

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 *Pterosphaera 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 overseas. 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,l,k,l,m), A2.4(a), A2.5(d), A3.8d(i), A3.8e(l,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,l,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 endemism).
 - 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 endemism).
 - Lease and Licence conditions including: 12.4, A2.2(d,l,k,l,m), A2.4(a), A2.5(d), A3.8d(i), A3.8e(l,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 (*Pterosphaera 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 *Pterosphaera 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 DPIPW (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 overseas. 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) 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

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

Pterosphaera 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 exclusion 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 overseas. 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: 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 commonly 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 occasionally 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 reliant 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 a particular area. These prescriptions are voluntary.

Due to the fact that the proposed use 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

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1. Introduction
2. Construction – Protected Matters Environmental Management Subplan
3. Weed and Hygiene – Protected Matters Environmental Management Subplan
4. Indigenous Heritage – Protected Matters Environmental Management Subplan
5. Species and communities of significance – Protected Matters Environmental Management Subplan
6. Fire – Protected Matters Environmental Management Subplan
7. Customised FNA impact mitigation and avoidance prescriptions – Protected Matters Environmental Subplan
8. Wilderness Characteristics Management Plan – Protected Matters Environmental Management Subplan
9. Other information – Public Access Plan

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.

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 (*Ptherosphaera hookeriana* pines) during construction. Include in CEMP.
- (j) Locate the Halls Island landing such that threatened plants (*Ptherosphaera 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;
-

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 protocols 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.

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.

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 mitigation 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.

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 endemism)

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.

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.)

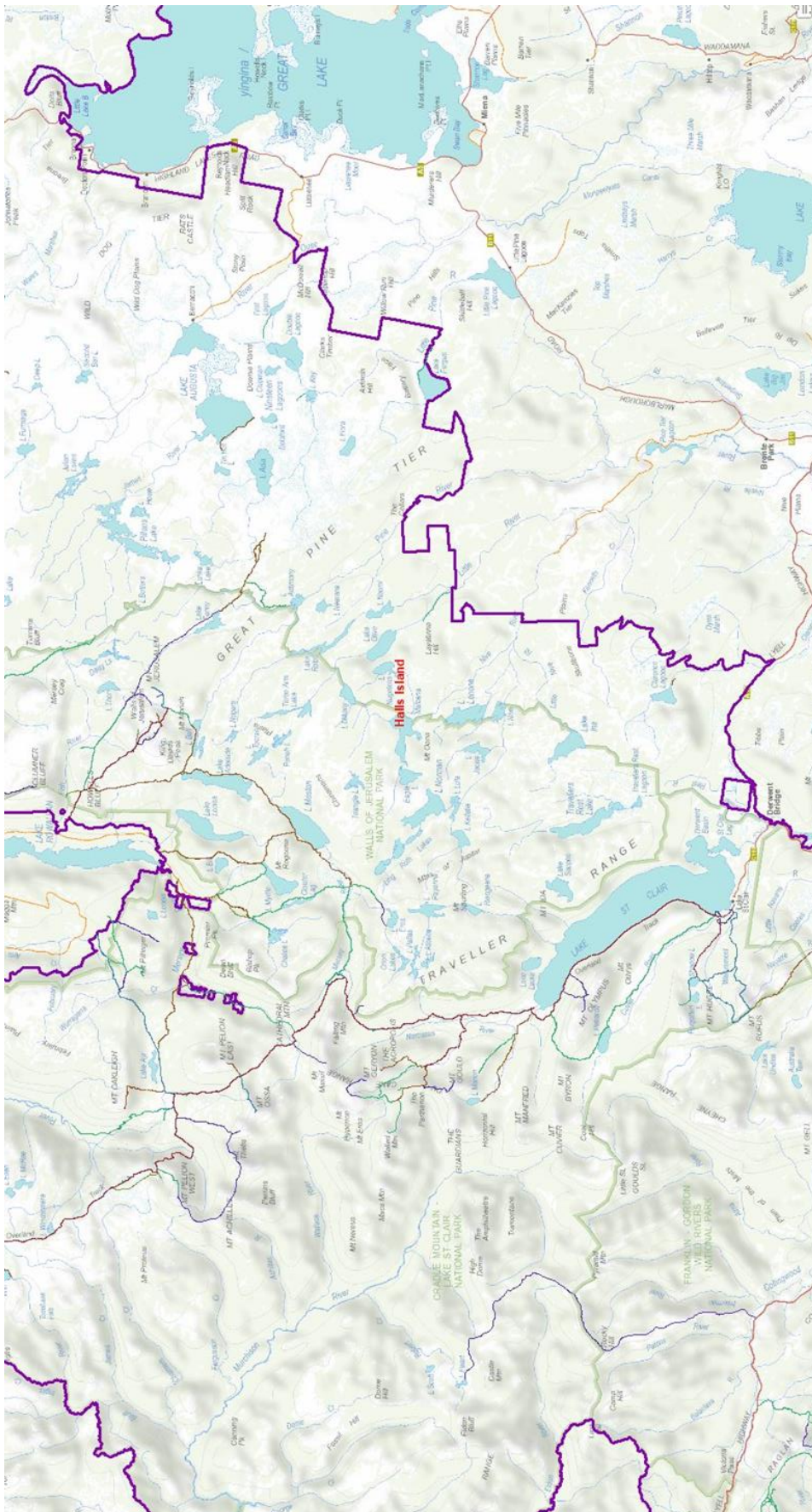
The means of access to the TWWHA, and walking routes etc to Halls Island are the responsibility of the visitor.

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
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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].
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Referral decision: Not a controlled action

status of proposed action	The proposed action is not a controlled action.
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Person authorised to make decision

Name and position	James Barker Assistant Secretary Assessments and Governance Branch
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signature

date of decision

31 / 8 / 2018
