Agenda Attachments

26TH February 2019

Special Council Meeting

Bothwell Town Hall

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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 Wild Drake Pty Ltd

Postal Address: PO Box 1061 — Phone No: 0427313972

Launceston, TAS 7250 — Fax No:

Email address: daniel@hallsisland.com.au

Owner/s Name (if not Applicant): Daniel Hackett (owner)

Postal Address: As above — Phone No:

Fax No:

Email address:

Description of proposed use and/or development:

Address of new use and development: Halls Island, Lake Malbena, TWWHA, GDA 441994, 5355399

Certificate of Title No: Volume No _____ Lot No: _____

Description of proposed use or development: See Attached

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

Current use of land and buildings: Private leasehold

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: muted tones

What is the proposed roof colour: see attached.

What is the proposed new floor area m^2.: ~ 64 m^2

What is the estimated value of all the new work proposed: $400,000

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 (if not the Owner)	Applicant Name *(Please print)*	Date
[signature]	Daniel Hackett	17/10/18

Land Owner(s) Signature	Land Owners *Name (please print)*	Date
Jason Jacobi Digitally signed by Jason Jacobi DN: cn=Jason Jacobi, o=DPIPWE, ou=PWS, email=Jason.Jacobi@parks.tas.gov.au, c=AU Date: 2018.10.31 13:38:13 +11'00'	Jason Jacobi	31/10/2018
Land Owner(s) Signature	Land Owners *Name (please print)*	Date

Tasmanian Government

Department of Primary Industries,
Parks, Water and Environment

GPO Box 44, Hobart, TAS 7001 Australia
Ph (03) 6233 6413 Fax (03) 6173 0226
www.parks.tas.gov.au

Enquiries: Jen Fry
Phone: (03) 6165 4245
Email: JenFry@parks.tas.gov.au.
Our ref: 113175A, 004687A

Daniel Hackett
PO Box 1061,
Launceston TAS 7250

Dear Mr Hackett,

HALLS ISLAND – LAND TITLE AND LEASE CONFIRMATION

I refer to your recent email requesting further information for Council with regard to Halls Island.

I can confirm that there is no land title for Halls Island – it is unalienated Crown Land within the Walls of Jerusalem National Park.

I can also confirm that there have been two Leases issued on the island in the names of Wild Drake and Daniel Hackett.

Should you have any questions about this matter, please contact me on 6165 4245 or JenFry@parks.tas.gov.au.

Yours sincerely

Jen Fry
Manager, Visitor Strategy
PARKS & WILDLIFE SERVICE
15 October 2018

Tasmanian Government

Department of Primary Industries, Parks Water and Environment

GPO Box 1751, Hobart, TAS 7001 Australia
Ph 1300 827 727 Fax 03) 6223 8308
www.parks.tas.gov.au

Mr Daniel Hackett,
Wild Drake Pty Ltd
PO Box 1061
Launceston Tas 7250

Dear Daniel

Halls Island Standing Camp consent to lodge development application

This letter, issued pursuant to section 52(1B) of the *Land Use Planning and Approvals Act 1993,* is to confirm that the Crown consents to the making of a Planning Permit Application, insofar as the proposed development relates to Crown land managed by the Parks and Wildlife Service, Department of Primary Industries, Parks, Water and Environment.

Crown consent is only given to the lodgement of this application consistent with the design and materials previously approved in my correspondence of 3rd August 2018 (copy attached). Any variation will require further consent from the Crown.

This letter does not constitute, nor imply, any approval to undertake works, or that any other approvals required under the *National Parks and Reserves Management Act 2002*, have been granted. If planning approval is given for the proposed development, the applicant will be required to obtain separate and distinct consent from the Crown before commencing any works on Crown owned land.

Public consultation in relation to this proposal is required to be undertaken to the satisfaction of the Minister. This will be determined following completion of the development application process and prior to the finalisation of the Reserve Activity Assessment.

This requirement for public consultation is a condition of the lease and business licence issued to Wild Drake Pty Ltd, specifically, condition A2.1(b) which states "In addition to clause A2.1(a), the Operator must undertake a public consultation process in relation to the Approved Use and the relevant Preliminary Design Documents, to the satisfaction of the Minister."

Should you have any further queries about this matter, please contact Chris Colley on telephone (03) 6777 2173, mobile: 0427 125287 or email: chris.colley@parks.tas.gov.au

Yours sincerely

Jason Jacobi
GENERAL MANAGER
PARKS AND WILDLIFE SERVICE

4 October 2018

AllUrbanPlanning PTY LTD

5 January 2019

Lyn Eyles
General Manager
Central Highlands Council
6 Tarleton Street, Hamilton TAS 7140
PO Box 20, Hamilton TAS 7140

Dear Madam

Planning Assessment – Proposed Visitor Accommodation (Standing Camp): Halls Island, Lake Malbena, Walls of Jerusalem National Park

All Urban Planning Pty Ltd has been engaged by Wild Drake Pty Ltd to provide an assessment of a proposal for a small scale standing camp on Halls Island, Lake Malbena under the provisions of the Central Highlands Interim Planning Scheme 2015 (Planning Scheme).

This assessment has been updated to provide an itemised response to Clause E11.7.1 P1 of the Planning Scheme as requested by Council 24 December 2018.

The site is located on leasehold hand within the Walls of Jerusalem National Park within the Tasmanian Wilderness World Heritage Area. The accommodation will be accessed via helicopter to a landing site on sheet rock, east of the island within the adjacent Central Plateau Conservation Area.

Proposal
The proposal is described on the plans and information that accompanies the application and includes:

- three purpose built accommodation pods each with a toilet and shower;
- communal pod with guide accommodation, storage and toiletry facilities;
- perforated board walking;
- selective vegetation lancing around the helicopter landing site and pods as described in the Reserve Activity Assessment;
- Access to the site will be via helicopter.

The pods will have a combined floor area of approximately 64m^2 and will be finished with dark grey walls and roof.

The use is to accommodate a maximum of 6 guests and is restricted to 30 trips annually.

All waste will be captured and exported from the site on outgoing helicopter flights.

The camp will be completely removal if the need arises.

Tasmanian Wilderness World Heritage Area Management Plan 2016 (TWWHA Management Plan 2016)
Parks and Wildlife Service (PWS) advise that the site is managed in accordance with the TWWHA Management Plan, which is a statutory management plan approved under the National Parks and Reserves Management Act 2002 (NPRMA).

Under the management plan:

- the subject land is zoned Self-Reliant Recreation Zone;
- the management plan allows visitor accommodation in the form of a standing camp within the Self-Reliant Recreation Zone;
- the structures as proposed would meet the definition of a standing camp under the current PWS Standing Camp Policy 2006.

On the basis of the above, PWS advise that the proposed development is allowable under the management plan.

Planning Scheme
Under Clause 8.10.1 of the planning scheme the planning authority must, in addition to the matters required by s.51(2) of the Act, take into consideration:

> *(a) all applicable standards and requirements in this planning scheme; and*
>
> *(b) any representations received pursuant to and in conformity with s57(5) of the Act,*
>
> *but in the case of the exercise of discretion, only insofar as each such matter is relevant to the particular discretion being exercised.*

Relevantly, a standard is applicable if the site is within the relevant zone and the standard deals with a matter that could affect or be affected by the proposed development; cl.7.5.2.

A standard is defined to mean the objective for a particular planning issue and the means for satisfying that objective through either an acceptable solution or corresponding performance criterion.

Compliance with a standard is achieved by complying with either the acceptable solution or corresponding performance criterion; cl.7.5.3.

The objective of the standard may be considered to help determine whether the proposed use or development complies with the performance criterion of that standard; cl.7.5.4.

The site is zoned Environmental Management under the Planning Scheme.

The proposed accommodation falls within the Visitor Accommodation Use class and is a Permitted Use given that a reserve management plan under the NPRMA applies.

I approach the associated helicopter access as directly associated and a subservient part of the use and in accordance with Clause 8.2.2 categorise those activities as the same Visitor Accommodation Use Class.

Use Standards (29.3)

Use Standards for Reserved Land (29.3.1)

Use Standard	***Assessment***
A1 Use is undertaken in accordance with a reserve management plan.	In accordance with advice provided by PWS the proposal meets the definition of a standing camp and is an allowable use within the Self-Reliant Recreation Zone under the TWWHA Management Plan 2016. The proposed use therefore complies with A1.

Development Standards for Buildings and Works (29.4)

Building Height (29.4.1)

Development Standard	***Assessment***
A1 *Building height comply with any of the following:* *(a) as proscribed in an applicable reserve management plan;* *(b) be no more than 7.5 m.*	The proposed pods will have a maximum height under 4.3m. There are no prescribed heights under TWWHA Management Plan and the proposal therefore comfortably complies with the 7.5m permitted standard under A1.

Setback (29.4.2)

Development Standard	***Assessment***
A1 *Building setback from frontage must comply with any of the following:*	The planning scheme defines frontage as where a boundary of a lot abut a road. Tis standard therefore does not apply to the circumstances of this remote proposal.

(a) as proscribed in an applicable reserve management plan; *(b) be no less than 30 m.*	
A2 *Building setback from side and rear boundaries must comply with any of the following:* *(a) as proscribed in an applicable reserve management plan;* *(b) be no less than 30 m.*	The proposal will be sited well clear of all boundaries and therefore complies with A2.
A3	I note that the Planning Scheme does not include a Standard A3/P3.
A4 *Building setback for buildings for sensitive use (including residential use) must comply with all of the following:* *(a) be sufficient to provide a separation distance from land zoned Rural Resource no less than 100 m;* *(b) be sufficient to provide a separation distance from land zoned Significant Agriculture no less than 200 m.*	The proposal is surrounded by Environmental Management Zoning and there are no adjacent areas of Rural Resource or Significant Agriculture zoning. The proposal complies with A4.
A5 *Buildings setback from the Tasmanian Wilderness World Heritage Area must comply with any of the following:* *(a) as proscribed in an applicable reserve management plan;* *(b) be no less than 500 m.*	The proposal is located within rather than adjacent to the Tasmania wilderness World Heritage Area. I therefore approach the standard on the basis that it does not apply.
P5 *Building setback from the Tasmanian Wilderness World Heritage Area must*	Notwithstanding the assessment A5 above, based on the RAA assessment the proposal will avoid significant impact from the development on the environmental

satisfy all of the following: *(a) there is no significant impact from the development on the environmental values of the land within the World Heritage Area;* *(b) the potential for the spread of weeds or soil pathogens onto the land within the World Heritage Area is minimised;* *(c) there is minimal potential for contaminated or sedimented water runoff impacting the land within the World Heritage Area;* *(d) there are no reasonable and practical alternatives to developing close to the land within the World Heritage Area.*	values of the World Heritage Area and therefore would satisfy P5 if it did apply.

Design (29.4.3)

Objective:

To ensure that the location and appearance of buildings and works minimises adverse impact on natural values and on the landscape.

Development standard	***Assessment***
A1 *The location of buildings and works must comply with any of the following:* *(a) be located on a site that does not require the clearing of native vegetation and is not on a skyline or ridgeline;* *(b) be located within a building area, if provided on the title;* *(c) be an addition or alteration to an existing building;* *(d) as prescribed in an applicable*	The proposal will involve some vegetation disturbance and is to be assessed under P1.

reserve management plan.	
P1 *The location of buildings and works must satisfy all of the following:* *(a) be located in an area requiring the clearing of native vegetation only if:* *(i) there are no sites clear of native vegetation and clear of other significant site constraints such as access difficulties or excessive slope;* *(ii) the extent of clearing is the minimum necessary to provide for buildings, associated works and associated bushfire protection measures;* *(iii) the location of clearing has the least environmental impact;* *(b) be located on a skyline or ridgeline only if:* *(i) there are no sites clear of native vegetation and clear of other significant site constraints such as access difficulties or excessive slope;* *(ii) there is no significant impact on the rural landscape;* *(iii) building height is minimised;* *(iv) any screening vegetation is maintained.* *(c) be consistent with any Desired Future Character Statements provided for the area or, if no such statements are provided, have regard to the landscape.*	As set out in the accompanying documentation and RAA the modest buildings and works have been sited to minimise disturbance of native vegetation. The building and works have been sited to be hidden in the landscape and are not on a skyline or ridgeline. For these reasons the proposal is considered to satisfy P1.
A2 *Exterior building surfaces must be coloured*	The pods and boardwalks will be finished in muted bush tones and dark grey and

using colours with a light reflectance value not greater than 40 percent.	comply with A2.
A3 *Fill and excavation must comply with all of the following:* *(a) height of fill and depth of excavation is no more than 1 m from natural ground level, except where required for building foundations;* *(b) extent is limited to the area required for the construction of buildings and vehicular access.*	No excavations, earthworks or alteration to natural drainage is proposed. The proposal complies with A3.

Planning Scheme Codes

The proposed camp is located clear of Code overlays as shown on Figure 1 below. The proposed boardwalk sections are also clear of the overlays. The helicopter landing area is within a Waterway and Coastal Protection Area.

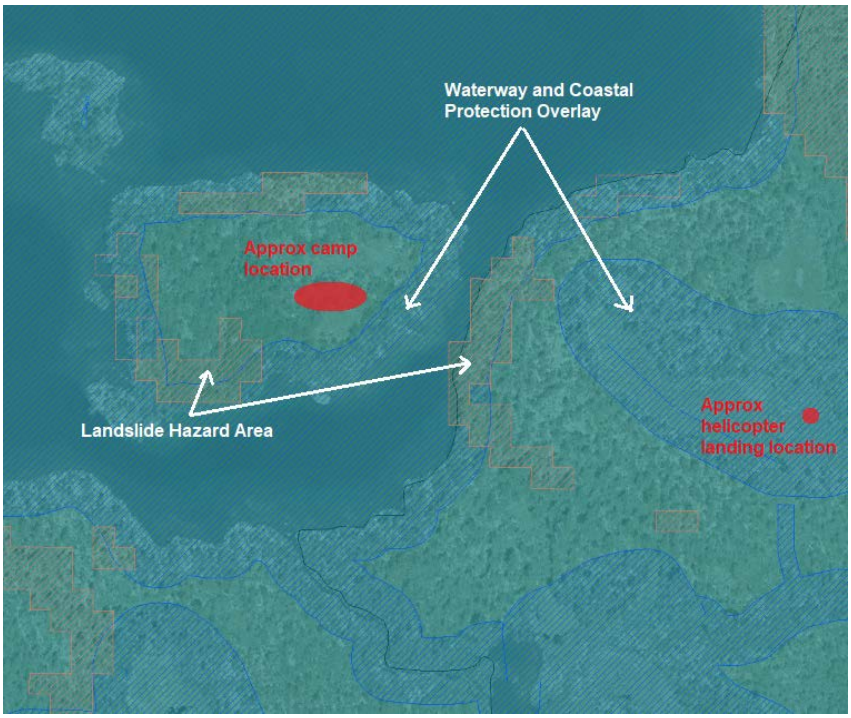

Figure 1 - Planning Scheme Code Overlays (Source: annotated plan from theList)

Stormwater Management Code

This Code applies to all development requiring the management of stormwater.

Stormwater Drainage and Disposal (E7.7.1)

Objective:

To ensure that stormwater quality and quantity is managed appropriately.

Development Standard	***Assessment***
A1 *Stormwater from new impervious surfaces must be disposed of by gravity to public stormwater infrastructure.*	The proposal collects rainwater to tanks rather than public stormwater infrastructure and therefore is to be assessed under P1.
P1 *Stormwater from new impervious surfaces must be managed by any of the following:* *(a) disposed of on-site with soakage devices having regard to the suitability of the site, the system design and water sensitive urban design principles* *(b) collected for re-use on the site;* *(c) disposed of to public stormwater infrastructure via a pump system which is designed, maintained and managed to minimise the risk of failure to the satisfaction of the Council.*	The proposal for collection and reuse of water on site satisfies part b) and therefore complies with P1.
A2 *A stormwater system for a new development must incorporate water sensitive urban design principles R1 for the treatment and disposal of stormwater if any of the following apply:* *(a) the size of new impervious area is more than 600 m2;*	The proposal does not involve any of the types of development identified in parts a-c) and therefore satisfies A2.

(b) new car parking is provided for more than 6 cars; *(c) a subdivision is for more than 5 lots.*	

Waterway and Coastal Protection Code

Buildings and Works (E11.7.1)

Objective:

To ensure that buildings and works in proximity to a waterway, the coast, identified climate change refugia and potable water supply areas will not have an unnecessary or unacceptable impact on natural values.

Development Standards	***Assessment***
A1 *Building and works within a Waterway and Coastal Protection Area must be within a building area on a plan of subdivision approved under this planning scheme.*	The proposal is to be assessed under P1.
P1 *Building and works within a Waterway and Coastal Protection Area must satisfy all of the following:* *(a) avoid or mitigate impact on natural values;* *(b) mitigate and manage adverse erosion, sedimentation and runoff impacts on natural values;* *(c) avoid or mitigate impacts on riparian or littoral vegetation;* *(d) maintain natural streambank and streambed condition, (where it exists);* *(e) maintain in-stream natural habitat, such as fallen logs, bank overhangs, rocks and trailing vegetation;*	The proposed pods are well clear of the overlay areas. The proposed boardwalk areas are also outside the overlay areas. If they were in side areas of Waterway and Coastal Protection it is my assessment that they would comply with P1 in that the permeable boardwalks are to be sited for minimal disturbance over existing tracks and will allow 65% light transmission. The proposal involves some minor vegetation lancing at the helicopter landing Site 2 as assessed in the North Barker addendum report, 14 June 2018. This site is dominated as exposed flat bedrock with various shrubs and sedges occupying the fissures and spaces in the

(f) avoid significantly impeding natural flow and drainage; *(g) maintain fish passage (where applicable);* *(h) avoid landfilling of wetlands;* *(i) works are undertaken generally in accordance with 'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual" (DPIPWE, Page and Thorp, 2010), and the unnecessary use of machinery within watercourses or wetlands is avoided.*	rocks. Some rocks may need to be relocated and a small number of shrubs of L. lanigerum may need to be removed to accommodate the space for the helicopter to safely land. The proposal is considered to avoid and minimise impacts on natural values and satisfy P1 in that: a) the landing site has been chosen on an area of exposed bedrock that requires removal of only a small number of shrubs growing in cracks in the rock. The vegetation community is assessed not to be significant; b) the vegetation to be removed is growing in fissures and spaces between the rocks and removal will not cause erosion, sedimentation or runoff impacts on natural values; c) the proposed site has been chosen such that only minimal vegetation removal is required; d) the proposed landing site will not effect streambank and streambed condition; e) the proposed landing site is clear of watercourses and will not effect in-stream natural habitat; f) the proposed landing site on exposed bedrock requires minimal disturbance and will not result in any significant effect on natural flow or drainage; g) the site will not effect fish passage; h) no landfilling is required; and

	i) the minor work at the landing site will not require the use of any heavy machinery and is considered consistent with the *'Wetlands and Waterways Works Manual' (DPIWE, 2003) and "Tasmanian Coastal Works Manual.*
A4 *Development must involve no new stormwater point discharge into a watercourse, wetland or lake.*	Complies. The proposal does not involve a stormwater point discharge to watercourse, wetland or lake.

There are no other planning scheme codes of relevance to the proposal. However, to the extent that they apply the proposal is considered to satisfy all requirements.

Conclusion

The proposal has been carefully designed to minimise impacts on the environment and is a permitted use in the Environmental Management Zone. In my assessment the proposal satisfies the relevant provisions of the Planning Scheme and should be approved as a discretionary application pursuant to Section 57 of the Act.

I would be pleased to discuss or clarify any of the above as necessary.

Yours sincerely

Frazer Read
Principal
All Urban Planning Pty Ltd

HALLS ISLAND STANDING CAMP, WALLS OF JERUSALEM NATIONAL PARK

GENERAL NOTES

PROJECT

DESIGNER
CUMULUS STUDIO PTY LTD
CERTIFIED ARCHITECT: PETER WALKER
ACCREDITATION Nº: CC2143E
ARCHITECTS ADDRESS: OFFICE:
LEVEL 1 60
CAMERON ST
LAUNCESTON
TAS
7250
OFFICE: 63330930

LOCATION
PROJECT Nº: 15191
PROJECT NAME: HALLS ISLAND
PROJECT ADDRESS: WALLS OF
JERUSALEM
NATIONAL PARK

SITE DETAILS
BAL: NA
CLIMATE ZONE: ZONE 7
WIND SPEED REFER ENG
SOIL CLASS: REFER ENG
ALPINE AREA: YES
CORROSION: <BCA VOL2 3.5.1.3>

GENERAL

THESE DRAWINGS SHOW DESIGN INTENT AND ARE SUITABLE AS A GUIDE ONLY. DO NOT SCALE OFF THE DRAWINGS. ALL DIMENSIONS IN MILLIMETRES. DIMENSIONS OF EXISTING BUILDING ARE INDICATIVE ONLY AND SHOULD NOT BE RELIED ON - VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK. ALL DOCUMENTS SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS AND ANY CONSULTANTS DETAIL.

ANY DISCREPANCIES, ERRORS OR OMISSIONS SHALL BE REFERRED TO THE ARCHITECTS. DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES UNTIL ISSUED BY THE ARCHITECT FOR CONSTRUCTION.

ALL WORK CARRIED OUT SHALL BE IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS, NCCS, BUILDING CODE OF AUSTRALIA, SPECIFICATIONS AND ANY LOCAL AUTHORITY BY-LAWS AND REGULATIONS.

DOC DRAWING LIST

SET	Nº	DRAWING NAME	REV	SCALES
da PRELIMINARIES				
	da01	COVER PAGE	A	NA
	da02	CONTEXT PLAN	A	1:10,000
	da03	LOCATION PLAN	A	1:4000
	da04	SITE PLAN	A	1:500
	da05	ACCOMMODATION POD(S)	A	1:50
	da06	ELEVATIONS	A	1:50
	da07	ELEVATIONS	A	1:50
	da08	SECTIONS	A	1:50
	da09	COMMUNAL POD	A	1:50
	da10	ELEVATIONS	A	1:50
	da11	ELEVATIONS	A	1:50
	da12	SECTIONS	A	1:50
	da13	DETAIL	A	1:5
	da14	COMPARISON DIAGRAM	A	NA

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

CUMULUS STUDIO

info@cumulus.studio

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Melbourne
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+61(3) 9521 4518

general notes
These drawings show design intent & are suitable as a guide only. Do not scale off the drawings. All dimensions in millimetres. Dimensions of existing building are indicative only - they should not be relied on and are to be verified on site before commencing work. All documents shall be read in conjunction with specifications and any consultants detail. All work shall be in accordance with the Building Code of Australia, relevant Australian Standards & local authority by-laws and regulations. Any discrepancies, errors or omissions shall be referred to the Architects. Drawings are not to be used for construction until issued Construction

accredited designer:
Peter Walker, CC2143E

drawn by: PA, JC
checked by: TH

reason of issue
DEVELOPMENT APPROVAL

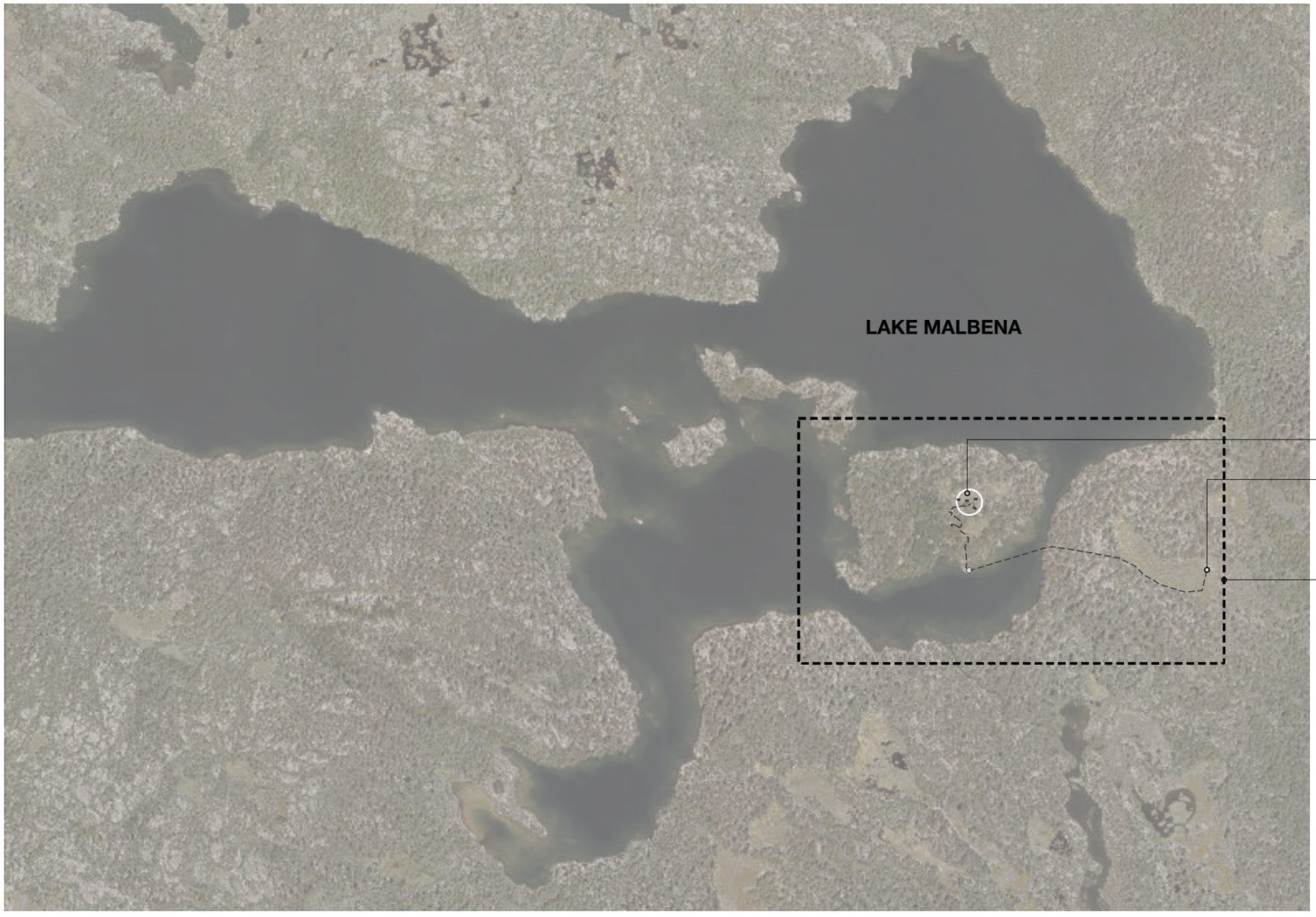
client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

project:
HALLS ISLAND STANDING CAMP

drawing title
COVER PAGE
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing nº: **15191-da01**
issue: **DA**



CONTEXT PLAN
1:10000

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

CUMULUS STUDIO

info@cumulus.studio

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LAUNCESTON
TAS, 7250

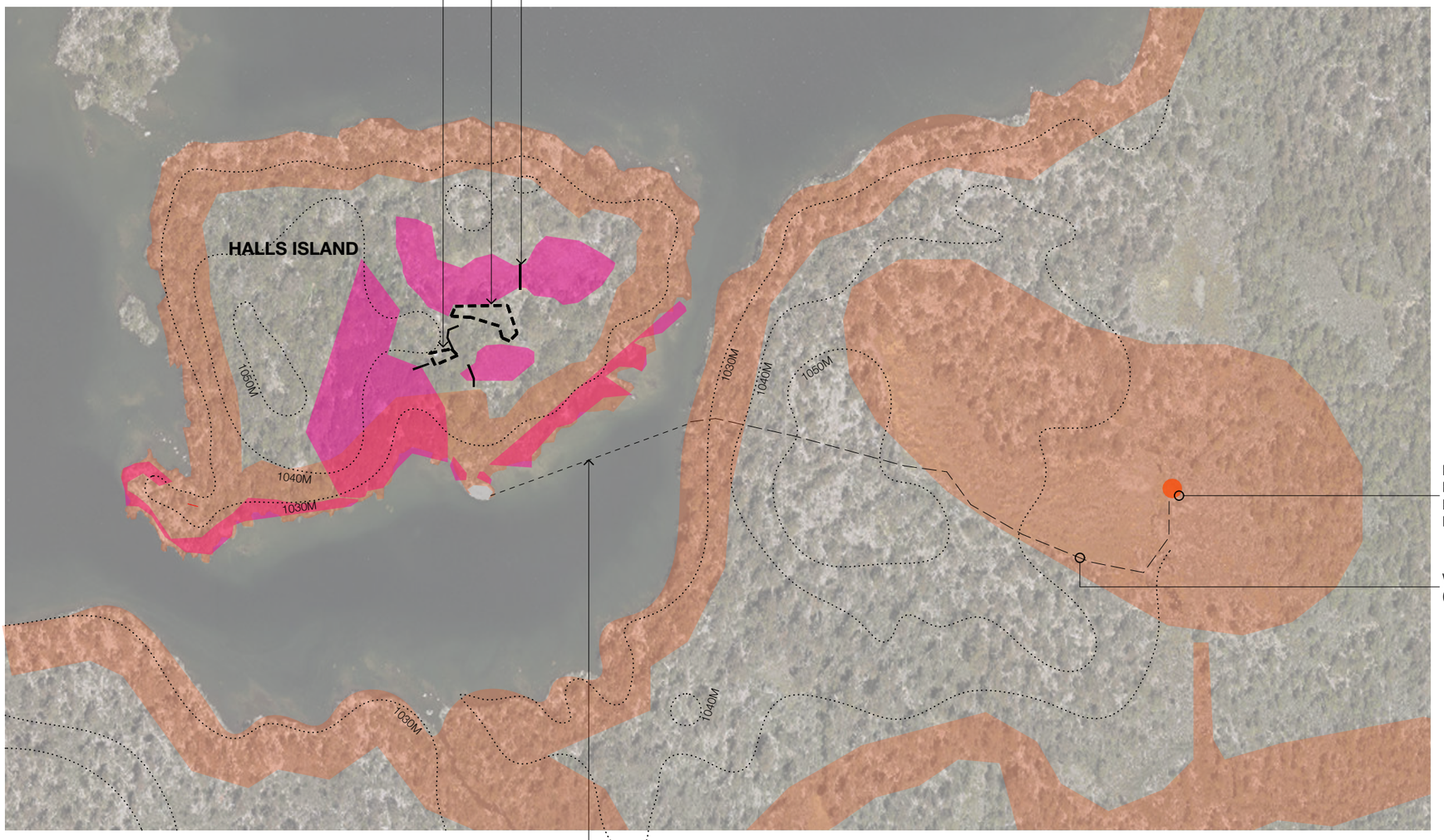
N

project:
HALLS ISLAND STANDING CAMP

drawing title
CONTEXT PLAN
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da02**
issue: **DA**



KEY

WATERWAY AND COASTAL PROTECTION AREA

CUSTOMER EXCLUSION ZONE

LOCATION PLAN
1:4000

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

CUMULUS STUDIO

info@cumulus.studio

Hobart
Suite 2, Level 2, 145 Macquarie St. Hobart, TAS 7000
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client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

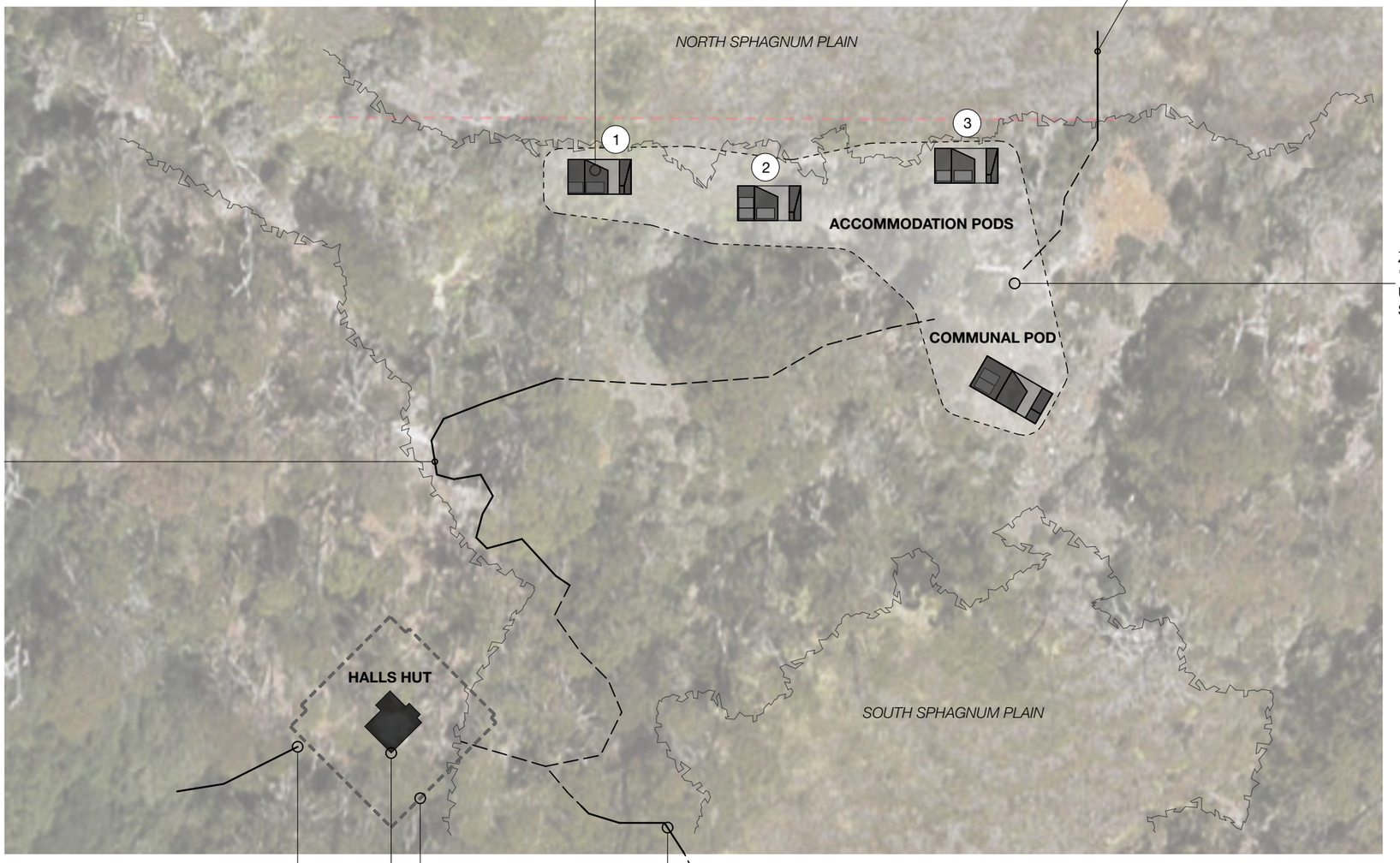
N

project:
HALLS ISLAND STANDING CAMP

drawing title
LOCATION PLAN
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da03**
issue: **DA**



SITE PLAN - STANDING CAMP
1:500

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

CUMULUS STUDIO

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Hobart
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+61(3) 6333 0930

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accredited designer:
Peter Walker, CC2143E

drawn by: PA, JC
checked by: TH

reason of issue
DEVELOPMENT APPROVAL

client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

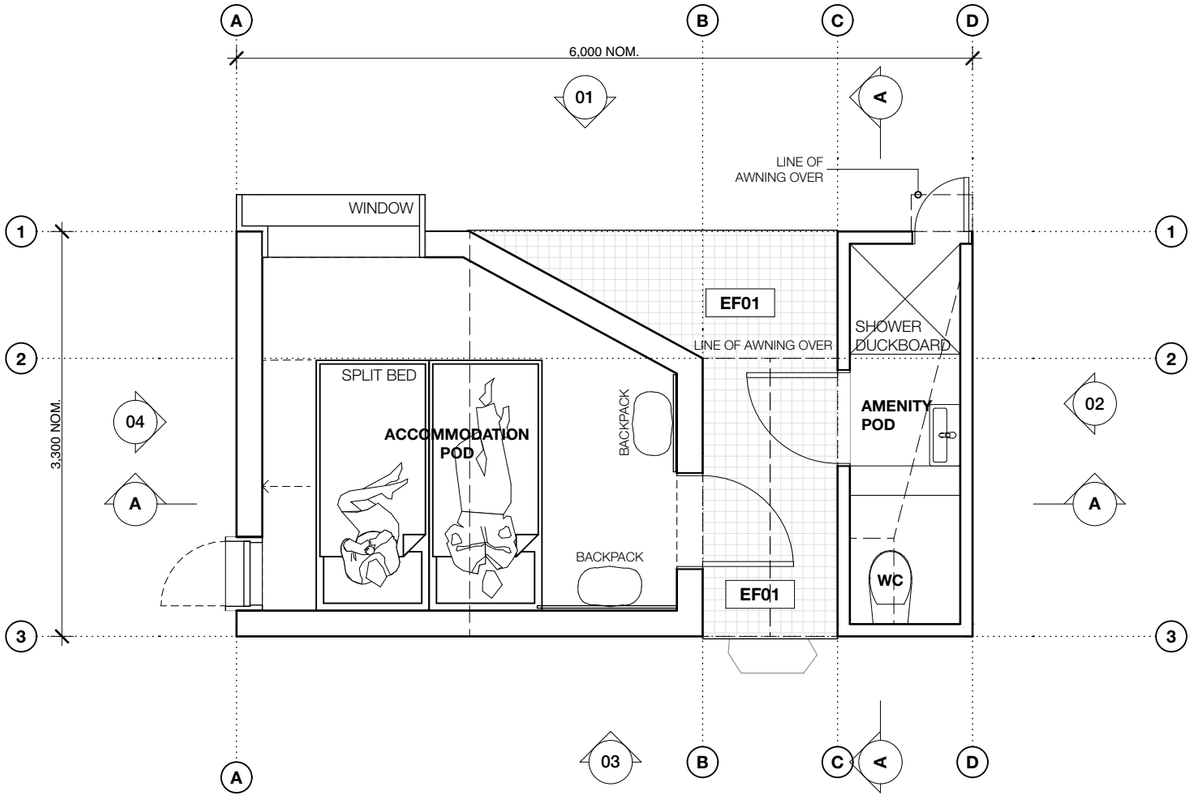
N

project:
HALLS ISLAND STANDING CAMP

drawing title
SITE PLAN
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da04**
issue: **DA**



ACCOMMODATION POD(S)
1:50

MATERIAL NOTES & LEGENDS

FIXTURES AND FINISHES SCHEDULE

ROOF CLADDING:

R01: 4MM THICK FRP FLAT GRITTED PANEL. DARK GREY.

EXTERNAL FINISHES:

EF01: PERFORATED BOARDWALK: 38X38 FRP GRATING 400MM WIDE TYPICAL. COLOUR: DARK GREY. OPEN AREA 68%

EF02: CELERY TOP PINE DECKING BOARD OR SIMILAR APPROVED

CLADDINGS:

EC01: 4MM THICK FRP FLAT GRITTED PANEL. DARK GREY.

AWNING: 6MM FOLDED ALUMINIUM FIXED PLATE TO FUTURE DETAIL. POWDERCOAT FINISH DARK GREY.

GLAZING: NON REFLECTIVE GLAZING

FLOOR FINISHES:

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

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checked by: TH

reason of issue
DEVELOPMENT APPROVAL

client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

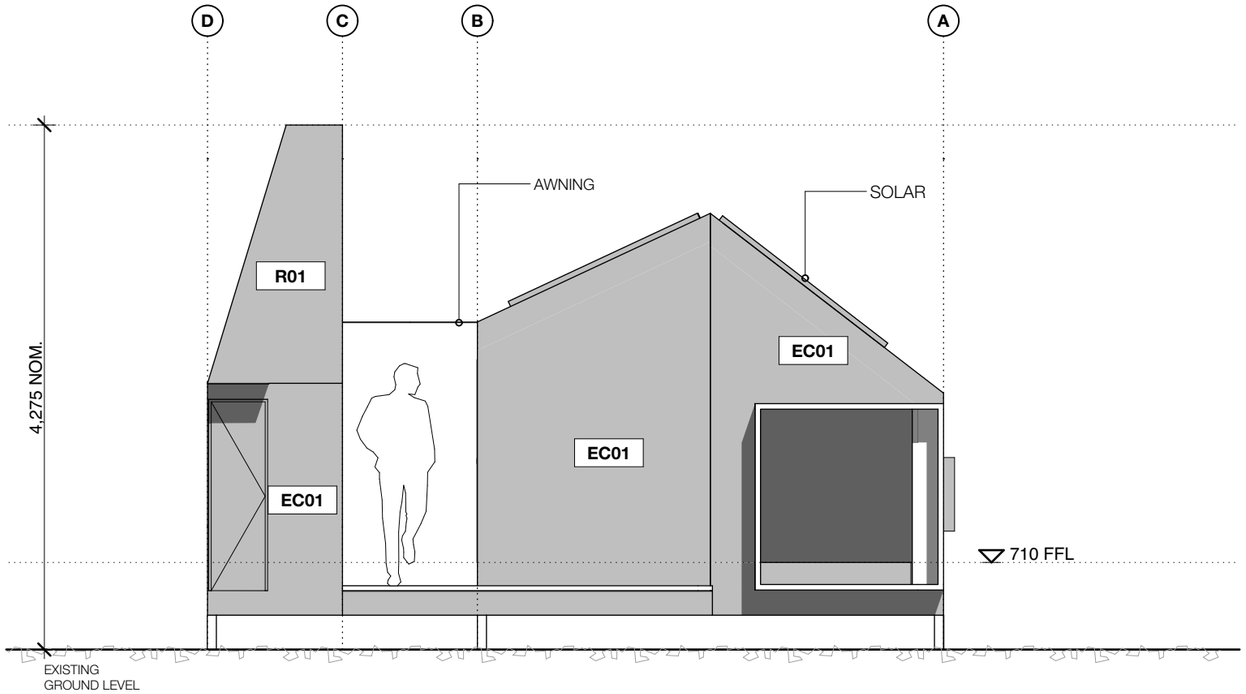
N

project:
HALLS ISLAND STANDING CAMP

drawing title
ACCOMMODATION POD(S)
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da05**
issue: **DA**



ACCOMMODATION ELEVATION 01
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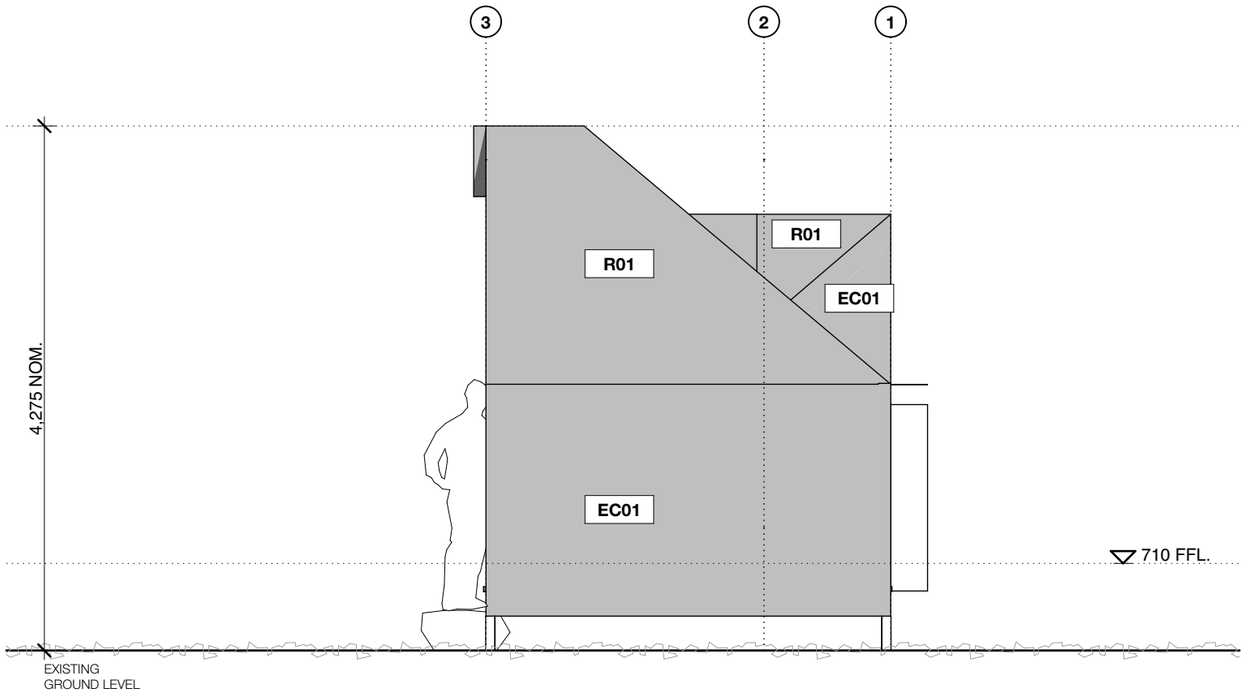

ACCOMMODATION ELEVATION 02
1:50

MATERIAL NOTES & LEGENDS

FIXTURES AND FINISHES SCHEDULE

ROOF CLADDING:

R01: 4MM THICK FRP FLAT GRITTED PANEL. DARK GREY.

EXTERNAL FINISHES:

EF01: PERFORATED BOARDWALK: 38X38 FRP GRATING 400MM WIDE TYPICAL. COLOUR: DARK GREY. OPEN AREA 68%

EF02: CELERY TOP PINE DECKING BOARD OR SIMILAR APPROVED

CLADDINGS:

EC01: 4MM THICK FRP FLAT GRITTED PANEL. DARK GREY.

AWNING: 6MM FOLDED ALUMINIUM FIXED PLATE TO FUTURE DETAIL. POWDERCOAT FINISH DARK GREY.

GLAZING: NON REFLECTIVE GLAZING

FLOOR FINISHES:

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

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accredited designer:
Peter Walker, CC2143E

drawn by: PA, JC
checked by: TH

reason of issue
DEVELOPMENT APPROVAL

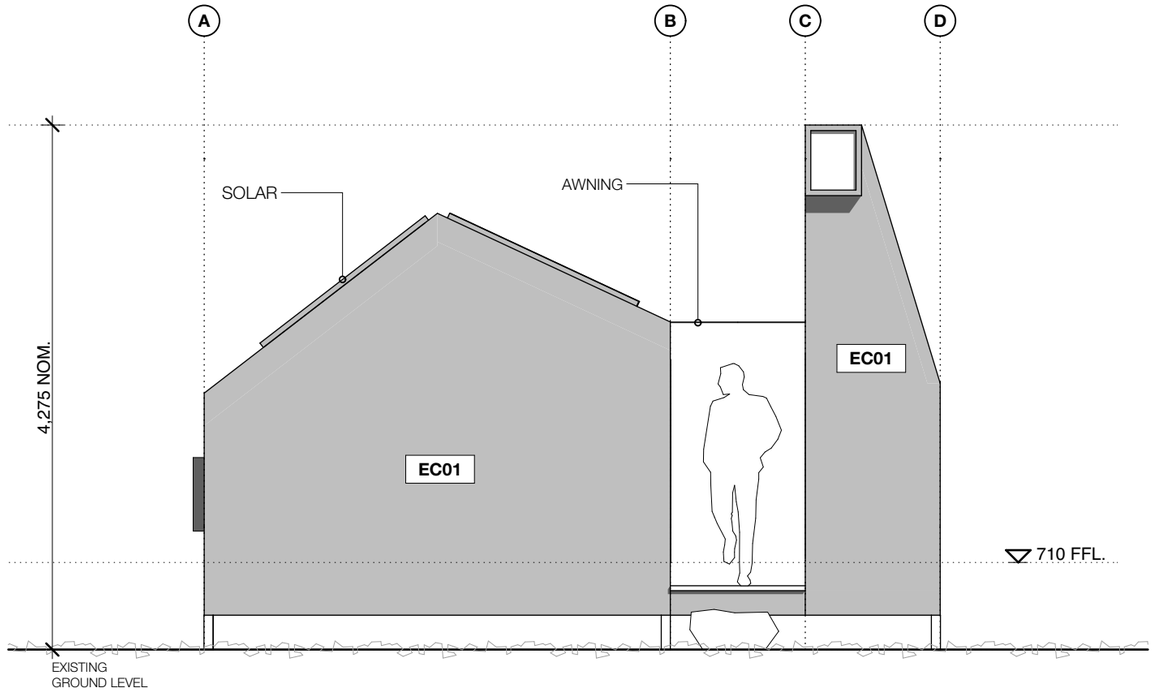
client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

project:
HALLS ISLAND STANDING CAMP

drawing title
ELEVATIONS
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da06**
issue: **DA**



ACCOMMODATION ELEVATION 03
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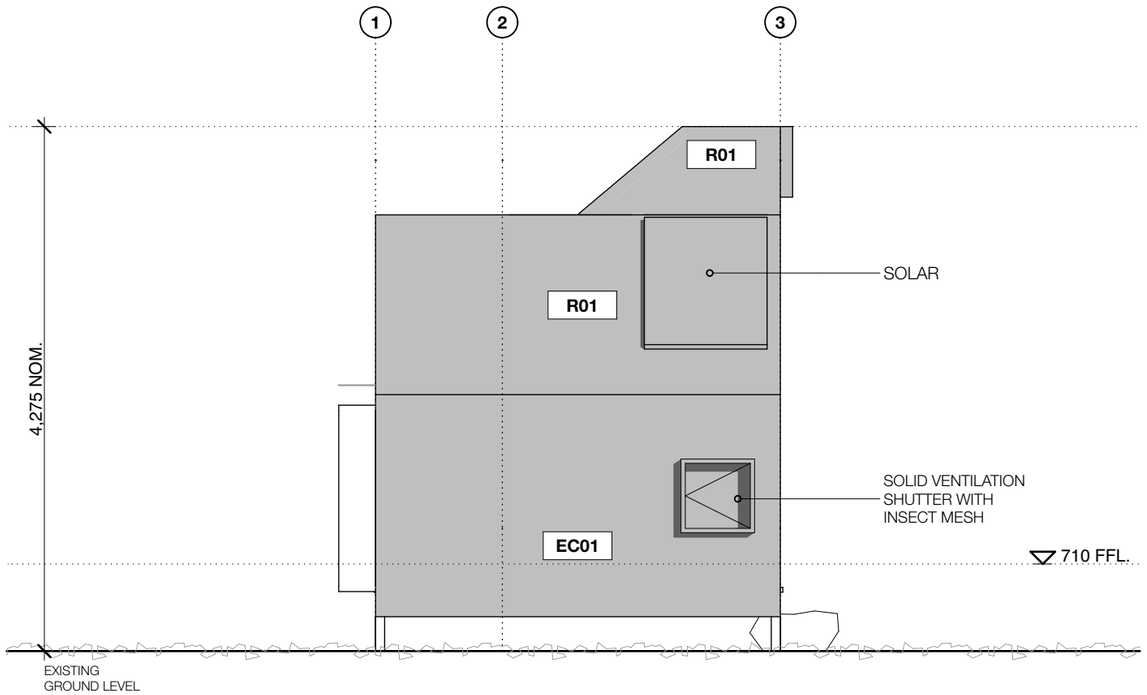

ACCOMMODATION ELEVATION 04
1:50

MATERIAL NOTES & LEGENDS

FIXTURES AND FINISHES SCHEDULE

ROOF CLADDING:

R01: 4MM THICK FRP FLAT GRITTED PANEL. DARK GREY.

EXTERNAL FINISHES:

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EF02: CELERY TOP PINE DECKING BOARD OR SIMILAR APPROVED

CLADDINGS:

EC01: 4MM THICK FRP FLAT GRITTED PANEL. DARK GREY.

AWNING: 6MM FOLDED ALUMINIUM FIXED PLATE TO FUTURE DETAIL. POWDERCOAT FINISH DARK GREY.

GLAZING: NON REFLECTIVE GLAZING

FLOOR FINISHES:

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

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accredited designer:
Peter Walker, CC2143E

drawn by	checked by
PA, JC	TH

reason of issue
DEVELOPMENT APPROVAL

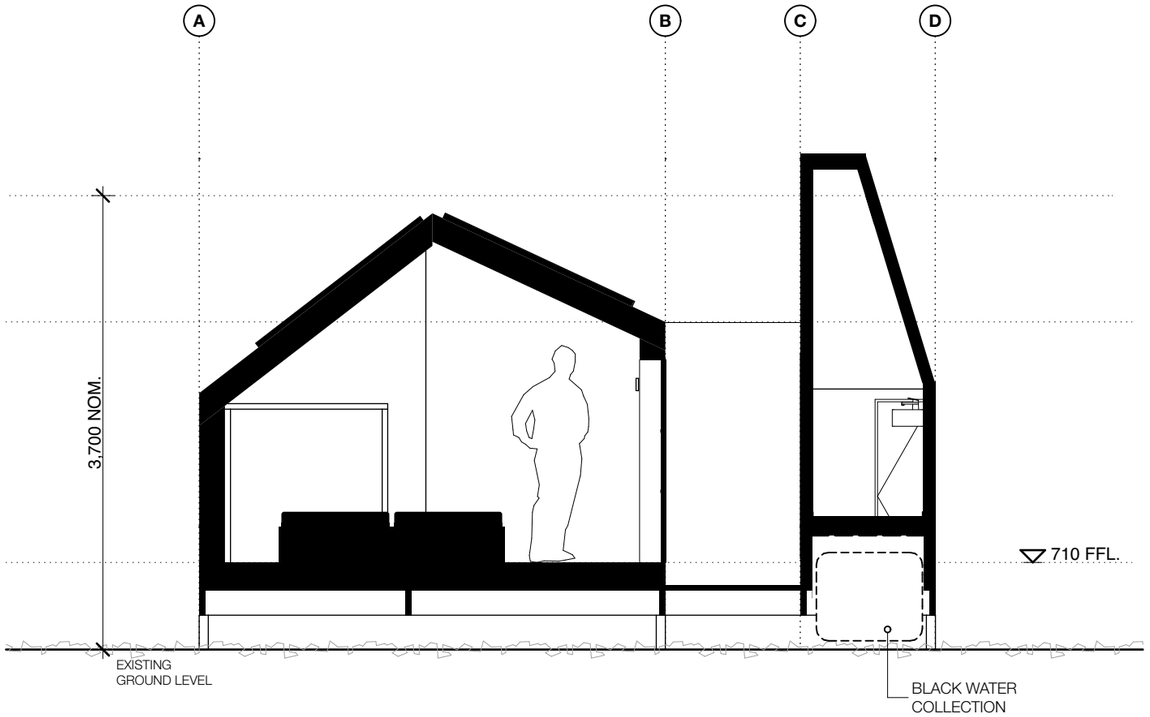
client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

project:
HALLS ISLAND STANDING CAMP

drawing title
ELEVATIONS
(PRELIMINARIES)

print date	original size
9/10/18	A3

drawing n°	issue
15191-da07	DA



ACCOMMODATION SECTION AA
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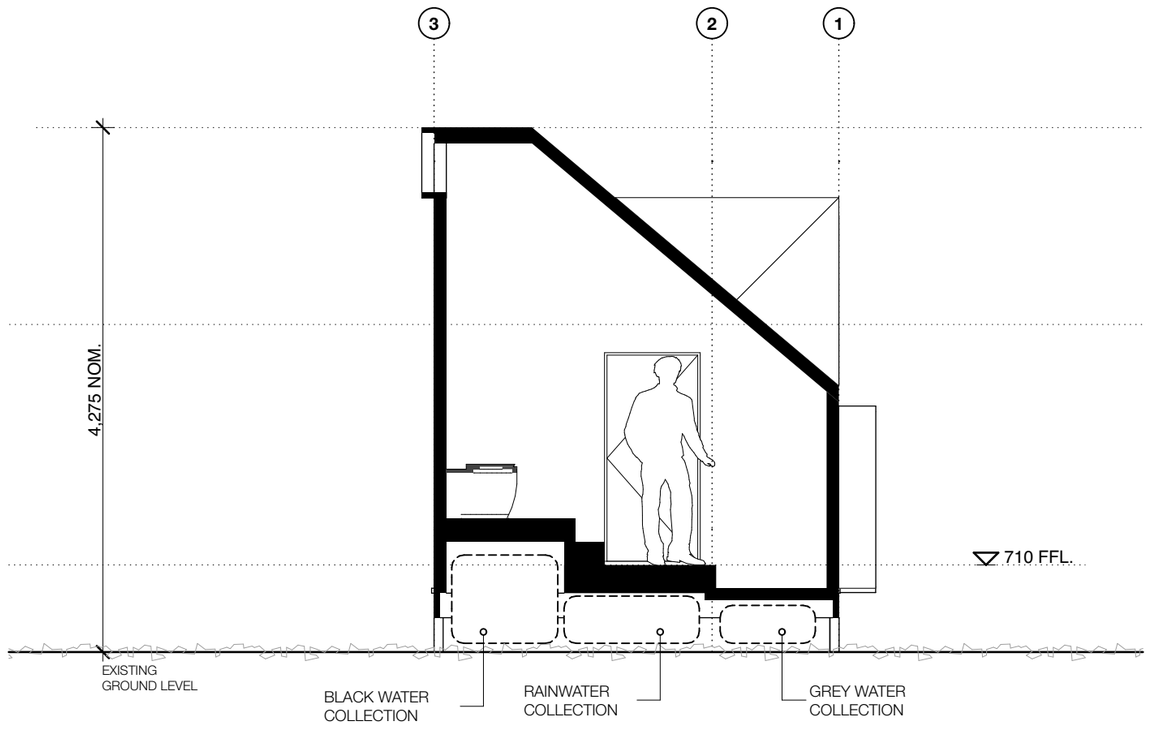

ACCOMMODATION SECTION BB
1:50

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

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accredited designer:
Peter Walker, CC2143E

drawn by: PA, JC
checked by: TH

reason of issue
DEVELOPMENT APPROVAL

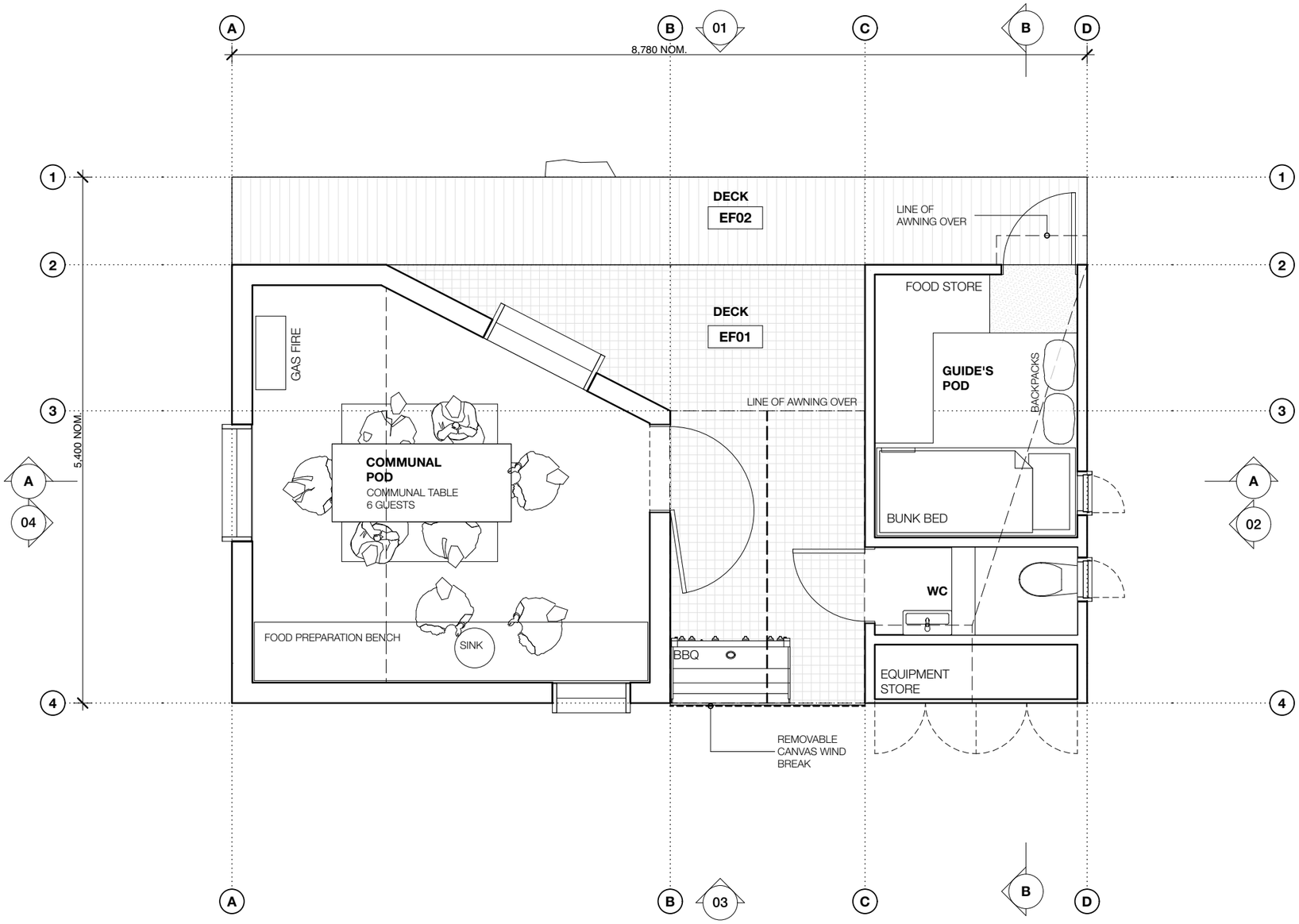
client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

project:
HALLS ISLAND STANDING CAMP

drawing title
SECTIONS
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da08**
issue: **DA**



COMMUNAL POD GROUND FLOOR
1:50

MATERIAL NOTES & LEGENDS

FIXTURES AND FINISHES SCHEDULE

ROOF CLADDING:

R01: 4MM THICK FRP FLAT GRITTED PANEL. DARK GREY.

EXTERNAL FINISHES:

EF01: PERFORATED BOARDWALK: 38X38 FRP GRATING 400MM WIDE TYPICAL. COLOUR: DARK GREY. OPEN AREA 68%

EF02: CELERY TOP PINE DECKING BOARD OR SIMILAR APPROVED

CLADDINGS:

EC01: 4MM THICK FRP FLAT GRITTED PANEL. DARK GREY.

AWNING: 6MM FOLDED ALUMINIUM FIXED PLATE TO FUTURE DETAIL. POWDERCOAT FINISH DARK GREY.

GLAZING: NON REFLECTIVE GLAZING

FLOOR FINISHES:

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

CUMULUS STUDIO

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drawn by: PA, JC
checked by: TH

reason of issue
DEVELOPMENT APPROVAL

client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

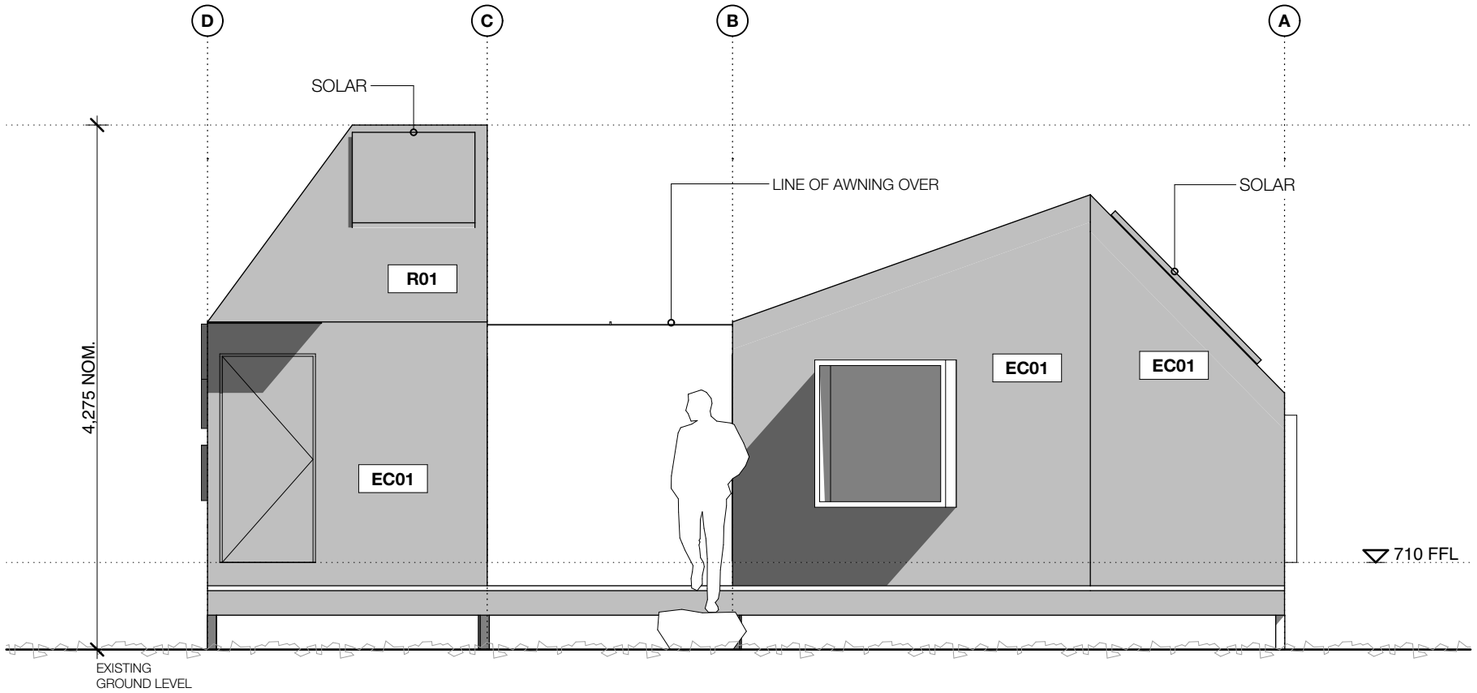
N

project:
HALLS ISLAND STANDING CAMP

drawing title
COMMUNAL POD
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da09**
issue: **DA**



COMMUNAL ELEVATION 01
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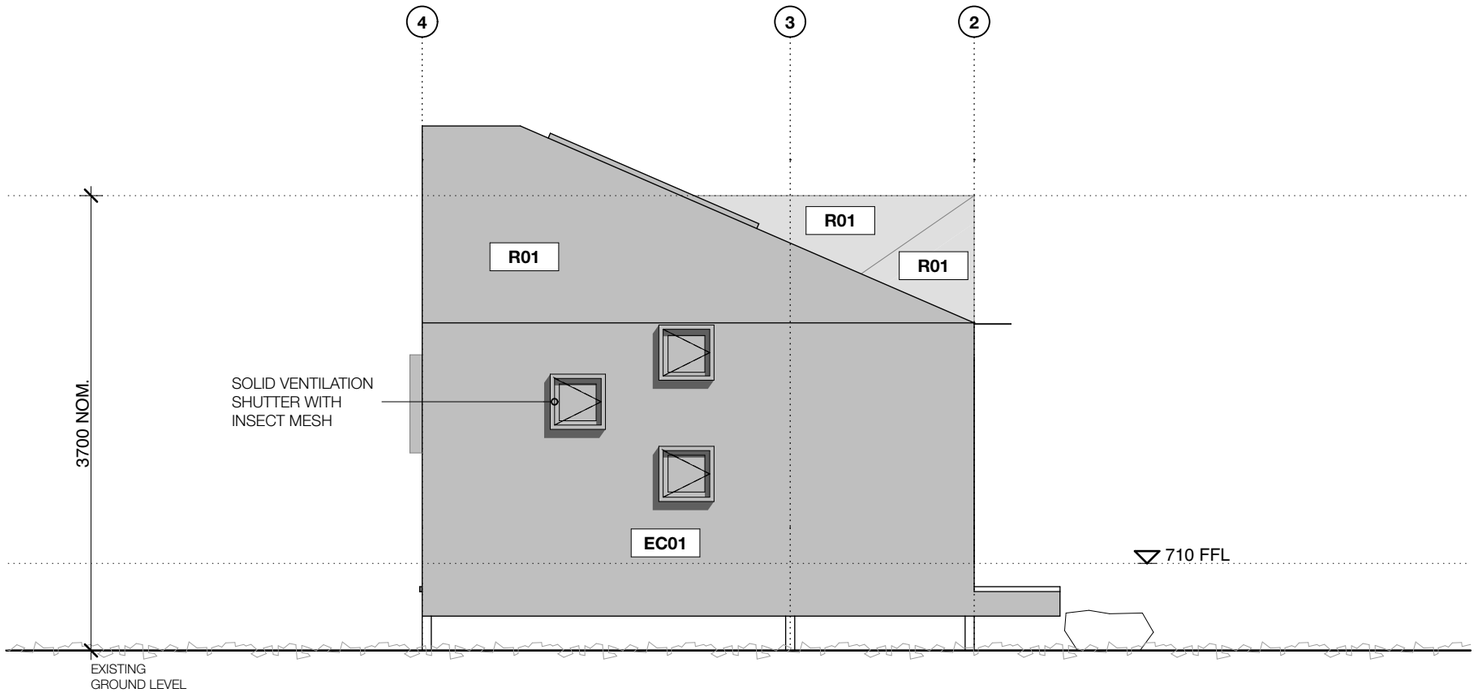

COMMUNAL ELEVATION 02
1:50

MATERIAL NOTES & LEGENDS

FIXTURES AND FINISHES SCHEDULE

ROOF CLADDING:

R01: 4MM THICK FRP FLAT GRITTED PANEL. DARK GREY.

EXTERNAL FINISHES:

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EF02: CELERY TOP PINE DECKING BOARD OR SIMILAR APPROVED

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AWNING: 6MM FOLDED ALUMINIUM FIXED PLATE TO FUTURE DETAIL. POWDERCOAT FINISH DARK GREY.

GLAZING: NON REFLECTIVE GLAZING

FLOOR FINISHES:

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

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checked by: TH

reason of issue
DEVELOPMENT APPROVAL

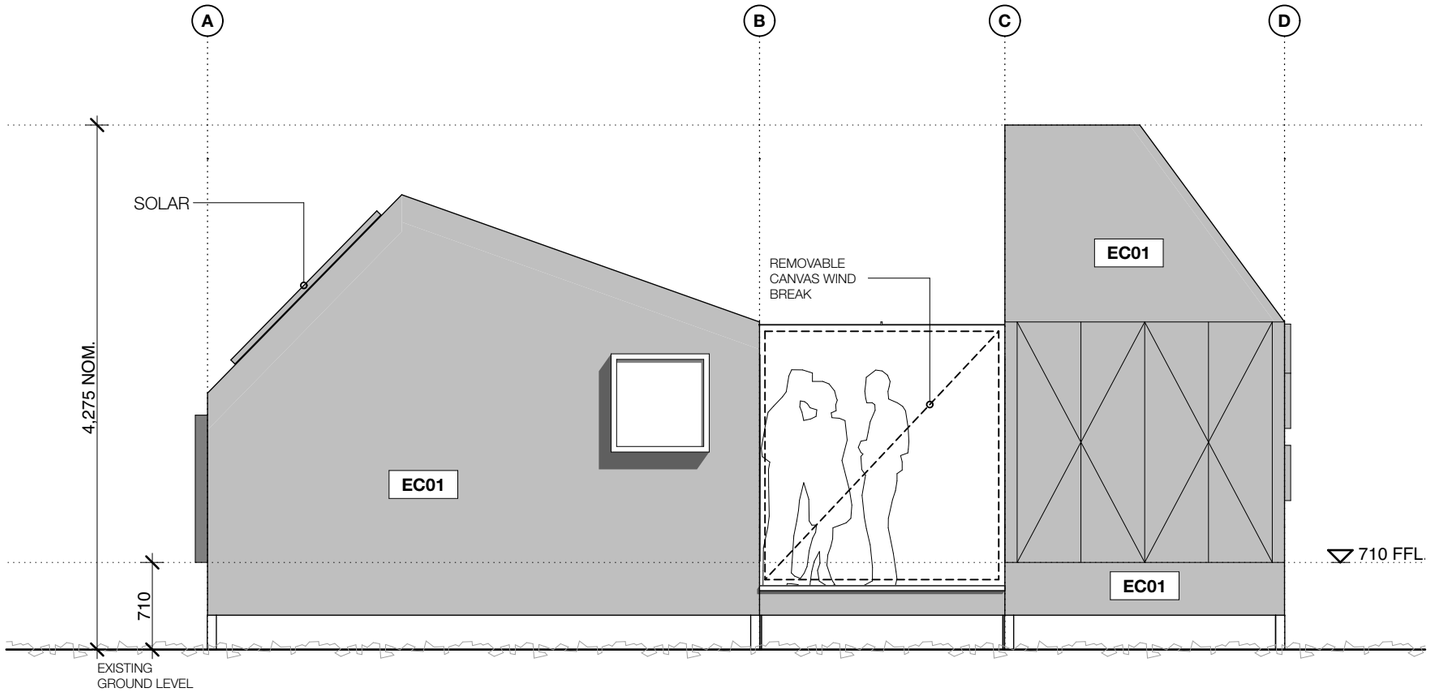
client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

project:
HALLS ISLAND STANDING CAMP

drawing title
ELEVATIONS
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da10**
issue: **DA**



COMMUNAL ELEVATION 03
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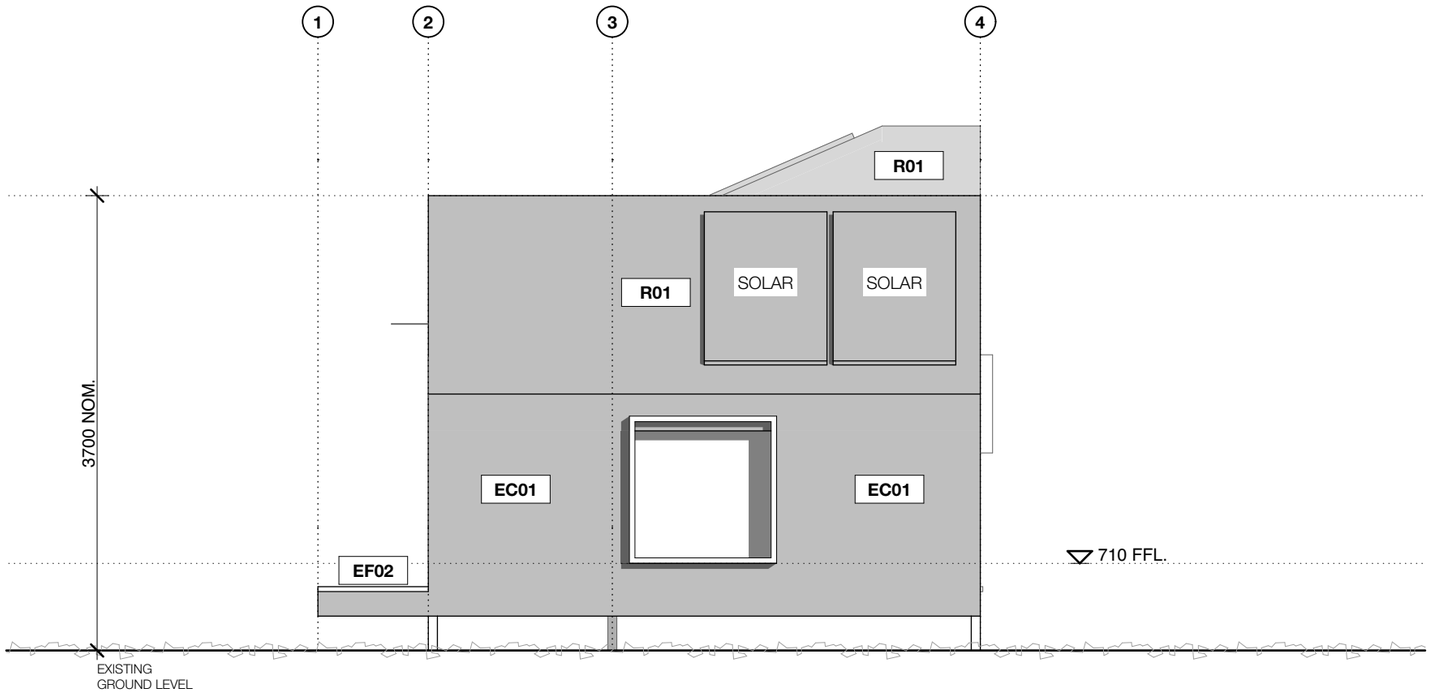

COMMUNAL ELEVATION 04
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MATERIAL NOTES & LEGENDS

FIXTURES AND FINISHES SCHEDULE

ROOF CLADDING:

R01: 4MM THICK FRP FLAT GRITTED PANEL. DARK GREY.

EXTERNAL FINISHES:

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CLADDINGS:

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AWNING: 6MM FOLDED ALUMINIUM FIXED PLATE TO FUTURE DETAIL. POWDERCOAT FINISH DARK GREY.

GLAZING: NON REFLECTIVE GLAZING

FLOOR FINISHES:

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

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Peter Walker, CC2143E

drawn by: PA, JC
checked by: TH

reason of issue
DEVELOPMENT APPROVAL

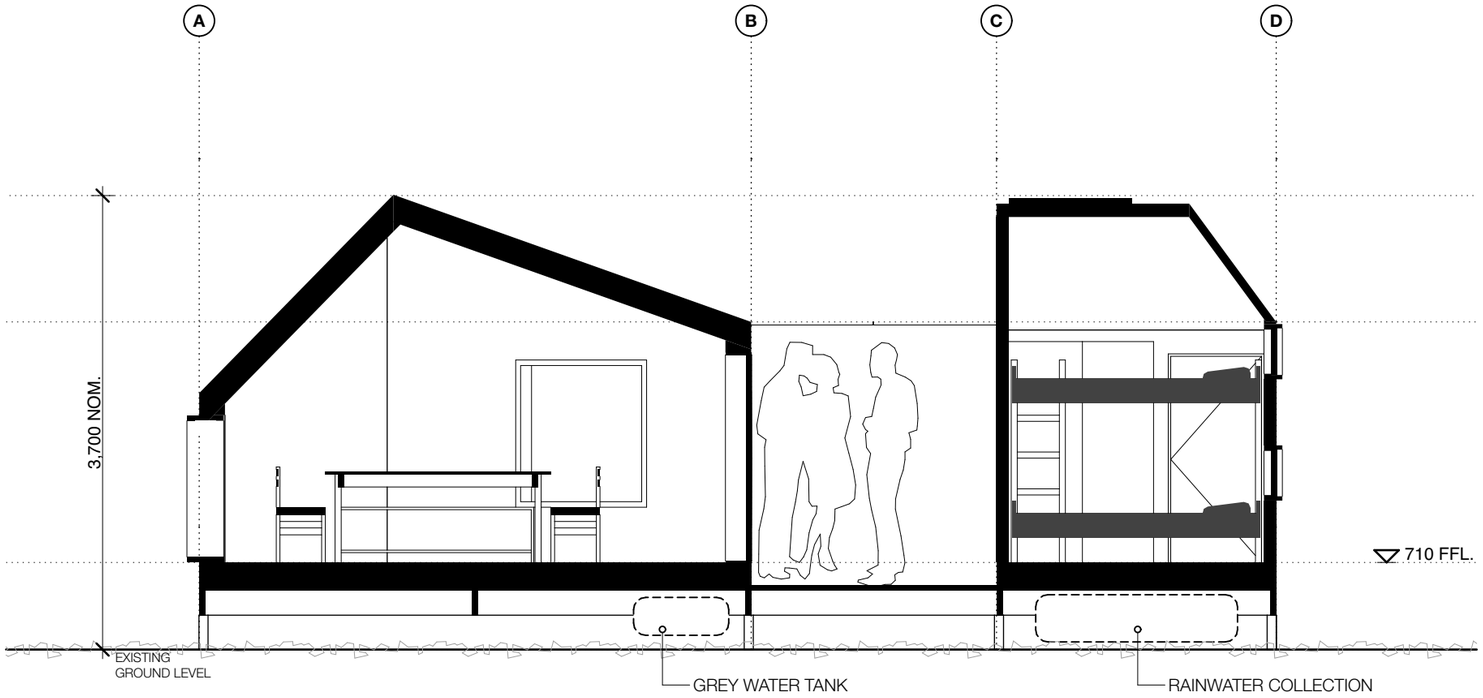
client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

project:
HALLS ISLAND STANDING CAMP

drawing title
ELEVATIONS
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da11**
issue: **DA**



COMMUNAL SECTION AA
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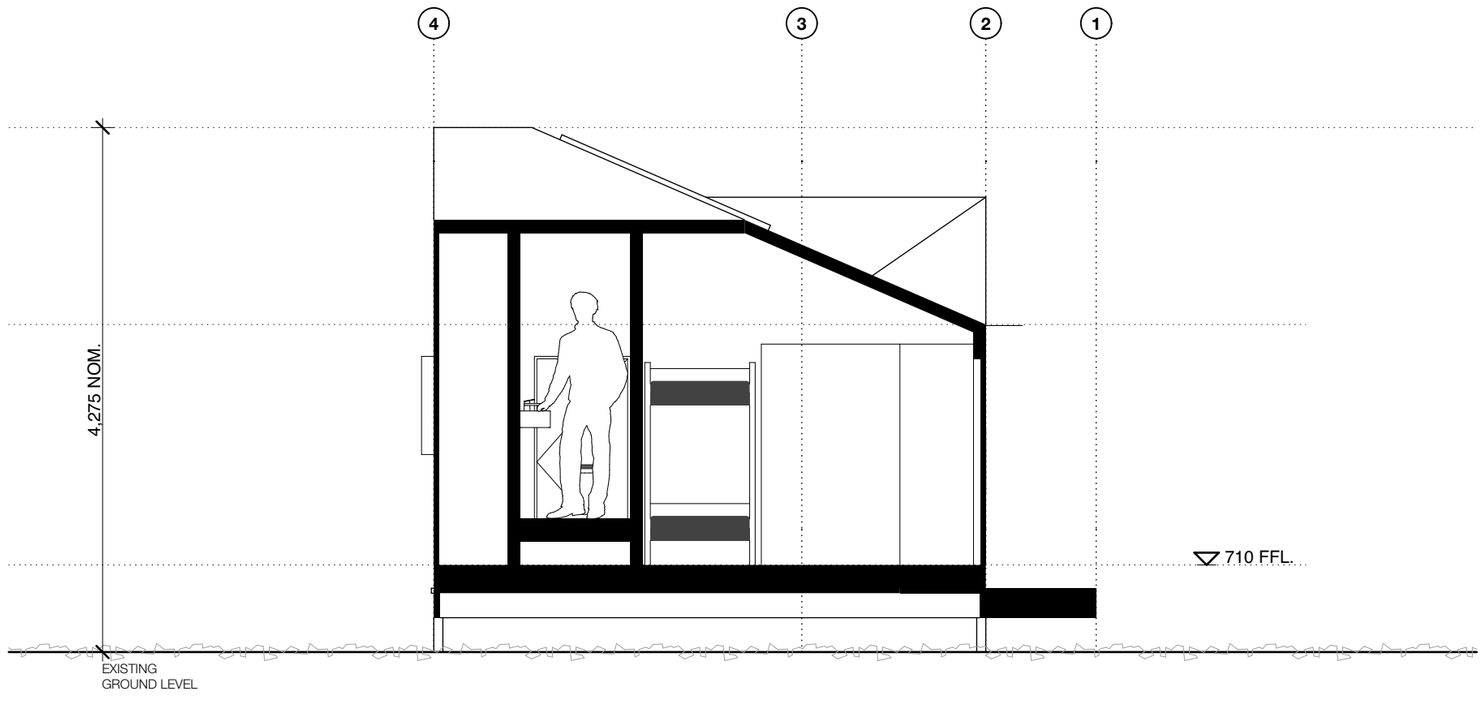

COMMUNAL SECTION BB
1:50

MATERIAL NOTES & LEGENDS

FIXTURES AND FINISHES SCHEDULE

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GLAZING: NON REFLECTIVE GLAZING

FLOOR FINISHES:

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A	9/10/18	DEVELOPMENT APPROVAL

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accredited designer:
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drawn by: PA, JC
checked by: TH

reason of issue
DEVELOPMENT APPROVAL

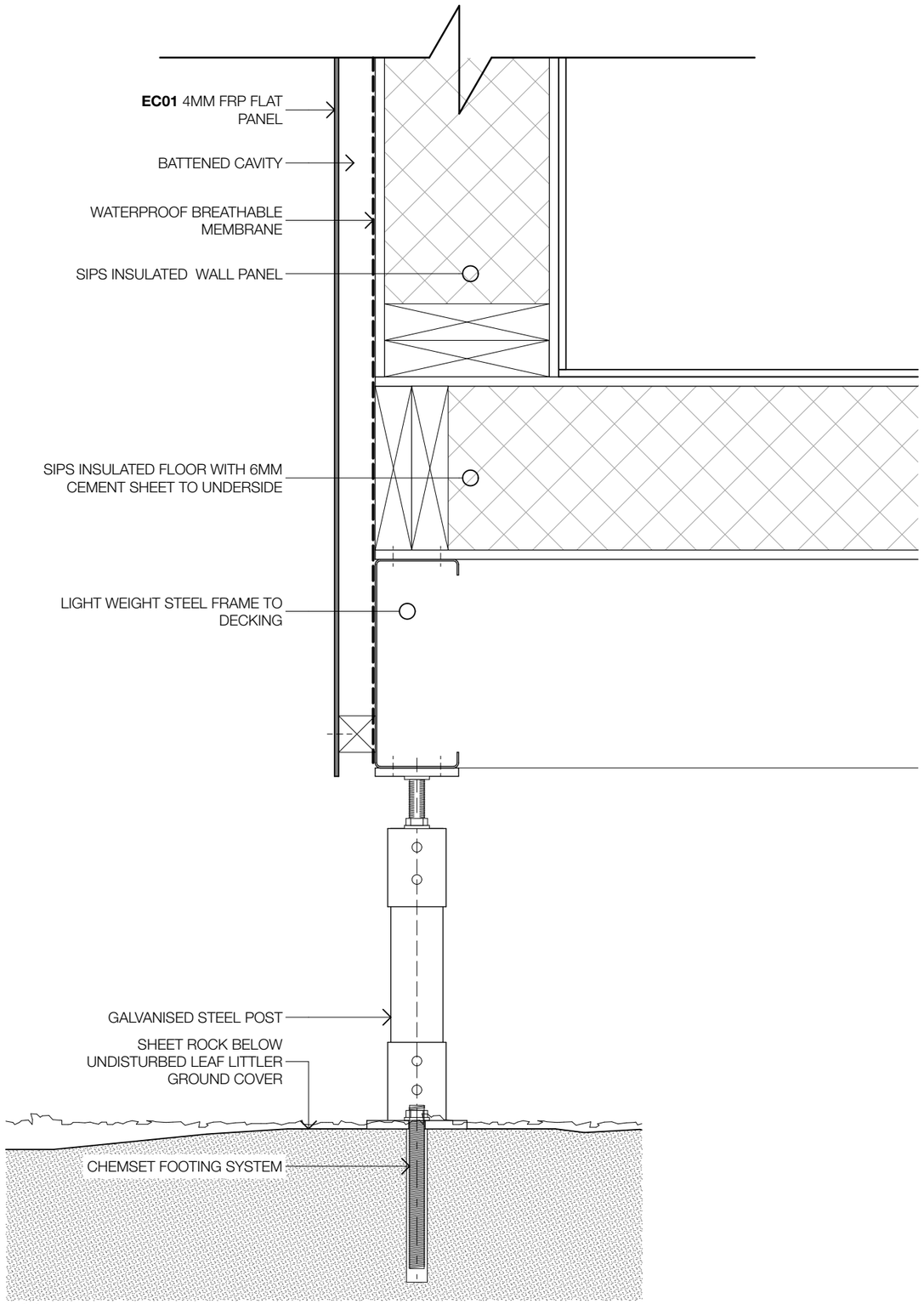
client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

project:
HALLS ISLAND STANDING CAMP

drawing title
SECTIONS
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da12**
issue: **DA**



TYPICAL FOOTING/WALL DETAIL NOM.
1:5

rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

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checked by: TH

reason of issue
DEVELOPMENT APPROVAL

client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

project:
HALLS ISLAND STANDING CAMP

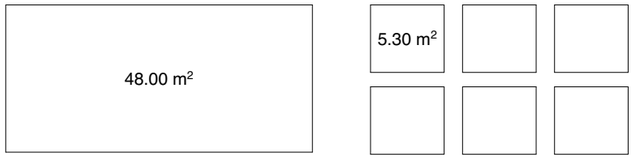
drawing title
DETAIL
(PRELIMINARIES)

print date: 9/10/18
original size: A3

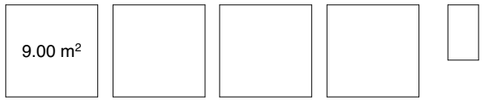
drawing nº: **15191-da13**
issue: **DA**

STANDING CAMP RELATIVE SCALE COMPARISON

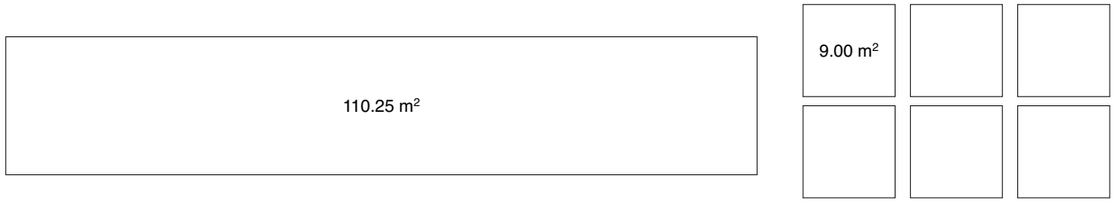
MARIA ISLAND WALK STANDING CAMP - 80m2



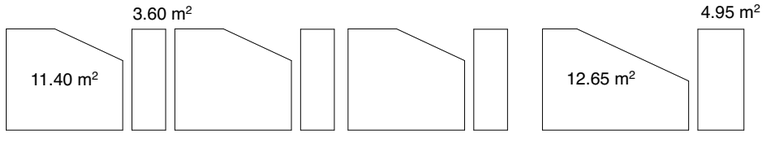
RIVERFLY WILDERNESS FLY FISHING STANDING CAMP - 38m2



KRAKANI LUMI - WUKALINA STANDING CAMP - 164m2



HALLS ISLAND PROPOSED STANDING CAMP 64m2



rev	date	purpose
A	9/10/18	DEVELOPMENT APPROVAL

CUMULUS STUDIO

info@cumulus.studio

Hobart
Suite 2, Level 2, 145 Macquarie St. Hobart, TAS 7000
+61(3) 6231 4841

Launceston
Level 1, 60 Cameron St. Launceston, TAS 7250
+61(3) 6333 0930

Melbourne
Level 1, 127 Greville St. Prahran, VIC 3181
+61(3) 9521 4518

general notes
These drawings show design intent & are suitable as a guide only. Do not scale off the drawings. All dimensions in millimetres. Dimensions of existing building are indicative only - they should not be relied on and are to be verified on site before commencing work. All documents shall be read in conjunction with specifications and any consultants detail. All work shall be in accordance with the Building Code of Australia, relevant Australian Standards & local authority by-laws and regulations. Any discrepancies, errors or omissions shall be referred to the Architects. Drawings are not to be used for construction until issued Construction

accredited designer:
Peter Walker, CC2143E

drawn by: PA, JC
checked by: TH

reason of issue
DEVELOPMENT APPROVAL

client:
DANIEL & SIMONE HACKETT
WILD DRAKE
LAUNCESTON
TAS, 7250

project:
HALLS ISLAND STANDING CAMP

drawing title
COMPARISON DIAGRAM
(PRELIMINARIES)

print date: 9/10/18
original size: A3

drawing n°: **15191-da14**
issue: **DA**

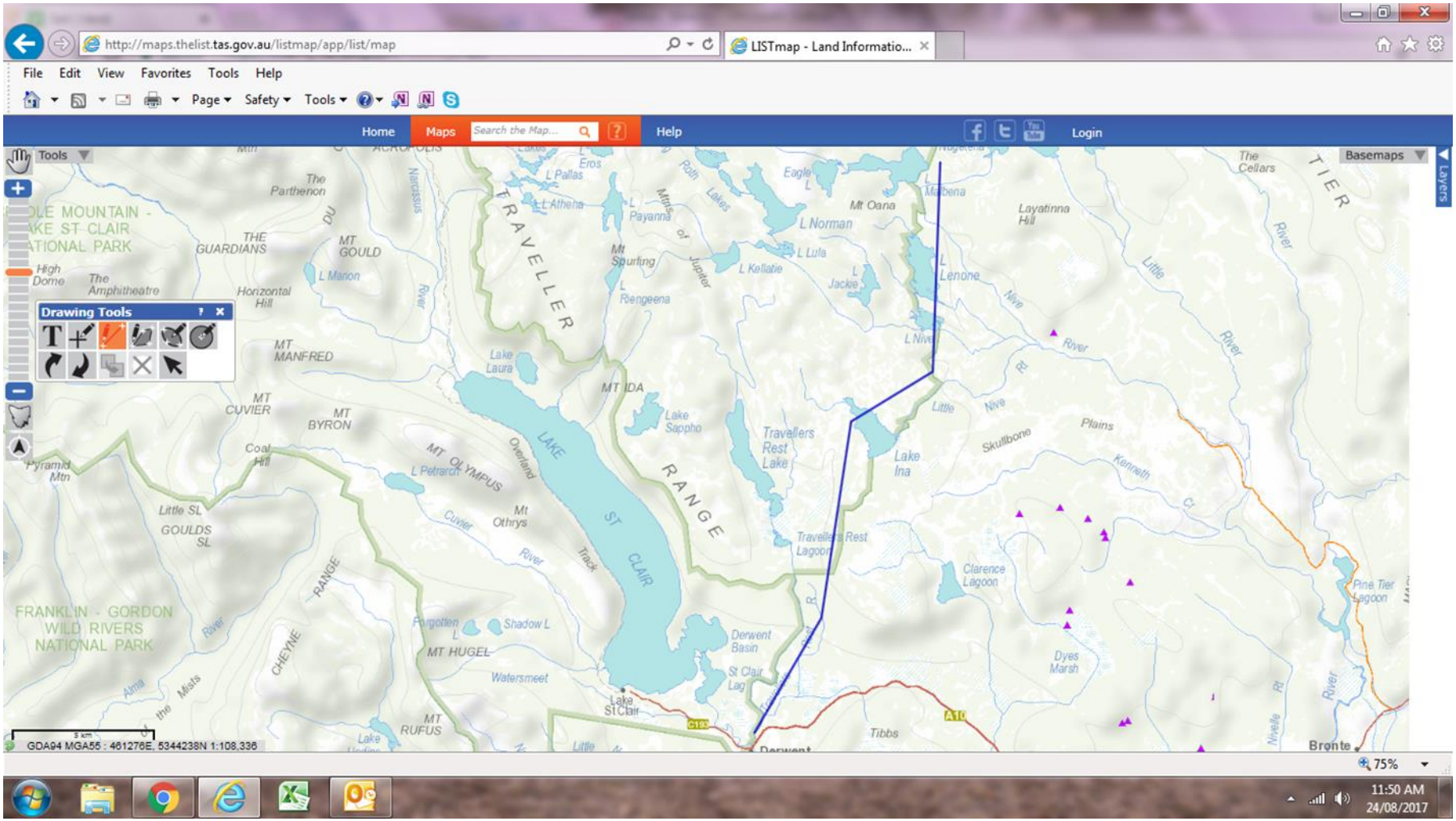
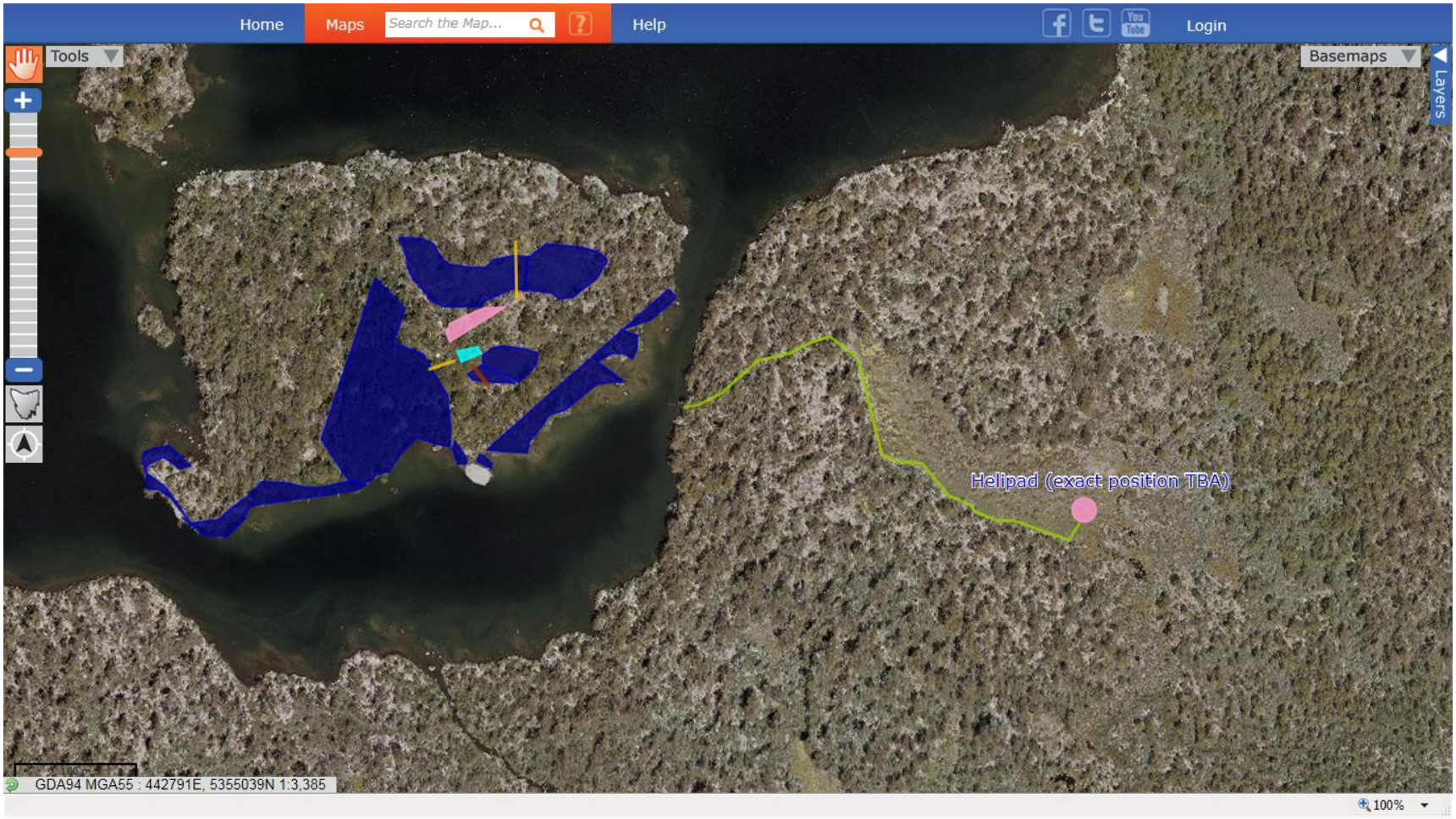


Image 1: Proposed helicopter flight path from Derwent Bridge to Lake St Clair, including nearest recorded raptor nests.



Map 2 - On-island customer exclusion-zones (dark blue), standing camp footprint (pink), Halls Hut existing footprint (aqua), new boardwalking (yellow), new boardwalking / rock pad to replace existing footpad through sphagnum (red), rock landing area (grey), approximate helipad site (pink circle) and walking route (olive)

Wild Drake P/L

PO Box 1061, Launceston 7250

Halls Island Development Application

Proposed use / development:

To construct and operate a small-scale Standing Camp on Halls Island, Lake Malbena, Tasmania. The primary theme of the project is one of environmental immersion, complemented by the Reg Hall and Walls of Jerusalem National Park cultural narrative. These themes are to be enhanced by world-class interpretation of the listed Outstanding Universal Values found in the World Heritage area.

Activities will include kayaking, hill-walking, bushwalking, cultural interpretation, wildlife viewing, occasional fishing, and the chance to participate in choreographed 'citizen-science' style field trips with guest-experts in the fields of science, art and culture. On-island activities will include continuing with the sixty-year history of poetry and art on the island, astronomy, botany, bird watching, and flora and fauna interpretation.

The Standing Camp would occupy a discrete ~800m2 site, and consist of three pods with complete-capture toiletry facilities, and one communal pod with guides accommodation, storage and toiletry facilities. Board-walking is to be used on-island where required to minimise impacts, and selective lancing of flora is required around the helicopter landing site, and hut building site.

Access to Halls Island is via a minimal ~9 minute helicopter transfer from Derwent Bridge (or other locations outside of the TWWHA, via the nominated flight route), which utilises a flight path and altitude that avoids crossing walking tracks, significant trout fishing destinations and minimises impacts on Matters of National Environmental Significance associated with the World Heritage Status of the property.

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The proposal has passed through the State Government's Parks and Wildlife Service Reserve Activity Assessment, and has received conditional approval. The proposal was also self-referred for assessment under the Federal Government Environmental Protection and Biodiversity Conservation Act (EPBC). See attached for copies. These assessments included two rounds of public comment through the Federal Government.

The proposed location (Halls Island) has been under private lease or licence since ~1955, preceding National Park and World Heritage Listing. The existing hut (which does not form part of this DA) has been privately owned since its construction.

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Please see attached AHT report and Unanticipated Discovery Plan. A section of the AHT report has been redacted as it contains information regarding Aboriginal cultural heritage that is not in the public domain, or relevant to the Development Application

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- ***Evidence of conditional approval from Parks and Wildlife Service:***

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- ***RAA Maps and images:***

Please see attached 'Halls Island Maps' for maps supplied during the RAA of relevance to the DA

- ***Clarification of (a) the helicopter departure point, (b) maximum trip numbers per year, and (c) maximum helicopter flight numbers per group and year:***

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(b) Maximum trip numbers (bookings) per year for the Halls Island product is capped (and conditioned by RAA) at 30 trips per annum. These trips are restricted (and conditioned by the RAA) to a maximum of six guests.

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At a maximum of 30 bookings per year, this extrapolates to a maximum of 120 return heli-transfers per year.

A return heli-transfer equates to between 18 and 22 minutes flight time. Under the capped number of bookings per year, and sympathetic scale of operations, there will be more than 300 days per year where there are no flights.

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RFI Part 4. Servicing

- ***(a) Design details of the wastewater pods and water tanks, (b) method and frequency of maintenance/servicing of the camp, (c) helicopter use for provision of supplies and removal of wastewater pods.***

(a) Wastewater pods and water tanks will be fully sealed tanks, of the same or similar design to those already in use within the TWWHA at Parks and Wildlife Service facilities, and other private operations. For example, see tanks manufactured by Gough Plastics or Orion Tanks at use in the TWWHA. An example can be found here http://www.gough.com.au/pdf/ENV-RTP-001.01-B.PDF .

As with existing operations in the TWWHA, there will be spare tanks stored on-site (within the pods) for use when full tanks are off-site for disposal.

(b+c) Servicing (food and supplies etc) will occur as part of customer transit flights. This negates the requirement for additional heli-provisioning trips etc.

Grey water will be backloaded on vacant heli-return legs (eg: after customers have been dropped off), as required. Greywater will be removed from the site by heli-slingline, a method used throughout the TWWHA to service infrastructure.

Sewage will be removed as per greywater above, with a frequency of once per annum or less.

RFI Part 5.

Please provide any relevant details regarding emergency/risk management planning:

The proponent is conditioned by State RAA approvals and oversight, and Federal EPBC conditions to prepare the following plans prior to the commencement of construction and operations. Mitigation, management and avoidance measures from the RAA approval and EPBC commitments are to be incorporated into the plans. Finalisation of these plans are reliant on the outcome of the approved building designs and final RAA approval, and any additional measures arising:

- 5.1 Operations Manual

- 5.2 Construction Environmental Management Plan

- 5.3 Weed and Hygiene Plan

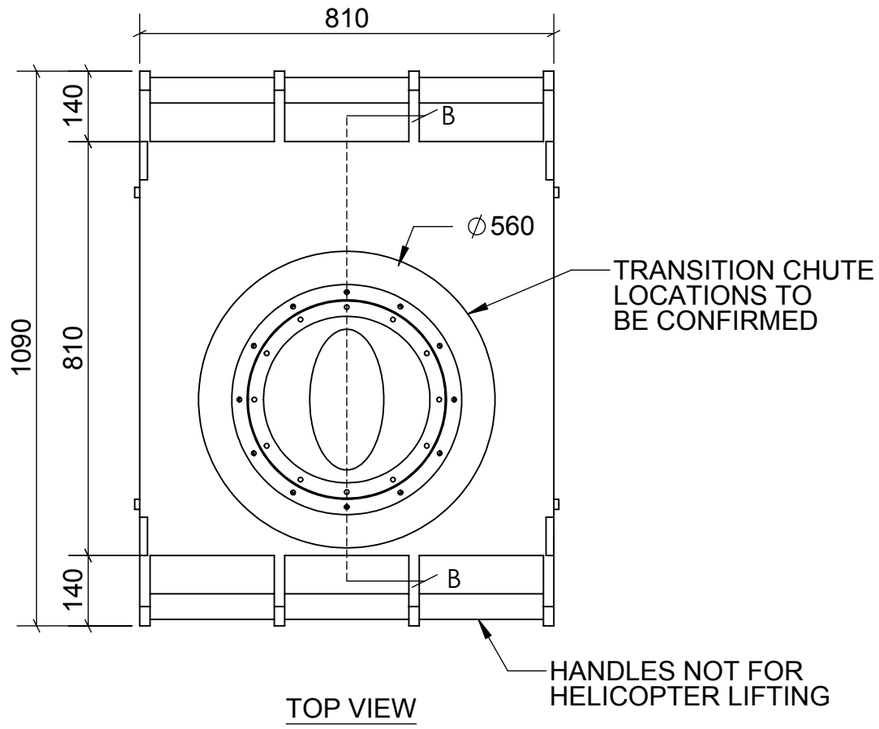
- 5.4 Indigenous Heritage Management Plan

- 5.5 Species and Communities of Significance Plan

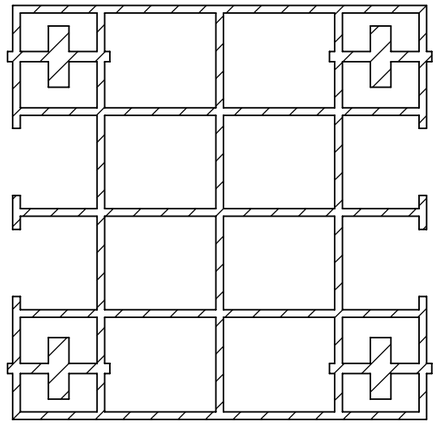
- 5.6 Fire Management Plan

- 5.7 Customised Fly Neighbourly Advice impact mitigation and avoidance prescription Plan

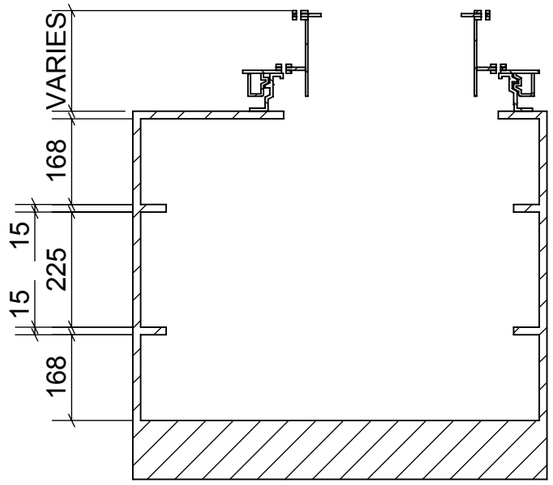
- 5.8 Wilderness Characteristics Management Plan



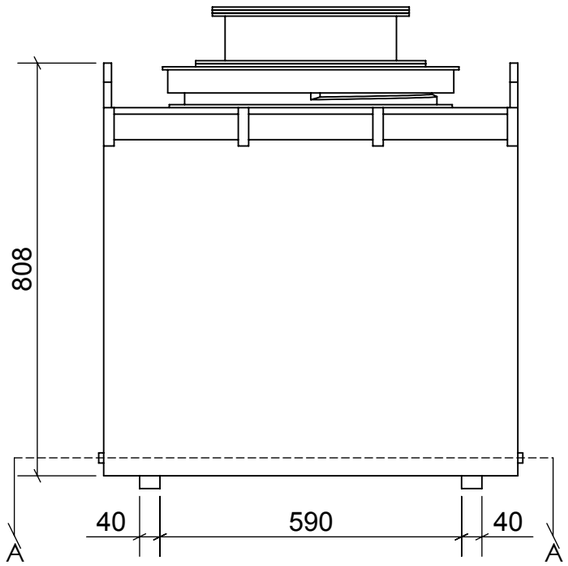
TOP VIEW



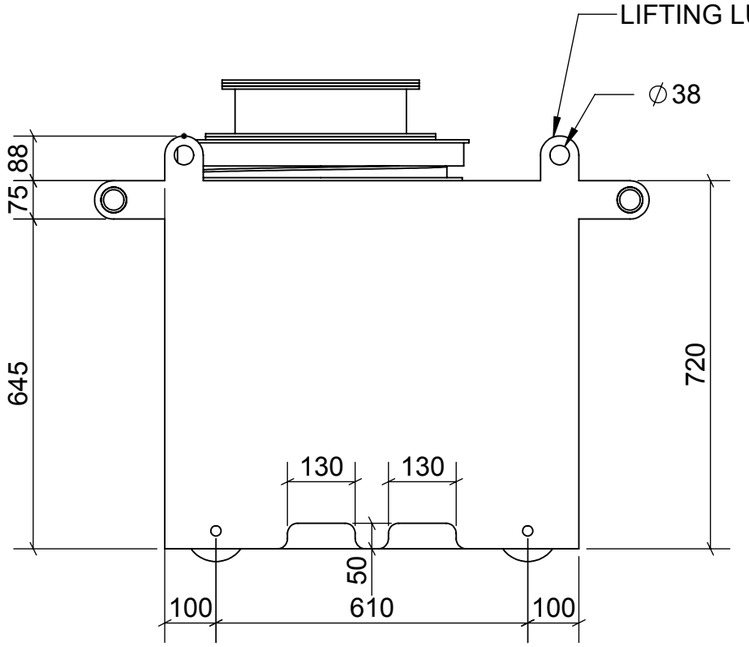
SECTION A-A
SCALE 1 : 12



SECTION B-B
SCALE 1 : 12



FRONT VIEW



SIDE VIEW

MATERIAL: 15mm HDPE

CLIENT APPROVAL

☐ APPROVED FOR CONSTRUCTION

☐ MAKE CHANGES AS NOTED

Name: .....
Signed: .....
Date: .....

No.	DATE	BY	REVISION DESCRIPTION	APPROV.
A	24.04.12	TL	ORIGINAL ISSUE	
B	27.04.12	TL	LIFTING LUGS ADDED	

GOUGH PLASTICS AUSTRALIA
Since 1989

Gough Industries Pty. Ltd.
833 Ingham Road
Bohle, Townsville
P.O. Box 7570, Garbutt BC, Qld. 4814.
Telephone 07 47747606
Facsimile 07 47747608
A.C.N. 010 028 547

	Signature	Date
DRAWN	T.LYNCH	24.04.12
DRN. CHK		
APPROVED		
		A3

RIVERFLY TOILET PODS

SCALE

ENV-RTP-001.01

B

REV

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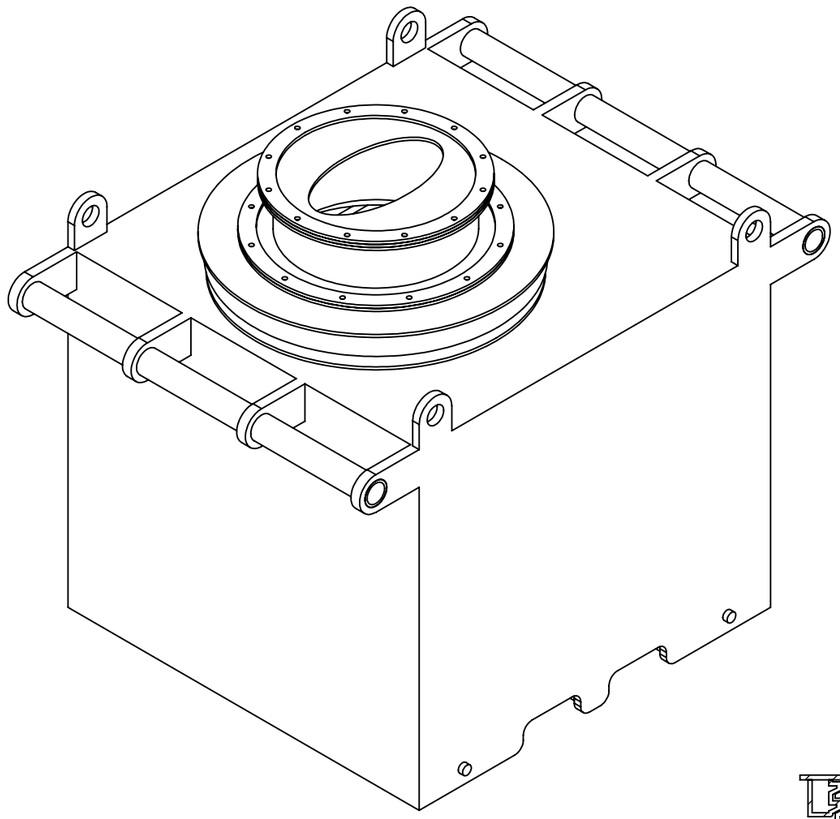

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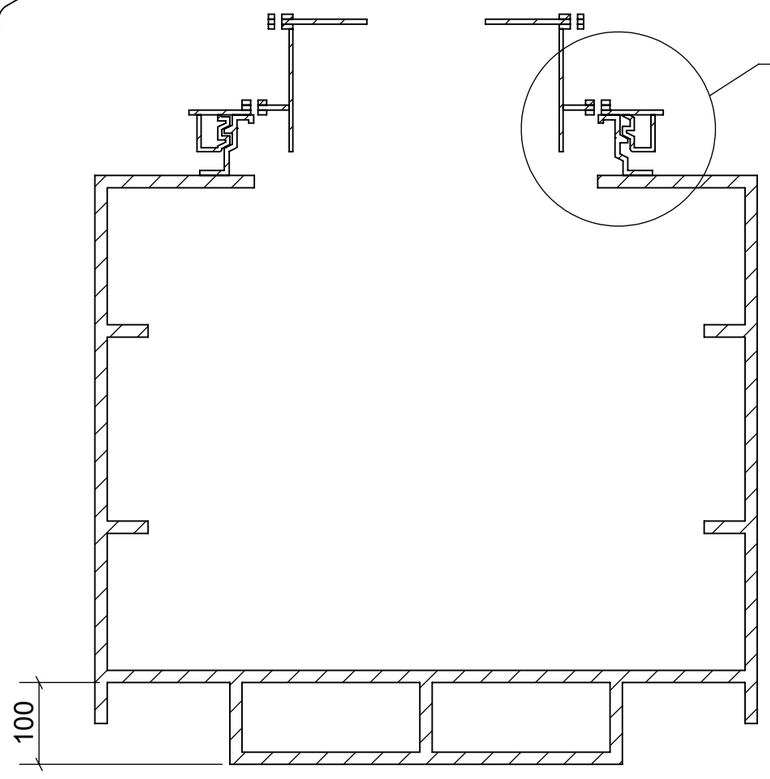
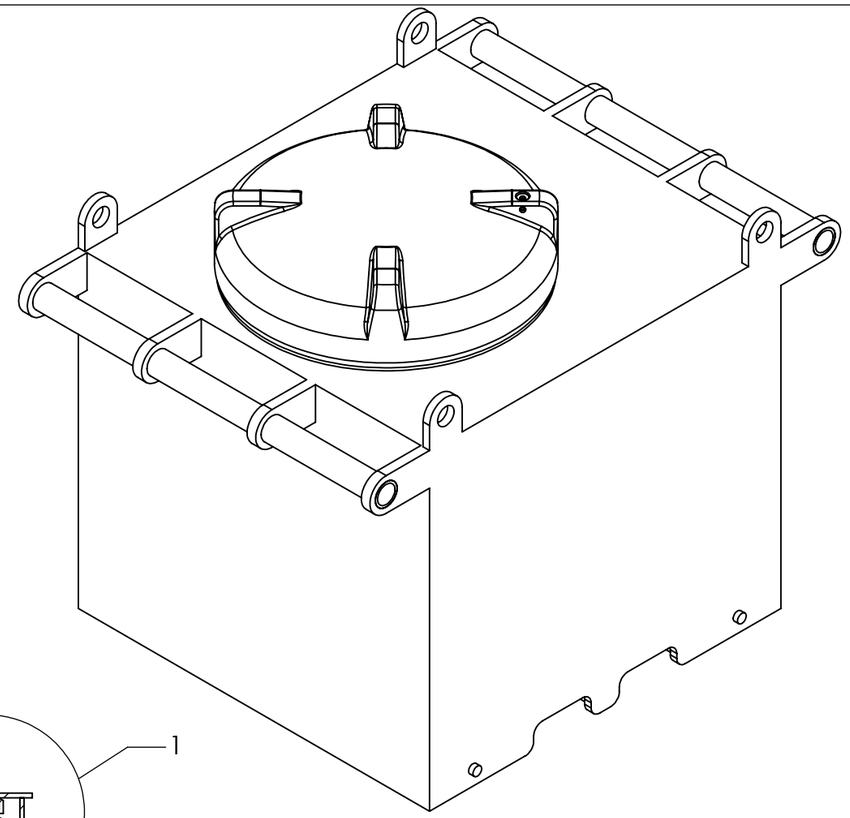


TYPICAL SECTION



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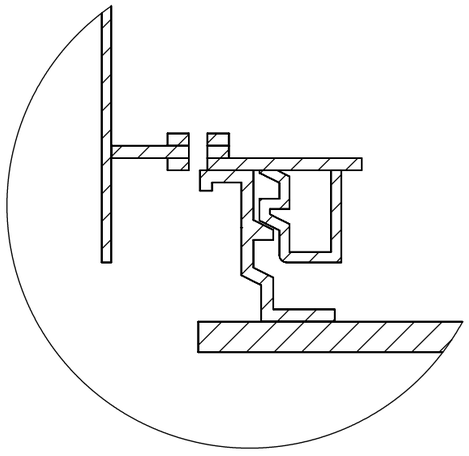

DETAIL 1
SCALE 1 : 3

CLIENT APPROVAL

☐ APPROVED FOR CONSTRUCTION

☐ MAKE CHANGES AS NOTED

Name: .....
Signed: .....
Date: .....

No.	DATE	BY	REVISION DESCRIPTION	APPROV.
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B	27.04.12	TL	LIFTING LUGS ADDED	

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A.C.N. 010 028 547

	Signature	Date
DRAWN	T.LYNCH	24.04.12
DRN. CHK		
APPROVED		
		A3

RIVERFLY TOILET PODS

SCALE

ENV-RTP-001.02

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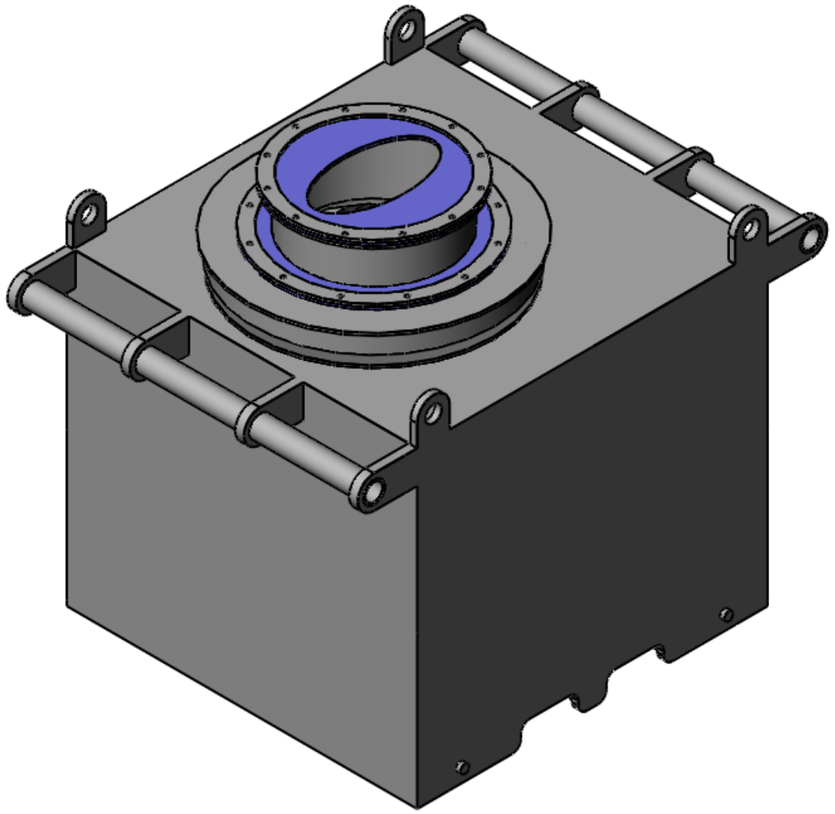

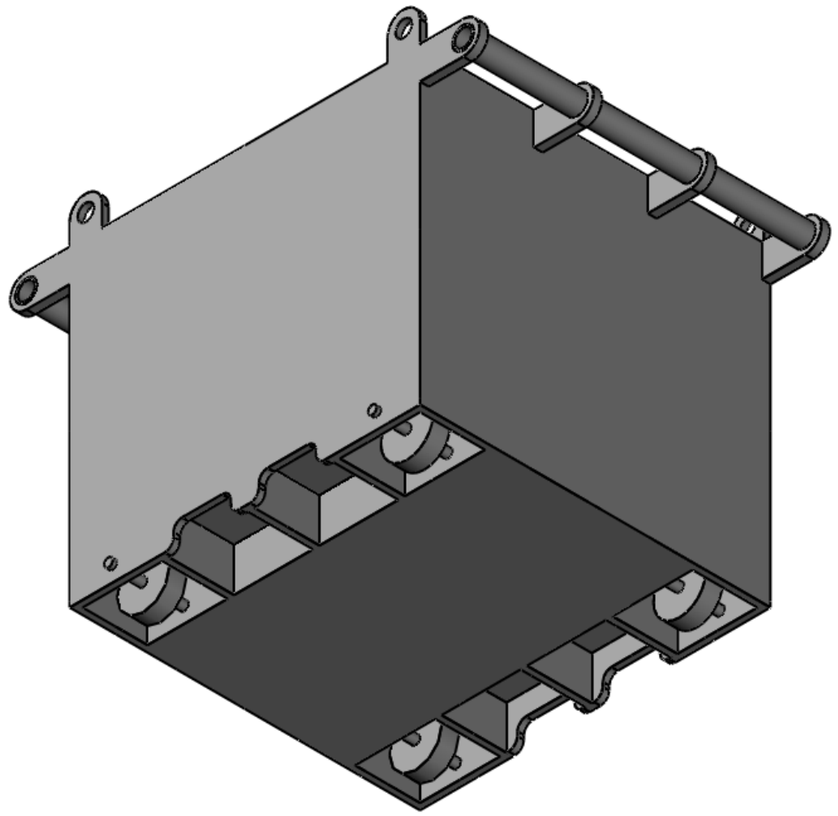

CLIENT APPROVAL

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Name: .....
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	Signature	Date
DRAWN	T.LYNCH	24.04.12
DRN. CHK		
APPROVED		
		A3

RIVERFLY TOILET PODS

SCALE

ENV-RTP-001.03

REV B

S:\Products\Engineering\Plastic Fabrication\Fly Fishing Fly Out Pods\Fly out Pods\

RE: ABORIGINAL HERITAGE DESKTOP ASSESSMENT

AHTP2343 - EOI (Confidential) - Hall's Island - Lake Malbena

Dear Rebecca,

Aboriginal Heritage Tasmania (AHT) has completed a search of the Aboriginal Heritage Register (AHR) regarding the proposed EOI of Hall's Island, Lake Malbena and can advise that there are no Aboriginal heritage sites recorded within or close to the property. Due to a review of previous reports and the level of impact intended for the site, it is believed that the area has a low probability of Aboriginal heritage being present.

Accordingly there is no requirement for an Aboriginal heritage investigation and AHT have no objection to the project proceeding.

[redacted]

Please be aware that all Aboriginal heritage is protected under the *Aboriginal Relics Act 1975*. If at any time during works you suspect Aboriginal heritage, cease works immediately and contact AHT for advice. Attached is an Unanticipated Discovery Plan, which you should have on hand during ground disturbing works, to aid you in meeting your requirements under the Act.

If you have any queries please do not hesitate to contact AHT.

Kind Regards,

Samuel Dix

Archaeologist

Aboriginal Heritage Tasmania
Department of Primary Industries, Parks, Water and Environment
5th Floor, Marine Board Building, 1 Franklin Wharf
GPO Box 44, Hobart, TAS, 7001

p 03 6165 3152
e aboriginal@heritage.tas.gov.au

www.aboriginalheritage.tas.gov.au

Unanticipated Discovery Plan

Procedure for the management of unanticipated discoveries of Aboriginal relics in Tasmania

For the management of unanticipated discoveries of Aboriginal relics in accordance with the *Aboriginal Heritage Act 1975* and the *Coroners Act 1995*. The Unanticipated Discovery Plan is in two sections.

Discovery of Aboriginal Relics other than Skeletal Material

Step 1:

Any person who believes they have uncovered Aboriginal relics should notify all employees or contractors working in the immediate area that all earth disturbance works must cease immediately.

Step 2:

A temporary 'no-go' or buffer zone of at least 10m x 10m should be implemented to protect the suspected Aboriginal relics, where practicable. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected Aboriginal relics have been assessed by a consulting archaeologist, Aboriginal Heritage Officer or Aboriginal Heritage Tasmania staff member.

Step 3:

Contact Aboriginal Heritage Tasmania on **1300 487 045** as soon as possible and inform them of the discovery. Documentation of the find should be emailed to **aboriginal@heritage.tas.gov.au** as soon as possible. Aboriginal Heritage Tasmania will then provide further advice in accordance with the *Aboriginal Heritage Act 1975*.

Discovery of Skeletal Material

Step 1:

Call the Police immediately. Under no circumstances should the suspected skeletal material be touched or disturbed. The area should be managed as a crime scene. It is a criminal offence to interfere with a crime scene.

Step 2:

Any person who believes they have uncovered skeletal material should notify all employees or contractors working in the immediate area that all earth disturbance works cease immediately.

Step 3:

A temporary 'no-go' or buffer zone of at least 50m x 50m should be implemented to protect the suspected skeletal material, where practicable. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected skeletal remains have been assessed by the Police and/or Coroner.

Step 4:

If it is suspected that the skeletal material is Aboriginal, Aboriginal Heritage Tasmania should be notified.

Step 5:

Should the skeletal material be determined to be Aboriginal, the Coroner will contact the Aboriginal organisation approved by the Attorney-General, as per the *Coroners Act 1995*.

Guide to Aboriginal site types

Stone Artefact Scatters

A stone artefact is any stone or rock fractured or modified by Aboriginal people to produce cutting, scraping or grinding implements. Stone artefacts are indicative of past Aboriginal living spaces, trade and movement throughout Tasmania. Aboriginal people used hornfels, chalcedony, spongelite, quartzite, chert and silcrete depending on stone quality and availability. Stone artefacts are typically recorded as being 'isolated' (single stone artefact) or as an 'artefact scatter' (multiple stone artefacts).

Shell Middens

Middens are distinct concentrations of discarded shell that have accumulated as a result of past Aboriginal camping and food processing activities. These sites are usually found near waterways and coastal areas, and range in size from large mounds to small scatters. Tasmanian Aboriginal middens commonly contain fragments of mature edible shellfish such as abalone, oyster, mussel, warrener and limpet, however they can also contain stone tools, animal bone and charcoal.

Rockshelters

An occupied rockshelter is a cave or overhang that contains evidence of past Aboriginal use and occupation, such as stone tools, middens and hearths, and in some cases, rock markings. Rockshelters are usually found in geological formations that are naturally prone to weathering, such as limestone, dolerite and sandstone

Quarries

An Aboriginal quarry is a place where stone or ochre has been extracted from a natural source by Aboriginal people. Quarries can be recognised by evidence of human manipulation such as battering of an outcrop, stone fracturing debris or ochre pits left behind from processing the raw material. Stone and ochre quarries can vary in terms of size, quality and the frequency of use.

Rock Marking

Rock marking is the term used in Tasmania to define markings on rocks which are the result of Aboriginal practices. Rock markings come in two forms; engraving and painting. Engravings are made by removing the surface of a rock through pecking, abrading or grinding, whilst paintings are made by adding pigment or ochre to the surface of a rock.

Burials

Aboriginal burial sites are highly sensitive and may be found in a variety of places, including sand dunes, shell middens and rock shelters. Despite few records of pre-contact practices, cremation appears to have been more common than burial. Family members carried bones or ashes of recently deceased relatives. The Aboriginal community has fought long campaigns for the return of the remains of ancestral Aboriginal people.

Further information on Aboriginal Heritage is available from:

Aboriginal Heritage Tasmania
Natural and Cultural Heritage Division
Department of Primary Industries, Parks, Water and Environment
GPO Box 44 Hobart TAS 7001

Telephone: **1300 487 045**
Email: **aboriginal@heritage.tas.gov.au**
Web: **www.aboriginalheritage.tas.gov.au**

Wild Drake P/L

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(a) Wastewater pods and water tanks will be fully sealed tanks, of the same or similar design to those already in use within the TWWHA at Parks and Wildlife Service facilities, and other private operations. For example, see tanks manufactured by Gough Plastics or Orion Tanks at use in the TWWHA. An example can be found here http://www.gough.com.au/pdf/ENV-RTP-001.01-B.PDF .

As with existing operations in the TWWHA, there will be spare tanks stored on-site (within the pods) for use when full tanks are off-site for disposal.

(b+c) Servicing (food and supplies etc) will occur as part of customer transit flights. This negates the requirement for additional heli-provisioning trips etc.

Grey water will be backloaded on vacant heli-return legs (eg: after customers have been dropped off), as required. Greywater will be removed from the site by heli-slingline, a method used throughout the TWWHA to service infrastructure.

Sewage will be removed as per greywater above, with a frequency of once per annum or less.

RFI Part 5.

Please provide any relevant details regarding emergency/risk management planning:

The proponent is conditioned by State RAA approvals and oversight, and Federal EPBC conditions to prepare the following plans prior to the commencement of construction and operations. Mitigation, management and avoidance measures from the RAA approval and EPBC commitments are to be incorporated into the plans. Finalisation of these plans are reliant on the outcome of the approved building designs and final RAA approval, and any additional measures arising:

- 5.1 Operations Manual
- 5.2 Construction Environmental Management Plan
- 5.3 Weed and Hygiene Plan
- 5.4 Indigenous Heritage Management Plan
- 5.5 Species and Communities of Significance Plan
- 5.6 Fire Management Plan
- 5.7 Customised Fly Neighbourly Advice impact mitigation and avoidance prescription Plan
- 5.8 Wilderness Characteristics Management Plan

Tasmanian Government

Department of Primary Industries, Parks Water and Environment

GPO Box 1751, Hobart, TAS 7001 Australia
Ph 03) 6165 4234 Fax 03) 6173 0226
www.parks.tas.gov.au

Ms Jacqui Tyson
Planning Consultant
Central Highland Council
C/- kbradburn@centralhighlands.tas.gov.au

Dear Ms Tyson

PROPOSED VISITOR ACCOMMODATION (STANDING CAMP) - HALLS ISLAND, LAKE MALBENA, WALLS OF JERUSALEM NATIONAL PARK

I write regarding the development application (DA) by Wild Drake Pty Ltd for visitor accommodation at Halls Island, Lake Malbena, within the Walls of Jerusalem National Park, and your request to provide more information. As a delegate of the Director of National Parks and Wildlife, I submit the following:

- The proposal occurs on land within the Walls of Jerusalem National Park, for which the Director of the Tasmania Parks and Wildlife Service (PWS) is the Managing Authority under the *National Parks and Reserves Management Act 2002* (NPRMA).
- The Walls of Jerusalem National Park is within the Tasmanian Wilderness World Heritage Area (TWWHA), which is managed in accordance with a statutory management plan approved under the NPRMA, that being the *TWWHA Management Plan 2016*.
- Under the management plan, the land the development is proposed on is zoned as Self-Reliant Recreation Zone.
- The management plan allows visitor accommodation in the form of a standing camp within the Self-Reliant Recreation Zone.
- The structures, as proposed, would meet the definition of a standing camp under the current *PWS Standing Camp Policy 2006*.
- As such, the proposed development is allowable under the management plan, and the PWS has consented to the DA being submitted on that basis.

In regard to evidence of conditional approval from the PWS, the proposal has been assessed via the PWS Reserve Activity Assessment (RAA) process, and I understand that the proponent has submitted this completed RAA. You will note that Step 7 of the RAA states *"at this point the assessment from a PWS perspective is complete and PWS is signalling it plans to approve the Activity Plan … subject to any further conditions that are imposed by external assessment."*

This status means that, subject to an approved planning permit and any associated conditions, the PWS intends to approve the proposal subject to appropriate conditions and final review.

Should you have any queries regarding this matter, please contact Mark Bryce, PWS Director Operations, by telephone on 6165 4272, or by email to mark.bryce@parks.tas.gov.au

Yours sincerely

Jason Jacobi
GENERAL MANAGER
PARKS AND WILDLIFE SERVICE

16 November 2018

Copy to: Daniel Hackett

Tasmanian Government

Department of Primary Industries, Parks, Water and Environment

GPO Box 1751, Hobart, TAS 7001 Australia
Ph 03) 6165 4234 Fax 03) 6173 0226
www.parks.tas.gov.au

Mr Daniel Hackett
RiverFly 1864
PO Box 1061
LAUNCESTON TAS 7250

Dear Daniel

HALLS ISLAND STANDING CAMP PRELIMINARY DESIGN APPROVAL.

Parks and Wildlife Service (PWS) staff have reviewed the preliminary development design documents, provided by yourself on 4 June 2018 (attached), and have determined that the documents reflect the intent of the Reserve Activity Assessment (RAA), and the proposed standing camp and infrastructure design should ensure that the development is unobtrusive in the landscape.

The camp style has been designed to be sympathetic and in keeping with the existing trappers' style hut on the island. The construction materials chosen are considered appropriate as the proposed textures (FRP flat gritted panel cladding and 38x38 FRP grating for boardwalks) and colours (dark grey) are sympathetic to the local landscape.

Designs for the pods should meet the 'Type C' Standing Camp policy intent; although solid panel construction is proposed due to the remote alpine environment as it is lightweight and easily demountable, should the need arise.

The FRP boardwalks proposed are to minimise ground and threatened species impacts; are designed to let light through; will be removable if required; and any impacts should be easily rehabilitated.

The proposed helipad site has changed to be on a sheet rock area, negating the need for construction of a helipad and associated boardwalk as shown in the attached plans.

Please note that final designs for a 'Type C' standing camp must be approved by the PWS Engineer prior to seeking building approval in accordance with the *Building Act 2016* stage, as per the dot points below:

Prior to construction, the following building design will be required by the PWS:

- the FRP boardwalk and footings design, including height above ground and safety standards;
- design and capacity of full capture black and grey water pods, including handling methods for lifting out via helicopter;

- suitability of proposed external coatings to blend in with the environment;
- site assessment (geotechnical, wind classification and snow loadings); and
- detailed drawings and specifications (including energy assessment and ventilation/condensation control);.

Please note that this letter does not constitute land owner consent for the purposes of submitting a development application. Land owner consent is only provided following the final approval of the RAA. Final approval is awaiting determination from the *Environment Protection and Biodiversity Conservation Act 1999* referral process.

Should you have any further queries regarding this matter, please contact Chris Colley, PWS Regional Manager North, by telephone on 6777 2173 / 0427 125 287 or by email to chris.colley@parks.tas.gov.au

Yours sincerely

Jason Jacobi
GENERAL MANAGER
PARKS AND WILDLIFE SERVICE

3 August 2018

PWS Reserve Activity Assessment - Level 2 to 4

G18/613-01
113175
cc - 110850PRO

Activity Title: RAA Halls Island proposed standing camp, helipad and guided tourism EOI within Tasmanian Wilderness World Heritage Area.

RAA Administration and Tracking

Important Dates and Information

Start Date (Date RAA submitted)	29-09-2017	Decision Required by	Oct 2017
Return comments on RAA to	Andrew Crowden, Regional Planner North		
Hobart office file Number	113175	Region file Number	
PWS Cost Centre (if assigned)			

Step 1. Activity Summary

This step states the details of the proposed activity. Enough information is provided so that someone unfamiliar with the activity will gain a clear idea of what is involved and where the activity will occur. Use the Maplink, Natural Values Atlas and PWS Site Register reports to help in filling out this step (see RAA Manual).

1.1 Contact Details (who)

Initiating Organisation	Daniel Hackett		
Initiating Person	Daniel Hackett	Phone contact:	[redacted]
Initiating Person Email	[redacted]		
Initiating Person Address			
PWS Contact Officer	Andrew Crowden	Phone contact:	[redacted]
PWS Contact Officer Email	[redacted]		

1.2 Location Information (where)

Location of Activity	Halls Island, Lake Malbena		
Reserve Name & Tenure	TWWHA (Central Plateau Conservation Area and Walls of Jerusalem National Park)		
Grid Ref (GDA): Easting	441994	Northing	5355399
PWS Field Centre	Derwent Bridge	PWS Region	NW & N
IMS/RSF Site Number	SNGWT41494 SWLSC38953	IMS/RSF Site Name	Central Plateau CA NMVS (GWT) Walls of Jerusalem NP NMVS (LSC)
Map. Number (1:25000)	4435	Map Name (1:25000)	**Olive**

1.3 Description (what)

Background information – Halls Island and Reg Hall

Reg Hall was one of the first European bushwalkers to regularly visit the Walls of Jerusalem, with his first visit to the area in the early 1920's.

More than twenty of the Walls Of Jerusalem place names (including Pool of Siloam, Damascus Gate, West Wall) were attributed to Reg Hall, and the first widely used walking maps of The Walls of Jerusalem, complete with topography were also developed by Reg. These remained in use by the main bushwalking clubs till the advent of aerial-mapping in the mid-1950's and the first government produced topographical maps. It is on these maps that Reg allocated the formal place names as we know them today.

The area around Ling Roth Lakes was Reg's favourite on the plateau, and it was during a walk (circa 1950) from the central Walls to Ling Roth Lakes that he first spotted Halls Island, the perfect location for a hidden hut. After hitching a ride on the government aerial survey plane, Halls Island was confirmed as the perfect place for a long-planned hidden hut, and a submission was made to the Lands Department to purchase the island. This bid was blocked by the Hydro, who had plans to dam the lake, and a lease was instead issued.

The hut-building process commenced circa summer 1954, with bulky materials palletised back in Launceston, before being fitted with long poles and bright orange flagging—not unlike the fibreglass flagpoles that use to adorn kids' bicycles. The purpose of these were simple: so that the caches of building materials could be found again, after they were heaved out the side-door of plane, overhead of Lake Malbena.

Over the course of following two summers' the hut was completed with the aid of a local shepherd (an employee of another famed bushman, Dick Reed), and two others. Pencil-pine was milled on-site for framing, while the pallets of timber and metal sheeting formed the tongue-and-groove flooring, trademark barn-style door, and pitched-roof with large skillion. A very effective open-fireplace, stacked with drystone wall inside of a steel and timber chimney, and a second small skillion at the back to house a portable kayak completed the design. This hut would become the first hut to ever be designed and built in the Walls of Jerusalem area specifically for recreation, and the design would go on to be used in subsequent huts at Lake Meston, and Junction Lake.

The island has now been in use for recreation, for in excess of sixty years. The approach routes to the island were formed from horse and haflinger use, over a period of thirty years of more, and floatplanes were used for access on numerous occasions by Reg Hall during the 1970's.

Jump forward sixty years, and Daniel and Simone Hackett are now the owners & custodians of Halls Hut, after Reg's elderly daughter Liz McQuilken sought them out as new owners. The current tourism proposal has been submitted with her blessing.

Halls Island itself is a location with previous and existing European human activity and built heritage, and obvious long-term disturbance.

Proposal: To develop and operate a luxury Standing Camp on Halls Island, Lake Malbena.

The primary theme of the development is one of cultural immersion, built around the Reg Hall and Walls of Jerusalem National Park narrative. This theme is to be enhanced by world-class interpretation of the listed Outstanding Universal Values found in the World Heritage area, and the wider Aboriginal cultural landscape.

Key target markets will be discerning travellers looking for new discoveries, deep heritage and strong narratives, disconnection from the outside world, and privileged access to Tasmania's wilderness.

Activities will include kayaking, hill-climbing, bushwalking, cultural interpretation, wildlife viewing, and the chance to participate in choreographed field trips with guest-experts in the fields of science, art and culture. On island activities will include continuing with the sixty year history of poetry and art on the island, astronomy, botany, bird watching, astronomy and flora and fauna interpretation.

The development is aimed at the very top of the tourism market – a market only tapped in Tasmania by Safire. Ensuring that the outcomes are sensitive to the environmental and social expectations of operations is the TWWHA (Tasmanian Wilderness World Heritage Area), the scale will be extremely low: 25-30 trips annually, with just 6 customers per trip.

1.3.1 Camp Design

The infrastructure would be erected for 12 months per year (to minimise impacts arising from seasonal removal).

The operation would run seasonally from approximately November to May annually, and provide for a high-level of visitor comfort and environmental interpretation

The camp design would include:

- Three twin-share accommodation buildings, of approximately 3mx3m.
- One central kitchen / communal hut, of approximately 7mx4m
- Associated toiletry building(s), designed as complete-capture pod systems for removal of all sewage and grey-water.
- All buildings will be of sympathetic design and scale reflecting key features of the existing Halls Hut, and will incorporate:
    - Minimal internal 12v lighting, no external lighting (beyond those required for safety). Where possible, lighting will be floor-level, and use red light to minimise light transmission etc.
    - Gas or electric heating
    - A mixture of timber and steel construction in muted bush-tones. This will provide buildings that require a minimum of maintenance and associated activity.
    - Minimal fixings anchoring footings to the ground (rock) are planned (e.g. epoxy and bolts), and site location is open sheet rock requiring no excavations, earthworks or altering of natural drainage.
    - Site location allows the new camp to be discretely and sympathetically hidden from sight when viewed from the existing historic hut, and from the mainland. See appendix Image 1 for an artists' impression of the Standing Camp location,

in reference to the historic Halls Hut.

  - The Standing Camp will be completely removable should the need arise.
  - See appendix Image 6 for an artists' impression of accommodation building.

- A helicopter landing pad will be constructed on the mainland adjacent to Halls Island, facilitating arrival / departures. Approximate location to be sited on a coral-fern plain (to be confirmed during on-site selection with Flora and Fauna specialists from North Barker). Approx. location GDA94 442409E, 5355287N
- A helicopter flight-path has been developed to ensure minimal airtime, and minimal impacts on other users in the area. See Appendix Halls Island Maps, Maps 2 & 3. The flight path results in the minimum flight time over the TWWHA (approx. 11 minutes each way), and avoids crossing and walking routes. The flight path also avoids major trout fishing destinations, and only crosses above two waters known to contain trout.
- The proposed flight path avoids all known raptor-nesting sites, with the closest being + 7km's to the east. See Appendix Halls Island Maps, Map 1.
- Informal boat mooring will occur in the vicinity of the natural rock landing GDA94 44197E, 5355296N
- Helicopter servicing relating to construction, maintenance, and re-supply of Standing Camp will occur within the Standing Camp footprint, utilising an area of natural sheet-rock for depositing and the collection of goods (via slinging) GDA94 442007E, 5355448N
- See Appendix Halls Island Maps, Map 6, for an indication of the standing camp site plan. Note that exact locations of huts and outbuildings will be determined at time of construction, in co-ordination with a flora and fauna specialist, to minimise impacts on flora, and to maximise use of the naturally cleared areas of flat sheet-rock.
- The pruning (preferential), or removal of <6 alpine yellow-gums damaged in the winter 2016 storms may need to occur, to protect the culturally important existing Halls Hut from damage, and comply with OH&S obligations. Materials from these trees may be re-used in the restoration of Halls Hut, or as a fuel source in existing Halls Hut. The pruning (preferred) or removal by hand of a small number of common species (teatree, hakea, bauera) may also be required among the selected site.
- The Standing Camp would occupy a primary area within a 40 metre x 20metre site.
  - FRP board-walking is envisaged to be used around the island, to facilitate access to and from the Standing Camp, and to key on-island interpretation sites, while minimising impacts on flora. The three sites are
  - ~25 metres of raised FRP boardwalk at MSP sphagnum peatland 442006E, 5355468N to provide a link between the Standing Camp site and the northern edges of the island.
  - ~15 metres of raised FRP boardwalk at MSP 441966E, 5355371N to link the Standing Camp site and Halls Hut with the natural rock jetty. This location already features a prominent foot-pad through the MSP, and will be improving the environmental management of the foot pad.
  - ~17 metres of raised FRP boardwalk linking Halls Hut site with the RSH rainforest 441908E, 5355389N. The boardwalk may terminate with a seating area, to facilitate interpretation at this location.

- The camp will be managed as per a Site Use Plan agreed to by the PAWS, which will include annual inspections attended by the site manager, and the landlord (PAWS).
- Though Halls Hut is privately-owned, and separate to this RAA, it may be pertinent to note that a woodstove will be installed in the heritage hut during the adjacent camp-construction process. This will permanently reduce the risk of fire from the existing open-fire, while maintaining an important cultural element of the historically significant hut.

1.3.2 Camp Construction

- The camp buildings will be delivered by heli-sling, from Lake St Clair. To maximise sustainability, buildings will be prefabbed off-site, and be designed to minimise the number of helicopter movements required. Sustainability on all levels (economic, environmental and social) dictates a minimum amount of helicopter use during this period. Fifteen hours of flight time is currently budgeted for.
- On-site construction will be performed with the use of hand tools, and battery-operated tools. A small four-stroke generator will be used to re-charge drills etc as required. It is planned that the camp will be installed to lock-up stage within a 20-30 day period.
- Safety will be government by a Risk Assessment and OH&S Plan.
- Impact mitigation will be managed through a site management plan, on-site induction related to listed species and communities on the island, risk mitigation measures, and supervision.
- An Unanticipated Discovery Plan will be developed and implemented, to cover scenarios where Aboriginal heritage, or listed flora and fauna are found on the construction site. This plan will involve contacting the relevant government bodies, and suspending works while further assessments are made.
- Construction is planned to occur in March 2018. Though no eagles nests have been identified in the vicinity of Halls Island, it is our intention to commence building at the end of the nesting season (end of Feb) to ensure no potential impacts.
- Toilet pods will be installed at the beginning of the construction phase, to ensure that all waste is collected during the build.
- All building waste will be removed off-site upon completion of the build.

1.3.3 Camp Operations

Activities and operations would be governed by a PAWS approved Operations Manual, and reviewed annually by the proponent and PAWS (during June/July annually) to facilitate monitoring, and implement minor-adjustments as required. This method is in place for the proponents existing operations the TWWHA, and has proved to be a flexible and pragmatic management approach.

All impact mitigation measures noted in the North Barker Flora and Fauna Assessment (see appendices) will be adopted to minimise impacts and risks during construction and operations. These include:

- The avoidance of MSP and RKP habitats, and P. hookeriana species locations, and the use of boardwalking where required.
- Avoid wood-fireplaces and sources of potential ignition within the new buildings
- Maintain best practice hygiene protocals prior to entering the TWWHA, and once in

the TWWHA. These guidelines are based on the 'Keeping it Clean' manual produced by NRM South, March 2010. F10SC is the primary chemical treatment used on all equipment, after visual checks and cleans.

- Use continual education and supervision as part of the overall interpretation and presentation of the TWWHA, to ensure minimal impacts.

Trip details:

- The current Business Plan proposes a maximum of 25 commercial trips per season, with a maximum of six customers per trip. Each trip will feature two guides. This is a low-volume, high-yield business model designed to facilitate sustainable tourism. A further 5 annual winter trips may be considered at a later point.
- Each trip is planned for 3 nights, 4 days
- A capacity trip will be charged at a rate of [redacted]
- Arrival to Lake Malbena will occur at a helipad located on the mainland, and guests will be ferried across to the island. This is in-keeping with the historic use of Halls Island, where Reg Hall and guests arrived by water (by boat or seaplane).

Proposed activities include:

- Kayaking on Lake Malbena – operations will meeting Marine And Safety Tasmania (MAST) requirements.
- A half-day walk up Mount Oana (GDA94 441609E, 5355034N) adjacent to the Lake Malbena shoreline. This is adjacent to the Self-Reliant / Wilderness Zone boundary, however we believe that the dry-sclerophyll and rock habitat found on the northern face is traversable without creating any significant impacts. Exact route to be determined with an on-site Flora and Fauna specialist in liaison with PAWS, and walks to be GPS tracked and reported annually for monitoring. See appendix Halls Island Maps, Map 4.
- [redacted]

*Aboriginal cultural interpretation is reliant on input, permission and facilitation from the wider Tasmanian Aboriginal Communities.

- European cultural interpretation at archaeological sites (chimney stack and horse paddock [redacted]
- On-island European cultural interpretation built around the Reg Hall and Walls Of Jerusalem story.
- On-island passive activities (i.e. un-guided walking within WSU communities and boardwalking, to be defined in operations manual)
- Occasional fly fishing specific activities around lakes Malbena [redacted]

[redacted] and prescribed impact-minimisation walking strategies will be used (eg fan-out, sticking to high and rocky ground etc) as per our existing fishing operations in the self-reliant and wilderness zone further south at Lake Ina. Furthermore, trip numbers t[redacted]capped at six per annum, to minimise any potential or perceived impacts, and all trips will be GPS logged, and reported annually should monitoring be required. See appendix Halls Island Maps, Map 7

Helicopter use:

- Helicopter use will be required, facilitating up to 30[1] commercial trips (arrivals / departures) per year. This is a key element of the product, facilitating high-quality aerial overview and interpretation of the Cultural Landscape, and Outstanding Universal Values found in the area. Approximate air-time required is 12 minutes each direction from Lake St Clair (preferred departure point). Total flight time from these 30 trips per year is estimated at a minimal 30-40 hours per year, total. The proposed route is currently Lake St Clair – Travellers Rest – Jackie –Malbena. See appendix Halls Island Maps, Maps 1-3, Attachment 8. This route avoids known Wedge Tail nesting sites, all recorded walking routes in the area, and only passes over two trout fishing waters (Travellers Rest, and Jackie / Burrow, the latter of which are un-remarkable fishing locations).
- Approximately 3 hours of further helicopter use will be required annually for maintenance and servicing of the Standing Camp. Ideally this will occur in partnership with PAWS and other planned helicopter use in the area (resource sharing).
- Additional media-famils, along with dedicated (non-commercial) cultural and scientific expeditions to Halls Island will be approved through a separate as-required permit application process, with a minimum of 72 hours' notice to PAWS. Where possible the latter cultural and scientific expeditions will be ran through the PAWS Green Guardian Program, and partner with Tasmanian Museums and other public entities as appropriate.

  Refer to Attachment 10 for further information on helicopter use.

Non-motorised access to site

- Hike-in access to the site is currently available via the adjacent trawtha makuminya property to the east (using a redundant horse / 4wd track from Lake Olive), or from the adjacent Skullbone Plains property to the south. These access points will be used from time to time by owners and staff to access Halls Island for maintenance or other requirements, thereby limiting the use of mechanised air access where possible.

On-island numbers

- To enable the bookending of consecutive trips, minimising helicopter use and maximising sustainability, the proponents envision a scenario where departing and arriving groups may at times crossover. To facilitate this, operational permits shall include the ability to have up to two-groups on island at any time (up to 12 customers, and 4 guides). This capacity should be restricted to daylight hours only ensuring the legitimacy of the request / permit.

1.4 Objective/s (the aim) **and Outcome/s** (aimed for change)

- The creation of a new flagship, sustainable Tasmanian tourism product, offering

[1] Updated as a result of amended information provided 11/01/2017 – Attachment 10

adventure tourism activities radiating from a single base, and un-paralleled cultural interpretation relating to the TWWHA.

- The development of high-quality presentation of the built-heritage found on Halls Island, which is intrinsically linked to the foundation of the Walls of Jerusalem National Park.
- Through partnering with members of the Tasmanian Aboriginal communities, the development of high quality interpretation relating to the 30,000+ years of human history in the TWWHA.
- A greater involvement of members of the Tasmanian Aboriginal communities in the presentation of the TWWHA, through a direct involvement in the Halls Island project.
- Increased access to Country for local Aboriginal communities, through partnerships with the proponents.
- Increased community engagement in the cultural history of the TWWHA, through 'satellite' activities such as historical exhibitions in partnership with the Queen Victoria (QV) Museum (already underway), and the sharing of other materials relating to the history of the Walls of Jerusalem National Park.
- An increased awareness of the natural values found in the eastern areas of the TWWHA, through science-based partnerships with the QV Museum Natural Sciences department (already underway), PAWS, and other interested parties.
- Through regular presence on-the-ground, the proponents' would be increasing monitoring of activities in the eastern area of the TWWHA on behalf of PAWS. This informal role has already proved to be effective and valuable further south at Skullbone Plains, where the proponents' commercial presence has led to the detection and reporting of a number of illegal vehicle incursions, and has overall contributed in a decrease from dozens of illegal activities per season, to single events.
- Provide for ecologically sustainable recreation and engagement with the wilderness, consistent with conserving those values.
- Increase the diversity of visitor experiences available in the TWWHA.
- Increased employment (+3 FTE) in regional Tasmania, and contribute to the economic sustainability of the proponent's existing regional business activities.
- Assist in meeting the goals of the Parks 21 strategic plan.
- Through income and awareness derived from the operations, the privately-owned Halls Hut is conserved in perpetuity.
- To create 3 FTE employment positions as a result of this project, and consolidate on the long-term sustainability of the proponent's existing business.

1.5 Outputs or Products (results)

The objectives and outcomes in 1.4 are achieved.

1.6 Evaluation (how you know it worked)

1.6.1 External Benchmarking

- For the purpose of external benchmarking (eg benchmarking for licencing / lease purposes), we suggest the following quantifiable benchmarks:
- Australian Tourism Accreditation Program (ATAP) accreditation encompassing the product is achieved within 12 months of construction completion, and maintained.

The ATAP process and accreditation allows for input from external stakeholders such as PAWS should the need arise.

- ECO certification (eco-tourism level) is achieved within 12 months of construction, and 'advanced eco-tourism' level certification is achieved within three operational seasons. This process and accreditation allows for input from external stakeholders such as PAWS should the need arise.
- The development achieves 'Finalist' at the Tasmanian Tourism Awards level.
- The development maintains high-profile support from key tourism stakeholders including the Tourism Industry Council Tasmania (TICT) and Tourism Tasmania.
- The developed product includes active input and participation from members of the Tasmanian Aboriginal communities. For instance, basic interpretation of the Cultural Landscape is developed by respected Aboriginal elder(s), for use at Halls Island.
- Through an existing and developing partnership with the QV Museum, scientific knowledge, social awareness and accessibility to the cultural and natural assets of the TWWHA surrounding Halls Island is increased.
- Participation in the PAWS Green Guardian program or similar, as opportunities arise.

1.6.2 Internal benchmarking

- As would be expected, the operation will be run in conjunction with a comprehensive Business Plan. The Business Plan will include a Financial Plan (with annual budget, and three year P&L), Marketing Plan, Operations Manual, OH&S Strategy, Employee Management Plan (including access to on-going training and development) and Sustainability Plan. This over-arching Business Plan forms the basis of the benchmark accreditations such as Australian Tourism Accreditation Program (ATAP) and ECO-accreditation, feeding back into external benchmarks.

1.7 Need (why)

1.7 Need

- The proposal is an outcome of the State Government Expressions of Interests – Tourism Investment Opportunities in the Tasmanian Wilderness World Heritage Area, National Parks and Reserves process.
- A number of the outcomes generated by this proposal support the broader prescribed, required outcomes of the TWWHA Management Plan, including:
- Increased the diversity of products that is consistent with the conservation of natural and cultural values
- Increased Aboriginal participation in the presentation and interpretation of the TWWHA
- Increased understanding and presentation of the TWWHA as a Cultural Landscape
- Providing for ecologically sustainable recreation consistent with conserving the values of the TWWHA
- Increase monitoring of natural values in and around Halls Island
- Increased monitoring of activities along the eastern boundary of the TWWHA, through the commercial operations at Halls Island
- Increase the profile and value of historic heritage to local communities, relating to the Walls of Jerusalem National Park and greater TWWHA.

1.8 Timetable (when)

It is planned that successful RAA, EPBCA referral, Development Approval and Building Approval will be achieved by October 2017.

September 2017 will see a preferred architectural and construction company selected, and off-site construction commence will commence by January 2018.

On-site construction will commence by March 2018. These timeframes may be delayed by 12 months in the case of DA, EPBCA or other related and unforeseen appeals / delays.

It is important to note that this project is the first to undergo assessment under the new Tasmanian Wilderness World Heritage Area Management Plan 2016, and as such some elements of the assessment and approval process remain un-tested, and may result in unforeseen delays.

1.9 Environmental Benefits and Impacts (summary Use the Maplink report to assist here)

See Appendix - Flora and Fauna Assessment prepared by Northbarker, and 1.4 Outcomes and Objectives (which include environmental benefits). See 4.1 (RAA) for detailed assessment matrix.

Conclusion Summary (from the Northbarker report):

Our field survey has established that the island contains two threatened vegetation communities (MSP and RKP) and one threatened plant species (P. hookeriana). It is recommended that the locations of these values are not utilised for standing camp or helicopter pad placement. Management prescriptions should also be applied to protect these values from fire and to avoid tramping.

It is understood that the current proposal is to place the standing camp and helicopter pad footprint within the ORO and WSU communities. These non-threatened communities are likely to be resilient to a proposal of this nature and potential losses in extent are considered to be negligible. It may be possible to construct boardwalks within the other communities by using a boardwalk design with minimal footprint and shading.

Action: The proponent will adopt the above mitigation measures in full.

Environmental benefits from the proposal will include a wider knowledge of the flora and fauna in the general area, and greater access to the area for interested scientists (as facilitated by the proponents as part of annual operations). Already to date the proponents have facilitated a benchmarking survey trip with the QV Museum Launceston, in order to collect and identify invertebrates from the previously un-surveyed area.

*Worth noting is that the NVA Natural Values Assessment Report (see appendices) has indicated that there are no fire records for the area. We have personal family records from Reg Hall indicating a large fire generated a significant ember attack and subsequent fires on the island during some point in the 1960's, whilst Reg and friend Dick Reed were in-residence, in situ. This provides explanation for some of the existing fire damage on the mainland and surrounds.

1.10 Cultural and Social Benefits and Impacts (summary)

Potential Impacts:

Perceived social impacts appear to relate to the 'privatisation' of the island. The proponents will facilitate occasional access to the historic (privately owned) Halls Hut on request, when appropriate, for regular past-users, or those with a specific interest in the European cultural history of the island.

Social Benefits:

- The development of high-quality presentation of the built-heritage found on Halls Island, which is intrinsically linked to the foundation of the Walls of Jerusalem National Park.
- Through partnering with members of the Tasmanian Aboriginal communities, the development of high quality interpretation relating to the 30,000+years of human history in the TWWHA.
- A greater involvement of members of the Tasmanian Aboriginal communities in the presentation of the TWWHA, through a direct involvement in the Halls Island project.
- Increased access to Country for local Aboriginal communities, through partnerships with the proponents.
- Increase community engagement in the cultural history of the TWWHA, through 'satellite' activities such as historical exhibitions in partnership with the Queen Victoria (QV) Museum (already underway), and the sharing of other materials relating to the history of the Walls of Jerusalem National Park.
- Through regular presence on-the-ground, the proponents' would be increasing monitoring of activities in the eastern area of the TWWHA on behalf of PAWS. This informal role has already proved to be effective and valuable further south at Skullbone Plains, where the proponents' commercial presence has led to the detection and reporting of a number of illegal vehicle incursions, and has overall contributed in a decrease from dozens of illegal activities per season, to single events.
- Provide for ecologically sustainable recreation and engagement with the wilderness, consistent with conserving those values, as per the TWWHA Management Plan.

1.11 Economic Benefits and Impacts (summary)

1.11 Economic Benefits and Impacts

- It is anticipated that the building phase of the development will result in a direct spend, within Tasmania, [redacted]
- Annual gross income of up to [redacted]
- Up to 3 full-time-equivalent (FTE) employees, with a direct benefit of $409,500 to the local economy, per annum (based on 'recreation services employment' using REMPLAN modelling).

The project aligns with the following State and Regional Plans:

- Australian Government Tourism 2020 Plan to (i) encourage high-quality tourism

experiences, including indigenous tourism, and (ii) develop tourism infrastructure that can drive demand.

- The project meets the desired outcomes of the 2014 Reimagining the Visitor Experiences of the TWWHA Project, which was developed in partnership between the Tourism Industry Council Tasmania, PAWS, Tourism Tasmania and Cradle Coast Authority.
- The Halls Island proposal supports the goals of, and is a result of the State Government EOI for Development in the Tasmanian Wilderness World Heritage Area Expression of Interest process (2014).
- Halls Island supports a number of primary objectives of the T21 – The Tasmanian Visitor Economy Strategy 2015-2020 including investment in quality infrastructure, committing to world-leading, sensitive, low-impact commercial tourism that respects and elevates the environmental and cultural significance of the area, and champions' entrepreneurialism and demonstrates innovation in the Tasmanian Visitor Economy.

1.12 Alternatives (other ways)

Explain the other options that were considered to meet your outcome/s and cost and why they were not preferred? State why the preferred option is supported. (Attach additional information if necessary at part 1.13)

Options		Comments
Do nothing	N/A	
Eliminate	N/A	
Isolate/Substitute	N/A	
Engineer	N/A	
Administrate	N/A	
Preferred Option	To develop and operate a luxury Standing Camp on Halls Island, Lake Malbena.	

1.13 Attachments

No.	Description/Details of Attachment eg. maps, photos, reports
1	Halls Island AHT (Aboriginal Heritage Tasmania) Advice
2	NCH (DPIPWE) Advice Halls Island – Natural Values Assessment Report 4/6/2015
3	NCH (DPIPWE) Advice Halls Island – Natural Values Assessment Report 20/4/2017
4	Heritage Tasmania report 15 June 2016
5	Image 1 Proposed site plan
6	[redacted]
7	Halls Island Flora and Fauna Survey prepared by North Barker and associates
8	[redacted]
9	Helicopter flight route eagle habitat / nest assessment – NJ Mooney
10	Supplementary helicopter-usage information
11	n/a

1.14 Third Party Description and Interest in the Activity

No other parties at this stage.

Step 2 – Concept Review

At this step the activity is considered against legislation, management plans, subsidiary plans and PWS policies. PWS activities are checked to ensure they have been approved and funded. This step examines whether there are any major flaws in the activity that would make it inappropriate to continue the assessment.

2.1 Legislation and State Policies

Note: see manual for summaries of the legislation listed below. Place an 'X" in the relevant column in the table below.

Acts Is the activity compliant with the following Acts:	Compliant	Potentially Compliant	Not compliant	Act not Applicable	**Details** Note relevant section/s of the Act and explain why the activity complies, potentially complies or does not comply with the Act. If it is potentially compliant state what is required to make it compliant.
Core Acts (always check)					
National Parks and Reserves Management Act 2002		X			Requires RAA, DA and GofA
Crown Lands Act 1976				X	
Nature Conservation Act 2002		X			Requires RAA, DA and GofA
Threatened Species Protection Act 1995		X			Requires RAA, DA and GofA
Aboriginal Relics Act 1975		X			Requires aboriginal community agreement
Historic Cultural Heritage Act 1995		X			Hall hut is not listed on the Tasmanian Heritage Register.
Land Use Planning and Approvals Act 1993		X			DA required – Discretionary Use
Environment Protection and Biodiversity Conservation Act 1999		X			Ecological studies to inform RAA and approvals process
Work Health and Safety 2012		X			WS Plan required for construction and operations
Other Acts (check as relevant)					
Environmental Management and Pollution Control Act 1994				X	
Water Management Act 1999 / State Policy on Water Quality Management 1997				X	
Fire Service Act 1979		X			BAL assessment possibly required for standing camp structures
Forest Practices Act 1985				X	
Living Marine Resources Management Act 1995				X	
Mineral Resources				X	

Acts Is the activity compliant with the following Acts:	Compliant	Potentially Compliant	Not compliant	Act not Applicable	**Details** Note relevant section/s of the Act and explain why the activity complies, potentially complies or does not comply with the Act. If it is potentially compliant state what is required to make it compliant.
Development Act 1995					
Building Act 2000 Building Reg's 2004, Plumbing Reg's 2004		x			DA required – Discretionary Use B & P permits required
State Coastal Policy 1996				x	
Other: State Act . . .					

2.2 PWS Management Plans, Subsidiary Plans and Policies

List any management plan, site plan, maintenance plan or other planning document, strategy or policy relevant to the activity below.

Plan/Document Name	Compliant	Potentially Compliant	Not Compliant	**Details** State relevant sections and page numbers. Explain why the activity does or does not comply and any required conditions if it is potentially compliant. List any proposed changes to plans and their rationale. Ensure the activity fits with plan zoning.
TWWHA Management Plan 2016 **See attached Tables 1 & 2 addressing Section 3.3.1. Section 6.8 & Section 8.2 and comments to date.**		X X		**Section 3.3.1 Reserve Activity Assessment – Pages 81 - 82.** • Identify the World Heritage values likely to be affected by the proposal; • Identify how those values might be affected; • Consider direct, indirect and cumulative impacts on World Heritage values; • Identify how any impacts on World Heritage values will be managed or mitigated; • Consider the social and environmental benefits and impacts of the proposal; • Consider appropriate monitoring and compliance measures; and • Consider provision of public consultation based on the scale and nature of the proposal. **Section 6.8 Commercial Tourism – Pages 149 – 150.** A proposal must: • Describe how the experience is based on the values and features of the TWWHA; • Submit a case for why it should be situated within reserved land and address compatibility with existing services and infrastructure;

Plan/Document Name	Compliant	Potentially Compliant	Not Compliant	Details State relevant sections and page numbers. Explain why the activity does or does not comply and any required conditions if it is potentially compliant. List any proposed changes to plans and their rationale. Ensure the activity fits with plan zoning.
				• Describe how it will contribute to the guiding Vision and management Objectives for the TWWHA as articulated in the management plan (Section 1.7 Pages 34 – 35); • Describe how potential impacts on the legitimate enjoyment and experience by others of TWWHA features and values will be managed; • Describe how it will be constructed and / or operate in a manner compatible with the protection and conservation of World Heritage and other values; • Incorporate environmentally sustainable operational practices and the use of environmentally 'best practice' goods and technologies; • Detail any external costs resulting from the proposal including ongoing monitoring and compliance; and • Demonstrate economic viability.
TWWHA Management Plan 2016		X		**Section 8.2 Wilderness Values Pages 173 - 175.** • Further description of the proposed helicopter flight path's impacts on wilderness values, aesthetic values (including characteristics of remoteness and isolation of on ground TWWHA users) and natural values (flora, fauna including results from Raptor suitable nesting habitat assessment and nest survey)
REVISED POLICY (PWS P-036) WALKING TRACK CLASSIFICATION SYSTEM		X		**Detail re party sizes for T4 tracks and Routes**

2.3 Reserves Standards Framework (RSF)

Current RSF Category	Self-Reliant Recreation Zone and Wilderness Zone	Aspirational RSF Category	Self-Reliant Recreation Zone and Wilderness Zone

Does the activity conform with the Aspirational RSF category, or, if this has not been determined, the current RSF category? (Use the PWS Site Register to find RSF information)

■ Yes ☐ No ☐ Activity not described by RSF

If No, state the proposed new category below and detail the business case for the change.

Note that stage 2 of the proposal may involve activities and physical impacts that could be inconsistent with wilderness recreational settings. This aspect has yet to be assessed.

2.4 PWS Priorities

Is the activity listed in the current PWS Strategic Plan?	☐ Yes ■ No	Comment: The PWS Strategic Plan does not specifically refer to this proposal.
Is the activity listed in a Regional/Branch business plan or strategic plan?	☐Yes ■ No	Comment: The Regional/Branch business plans do not specifically refer to the merits of this proposal just undertaking assessment process.
What is the budget priority score	____	Comment:

2.5 Comment on Concept Review

Bearing in mind the environmental, social/cultural and economic benefits and impacts at Step 1 (parts 1.9 - 1.11), and referring to the Maplink and Natural Values Atlas reports, note whether the activity is likely to result in significant negative impacts that cannot be overcome (and therefore shouldn't be supported), or whether it can be supported with conditions. Provide a short summary in the Comment field below to assist the Regional Manager's decision below.

Comment
Refer to RM comments in attached briefing note: "Halls Island EOI-RAA" dated 3 October 2017.

2.6 Decision Point – Concept Review

Following consideration of the above matters (Step 2, parts 1 to 5) the Regional Manager judges whether the concept is supported or not. If the concept is supported it proceeds to the next assessment step (Step 3). It can also be 'parked' at this step (to move forward in the assessment at a later time). If the concept is not supported the project does not proceed and the reasons are given to the proponent.

■ **Concept Supported** (Assessment moves to next step)

☐ **Concept Supported - Parked** (Assessment moves to next step at a later date)

☐ **Concept NOT Supported** (Activity cannot proceed further)

Why not appropriate?	Details
☐ The proposed activity conflicts with legislative or	

policy requirements.	
☐ The proposed activity contravenes an existing planning document or strategy.	
☐ The proposed activity is likely to cause unacceptable environmental, social or economic impacts.	
☐ Other	

Signed: Chris Colley

Title: Regional Manager North

Date: 9 October 2017

Comment, explanation

NB If the concept is supported at the end of this step this allows the activity to proceed further in the assessment process; it does *not* signify formal approval of the activity.

Step 3 – Assessment Scope

This step determines the scope of all relevant assessments and the level of documentation that will be required. It determines the level of RAA - levels 2, 3 or 4, (note: level 1 RAA's use a separate form) and it integrates with all internal (PWS) and related external assessment processes. The PWS Initiating/Contact Officer recommends and the PWS Regional Manager decides which options are selected at this step.

3.1 RAA Documentation (Select one option only)

RAA Documentation Required	Additional Information/Requirements
☐ Level 2: RAA	
■ Level 3: RAA (L2 + surveys)	
☐ Level 4: RAA (DPEMP)	

3.2 Circulation List (RAA levels 2 to 4 only, list approved at Step 3, circulated at Step 5)

PWS Head Office (134 Macquarie St, Hobart) GPO Box 1751, Hobart 7001	☒ Visitor Services Branch, PWS ☒ Planning ☐ Education & Interpretation ☐ Historic Heritage ☒ Operations Branch, PWS ☒ Fire Management ☐ Asset Services ☒ Business Services Branch, PWS ☒ Commercial Visitor Services (CVS) ☒ Leases and Licences (non visitor)
Region (only fill out if an additional region is to comment) ☐ North ☐ North West ☐ South	☒ Regional Manager ☒ Regional RAA Coordinator ☐ Other ☐ _____ ☐ _____
Aboriginal Heritage Tasmania GPO Box 771, Hobart 7001	☒ Aboriginal Heritage, DPIPWE
Natural and Cultural Heritage Division DPIPWE GPO Box 44 Hobart 7001	☒ PCAB (specialist review of flora, fauna, geo etc)
Advisory / Consultative Committees	☒ National Parks and Wildlife Advisory Council Committee

3.3 Additional Internal (PWS) assessments

Select (replace the checkbox with an 'X') and state any additional PWS assessments required, and their relationship to the RAA.

Additional PWS Assessment	Relationship to RAA / Further Information
☐ _____	
☐ _____	
☐ _____	

3.4 Additional External Assessments

This step determines whether additional external assessments are required beyond those conducted by the PWS. The most commonly integrated external assessments are LUPAA and EPBC but others are also possible – refer to the RAA Manual).

Development Application (under Land Use Planning and Approvals Act (LUPAA))

Municipality	**Central Highlands Council**
Zoning under the Council Planning Scheme	**Environmental Management Zone**

Under the relevant Planning Scheme the activity is: (check one option only)

LUPAA Status	Further Detail	Development Application
☐ Exempt		Not required
☐ A Permitted Use	Permitted use 'Tourist Operation' subject to the successful completion of RAA, and adoption of 'acceptable solutions' (to which this project will be compliant).No advertised DA required. See attachment #14 (Council advised that a Discretionary DA may be required if helipad and boardwalks are built in Waterway and Coastal Protection Overlay – initial Council advice above given on basic plan with not much detail)	Required
■ A Discretionary Use	Discretionary DA may be required if helipad and boardwalks are built in Waterway and Coastal Protection Overlay	Required
☐ A Prohibited Use		Required

Environment Protection and Biodiversity Conservation Act 1999 (EPBC)

EPBC Impact: Will the activity impact on:	What is the likely impact? Is there likely to be a 'significant' impact on any matter of national environmental significance from the activity?	Referral under EPBC recommended?
World Heritage Sites (Tasmanian Wilderness, Macquarie Island)	It is not anticipated that there would be a significant impact on Outstanding Universal Values however considering the perceived impact on wilderness recreational experiences from aerial operations it was agreed with the proponent that they would refer the proposal to the Australian Government for assessment under EPBCA. This would assist in determining stakeholder and public thoughts on the issue.	■ Yes ☐ No
Ramsar Wetlands	N/A	☐ Yes ☐ No
Nationally Threatened Species	Listed species are present on the island. By adopting prescribed mitigation measures, potential impacts classed as negligible (see NorthBarker report).	☐ Yes ■ No

Protected Migratory Species	N/A	☐ Yes ☐ No
Commonwealth Marine Areas	N/A	☐ Yes ☐ No
National Heritage Places	N/A	☐ Yes ☐ No
Other		☐ Yes ☐ No

Note that the General Manager PWS determines whether a referral under EPBC is required, actual referral occurs at Step 7.

OTHER External Assessment
State any other external assessments required, and their relationship to the RAA (e.g. Dam, beekeeping, Hydro, Mineral exploration). See manual for all potential external assessments and list them below.

Other External Assessment	Relationship to RAA / Further Information
☐	
☐	
☐	
☐	
☐	

3.5 Decision Point – Assessment Scope

The scope of the RAA, internal and external assessments required are as indicated above.

The signature of the RM (and the additional signature of the General Manager in some circumstances) below means the next step in the assessment can commence, it does not grant any form of approval at this point.

Signed: Chris Colley

Title: Regional Manager North

Date: 11 January 2017

Signed by PWS General Manager (only if required see RAA Manual):

Date: 11 January 2017

Explanation, further assessment of action required

Step 4 – Impact Assessment and Proposed Management

This part of the RAA records the impacts and benefits of the activity in detail. Impacts and benefits are examined under three headings — Natural Values, Cultural Values and Economic Values. Use N/A if a value is not applicable for this activity. Consider cumulative effects that may result from the activity.

4.1 Natural Values Assessment: Impacts, Benefits and Management

Natural Values (including natural assets, processes and systems)	**General description and existing conditions.** List values/assets of significance, surveys completed (by whom and when), specialist staff consulted and relevant ref's.	**Likely impact / benefit on values / assets** (natural processes and systems, including cumulative effects). Particularly assess impact on world heritage and other significant natural values.	**Risk level** (no controls)	**List control options** Management actions to be taken to avoid or minimise any likely negative impacts, include ongoing monitoring.	**Risk level** (controls)	**X Ref. Action Plan**
1. **Flora** (threatened species, priority communities, critical habitats and endemic, regionally or locally significant species, RFA priority forest types, WHA flora values)	TasVeg classifications: Eucalyptus subcrenulata forest and woodland (WSU) *Sphagnum* peatland (MSP), Lichen lithosphere (ORO), Athrotaxis selaginoides rainforest (RKP) Highland low rainforest and scrub (RSH) present	Trampling is the primary concern (medium) among MSP's.	Med	Adopt all mitigation measures prescribed in the Avoidance of trampling (on-island) within the Flora and Fauna assessment: A. Avoid routes through MSP's, or facilitate passage across MSP's by installing raised, perforated FRP boardwalking. Risk is mitigated. B. Education and supervision during trips. C. Siting of standing camp among ORO or WSU communities. D. Create visitor exclusion zones, excluding visitors from sensitive communities MSP, RKP, and Pherosphaera hookeriana communities (see Map 6, appendices)	Negligible	4.1.1.1
		Fire threat is a second potential threat (low).	Low	Fire risk mitigation – Electric or gas heating in Standing Camp. – no open flames, Smoking only permitted in designated area.	Improved conditions	4.1.1.2

	An existing foot-pad is present through one of the MSP communities south west of Halls Hut.	Improved health of MSP community by installing perforated boardwalk or rock-re- enforcement as per Flora and Fauna recommendations.	Low – Med	Install boardwalk or rock re- enforcement along existing impact.	Negligible - low	4.1.1.3
	Mount Mawson Pine (Pherosphaera hookeriana)	Trampling of plant species	Low	Ensure on-island routes/tracks avoid this species. Where existing routes pass by this species (near the natural rock jetty), use short lengths of boardwalk to ensure clear walking route that avoids plant species. Education and supervision to re-enforce impact mitigation. Utilise no-access areas for visitors, see appendix Halls Island Maps, Map 6, for site plan including exclusion zones.	Negligible	4.1.1.4
	Off-island communities susceptible to tramping. E.g.: Sphagnum, marshes etc.	Trampling and route-formation	Med	Implement minimal-impact bushwalking techniques including: fan-out, sticking to hard ground on the edges of plains / forest, avoid crossing striated marshes and marshes in general. Monitor walking routes by GPS, and actively monitor and adjust walking routes annually as part of Operations Manual. These guidelines have been proven to be effective at the proponents other operations in the TWWHA, including within the self-reliant and wilderness zones.	Low	***
2. **Fauna** (Rare or Threatened species, critical habitats, endemic species, regionally or locally significant species, WHA fauna values)	See North Barker Fauna Assessment, and (PWS and Nick Mooney) Eagle Nest Survey results.	Fauna Assessment notes no impacts to threatened species are likely to result from the proposal.	Low	Ecological survey completed for Halls Island component – walking routes to be surveyed once confirmed.	Negligible to low	***
	Raptors (eg: Wedge Tail Eagle): New	Disturbance to nesting sites. Suitable habitat searched – no	Mod	None required Helicopter flights routes regularly	Low	

	discovery for nesting sites on-island, or within the planned flight route	nests found		reviewed and adjusted to take account of any new nesting sites.		
	Clarence Galaxias (Galaxias johnstonii) – population approximately 5km east of Halls Island	Disturbance of water course (erosion etc)	Low	Commercial trips will avoid this high plateau habitat area.	Low	4.1.2.3
	Other fauna	Humanising of local fauna	Low	Education and supervision of customers to ensure no feeding or petting of animals. Ensure all food wastes etc are properly stored.	Negligible to low	4.1.2.4
3. **Geoconservation** *Geology* (uncommon rock types, minerals, fossils or similar; significant outcrop or landform, WHA geo values) *Geomorphology* (sensitive landform systems e.g. karst, dunes, rivers, marshes, estuaries coasts) *Soils* (rare soil types e.g. Basalt derived and hosting native vegetation; soils sensitive to disturbance eg. peats, sands, alpine soils)	Central Highlands Cenozoic Glacial Area (Site ID 2953) & Central Plateau Terrain (Site ID 2684)	Ground disturbance resulting in impacts on geoconservation sites.	Negligible-low	Camp will be installed using hand tools / battery-operated tools only. Minimal ground disturbance, no excavations or changes to water-courses. Sites are avoided. Any interaction with sites (eg helicopter pad) will involve minimal ground disturbance, perforated decking and boardwalking.	Negligible	4.1.3.1
	Western Tasmania Blanket Bogs (Site ID 2527)	Ground disturbance resulting in impacts on organosoil terrain, eg: erosion	Low		Negligible	4.1.3.2
4. **Landscape and viewfields** (Consider impact of the proposal on viewfields into the site and from the site)	Halls Island contains an existing hut (circa 1955), a number of tracks, numerous tree-harvesting sites, a disused toilet site, a disused boat-slip, and other evidence of human use.	Landscape and viewfields should remain relatively unchanged. Site selection has ensured that the viewfield from the existing historic hut is maintained, and unchanged. Viewfield from the mainland looking back to the island will remain relatively unchanged due to the site location alongside a WSU forest, along	Low	Sympathetic building material selection, no reflective materials, muted-bush tones, minimal 12V lighting, natural materials where possible.	Negligible	4.1.4.1

		with sympathetic building material selection.				
5. **Wilderness and wild rivers** (impact of proposal on Wilderness quality using modified NWI mapping, any effects on wild rivers)	NWI quality is listed as high (14- 18 / 20). NWI mapping resolution does not allow accurate reference specific to Halls Island, and it is unknown whether the long history of human habitation and structures on the island were taken into account.	Low level impact Wilderness qualities may be improved by eliminating seasonal tree (firewood) harvesting by unauthorised users of the existing Halls Hut.	Low	Restrict maximum group sizes to six customers, two guides Restrict number of commercial trips to approx. 30 per year. Sympathetic building designs and scale. Adhere to strict helicopter flight path and prescriptions.	Negligible	4.1.5.1
6. **Threats** (diseases such as Phytophthora and Chytrid Fungus, introduced animals and weeds)	No weed species detected on Halls Island (see Flora and Fauna Assessment). Didymo, Chytrid fungus disease, platypus mucor etc.	Orange hawkweed is listed as a potential threat to Sphagnum communities, and is known in the Derwent Bridge / Lake St Clair area. Introduction of disease threats to the area from helicopter operations, outdoor gear, fire wood.	Low Mod	Implement 'Keeping It Clean' training provided by NRM South. The final check and disinfectant process should be applied at Derwent Bridge, prior to departure for Halls Island. Incorporate into Operations Manual. As above All 'fire-wood' would be manufactured e.g. briquettes	Negligible Low	4.1.6.1
7. **Estuarine or Marine** (add broad descriptors of important features like fauna/flora)	N/A	N/A	N/A	N/A	N/A	N/A
8. **Water quality** (PEV's) (add broad descriptors of important features like fauna/flora)	Pristine water quality / CFEV values	Contamination from grey water and/or sewage. Currently the island has no toilet facilities despite history of use. The proponent will be improving this situation. Potential for fuel spills from	Mod	Installation of complete capture sewage and greywater pods. Greywater will be back- loaded with each trip, for disposal outside of the TWWHA. Sewage will be collected annually in pods and emptied off-site. No aviation fuel will be stored on site.	Low	4.1.8.1

		helicopter, power boat usage		All boats – non motorised.	
*** denotes aspect of RAA to be considered in Stage 2 RAA approval. Actions relating to Stage 2 proposed activities are not included in this RAA approval and conditions.					

4.2 Cultural Values Assessment: Impacts, Benefits and Management

Cultural Values (including cultural assets, processes and systems)	**General description and existing conditions.** Note relevant people consulted, references to documents. List any values/assets of significance. List any surveys completed by whom and when.	**Likely impact on values / assets** (cultural assets, landscapes and systems, including cumulative effects). Particularly assess impact on world heritage and other significant cultural values.	**Risk level** (no controls)	**List control options** Management actions to be taken to avoid or minimise any likely negative impacts, include ongoing monitoring.	**Risk level** (controls)	**X Ref. Action Plan**
1. Aboriginal heritage values (e.g. landscapes, areas, sites, artefacts, relics, resources, WHA Aboriginal values)	Advice from Aboriginal Heritage Tasmania that the immediate on island area has a low probability of Aboriginal Heritage being present. [redacted]	No likely impact, though positive impacts may arrive through partnerships with the Aboriginal communities and increased awareness.	No likely impact, though positive impacts may arrive through partnerships with the Aboriginal communities and increased awareness.	Engagement and involvement with the Aboriginal communities as prescribed by the AHT report (see appendix 6). Implement the AHT Unanticipated Discovery Plan should Aboriginal heritage be discovered.	Low	***
2. Historic heritage values (e.g. historic places, movable heritage or relics)	Advice from DPIPWE Natural and Cultural Heritage Division indicate the overall risk to natural values in the Walls of Jerusalem National Park is considered low.	Positive impacts include increased awareness of the European cultural history of the area, and the conservation of the historic Halls Hut.	Low	Conduct further research and promote the cultural history of the Walls of Jerusalem National Park	Negligible	4.2.2.1

*** denotes aspect of RAA to be considered in Stage 2 RAA approval. Actions relating to Stage 2 proposed activities are not included in this RAA approval and conditions.

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Social Values	General description and existing conditions. Describe how the area is used and how the activity is likely to change the way the area is used. Note people consulted, references to documents. List any social values/assets of significance.	Likely impact on current social values.	Risk level (no controls)	List control options Management actions to be taken to avoid or minimise any likely impacts, include ongoing monitoring.	Risk level (controls)	X Ref. Action Plan
3. Recreational values, established uses	The existing, privately-owned Halls Island hut has been the main drive of visitation to the area since the 1970's. Usage is very low, and the hut log book lists a maximum of six visitor groups per season, often as low as two groups per season. Access is very difficult, with access from the east requiring additional permission to cross private land (trawtha makuminya property). Anecdotal access details from the land owners at trawtha makuminya also indicate single-digit visitation to the area, annually.	An improved, more formalised process for those wanting to use the private Halls Hut (which is external to this proposal). Reduced access to important European history on Halls Island	Low Low	Facilitate public access to the privately owned Halls Hut when appropriate (this is again external to this proposal). Increase accessibility to the history and artefacts relating to Halls Island and Reg Hall, through partnership with the Queen Victoria Museum and Art Gallery, Launceston.	Negligible Overall improvem -ent on current access.	4.2.3.1 4.2.3.2
	Helicopter usage for access and servicing.	Helicopter usage in the area has also been perceived to impact on potential recreational values.	Low	Minimise helicopter use, use helicopter route as described which avoids known walking routes, and all significant recreational fishing waters. Operate where possible at minimum 1000 m altitude. Pilot and guides to observe for on-ground users, and avoid. Restrict annual trip numbers to 25 peak-season trips, and 5 winter trips.	Negligible	4.2.3.3

		Cumulative effect of helicopter use and commercial operations on 'wilderness value' Refer to Attachment 10.	Low	Development site is located in an area featuring extensive history of human use, on-going use, built heritage and disturbance including prior seaplane use. Helicopter use for operations is minimised toless than 48 hours per annum (based on Attachment 10 estimates). Capped number of Halls Island sales per year (~30) and small groups sizes are applied. Point-impacts to on-ground users limited to ~2 minutes of sound.	Negligible	4.2.3.4
		Potential social impacts from interactions with other users during trips		Use adaptive management as part of the Operations Manual to avoid or bypass areas where other users are recreating. This has been proven to be effective at the proponents other operations in the TWWHA.		
4. Leases and licences	The existing hut in Halls Island is owned by the proponent, and sited under lease. No other private leases or licences exist in the area.	New infrastructure seen as exclusive use.	Mod	Negotiate new lease over all infrastructure	Low	4.2.4.1
5. Surrounding land uses	Recreation – bushwalking and fishing. Halls Island has featured private buildings and use since 1955, this proposal continues with similar activity. Trout fishing at Lake Malbena is unremarkable (compared to waters further east). Waters	Likely impacts are very low. Current usage levels of the area are at historical lows.	Low	Avoid areas where other users are recreating. Adhere to strict flight paths.	Low	4.2.5.1

	west and north of Malbena are generally trout free.					

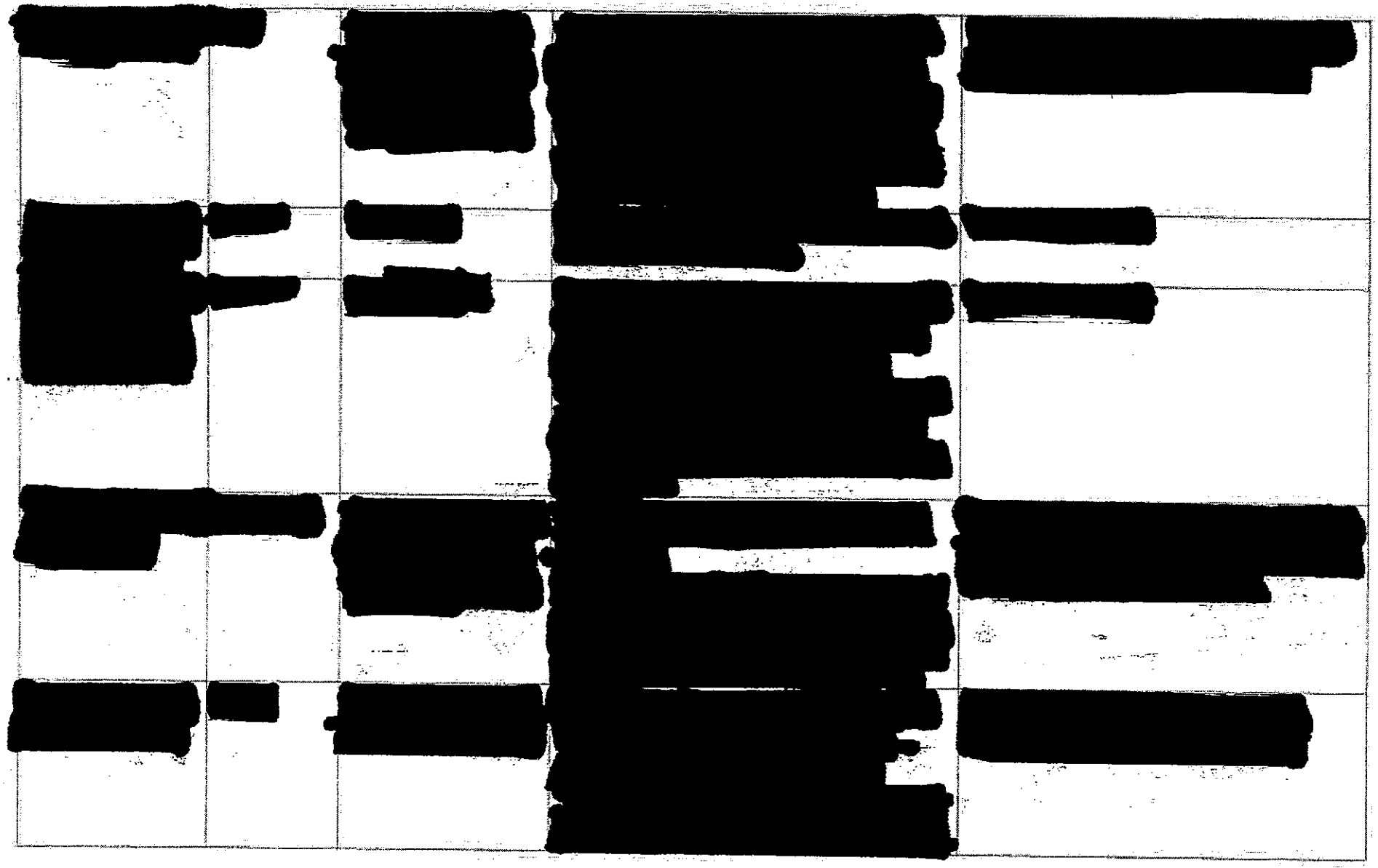
4.3 Activity Hazards

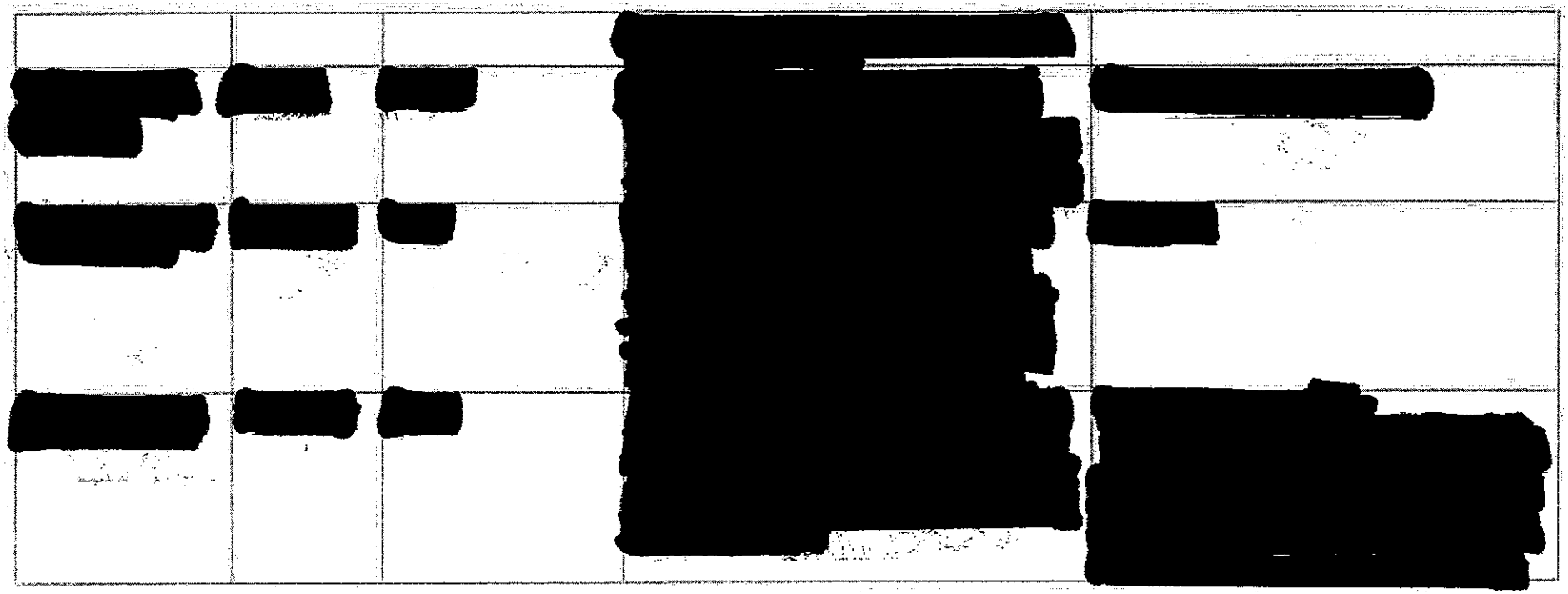
Activity Hazards	General description of how the site is used and existing nature of hazards/risks.	Likely impact on nature and severity of hazards/risks.	Risk level (no controls)	List control options and management actions to be taken to avoid or minimise risks.	Risk level (controls)	X Ref. Action Plan
1. Occupational Health and Safety	Self- reliant recreation. Existing hazards are exposure to elements and environment	Possible injury or death due to; slips, trips and falls, exposure to elements, snake bite, construction and helicopter use.	Mod	A complete WH&S Management Plan will be developed for the construction phase, and operational phases of the development. Development of emergency response plan.	Low	4.3.1.1
2. Visitor Risk	Self- reliant recreation. Existing hazards are exposure to elements and environment	Possible injury or death due to; slips, trips and falls, exposure to elements, snake bite, construction and helicopter use.	Low	As above to manage occasional outside visitor to the site.	Negligible	4.3.2.1
3. Other – Dangerous goods, controlled waste, fire etc.	Self- reliant recreation. Historic hut accommodation – wood fire – no toilet facilities	Waste generation, wildfire, fuel and oils spills.	Mod	Outside open fires are not permitted. Accidental fires will be extinguished immediately. Construction waste and general rubbish generated onsite will be contained onsite for disposal to a Council Waste Transfer Station. Oil / fuel spills will be prevented and will be contained and cleaned up promptly if they occur.	Low	4.3.3.1

				Installation of complete capture sewage and greywater pods. Greywater will be back- loaded with each trip, for disposal outside of the TWWHA. Sewage will be collected annually in pods and emptied off-site.		

4.4 Community Consultation

Stakeholders	Interest Level (low, med, high)	Concern Level (low, med, high)	How was consultation performed, and stakeholders view's on the activity	Details of further consultation required or planned, if any
[redacted]				





Supplemental Table 1: Project specifics in relation to 6.8 Commercial Tourism, Tasmanian Wilderness World Heritage Management Plan 2016 (page 150).

The 2016 Plan outlines key criteria for commercial tourism in the TWWHA. The below table addresses these criteria:

Describe how the experience is based on the values and features of the TWWHA;	The focal point of this proposal is the interpretation and presentation of the cultural history and outstanding universal values of Halls Island and surrounds.
Submit a case for why it should be situated within reserved land and address compatibility with existing services and infrastructure;	This proposal, and the interpretation and presentation of the cultural history of Halls Island which it revolves around, is only achievable if located on Halls Island. The proposal is compatible and complimentary to the TWWHA Management Plan 2016, and guidelines for the Self-Reliant Zone.
Describe how it will contribute to the guiding Vision and management Objectives for the TWWHA as articulated in the management plan	The Halls Island proposal has been designed to support the identification, protection, conservation, and presentation of the World Heritage, National Heritage and other natural and cultural values of the TWWHA. Operations will facilitate community engagement, add to the diversity and quality of experiences in the TWWHA consistent with the conservation of natural and cultural values, and further identify, protect, conserve and restore cultural values in the TWWHA. The proposal is also compatible with the objective and aims of the Parks 21 subsidiary document.
Describe how potential impacts on the legitimate enjoyment and experience by others of TWWHA features and values will be managed	Any access to Halls Island has always been by a small number (less than ~12 per annum) of the public wishing to visit and use the privately owned Hall's Hut. The small number of regular users, as identified by the hut log book, will have access facilitated upon reasonable request. Visits to Halls Island by scientists, artists, cultural researchers, members of the Aboriginal community and others will be facilitated by the proponents. Other members of the Tasmanian community interested in access to the cultural history of Halls Island will find a significant collection relating to the hut and history at the Queen Victoria Museum and Art Gallery, Tasmania, which has been kindly donated by the proponents. Aerial access is described in the TWWHA Management Plan as '*a significant component of presentation in the TWWHA…providing opportunities to contribute to the diversity of experiences that are offered*'. Site selection for the proposed helicopter landing site avoid overflights of

	walking routes and trout fishing waters, unnecessary conflict with other users, and the proposed capped number of trips per year avoids cumulative impacts. Impacts on other general users of the TWWHA will be managed through the Operations Manual, as outlined in Sections1 and 4.
Describe how it will be constructed and/or operate in a manner compatible with the protection and conservation of World Heritage and other values	Construction and operational guidelines have been described in sections 1 and 4. The proponents already operate a Standing Camp in the TWWHA, and can demonstrate that the listed impact mitigation measures, walking group ratios, and camp construction / operation measures are sustainable, and compatible and beneficial to the protection and conservation of the World Heritage and other values. In particular, the proposal will lead to: - An increased awareness of the TWWHA, and the outstanding universal values and cultural history of the area - High quality interpretation and presentation of the TWWHA - Increased access to the TWWHA for researchers, artists and members of the Aboriginal community - All access, egress, and operations revolve around minimising interaction and impacts on other users. - Activities are compatible with the TWWHA Management Plan 2016 The presentation of built heritage, such as the historic Halls Hut, is inextricably linked with its on-going conservation.
Incorporate environmentally sustainable operational practices and the use of environmentally 'best practice' goods and technologies	Best practice for this proposal include: - Complete capture grey-water and sewage - Buildings are minimalist in scale, and require minimal fixtures to ground - Infrastructure outside of the 30m x 10m Standing Camp site is minimal - The number of trips, and customers per trip are minimal in scale (approx. 25 trips per year), and sympathetic to the location in the TWWHA - The site selection is a location with previous European human activity and built heritage, and obvious long-term disturbance.
Detail any external costs resulting from the proposal including ongoing monitoring and compliance	See section 4
Demonstrate economic viability	See section 1.11 and 4

4.5 Economic Values Assessment: Impacts, Benefits and Management

1. Economic Assessment of Options	Current Management Regime ($)	New Management Regime ($)
Capital Costs		
PROJECT MANAGEMENT (e.g. Salary, oncosts, expenses, travel, other)	Proponent	Proponent
PLANNING, PRE-WORKS (e.g. Advertising / meetings, consultants, documentation & certification, approvals: RAA & Regulatory)	Proponent	Proponent
WORKS/CONSTRUCTION (e.g. Materials & Supplies, labour & equipment, rehabilitation)	Proponent	Proponent
TOTAL CAPITAL COST	Proponent	[redacted]
Annual Operating Costs (e.g. PWS labour, other labour, consultants, contractors materials & Supplies)	Proponent	Proponent
NET ANNUAL OPERATING COSTS	Proponent	Proponent
TOTAL COSTS (Capital and Operating)	Proponent	Proponent

2. Economic Questions

Will the project create a new asset or alter/upgrade an existing asset?	Yes
Does the project require PWS or other Government funding for infrastructure upgrades?	No
Who is / will be responsible for annual operating costs?	Proponent
What is the fund source for capital and maintenance works?	Private funding – [redacted]
Is there any requirement for PWS involvement in ongoing management?	Annual site inspection
What are the implications of not implementing the project (in terms of assets and finance):	Funds to repair and maintain the existing heritage Halls Hut will not be received, and the important cultural asset will be impacted. [redacted] Opportunities to meet the goals for presentation and tourism in the 2016 TWWHA Management Plan, and Parks21 Partnership will be missed.

Economic Comment (Comment on the Impacts / benefits of each option)

Step 5 – Advice on Impact Assessment and Proposed Management

Summary of comment received.

Part of RAA Referred to:	Name and Section	Advice and Comment	Initiating Person's / Regional Response
Supplement al Table 1	PWS Planning (Hobart), Lynne Sparrow	*Impacts from trampling* Photo monitoring guide prepared by NRM South provided. Particular attention made to the clear identification of trigger points at which impacts are addressed (limits of acceptable change). *Impacts on Wilderness Character* Helicopter use could have negative impacts on the wilderness recreational experience of many other users (e.g. especially the many visitors who use the Cynthia Bay/Lake St Clair/Pumphouse Point vicinity). Feedback comments on past proposals for helicopter access to the TWWHA have reflected significant opposition to helicopters because they disturb 'the peace and quiet' of the TWWHA experience.	*Impacts from trampling* Additional cultural and natural values assessments undertaken by the Proponent will be required before approval is provided for proposed walking routes off Halls Island, including Mt Oana [redacted] outes (Stage 2 activities). PWS will provide the proponent with the NRM South Photo Monitoring guidelines for inclusion within additional RAA assessments for Stage 2 activities. *Wilderness Character* • Action included in Action Plan for proponent to adhere to 'Fly Neighbourly Advice'.
Aboriginal Heritage Values	Aboriginal Heritage Tasmania, Ross Stanger	[redacted] AHT would therefore advise that the proponent formally contact, engage and consult with the Aboriginal Heritage Council (AHC) and the Aboriginal community to outline the details of the proposed development and any proposed plans for activities [redacted] ...Engagement and consultation with the AHC, which includes members from the Tasmanian Aboriginal community...may provide further information and advice in relation to [redacted] and the culturally appropriate activities that can be	Additional cultural and natural values assessments undertaken by the Proponent will be required before approval is provided for proposed walking routes off Halls Island, including [redacted] routes. Stage 2 actions: • proponent formally contact, engage and consult with the Aboriginal Heritage Council (AHC) and the Aboriginal community to outline the details of the proposed development and any proposed plans for activities [redacted]

		undertaken as part of the project. *Direct involvement or and collaboration with Aboriginal community* ...AHT would therefore advise engagement and consultation with the AHC and Aboriginal community on the development of all cultural heritage interpretation and planned access to Country projects. Another key objective of the TWWHA Management Plan 2016 involves the development of strategies for secure employment opportunities for Aboriginal people in the TWWHA. While not considered within the RAA, the AHC would welcome further consideration and commitments by the proponent for the establishment of collaborative relationships and partnerships with the Aboriginal community in terms of employment and training for Aboriginal people as part of this project.	- proponent to engage and consult with the AHC and Aboriginal community on the development of all cultural heritage interpretation and planned access to Country projects PWS will provide the information from AHT to the proponent so the proponent can consider all opportunities as identified by AHT for their consideration.
Natural Values	PCAB, Simon Wilcox	*Proposed tracks off Halls Island* Based on desktop information, it appears that the helipad and some of these proposed tracks pass through areas of listed threatened native vegetation communities and it appears that these areas were not surveyed as part of the onground assessment by Northbarker. No information has been provided in the documentation regarding the size or form of these structures, it is PCABs understanding/assumption that the tracks will be located and designed to avoid disturbance to vegetation as much as practicable and this is supported. *Increased usage of Halls Island and vegetation impacts* The management of the numbers proposed should be sufficient to minimise impacts (this may need to be reviewed if any future discussions on increasing visitation further). However the suggestion to utilise minimal impact bushwalking techniques for some of the proposed surrounding walks will need to be carefully assessed against vegetation values; with these type of visitor number impacts may be lessened by creating hardened tracks. The avoidance and mitigation measures outlined in the Northbarker flora and fauna assessment report (dated 21/11/16) are supported. It is recommended that it be clearly stated that no helicopter refuelling operations or fuel storage etc. is to be undertaken on site.	*General* Action included in Action Plan for proponent to: • Implement all avoidance and mitigation measures outlines in the NorthBaker flora and fauna assessment report; • No storage of aviation fuel or undertake any refuelling operations at Halls Island helipad or surrounding area; • Not allow any sewage, grey water, and sediment to enter lake/streams in order to protect aquatic fauna (which has high endemicity); and • Not fly within 1km line-of-sight of known eagles nests and that helicopter flights do not include a 'viewing' of the nest. *Geoconservation* • Action included in Action Plan for proponent to modify the proposed helipad to Halls Island walking route to avoid degradation of the patterned mire

		No sewage, grey water, and sediment should be allowed to enter lake/streams in order to protect aquatic fauna (which has high endemicity). It is recommended that, where possible, helicopters do not fly within 1km line-of-sight of known eagles nests and specifically that tours do not include a 'viewing' of the nest. *Geoconservation* ...the proposed walking track/route to Mt Oana would skirt a patterned mire, while the helipad and access track cross another... Such mires are considered to be of national significance from a geoconservation perspective while the flora aspect is regarded an outstanding universal value... . It is recommended that minor modification to the proposed Mt Oana walking track/route and to the helipad location be made to avoid degradation of these mires. *Threatened flora & fauna* *Halls Island* ...no significant vegetation-related issues for Hall's Island itself, provided the proponent agrees to adopt, in full, the recommendations and mitigation measures outlined in the northbarker flora and fauna assessment report (dated 21/11/16) for protection of the two threatened vegetation communities (Sphagnum peatland and Athrotaxis selaginoides rainforest), fire sensitive vegetation (MSP, RKP and RSH) and flora species (Pherosphaera hookeriana, Athrotaxis selaginoides, Athrotaxis cupressoides, Diselma archeri) identified as present on the island. It is recommended that threatened plants (Mount Mawson pines) near to the work areas should be flagged to avoid any inadvertent disturbance during construction. The island landing should be located such that these plants do not need to be removed, but if this is not practicable or safe, and any of these threatened pines need to be taken, then a permit to take under the *Threatened Species Protection Act 1994* will be required from PCAB prior to any impact. Staff and contractors working onsite should be made aware of the location of threatened plants and threatened native vegetation communities to ensure no inadvertent impact to these natural values.	Additional cultural and natural values assessments undertaken by the Proponent will be required before approval is provided for proposed walking routes off Halls Island, including Mt Oana [redacted] routes (Stage 2 activities). PWS will provide the proponent with the advice regarding geoconservation features as outlined by PCAB for inclusion within additional RAA assessments for Stage 2 activities. *Threatened flora & fauna* Action included in Action Plan for proponent to • Make staff and contractors working on Halls Island aware of the location of threatened plants and threatened native vegetation communities to ensure no inadvertent impact to these natural values. • flag work area to avoid inadvertent disturbance of threatened plants (Mount Mawson pines) during construction; and • locate the Halls Island landing such that these plants do not need to be removed, but if this is not practicable or safe, and any of these threatened pines need to be taken, then a permit to take under the *Threatened Species Protection Act 1994* will be required from PCAB prior to any impact. *Weeds & Disease* Action included in Action Plan for proponent to • develop a hygiene plan developed in accordance with DPIPWE (2015). *Weed*

		PCAB requests that onground mapping of the vegetation communities undertaken by northbarker should be provided to the NVA, if this has not already been done, to inform TASVEG mapping. *Weeds & Disease* PCAB recommends that as a condition of any approvals that the proponent be required to have a biosecurity hygiene plan developed (and implemented)... Neoprene waders are a significant biosecurity risk (e.g. didymo) and staff and visitors involved with this proposal should be required to properly clean, dry and disinfect their waders prior to accessing the area for fishing, especially if people have been fishing overseas. This also applies to any other aquatic-related equipment and clothing (e.g. kayaks and fishing gear).	*and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania* and should cover construction and operational phases of the project, quality control checks during construction and operations (and who will monitor compliance with agreed biosecurity measures) and a list of management actions that will be implemented (and by whom) if any weeds or other threats are identified during construction or operations. Issues/threats to consider should include plant seeds, invertebrates, aquatic alga and pathogens, plant pathogens and the like; and • require staff and visitors to properly clean, dry and disinfect their waders prior to accessing the area for fishing, especially if people have been fishing overseas. This also applies to any other aquatic-related equipment and clothing (e.g. kayaks and fishing gear).

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Step 6 – Activity Plan

The Activity Plan shows the key actions required to ensure that short and long term high risk aspects of the activity are minimised or addressed and legislative requirements are met. These are actions that are critical to implement to achieve the environmental, social and economic outcomes. Use the activity reference column to cross-reference actions with the Impact Assessment and Proposed Management table – Step 4.

The Activity Plan details the critical actions that have emerged from steps 1, 4 and 5. Only list important actions not day-to-day or operational tasks. Make sure evaluation and reporting tasks (Step 10) are listed (see Step 1, part 8 for success indicators).

Activity #	Activity Details	Activity Controls	Responsible Officer	Start Date	Notes
4.1.1.1	*Natural values* *Flora* *Trampling*	Adopt all mitigation measures prescribed in the Avoidance of trampling (on-island) within the Flora and Fauna assessment: A. Avoid routes through MSP's, or facilitate passage across MSP's by installing raised, perforated FRP boardwalking. Risk is mitigated. B. Education and supervision during trips. C. Siting of standing camp among ORO or WSU communities. Create visitor exclusion zones, excluding visitors from sensitive communities MSP, RKP, and Pherosphaera hookeriana communities (see Map 6, appendices)			
4.1.1.2	*Natural values* *Flora* *Fire mitigation*	Fire risk mitigation – Electric or gas heating in Standing Camp – no open flames, Smoking only permitted in designated area.			
4.1.1.3	*Natural values* *Flora* *MSP communities south west of Halls Hut*	Install boardwalk or rock re- enforcement along existing impact.			
4.1.1.4	*Natural values* *Flora*	Ensure on-island routes/tracks avoid this species. Where existing routes pass by this species (near the natural rock jetty),			

	Mount Mawson Pine	use short lengths of boardwalk to ensure clear walking route that avoids plant species. Education and supervision to re-enforce impact mitigation. Utilise no-access areas for visitors, see appendix Halls Island Maps, Map 6, for site plan including exclusion zones.			
4.1.2.3	*Natural values* *Fauna* *Clarence Galaxias*	Commercial trips will avoid this high plateau habitat area.			
4.1.2.4	*Natural values* *Fauna* *Other fauna*	Education and supervision of customers to ensure no feeding or petting of animals. Ensure all food wastes etc are properly stored.			
4.1.3.1	*Natural values* *Geoconservation* *Central Highlands Cenozoic Glacial Area (Site ID 2953) & Central Plateau Terrain (Site ID 2684)*	Camp will be installed using hand tools / battery-operated tools only. Minimal ground disturbance, no excavations or changes to water-courses.			
4.1.3.2	*Natural values* *Geoconservation* *Western Tasmania Blanket Bogs (Site ID 2527)*	Sites are avoided. Any interaction with sites (eg helicopter pad) will involve minimal ground disturbance, perforated decking and boardwalking.			
4.1.4.1	*Natural values* *Landscape & Viewfield* *Halls Island*	Sympathetic building material selection, no reflective materials, muted-bush tones, minimal 12V lighting, natural materials where possible.			
4.1.5.1	*Natural values* *Wilderness & wild rivers* *NWI 14+*	Restrict maximum group sizes of six customers, two guides Restrict number of commercial trips to 30per year. Sympathetic building designs and scale. Adhere to strict helicopter flight path and impact minimisation prescriptions in Attachment 10.			
4.1.6.1	*Natural values*	Implement 'Keeping It Clean' training provided by NRM South. The final check			

	Threats *Weeds*	and disinfectant process should be applied at Derwent Bridge, prior to departure for Halls Island. Incorporate into Operations Manual.			
4.1.8.1	*Natural values* *Water quality* *CFEV values*	Installation of complete capture sewage and greywater pods. Greywater will be back- loaded with each trip, for disposal outside of the TWWHA. Sewage will be collected annually in pods and emptied off-site.			
4.2.2.1	*Cultural Values* *Historic Heritage values*	Conduct further research and promote the cultural history of the Walls of Jerusalem National Park			
4.2.3.1	*Social values* *Recreational values, established uses*	Facilitate public access to the privately owned Halls Hut when appropriate (this is again external to this proposal).			
4.2.3.2	*Social values* *Recreational values, established uses*	Increase accessibility to the history and artefacts relating to Halls Island and Reg Hall, through partnership with the Queen Victoria Museum and Art Gallery, Launceston.			
4.2.3.3	*Social values* *Recreational values, established uses* *Helicopter use*	Minimise helicopter use, use helicopter route as described which avoids known walking routes, and all significant recreational fishing waters. Restrict annual trip numbers during peak season to approx. 25 trips. Adhere to impact minimisation prescriptions in Attachment 10			
4.2.3.4	*Social values* *Recreational values, established uses* *Social impacts*	Use adaptive management as part of the Operations Manual to avoid or bypass areas where other users are recreating. This has been proven to be effective at the proponents other operations in the TWWHA.			
4.2.4.1	*Leases & Licences*	Negotiate new lease over all infrastructure			
4.2.5.1	*Surrounding land uses*	Avoid areas where other users are recreating.			

		Adhere to strict flight paths.			
4.3.1.1	*Activity Hazards* *Occupational Health and Safety*	A complete WH&S Management Plan will be developed for the construction phase, and operational phases of the development.			
4.3.2.1	*Activity Hazards* *Visitor Risk*	A complete WH&S Management Plan will be developed for the construction phase, and operational phases of the development.			
4.3.3.1	*Activity Hazards* *Other – Dangerous goods, controlled waste, fire etc.* *Historic hut accommodation – wood fire – no toilet facilities*	Outside open fires are not permitted. Accidental fires will be extinguished immediately. Construction waste and general rubbish generated onsite will be contained onsite for disposal to a Council Waste Transfer Station. Oil / fuel spills will be prevented and will be contained and cleaned up promptly if they occur. Installation of complete capture sewage and greywater pods. Greywater will be back- loaded with each trip, for disposal outside of the TWWHA. Sewage will be collected annually in pods and emptied off-site.			

For projects that involve a project team detail the governance structures below. For simple PWS projects just list the responsible officer.

Governance

PWS I/C

Step 7 – External Assessment

If the activity *does* require external assessment (as identified at Step 3), this takes place at this step. At this point the assessment from a PWS perspective is complete and PWS is signalling it plans to approve the Activity Plan (for a level 2-3 RAA, or a DPEMP for a Level 4 RAA) subject to any further conditions that are imposed by external assessment.

If the activity *does not* require external assessment, go direct to Step 8.

PWS will refer/recommend the referral of the proposal for assessment under the process/es below (check those that apply):

■ LUPAA (Required)

■ EPBC (EPBC Referral, General Manager decides whether to refer)

☐ Other _____ PWS I/C

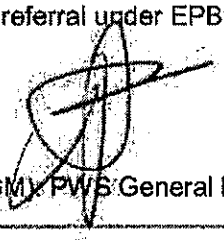
ENDORSED

Approved for External Assessment by:

Signed (RM): PWS RM  **Date:** 13 March 2018

Name: Chris Colley **Position:** Regional Manager North

Note for a referral under EPBC, EPBC or a DPEMP the approval of the General Manager is also required.



Signed (GM): PWS General Manager **Name:** Jason Jacobi **Date:** 14/3/18

Add results of external assessments here.

Add any changes or new conditions/controls to the Activity Plan (Step 6) that are required as a result of these assessments. State which conditions have been added/modified in the Notes column and also state the assessment process that required the change/addition.

Any Further Comment:

PWS I/C

Step 8 – Draft Final Determination

☒ **Activity Approved with conditions** (Can be implemented subject to the conditions in the Activity Plan and any additional or changed conditions listed below.)

Stage 1 activities

This RAA proposal has been broken into two stages of activities. Stage 1 has been approved, whilst stage 2 activities require additional assessment and approval.

Activities approved with the following conditions include (Stage 1);

- All developments and activities on Halls Island;
- Helipad;
- Walking route between the helipad and Halls Island;
- The use of non-motorised watercraft on Lake Malbena; and
- Helicopter flight path.

The following conditions apply

Condition Title	Condition details
Wilderness Character	Prepare and comply with an Operations Plan to include: 'Fly Neighbourly Advice and identified flight path between Lake St Claire and helipad. Conditions are also to be incorporated into the lease and licence. Adhere to helicopter use prescriptions in Attachment 10 to minimise point-impacts Final building design, colours and materials to be approved by PWS prior to submitting DA.
Flora & fauna	Implement all avoidance and mitigation measures outlines in the NorthBaker flora and fauna assessment report; Prepare a Construction Environmental Management Plan (CEMP) covering the construction phase, to be approved by PWS.
Flora & fauna	Through the CEMP, make staff and contractors working on Halls Island aware of the location of threatened plants and threatened native vegetation communities to ensure no inadvertent impact to these natural values.
Flora & fauna	Flag work area to avoid inadvertent disturbance of threatened plants (Mount Mawson pines) during construction To be included in CEMP
Flora & fauna	Locate the Halls Island landing such that these plants do not need to be removed, but if this is not practicable or safe, and any of these threatened pines need to be taken, then a permit to take under the *Threatened Species Protection Act 1994* will be required from PCAB prior to any impact.
Flora & fauna Helicopter use	Not fly within 1km line-of-sight of known eagles nests and that helicopter flights do not include a 'viewing' of the nest. (to be included in Operations Plan)

CFEV Values	Not allow any sewage, grey water, and sediment to enter lake/streams in order to protect aquatic fauna (which has high endemicity) Specific management of sewage and grey water to be addressed in Operations Plan.
Geoconservation	Modify the proposed helipad to Halls Island walking route to avoid degradation of the patterned mire
Weeds & Disease	Develop a hygiene plan developed in accordance with DPIPWE (2015). *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania* and should cover construction and operational phases of the project, quality control checks during construction and operations (and who will monitor compliance with agreed biosecurity measures) and a list of management actions that will be implemented (and by whom) if any weeds or other threats are identified during construction or operations. Issues/threats to consider should include plant seeds, invertebrates, aquatic alga and pathogens, plant pathogens and the like. Include actions in the operations plan.
Weeds & Disease	Require staff and visitors to properly clean, dry and disinfect their waders prior to accessing the area for fishing, especially if people have been fishing overseas. This also applies to any other aquatic-related equipment and clothing (e.g. kayaks and fishing gear). Include requirements in the operations plan.
Activity Hazards	Storage of aviation fuel or undertaking any helicoper refuelling operaiton is not permitted at the Halls Island helipad or nearby area.
Operations Plan	Operations plan is to be prepared and submitted to PWS for approval prior to operations commencing. The operational plan provides workers a clear picture of their tasks and responsibilities necessary to control negative impacts and maximise benefits of the activity covering post-construction and operational phases. The operations plan should cover: - Operating procedures and maintenance tasks required to manage risks to the environment and the safety of workers and guests (e.g. bushfire risks, tree and limb fall risks). - Guide induction and training - Approved walking tracks that can be used as part of the camps operation (e.g. guided walks) - The means of access to and from the camp. - Any camp set-up and breakdown procedures, as well as methods of transporting camping structures and equipment to and from the site. - Type, frequency and responsibility for monitoring - Frequency and responsibility of reporting

☒ **Activity Not Approved** (Activity cannot be implemented)

Why not approved	Details
☐ The proposed activity is likely to cause unacceptable environmental impacts.	
☐ The proposed activity is likely to cause unacceptable social impacts.	
☐ The proposed activity is likely to cause unacceptable economic	

impacts.	
☒ Other – additional assessment required	**Stage 2 Activities** Activities presented within this RAA that require further assessment prior to approval include: • proposed walking routes to Mt Oana; • [redacted] • any additional walking routes (excluding walking route between Helipad and Halls Island). In order to undertake the assessment of stage 2 activities all walking routes to Mt Oana, [redacted] and any other routes to be used for commercial operations the proponent will need to identify potential impact on natural and cultural including social and recreational values and actions to control or minimise adverse impacts. With regard to Aboriginal heritage, the proponent must formally contact, engage and consult with the Aboriginal Heritage Council (AHC) and the Aboriginal community to outline the details of the proposed development and any proposed plans for activities including site visits; and 1. proponent to engage and consult with the AHC and Aboriginal community on the development of all cultural heritage interpretation and planned access to Country projects.

Any Further Comment:
PWS I/C

Authorised by:

Signed (RM): PWS RM

Date: PWS RM

Name: PWS RM

Position: PWS RM

Note for a proposal referred under EPBC or a level 4 (DPEMP) RAA the approval of the General Manager is required.

Signed (GM):

Name: PWS GM

Date: PWS GM

Step 9 – Notification and Implementation

PWS proposals: An approved RAA indicates to staff the proposal can be implemented, subject to any conditions stated in the approval at Step 8.

External proposals: the PWS provides written authority including any conditions to external proponents. Following notification and the fulfilment of any pre-conditions the activity proceeds.

Step 10 – Report and Evaluation

At completion of works a final report and evaluation of the project is completed. This is to be completed within three months of the project finishing using the table below:

Final Report and Evaluation

Report Elements	Report Details
Start Date	PWS I/C
Finish Date	PWS I/C
Estimated Cost	PWS I/C
Actual Cost	PWS I/C
Were all conditions of approval complied with? Detail and explain any variations.	PWS I/C
Were all control actions implemented successfully. Detail and explain any variations.	PWS I/C
Were the outputs (1.7) achieved?	PWS I/C
Were the outcomes (1.6) achieved or are they on track to be achieved	PWS I/C
Are any additional works or monitoring required?	PWS I/C
Further Comment	PWS I/C

Evaluation of project by Regional Manager/Branch Manager

☐ Project Complete

☐ Project Successful

☐ Further Action Required:

PWS I/C

Signed (RM): PWS RM **Date:** PWS RM

Name: PWS RM **Position:** PWS RM

Attachment 10

Halls Island – Amendments and further information in relation to helicopter use. Prepared by the Proponent 11/01/2017 for inclusion in the Halls Island RAA.

Present the below as a new attachment in appendix thank you

Attachment 10: Notes on Helicopter use and impact minimisation. (please add to the RAA as a new attachment

10.a Usage levels

Required usage levels have been designed to minimise overall use, mitigate any point-impacts to other users in the TWWHA, and in doing so protect the wilderness character of the TWWHA.

Each guided package to Halls Island requires the capacity of two helicopters in order to deliver or retrieve customers and staff. The most common helicopter used for such purposes in Tasmania are the B2/B3 Squirrel, which take 5 passengers and the pilot.

Extrapolating the above, each guided package to Halls Island operating at a capacity 6+2 ratio would require two helicopter return trips to deliver customers and staff, and a further two helicopter return trips to deliver customers and staff back to Derwent Bridge some four days later. Each return trip is approximately 24 minutes air time (12 minutes each way), which equates to a maximum required airtime of ~96 minutes per guided package (4 x 24 minutes).

The capacity to offer up to 30 guided packages per year, at 96 minutes total flight time each, results in a maximum flight usage level of 2880 minutes, or 48 hours, per annum.

10.b Point impacts

It is important to quantify the level of usage in terms of its potential effect on other users in the area, and the overall potential impact on the 'wilderness character' of the TWWHA.

To the user on the ground, each helicopter trip would produce a point-impact: a specific noise footprint and potential visual impact to those within audible / visual range of the flight path. A brief desktop study of helicopter sound-monitoring studies indicates that a discernible noise footprint is detectable within an approximate 4km lateral distance of a B2/B3 Squirrel helicopter. With the recommended manufacturer's flight speed of just over 200km/h, we can then determine that each flight would potentially create a point-impact (noise footprint and visual impact) of a maximum 2 minutes per trip, in the unlikely event that a user is *directly* under the flight path. This noise footprint when graphed is a bell-shaped curve, with maximum noise experienced when directly overhead, graduating to no noise at either end of the 4km lateral distance.

By implementing recommended FNA strategies including flying at 1000m+ altitude, using the selected flight corridor which avoids walking routes and Wilderness Zones, by following the eastern periphery of the TWWHA, and by ensuring that the pilot and passengers are to note any other users located in the TWWHA and implement avoidance measures, the likelihood of any other user experiencing more than one <2 minute point-impact is extremely unlikely, ensuring the protection of the wilderness character and integrity of the TWWHA.

10.c. **Impact Mitigation Measures**

The FNA (Fly Neighbourly Advice) developed for the Halls Island includes a recommended flight altitude of 1000metres+, which reduces the maximum point-impact of any noise. A desktop study of previous papers relating to helicopter use suggest that at this altitude, noise from the B2/B3 Squirrel is reduced from ~75dB, to somewhere

around 60dB. This in turn also decreases the radius of impact along the flight path, to a ~4km lateral distance.

The flight corridor itself has been designed to ensure that no walking routes are crossed, and the route itself is to the eastern periphery of the TWWHA. This positioning prevents any point-impact on Wilderness Zones in the TWWHA, or on any walking routes/tracks in the TWWHA.

Wind direction is a recommended consideration from the B2/B3 Operators Manual, when minimising noise impacts. As the regular and predominant winds in the TWWHA feature a dominant westerly influence, once again any aircraft noise is carried towards/across the eastern boundary of the TWWHA, and away from other potential users and sensitive areas such as Wilderness Zones.

For operations departing Derwent Bridge, take-offs and landings will occur in the direction of the noisiest land route (Lyell Hwy) as per the helicopter manufacturers recommendations on impact mitigation. Take-off and landings at the Halls Island end of the flight corridor will again follow manufacturers' recommendations on impact mitigation by taking-off to the right, while the natural topography of the location will enhance lateral attenuation and minimise the transmission of noise produced at take-off.

During each flight, the pilot and passengers (guides) are to note any other users located under the flight path in the TWWHA, and avoid overflying these positions on the return trip, again minimising any inadvertent direct overflight and associated point-impact on users to a single ~2 minute event or less.

10.d. **Summary**

In summary, careful flight-path selection combined with the documented low-usage of the area ensures that it is unlikely that other users will be over-flown by helicopter operations relating to Halls Island. In the unlikely event that this does occur, by using the Halls Island specific FNA prescriptions, the overall potential impact on wilderness values to other users will be minimised to a ~2 minute, once-off point-impact. Due to the location of the flight corridor, there are no anticipated impacts to any Wilderness Zones in the TWWHA.

Further references:

http://www.ricondoprojects.com/Heliport/D_Noise.pdf

Flight Manual AS350 B3e – 9.9 Noise Reduction

Changes to Supplementary Table 1

Supplemental Table 1: Project specifics in relation to 3.31, Required assessment through the RAA process, Tasmanian Wilderness World Heritage Management Plan 2016 (page 82).

The assessment process must identify how any impacts on World Heritage values will be managed or mitigated. At 8a Potential impacts on 'wilderness character'. Mitigation/Management measures, please insert a single line in the RH column:

Through adopting the FNA and other minimisation strategies, any potential point-impacts (noise/visual) on other users in TWWHA within ~4km lateral distance of the flight path will be strictly limited to a once-off ~2 minute event.

Changes to Supplementary Table 2

Changes to Supplemental Table 2: Project specifics in relation to 6.8 Commercial Tourism, Tasmanian Wilderness World Heritage Management Plan 2016 (page 150).

Describe how potential impacts on the legitimate enjoyment and experience by others of TWWHA features and values will be managed. Alter paragraph four to read:

Aerial access is described in the TWWHA Management Plan as 'a significant component of presentation in the TWWHA...providing opportunities to contribute to the diversity of experiences that are offered'. It should be noted that the TWWHA management plan does not allow for aerial access to remote areas with relatively high use (such as the Western lakes around the Nineteen Lagoons), or aerial access to the Wilderness Zone. As a result, the only aerial access permitted on the eastern side of the Central Plateau is the southern area between Lake St Clair and the Pine River valley, within which Lake Malbena is located. Considering the low usage of the area, and by avoiding fly-overs of popular walking routes, flight-corridor location to the eastern edge of the TWWHA, and by adopting Fly Neighbourly practices such as +1000m altitude, social impacts of the proposal can be managed/mitigated, and restricted to once-off point-impacts of ~2 minutes or less in the unlikely case of other users being within 4km lateral distance of the flight path.

RAA amendment 1 of 3

Page 8, 1.3.3 amendment (needs to be inserted):

Helicopter use:

- Helicopter use will be required, facilitating up to a maximum 30 commercial trips (arrivals / departures) per year.

The only aerial access permitted by the TWWHA Management Plan on the eastern side of the Central Plateau is outside of areas of regular visitor use and/or Wilderness Zones, in the southern area between Lake St Clair and the Pine River valley, in which Lake Malbena is located. Social impacts and potential impacts to the wilderness values of the area are managed/mitigated by considering the (i) very low usage of the selected area by walkers, (ii) avoiding fly-overs of walking routes, (iii) the chosen flight corridor is sighted along the eastern periphery of the TWWHA, and by (iv) adopting fly-neighbourly practices such as 1000m+ cruising altitude.

Due to helicopter seating configurations (maximum 5 pers + pilot), the heli-use required to facilitate up to 30 guiding packages per year is in vicinity of 60-120 return heli-trips per annum. To put this in context, the approximate air-time required for each trip is 12 minutes each direction to/from Derwent Bridge (preferred departure point), equating to a total flight time of between 25 and 44 hours per year at capacity.

Noise and visual impacts of the helicopter flights are further mitigated by the FNA (Fly Neighbourly Advice) prescriptions attached to the RAA, which include a minimum flight altitude of +1000m where possible, a flight corridor on the eastern boundary of the TWWHA which avoids all recognised walking routes and formed camping areas, and a flight route which is located to maximise its' distance from the Wilderness Zone, and careful observation by pilot and passengers (guides) of any independent walkers, and take measures to avoid disturbance of those walkers.

It is noted that with reference to the possible impact of helicopter use to 'Wilderness Values' in the TWWHA, that the most important factor to impact is the length of any *point-impact* (noise or visual) to other users within the footprint of the flight corridor. This point-impact is estimated to be a minimal 2 minutes over any trip (see attachment 11 in appendices for further information), and through implantation of the FNA and avoidance measures, any users should only be impacted by one trip, 2 minutes in duration, in total.

See appendices for attachment 10: Notes on Helicopter use and impact minimisation for further information.

RAA amendment 2 of 3.

Page 29, 4.1.5 (needs inserting) re impact minimisation strategy, insert 'flight altitude of +1000m'

RAA amendment 3 of 3

Page 35 4.2.3 (needs inserting) re cumulative effects on recreational and wilderness values: Insert flights are carried out at altitude of +1000m where possible, and flight corridor has been chosen to avoid areas of regular use, including walking routes and camping areas.

Halls Island EPBC Self-referral – Response to request for further Information

Overview

This document was prepared by the proponent in response to a request for more information received from the Department of The Environment and Energy on the 24 April 2018.

Additional and updated information includes:

- Updated information relating to the proposed Helicopter Landing Site (HLS), which is located outside of the Walls of Jerusalem National Park (WOJNP), in the Central Plateau Conservation Area (CPCA). Investigations during June 2018 have resulted in the identification of a HLS consisting of exposed bedrock suitable for landing, and negating the requirement for decking or boardwalking (subject to Occupational Health and Safety (OH&S) assessments, and assessments against applicable CASA guidelines).
- Updated information regarding the assessment findings of the complex fire history of Halls Island (see North Barker Flora and Fauna Assessment addendum - Proposed Helipad and Access to Halls Island Vegetation Survey, 30 May 2018 (Flora and Fauna Assessment addendum) in appendices).
- The implementation of non-smoking designation to the proposed activities to ensure that workplace OH&S requirements are met, and fire risk is avoided.
- The clarification that the proposed boat landing site on Halls Island is a pre-existing area of naturally exposed bedrock. No construction is proposed.
- The inclusion of a map illustrating Halls Island, in relation to recorded walking tracks and routes (supplied by the Parks and Wildlife Service (PWS), see appendices).
- Increased information relating to the history of aerial activities and access in the Tasmanian Wilderness World Heritage Area (TWWHA), and historical Management Plans and associated documents.
- Information relating to the proposed Standing Camp design, including a preliminary design document (see appendices).

Consideration of Matters of National Environmental Significance (MNES), potential impacts, avoidance and mitigation measures

WORLD HERITAGE PROPERTIES (SS 12, 15A)

Tasmanian Wilderness World Heritage Area (TWWHA)

Value: Criteria viii - Values representing the major stages of earth's evolutionary history.

Matter: Potential on-island impacts from fire to relic biota with links to ancient Gondwanan biota including endemic conifers.

Potential impacts (to establish likelihood of a significant impact on MNES): Fire.

Likelihood: Low, no likely ignition sources.

Consequence: Burning and localised loss of fire-intolerant relic biota.

Risk *(combination of likelihood and consequence):* Low. Distribution of vegetation communities and form of several tree species indicates a complex fire history on Halls Island (see Flora and Fauna Assessment addendum) and subsequent resilience to fire among on-island MSP (*Sphagnum* peatland) communities.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.2, 4.3.3.1, and implement all RAA Step 8 Conditions

    1) 4.1.1.2: Electric or gas heating in Standing Camp, no open flames, smoking only in permitted area.

    2) 4.3.3.1: Outside fires are not permitted. Accidental fires will be extinguished immediately.

- Step 8 Conditions:

    3) Storage of aviation fuel or undertaking any helicopter refuelling operation is not permitted at the Halls Island HLS or nearby area.

    4) Implement all avoidance and mitigation measures outlined in the North Barker Flora and Fauna Assessment Report, 21 Nov 2016 (Flora and Fauna Assessment) (as outlined below in Lease Conditions 2.4ii (B)); prepare a Construction Environmental Management Plan (CEMP) covering the construction phase, to be approved by the PWS.

- Lease and Licence conditions including:

5) 12.12 Fire: The Operator must:

(a) take all reasonable actions necessary to limit fire hazards and the threat of fire on the Land (but nothing in this clause authorises the removal or burning of any vegetation without the Minister's prior written consent);

(b) in relation to the Land, ensure that all necessary and appropriate fire retardation and fire-fighting equipment and devices (including those required by Law) are installed, upgraded and maintained in good working order and condition, and are readily available for use throughout the Term;

(c) comply with all directions of the Minister (acting reasonably) and any relevant Government Bodies in respect of fire prevention and fire-fighting on the Land generally; and

(d) ensure all Operator's Agents who are involved in the carrying out of the Approved Use have been trained in accordance with any applicable Laws and know how to operate all fire retardation and fire-fighting equipment and devices on the Land.

6) A2.2 (f): The design must satisfy, or be capable of satisfying, all applicable requirements for buildings being built in bushfire prone areas under the Building Code of Australia **(Code)**. The design must encompass appropriate fire risk mitigation principles.

7) A2.4 (a) The Operator must prepare an Operations Manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the Flora and Fauna Assessment, including:

(B) avoiding wood fireplaces and sources of potential ignition;

8) B3: Fuels and storage

The Operator must:

(a) only use heating and cooking appliances and fuels within the Land, as approved from time to time in writing by the Minister.

- Additional proponent proposed measures:

  9) Halls Island will be offered as a non-smoking destination, as a provision to mitigate fire risk, and meet with OH&S obligations to employees. Shall be incorporated into the Fire Management Plan / Operations Manual.

Risk after mitigation and avoidance measures are in place: Negligible. Possible sources of ignition (eg open-fires) are avoided, risk of fire is mitigated.

Likelihood of a significant impact: Negligible likelihood due to mitigation and avoidance measures implemented to avoid / mitigate risk of fire.

Value: Criteria viii - Values representing the major stages of earth's evolutionary history.

Matter: Potential impacts to soils from erosion (eg blanket bogs, peatlands).

Potential impacts (to establish likelihood of a significant impact on MNES): Trampling & track formation related to on-island activities and proposed walking route to and from HLS.

Likelihood: Low-moderate.

Consequence: Damage to the integrity of susceptible soils arising from trampling, track formation and subsequent erosion.

Risk: Moderate.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.1, 4.1.1.3, 4.1.1.4, 4.1.3.1, 4.1.3.2 and implement all RAA Step 8 Conditions

  1) 4.1.1.1: Adopt all mitigation measures prescribed in the avoidance of trampling (on-island) within the Flora and Fauna Assessment:

     a) Avoid routes through MSP's, or facilitate passage across MSP's by installing raised, perforated boardwalking. Risk is mitigated.

     b) Education and supervision during trips, in relation to avoidance of trampling.

     c) Siting of Standing Camp among ORO (Lichen lithosphere) or WSU (*Eucalyptus subcrenulata* forest and woodland) communities. * Note that the ORO community is

located on an area of hard-wearing, exposed bedrock, and WSU is considered a common and resilient community to site activities.

d) Create visitor exclusion zones, excluding visitors from sensitive communities MSP, RKP (*Athrotaxis selaginoides* rainforest) and *Pherosphaera hookeriana* communities (see site map).

2) 4.1.1.3: Install raised, perforated boardwalk along area of existing impact.

3) 4.1.1.4: Ensure on-island routes/tracks avoid *Pherosphaera hookeriana*. Where existing routes pass by this species (near the natural rock landing), use short lengths of boardwalk to ensure clear walking route that avoids plant species. Education and supervision to re-enforce impact mitigation. Utilise no-access areas for visitors, see Site Plan Map including exclusion zones.

4) 4.1.3.1: Camp will be installed using hand tools / battery-operated tools only. Minimal ground disturbance, no excavations or changes to water-courses.

5) 4.1.3.2: Blanket bog sites are avoided.

- Step 8 Conditions:

6) Implement all avoidance and mitigation measures outlined in the Flora and Fauna Assessment; prepare a Construction Environmental Management Plan (CEMP) covering the construction phase, to be approved by the PWS.

7) Through the CEMP, make staff and contractors working on Halls Island aware of the location of threatened plants and threatened native vegetation communities to ensure no inadvertent impact to these natural values.

8) Flag work area to avoid inadvertent disturbance of threatened plants (*Pherosphaera hookeriana* pines) during construction. Include in CEMP.

9) Locate the Halls Island landing such that these plants do not need to be removed, but if this is not practicable or safe, and any of these threatened pines need to be taken, then a permit to take under the *Threatened Species Protection Act 1994* will be required from Policy and Conservation Advice Branch (PCAB) TAS, prior to any impact. *Note – the Halls Island landing utilised the natural rock formation. No construction is required.

- Lease and Licence conditions including A2.3, A2.4 (ii), A2.5(d), C2.2

10) A2.4 Operations Manual

(a) The Operator must prepare an operations manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the Flora and Fauna Assessment:

(A) avoiding MSP - Sphagnum peatland, RKP - *Athrotaxis selaginoides* rainforest and *Pherosphaera hookeriana* locations (the Operator, where necessary, can apply to construct boardwalks over locations not specified in the RAA, which application will be subject to the written consent of the Minister including any necessary further assessment);

(D) using continual education and supervision as part of the overall interpretation and presentation of the Land to ensure minimal impact.

1) A2.5: Construction Environmental Management Plan - The Operator must, before making any application for Development Approval to the Central Highlands Council and/or undertaking any Development Works on the Land prepare a plan ('Construction Environmental Management Plan'), in a form and substance satisfactory to the Minister, to deal with the following matters:

(d) details of how impact mitigation will be managed including the development of site management plan dealing with listed species and communities of the island, risk mitigation measure and supervision;

2) C2.2 Management of the Environment: At all times while on an Activity the Operator must use all reasonable endeavours to ensure that the environment and ecology of the Licensed Area is in no way damaged by the Experience Guides and Clients including ensuring all staff and Clients clean, dry and disinfect any waders or equipment prior to accessing the Land and the Licensed Area.

- Additional proponent proposed measures

11) Additional on-site assessments (30 May 2018) have identified a suitable helicopter landing location (see Helipad Site 2 - Proposed Helipad and access to Halls Island Vegetation Survey 20 May 2018) consisting of naturally exposed bedrock within a HHE (Eastern alpine heathland) community. It is the intention of the proponent to use this area as HLS without the requirement for added infrastructure (subject to HLS approval from helicopter contractors and meeting applicable CASA regulations).Should infrastructure (formed helipad) be required due to OH&S and/or CASA requirements, a raised perforated deck shall be installed at Site 2, as per the Flora and Fauna Assessment impact mitigation prescriptions.

12) Walking route from HLS to the lake edge shall follow the sclerophyll forest / open plain edge as prescribed in the Flora and Fauna Assessment addendum. When using the

route between the western plain edge and the lake edge, customers and guides shall use fan-out walking techniques to avoid trampling and track formation. Incorporate into CEMP and Operations Manual.

13) Traversing of susceptible poorly drained habitats including sphagnum, blanket bogs and wetlands shall be avoided through the CEMP and Operations Manual.

Risk after mitigation and avoidance measures are in place: Low. Activities that could result in trampling are mitigated, and activities that could lead to track formation are avoided.

Likelihood of a significant impact: Negligible-low. Avoidance measures, along with mitigation measures such as education and supervision result in a negligible to low risk of significant impact.

Value: Criteria ix; Values representing significant ongoing geological processes, biological evolution and man's interaction with his natural environment.

Matter*:* Blanket bogs, bolster heaths and peat soils where processes of hydrological and geomorphological evolution are continuing in an uninterrupted natural condition.

Potential impacts (to establish the likelihood of a significant impact on MNES): Trampling & track formation related to on-island activities and proposed walking routes from HLS to lake edge.

Likelihood: Low-moderate

Consequence: Damage to the integrity of susceptible features arising from trampling, track formation and subsequent erosion.

Risk: Moderate

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.1, 4.1.1.3, 4.1.1.4, 4.1.3.1, 4.1.3.2 and implement all RAA Step 8 Conditions

    1) 4.1.1.1: Adopt all mitigation measures prescribed in the avoidance of trampling (on-island) within the Flora and Fauna Assessment Report:

        a) Avoid routes through MSP's, or facilitate passage across MSP's by installing raised, perforated boardwalking. Risk is mitigated.

b) Education and supervision during trips, in relation to avoidance of trampling

c) Siting of standing camp among ORO or WSU communities.

d) Create visitor exclusion zones, excluding visitors from sensitive communities MSP, RKP and *Pherosphaera hookeriana* communities, see Site Plan Map.

2) 4.1.1.3: Install raised, perforated boardwalk along area of existing impact

3) 4.1.1.4: Ensure on-island routes/tracks avoid *Pherosphaera hookeriana*. Where existing routes pass by this species (near the natural rock landing), use short lengths of boardwalk to ensure clear walking route that avoids plant species. Education and supervision to re-enforce impact mitigation. Utilise no-access areas for visitors, see Site Plan Map including exclusion zones.

4) 4.1.3.1: Camp will be installed using hand tools / battery-operated tools only. Minimal ground disturbance, no excavations or changes to water-courses.

5) 4.1.3.2: Blanket bog sites are avoided.

- Step 8 Conditions:

6) Implement all avoidance and mitigation measures outlined in the Flora and Fauna Assessment; prepare a Construction Environmental Management Plan (CEMP) covering the construction phase, to be approved by the PWS.

7) Through the CEMP, make staff and contractors working on Halls Island aware of the location of threatened plants and threatened native vegetation communities to ensure no inadvertent impact to these natural values.

8) Flag work area to avoid inadvertent disturbance of threatened plants (*Pherosphaera hookeriana* pines) during construction. Include in CEMP.

9) Locate the Halls Island landing such that these plants do not need to be removed, but if this is not practicable or safe, and any of these threatened pines need to be taken, then a permit to take under the *Threatened Species Protection Act 1994* will be required from Policy and Conservation Advice Branch (PCAB) Tas, prior to any impact.

- Lease and Licence conditions including A2.3, A2.4 (ii), A2.5(d), C2.2

10) A2.4 Operations Manual

(a) The Operator must prepare an Operations Manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the Flora and Fauna Assessment including:

(A) avoiding MSP - Sphagnum peatland, RKP - *Athrotaxis selaginoides* rainforest and *Pherosphaera hookeriana* locations (the Operator, where necessary, can apply to construct boardwalks over locations not specified in the RAA, which application will be subject to the written consent of the Minister including any necessary further assessment);

(D) using continual education and supervision as part of the overall interpretation and presentation of the Land to ensure minimal impact.

11) A2.5: Construction Environmental Management Plan - The Operator must, before making any application for Development Approval to the Central Highlands Council and/or undertaking any Development Works on the Land prepare a plan ('Construction Environmental Management Plan'), in a form and substance satisfactory to the Minister, to deal with the following matters:

(d) details of how impact mitigation will be managed including the development of site management plan dealing with listed species and communities of the island, risk mitigation measure and supervision;

12) C2.2 Management of the Environment: At all times while on an Activity the Operator must use all reasonable endeavours to ensure that the environment and ecology of the Licensed Area is in no way damaged by the Experience Guides and Clients including ensuring all staff and Clients clean, dry and disinfect any waders or equipment prior to accessing the Land and the Licensed Area.

- Additional proponent proposed measures

13) Additional on-site assessments (30 May 2018) have identified a suitable helicopter landing location (see Helipad Site 2 - Proposed Helipad and access to Halls Island Vegetation Survey 20 May 2018) consisting of naturally exposed bedrock within a HHE (Eastern alpine heathland) community. It is the intention of the proponent to use this area as the Helicopter Landing Site (HLS) without the requirement for added infrastructure (subject to HLS approval from helicopter contractors and meeting applicable CASA regulations). Should infrastructure (formed helipad) be required due to OH&S and/or CASA requirements, a raised perforated deck shall be installed at Site 2, as per impact mitigation prescriptions of the Flora and Fauna Assessment.

Incorporate site locations and walking routes into CEMP and Operations Manual.

14) Walking route from HLS to the lake edge shall follow the sclerophyll forest / open plain edge as prescribed in the Flora and Fauna Assessment addendum. When using the route between the western plain edge, and the lake edge, customers and guides shall use fan-out walking techniques to avoid trampling and track formation. Incorporate into CEMP and Operations Manual.

15) Traversing of susceptible poorly drained habitats including sphagnum, blanket bogs and wetlands shall be avoided through the CEMP and Operations Manual.

Risk after mitigation and avoidance measures are in place: Low. Activities that could result in trampling are mitigated, and activities that could lead to track formation are avoided.

Likelihood of a significant impact: Negligible-low. Avoidance measures, along with mitigation measures such as education and supervision result in a negligible to low risk of significant impact.

Value: Criteria ix; Values representing significant ongoing geological processes, biological evolution and man's interaction with his natural environment

Matter*:* Conifers of extreme longevity.

Potential impacts (to establish the likelihood of a significant impact on MNES): Fire

Likelihood: Low, no likely ignition sources.

Consequence: Burning and localised loss of fire-intolerant relic biota.

Risk *(combination of likelihood and consequence):* Low. Distribution of vegetation communities and form of several tree species indicates a complex fire history on Halls Island (see Flora and Fauna Assessment addendum).

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.2, 4.3.3.1, and implement all RAA Step 8 Conditions

    1) 4.1.1.2: Electric or gas heating in Standing Camp, no open flames, smoking only in permitted area.

    2) 4.3.3.1: Outside fires are not permitted. Accidental fires will be extinguished immediately.

- Step 8 Conditions:

3) Storage of aviation fuel or undertaking any helicopter refuelling operation is not permitted at the Halls Island helipad or nearby area.

4) Implement all avoidance and mitigation measures outlined in the Flora and Fauna Assessment; prepare a CEMP covering the construction phase, to be approved by the PWS.

- Lease and Licence conditions including:

5) 12.12 Fire:

The Operator must:

(a) take all reasonable actions necessary to limit fire hazards and the threat of fire on the Land (but nothing in this clause authorises the removal or burning of any vegetation without the Minister's prior written consent);

(b) in relation to the Land, ensure that all necessary and appropriate fire retardation and fire-fighting equipment and devices (including those required by Law) are installed, upgraded and maintained in good working order and condition, and are readily available for use throughout the Term;

(c) comply with all directions of the Minister (acting reasonably) and any relevant Government Bodies in respect of fire prevention and fire-fighting on the Land generally; and

(d) ensure all Operator's Agents who are involved in the carrying out of the Approved Use have been trained in accordance with any applicable Laws and know how to operate all fire retardation and fire-fighting equipment and devices on the Land.

6) 2.2f: The design must satisfy, or be capable of satisfying, all applicable requirements for buildings being built in bushfire prone areas under the Building Code of Australia (Code). The design must encompass appropriate fire risk mitigation principles.

7) 2.4: (a) The Operator must prepare an Operations Manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the Flora and Fauna Assessment including:

(B) avoiding wood fireplaces and sources of potential ignition;

8) B3: Fuels and storage

The Operator must:

(a) only use heating and cooking appliances and fuels within the Land, as approved from time to time in writing by the Minister

- Additional proponent proposed measures

9) Halls Island will be offered as a non-smoking destination, as a provision to mitigate fire risk, and meet with OH&S obligations to employees. Shall be incorporated into CEMP and Operations Manual.

Risk after mitigation and avoidance measures are in place: Negligible. Possible sources of ignition (eg open-fires) are avoided, risk of fire is mitigated.

Likelihood of a significant impact: Negligible likelihood due to mitigation and avoidance measures implemented to avoid / mitigate risk of fire.

Value: Criteria ix; Values representing significant ongoing geological processes, biological evolution and man's interaction with his natural environment

Matter: Values representing significant ongoing biological evolution.

Potential impacts (to establish the likelihood of a significant impact on MNES): Introduction of exotic biota.

Likelihood: Low.

Consequence: Wide-ranging potential impacts on flora and/or fauna.

Risk Low-moderate.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.6.1, and implement all RAA Step 8 Conditions

1) 4.1.6.1: The proponent shall implement 'Keeping It Clean' training provided by NRM South. The final check and disinfection process should be applied at Derwent Bridge, prior to departure for Halls Island. Incorporate into Operations Manual.

- Step 8 Conditions:

2) Implement all avoidance and mitigation measures outlines in the Flora and Fauna Assessment;

3) Develop a hygiene plan developed in accordance with DPIPWE (2015) *Weeds and Disease Planning and Hygiene Guidelines – Preventing the spread of weeds and diseases in Tasmania* should cover construction and operational phases of the project, quality control checks during construction and operations (and who will monitor compliance with agreed biosecurity measures) and a list of management actions that will be implemented (and by whom) if any weeds or other threats are identified during construction or operations. Issues/threats to consider should include plant seeds, invertebrates, aquatic alga and pathogens, plant pathogens and the like. Include actions in the Operations Plan.

4) Require staff and visitors to properly clean, dry and disinfect their waders prior to accessing the area for fishing, especially if people have been fishing oversees. This also applies to any other aquatic-related equipment and clothing (e.g. kayaks and fishing gear). Include actions in the Operations Plan.

- Lease and Licence conditions including: A 2.4 (c), A (2.7), C2.4 (c)

5) A2.4(a): The Operator must prepare an Operations Manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

A2.4(a)ii(C): complying with best practice protocols including the 'Keeping it clean' guidelines, noting that F10SC is the primary chemical treatment used on all equipment.

6) A2.7: Hygiene Plan

a) The Operator must prepare a plan in accordance with the document prepared by the Department of Primary Industries Parks Water and Environment in 2015 titled 'Weed and Disease Planning and Hygiene Guideline – prevent the spread of weeds and diseases in Tasmania ('Hygiene Plan'). The Hygiene Plan will need to consider both the Development and Approved Use (including quality control checks, compliance and monitoring of biosecurity measures and a list of actions that will be implemented by the Operator if any weeds or threats are identified during the Development of the Approved Use such as plant seeds, invertebrates, aquatic alga and pathogens, plant pathogens and the like.

(b) The Hygiene Plan must be in a form and substance satisfactory to the (Tas) Minister.

7) C2.4 (c): The Operator must, ensure that all Clients, when undertaking an Activity on the Licensed Area:

(c) adhere to 'Leave No Trace' principles and techniques including for the prevention of infection of any Phytophthora species.

- Additional proponent proposed measures

    8) By using helicopter to transport guests to the site will ensure the maximum biosecurity is adopted. Helicopters are hygienically very clean machines that must be free of soil and vegetation debris at all times in order to operate within strict CASA guidelines, thereby avoiding risk of transfer of exotic species.

Risk after mitigation and avoidance measures are in place: Negligible. Risks are mitigated and avoided through hygiene processes and protocols.

Likelihood of a significant impact: Negligible likelihood due to mitigation and avoidance measures implemented.

Value: Criteria ix; Values representing significant ongoing geological processes, biological evolution and man's interaction with his natural environment

Matter: Impacts to relatively undisturbed landscape.

Potential impacts (to establish the likelihood of a significant impact on MNES): Disturbance from infrastructure and on-island use.

Likelihood Low. Built-infrastructure will be located in an area with existing human-habitation / structures and use (modified apparent naturalness).

Consequence: Disturbance to the relatively undisturbed landscape.

Risk: Low.

Mitigation and management measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.3.1, 4.1.3.2, 4.1.4.1, 4.1.5.1, 4.1.8.1, 4.2.3.3, 4.2.3.4, 4.2.5.1 and implement all RAA Step 8 Conditions

    1) 4.1.3.1: (Geoconservation) Camp will be installed using hand-tools / battery operated tools only. Minimal ground disturbance, no excavations or changes to water-courses.

    2) 4.1.3.2: (Western Tasmania Blanket Bogs) Sites are avoided. Any interaction with sites will involve minimal ground disturbance, perforated decking and boardwalking.

    3) 4.1.4.1: (Landscape & Viewfield) Sympathetic building material selection, no reflective materials, muted bush tones.

    4) 4.1.5.1: (Wilderness and wild rivers, NWI (National Wilderness Inventory) 14+) Restrict maximum group sizes of 6 customers, restrict number of commercial trips to 30 per

year. Sympathetic building designs and scale. Adhere to strict flight path and impact minimisation prescriptions in Attachment 10.

5) 4.1.8.1: (Water quality / CFEV (Conservation Freshwater Ecosystem Values) Values) Installation of complete-capture sewage and greywater pods. Greywater will be back-loaded with each trip, for disposal outside of the TWWHA. Sewage will be collected annually in pods and emptied off-site.

6) 4.2.3.3: (Recreational values, established uses) Minimise helicopter use, use helicopter route as described which avoids recorded & formal walking routes, and all significant recreational fishing waters. Restrict annual trip (booking) numbers during peak season (Oct-May) to 25 trips. Adhere to impact minimisation prescriptions in Attachment 10.

- Step 8 Conditions:

7) (Wilderness Character) Prepare and comply with an Operations Plan to include: 'Fly Neighbourly Advice and identified flight path between Lake St Clair and helipad. Conditions are also to be incorporated into the lease and licence. Adhere to helicopter prescriptions in Attachment 10 to minimise point-impacts.

- Lease and Licence conditions including:12.4, A2.2(d,I,k,l,m), A2.4(a), A2.5(d), A3.8d(i), A3.8e(I,ii), B1.2(c), B1.2(f), C2.2, C4(A, Bii, Bvii, Bviii, Bix, BxiiC)

8) 12.4: Compliance with management objectives. The Operator must not do anything that is inconsistent with the management objectives (for the purposes of the Act (*National Parks and reserves Management Act 2002 Tas*)) applicable in respect of the Land.

9) A2.2 (d,I,k,l,m): (l)the design must minimise environmental impacts through:

(i) appropriate footprint design and techniques for the three accommodation huts and the communal kitchen hut , with exact locations and size of huts to be determined in conjunction with the (Tas) Minister ;

(ii) the use of a selection of products, materials and methods that reduce or minimise impacts (including in respect of water use, waste production and generation); and

(iii) the development and implementation of actions to ensure that the natural and heritage values of the Park are preserved.

(m) all kitchens, toilets and bathrooms must be designed with a complete capture system. All grey and black waste water must be removed from the Land regularly and disposed of at a Central Highlands Council approved disposal facility.

(k) the design must maximise the retention of existing vegetation and topography.

(i) materials used in external surfaces of the Development must be low-visibility in colour and similar to surrounding vegetation(including a mixture of timber and steel materials in muted bush tones).

(d) the design must protect and present the values of the setting in which the Development is to occur, including in respect of the selection of materials and scale of buildings being complementary and sensitive to the surrounding environment (including vegetation type) with a reduced visual impact.

10) A2.4 (a) I,ii: The Operator must prepare an operations manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(i) details of the FNA (Fly Neighbourly Advice) and an identified flight path between the identified area of Lake St Clair and the Conservation Area (helipad), including ensuring a standard operating procedure of over-flying potential (*wedge tail eagle) nesting habitat by approximately 1000m altitude where possible (except for the end points of the flight), travelling along the pre-determined route of minimum likelihood of nests and avoiding tight manoeuvres and hovering (including ensuring that any flight path is not within a 1km line of sight of known eagles nests and that any flight does not include any 'view' of the nest);

(ii) impact mitigation measures which are noted in the North Barker Flora and Fauna Assessment dated 21/11/2016, for Riverfly RIV002:

A 2.5(d): Construction Environmental Management Plan

(d) details of how impact mitigation will be managed including the development of site management plan dealing with listed species and communities of the island, risk mitigation measure and supervision

11) A3.8d (I): The Operator must ensure that any helicopter used in connection with the construction and/or operation of the Development:

(i) uses the flight path provided by the Lessor to ensure minimal airtime and minimal impacts on other users of the area;

12) A3.8e (I,ii): (e) Except for emergency situations, helicopters:

(i) must not be operated at frequencies greater than those from time to time approved in writing by the Minister; and

(ii) must operate substantially in accordance with any applicable operations schedule from time to time approved in writing by the (Tas) Minister.

13) B1.2(c,f): B1.2 General Obligations

(c) to comply with all requirements and recommendations of the FNA (as may be amended generally or in respect of the Business only where such amendments are agreed between the parties acting reasonably) at all times during the Term including ensuring the recommended flight paths and altitude requirements are followed at all times when the helicopter is operating (provided that in the event of any inconsistency between the FNA and any requirements of CASA or relevant legislation the requirements of CASA or relevant legislation will take precedence to the extent of the inconsistency);

(f) discourage smoking from occurring on the Land and within the Park generally but in the event smoking occurs the Operator must ensure that appropriate butt storage is provided and all butts are removed from the Land and disposed of appropriately.

14) C2.2: At all times while on a Activity the Operator must use all reasonable endeavours to ensure that the environment and ecology of the Licensed Area is in no way damaged by the Experience Guides and Clients including ensuring all staff and Clients clean, dry and disinfect any waders or equipment prior to accessing the Land and the Licensed Area.

15) C4 (A, Bii, Bvii, Bviii, Bix, BxiiC): C4 Transport Service

(a) The Operator must not operate or use, or arrange for the operation or use of, a helicopter within the Park except in accordance with this clause C4.

(b) The Operator may operate or use, or arrange for the operation or use, of a helicopter within the Park subject to the following provisions:

(ii) ensure that the flight path enclosed at Attachment B 'Flight Paths' is followed at all times;

(vii) complies with the FNA including ensuring a standard operating procedure of over-flying potential nesting habitat by approximately 1000m altitude where possible (except for the end points of the flight), travelling along the pre-determined route of minimum likelihood of nests and avoiding tight manoeuvres and hovering (including ensuring that any flight path is not within a 1km line of sight of known (wedge tailed) eagles nests and that any flight does not include any 'view' of the nest);

(viii) unless otherwise agreed in writing by the (Tas) Minister, helicopters must only land and take-off from the recognised landing pad, the final location to be determined in accordance with Schedule A;

(ix) except for helicopter operations required for the construction of the Development or in respect of emergency situations, helicopters must only be used for supply and servicing runs in respect of a Land or in connection with maintenance of the Operator's Improvements and in accordance with the approved Operations Manual in accordance with clause A2.2;

(xii) except where necessary because of overriding safety considerations, the Operator must ensure that helicopters:

(c) are operated in a manner that minimises noise and disturbance to other users of the Park;

- Additional proponent proposed measures

16) The Standing Camp site will be rested from commercial activities for the period June-September annually (4 months), with the minor allowance of up to 5 commercial trips (20days) during this period, as per RAA approvals.

Risk after mitigation and management measures are in place: Low. Appropriate Standing Camp design and siting ensures that infrastructure does not impact on areas relatively undisturbed landscape. Low volume helicopter use and impact mitigation measures ensure that impacts on other users of the landscape is minimised.

Likelihood of a significant impact: Low – no significant visual or physical impacts from Standing Camp infrastructure, and minimal impacts from associated site usage.

Value: Criteria vii; Values representing superlative natural phenomena, formations or features.

Matter: Impacts on the landscape (including 'wilderness characteristics').

***Potential impacts (to establish the likelihood of significant impacts on MNES)*:** Impacts on the landscape (including 'wilderness characteristics') from infrastructure.

Likelihood: Low. Halls Island is a location featuring existing human infrastructure (since 1956), on-going history of use, and modified landscape.

Consequence: Modified apparent naturalness, remoteness from settlement.

Risk *(combination of likelihood and consequence)*: Low-moderate.

Mitigation and management measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.3.1, 4.1.3.2, 4.1.4.1, 4.1.5.1, 4.1.8.1, 4.2.3.3, 4.2.3.4, 4.2.5.1, and implement all RAA Step 8 Conditions

1) 4.1.3.1: (Geoconservation) Camp will be installed using hand-tools / battery operated tools only. Minimal ground disturbance, no excavations or changes to water-courses

2) 4.1.3.2: (Western Tasmania Blanket Bogs) Sites are avoided. Any interaction with sites will involve minimal ground disturbance, perforated decking and boardwalking.

3) 4.1.4.1: (Landscape & Viewfield) Sympathetic building material selection, no reflective materials, muted bush tones.

4) 4.1.5.1: (Wilderness and wild rivers, NWI 14+) Restrict maximum group sizes of 6 customers, restrict total number of commercial bookings to 30 per year. Sympathetic building designs and scale. Adhere to strict flight path and impact minimisation prescriptions in Attachment 10.

5) 4.1.8.1: (Water quality / CFEV Values) Installation of complete-capture sewage and greywater pods. Greywater will be back-loaded with each trip, for disposal outside of the TWWHA. Sewage will be collected annually in pods and emptied off-site.

6) 4.2.3.3: (Recreational values, established uses) Minimise helicopter use, use helicopter route as described which avoids recorded & formal walking routes, and all significant recreational fishing waters. Restrict annual trip (booking) numbers during peak season (Oct-May) to 25 trips. Adhere to impact minimisation prescriptions in Attachment 10.

- Step 8 Conditions:

7) (Wilderness Character) Prepare and comply with an Operations Plan to include: 'Fly Neighbourly Advice and identified flight path between Lake St Clair and helipad. Conditions are also to be incorporated into the lease and licence. Adhere to helicopter prescriptions in Attachment 10 to minimise point-impacts.

8) (CFEV Values) Not allow any sewage, grey water, and sediment to enter lake/streams in order to protect aquatic fauna (which has high endemicity).

- Lease and Licence conditions including:12.4, A2.2(d,I,k,l,m), A2.4(a), A2.5(d), A3.8d(i), A3.8e(I,ii), B1.2(c), B1.2(f), C2.2, C4(A, Bii, Bvii, Bviii, Bix, BxiiC)

9) 12.4: Compliance with management objectives. The Operator must not do anything that is inconsistent with the management objectives (for the purposes of the Act) applicable in respect of the Land.

10) A2.2 (d,I,k,l,m):

(l) the design must minimise environmental impacts through:

(i) Appropriate footprint design and techniques for the three accommodation huts and the communal kitchen hut, with exact locations and size of huts to be determined in conjunction with the Minister ;

(ii) the use of a selection of products, materials and methods that reduce or minimise impacts (including in respect of water use, waste production and generation); and

(iii) the development and implementation of actions to ensure that the natural and heritage values of the Park are preserved.

(m) all kitchens, toilets and bathrooms must be designed with a complete capture system. All grey and black waste water must be removed from the Land regularly and disposed of at a Central Highlands Council approved disposal facility.

(k) the design must maximise the retention of existing vegetation and topography.

(i) materials used in external surfaces of the Development must be low-visibility in colour and similar to surrounding vegetation (including a mixture of timber and steel materials in muted bush tones).

(d) the design must protect and present the values of the setting in which the Development is to occur, including in respect of the selection of materials and scale of buildings being complementary and sensitive to the surrounding environment (including vegetation type) with a reduced visual impact.

11) A2.4(a) I,ii: The Operator must prepare an operations manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(i) details of the FNA and an identified flight path between the identified area of Lake St Clair and the Conservation Area (helipad), including ensuring a standard operating procedure of over-flying potential nesting habitat by approximately 1000m altitude where possible (except for the end points of the flight), travelling along the pre-determined route of minimum likelihood of nests and avoiding tight manoeuvres and hovering (including ensuring that any flight path is not within a 1km line of sight of known eagles nests and that any flight does not include any 'view' of the nest);

(ii) impact mitigation measures which are noted in the North Barker Flora and Fauna Assessment dated 21/11/2016, for Riverfly RIV002,

12) A 2.5(d): Construction Environmental Management Plan

(d) details of how impact mitigation will be managed including the development of site management plan dealing with listed species and communities of the island, risk mitigation measure and supervision

13) A3.8d (i): The Operator must ensure that any helicopter used in connection with the construction and/or operation of the Development:

(i) uses the flight path provided by the Lessor to ensure minimal airtime and minimal impacts on other users of the area;

14) A3.8e (I,ii): (e) Except for emergency situations, helicopters:

(i) must not be operated at frequencies greater than those from time to time approved in writing by the Minister; and

(ii) must operate substantially in accordance with any applicable operations schedule from time to time approved in writing by the Minister.

15) B1.2(c,f): B1.2 General Obligations

(c) to comply with all requirements and recommendations of the FNA (as may be amended generally or in respect of the Business only where such amendments are agreed between the parties acting reasonably) at all times during the Term including ensuring the recommended flight paths and altitude requirements are followed at all times when the helicopter is operating (provided that in the event of any inconsistency between the FNA and any requirements of CASA or relevant legislation the requirements of CASA or relevant legislation will take precedence to the extent of the inconsistency);

(f) discourage smoking from occurring on the Land and within the Park generally but in the event smoking occurs the Operator must ensure that appropriate butt storage is provided and all butts are removed from the Land and disposed of appropriately.

16) C2.2: At all times while on a Activity the Operator must use all reasonable endeavours to ensure that the environment and ecology of the Licensed Area is in no way damaged by the Experience Guides and Clients including ensuring all staff and Clients clean, dry and disinfect any waders or equipment prior to accessing the Land and the Licensed Area.

17) C4 (A, Bii, Bvii, Bviii, Bix, BxiiC): C4 Transport Service

(a) The Operator must not operate or use, or arrange for the operation or use of, a helicopter within the Park except in accordance with this clause C4.

(b) The Operator may operate or use, or arrange for the operation or use, of a helicopter within the Park subject to the following provisions:

(ii) ensure that the flight path enclosed at Attachment B 'Flight Paths' is followed at all times;

(vii) complies with the FNA including ensuring a standard operating procedure of over-flying potential nesting habitat by approximately 1000m altitude where possible (except for the end points of the flight), travelling along the pre-determined route of minimum likelihood of nests and avoiding tight manoeuvres and hovering (including

ensuring that any flight path is not within a 1km line of sight of known eagles nests and that any flight does not include any 'view' of the nest);

(viii) unless otherwise agreed in writing by the Minister, helicopters must only land and take-off from the recognised landing pad, the final location to be determined in accordance with Schedule A;

(ix) except for helicopter operations required for the construction of the Development or in respect of emergency situations, helicopters must only be used for supply and servicing runs in respect of a Land or in connection with maintenance of the Operator's Improvements and in accordance with the approved Operations Manual in accordance with clause A2.2;

(xii) except where necessary because of overriding safety considerations, the Operator must ensure that helicopters:

(C) are operated in a manner that minimises noise and disturbance to other users of the Park;

- Additional proponent proposed measures

18) Any external lighting within the Standing Camp shall be solar-powered, utilising red colour spectrum to avoid possible light transmission beyond the Standing Camp area.

19) Site location (Halls Island) is an area with existing built-infrastructure and use (since 1956).

20) Site location is an area with modified 'apparent naturalness'.

21) Infrastructure shall be designed to be lightweight and completely removable, and aimed at requiring minimal assemblage time on-site.

22) Additional on-site assessments (30 May 2018) have identified a suitable helicopter landing location (see Helipad Site 2 - Proposed Helipad and access to Halls Island Vegetation Survey 20 May 2018) consisting of naturally exposed bedrock within a HHE (Eastern alpine heathland) community. It is the intention of the proponent to use this area as the HLS without the requirement for added infrastructure (subject to HLS approval from helicopter contractors and meeting applicable CASA regulations). Should infrastructure (formed helipad) be required due to OH&S and/or CASA requirements, a raised perforated deck shall be installed at Site 2, as per Flora and Fauna Assessment impact mitigation prescriptions.

Risk after mitigation and management measures are in place: Low. Risks are mitigated through appropriate site selection (featuring existing human use, built heritage and modified apparent naturalness), and appropriate avoidance and mitigation measures around operations

Likelihood of a significant impact: Low.

Value: Criteria vii – Values representing superlative natural phenomena, formations or features.

Matter: Potential impacts to values (including 'wilderness characteristics') from the introduction of noise and other intrusive elements with substantial, long term or permanent impacts.

Potential impacts (to establish the likelihood of a significant impact on MNES): Disturbance and impacts related to the installation and use of infrastructure on-island, heli-transport to and from the site.

Likelihood: Low-moderate. Halls Island is a location featuring existing human infrastructure (since 1956), on-going history of use, and modified apparent naturalness.

Consequence: Disturbance to other users through visual impacts, sound impacts.

Risk: Low-moderate

Mitigation and management measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.3.1, 4.1.3.2, 4.1.4.1, 4.1.5.1, 4.1.8.1, 4.2.3.3, 4.2.3.4, 4.2.5.1, and implement all RAA Step 8 Conditions

    1) 4.1.3.1: (Geoconservation) Camp will be installed using hand-tools / battery operated tools only. Minimal ground disturbance, no excavations or changes to water-courses

    2) 4.1.3.2: (Western Tasmania Blanket Bogs) Sites are avoided. Any interaction with sites will involve minimal ground disturbance, perforated decking and boardwalking.

    3) 4.1.4.1: (Landscape & Viewfield) Sympathetic building material selection, no reflective materials, muted bush tones.

    4) 4.1.5.1: (Wilderness and wild rivers, NWI 14+) Restrict maximum group sizes of 6 customers, restrict total number of commercial bookings to 30 per year. Sympathetic building designs and scale. Adhere to strict flight path and impact minimisation prescriptions in Attachment 10.

    5) 4.1.8.1: (Water quality / CFEV Values) Installation of complete-capture sewage and greywater pods. Greywater will be back-loaded with each trip, for disposal outside of the TWWHA. Sewage will be collected annually in pods and emptied off-site.

6) 4.2.3.3: (Recreational values, established uses) Minimise helicopter use, use helicopter route as described which avoids recorded & formal walking routes, and all significant recreational fishing waters. Restrict annual trip (booking) numbers during peak season (Oct-May) to 25 trips. Adhere to impact minimisation prescriptions in Attachment 10.

- Step 8 Conditions:

7) (Wilderness Character) Prepare and comply with an Operations Plan to include: 'Fly Neighbourly Advice and identified flight path between Lake St Clair and helipad. Conditions are also to be incorporated into the lease and licence. Adhere to helicopter prescriptions in Attachment 10 to minimise point-impacts.

8) (CFEV Values) Not allow any sewage, grey water, and sediment to enter lake/streams in order to protect aquatic fauna (which has high endemicity).

- Lease and Licence conditions including:12.4, A2.2(d,I,k,l,m), A2.4(a), A2.5(d), A3.8d(i), A3.8e(I,ii), B1.2(c), B1.2(f), C2.2, C4(A, Bii, Bvii, Bviii, Bix, BxiiC)

9) 12.4: Compliance with management objectives. The Operator must not do anything that is inconsistent with the management objectives (for the purposes of the Act) applicable in respect of the Land.

10) A2.2: (l) the design must minimise environmental impacts through:

(i) appropriate footprint design and techniques for the three accommodation huts and the communal kitchen hut, with exact locations and size of huts to be determined in conjunction with the (Tas) Minister ;

(ii) the use of a selection of products, materials and methods that reduce or minimise impacts (including in respect of water use, waste production and generation); and

(iii) the development and implementation of actions to ensure that the natural and heritage values of the Park are preserved.

(m) all kitchens, toilets and bathrooms must be designed with a complete capture system. All grey and black waste water must be removed from the Land regularly and disposed of at a Central Highlands Council approved disposal facility.

(k) the design must maximise the retention of existing vegetation and topography.

(i) materials used in external surfaces of the Development must be low-visibility in colour and similar to surrounding vegetation(including a mixture of timber and steel materials in muted bush tones).

(d) the design must protect and present the values of the setting in which the Development is to occur, including in respect of the selection of materials and scale of buildings being complementary and sensitive to the surrounding environment (including vegetation type) with a reduced visual impact.

11) A2.4(a) I,ii: The Operator must prepare an operations manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(i) details of the FNA and an identified flight path between the identified area of Lake St Clair and the Conservation Area (helipad), including ensuring a standard operating procedure of over-flying potential nesting habitat by approximately 1000m altitude where possible (except for the end points of the flight), travelling along the pre-determined route of minimum likelihood of nests and avoiding tight manoeuvres and hovering (including ensuring that any flight path is not within a 1km line of sight of known eagles nests and that any flight does not include any 'view' of the nest);

(ii) impact mitigation measures which are noted in the Flora and Fauna Assessment.

12) A 2.5(d): Construction Environmental Management Plan

(e) details of how impact mitigation will be managed including the development of site management plan dealing with listed species and communities of the island, risk mitigation measure and supervision

13) A3.8d(i): The Operator must ensure that any helicopter used in connection with the construction and/or operation of the Development:

(ii) uses the flight path provided by the Lessor to ensure minimal airtime and minimal impacts on other users of the area;

14) A3.8e(I,ii): (e) Except for emergency situations, helicopters:

(i) must not be operated at frequencies greater than those from time to time approved in writing by the Minister; and

(ii) must operate substantially in accordance with any applicable operations schedule from time to time approved in writing by the Minister.

15) B1.2(c,f): B1.2 General Obligations

(c) to comply with all requirements and recommendations of the FNA (as may be amended generally or in respect of the Business only where such amendments are agreed between the parties acting reasonably) at all times during the Term including ensuring the recommended flight paths and altitude requirements are followed at all times when the helicopter is operating (provided that in the event of any inconsistency

between the FNA and any requirements of CASA or relevant legislation the requirements of CASA or relevant legislation will take precedence to the extent of the inconsistency);

(f) discourage smoking from occurring on the Land and within the Park generally but in the event smoking occurs the Operator must ensure that appropriate butt storage is provided and all butts are removed from the Land and disposed of appropriately.

16) C2.2:

At all times while on a Activity the Operator must use all reasonable endeavours to ensure that the environment and ecology of the Licensed Area is in no way damaged by the Experience Guides and Clients including ensuring all staff and Clients clean, dry and disinfect any waders or equipment prior to accessing the Land and the Licensed Area.

17) C4 (A, Bii, Bvii, Bviii, Bix, BxiiC): C4 Transport Service

(a) The Operator must not operate or use, or arrange for the operation or use of, a helicopter within the Park except in accordance with this clause C4.

(b) The Operator may operate or use, or arrange for the operation or use, of a helicopter within the Park subject to the following provisions:

(ii) ensure that the flight path enclosed at Attachment B 'Flight Paths' is followed at all times;

(vii) complies with the FNA including ensuring a standard operating procedure of over-flying potential (wedge tailed eagle) nesting habitat by approximately 1000m altitude where possible (except for the end points of the flight), travelling along the pre-determined route of minimum likelihood of nests and avoiding tight manoeuvres and hovering (including ensuring that any flight path is not within a 1km line of sight of known eagles nests and that any flight does not include any 'view' of the nest);

(viii) unless otherwise agreed in writing by the Minister, helicopters must only land and take-off from the recognised landing pad, the final location to be determined in accordance with Schedule A;

(ix) except for helicopter operations required for the construction of the Development or in respect of emergency situations, helicopters must only be used for supply and servicing runs in respect of a Land or in connection with maintenance of the Operator's Improvements and in accordance with the approved Operations Manual in accordance with clause A2.2;

(xii) except where necessary because of overriding safety considerations, the Operator must ensure that helicopters:

(C) are operated in a manner that minimises noise and disturbance to other users of the Park;

- Additional proponent proposed measures:

18) Any external lighting within the Standing Camp shall be solar-powered, utilising red colour spectrum to avoid potential for light transmission beyond the Standing Camp area.

19) Site location (Halls Island) is an area with existing built-infrastructure and use (since 1956).

20) Site location is an area with modified 'apparent naturalness'.

21) Infrastructure shall be designed to be lightweight and completely removable, and require minimal assemblage time on-site.

22) Additional on-site assessments (30 May 2018) have identified a suitable helicopter landing location (see Helipad Site 2 - Proposed Helipad and access to Halls Island Vegetation Survey 20 May 2018) consisting of naturally exposed bedrock within a HHE (Eastern alpine heathland) community. It is the intention of the proponent to use this area as the HLS without the requirement for added infrastructure (subject to HLS approval from helicopter contractors and meeting applicable CASA regulations).Should infrastructure (formed helipad) be required due to OH&S and/or CASA requirements, a raised perforated deck shall be installed at Site 2, as per Flora and Fauna Assessment impact mitigation prescriptions..

23) Customised FNA will be adopted in full, including use of the identified flight route along eastern-periphery of the TWWHA, avoiding over-flights of recorded walking routes / tracks, careful observation by pilot and guides of any independent walkers along flight-route in order to avoid disturbance. Customised FNA mitigates potential point-impacts (noise/visual) on other potential users of the TWWHA within a ~4km lateral distance of the flight path to a once-off ~2 minute event.

24) HLS location adjacent to Halls Island is a small amphitheatre-setting surrounded by natural woodland which maximise sound attenuation, resulting in noise impact equivalent to ambient during start-up or set-down (observed by proponent and PWS at 400metres, from location 442142E, 5355302N).

25) HLS siting ensures no noise impact on the TWWHA Wilderness Zone on start-up or set-down, and HLS is located outside of the Walls of Jerusalem National Park (WOJNP), in the Central Plateau Conservation Area (CPCA).

26) Proposed HLS siting in the CPCA is a compliant activity with both the current *2016 TWWHA Management Plan*, and the preceding *1999 TWWHA Management Plan*.

Risk after mitigation and management measures are in place: Low. Risks of substantial, long-term or permanent impacts are avoided or mitigated by prescriptions including appropriate Standing Camp siting in area of modified apparent naturalness, and effective helicopter impact mitigation strategies

Likelihood of a significant impact: Low.

Value: Criteria X – Values of the most important and significant habitats where threatened species of plants and animals of outstanding universal value from the point of view of science and conservation still survive.

Matter**:** Habitats where plant species (*Pherosphaera hookeriana*) & communities of significance survive (*sphagnum* peatland, buttongrass moorland, Highland poa grassland, *Athrotaxis sealginoides* rainforest).

Potential impacts (to establish the likelihood of a significant impact on MNES): Fire

Likelihood: Low.

Consequence: On-island impact to localised rainforest and *sphagnum* communities.

Risk: Low. Distribution of vegetation communities and form of several tree species indicates a complex fire history on Halls Island (see Flora and Fauna Assessment addendum *Proposed Helipad and Access to Halls Island Vegetation Survey* 30 May 2018).

Mitigation and management measures to reduce risk

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.2, 4.3.3.1, and implement all RAA Step 8 Conditions

    1) 4.1.1.2: Electric or gas heating in Standing Camp, no open flames, smoking only in permitted area.

    2) 4.3.3.1: Outside fires are not permitted. Accidental fires will be extinguished immediately.

- Step 8 Conditions:

    3) Storage of aviation fuel or undertaking any helicopter refuelling operation is not permitted at the Halls Island helipad or nearby area.

4) Implement all avoidance and mitigation measures outlined in the Flora and Fauna Assessment report; prepare a Construction Environmental Management Plan covering the construction phase, to be approved by the PWS.

- Lease and Licence conditions including:

5) 12.12 Fire: The Operator must:

(a) take all reasonable actions necessary to limit fire hazards and the threat of fire on the Land (but nothing in this clause authorises the removal or burning of any vegetation without the Minister's prior written consent);

(b) in relation to the Land, ensure that all necessary and appropriate fire retardation and fire-fighting equipment and devices (including those required by Law) are installed, upgraded and maintained in good working order and condition, and are readily available for use throughout the Term;

(c) comply with all directions of the Minister (acting reasonably) and any relevant Government Bodies in respect of fire prevention and fire-fighting on the Land generally; and

(d) ensure all Operator's Agents who are involved in the carrying out of the Approved Use have been trained in accordance with any applicable Laws and know how to operate all fire retardation and fire-fighting equipment and devices on the Land.

6) 2.2f: The design must satisfy, or be capable of satisfying, all applicable requirements for buildings being built in bushfire prone areas under the Building Code of Australia (Code). The design must encompass appropriate fire risk mitigation principles.

7) 2.4ii: (a) The Operator must prepare an Operations Manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the North Barker Flora and Fauna Assessment dated 21/11/2016, for Riverfly RIV002, including:

(B) avoiding wood fireplaces and sources of potential ignition;

8) B3: Fuels and storage

The Operator must:

(a) only use heating and cooking appliances and fuels within the Land, as approved from time to time in writing by the Minister

- Additional proponent proposed measures

    9) Halls Island will be offered as a no-smoking destination, as a provision to mitigate fire risk, and meet with OH&S obligations to employees. Shall be incorporated into CEMP / Operations Manual.

Risk after mitigation and avoidance measures are in place: Negligible. Possible sources of ignition (eg open-fires) are avoided, risk of fire is mitigated.

Likelihood of a significant impact: Negligible likelihood due to mitigation and avoidance measures implemented to avoid / mitigate risk of fire.

Value: Criteria X – Values of the most important and significant habitats where threatened species of plants and animals of outstanding universal value from the point of view of science and conservation still survive.

Matter: Habitats where threatened species of plants and animals of outstanding universal value from the point of view of science and conservation communities' and species of conservation significance still survive (eg: *sphagnum* peatland, *Athrotaxis selaginoides* rainforest).

Potential impacts (to establish the likelihood of a significant impact on MNES): Trampling & track formation related to on-island activities and proposed walking routes from helipad to lake edge.

Likelihood: Low-Moderate.

Consequence: Damage to the integrity of susceptible features arising from trampling, track formation and subsequent erosion.

Risk: Moderate.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.1, 4.1.1.3, 4.1.1.4, 4.1.3.1, 4.1.3.2 and implement all RAA Step 8 Conditions

    1) 4.1.1.1: Adopt all mitigation measures prescribed in the avoidance of trampling (on-island) within the Flora and Fauna Assessment:

    a. Avoid routes through MSP's, or facilitate passage across MSP's by installing raised, perforated boardwalking. Risk is mitigated.

    b. Education and supervision during trips, in relation to avoidance of trampling.

c. Siting of standing camp among ORO or WSU communities.

d. Create visitor exclusion zones, excluding visitors from sensitive communities MSP, RKP and *Pherosphaera hookeriana* communities (see Site Plan Map).

2) 4.1.1.3: Install raised, perforated boardwalk along area of existing impact.

3) 4.1.1.4: Ensure on-island routes/tracks avoid *Pherosphaera hookeriana*. Where existing routes pass by this species (near the natural rock landing), use short lengths of boardwalk to ensure clear walking route that avoids plant species. Education and supervision to re-enforce impact mitigation. Utilise no-access areas for visitors, see Site Plan Map including exclusion zones.

4) 4.1.3.1: Camp will be installed using hand tools / battery-operated tools only. Minimal ground disturbance, no excavations or changes to water-courses.

5) 4.1.3.2: Blanket bog sites are avoided.

- Step 8 Conditions:

6) Implement all avoidance and mitigation measures outlined in the Flora and Fauna Assessment; prepare a Construction Environmental Management Plan (CEMP) covering the construction phase, to be approved by the PWS.

7) Through the CEMP, make staff and contractors working on Halls Island aware of the location of threatened plants and threatened native vegetation communities to ensure no inadvertent impact to these natural values.

8) Flag work area to avoid inadvertent disturbance of threatened plants (*Pherosphaera hookeriana* pines) during construction. Include in CEMP.

9) Locate the Halls Island landing such that these plants do not need to be removed, but if this is not practicable or safe, and any of these threatened pines need to be taken, then a permit to take under the *Threatened Species Protection Act 1994* will be required from PCAB prior to any impact.

- Lease and Licence conditions including A2.3, A2.4 (ii), A2.5(d), C2.2

10) A2.4 Operations Manual

(b) The Operator must prepare an operations manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the North Barker Flora and Fauna Assessment dated 21/11/2016, for Riverfly RIV002, including:

(A) avoiding MSP - *Sphagnum* peatland, RKP - *Athrotaxis selaginoides* rainforest and *Pherosphaera hookeriana* locations (the Operator, where necessary, can apply to construct boardwalks over locations not specified in the RAA, which application will be subject to the written consent of the Minister including any necessary further assessment);

(D) using continual education and supervision as part of the overall interpretation and presentation of the Land to ensure minimal impact.

11) A2.5: Construction Environmental Management Plan - The Operator must, before making any application for Development Approval to the Central Highlands Council and/or undertaking any Development Works on the Land prepare a plan ('Construction Environmental Management Plan'), in a form and substance satisfactory to the Minister, to deal with the following matters:

(d) details of how impact mitigation will be managed including the development of site management plan dealing with listed species and communities of the island, risk mitigation measure and supervision;

12) C2.2 Management of the Environment: At all times while on an Activity the Operator must use all reasonable endeavours to ensure that the environment and ecology of the Licensed Area is in no way damaged by the Experience Guides and Clients including ensuring all staff and Clients clean, dry and disinfect any waders or equipment prior to accessing the Land and the Licensed Area.

- Additional proponent proposed measures

13) Additional on-site assessments (30 May 2018) have identified a suitable helicopter landing location (see Helipad Site 2 - Proposed Helipad and access to Halls Island Vegetation Survey 20 May 2018) consisting of naturally exposed bedrock. It is the intention of the proponent to use this area as the Helicopter Landing Site (HLS) without the requirement for added infrastructure (subject to HLS approval from helicopter contractors and meeting applicable CASA regulations).Should infrastructure (formed helipad) be required due to OH&S and/or CASA requirements, a raised perforated deck shall be installed at Site 2, as per Flora and Fauna Assessment impact mitigation prescriptions.

14) Walking route from heli-landing site to the lake-edge shall follow the sclerophyll forest / open plain edge as prescribed in the Flora and Fauna Assessment addendum. When using the route between the western plain edge, and the lake edge, customers and guides shall use fan-out walking techniques to avoid trampling and track formation. Incorporate into CEMP / Operations Manual.

15) Traversing of susceptible poorly drained habitats including sphagnum, blanket bogs and wetlands shall be avoided through the CEMP / Operations Manual

Risk after mitigation and avoidance measures are in place: Low. Activities that could result in trampling are mitigated, and activities that could lead to track formation are avoided.

Likelihood of a significant impact: Negligible-low. Avoidance measures, along with mitigation measures such as education and supervision result in a negligible to low risk of significant impact.

Value: Criteria X – Values of the most important and significant habitats where threatened species of plants and animals of outstanding universal value from the point of view of science and conservation still survive.

Matter: Habitats where threatened species of plants and animals of outstanding universal value from the point of view of science and conservation communities' and species of conservation significance still survive (eg: *sphagnum* peatland, *Athrotaxis selaginoides* rainforest).

Potential impacts (to establish the likelihood of a significant impact on MNES): Introduction of exotic biota.

Likelihood: Low.

Consequence: Wide-ranging potential impacts on flora and/or fauna.

Risk *(combination of likelihood and consequence)*: Low-Moderate

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.6.1, and implement all RAA Step 8 Conditions

    1) 4.1.6.1: The proponent shall implement 'Keeping It Clean' training provided by NRM South. The final check and disinfection process should be applied at Derwent Bridge, prior to departure for Halls Island. Incorporate into Operations Manual.

- Step 8 Conditions:

    2) Implement all avoidance and mitigation measures outlines in the North Barker flora and fauna assessment report;

    3) Develop a Hygiene Plan developed in accordance with DPIPWE (2015) *Weeds and Disease Planning and Hygiene Guidelines – Preventing the spread of weeds and diseases in Tasmania* should cover construction and operational phases of the project, quality

control checks during construction and operations (and who will monitor compliance with agreed biosecurity measures) and a list of management actions that will be implemented (and by whom) if any weeds or other threats are identified during construction or operations. Issues/threats to consider should include plant seeds, invertebrates, aquatic alga and pathogens, plant pathogens and the like. Include actions in the Operations Plan.

4) Require staff and visitors to properly clean, dry and disinfect their waders prior to accessing the area for fishing, especially if people have been fishing oversees. This also applies to any other aquatic-related equipment and clothing (e.g. kayaks and fishing gear). Include actions in the Operations Plan.

- Lease and Licence conditions including: A 2.4 (c), A (2.7), C2.4 (c)

5) A2.4(a): The Operator must prepare an operations manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

A2.4(a)ii(C): complying with best practice protocals including the 'Keeping it clean' guidelines, noting that F10SC is the primary chemical treatment used on all equipment

6) A2.7: Hygiene Plan

(a) The Operator must prepare a plan in accordance with the document prepared by the Department of Primary Industries Parks Water and Environment in 2015 titled 'Weed and Disease Planning and Hygiene Guideline – prevent the spread of weeds and diseases in Tasmania ('Hygiene Plan'). The Hygiene Plan will need to consider both the Development and Approved Use (including quality control checks, compliance and monitoring of biosecurity measures and a list of actions that will be implemented by the Operator if any weeds or threats are identified during the Development of the Approved Use such as plant seeds, invertebrates, aquatic alga and pathogens, plant pathogens and the like.

(b) The Hygiene Plan must be in a form and substance satisfactory to the (Tas) Minister.

7) C2.4 (c): The Operator must, ensure that all Clients, when undertaking an Activity on the Licensed Area:

(c) adhere to 'Leave No Trace' principles and techniques including for the prevention of infection of any Phytophthora species.

- Additional proponent proposed measures

    8) The use of helicopter to transport guests to the site will ensure the maximum biosecurity is adopted. Helicopters are must be free of soil and vegetation debris at all times in order to operate within strict CASA guidelines, thereby avoiding risk of transfer of exotic species.

Risk after mitigation and avoidance measures are in place: Negligible. Risks are mitigated and avoided through hygiene processes and protocols.

Likelihood of a significant impact: Negligible likelihood due to mitigation and avoidance measures implemented

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Value: Criteria iii: Values bearing unique or at least exceptional testimony to a civilisation which has disappeared

Matter: Aboriginal heritage

Potential impacts (to establish likelihood of a significant impact on MNES): Disturbance or culturally inappropriate use.

Likelihood: Low. Formal advice from Aboriginal Heritage Tasmania is that Halls Island and the nearby HLS has a low probability of having Aboriginal heritage present.

***Consequence*:** Inappropriate use and/or interpretation, disturbance.

Risk: Low.

Mitigation and management measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.3.1 and implement all RAA Step 8 Conditions

    1) RAA 4.1.3.1: Camp will be installed using hand-tools / battery operated tools only. Minimal ground disturbance, no excavations or changes to water courses.

- Step 8 Conditions:

    2) (Regarding potential additional off-island activities) With regard to Aboriginal heritage, the proponent must formally engage and consult with the Aboriginal Heritage Council (AHC) and the Aboriginal community to outline the details of the proposed development and any proposed plans for activities including site visits; and proponent to engage and consult with the AHC and Aboriginal community on the development of all cultural heritage interpretation and planned access to Country projects.

3) A2.6 Unanticipated Discovery Plan

(a) The Operator must prepare a plan to deal with situations where Aboriginal heritage or threatened flora and fauna are found on the Land ('Unanticipated Discovery Plan'). The Unanticipated Discovery Plan must details a plan to deal with the discovery and must state that all work on the Land must be suspended until an assessment is made by the Minister and any relevant bodies in relation to the Aboriginal heritage of threatened flora and fauna.

(b) The Unanticipated Discovery Plan must be in a form and substance satisfactory to the Minister. (See Unanticipated Discovery Plan supplied by Aboriginal Heritage Tasmania – to be adopted in full).

- Additional proponent proposed measures

4) The proponent and staff have attended / undertaken a number of formal and informal cultural awareness and familiarisation activities, including On Country sessions with respected Tasmanian Aboriginal elders and Tasmanian Aboriginal tourism operators.

Risk after mitigation and management measures are in place: Low. Risks are mitigated through minimal site disturbance, avoided by low-likelihood of Aboriginal cultural artefacts on-site, and mitigated by cultural awareness training and the use of the AHT Unanticipated Discovery Plan. The proponent has and will continue to consult AHT and the wider Aboriginal community.

Likelihood of a significant impact: Low – low probability of Aboriginal heritage present.

Value: Criteria V: Values of outstanding examples of traditional human settlement which is representative of a culture which has become vulnerable under the impact of irreversible change.

Matter: Aboriginal heritage.

Potential impacts (to establish the likelihood of a significant impact on MNES): Disturbance or culturally inappropriate use.

Likelihood: Low. Formal advice from Aboriginal Heritage Tasmania is that Halls Island and the nearby HLS has a low probability of having Aboriginal heritage present.

***Consequence*:** Inappropriate use and/or interpretation, disturbance.

Risk: Low.

Mitigation and management measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.3.1 and implement all RAA Step 8 Conditions

    1) RAA 4.1.3.1: Camp will be installed using hand-tools / battery operated tools only. Minimal ground disturbance, no excavations or changes to water courses.

- Step 8 Conditions:

    2) (Regarding potential additional off-island activities) With regard to Aboriginal heritage, the proponent must formally engage and consult with the Aboriginal Heritage Council (AHC) and the Aboriginal community to outline the details of the proposed development and any proposed plans for activities including site visits; and proponent to engage and consult with the AHC and Aboriginal community on the development of all cultural heritage interpretation and planned access to Country projects.

    3) A2.6 Unanticipated Discovery Plan

        (a) The Operator must prepare a plan to deal with situations where Aboriginal heritage or threatened flora and fauna are found on the Land ('Unanticipated Discovery Plan'). The Unanticipated Discovery Plan must details a plan to deal with the discovery and must state that all work on the Land must be suspended until an assessment is made by the Minister and any relevant bodies in relation to the Aboriginal heritage of threatened flora and fauna.

        (b) The Unanticipated Discovery Plan must be in a form and substance satisfactory to the Minister. (See Unanticipated Discovery Plan supplied by Aboriginal Heritage Tasmania – to be adopted in full).

- Additional proponent proposed measures

    4) The proponent and staff have attended / undertaken a number of formal and informal cultural awareness and familiarisation activities, including On Country sessions with respected Tasmanian Aboriginal elders and Tasmanian Aboriginal tourism operators.

Risk after mitigation and management measures are in place: Low. Risks are mitigated through minimal site disturbance, avoided by low-likelihood of Aboriginal cultural artefacts on-site, and mitigated by cultural awareness training and the use of the AHT Unanticipated Discovery Plan. The proponent has and will continue to consult AHT and the wider Aboriginal community.

Likelihood of a significant impact: Low – unlikely to be Aboriginal Heritage present.

Value: Criteria Vi: Values relating to the events or with ideas or beliefs of outstanding universal significance.

Matter: Aboriginal heritage.

Potential impacts (to establish the likelihood of a significant impact on MNES): Disturbance or culturally inappropriate use.

Likelihood: Low. Formal advice from Aboriginal Heritage Tasmania is that Halls Island and the nearby HLS has a low probability of having Aboriginal heritage present.

***Consequence*:** Inappropriate use and/or interpretation, disturbance.

Risk: Low.

Mitigation and management measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.3.1 and implement all RAA Step 8 Conditions

    1) RAA 4.1.3.1: Camp will be installed using hand-tools / battery operated tools only. Minimal ground disturbance, no excavations or changes to water courses.

- Step 8 Conditions:

    2) (Regarding potential additional off-island activities) With regard to Aboriginal heritage, the proponent must formally engage and consult with the Aboriginal Heritage Council (AHC) and the Aboriginal community to outline the details of the proposed development and any proposed plans for activities including site visits; and proponent to engage and consult with the AHC and Aboriginal community on the development of all cultural heritage interpretation and planned access to Country projects.

    3) A2.6 Unanticipated Discovery Plan

        (a) The Operator must prepare a plan to deal with situations where Aboriginal heritage or threatened flora and fauna are found on the Land ('Unanticipated Discovery Plan'). The Unanticipated Discovery Plan must details a plan to deal with the discovery and must state that all work on the Land must be suspended until an assessment is made by the Minister and any relevant bodies in relation to the Aboriginal heritage of threatened flora and fauna.

        (b) The Unanticipated Discovery Plan must be in a form and substance satisfactory to the Minister. (See Unanticipated Discovery Plan supplied by Aboriginal Heritage Tasmania – to be adopted in full).

- Additional proponent proposed measures:

4) The proponent and staff have attended / undertaken a number of formal and informal cultural awareness and familiarisation activities, including On Country sessions with respected Tasmanian Aboriginal elders and Tasmanian Aboriginal tourism operators.

Risk after mitigation and management measures are in place: Low. Risks are mitigated through minimal site disturbance, avoided by low-likelihood of Aboriginal heritage on-site, and mitigated by cultural awareness training and the use of the AHT Unanticipated Discovery Plan.

Likelihood of a significant impact: Low – Low probability of Aboriginal heritage present on site.

END Section one

Consideration of Matters of National Environmental Significance (MNES), potential impacts, avoidance and mitigation measures

MNES species and communities, as identified by the North Barker Flora and Fauna report, and Halls Island Reserve Activity Assessment (RAA)

MNES species and communities details:

Alpine Sphagnum Bogs and Associated Fens (MSP) – EPBCA (Environment Protection of Biodiversity Conservation Act 1999) Endangered, OUV Criteria ix, Criteria Viii, Criteria X

Athrotaxis selaginoides rainforest (RKP) – OUV Criteria ix, Criteria Viii, Criteria X

Pherosphaera hookeriana - OUV Criteria ix, Criteria Viii, Criteria X

Pseudocephalozia paludicola liverwort – EPBCA Vulnerable

Aquila audax subsp. fleayi – EPBCA Endangered

Galaxias Johnstonii – Clarence galaxias – EPBCA Endangered

Dasyurus maculates – Spotted tail quoll – EPBCA Vulnerable

Sarcophilus harrisii – Tasmanian devil – EPBCA Endangered

Tyto novaehollandiar – Masked owl – EPBCA Vulnerable

Community / species: Alpine Sphagnum bogs and Associated Fens - MSP

Potential impacts (to establish the likelihood of a significant impact on MNES): Fire

Likelihood: Low, no likely ignition sources.

Consequence: Burning and localised impacts to Alpine Sphagnum bogs and Associated Fens.

Risk: Low. Distribution of vegetation communities and form of several tree species indicates a complex fire history on Halls Island (see Flora and Fauna Assessment addendum Proposed Helipad and Access to Halls Island Vegetation Survey 30 May 2018), and subsequent resilience to fire among on-island MSP communities

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.2, 4.3.3.1, and implement all RAA Step 8 Conditions

1) 4.1.1.2: Electric or gas heating in Standing Camp, no open flames, smoking only in permitted area.

2) 4.3.3.1: Outside fires are not permitted. Accidental fires will be extinguished immediately.

- Step 8 Conditions:

3) Storage of aviation fuel or undertaking any helicopter refuelling operation is not permitted at the Halls Island helipad or nearby area.

4) Implement all avoidance and mitigation measures outlined in the Flora and Fauna Assessment; prepare a Construction Environmental Management Plan covering the construction phase, to be approved by the PWS.

- Lease and Licence conditions including:

5) 12.12 Fire: The Operator must:

(a) take all reasonable actions necessary to limit fire hazards and the threat of fire on the Land (but nothing in this clause authorises the removal or burning of any vegetation without the Minister's prior written consent);

(b) in relation to the Land, ensure that all necessary and appropriate fire retardation and fire-fighting equipment and devices (including those required by Law) are installed, upgraded and maintained in good working order and condition, and are readily available for use throughout the Term;

(c) comply with all directions of the Minister (acting reasonably) and any relevant Government Bodies in respect of fire prevention and fire-fighting on the Land generally; and

(d) ensure all Operator's Agents who are involved in the carrying out of the Approved Use have been trained in accordance with any applicable Laws and know how to operate all fire retardation and fire-fighting equipment and devices on the Land.

6) 2.2f: The design must satisfy, or be capable of satisfying, all applicable requirements for buildings being built in bushfire prone areas under the Building Code of Australia (Code). The design must encompass appropriate fire risk mitigation principles.

7) 2.4ii: (a) The Operator must prepare an Operations Manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the Flora and Fauna Assessment, including:

(B) avoiding wood fireplaces and sources of potential ignition;

8) B3: Fuels and storage

The Operator must:

(a) only use heating and cooking appliances and fuels within the Land, as approved from time to time in writing by the Minister

- Additional proponent proposed measures

9) Halls Island will be offered as a no-smoking destination, as a provision to mitigate fire risk, and meet with OH&S obligations to employees. Shall be incorporated into CEMP and Operations Manual.

Risk after mitigation and avoidance measures are in place: Negligible. Possible sources of ignition (eg open-fires) are avoided, risk of fire is mitigated.

Likelihood of a significant impact: Negligible likelihood due to mitigation and avoidance measures implemented to avoid / mitigate risk of fire.

Community / species: Alpine Sphagnum bogs and Associated Fens - MSP

Potential impacts (to establish likelihood of a significant impact on MNES): Trampling & track formation related to on-island activities and proposed walking route to and from helipad

Likelihood: Low-moderate.

Consequence: Damage to the integrity of susceptible soils arising from trampling, track formation and subsequent erosion.

Risk: Low-moderate.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.1, 4.1.1.3, 4.1.3.1, and implement all RAA Step 8 Conditions

1) 4.1.1.1: Adopt all mitigation measures prescribed in the avoidance of trampling (on-island) within the Flora and Fauna assessment:

(a) Avoid routes through MSP's, or facilitate passage across MSP's by installing raised, perforated boardwalking. Risk is mitigated.

(b) Education and supervision during trips, in relation to avoidance of trampling

(c) Siting of standing camp among ORO or WSU communities.

(d) Create visitor exclusion zones, excluding visitors from sensitive communities MSP, RKP and *Pherosphaera hookeriana* communities (see site map)

2) 4.1.1.3: Install raised, perforated boardwalk along area of existing impact (through MSP)

3) 4.1.3.1: Camp will be installed using hand tools / battery-operated tools only. Minimal ground disturbance, no excavations or changes to water-courses.

- Step 8 Conditions:

4) Implement all avoidance and mitigation measures outlined in the North Barker Flora and Fauna assessment report; prepare a Construction Environmental Management Plan (CEMP) covering the construction phase, to be approved by the PWS.

5) Through the CEMP, make staff and contractors working on Halls Island aware of the location of threatened plants and threatened native vegetation communities to ensure no inadvertent impact to these natural values.

6) Flag work area to avoid inadvertent disturbance of threatened plants (*Pherosphaera hookeriana* pines) during construction. Include in CEMP.

7) Locate the Halls Island landing such that these plants do not need to be removed, but if this is not practicable or safe, and any of these threatened pines need to be taken, then a permit to take under the Threatened Species Protection Act 1994 will be required from PCAB prior to any impact.

- Lease and Licence conditions including A2.3, A2.4 (ii), A2.5(d), C2.2

8) A2.4 Operations Manual

(a) The Operator must prepare an operations manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the North Barker Flora and Fauna Assessment dated 21/11/2016, for Riverfly RIV002, including:

(A) avoiding MSP - Sphagnum peatland, RKP - *Athrotaxis selaginoides* rainforest and *Pherosphaera hookeriana* locations (the Operator, where necessary, can apply to construct boardwalks over locations not specified in the RAA, which application will be subject to the written consent of the Minister including any necessary further assessment);

(D) using continual education and supervision as part of the overall interpretation and presentation of the Land to ensure minimal impact.

9) A2.5: Construction Environmental Management Plan - The Operator must, before making any application for Development Approval to the Central Highlands Council and/or undertaking any Development Works on the Land prepare a plan ('Construction Environmental Management Plan'), in a form and substance satisfactory to the Minister, to deal with the following matters:

(d) details of how impact mitigation will be managed including the development of site management plan dealing with listed species and communities of the island, risk mitigation measure and supervision;

ii. C2.2 Management of the Environment: At all times while on an Activity the Operator must use all reasonable endeavours to ensure that the environment and ecology of the Licensed Area is in no way damaged by the Experience Guides and Clients including ensuring all staff and Clients clean, dry and disinfect any waders or equipment prior to accessing the Land and the Licensed Area.

- Additional proponent proposed measures

10) Additional on-site assessments (30 May 2018) have identified a suitable helicopter landing location (see Helipad Site 2 - Proposed Helipad and access to Halls Island Vegetation Survey 20 May 2018) consisting of naturally exposed bedrock within a HHE (Eastern alpine heathland) community. It is the intention of the proponent to use this area as the HLS without the requirement for added infrastructure (subject to HLS approval from helicopter contractors and meeting applicable CASA regulations).Should infrastructure (formed helipad) be required due to OH&S and/or CASA requirements, a raised perforated deck shall be installed at Site 2, as per Flora and Fauna Assessment impact mitigation prescriptions..

11) Walking route from heli-landing site to the lake-edge shall follow the sclerophyll forest / open plain edge as prescribed in the Flora and Fauna Assessment addendum. When using the route between the western plain edge, and the lake edge, customers and guides shall use fan-out walking techniques to avoid trampling and track formation. Incorporate into CEMP / Operations Manual.

12) Traversing of susceptible poorly drained habitats including sphagnum, blanket bogs and wetlands shall be avoided through the CEMP / Operations Manual

Risk after mitigation and avoidance measures are in place: Low. Activities that could result in trampling are mitigated, and activities that could lead to track formation are avoided.

Likelihood of a significant impact: Negligible-low. Avoidance measures, along with mitigation measures such as education and supervision result in a negligible to low risk of significant impact.

Community / species: *Athrotaxis selaginoides* rainforest – RKP.

Potential impacts (to establish the likelihood of a significant impact on MNES): Fire.

Likelihood: Low, no likely ignition sources.

Consequence: Burning and localised loss of fire-intolerant relic biota.

Risk: Low. Distribution of vegetation communities and form of several tree species indicates a complex fire history on Halls Island (see Flora and Fauna Assessment addendum Proposed Helipad and Access to Halls Island Vegetation Survey 30 May 2018) indicating fire-resilience of on-island communities.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.2, 4.3.3.1, and implement all RAA Step 8 Conditions

    1) 4.1.1.2: Electric or gas heating in Standing Camp, no open flames, smoking only in permitted area.

    2) 4.3.3.1: Outside fires are not permitted. Accidental fires will be extinguished immediately.

- Step 8 Conditions:

    3) Storage of aviation fuel or undertaking any helicopter refuelling operation is not permitted at the Halls Island helipad or nearby area.

    4) Implement all avoidance and mitigation measures outlined in the Flora and Fauna Assessment; prepare a Construction Environmental Management Plan covering the construction phase, to be approved by the PWS.

- Lease and Licence conditions including:

    5) 12.12 Fire: The Operator must:

(a) take all reasonable actions necessary to limit fire hazards and the threat of fire on the Land (but nothing in this clause authorises the removal or burning of any vegetation without the Minister's prior written consent);

(b) in relation to the Land, ensure that all necessary and appropriate fire retardation and fire-fighting equipment and devices (including those required by Law) are installed, upgraded and maintained in good working order and condition, and are readily available for use throughout the Term;

(c) comply with all directions of the Minister (acting reasonably) and any relevant Government Bodies in respect of fire prevention and fire-fighting on the Land generally; and

(d) ensure all Operator's Agents who are involved in the carrying out of the Approved Use have been trained in accordance with any applicable Laws and know how to operate all fire retardation and fire-fighting equipment and devices on the Land.

6) 2.2f: The design must satisfy, or be capable of satisfying, all applicable requirements for buildings being built in bushfire prone areas under the Building Code of Australia (Code). The design must encompass appropriate fire risk mitigation principles.

7) A2.4: Operations Manual

(a) The Operator must prepare an Operations Manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the Flora and Fauna Assessment, including:

(B) avoiding wood fireplaces and sources of potential ignition;

8) B3: Fuels and storage

The Operator must:

(a) only use heating and cooking appliances and fuels within the Land, as approved from time to time in writing by the Minister

- Additional proponent proposed measures

9) Halls Island will be offered as a no-smoking destination, as a provision to mitigate fire risk, and meet with OH&S obligations to employees. Shall be incorporated into CEMP / Operations Manual.

Risk after mitigation and avoidance measures are in place: Negligible. Possible sources of ignition (eg open-fires) are avoided, risk of fire is mitigated. Activities and infrastructure are located outside of this community.

Likelihood of a significant impact: Negligible likelihood due to mitigation and avoidance measures implemented to avoid / mitigate risk of fire.

Community / species: *Athrotaxis cupressoides / Nothafagus gunii community – RPF*

Potential impacts (to establish the likelihood of a significant impact on MNES): Fire, trampling

Likelihood: N/A. Community not present in surveys.

Consequence:

Risk N/A

Community / species: *Aquila audax fleayi – Tasmanian wedge-tailed eagle.*

Potential impacts: ***(to establish the likelihood of a significant impact on MNES):*** Disturbance.

Likelihood: Low. No nesting sites within 2km+ of Halls Island, and no nesting sites within 4km+ of flight route.

Consequence: Nest abandonment, interaction with helicopter.

Risk: Low.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Conditions Step 8:
    1) Not fly within 1km line-of-sight of known eagles nests and that helicopter flights do not include a 'viewing' of the nest (to be included in Operations Plan).
- Additional proponent proposed measures:

2) Fully adopt customised FNA including all recommendations from NJ Mooney Eagle impact minimisation report (26-09-17). These actions include flight altitude above 500metres with preference for 1000metres, adhering to assessed & nominated flight route.

Risk after mitigation and avoidance measures are in place: Low – Negligible.

Likelihood of a significant impact: Low – Negligible.

Community / species: *Galaxias johnstonii*

Potential impacts (to establish the likelihood of a significant impact on MNES): Impact on habitat.

Likelihood: N/A. Community not present in surveys. Nearest known occurrence is approximately +4km from Halls Island.

Consequence:

Risk N/A

Community / species: Species known or likely to occur within 500m of Halls Island. *Aquila audax fleayi, Dasyurus maculatus, Sarcophilus harrissi, Tyto novaehollandiae.*

Potential impacts (to establish the likelihood of a significant impact on MNES): Disturbance.

Likelihood: Negligible. The absence of available nesting and denning opportunities, it is likely that even if any of these species use the island, it would only be occasionally for foraging. If nesting or denning was attempted by one of these species, it is unlikely that the island would have sufficient prey to make raising a litter/brood there energetically viable. See Flora and Fauna Assessment for further information.

Consequence: Disturbance of species.

Risk: Negligible.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- Lease and Licence Conditions:

1) A2.6 Unanticipated Discovery Plan

(a) The Operator must prepare a plan to deal with situations where Aboriginal heritage or threatened flora and fauna are found on the Land ('Unanticipated Discovery Plan'). The Unanticipated Discovery Plan must details a plan to deal with the discovery and must state that all work on the Land must be suspended until an assessment is made by the (Tas) Minister and any relevant bodies in relation to the Aboriginal heritage of threatened flora and fauna.

(b) The Unanticipated Discovery Plan must be in a form and substance satisfactory to the (Tas) Minister.

Community / species: *Pseudocephalozia paludicola*

Potential impacts (to establish the likelihood of a significant impact on MNES): Trampling.

Likelihood: Negligible. No population observed on Halls Island.

Consequence: N/A

Risk: Negligible.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- Lease and Licence Conditions:

  1) A2.6 Unanticipated Discovery Plan

  (a) The Operator must prepare a plan to deal with situations where Aboriginal heritage or threatened flora and fauna are found on the Land ('Unanticipated Discovery Plan'). The Unanticipated Discovery Plan must details a plan to deal with the discovery and must state that all work on the Land must be suspended until an assessment is made by the Minister and any relevant bodies in relation to the Aboriginal heritage of threatened flora and fauna.

  (b) The Unanticipated Discovery Plan must be in a form and substance satisfactory to the Minister.

Community / species: *Pherosphaera hookeriana*

Potential impacts (to establish the likelihood of a significant impact on MNES): Fire.

Likelihood: Low, no likely ignition sources.

Consequence: Burning and localised loss of fire-intolerant relic biota.

Risk *(combination of likelihood and consequence):* Low. Distribution of vegetation communities and form of several tree species indicates a complex fire history on Halls Island (see Flora and Fauna Assessment addendum Proposed Helipad and Access to Halls Island Vegetation Survey 30 May 2018) and subsequent resilience to fire among on-island MSP communities.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.2, 4.3.3.1, and implement all RAA Step 8 Conditions

    1) 4.1.1.2: Electric or gas heating in Standing Camp, no open flames, smoking only in permitted area.

    2) 4.3.3.1: Outside fires are not permitted. Accidental fires will be extinguished immediately.

- Step 8 Conditions:

    3) Storage of aviation fuel or undertaking any helicopter refuelling operation is not permitted at the Halls Island helipad or nearby area.

    4) Implement all avoidance and mitigation measures outlined in the Flora and Fauna Assessment report; prepare a Construction Environmental Management Plan covering the construction phase, to be approved by the PWS.

- Lease and Licence conditions including:

    5) 12.12 Fire: The Operator must:

    (a) take all reasonable actions necessary to limit fire hazards and the threat of fire on the Land (but nothing in this clause authorises the removal or burning of any vegetation without the Minister's prior written consent);

    (b) in relation to the Land, ensure that all necessary and appropriate fire retardation and fire-fighting equipment and devices (including those required by Law) are installed, upgraded and maintained in good working order and condition, and are readily available for use throughout the Term;

(c) comply with all directions of the Minister (acting reasonably) and any relevant Government Bodies in respect of fire prevention and fire-fighting on the Land generally; and

(d) ensure all Operator's Agents who are involved in the carrying out of the Approved Use have been trained in accordance with any applicable Laws and know how to operate all fire retardation and fire-fighting equipment and devices on the Land.

6) 2.2f: The design must satisfy, or be capable of satisfying, all applicable requirements for buildings being built in bushfire prone areas under the Building Code of Australia (Code). The design must encompass appropriate fire risk mitigation principles.

7) A2.4: (a) The Operator must prepare an Operations Manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the North Barker Flora and Fauna Assessment dated 21/11/2016, for Riverfly RIV002, including:

(B) avoiding wood fireplaces and sources of potential ignition;

8) B3: Fuels and storage

The Operator must:

(a) only use heating and cooking appliances and fuels within the Land, as approved from time to time in writing by the Minister

- Additional proponent proposed measures

9) Halls Island will be offered as a non-smoking destination, as a provision to mitigate fire risk, and meet with OH&S obligations to employees. Shall be incorporated into CEMP / Operations Manual.

Risk after mitigation and avoidance measures are in place: Negligible. Possible sources of ignition (eg open-fires) are avoided, risk of fire is mitigated.

Likelihood of a significant impact: Negligible likelihood due to mitigation and avoidance measures implemented to avoid / mitigate risk of fire.

Community / species: *Pherosphaera hookeriana*

Potential impacts (to establish the likelihood of significant impact on MNES): Trampling.

Likelihood: Low-moderate.

Consequence: Inadvertent damage or destruction of plant species individuals through trampling.

Risk: Moderate

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.1.1, 4.1.1.4 and implement all RAA Step 8 Conditions

    1) 4.1.1.1: Adopt all mitigation measures prescribed in the avoidance of trampling (on-island) within the Flora and Fauna assessment:

        (a) Avoid routes through MSP's, or facilitate passage across MSP's by installing raised, perforated boardwalking. Risk is mitigated.

        (b) Education and supervision during trips, in relation to avoidance of trampling

        (c) Siting of standing camp among ORO or WSU communities.

        (d) Create visitor exlusion zones, excluding visitors from sensitive communities MSP, RKP and *Pherosphaera hookeriana* communities (see site map)

    2) 4.1.1.4: Ensure on-island routes/tracks avoid *Pherosphaera hookeriana*. Where existing routes pass by this species (near the natural rock landing), use short lengths of boardwalk to ensure clear walking route that avoids plant species. Education and supervision to re-enforce impact mitigation. Utilise no-access areas for visitors, see Site Plan Map including exclusion zones.

- Step 8 Conditions:

    3) Implement all avoidance and mitigation measures outlined in the North Barker Flora and Fauna assessment report; prepare a Construction Environmental Management Plan (CEMP) covering the construction phase, to be approved by the PWS.

    4) Through the CEMP, make staff and contractors working on Halls Island aware of the location of threatened plants and threatened native vegetation communities to ensure no inadvertent impact to these natural values.

    5) Flag work area to avoid inadvertent disturbance of threatened plants (*Pherosphaera hookeriana* pines) during construction. Include in CEMP.

    6) Locate the Halls Island landing such that these plants do not need to be removed, but if this is not practicable or safe, and any of these threatened pines need to be taken, then

a permit to take under the *Threatened Species Protection Act 1994* will be required from PCAB prior to any impact.

- Lease and Licence conditions including A2.3, A2.4 (ii), A2.5(d), C2.2

7) A2.4 Operations Manual

(b) The Operator must prepare an operations manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

(ii) impact mitigation measures which are noted in the North Barker Flora and Fauna Assessment dated 21/11/2016, for Riverfly RIV002, including:

(A) avoiding MSP - Sphagnum peatland, RKP - *Athrotaxis selaginoides* rainforest and *Pherosphaera hookeriana* locations (the Operator, where necessary, can apply to construct boardwalks over locations not specified in the RAA, which application will be subject to the written consent of the Minister including any necessary further assessment);

(D) using continual education and supervision as part of the overall interpretation and presentation of the Land to ensure minimal impact.

8) A2.5: Construction Environmental Management Plan - The Operator must, before making any application for Development Approval to the Central Highlands Council and/or undertaking any Development Works on the Land prepare a plan ('Construction Environmental Management Plan'), in a form and substance satisfactory to the Minister, to deal with the following matters:

(d) details of how impact mitigation will be managed including the development of site management plan dealing with listed species and communities of the island, risk mitigation measure and supervision;

9) C2.2 Management of the Environment: At all times while on an Activity the Operator must use all reasonable endeavours to ensure that the environment and ecology of the Licensed Area is in no way damaged by the Experience Guides and Clients including ensuring all staff and Clients clean, dry and disinfect any waders or equipment prior to accessing the Land and the Licensed Area.

Risk after mitigation and avoidance measures are in place: Low. Activities that could result in trampling are avoided and/or mitigated.

Likelihood of a significant impact: Low. Avoidance measures, along with mitigation measures such as education and supervision result in a negligible to low risk of significant impact.

Community / species: *MNES Species and communities*

Alpine Sphagnum Bogs and Associated Fens (MSP) – EPBCA Endangered, OUV Criteria Viii, IX, X

Athrotaxis selaginoides rainforest (RKP) –OUV Criteria Viii, IX, X

Pherosphaera hookeriana - OUV Criteria Viii, IX, X

Potential impacts (to establish the likelihood of significant impacts on MNES): Introduction of exotic flora and fauna.

Likelihood: Low.

Consequence: Wide-ranging potential impacts on flora and/or fauna.

Risk: Low-moderate.

Mitigation and avoidance measures

Existing measures (RAA, lease and licence conditions) to be fully adopted

- RAA Step 6 Activity controls # 4.1.6.1, and implement all RAA Step 8 Conditions

    1) 4.1.6.1: The proponent shall implement 'Keeping It Clean' training provided by NRM South. The final check and disinfection process should be applied at Derwent Bridge, prior to departure for Halls Island. Incorporate into Operations Manual.

- Step 8 Conditions:

    2) Implement all avoidance and mitigation measures outlines in the Flora and Fauna Assessment report;

    3) Develop a Hygiene Plan developed in accordance with DPIPWE (2015) *Weeds and Disease Planning and Hygiene Guidelines – Preventing the spread of weeds and diseases in Tasmania* should cover construction and operational phases of the project, quality control checks during construction and operations (and who will monitor compliance with agreed biosecurity measures) and a list of management actions that will be implemented (and by whom) if any weeds or other threats are identified during construction or operations. Issues/threats to consider should include plant seeds, invertebrates, aquatic alga and pathogens, plant pathogens and the like. Include actions in the Operations Plan.

    4) Require staff and visitors to properly clean, dry and disinfect their waders prior to accessing the area for fishing, especially if people have been fishing oversees. This also

applies to any other aquatic-related equipment and clothing (e.g. kayaks and fishing gear). Include actions in the Operations Plan.

- Lease and Licence conditions including: A 2.4 (c), A (2.7), C2.4 (c)

5) A2.4(a): The Operator must prepare an operations manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

A2.4(a)ii(C): complying with best practice protocals including the 'Keeping it clean' guidelines, noting that F10SC is the primary chemical treatment used on all equipment

6) A2.7: Hygiene Plan

(a) The Operator must prepare a plan in accordance with the document prepared by the Department of Primary Industries Parks Water and Environment in 2015 titled 'Weed and Disease Planning and Hygiene Guideline – prevent the spread of weeds and diseases in Tasmania ('Hygiene Plan'). The Hygiene Plan will need to consider both the Development and Approved Use (including quality control checks, compliance and monitoring of biosecurity measures and a list of actions that will be implemented by the Operator if any weeds or threats are identified during the Development of the Approved Use such as plant seeds, invertebrates, aquatic alga and pathogens, plant pathogens and the like.

(b) The Hygiene Plan must be in a form and substance satisfactory to the (Tas) Minister.

7) C2.4: The Operator must, ensure that all Clients, when undertaking an Activity on the Licensed Area:

(c) adhere to 'Leave No Trace' principles and techniques including for the prevention of infection of any Phytophthora species.

- Additional proponent proposed measures

8) The use of helicopter to transport guests to the site will ensure the maximum biosecurity is adopted. Helicopters are must be free of soil and vegetation debris at all times in order to operate within strict CASA guidelines, thereby avoiding risk of transfer of exotic species.

Risk after mitigation and avoidance measures are in place: Negligible. Risks are mitigated and avoided through hygiene processes and protocols.

Likelihood of a significant impact: Negligible likelihood due to mitigation and avoidance measures implemented.

Other Impact Considerations relevant to Halls Island

General statement on wilderness characteristics of Halls Island

Introduction

Halls Island has featured a permanent privately-owned hut on leasehold land (Halls Island) since 1956 (pre-dating National Park and World Heritage listing), along with annual human habitation for up to eight-weeks per year during this time.

Prior to recreational use, the area was used to graze sheep (through formal grazing rights from the mid-1800's through to mid-1900's). This is evidenced by the remains of a stone chimney ~2 km's east of Lake Malbena, and shepherd's maps in possession of the proponent.

Since 1955, access to Lake Malbena has been through a range of means: The original hut materials were brought in by air-drop and pack-horse, while annual visitation was facilitated by foot, by horse from 1940's to late 1970's, Haflinger 4wd up to 1984, and sea-plane during the 1970's. Canoes and boats stored at Halls Island were used to access and explore the broader surrounding areas from Travellers Range and the Mersey Valley in the west, to the Pine Valley in the north, and back to Malbena for the past sixty years. These expeditions led to the creation of the first maps of the area, and Reg Hall (original hut owner) was responsible for in excess of twenty place names in the Walls of Jerusalem National Park.

Since ~2013 the traditional access point to this part of the TWWHA, the private property now known as trawtha makuminya, has come under new ownership, and through-access to the eastern periphery of the TWWHA at Olive Lagoon now requires formal permission (which is not guaranteed), and travel beyond two permanently locked gates. The historical walk-in regime to Halls Island is now problematic, and up to 17km in length (each way), an increase from ~9.7km.

Apparent Naturalness has been altered by the on-island presence of the hut, historic garden beds, pronounced access track and remnants of the toilet building. Numerous wood-harvesting sites originally used as fuel, and additional building materials are dotted throughout the island. Various cairned and formed walking routes and tracks braid the valley and surrounds from Lake Malbena, all the way east to Lake Olive. Other features include remnants (chimney) of a shepherds hut, horse paddock, and remains of the early four-wheel drive route (including cording through wet areas).

National Wilderness Inventory (NWI) rating

It is important to highlight that 'wilderness values' are a set of measureable and quantifiable values, which are the result of a defined set of physical criteria.

The Australian Heritage Commission began the NWI program in 1986. It was initiated as a result of community concern over the rapid decline in the area and quality of relatively remote and natural land in Australia and in recognition of the need for wilderness resource information to assist scientists and administrators with wilderness conservation and management planning.

NWI assessment and mapping was applied to the Tasmanian TWWHA through the 2006 '*Tasmanian Wilderness World Heritage Area Wilderness Mapping*' project prepared for the Tasmanian Parks and Wildlife Service by Martin Hawes *http://www.parks.tas.gov.au/file.aspx?id=38815* . This document provides measurements of component variables relating to 'wilderness values' , resulting in a National Wilderness Inventory rating developed by the Australian Heritage Commission:

The NWI rating for Halls Island found in the 2006 mapping project are as follows (though the reader is limited by mapping resolution):

- Remoteness from Settlement (Remoteness from towns, settlements and isolated residences) 4+
- Remoteness from Access (Remoteness from points and corridors of access such as roads, walking tracks and airstrips) 4+
- Apparent Naturalness (Remoteness from features that impinge on the perception of naturalness such as settlements, roads, impoundments and transmission lines) 1+
- Biophysical Naturalness (Extent to which a defined area (typically a grid square) is free from evidence of changes caused by modern technological society – specifically logging and grazing 5.
- Total NWI Wilderness Value: 14+ / 20.

Notes on proposed aerial access

The 1981 '*Nomination of Western Tasmania Wilderness National Parks by the Commonwealth of Australia For inclusion in the World Heritage List*' identified aerial sightseeing as a pre-existing use and legitimate method for sightseers to observe the wilderness:

'Large numbers travel by motor launch on the Gordon River out of Strahan and aerial sightseeing over the nominated area enables many to observe the wilderness'

The subsequent 1989 request for an extension to the area '*Nomination of the Tasmanian Wilderness by the Government of Australia for inclusion in the World Heritage List*' again re-affirmed aerial access as a pre-existing and legitimate activity, enabling visitors to appreciate the Tasmanian wilderness:

'Scenic flights in conventional and amphibious light aircraft are increasingly allowing many people to appreciate the wilderness'

While the Halls Island proposal is not a guided fishing product, and fly fishing is only offered as an 'occasional' activity, it is important to address helicopter use in context of the surrounding Western Lakes trout fishery. Following from the successful 1989 request for extension of the TWWHA, the 1991 *'Trout Fishery Management Plan, Western Lakes - Central Plateau : Tasmanian World Heritage Area'* (by Sloane & French) was prepared as a comprehensive plan for the Department of Parks, Wildlife and Heritage, to inform the management of the renowned trout fishing region comonly known to anglers as the 'Western Lakes'. The Western Lakes are located in the north-eastern corner of the TWWHA, and formed part of the newly listed area. Following extensive research, the Management Plan produced the following findings and recommendations in relation to Aerial Access, specific to the Western Lakes:

'Confine the use of float-planes and helicopter to Pillans Lake and Lake Olive on a trial basis, subject to restricted operating permits controlled by PWH. No temporary, or permanent, landing or refuelling facilities should be permitted within the WHA in association with such operations.

Helicopters and float-planes have been used to support research activities in this area in the past and helicopters have occassionally been used by trout fishing guides.

Whilst there is little demand for aerial access at the present time, float-planes and helicopters provide a legitimate form of transport with minimal environmental impact, offering considerable commercial and tourism opportunities. Both forms of transport are widely used to access wilderness trout fishing waters in other countries, notable Canada, Alaska (sic), South America and New Zealand. In New Zealand professional trout guides are given controlled aerial access to the Fiordland WHA.

The recommended lakes, Pillans and Olive, provide access to two contrasting environments within the Western Lakes. Whilst essentially 'remote' in nature they are relatively easily accessed in case of emergency'.

In reference to the recommended helicopter landing site at Lake Olive, Halls Island is comparatively close to this site (3.0km west of Lake Olive), and itself has a history of amphibious-plane and sea plane access.

Lake Olive has a 2006 NWI rating of 16+, whereas Halls Island has an NWI rating of 14+.

The *1999 TWWHA Management Plan* was widely regarded as a leading management document by all users of the TWWHA, and was the guiding management document until 2015. Under the 1999 Plan, air access was recognised as:

'Providing people with an opportunity to view the WHA with virtually no physical environmental impact, apart from that of noise, and in the case of floatplanes, wash from their wake'

Potential helicopter landing sites were restricted to a total of 3 in the TWWHA. These 3 potential sites were restricted to the Central Plateau Conservation Area (CPCA), were relient on 'nil or very little conflict with other users of the site', and having little or no impacts on natural or cultural values at the site. The proposed helicopter use at Halls Island is compliant with the 1999 Management Plan guidelines.

The proposed helicopter use is compliant with the prescriptions of the current *2016 TWWHA Management Plan*. The helicopter landing site is located in the CPCA, and outside of the Walls Of Jerusalem National Park, and would be the first nominated landing site out of a possible maximum of 5 in the TWWHA, all to be located outside of the Wilderness Zone (leaving only ~15% of the TWWHA available to the five potential landing sites).

Current management of scenic flights and over-flying of the TWWHA

At this point in time, the only regulatory body able to regulate over-flights of the TWWHA (not involving landings in the Reserve) is the Civil Aviation Safety Authority (CASA). As such, overflight numbers of the TWWHA are essentially ungoverned, and carried out at will.

To limit potential impacts from over-flights on users, the PWS has developed *'Fly Neighbourly Advice (FNA)'* prescriptions between aircraft operators and communities interested in reducing the disturbance caused by aircraft withing aparticular area. These prescriptions are voluntary.

Due to the fact that the proposed used at Halls Island involves landing, rather than over-flight, the PWS in this case is able to apply strict flight path regulations and prescriptions over and above those described above. These include a prescribed flight path, and prescriptions that have been developed and assessed to minimise impacts on the TWWHA, including protected matters and other users. The proponent welcomes these measures.

Notes relating on-island boardwalks

To facilitate sustainable use of the Halls Island Standing Camp, two boardwalks are proposed in order to cross two MSP bog areas identified in the Flora and Fauna Assessment. The first of these bogs (referred to here as Bog 1) is located at the southern-end of the island, and is impacted by an existing historical foot pad linking the natural rock landing, and Halls Hut. The second bog (referred to as Bog 2) is immediately north of the proposed Standing Camp site and ORO habitat.

To remediate existing impacts and mitigate future impacts to Bog 1, a short length (approximately 10m) of raised, perforated FRP (Fibreglass Re-enforced Plastic) boardwalk will be installed. Raised, perforated boardwalks are a recommended impact mitigation tool noted in the Flora and Fauna Assessment. FRP mesh allows for +65% light-transmissions, not accounting for the additional light that enters between the boardwalk and the ground-level. The installation and use of this boardwalk will result in improved conditions within the southern MSP community, allowing the current

footpad (see Plate 10, Flora and Fauna Assessment) to repair, and avoid the continuation of further trampling impacts that may lead to erosion.

In order to mitigate impacts to Bog 2, and facilitate sustainable foot-access to the northern-half of Halls Island, a second section of raised, perforated FRP boardwalking is proposed. The boardwalk is proposed to begin on an area of ORO / gravel hard-ground on the perimeter of the Standing Camp footprint, and end on a raised portion of ORO bedrock. The use of the boardwalk will mitigate risks to the integrity of the MSP community, and provide excellent locations for high-quality interpretation relating to the function and importance of MSP communities as plant communities of Outstanding Universal Value.

Raised, perforated boardwalking as a mitigation tool

The use of raised FRP boardwalking is common and accepted as best-practice within the TWWHA to mitigate and avoid impacts on susceptible areas. FRP boardwalks have been used for the past 3 years+ by the Tasmanian PWS, in this context.

The concept of perforated boardwalks as impact mitigation and avoidance tools is not new. Kosciuszko National Park (incorporating the Mt Kosciuszko alpine area, from Thredbo Top Station to Rawson Pass) is an iconic conservation area with a long and successful history (+35 years) of using raised, perforated boardwalks to remediate and avoid damage to 'two broad vegetation types: wet communities of bog and fen vegetation', and 'the tall alpine herbfield communities of better drained sites' (Worboys & Pickering 2002). Known colloquially as 'bog bridges' (due to their function), it is noted that this infrastructure 'blends aesthetically into the landscape', and 'importantly the walkway has an absence of weeds thanks to the vigorous growth of natives and the absence of disturbance, and the technology has since been exported to Glacier National Park in the U.S.A.' (Worboys & Pickering 2002).

Further studies on the success of the raised boardwalk at Kosciusko by Hill and Pickering (2005) revealed that 'for a raised steel mesh walkway there was no difference in vegetation under the walkway, on the verge, and 3 m away. In contrast, for a non-hardened track there was 35% bare ground on the track surface but no other detectable impacts. Gravel and paved tracks had distinct verges largely comprising bare ground and exotic species'.

References:

- Graeme L Worboys and Catherine M. Pickering, Mountain Tourism Research Report Series: No 3, CRC Sustainable Tourism 2002. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.548.802&rep=rep1&type=pdf
- Wendy Hill and Catherine M. Pickering, Vegetation associated with different walking track types in the Kosciuszko alpine area, Australia. School of Environmental and Applied Sciences, Griffith University, PMB 50 Gold Coast Mail Centre, Queensland 9726, Australia 2005 https://www.sciencedirect.com/science/article/pii/S0301479705001519

Notes on greywater and sewage

Sewage will be collected in fully-sealed, complete-capture plastic / fibreglass pods for periodic (no greater than annual) removal and emptying off-site. This is deemed as best practice in sub-alpine environments, and these units are in use at RiverFly 1864's Skullbone Plains Standing Camp in the TWWHA, Tasmanian Land Conservancy Skullbone Plains toilet in the TWWHA, as well as Tasmanian Walking Company and Tasmanian Parks and Wildlife Service sites in the TWWHA.

All greywater will be collected as per above, and back-loaded as required via helicopter for disposal outside of the TWWHA.

END section two

Protected Matters Environmental Management Plan

This Plan will be implemented by Wild Drake P/L as part of the Halls Island Development

Prepared by Daniel Hackett, on behalf of Wild Drake P/L 19/06/2018

Contents

1. Introduction

The Protected Matters Environmental Management Plan (PMEMP) has been developed to ensure that the impact and avoidance strategies and procedures prescribed in the *Halls Island Consideration of MNES, potential impacts, avoidance and mitigation measures* are identified, encapsulated and implemented within the proposed activities and actions.

The General Manager (or equivalent) is responsible for adopting and implementing the impact and avoidance measures listed in this document, and ensuring that all sub-ordinates and contractors are aware and compliant with these measures.

The listed impact mitigation and avoidance measures outlined in this document shall be replicated in the CEMP and Operations Manual prepared prior to the commencement of activities.

In the case of an environmental emergency, or if the PMEMP does not achieve the stated mitigation and / or avoidance measures, corrective actions will be taken, and applicable impact mitigation and avoidance measures will be immediately updated through the relevant CEMP, or Operations Plan.

In the event of an environmental emergency:

- The action resulting in the emergency will cease;

- The relevant environmental authority will be immediately contacted (the PWS in the first instance)

- The source or action generating the impact will be avoided or mitigated through improved avoidance and / or mitigation measures developed in co-operation with the applicable agency (the PWS in the first instance). The new impact avoidance and mitigation action will be implemented and incorporated into either the CEMP or Operations Manual

The General Manager (or equivalent) is responsible for implementing the corrective actions on behalf of Wild Drake P/L.

The proposed Halls Island operations will be reviewed annually through reviews of the Operations Manual by the PWS, as per the Halls Island Lease and Business Licence Conditions.

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2. Construction - Protected Matters Environmental Management Subplan

2.1 Objective

The objective of this plan is to ensure that all impact avoidance and mitigation measures relating to MNES are identified and implemented prior to the commencement of construction.

2.2 Appropriate site selection

The Standing Camp site selection has been a result of adopting the North Barker Flora and Fauna Assessment (21 November 2016). The chosen Standing Camp Site is primarily ORO community, with a small proportion of WSU. See appendices *Halls Island Preliminary Design Plan* for Site Plan.

2.3 Trampling and Track formation avoidance

To ensure that trampling, track formation and general disturbance of MNES species and communities is avoided and mitigated, the following measures will be fully adopted for use during the construction process:

(a) Avoid routes through MSP's, or facilitate passage across MSP's by installing raised, perforated boardwalking. Risk is mitigated.

(b) Education and supervision during trips, in relation to avoidance of trampling

(c) Siting of standing camp among ORO or WSU communities.

(d) Create visitor exclusion zones, excluding visitors from sensitive communities MSP, RKP and *Pherosphaera hookeriana* communities (see site map)

(e) Install raised, perforated boardwalk along area of existing impact (MSP community south of Halls Hut)

(f) Ensure on-island routes/tracks avoid *Pherosphaera hookeriana*. Where existing routes pass this species (eg: near the natural rock landing), use short lengths of boardwalk or similar appropriate mechanisms to ensure a clear walking route that avoids the plant species. Education and supervision to re-enforce impact mitigation. Utilise no-access areas for visitors, see *Halls Island Preliminary Design Plan* for Site Plan.

(g) Camp will be installed using hand tools / battery-operated tools only. Minimal ground disturbance, no excavations or changes to water-courses. A small four-stroke generator may be used during the construction process to charge electric tools. This shall be located on the ORO terrain to minimise risk of fire etc.

(h) A Construction Environment Management Plan (CEMP) shall be prepared in accordance with the current RAA and Lease requirements, and will ensure that staff and contractors working on Halls Island aware of the location of threatened plants

and threatened native vegetation communities to ensure no inadvertent impact to these natural values.

(i) Flag work area to avoid inadvertent disturbance of threatened plants (*Pherosphaera hookeriana* pines) during construction. Include in CEMP.

(j) Locate the Halls Island landing such that threatened plants (*Pherosphaera hookeriana* pines) do not need to be removed. If this is not practicable or safe, and any of these threatened pines need to be taken, then a permit to take under the Threatened Species Protection Act 1994 will be required from PCAB prior to any impact.

2.4 Heli-sling transport

The Standing Camp design shall be designed to include pre-fabrication as much as possible, to ensure that the minimum of heli-sling loads will be required to deliver materials to site, and that the camp installation process will require the minimal time possible.

2.5 Unanticipated Discovery Plan

Prior to the commencement of construction, and contained with the CEMP, an Unanticipated Discovery Plan (UDP) shall be created. The plan shall deal with situations where Aboriginal heritage or threatened flora and fauna are found on the Land. The UDP must detail a plan to deal with the discovery and must state that all work on the Land must be suspended until an assessment is made by the Minister and any relevant bodies in relation to the Aboriginal Heritage or threatened flora and fauna.

2.6 Hygiene Plan

Prior to the commencement of construction, The Operator must prepare a plan in accordance with the document prepared by the Department of Primary Industries Parks Water and Environment in 2015 titled 'Weed and Disease Planning and Hygiene Guideline – prevent the spread of weeds and diseases in Tasmania ('Hygiene Plan'). The Hygiene Plan will need to consider both the Development and Approved Use (including quality control checks, compliance and monitoring of biosecurity measures and a list of actions that will be implemented by the Operator if any weeds or threats are identified during the Development of the Approved Use such as plant seeds, invertebrates, aquatic alga and pathogens, plant pathogens and the like.

2.7 Effluent and Rubbish Plan

2.7.1 At the commencement of construction activities, a complete-capture pod should be installed to ensure that all sewage and greywater is captured during the construction process, for complete removal off-site.

2.7.2 During Construction and Operations, the Operator shall:

(a) maintain all toilets constructed as part of the Development in a proper safe and working manner;

(b) ensure all persons accommodated in the Land use the toilets constructed within the Land where practicable;

(c) ensure all garbage, rubbish and refuse generated on the Land and/or as a result of the Approved Use is:

(i) pending disposal, properly collected (with the Operator to provide adequate refuse receptacles on the Land and take all reasonable steps to ensure that they are used appropriately);

(ii) stored in a manner that it cannot be accessed by animals;

(iii) properly disposed of (and not burnt on the Land) at an authorised waste disposal site at the end of each stay on the Land;

(d) provide and use recyclable, compostable and/or reusable containers and wrappers wherever possible, and not use any plastic bags (unless they are of the fast degradable type) or single use plastic bottles;

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3. Weed and Hygiene – Protected Matters Environmental Management Subplan

3.1) Objective

The objective of the Weed and Hygiene Plan is to ensure that no exotic biota is introduced to the TWWHA through the proposed activities.

3.2) Operations Manual

The Operator must prepare an Operations Manual (prior to commencement of activities) detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

a) complying with best practice protocals including the 'Keeping it clean' NRM South guidelines, noting that F10SC is the primary chemical treatment used on all equipment

3.2.1 Hygiene Plan

(a) The Operator must prepare a plan in accordance with the document prepared by the Department of Primary Industries Parks Water and Environment in 2015 titled

'Weed and Disease Planning and Hygiene Guideline – prevent the spread of weeds and diseases in Tasmania ('Hygiene Plan'). The Hygiene Plan will need to consider both the Development and Approved Use (including quality control checks, compliance and monitoring of biosecurity measures and a list of actions that will be implemented by the Operator if any weeds or threats are identified during the Development of the Approved Use such as plant seeds, invertebrates, aquatic alga and pathogens, plant pathogens and the like.

b) The Hygiene Plan must be in a form and substance satisfactory to the (PWS) Minister.

3.2.2 The Operator must ensure that all Clients, when undertaking an Activity on the Licensed Area:

(a) Adhere to 'Leave No Trace' principles and techniques including for the prevention of infection of any Phytophthora species.

- Additional proponent proposed measures

3.3 The use of helicopter to transport guests to the site will ensure that maximum biosecurity provisions are adopted. Helicopters must be free of soil and vegetation debris at all times in order to operate within strict CASA guidelines, thereby mitigating risk of transfer of exotic species.

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4. Indigenous Heritage – Protected Matters Environmental Management Subplan

4.1 Objective

The objective of the Indigenous Heritage Subplan is to ensure that Aboriginal heritage is treated sensitively and appropriately, and protected from impact.

4.2 Appropriate siting

The proposed Standing Camp site is located in an area with low probability of Aboriginal heritage being present (see appendices for AHT report).

4.3 No ground disturbance

The Standing Camp will be installed using hand-tools / battery operated tools only. Minimal ground disturbance, no excavations or changes to water courses, ensuring that unanticipated & unidentified artefacts remain undisturbed.

4.4 Community input

With regard to Aboriginal heritage, the proponent has and will continue to formally engage and consult with the Aboriginal Heritage Council (AHC), and the Aboriginal community to outline the details of the proposed development, and any proposed plans for activities including site visits; and proponent to engage and consult with the AHC and Aboriginal community on the development of all cultural heritage interpretation and planned access to Country projects. The proponent has contacted AHC.

4.5 Unanticipated Discovery Plan

The Operator must prepare a plan to deal with situations where Aboriginal heritage or threatened flora and fauna are found on the Land ('Unanticipated Discovery Plan'). The Unanticipated Discovery Plan (UDP) must details a plan to deal with the discovery and must state that all work on the Land must be suspended until an assessment is made by the Minister and any relevant bodies in relation to the Aboriginal heritage of threatened flora and fauna. The UDP will be incorporated into the CEMP, and Operations Manual prior to the commencement of activities. See appendices for the UDP.

4.6 Additional proponent proposed measures:

The proponent and staff have attended / undertaken a number of formal and informal cultural awareness and familiarisation activities, including On Country sessions with respected Tasmanian Aboriginal elders and Tasmanian Aboriginal tourism operators.

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5. Species and Communities of Significance / Outstanding Universal Values – Protected Matters Environmental Management Subplan

5.1 Objective

The objective of the Species and Communities Subplan is to ensure that all risk related to the proposed activities are avoided, or mitigated.

5.2 Species and Communities of Significance

List of Species and Communities of Significance recorded in the Flora and Fauna Assessment and NJ Mooney Wedge-tailed eagle report:

- Alpine Sphagnum Bogs and Associated Fens (MSP) – EPBCA En (endangered), OUV representing the major stages of earth's evolutionary history
- *Athrotaxis selaginoides* rainforest (RKP) – OUV relic biota with links to ancient Gondwanan biota including endemic conifers
- *Pherosphaera hookeriana* - OUV relic biota with links to ancient Gondwanan biota including endemic conifers

- *Aquila audax subsp. Fleayi* – EPBCA Endangered

5.2 Trampling and Track-formation mitigation and avoidance measures

Implement all Trampling and Track-formation mitigation and avoidance measures for construction and operational phase as 2.2 and 2.3

5.3 Fire Risk

The *Fire Management Subplan* shall be implanted in full, prior to and during all proposed activities.

5.4 Weed and Hygiene Risk

The prescription of the *Weed and Hygiene – Protected Matters Environmental Management Subplan* shall be adopted in full.

5.5 Disturbance risk (Tasmanian wedge-tailed eagle)

Adopt all risk mitagtaion and avoidance measures outlined in *Customised Fly Neighbourly Advice (FNA) Subplan*

5.6 Unanticipated Discovery Plan

The Unanticipated Discovery Plan listed at 4.5, page 60, shall be implemented prior to and during all proposed activities.

5.7 Boat Launching details, Lake Malbena lake edge

The use of row boats and associated oar-powered water craft are proposed on Halls Island as transport to and from the island. During the activities the proponent will utilise areas of lake-edge featuring hard-wearing dolerite edges for embarking and disembarking to ensure no erosion impacts. Furthermore, staff are required to ensure that any *Pherosphaera hookeriana* pines are avoided, should they be located on the Lake Malbena lake edge. These mitigation and avoidance measures shall be incorporated into the Operations Manual prior to the commencement of activities.

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6. Fire Management Subplan

6.1 Objective

The objective of the Fire Management Subplan is to ensure that all fire risks related to the proposed activities are avoided, or mitigated.

6.3 No open flames

6.3.1 Halls Island shall be managed as a non-smoking destination, in order to avoid risk of fire, and ensure with OH&S requirements in the workplace.

6.3.2 Heating shall be electric or gas, with no open flames

6.3.3 Outside fires are not permitted. Accidental fires will be extinguished immediately

6.4 Storage of fuels

The storage of aviation fuel or undertaking any helicopter refuelling operation is not permitted at the Halls Island helipad or nearby area.

6.5 Limit fire hazards

6.5.1 Take all reasonable actions necessary to limit fire hazards and the threat of fire on the Land (but nothing in this clause authorises the removal or burning of any vegetation without the (State) Minister's prior written consent);

(b) in relation to the Land, ensure that all necessary and appropriate fire retardation and fire-fighting equipment and devices (including those required by Law) are installed, upgraded and maintained in good working order and condition, and are readily available for use throughout the Term;

(c) comply with all directions of the (State) Minister (acting reasonably) and any relevant Government Bodies in respect of fire prevention and fire-fighting on the Land generally; and

(d) ensure all Operator's Agents who are involved in the carrying out of the Approved Use have been trained in accordance with any applicable Laws and know how to operate all fire retardation and fire-fighting equipment and devices on the Land.

6.6 Camp Design

6.6.1 The design must satisfy, or be capable of satisfying, all applicable requirements for buildings being built in bushfire prone areas under the Building Code of Australia (Code). The design must encompass appropriate fire risk mitigation principles.

6.7 Fire risk – construction

All construction to be performed with 12V electric and hand-tools only. A small four-stroke generator may be used to charge equipment during construction activities. This will be located on ORO communities (exposed bedrock) to avoid and mitigate any potential for fire resulting from malfunction of the generator.

7. Customised Fly Neighbourly Advice (FNA) Subplan

7.1 Objective

The objective of the Customised Fly Neighbourly Advice (FNA) is to ensure that all mitigation and avoidance measures relating to impacts on MNES are identified and implemented.

7.2 Flight route

The proponents will adopt the prescribed flight route as shown in the Nick Mooney Wedge Tailed Eagle Impact Assessment (see appendices). This route avoids interactions with known nesting-sites, and utilises an area with a low probability of eagle nests. In addition, the helicopter shall not fly within 1km line-of-sight of known eagles nests, and helicopter flights shall not include a 'viewing' of the nest (to be included in Operations Plan)

7.3 Other Flight parameters

7.3.1 All flights shall travel at an altitude of 1000m+ where possible (weather dependant) to avoid interactions with eagles, and decrease sound impact on other users of the TWWHA

7.3.2 The prescribed flight route travels along the eastern boundary of the Walls of Jerusalem National Park, and avoids traversing the wilderness zone for extended periods

7.3.3 Climbing and descending actions should occur in the immediate vicinity of the HLS as practicable

7.3.4 Close manoeuvring, lingering and hovering shall be avoided where practicable

7.3.5 Eagles observed in operational area to be avoided

7.4 Social Impact Avoidance

7.4.1 The selected flight path avoids all recorded walking tracks and routes, and areas of regular use. See appendices for recorded walking route map supplied by PWS (appendices)

7.4.2 Helicopter use is restricted to that required to service the capped 30 bookings per year, and associated Standing Camp servicing requirements. (Estimated at a total of 25 to 48 hours annually). See appendices on helicopter use and impact minimisation for further information.

8. Wilderness Characteristics – Protected Matters Environmental Management Plan

8.1 Objective

The objective of the Wilderness Characteristics Subplan is to ensure that all mitigation and avoidance measures relating to impacts on MNES are identified and implemented.

8.2 Geoconservation

Standing Camp will be installed using hand-tools / battery operated tools only. Minimal ground disturbance, no excavations or changes to water-courses

8.3 Western Tasmania Blanket Bogs

Sites are avoided. Any interaction with sites will involve minimal ground disturbance, perforated decking and boardwalking as per Flora and Fauna Assessment.

8.4 Landscape & Viewfield

The design shall utilise sympathetic building material selection, avoid reflective surfaces, and utilise muted bush tones. Siting to provide further concealment, and restrict possible viewfields.

8.5 Wilderness and wild rivers, NWI 14+

Groups sizes shall be restricted to a maximum of 6 customers (plus guides), and the total number of commercial bookings shall be 30 per year. Sympathetic building designs and scale shall be implemented. Adhere to strict flight path and impact minimisation prescriptions of the Customised FNA subplan.

8.6 Water quality / CFEV (Conservation of Freshwater Ecosystem values) Values

8.6.1 The camp shall utilise complete-capture sewage and greywater pods. Greywater will be back-loaded with helicopters as required, for disposal outside of the TWWHA. Sewage will be collected in pods, and emptied off-site at a frequency no greater than annually. The operator shall not allow any sewage, grey water, and sediment to enter lake/streams in order to protect aquatic fauna (which has high endemicity)

8.6.2 The use of row boats and associated oar-powered water craft are proposed on Halls Island as transport to and from the island. During the activities the proponent will utilise areas of lake-edge featuring hard-wearing dolerite edges for embarking and disembarking to ensure no erosion or sedimentation impacts. Furthermore, staff are

required to ensure that any *Pherosphaera hookeriana* pines are avoided, should they be located on the Lake Malbena or Halls Island lake edges. These mitigation and avoidance measures shall be incorporated into the Operations Manual prior to the commencement of activities.

8.7 Recreational values, established uses

8.7.1 Prior to commencement of activities, the Operator must prepare an Operations Manual detailing the operational practices of the Operator in respect of both the Approved Use and the Licensed Activities (Operations Manual). The Operations Manual must include:

8.7.1.1 Details of the FNA and an identified flight path between the identified area of Lake St Clair and the Conservation Area (helipad), including ensuring a standard operating procedure of over-flying potential nesting habitat by approximately 1000m altitude where possible (except for the end points of the flight), travelling along the pre-determined route of minimum likelihood of nests and avoiding tight manoeuvres and hovering (including ensuring that any flight path is not within a 1km line of sight of known eagles nests and that any flight does not include any 'view' of the nest);

8.7.1.2 Restrict annual trip (booking) numbers to 30 trips, maximum 6 customers per trip.

8.8 Design

The design must minimise environmental impacts through:

8.8.1 Appropriate footprint design and techniques for the three accommodation huts and the communal kitchen hut, with exact locations and size of huts to be determined in conjunction with the Minister ;

8.8.2 The use of a selection of products, materials and methods that reduce or minimise impacts (including in respect of water use, waste production and generation); and

8.8.3 the development and implementation of actions to ensure that the natural and heritage values of the Park are preserved:

8.8.3.1 all kitchens, toilets and bathrooms must be designed with a complete capture system. All grey and black waste water must be removed from the Land regularly and disposed of at a Central Highlands Council approved disposal facility.

8.8.3.2 the design must maximise the retention of existing vegetation and topography.

8.8.3.3 materials used in external surfaces of the Development must be low-visibility in colour and similar to surrounding vegetation (including a mixture of timber and steel materials in muted bush tones).

8.8.3.4 the design must protect and present the values of the setting in which the Development is to occur, including in respect of the selection of materials and scale of buildings being complementary and sensitive to the surrounding environment (including vegetation type) with a reduced visual impact.

8.9 Construction Environmental Management Plan (CEMP)

The Construction Environmental Management Plan shall be prepared prior to the commencement of construction, and detail:

8.9.1 details of how impact mitigation will be managed including the development of site management plan dealing with listed species and communities of the island, risk mitigation measure and supervision

8.9.2 The Operator must ensure that any helicopter used in connection with the construction and/or operation of the Development:

8.9.2.1 uses the flight path provided by the Lessor to ensure minimal airtime and minimal impacts on other users of the area;

8.9.3 Except for emergency situations, helicopters:

8.9.3.1 must not be operated at frequencies greater than those from time to time approved in writing by the Minister; and

8.9.3.2 must operate substantially in accordance with any applicable operations schedule from time to time approved in writing by the Minister.

8.9.4 General Obligations

8.9.4.1 to comply with all requirements and recommendations of the FNA (as may be amended generally or in respect of the Business only where such amendments are agreed between the parties acting reasonably) at all times during the Term including ensuring the recommended flight paths and altitude requirements are followed at all times when the helicopter is operating (provided that in the event of any inconsistency between the FNA and any requirements of CASA or relevant legislation the requirements of CASA or relevant legislation will take precedence to the extent of the inconsistency);

- Additional proponent proposed measures

8.10.1 Any external lighting within the Standing Camp shall be solar-powered, utilising red colour spectrum where possible to avoid potential for light transmission beyond the Standing Camp area

8.10.2 Site location (Halls Island) is an area with existing built-infrastructure and use (since 1956)

8.10.3 Site location is an area with modified 'apparent naturalness'

8.10.4 Infrastructure shall be designed to be completely removable

8.10.5 Additional on-site assessments (30 May 2018) have identified a suitable helicopter landing location (see Helipad Site 2 - Proposed Helipad and access to Halls Island Vegetation Survey 20 May 2018) consisting of naturally exposed bedrock. It is the intention of the proponent to use this area as the Helicopter Landing Site (HLS) without the requirement for added infrastructure (subject to HLS approval from helicopter contractors and meeting applicable CASA regulations).Should infrastructure (formed helipad) be required due to OH&S and/or CASA requirements, a raised perforated deck shall be installed at Site 2, as per Flora and Fauna Assessment impact mitigation prescriptions.

8.10.6 HLS location adjacent to Halls Island is a small amphitheatre-setting surrounded by natural woodland which maximise sound attenuation, resulting in noise impact equivalent to ambient during start-up or set-down (observed at 400metres, from location 442142E, 5355302N).

8.10.7 HLS siting ensures no noise impact on the TWWHA Wilderness Zone to the west, during start-up or set-down, and HLS is located outside of the Walls of Jerusalem National Park (WOJNP), in the Central Plateau Conservation Area (CPCA).

8.10.8 Proposed HLS siting in the CPCA is a compliant activity with both the current 2016 TWWHA Management Plan, and the preceding 1999 TWWHA Management Plan.

See attached Basic Preliminary Developmental Design Plan, appendices for further details in relation to Standing Camp design.

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9. Public Access – other information

9.1 Previous public access arrangements

Under the ownership of Reg Hall, followed by Mrs Elizabeth McQuilkin, generous public access has been given to users who have sought permission to visit this significant but private, historical hut.

Recognising the importance of Reg Hall in the history of Tasmanian bushwalking and the foundation of the Walls of Jerusalem National Park, and his association with Halls Island, the new lessees of Halls Island intend to continue to allow similar arrangements and levels of public access.

9.2 Historical public usage levels

Records from the past 26 years of use at Halls Island indicate 92 visits, with a total of 271 guests. Based on these records, and the desire to continue similar levels of public use, the lessees may permit public access to up to 3 groups per year, with a maximum group size of 4 persons.

9.3 Public Access Requirements

It is important to note that under the new lease and business licence arrangements the lessees of Halls Island are responsible for the flora, fauna and general environment. This Access Plan is the means through which reasonable public visitation may be facilitated, whilst ensuring the lessees can meet legal obligations.

Preference will be given to past users who have by their use shown a record of interest in Halls Island, and / or recreational outdoors clubs wishing to incorporate Halls Island into a proposed club trip.

Users must have a history of being respectful of the owners, past and present.

To ensure the environmental integrity of the island, maximise the experience of the visit, and to provide indemnity to the lessees should it be required, visitors will be required to:

1. Contact Wild Drake P/L by Email to book in a suitable time to visit. This date must be approved by Wild Drake P/L.

2. Provide scanned or photocopy I.D., along with email address and phone number for booking contact.

3. Acknowledge the requirements of and at all times adhere to the Halls Island Hygiene Plan, and NRM South ‘Keeping It Clean’ guidelines as provided.

4. Sign an appropriate waiver of liability and indemnity in favour of Wild Drake P/L.

5. Provide an appropriate safety / emergency action plan including provision of an EPIRB*

(*Note that the above is typical information used and prepared by bushwalking clubs and outdoor groups during the preparation and planning of formal excursions.)

The means of access to the TWWHA, and walking routes etc to Halls Island are the responsibility of the visitor.

Whilst visiting Halls Island, visitors must adhere to any directions given by the lessors, to ensure that environmental integrity, safety and the important values of Halls Island are maintained.

Reference Appendices

1. Map of recorded walking routes and tracks in relation to Halls Island (Supplied by the PWS)

2. Helicopter use and impact mitigation notes

3. North Barker Flora and Fauna Assessment 21 November 2016 (see separate attachment)

4. North Barker Flora and Fauna Assessment Addendum (see separate attachment)

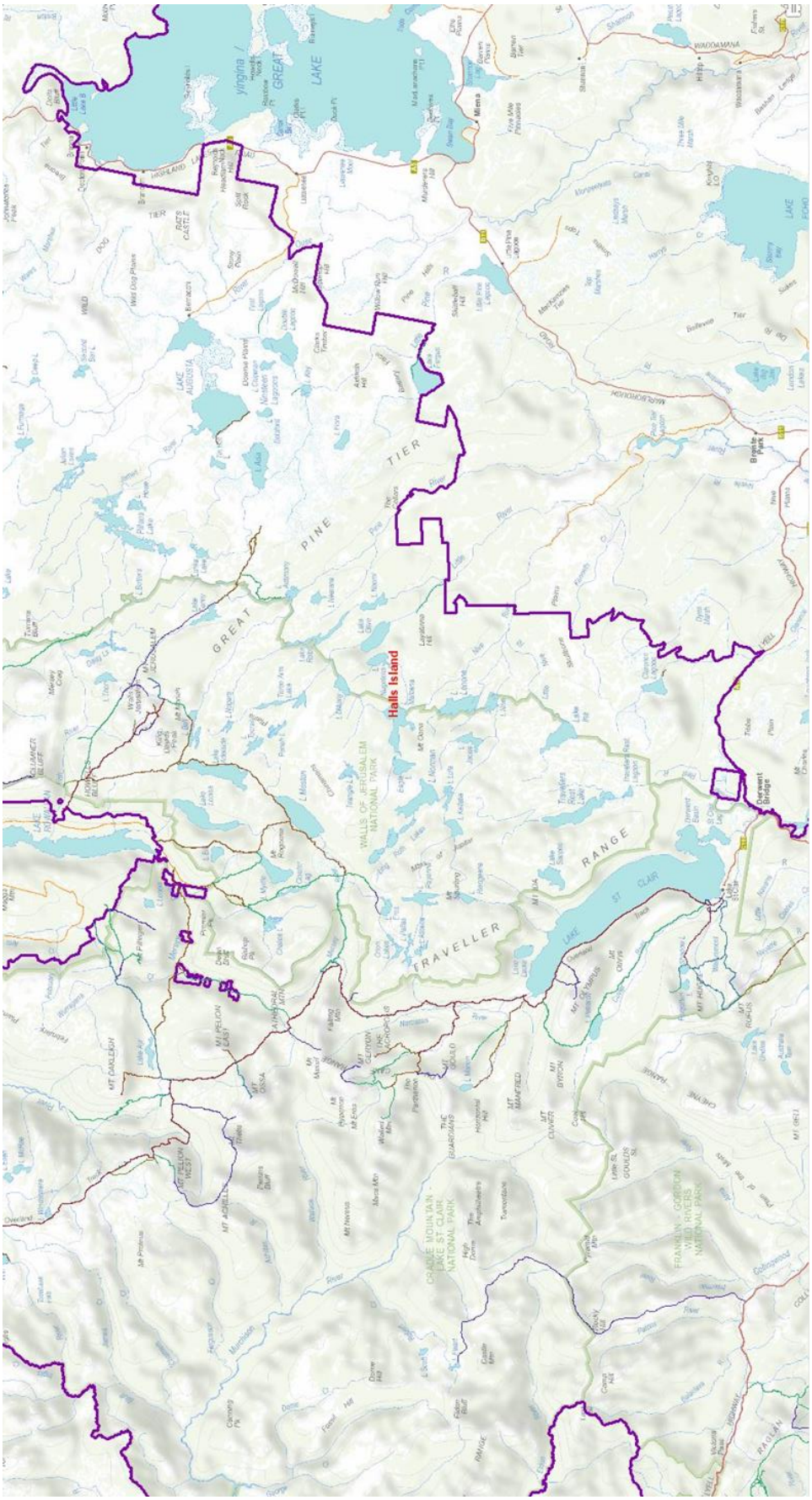
5. Preliminary Design Document (see separate attachment)

6. Nick Mooney Wedge Tail Eagle Assessment, including proposed flight path (see separate attachment)

7. Unanticipated Discovery Plan (UDP) (see separate attachment)

8. Halls Island Reserve Activity Assessment (see separate attachment)

Appendices 1. Halls Island in relation to known walking tracks and routes (supplied by PWS)



Appendices 2.

Halls Island – Amendments and further information in relation to helicopter use. Prepared by the Proponent 11/01/2017 for inclusion in the Halls Island RAA.

Attachment 11: Notes on Helicopter use and impact minimisation.

11.a Usage levels

Required usage levels have been designed to minimise overall use, mitigate any point-impacts to other users in the TWWHA, and in doing so protect the wilderness character of the TWWHA.

Each guided package to Halls Island requires the capacity of two helicopters in order to deliver or retrieve customers and staff. The most common helicopter used for such purposes in Tasmania are the B2/B3 Squirrel, which take 5 passengers and the pilot.

Extrapolating the above, each guided package to Halls Island operating at a capacity 6+2 ratio would require two helicopter return trips to deliver customers and staff, and a further two helicopter return trips to deliver customers and staff back to Derwent Bridge some four days later. Each return trip is approximately 24 minutes air time (12 minutes each way), which equates to a maximum required airtime of ~96 minutes per guided package (4 x 24 minutes).

The capacity to offer up to 30 guided packages per year, at 96 minutes total flight time each, results in a maximum flight usage level of 2880 minutes, or 48 hours, per annum.

11.b Point impacts

It is important to quantify the level of usage in terms of its potential effect on other users in the area, and the overall potential impact on the 'wilderness character' of the TWWHA.

To the user on the ground, each helicopter trip would produce a point-impact: a specific noise footprint and potential visual impact to those within audible / visual range of the flight path. A brief desktop study of helicopter sound-monitoring studies indicates that a discernible noise footprint is detectable within an approximate 4km lateral distance of a B2/B3 Squirrel helicopter. With the recommended manufacturer's flight speed of just over 200km/h, we can then determine that each flight would potentially create a point-impact (noise footprint and visual impact) of a maximum 2 minutes per trip, in the unlikely event that a user is *directly* under the flight path. This noise footprint when graphed is a bell-shaped curve, with maximum noise experienced when directly overhead, graduating to no noise at either end of the 4km lateral distance.

By implementing recommended FNA strategies including flying at 1000m+ altitude, using the selected flight corridor which avoids walking routes and Wilderness Zones, by following the eastern periphery of the TWWHA, and by ensuring that the pilot and passengers are to note any other users

located in the TWWHA and implement avoidance measures, the likelihood of any other user experiencing more than one <2 minute point-impact is extremely unlikely, ensuring the protection of the wilderness character and integrity of the TWWHA.

11.c. Impact Mitigation Measures

The FNA (Fly Neighbourly Advice) developed for the Halls Island includes a recommended flight altitude of 1000metres+, which reduces the maximum point-impact of any noise. A desktop study of previous papers relating to helicopter use suggest that at this altitude, noise from the B2/B3 Squirrel is reduced from ~75dB, to somewhere around 60dB. This in turn also decreases the radius of impact along the flight path, to a ~4km lateral distance.

The flight corridor itself has been designed to ensure that no walking routes are crossed, and the route itself is to the eastern periphery of the TWWHA. This positioning prevents any point-impact on Wilderness Zones in the TWWHA, or on any walking routes/tracks in the TWWHA.

Wind direction is a recommended consideration from the B2/B3 Operators Manual, when minimising noise impacts. As the regular and predominant winds in the TWWHA feature a dominant westerly influence, once again any aircraft noise is carried towards/across the eastern boundary of the TWWHA, and away from other potential users and sensitive areas such as Wilderness Zones.

For operations departing Derwent Bridge, take-offs and landings will occur in the direction of the noisiest land route (Lyell Hwy) as per the helicopter manufacturers recommendations on impact mitigation. Take-off and landings at the Halls Island end of the flight corridor will again follow manufacturers' recommendations on impact mitigation by taking-off to the right, while the natural topography of the location will enhance lateral attenuation and minimise the transmission of noise produced at take-off.

During each flight, the pilot and passengers (guides) are to note any other users located under the flight path in the TWWHA, and avoid overflying these positions on the return trip, again minimising any inadvertent direct overflight and associated point-impact on users to a single ~2 minute event or less.

11.d. Summary

In summary, careful flight-path selection combined with the documented low-usage of the area ensures that it is unlikely that other users will be over-flown by helicopter operations relating to Halls Island. In the unlikely event that this does occur, by using the Halls Island specific FNA prescriptions, the overall potential impact on wilderness values to other users will be minimised to a ~2 minute, once-off point-impact. Due to the location of the flight corridor, there are no anticipated impacts to any Wilderness Zones in the TWWHA.

Further references:

http://www.ricondoprojects.com/Heliport/D_Noise.pdf

Flight Manual AS350 B3e – 9.9 Noise Reduction

Definitions (for addition to Lease / Licence)

- Helicopter Trip: One-way use of a helicopter for ingress, or egress.
- Helicopter Return Trip: The use of a helicopter for two combined trips, ingress and egress.

FNA

- Add clause to FNA: Careful observation by pilot and passengers (guides) of any independent walkers, and take measures to avoid disturbance of those walkers.

- Ensure that FNA uses the term 'flight corridor' to describe the prescribed aerial route to Halls Island. The term 'flight path' should be used to describe the actual route taken during any flight.

Notification of

REFERRAL DECISION – not controlled action

Halls Island Standing Camp, Lake Malbena, Tasmania (EPBC 2018/8177)

This decision is made under Section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Proposed action

Person proposing to take the action	Wild Drake Pty Ltd ACN 623714545
proposed action	To construct and operate a small-scale tourist operation, including a standing camp on Halls Island, Lake Malbena, and helicopter access, approximately 20 kilometres north-east of Derwent Bridge, Tasmania, as described in the referral received by the Department on 28 March 2018 [see EPBC Act referral 2018/8177].

Referral decision: Not a controlled action

status of proposed action	The proposed action is not a controlled action.

Person authorised to make decision

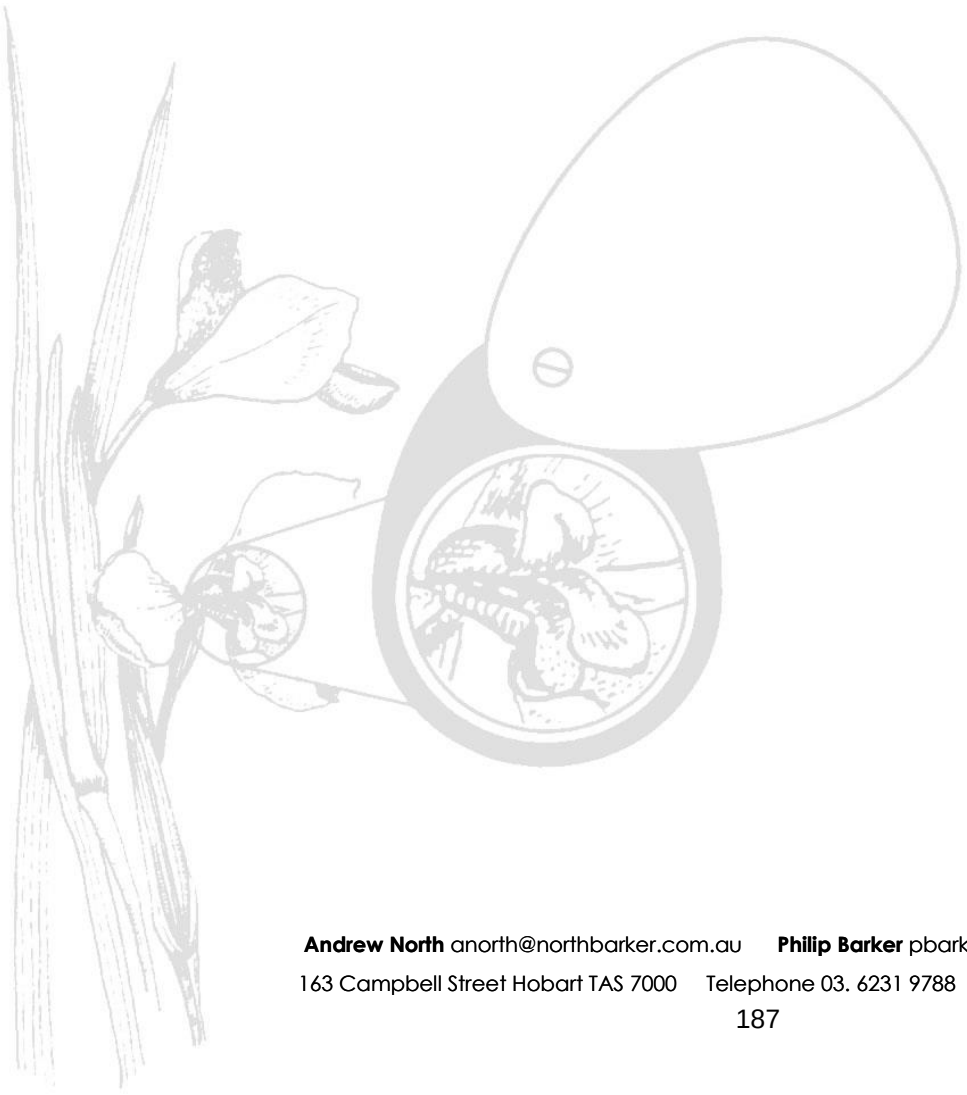
Name and position	James Barker Assistant Secretary Assessments and Governance Branch
signature	
date of decision	31 / 8 / 2018

northbarker
ECOSYSTEM SERVICES

Hall's Island, Lake Malbena, Walls of Jerusalem

FLORA AND FAUNA ASSESSMENT

21st November 2016
For Riverfly (RIV002)



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Summary

The lessee of a historic hut on Hall's Island, Lake Malbena, in the Walls of Jerusalem National Park, is investigating the potential for guided tours to the island. The proposed impacts to the island include the construction of 4 new huts (joined by boardwalk), a helicopter landing pad, and potentially some boardwalks and foot pads leading to points of interest. To assist in the avoidance of threatened natural values and inform a Reserve Activity Assessment, the proponent engaged North Barker Ecosystem Services to undertake a flora and fauna assessment of the island.

Vegetation

Prior to our survey, data held within the TASVEG v3.0 database suggested that Hall's Island was covered by *Athrotaxis cupressoides/ Nothofagus gunnii* short rainforest (RPF). Our field survey established that this community is not actually present and that the island is comprised of the following units:

- *Sphagnum* peatland (MSP) – 0.60 ha – NCA[1] threatened and EPBCA[2] endangered;
- Lichen lithosphere (ORO) – 0.18 ha;
- *Athrotaxis selaginoides* rainforest (RKP) – 0.03 ha – NCA threatened;
- Highland low rainforest and scrub (RSH) – 1.16 ha; and
- *Eucalyptus subcrenulata* forest and woodland (WSU) – 7.8 ha.

Threatened Flora

The island supports a population of *Pherosphaera* hookeriana, which is listed as vulnerable under the Tasmanian *Threatened Species Protection Act 1995* (TSPA).

Threatened Fauna

The only threatened fauna species known to occur within 5 km of the island is the Clarence galaxias, *Galaxias johnstoni* (TSPA and EPBCA endangered). The known occurrence of this species is adjacent to an area that will potentially be traversed on foot by visitors to the island. The island itself has no suitable habitat for the species.

No impacts to other threatened fauna species are likely to result from the proposal.

Summary

Our field survey has established that the island contains two threatened vegetation communities (MSP and RKP) and one threatened plant species (*P. hookeriana*). It is recommended that the locations of these values are not utilised for hut or helicopter pad placement. Management prescriptions should also be applied to protect these values from fire and to avoid tramping.

It is understood that the current proposal is to place the hut and helicopter pad footprint within the ORO and WSU communities. These non-threatened communities are likely to be resilient to a proposal of this nature and potential losses in extent are considered to be negligible. It may be possible to construct boardwalks within the other communities by using a boardwalk design with minimal footprint and shading.

[1] Tasmanian *Nature Conservation Act 2002* (NCA)
[2] Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA)

Acknowledgments

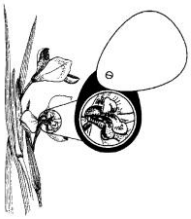
Project management: Grant Daniels

Field work and photographs: Grant Daniels

Report: Grant Daniels

Mapping: Grant Daniels

Client consultation: Dan Hackett



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1. Introduction and Methods

1.1. Background

The lessee of a historic hut on Hall's Island, Lake Malbena, in the Walls of Jerusalem National Park[3], is investigating the potential for guided tours to the island. The proposed impacts to the island include the construction of 4 new huts (joined by boardwalk), a helicopter landing pad, and potentially some boardwalks and foot pads leading to points of interest. To assist in the avoidance of threatened natural values and inform a Reserve Activity Assessment by the Tasmanian Parks and Wildlife Service, the proponent engaged North Barker Ecosystem Services to undertake a flora and fauna assessment of the island and a targeted threatened flora search within potential impact areas. The proposal may also include guests hiking to Lake Malbena from the east, but at this stage no formal track has been proposed and it is expected that the number of walkers will be low and proposed that concentrated impacts can be avoided by walkers fanning out and traversing the edges of bogs.

1.2. Location and Methods

1.2.1. Hall's Island

Hall's Island is located within the Central Highlands Council and the Tasmanian Central Highlands bioregion (Figure 1). Altitude on the island ranges from 1030 m to 1050 m AHD[4]. Average annual rainfall in the area is around 1000 mm[5]. The substrate is derived from Jurassic dolerite and the island is part of the listed geoconservation site 'Central Plateau Terrain', which is listed for its global significance as an example of both a continental erosion surface and a passive margin horst block.

1.2.2. Survey Area and Field Methods

The potential impact areas on the island were not definitively marked on the ground, but the proponent was present to identify proposed actions and sites, which are approximately indicated in Figure 2.

Field work was undertaken on foot by one observer on the 24th and 25th of October, 2016. Vegetation was mapped across the island in accordance with units defined in TASVEG 3.0[6]. Three quarters of the island (excluding the northwest quadrant where no actions are proposed and no impacts are anticipated based on the vegetation) were surveyed for vascular plants using a meandering area search technique[7]. Additional effort was focussed around the potential impact footprint, within potential threatened species[8] habitats and within threatened vegetation communities[9]. Plant species lists were compiled within each vegetation type using the current census of

[3] Part of the Tasmanian Wilderness World Heritage Area
[4] Australian Height Datum
[5] Station details: Liawenee, Central Tasmania, 41.8997°S, 146.6694°E, 1057m AHD, commenced 2001
[6] Kitchener and Harris 2013
[7] Goff *et al.* 1982
[8] Tasmanian *Threatened Species Protection Act 1995* (TSPA) and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA)
[9] Tasmanian *Nature Conservation Act 2002* (NCA) or the EPBCA

Tasmanian plants[10] for nomenclature. Surveying and identification of non-vascular flora was limited to searches for the EPBCA vulnerable *Pseudocephalozia paludicola*. Observations of habitat suitability for fauna, as well as direct or indirect indicators of presence (*i.e.* sightings, scats, tracks, dens, *etc*.) were made concurrently with the flora survey.

Vegetation was not mapped on the walk to Lake Malbena, but to aid the avoidance of vegetation potentially sensitive to trampling, waypoints were taken adjacent to patches of *Sphagnum* peatland.

All data points were recorded with a handheld GPS.

1.2.3. Limitations

Due to seasonal variations in detectability and identification, there may be some species on the island that have been overlooked or were seasonally absent during the survey. In particular, grasses and graminoids were largely lacking fertile material. To compensate for these limitations to some degree, data from the present survey are supplemented with data from the Tasmanian Natural Values Atlas[11] (NVA) and the EPBC Significant Matters database (PMST_GLKPXZ). From these sources, all threatened species known or with the potential to occur within 5 km are considered in terms of habitat suitability on the island.

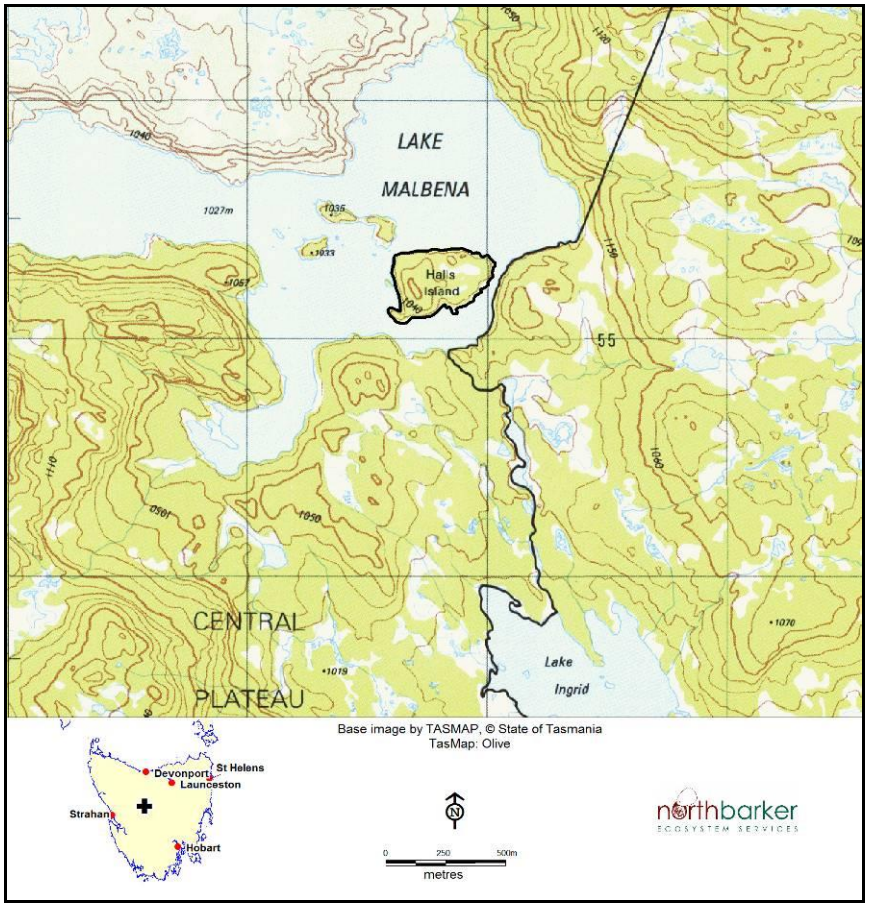

Figure 1: Location of Lake Malbena and Hall's Island, within the Walls of Jerusalem

[10] de Salas and Baker 2016
[11] nvr_2_02-Sep-2016

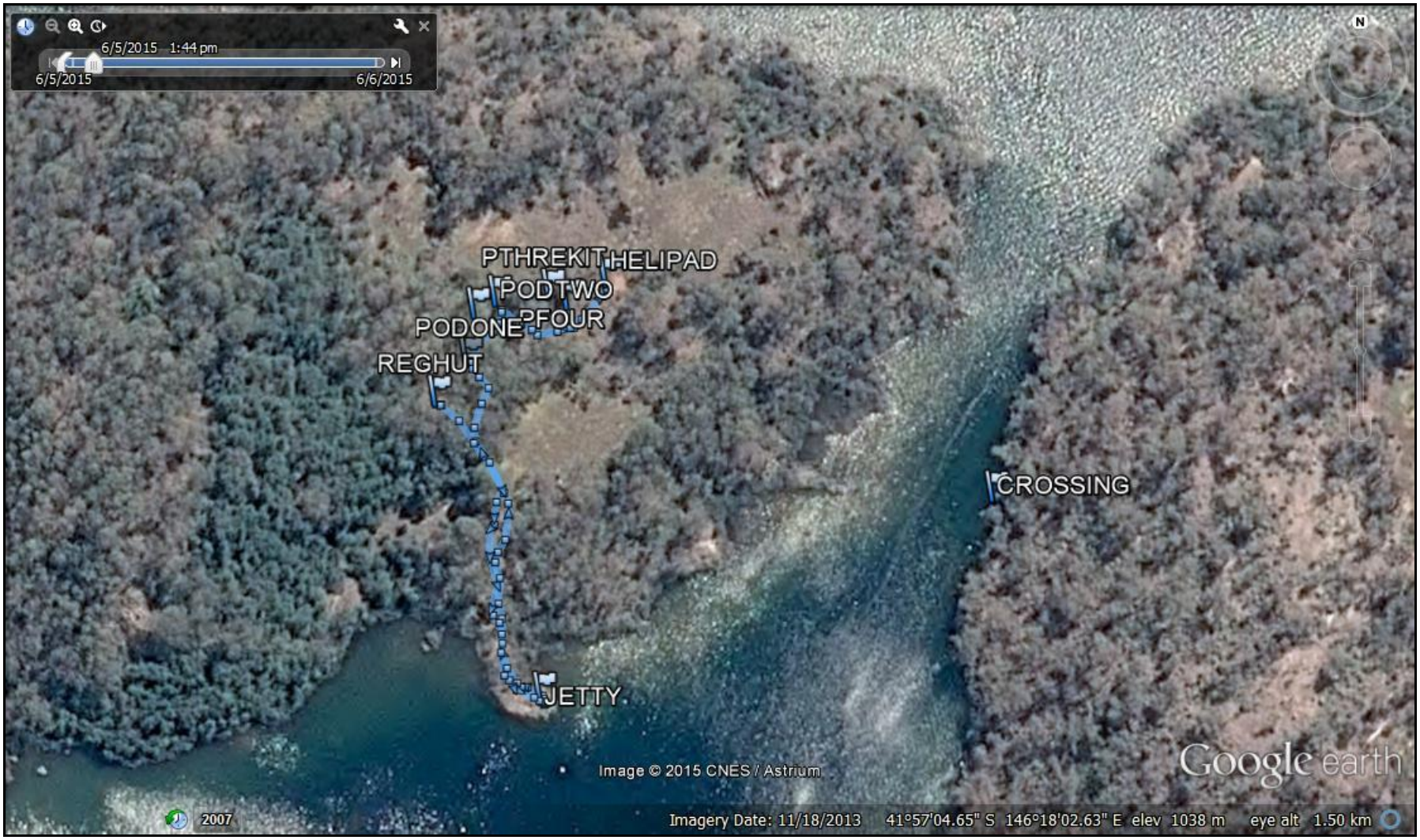

Figure 2: Approximate locations of proposed huts and helipad on Hall's Island (points and image supplied by proponent)

2. Results - Biological Values

2.1. Vegetation

Prior to our survey, data held within the TASVEG v3.0 database suggested that Hall's Island was covered by *Athrotaxis cupressoides/ Nothofagus gunnii* short rainforest (RPF). Our field survey established that this community is not actually present and that the island is comprised of the following units:

- *Sphagnum* peatland (MSP) – 0.60 ha – NCA threatened and EPBCA endangered;
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- Highland low rainforest and scrub (RSH) – 1.16 ha; and
- *Eucalyptus subcrenulata* forest and woodland (WSU) – 7.8 ha.

Distribution of vegetation communities within the island are presented in Figure 3, with floristics in Appendix A and brief summaries of defining traits below.

2.1.1. *Sphagnum* peatland (MSP)

This bog community occupies poorly drained depressions in the eastern half of the island (Figure 3). Dominant vascular plant species were found to be *Gleichenia alpina* (coral fern) and *Empodisma minus*, with occasional patches of other sedges and graminoids, including *Carpha alpina*, *Carex appressa* and *Juncus sarophorus* (Plate 1). Shrub species were infrequent, but some patches of *Richea scoparia* and *Baeckea gunniana* were present, as well as infrequent *Sprengelia incarnata* and *Almaleea subumbellata*. Herbs were mostly sparse, although a small pond within one patch contained a high cover of *Isolepis fluitans*.

Despite the high percentage cover of coral fern and monocots, the dominant factor defining this community is the percentage of ground covered by *Sphagnum* moss. 30 % cover of *Sphagnum* is required to be classified as *Sphagnum* peatland (MSP) under TASVEG 3.0[12], which is listed as threatened under the NCA and meets the definition for the 'alpine sphagnum bog and associated fens' community listed as endangered under the EPBCA. All the bogs on Hall's Island have thus been mapped as MSP because of the percentage cover of *Sphagnum* species, with most patches having well over the required 30 % cover (up to 80 % ground cover in some cases) and over 50 cm depth of *Sphagnum* being evident in places (Plate 2). Of note, the patch of MSP adjacent to the rainforest communities contains emergent pencil pines *Athrotaxis cupressoides* (Plate 3). The description of the TASVEG community for pencil pine woodland (RPW), allows for the presence of *Sphagnum* at ground level. However, because the percentage cover of *Sphagnum* in this patch is so high (> 75 %) it best fits the definition of the MSP community with emergent pencil pines (MSP_AC). In all cases throughout this report, MSP can be taken to include MSP_AC.

Several *Sphagnum* bogs were recorded on the way into Lake Malbena (Appendix B).

2.1.2. Lichen lithosphere (ORO)

This community has been mapped on the island where bare rock and/or lichens predominate over vascular plants or *Sphagnum* species. The largest patch of ORO on the island includes small clusters of shrubs on the edge of the rock (Plate 4), with the species composition mostly being derived from the adjacent sclerophyll vegetation. The most frequent shrubs include *Orites revolutus*, *Planocarpa petiolaris* and *Monotoca empetrifolia*.

[12] Kitchener and Harris 2013

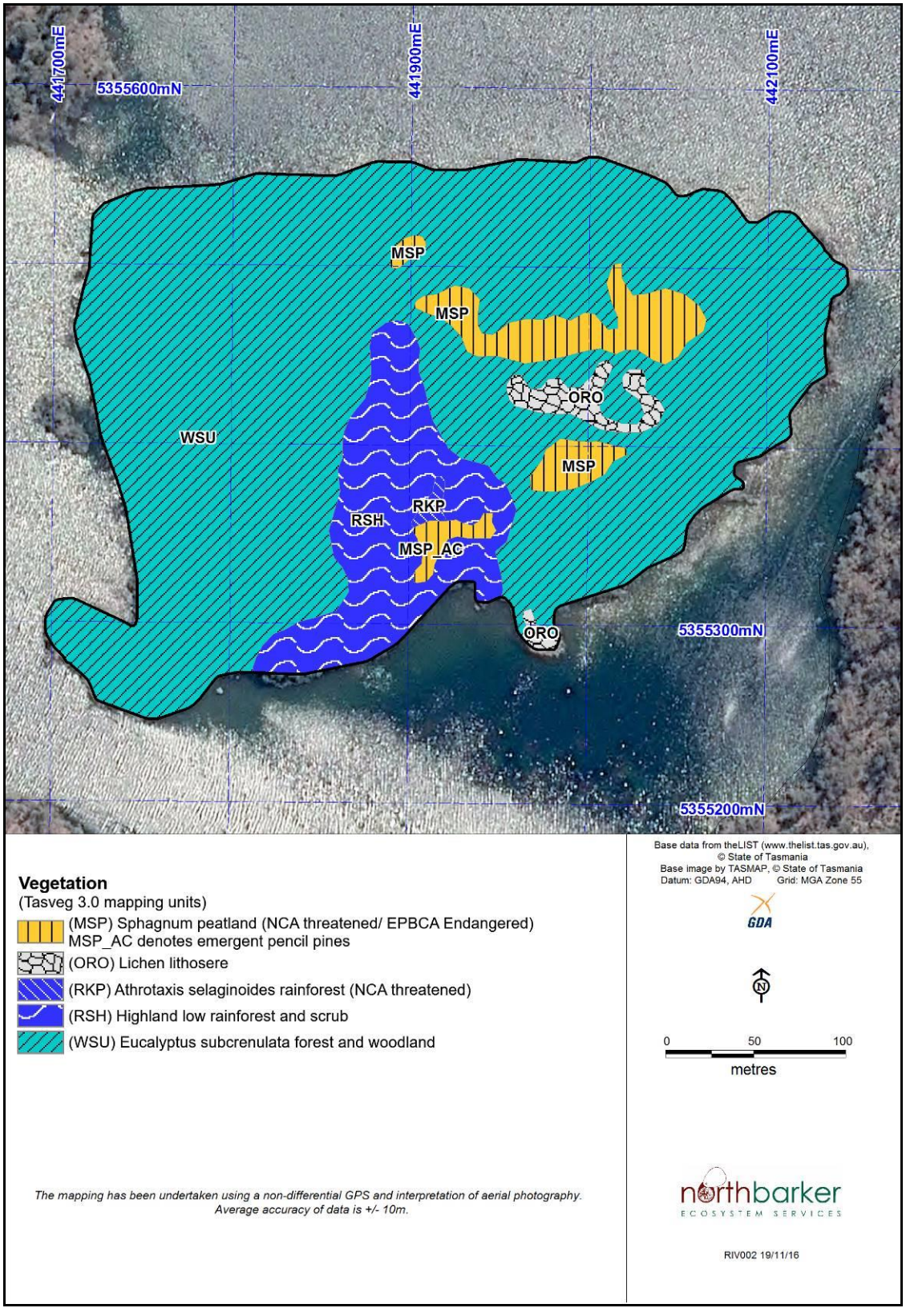

Figure 3: Distribution of TASVEG units on Hall's Island

Plate 1: *Sphagnum* peatland (foreground) with emergent *Gleichenia* and *Empodisma* – MSP community

Plate 2: Bench of *Sphagnum* on edge of MSP_AC patch

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Plate 3: *Sphagnum* peatland with emergent pencil pine *Athrotaxis cupressoides* – MSP_AC

Plate 4: Lichen lithosphere within the potential impact area of hut number 1

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2.1.3. Rainforest – highland low rainforest and scrub (RSH), and *Athrotaxis selaginoides* rainforest (RKP)

These communities occur in a shallow but protected gully in the south of the island (Figure 3). The patch is characteristically species poor and structurally simple (Plate 5 and 6). The RSH is dominated by a canopy of *Nothofagus cunninghamii* over a very sparse understorey of occasional *Leptecophylla juniperina* ssp. *parvifolia*, *Coprosma nitida*, *Phyllocladus aspleniifolius* and *Telopea truncata*. Occasional epiphytic ferns include *Grammitis billardierei* and *Hymenophyllum peltatum*. The small area of *Athrotaxis selaginoides* rainforest (RKP) was differentiated from the RSH because of the presence of a cluster of sub-dominant and co-dominant king billy pines amongst the *Nothofagus cunninghamii*. RKP is a threatened community listed under the Tasmanian NCA.

2.1.4. *Eucalyptus subcrenulata* forest and woodland (WSU)

This was the dominant community across the island in terms of area covered (Figure 3). The canopy was dominated mainly by the yellow gum *Eucalyptus subcrenulata*, with localised patches of *E. delegatensis* and *E. coccifera*. The majority of the understorey was comprised of a relatively dry facies dominated by medium tall sclerophyll shrubs (Plate 7), including *Hakea lissosperma*, *Persoonia gunnii*, *Lomatia polymorpha* and *Banksia marginata*. The open ground layer included patches of *Planocarpa petiolaris*, *Monotoca empetrifolia*, *Bellendena montana* and *Diplarrena moraea*. Poorly drained niches included *Bauera rubioides*, *Leptospermum lanigerum*, *Gahnia grandis* and *Epacris gunnii*. Other sheltered niches included small stands of subcanopy *Nothofagus cunninghamii* and *Phyllocladus aspleniifolius*. The waterside margins of the community in the south-eastern part of the island included a dense stand of *Pherosphaera hookeriana*.

Plate 5: The edge of the patch of highland low rainforest and scrub (RSH)

Plate 6: *Athrotaxis selaginoides* rainforest (RKP) on the edge of a broader area of RSH

Plate 7: *Eucalyptus subcrenulata* forest and woodland in the north of the island

2.2. Plant Species of Conservation Significance

In total, 53 species of vascular plants were recorded during our field survey (Appendix C). This included one species, *Pherosphaera hookeriana* listed as vulnerable under the schedules of the TSPA (Table 1, Figure 4). This species, known as the Mount Mawson pine (or the drooping pine), was already known from Hall's Island and is the only threatened species previously recorded from within 500 m[13].

Only two other threatened flora species have previously been recorded within 5 km of the island (Table 1). Although the island contains suitable habitat for these species, neither is considered highly likely to have been overlooked to the extent where unanticipated impacts may occur.

Three other EPBCA listed species are considered to have the potential to occur within 5 km[14] but do not have suitable habitat on the island (Table 1).

Table 1: Flora species of conservation significance known or predicted to potentially occur within a 5 km radius of the island[15]

Species	Status TSPA / EPBCA	Potential to occur if not observed	Observations and preferred habitat
KNOWN FROM HALL'S ISLAND			
Pherosphaera hookeriana Mt Mawson pine	Vulnerable/ -	**PRESENT**	A coniferous shrub or small tree that is highly sensitive to fire. Can form extensive clonal thickets by suckering, which can make the estimation of population size difficult. Our field survey recorded a dense but narrow band of plants around most of the southern edge of the island (Figure 4, Plates 8 and 9). Estimated percentage cover within this area of 3,500 m^2 is 30 %. The previous record of this species attributed to Hall's Island estimated 150 ± 50 plants are present, but this is likely to be an underestimate based on our mapping.
REPORTED FROM WITHIN 5 km[16]			
Planocarpa nitida black cheeseberry	Rare/ -	Very low	A short, compact shrub endemic to Tasmanian and found mostly on the eastern Central Plateau. Only one record known from within 5 km of Hall's Island. Habitat on the island is moderately suitable in areas of WSU and ORO, but the distinctive species is considered highly unlikely to have been overlooked. The more widespread congeneric species, *Planocarpa petiolaris,* was

[13] nvr_2_02-Sep-2016
[14] EPBC Significant Matters database report PMST_GLKPXZ
[15] nvr_2_02-Sep-2016; EPBC Significant Matters database report PMST_GLKPXZ
[16] nvr_2_02-Sep-2016

Species	Status TSPA / EPBCA	Potential to occur if not observed	Observations and preferred habitat
			present on the island and is differentiated by leaf morphology and inflorescence traits.
Pseudocephalozia paludicola liverwort	-/ VULNERABLE	Low	An erect liverwort that is light coloured and often lucid green. Known to occur in wet ground in subalpine grassland, moorland and sphagnous areas. Only one record is known from within 5 km of the island. Suitable habitat (areas of MSP) were searched for the species and it was not recorded.
PREDICTED AS POSSIBLY OCCURRING WITHIN 5 km[17]			
Colobanthus curtisiae Curtis' colobanth	Rare/ VULNERABLE	None	A small perennial herb of grasslands and grassy woodlands, often on rocky outcrops within these habitats. No suitable habitat on the island and not likely to have been overlooked.
Eucalyptus gunnii ssp. *divaricata* Miena cider gum	Endangered/ ENDANGERED	None	No suitable habitat is found on the island and the species is highly unlikely to have been overlooked. During the walk in to Lake Malbena some specimens of *E. gunnii* were noted around 443429.59 E, 5355189.74 N. Material collected from these plants is being examined to differentiate to the subspecies level. Impacts to these trees are very unlikely given the nature of the proposal.
Leucochrysum albicans var. *tricolor* grassland paper daisy	Endangered/ ENDANGERED	None	A floriferous herb of grasslands and grassy woodlands, generally on basalt soil. No suitable habitat on the island and not likely to have been overlooked.

[17] EPBC Significant Matters database report PMST_GLKPXZ

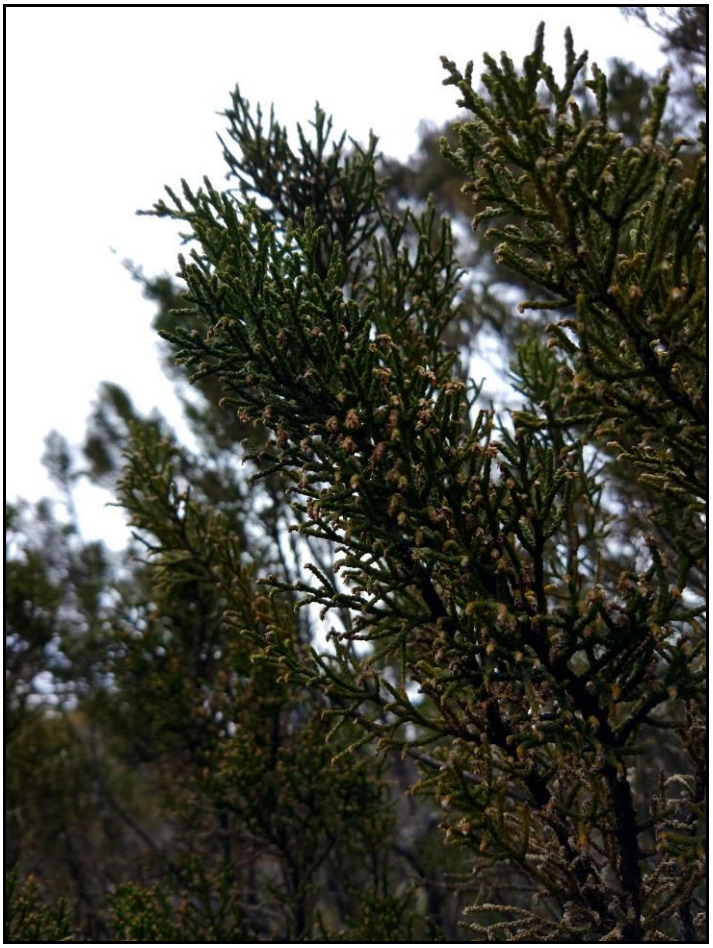

Plate 8: Female *Pherosphaera hookeriana* on Hall's Island

Plate 9: Thicket of *Pherosphaera hookeriana* on the edge of the water of Lake Malbena (looking east from Hall's Island)

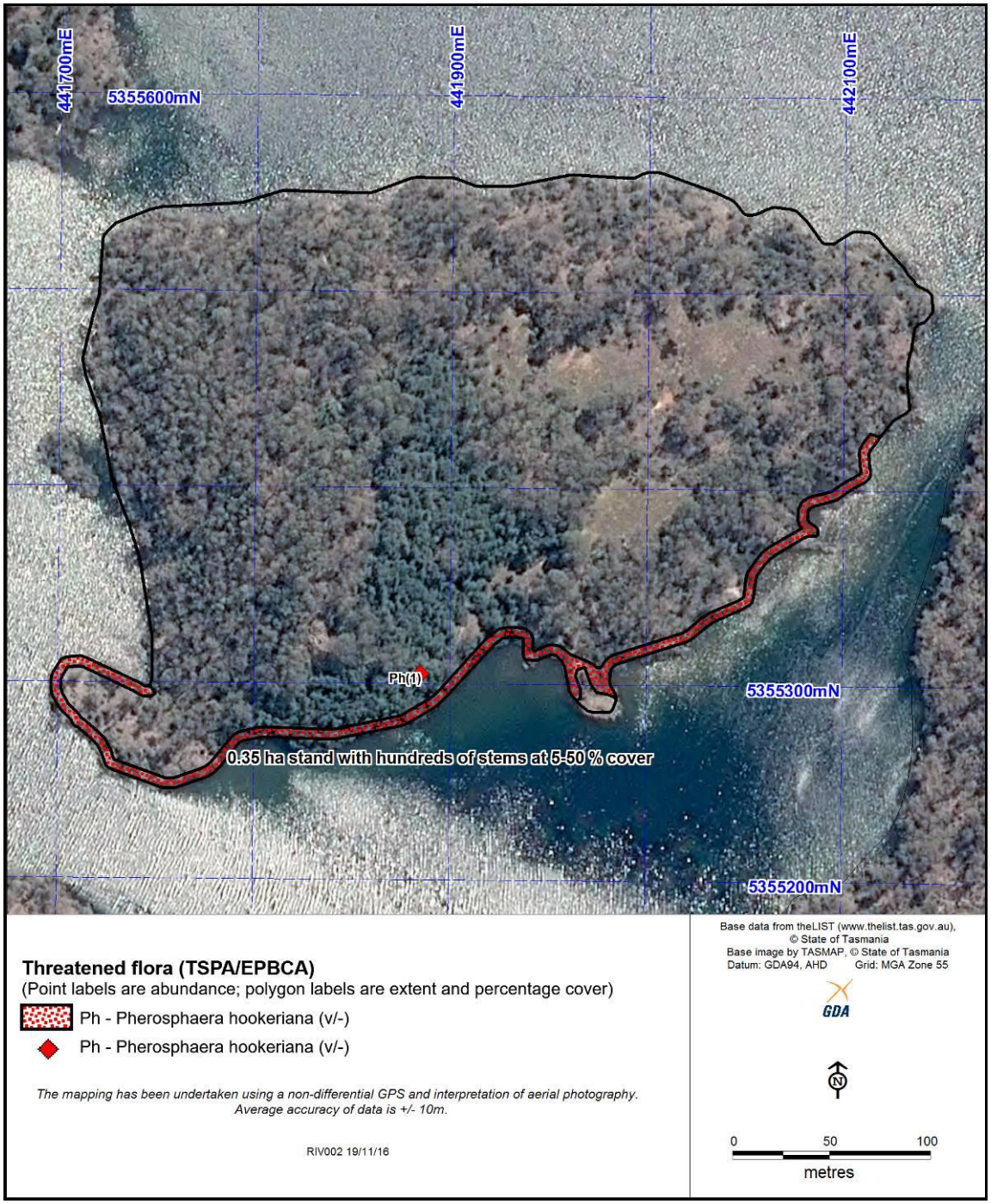

Figure 4: Threatened flora observations on Hall's Island

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2.3. Introduced Plants

No introduced plant species were observed on the island.

2.4. Fauna Species of Conservation Significance

2.4.1. Field survey results

Eleven species of vertebrate fauna were observed directly or indirectly during our survey (Appendix D). Based on our observations, the long-tailed mice (*Pseudomys higginsi*) and the Tasmanian froglet (*Crinia tasmaniensis*) may be the only vertebrate species permanently resident on the island. No threatened fauna species were observed, nor were any habitat elements that could conceivably be used for nesting or denning by threatened species.

2.4.2. Range boundaries within 500 m

Based on range boundaries from the NVA, the island is in the potential range of seven threatened fauna species (Table 2). Each of these species have average home range sizes that are too large for the island to support permanent populations. Based on the absence of available nesting and denning opportunities, it is likely that if any of these species use the island it would only be occasionally for foraging. Even if nesting or denning was attempted by any of the species in Table 2, it is unlikely that the island would have sufficient prey to make raising a litter/brood there energetically viable.

No eagle nests are known or likely to occur within 500 m or 1 km line of sight.

Table 2: Threatened fauna species with range boundaries within a 500 m radius of the island[18] - SS = TSPA; NS = EPBCA

Species	Common Name	SS	NS	Potential	Known	Core
Aquila audax	wedge-tailed eagle	pe	PEN	I	0	0
Dasyurus maculatus	spotted-tailed quoll	r	VU	I	0	0
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	I	0	0
Sarcophilus harrisii	tasmanian devil	e	EN	I	0	0
Tyto novaehollandiae	masked owl	pe	PVU	I	0	0
Accipiter novaehollandiae	grey goshawk	e		I	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		I	0	0

2.4.3. Known occurrences within 5 km

The only threatened fauna species known to occur within 5 km of the island is the Clarence galaxias, *Galaxias johnstoni* (TSPA and EPBCA endangered). The known occurrence of this species (Table 3) is adjacent to an area that will potentially be traversed on foot by visitors to the island. The island itself has no suitable habitat for the species.

2.4.4. EPBCA database predictions within 5 km

Several other species are predicted by the EPBCA protected matters database as having potential to occur within 5 km of the island (Table 4)[19]. Of these species, only the Japanese snipe and the satin flycatcher have a moderate likelihood of utilising the island. The snipe is a non-breeding migrant that may use the bogs for foraging. The flycatcher is unlikely to be impacted by a proposal of this scale and nature.

[18] nvr_2_02-Sep-2016
[19] EPBC Significant Matters database report PMST_GLKPXZ

Table 3: Known observations of threatened fauna within a 5 km radius of the island[20] - SS = TSPA; NS = EPBCA

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
1357038	Galaxias johnstoni	clarence galaxias	e	EN	Jean Jackson (1308),Andrew Harvey (1844)	13-Apr-2000	Sighting	446588, 5355240 +/- 20m
1262700	Galaxias johnstoni	clarence galaxias	e	EN	Robert Freeman (20722)	01-Jan-2009	Sighting	446808, 5355059 +/- 200m
1357039	Galaxias johnstoni	clarence galaxias	e	EN	Jean Jackson (1308),Andrew Harvey (1844)	13-Apr-2000	Sighting	446588, 5355240 +/- 20m
1262702	Galaxias johnstoni	clarence galaxias	e	EN	Jean Jackson (1308)	07-Nov-2001	Sighting	446008, 5355006 +/- 100m
1262701	Galaxias johnstoni	clarence galaxias	e	EN	Jean Jackson (1308)	13-Apr-2000	Sighting	446812, 5355058 +/- 100m

Table 4: Potential for EPBCA listed threatened and/or migratory species to occur within 5 km of the island, based on the protected matters database and excluding species covered in Table 2 and 3 – status refers to EPBCA listing only[21]

Name	Status	Type of Presence
Birds		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Insects		
Oreixenica ptunarra Ptunarra Brown, Ptunarra Brown Butterfly, Ptunarra Xenica [26327]	Endangered	Species or species habitat may occur within area

[20] nvr_2_02-Sep-2016
[21] EPBC Significant Matters database report PMST_GLKPXZ

Table 4 continued

Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Myiagra cyanoleuca		
Satin Flycatcher [612]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

3. Potential Impacts and Scope for Mitigation

The current proposal is to locate the new huts primarily within the main patch of ORO, with some encroachment into the WSU, but no buildings will be located within *Sphagnum* bogs or any of the rainforest communities. The proposal may include boardwalks through these communities.

3.1. Threatened Vegetation Communities

- *Sphagnum* peatlands are vulnerable to trampling. Permanent tracks should not be formed within the areas of MSP on the island and the patches specified in Appendix B.
- Patches within Appendix B can be avoided by routing visitors around the margins of the patches into more resilient vegetation types. Should other patches be found following route changes, no walking should occur within areas with > 30 % cover of *Sphagnum* moss.
- If necessary, patches on the island may be traversed with boardwalks that have minimal footprint and block very little light. In one patch, a small foot pad already exists from the jetty to the existing hut site (Reg's Hut in Figure 2). Given this pad is already present with seemingly minimal impacts (Plate 10), it could be viable to maintain it as a track without compromising the MSP patch. Lining the edges of the track with natural stone or similar could dissuade visitors from encroaching beyond the existing pad.
- The island contains patches of fire sensitive vegetation in the form of MSP, RKP and to a lesser extent RSH. The pencils pines within MSP_AC and the king billy pines within the RKP are very fire sensitive.
- The Walls of Jerusalem is a Fuel Stove Only Area and large areas of the parks fire sensitive vegetation have been lost to past fires. Any intention to equip the huts with fireplaces would need to be done with strict specifications to prevent a bushfire.

Plate 10: Existing foot pad through one patch of MSP on the island

3.2. Threatened Fauna

- Impacts to the habitat of the Clarence galaxias should be avoided by routing visitors to the island around the bog in which the species is known to occur. As this area is one of the bogs specified for avoidance in Appendix B, this will be achieved by following the mitigation measures for threatened vegetation communities. No other impacts to the habitat of this species are likely.
- No impacts to other threatened fauna species are likely to result from the proposal.

3.3. Weeds

- Although the vegetation communities on the island are relatively resilient to weed invasion, there is suitable habitat for the orange hawkweed *Hieracium aurantiacum*, which is a declared weed under the Tasmanian *Weed Management Act 1999* and is recognised as a threat to *Sphagnum* communities[22]. The orange hawkweed is known from the Derwent Bridge/ Lake St Clair area, as well as near the Lake Highway.
- Any proposal to guide visitors to the island, either by foot or by air, should include hygiene measures to prevent visitors introducing weeds such as orange hawkweed to the island and the National Park more broadly. Hygiene measures should include inspections of gear for seeds and other contaminants (such as clumps of soil).

[22] Commonwealth of Australia 2009

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3.4. Threatened Flora

- The impact footprint should be designed to avoid *Pherosphaera hookeriana*.
- During works, physical impacts to any *P. hookeriana* plants near the impact area should be avoided by flagging or cordoning off the plants and alerting construction workers as to their location.
- If there are any plants of this species (or any other threatened flora species) that cannot be avoided entirely, the proponent must apply for a permit to take from DPIPWE.
- *P. hookeriana* are very fire sensitive. As is a similar species of small pine, *Diselma archeri*, which also occurs on the island, including co-occurring within the main patch of *P. hookeriana*. For the same reasons as mentioned in the threatened community section, any intention to equip the huts with fireplaces would need to be done with strict specifications to prevent a bushfire and damage to these species.

3.5. General

- During works, to avoid inadvertent and unnecessary impact beyond the footprint, threatened species and communities near impact areas should be flagged and construction workers made aware of their locations. This includes locations for stockpiling materials, which should be excluded from areas of threatened values and where possible not be located near trees (to prevent root smothering).
- Avoidance and protection of values may best be achieved by having an ecologist present during site design/ placement of huts, pads, *etc*.
- A sensitive construction method in this case could involve airlifting in kit-style huts and depositing them within the impact area.
- Because neither ORO nor WSU are threatened communities, the impact footprint should be placed preferentially in these communities. The potential scale of losses to the communities from this proposal is negligible in relation to their extent at a local, State and national level.

4. Legislative Requirements for Flora and Fauna

4.1. Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The EPBCA is structured for self-assessment, with guidelines and criteria available[23] to assist any person who proposes to take an action to decide whether they should submit a referral to the Australian Government Department of the Environment for a decision by the Australian Government Environment Minister (the minister) on whether assessment and approval is required under the Act.

Under the Act, an action will require approval from the minister if the action has, will have, or is likely to have, a significant impact on a matter of national environmental significance (MNES), which includes all species and communities listed as threatened and/or migratory under the Act.

[23] Commonwealth of Australia 2013

Although it was not observed during our survey, the patches of MSP on Hall's Island are suitable habitat for the EPBCA vulnerable *Pseudocephalozia paludicola*. The species is unlikely to have been overlooked, but if it is in fact present, a significant impact is likely to be avoided by following the recommended prescriptions for the avoidance of trampling and prevention of fire within the MSP community. The probability of any other EPBCA listed flora species occurring within the impact area is negligible.

Significant impacts to the Clarence galaxias are likely to be avoided by the avoidance of tramping the patches of bog within Appendix B. No other significant impacts to EPBCA listed fauna are likely.

Significant impacts to the EPBCA listed 'alpine sphagnum bogs and associated fens' ecological community can be avoided by applying the prescriptions for avoidance of trampling and fire within the MSP community (Appendix E).

With these prescriptions and careful design of the impact footprint, referral to the minister based on impacts to species or communities that are MNES is not considered to be necessary for this proposal. However, because the proposal is within a World Heritage Area this aspect must also be considered in relation to significant impacts.

4.2. Tasmanian Threatened Species Protection Act 1995

Any impact on threatened plant species listed under the TSPA will require a 'permit to take' from the Policy and Conservation Assessments Branch (PCAB) at the Department of Primary Industries, Parks, Wildlife and the Environment (DPIPWE). Thus, if complete avoidance is not possible, the proponent will be required to obtain a permit to take for *Pherosphaera hookeri*.

4.3. Tasmanian Weed Management Act 1999

No action is currently required to eradicate or control species under this Act. Appropriate visitor hygiene should be applied to maintain compliance.

5. Conclusion

Our field survey has established that the island contains two threatened vegetation communities (MSP and RKP) and one threatened plant species (*P. hookeriana*). It is recommended that the locations of these values are not utilised for hut or helicopter pad placement. Management prescriptions should also be applied to protect these values from fire and to avoid tramping.

It is understood that the current proposal is to place the hut and helicopter pad footprint within the ORO and WSU communities. These non-threatened communities are likely to be resilient to a proposal of this nature and potential losses in extent are considered to be negligible. It may be possible to construct boardwalks within the other communities by using a boardwalk design with minimal footprint and shading.

6. References and Bibliography

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Appendix A - Vascular Plant Species in Communities

ORO in potential impact footprint

Grid Reference:	441961E, 5355432N
Accuracy:	within 50 metres
Recorder:	Grant Daniels
Date of Survey:	25 Oct 2016
Trees:	*Eucalyptus delegatensis subsp. tasmaniensis, Eucalyptus subcrenulata, Phyllocladus aspleniifolius*
Tall Shrubs:	*Leptospermum lanigerum, Oxylobium ellipticum*
Shrubs:	*Bauera rubioides, Hakea lissosperma, Leptecophylla juniperina subsp. parvifolia, Monotoca submutica, Orites revolutus, Persoonia gunnii, Planocarpa petiolaris, Pultenaea juniperina*
Low Shrubs:	*Olearia erubescens*
Herbs:	*Stylidium graminifolium*
Grasses:	*Poa sp., Rytidosperma sp.*

MSP - sphagnum peatland with emergent coral fern and cord rush

Grid Reference:	441969E, 5355456N
Accuracy:	within 50 metres
Recorder:	Grant Daniels
Date of Survey:	25 Oct 2016
Shrubs:	*Baeckea gunniana, Richea scoparia, Sprengelia incarnata*
Herbs:	*Almaleea subumbellata, Ranunculus sp.*
Graminoids:	*Carex appressa, Carpha sp., Empodisma minus, Gahnia grandis, Isolepis fluitans, Juncus sarophorus*
Ferns:	*Gleichenia alpina*

WSU - *E. subcrenulata* forest

Grid Reference:	441919E, 5355498N
Accuracy:	within 100 metres
Recorder:	Grant Daniels
Date of Survey:	25 Oct 2016
Trees:	*Eucalyptus coccifera, Eucalyptus delegatensis subsp. tasmaniensis, Eucalyptus subcrenulata, Phyllocladus aspleniifolius*
Tall Shrubs:	*Banksia marginata, Leptospermum lanigerum, Olearia argophylla, Oxylobium ellipticum, Telopea truncata*
Shrubs:	*Bauera rubioides, Bossiaea riparia, Coprosma nitida, Diselma archeri, Epacris gunnii, Exocarpos humifusus, Hakea lissosperma, Leptecophylla juniperina subsp. parvifolia, Lomatia polymorpha, Monotoca empetrifolia, Orites revolutus, Persoonia gunnii, Pherosphaera hookeriana, Pultenaea juniperina, Tasmannia lanceolata*
Low Shrubs:	*Olearia erubescens, Pentachondra pumila*
Herbs:	*Bellendena montana, Stylidium graminifolium*
Graminoids:	*Diplarrena moraea, Gahnia grandis*
Grasses:	*Poa sp.*

RSH - highland scrub rainforest, RPK - king billy pine rainforest and edge of MSP_AC

Grid Reference:	441844E, 5355339N
Accuracy:	within 100 metres
Recorder:	Grant Daniels
Date of Survey:	25 Oct 2016
Trees:	*Athrotaxis cupressoides, Athrotaxis selaginoides, Nothofagus cunninghamii, Phyllocladus aspleniifolius*
Tall Shrubs:	*Telopea truncata*
Shrubs:	*Coprosma nitida, Leptecophylla juniperina subsp. parvifolia, Pherosphaera*
Low Shrubs:	*Olearia erubescens*
Herbs:	*Viola hederacea*
Grasses:	*Poa tenera*
Ferns:	*Grammitis billardierei, Hymenophyllum peltatum, Polystichum proliferum*

Appendix B – *Sphagnum* bogs identified for avoidance

The following patches of bogs were identified on the walk into Hall's Island as containing *Sphagnum* species and potentially being sensitive to trampling – no formal surveys were undertaken in these patches but it is likely the percentage cover of *Sphagnum* in most or all patches is sufficient to qualify for protection under the NCA and EPBCA

Habitat type	East_GDA	North_GDA	Location accuracy (m)	Date	Surveyed by
Bog with *Sphagnum* spp.	446520.23	5355466.07	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	446441.23	5355401.19	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	446400.08	5355373.56	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	446340.86	5355301.83	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	446176.24	5355215.53	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	446060.71	5355213.88	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	445880.12	5355256.14	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	445492.97	5355417.51	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	445176.34	5355418.52	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	443870.44	5355128.17	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	442444.95	5355257.45	within 100 m	24/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	444823.14	5355057.69	within 100 m	25/10/2016	Grant Daniels
Bog with *Sphagnum* spp.	445149.15	5355236.21	within 100 m	25/10/2016	Grant Daniels

Appendix C - Vascular Plant Species List

Status codes:

ORIGIN	NATIONAL SCHEDULE	STATE SCHEDULE
	EPBC Act 1999	TSP Act 1995
i - introduced	CR - critically endangered	e - endangered
d - declared weed WM Act	EN - endangered	v - vulnerable
en - endemic to Tasmania	VU - vulnerable	r - rare
t - within Australia, occurs only in Tas.		

Sites:

1	ORO in potential impact footprint - E441961, N5355432	25-10-2016 Grant Daniels
2	MSP - sphagnum peatland with emergent coral fern and cord rush - E441969, N5355456	25-10-2016 Grant Daniels
3	WSU - E. subcrenulata forest - E441919, N5355498	25-10-2016 Grant Daniels
4	Vertebrate fauna recorded on island - E441925, N5355500	25-10-2016 Grant Daniels
5	RSH - highland scrub rainforest, RPK - king billy pine rainforest and edge of MSP_AC - E441844, N5355339	25-10-2016 Grant Daniels

Site	Name	Common name	Status
	DICOTYLEDONAE		
	ASTERACEAE		
3	*Olearia argophylla*	musk daisybush	
1 3 5	*Olearia erubescens*	moth daisybush	
	CUNONIACEAE		
1 3	*Bauera rubioides*	wiry bauera	
	EPACRIDACEAE		
3	*Epacris gunnii*	coral heath	
1 3 5	*Leptecophylla juniperina subsp. parvifolia*	mountain pinkberry	en
3	*Monotoca empetrifolia*	mat broomheath	en
1	*Monotoca submutica*	rmountain broomheath	en
3	*Pentachondra pumila*	carpet frillyheath	
1	*Planocarpa petiolaris*	alpine cheeseberry	en
2	*Richea scoparia*	scoparia	en
2	*Sprengelia incarnata*	pink swampheath	
	FABACEAE		
2	*Almaleea subumbellata*	wiry bushpea	
3	*Bossiaea riparia*	leafless bossiaea	
1 3	*Oxylobium ellipticum*	golden shaggypea	
1 3	*Pultenaea juniperina*	prickly beauty	
	FAGACEAE		
5	*Nothofagus cunninghamii*	myrtle beech	
	MYRTACEAE		
2	*Baeckea gunniana*	alpine heathmyrtle	
3	*Eucalyptus coccifera*	snow peppermint	en
1 3	*Eucalyptus delegatensis subsp. tasmaniensis*	gumtopped stringybark	en
1 3	*Eucalyptus subcrenulata*	alpine yellow gum	en
1 3	*Leptospermum lanigerum*	woolly teatree	
	PROTEACEAE		
3	*Banksia marginata*	silver banksia	
3	*Bellendena montana*	mountain rocket	en
1 3	*Hakea lissosperma*	mountain needlebush	
3	*Lomatia polymorpha*	mountain guitarplant	en
1 3	*Orites revolutus*	revolute orites	en
1 3	*Persoonia gunnii*	mountain geebung	en
3 5	*Telopea truncata*	tasmanian waratah	en
	RANUNCULACEAE		

2	*Ranunculus sp.*	buttercup	
	RUBIACEAE		
3 5	*Coprosma nitida*	mountain currant	
	SANTALACEAE		
3	*Exocarpos humifusus*	mountain native-cherry	en
	STYLIDIACEAE		
1 3	*Stylidium graminifolium*	narrowleaf triggerplant	
	VIOLACEAE		
5	*Viola hederacea*	ivyleaf violet	
	WINTERACEAE		
3	*Tasmannia lanceolata*	mountain pepper	
	GYMNOSPERMAE		
	CUPRESSACEAE		
5	*Athrotaxis cupressoides*	pencil pine	en
5	*Athrotaxis selaginoides*	king billy pine	en
3	*Diselma archeri*	dwarf pine	en
	PHYLLOCLADACEAE		
1 3 5	*Phyllocladus aspleniifolius*	celerytop pine	en
	PODOCARPACEAE		
3 5	*Pherosphaera hookeriana*	drooping pine	en
v			
	MONOCOTYLEDONAE		
	CYPERACEAE		
2	*Carex appressa*	tall sedge	
2	*Carpha sp.*	flower-rush	
2 3	*Gahnia grandis*	cutting grass	
2	*Isolepis fluitans*	floating clubsedge	
	IRIDACEAE		
3	*Diplarrena moraea*	white flag-iris	
	JUNCACEAE		
2	*Juncus sarophorus*	broom rush	
	POACEAE		
1 3	*Poa sp.*	poa	
5	*Poa tenera*	scrambling tussockgrass	
1	*Rytidosperma sp.*	wallabygrass	
	RESTIONACEAE		
2	*Empodisma minus*	spreading roperush	
	PTERIDOPHYTA		
	ASPIDIACEAE		
5	*Polystichum proliferum*	mother shieldfern	
	GLEICHENIACEAE		
2	*Gleichenia alpina*	alpine coralfern	en
	GRAMMITIDACEAE		
5	*Grammitis billardierei*	common fingerfern	
	HYMENOPHYLLACEAE		
5	*Hymenophyllum peltatum*	alpine filmyfern	

Appendix D - Vertebrate Species List

Vertebrate fauna recorded on Hall's island

Grid Reference: 441925E, 5355500N
Accuracy: within 100 metres
Recorder: Grant Daniels
Date of Survey: 25 Oct 2016

Amphibians: *Crinia tasmaniensis*
Mammals: *Macropus rufogriseus, Pseudocheirus peregrinus, Pseudomys higginsi*
Birds: *Chalcites lucidus, Colluricincla harmonica, Lichenostomus flavicollis, Phylidonyris pyrrhoptera, Platycercus caledonicus, Strepera fuliginosa, Zosterops lateralis*

Birds

Chalcites lucidus	Shining Bronze Cuckoo
Colluricincla harmonica	Grey Shrike-Thrush
Lichenostomus flavicollis	Yellow-Throated Honeyeater
Phylidonyris pyrrhoptera	Crescent Honeyeater
Platycercus caledonicus	Green Rosella
Strepera fuliginosa	Black Currawong
Zosterops lateralis	Silvereye

Frogs

Crinia tasmaniensis	Tasmanian Froglet

Mammals

Macropus rufogriseus	Bennett's Wallaby
Pseudocheirus peregrinus	Common Ringtail Possum
Pseudomys higginsi	Long-Tailed Mouse

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Appendix E – EPBCA significant impact criteria for MSP

Critically endangered and endangered ecological communities

Significant impact criteria

An action is likely to have a significant impact on a critically endangered or endangered ecological community if there is a real chance or possibility that it will:

- reduce the extent of an ecological community
- fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines
- adversely affect habitat critical to the survival of an ecological community
- modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns
- cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting
- cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to:
  - assisting invasive species, that are harmful to the listed ecological community, to become established, or
  - causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or
- interfere with the recovery of an ecological community.

Halls Island Standing Camp
Lake Malbena
Walls of Jerusalem

Proposed Helicopter Landing Site and Access to Halls Island

Vegetation Survey

For Wild Drake Pty Ltd

14 June 2018

Preferred Helicopter Landing Site, central-left of image

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Introduction

The project for a Standing Camp on Halls Island was assessed in 2016[1]. That report included a provisional helicopter landing site on the island. Subsequent planning for the project has identified an alternate location east of the island set back from the lake shore.

This assessment should be read as an addendum to that original assessment report. It focuses on two nominated options and includes an assessment of foot pad to the lakeshore. The term 'helipad' used through this document refers to a location for helicopter landing. Whether or not a built helipad structure is ultimately required or whether the natural features are sufficient for landing has not been resolved.

The location of both landing sites is within a clearing in the forest, mapped on TASVEG 3 (and TasVEG online) as ASP - *Sphagnum peatland.* Sphagnum peatland is a significant vegetation community that is listed as threatened on the Tasmanian *Nature Conservation Act 2002* and in situations where condition thresholds are met can accord to the EPBC listed ecological community - *Alpine Sphagnum Bog and Associated Fens*'

Figure 1 present the latest official vegetation mapping (TASVEG3). Both helipad sites are located within a polygon of Sphagnum peatland MSP (recently updated to ASP).

Figure 2 presents the most up to date vegetation mapping (TASVEG live).

Figure 3 presents amended mapping of the area based on field assessment.

The main part of the clearing is correctly mapped as ASP (Plate 1). The site is a patchwork of shrubs (*Baeckea gunnii* and *Richea gunnii*) and fern (*Gleichenia* alpina) over extensive hummocks of sphagnum (plate 1). The peat layer is deep and generally >75cm throughout.

Plate 1: Sphagnum peatland ASP(exMSP)

[1] North Barker Ecosystem Services 2016

Figure 1 - TASVEG v3

Figure 2 - TASVEG live. Note the mapping on Halls Island incorporates mapping undertaken by NBES 2016

Significant trees

Eg - Eucalyptus gunnii ssp. gunnii

Threatened Flora (No. of plants)
Status (TSPA/EPBCA)

Ph - Pherosphaera hookeriana (v/-)

Ph - Pherosphaera hookeriana (v/-)

Vegetation Communities
(Using Tasveg 3.0 mapping units)

ASP - Sphagnum peatland
HSE - Eastern alpine sedgeland
HHE - Eastern alpine heathland
DDE - Eucalyptus delegatensis dry forest and woodland
DCO - Eucalyptus coccifera forest and woodland

Helipad and infrastucture

Helipad access route

The mapping has been undertaken using a non-differential GPS and interpretation of aerial photography. Average accuracy of data is +/- 10m.

Base data from theLIST (www.thelist.tas.gov.au), © State of Tasmania
Base image by TASMAP, © State of Tasmania
Datum: GDA94, AHD Grid: MGA Zone 55

GDA

N

0 50 100
metres

northbarker
ECOSYSTEM SERVICES

RIV002 29/05/2018

Figure 3 – TASVEG this survey.

Vegetation

Helipad Site 1 (Plates 2,3,4)

This patch is clearly discernible on the aerial photograph reflecting the distinctive flora. It occupies an areas of 20 x 15 m. *Gleichenia alpina* dominates with 50-70% cover interspersed with heavily browsed cordrushes (*Baloskion australe* and *Empodisma minus*) and a prominent layer of coral lichen (*Cladia repitora*) (30%). Few other plants occur. Peat and topsoil depth varies but is predominantly 15-30cm[2]. No sphagnum is growing in this patch. This community forms the fernland facies of Eastern alpine sedgeland (HSE), which is a widespread and well reserved community that is not listed.

The character of this vegetation is moderately robust and able to tolerate compaction from helicopter landing. The site is well drained and showed no evidence of waterlogging even following a significant rain event at the time of survey.

A larger polygon of Eastern alpine sedgeland (HSE) has been mapped; this includes a localised patch of buttongrass *Gymnoschoenus sphaerocephalus*), but elsewhere is dominated by *Gleichenia alpina* with *Baloskion australe, Epacris lanuginosa, Almaleea subumbellata* and no sphagnum.

Helipad Site 2 (Plates 2,5)

This is located across a small creek / drainage line from Helipad 1 Exposed flat bedrock dominates with various shrubs and sedges occupying the fissures and spaces in the rocks. Occasional woolly tea tree (*Leptospermum lanigerum*) to 2m are scattered amongst low vegetation characterised by *Baeckea gunnii, Baloskion australe* and other heavily browsed prostrate plants such as *Hibbertia prostrata*.

Some rocks may need to be relocated and a few shrubs of L. lanigerum may need to be removed to accommodate the space for a helicopter to safely land.

There is one cider gum nearby in very poor health plus a few saplings growing within the shelter of the tea tree.

This community accords to Eastern alpine heathland (HHE) or Subalpine heathland (SHS).

"On the Central Plateau, shrubby subalpine heathland is replaced by Eastern alpine heathland (HHE) at 1050m, with the loss of most of the Proteaceae and other tall shrub species. The site is at 1040 m which puts it at the transition point between these two communities. Nether community is considered significant and both are well represented within the reserve system.

We have mapped this patch as HHE.

Foot pad to Lake Malbena (Plates 6,7,8)

The margins of the open area were inspected. The best hard standing is located along the southern boundary of the sphagnum peatland (ASP). The least impacting option would be to follow the drainage line where exposed rocks form most of the footfalls. There is a small patch of buttongrass to cross before reaching the forest margin. At the western end of the sphagnum peatland there is easy walking through rocky terrain within *Eucalyptus*

[2] A wire rod was used to penetrate the ground at 21 locations at 3m intervals across three transects (refer Appendix 2)

delegatensis dry forest (DDE) over a moderately dense shrubby layer to 3m dominated by *Hakea lissosperma* over a diverse low shrubby layer.

Threatened Flora

No evidence of threatened flora was observed within the Helipad sites or the walking route to the lakeshore. There is a single plant of drooping pine *Pherosphaera hookeriana* 20m from the preferred launching point (Plate 9). *P. hookeriana* is prominent around the southern shoreline of Halls Island, but only occasional on the Lake Malbena shoreline.

The occasional cider gums (*Eucalyptus gunnii* ssp. *gunni)* are notable. Although only one surviving tree was identified, there are numerous saplings (Plate 10). Cider gums are suffering significant declines throughout their range. Although these do not correspond to the listed Miena cider gum (*E. gunnii* ssp. *divaricata*) they are still significant. Marks on the trunk of the small tree may indicate tapping for sap (Plate 11).

Plate 2: Helipad 1 – foreground, Helipad 2 clear ground behind the buttongrass

Plate 3: Helipad 1 – ASP in background

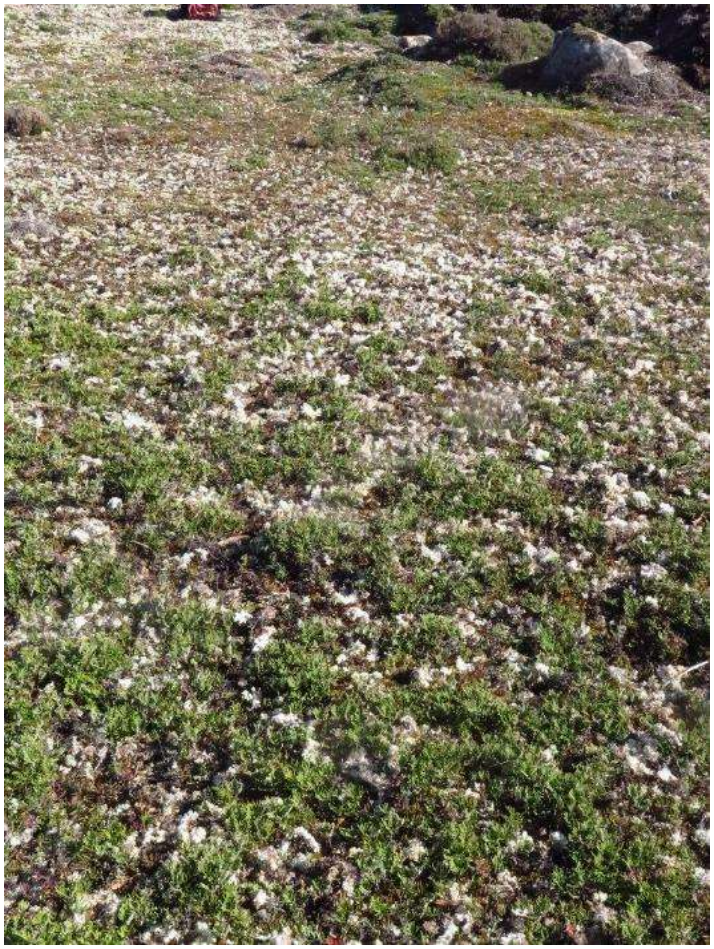

Plate 4: Helipad 1 – Gleichenia alpina fernland

Plate 5: Helipad 2 - Sheetrock provide robust support

Plate 6: Walking route looking from edge of forest to helipad (behind buttongrass)

Plate 7: Walking route - Terrain on edge of *E. delegatensis* forest DDE skirting south side of Sphagnum peatland

Plate 8: Walking route through *E. delegatensis* forest DDE to lakeshore

Plate 9: Drooping pine *Pherosphaera hookeriana* near to launching point

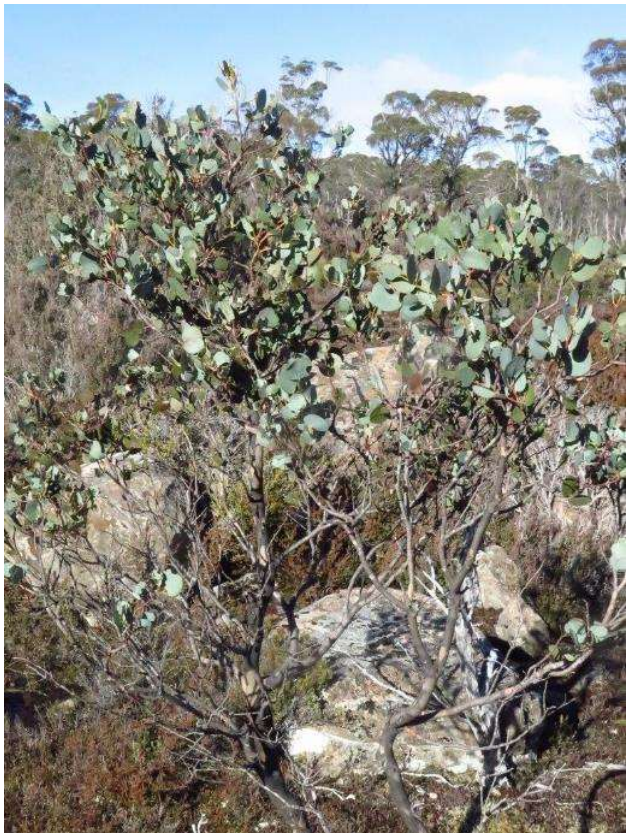

Plate 10: Cider gum sapling near Helipad 2

Plate 11: Cider gum exhibiting trunk damage – possible sap tapping marks

Fire History Halls Island

The distribution of vegetation communities and form of several tree species indicates a complex fire history on the island. The vegetation of Halls Island clearly differs from the surrounding vegetation. The present of a range of fire sensitive coniferous species (notably *Athrotaxis selaginoides and A. cupressoides*), the persistence of a patch of rainforest (on the leeward side of the island south of a 4m drop off) and the prominence of *Eucalyptus subcrenulata* yellow gum (absent elsewhere in the vicinity) suggest fires tar far less frequent across the island than elsewhere in this part of the Central Plateau. However, fire has still shaped the structure of the vegetation on Halls island. Many of the trees show trunk damage most easily attributable to fire scarring (plate 12). The multit-stemmed form of the *E. subcrenulata* suggest fire coppice (Plate 13). Most regenerating small trees of celery-top pine *Phyllocladus asplenifolius* suggest a single regrowth cohort post the last fire which is likely to have been 30-50 years ago.

Plate 12: Possible fire induced scarring on trunk of *E. subcrenulata*

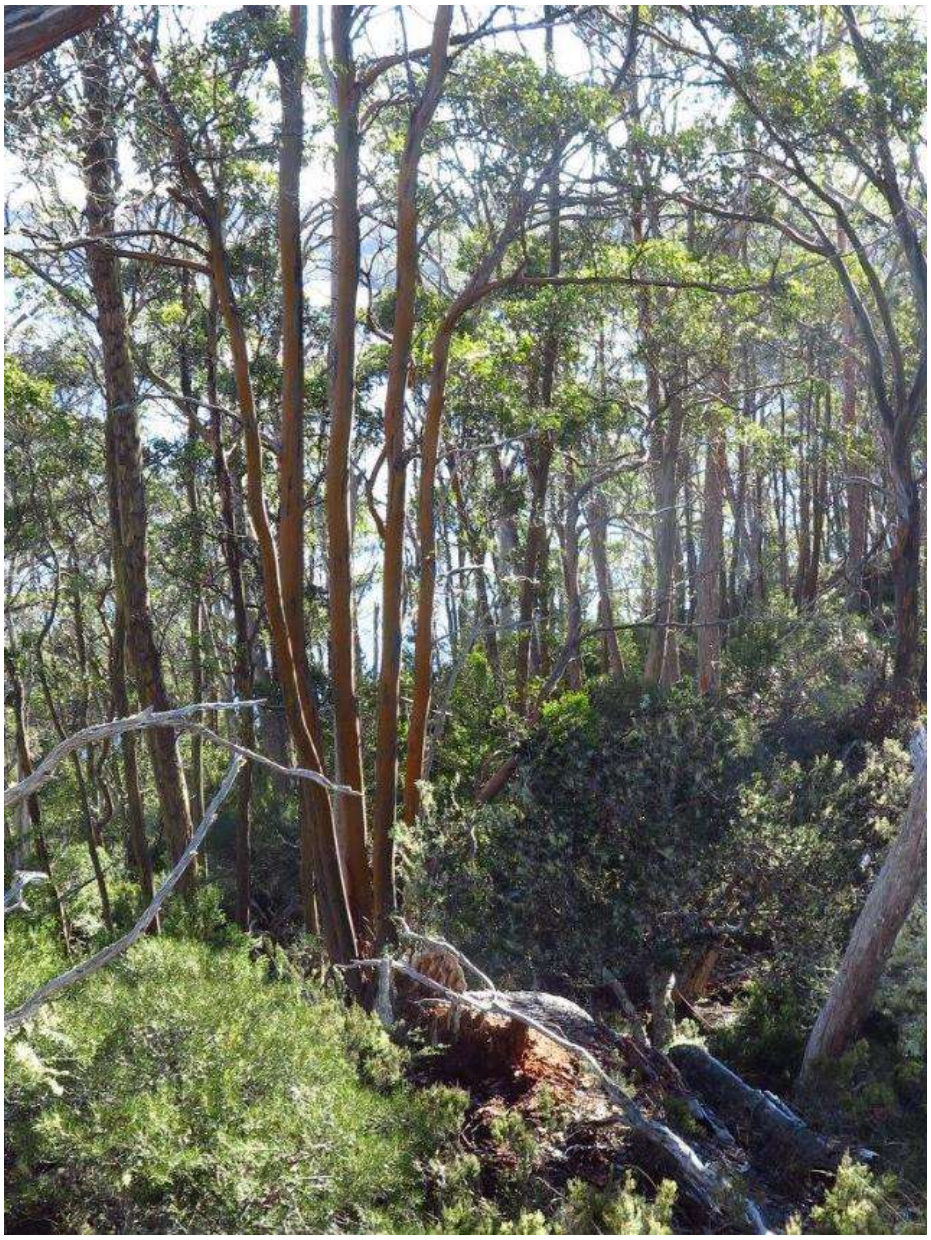

Plate 13: Coppice growth form of *E. subcrenulata* suggestive of fire

Appendix 1 – Site species lists

Helicopter pad site 1 - HSE

Grid Reference:	442500E, 5355300N
Accuracy:	GPS (within 10 metres)
Recorder:	Andrew J. North
Date of Survey:	24 May 2018
Herbs:	*Gonocarpus micranthus subsp. micranthus, Rubus gunnianus*
Graminoids:	*Empodisma minus*
Ferns:	*Gleichenia alpina*

Helicopter pad site 2 - HHE

Grid Reference:	442545E, 5355300N
Accuracy:	GPS (within 10 metres)
Recorder:	Andrew J. North
Date of Survey:	24 May 2018
Trees:	*Eucalyptus gunnii subsp. gunnii*
Tall Shrubs:	*Leptospermum lanigerum*
Shrubs:	*Baeckea gunniana, Monotoca empetrifolia, Orites revolutus*
Low Shrubs:	*Acrothamnus montanus, Hibbertia prostrata, Leucopogon pilifer*
Herbs:	*Almaleea subumbellata, Brachyscome spathulata, Pappochroma sp., Viola hederacea*
Graminoids:	*Baloskion australe*
Grasses:	*Poa gunnii, Rytidosperma sp.*

Route from helipad section 1 - edge of sphagnum (HSE)

Grid Reference:	442517E, 5355252N
Accuracy:	GPS (within 10 metres)
Recorder:	Andrew J. North
Date of Survey:	24 May 2018
Trees:	*Eucalyptus delegatensis subsp. tasmaniensis, Eucalyptus gunnii*
Tall Shrubs:	*Leptospermum lanigerum*
Shrubs:	*Baeckea gunniana, Boronia parviflora, Epacris lanuginosa, Melaleuca virens, Richea gunnii*
Low Shrubs:	*Grevillea australis*
Herbs:	*Almaleea subumbellata*
Graminoids:	*Eurychorda complanata, Gymnoschoenus sphaerocephalus*
Ferns:	*Lycopodiella sp.*

Route from helipad section 2 E. delegatensis forest (DDE)

Grid Reference:	442290E, 5355300N
Accuracy:	within 100 metres
Recorder:	Andrew J. North
Date of Survey:	24 May 2018
Trees:	*Eucalyptus delegatensis subsp. tasmaniensis*
Tall Shrubs:	*Leptospermum lanigerum, Oxylobium ellipticum*
Shrubs:	*Coprosma nitida, Hakea lissosperma, Leptecophylla parvifolia, Leptomeria drupacea, Lomatia polymorpha, Monotoca empetrifolia, Orites revolutus, Persoonia gunnii, Pherosphaera hookeriana, Pultenaea juniperina*
Low Shrubs:	*Acrothamnus montanus, Hibbertia procumbens, Olearia erubescens, Pentachondra pumila, Tetratheca procumbens*
Herbs:	*Euchiton sp., Gonocarpus montanus, Oreomyrrhis sessiliflora, Rubus gunnianus, Stylidium graminifolium, Wahlenbergia sp.*
Grasses:	*Rytidosperma sp.*

Appendix 2 – Soil depth data for Helipad 1 cm

Depth in cm

Core	Transect A	Transect B	Transect C
1	30	30	20
2	15	30	20
3	30	15	50
4	20	30	30
5	30	60	50
6	50	30	35
7	>70	50	>70