

LORD HOWE ISLAND BOARD

BOARD MEETING AGENDA

MEETING DATE:	MEETING LOCATION:	MEETING TIME:
Mon 14 May 2018	Public Hall, Lord Howe Island	Planning Session 9:00 am to 11:00 am
Mon 14 May 2018	Public Hall, Lord Howe Island	Closed Session: 11:00 am to 4:30 pm
Tues 15 May 2018	Public Hall, Lord Howe Island	Open Session: 9:00 am to 12:30 pm

	ITEM		OPEN (O)	CLOSED (C)	ACTION Note/Decide
PH	1	MINUTES OF PREVIOUS MEETING – NOTICE OF ADOPTION	O		Note
PH	2	OUT OF SESSION MATTERS STATUS REPORT	O		Note
PH	3	ACTIONS FROM PREVIOUS MEETINGS – STATUS REPORT	O		Note
PH	4	CHIEF EXECUTIVE OFFICER’S REPORT	O	C	Note
PH	5	MOTOR VEHICLE IMPORTATION OR TRANSFER – STATUS REPORT	O		Note
	6	BUDGET ADJUSTMENTS		C	
	7	DEVELOPMENT APPLICATIONS			
PH	(i)	Owner Consent approved under Delegated Authority	O		Note
PH	(ii)	DAs Determined Under Delegated Authority	O		Note
JL	(iii)	DA2018-04 - Transfer Shearwater Cottage dwelling and renovate Cyclone Alley - Diane Owens	O		Decide
JL	(iv)	DA2018-06 - Extension of existing dwelling - Corey Davies	O		Decide
JL	(v)	DA2018-09 - Installation of septic sludge dewatering system - Lord Howe Island Board (WMF)	O		Decide
	8	POLICY & STRATEGY			
PH	(i)	Community Strategic Plan – Planning process	O		Decide
JL	(ii)	Draft Amendment - Dog Importation and Management Policy	O		Decide
JL	(iii)	Dog, Avian and Stock Importation Policies – Moratorium	O		Decide
PH	(iv)	Memorandum of Understanding, Board and LHI Museum	O		Decide

	ITEM		OPEN (O)	CLOSED (C)	ACTION Note/Decide
	9	FINANCE AND BUSINESS MANAGEMENT		C	
	10	LEASING & LAND ADMINISTRATION			
		No papers			
	11	GOVERNANCE		C	
	12	OPERATIONS & SERVICES			
PH	(i)	Rodent Eradication – Progress Report	O		Decide
JT	(ii)	Renewable Energy Program Update	O		Note
JT	(iii)	Airport Runway Extension Feasibility Study Update	O		Decide
JT	(iv)	Boat Retrieval System Update	O		Decide
JT	(v)	LHIB Strategic Asset Management Plan Update	O		Note
	13	WH&S and PUBLIC RISK MANAGEMENT			
BM	(i)	WH&S and Public Risk Management Update	O		Note
	14	INTERVIEWS		C	
	15	GENERAL BUSINESS AND QUESTIONS ON NOTICE	O		

LORD HOWE ISLAND BOARD

MINUTES OF THE MEETING OF THE LORD HOWE ISLAND BOARD

HELD ON LORD HOWE ISLAND ON MONDAY 19 & TUESDAY 20 MARCH 2018

Present: Ms S Stewart (Chair – SS)
 Mr C Wilson (Deputy Chair – CW)
 Ms T Turner (Member – TT)
 Mr G Crombie (Member – GC)
 Mr M Retmock (Member – MR)
 Mr J King (Member - JK)
 Mr R Pallin (Member - RP)

Board staff present at all sessions were Penny Holloway (Chief Executive Officer - PH), Bill Monks (Manager Business and Corporate Services – BM), John Teague (Manager Infrastructure & Engineering Services - JT), and James Lonergan (Manager Environment & Community Services - JL).

The Board's external planning consultants were represented by Michelle Chapman (MC) and Peter Chapman (PC) from All About Planning.

The Closed Session commenced at 11:43 am at the Public Hall on Monday 19 March 2018 and closed at 2:15 pm.

The Open Session commenced at 9:02 am at the Public Hall on Tuesday 20 March 2018 and closed at 11:40 am. Approximately 40 members of the public attended all or part of the open session.

Unless otherwise specified, all Board decisions were unanimous.

SS declared the meeting open and thanked members of the public for their attendance.

SS acknowledged the new Board members and returning Board members, and acknowledged the contribution of former Board members Barney Nichols, Lisa Makiiti and Judy Riddle.

SS called for conflict of interest declarations.

GC declared a conflict of interest in agenda item 11(i).

1 ELECTION OF DEPUTY CHAIR

PH gave an overview of the paper.

GC nominated CW for the position of Deputy Chair. MR seconded the nomination.

There being no further nominations, the Board appointed CW to the position of Deputy Chair.

2 MINUTES OF PREVIOUS MEETING – NOTICE OF ADOPTION

SS advised that the minutes of the November meeting had been circulated and endorsed in accordance with normal practice.

3 OUT OF SESSION MATTERS STATUS REPORT

PH gave an overview of the report.

The Board noted the information provided in the Out of Session Report.

4 ACTIONS FROM PREVIOUS MEETINGS - STATUS REPORT

PH stated that some of the action items from previous meetings had been completed, whilst work was in progress on all others.

The Board noted the information provided in the Report.

5 CHIEF EXECUTIVE OFFICER'S REPORT

PH gave an overview of the Report.

CW asked if the Board will be provided with details of the contract for the provision of air services between Sydney and Lord Howe Island between Transport for NSW and Qantas.

PH replied that the Board has not been provided with the financial details of the contract.

The Board noted the information provided in the CEO's Report.

6 MOTOR VEHICLE IMPORTATION OR TRANSFER – STATUS REPORT

PH gave an overview of the Motor Vehicle Importation and Transfer Status Report.

The Board noted the information provided in the Report.

7 PROPOSED ADJUSTMENTS TO ADOPTED BUDGET

Closed Session.

8 DEVELOPMENT APPLICATIONS

8 (i) Owner Consent Approved Under Delegated Authority

PH advised the Board that there were no Owner Consent application approved by the CEO since the last Board meeting.

The Board noted the information provided in the Owner Consent under Delegated Authority paper.

8 (ii) Development Applications dealt with under Delegated Authority

PH advised the Board that there were two Development Applications determined by the CEO since the last Board meeting. Details are as follows:

DA	Applicant	Site	Proposal	Zone	Decision
DA2018.02	Daniel and Andrea Young	Lot 339 DP1017190	Convert existing garage into additional living space within existing detached habitable living space and add approximately 3 sqm additional new space	Zone 2 Settlement	Approved 27/11/2017 Subject to conditions
DA2018.03	Pauline Skeggs	Lot 358 DP1054109	Installation of wastewater management system	Zone 2 Settlement	Approved 20/12/2017 Subject to conditions

The Board noted the information provided in the Development Applications dealt with under Delegated Authority paper.

8 (iii) Lord Howe Island Local Environment Plan: Stage 1 Planning Proposal Update

MC gave an overview of the paper, and provided details of the statutory process and anticipated timeframes.

A member of the public, Rodney Thompson, asked if members of the community would be consulted prior to the proposed changes being made.

PH replied that a Discussion Paper was placed on public exhibition two years ago, and submissions from members of the community sought. She added that the new Stage 1 Planning Proposal will also be placed on public exhibition, and submissions from members of the community will again be sought.

It was moved JK, seconded RP, that the process as outlined in the paper be adopted.

The Board then adopted the motion.

9 POLICY AND STRATEGY

9 (i) Land Allocation (Handley) Review: Implementation Report

PH gave an overview of the paper.

SS stated that implementation of some of the recommendations, such as legislative changes, is likely to take much longer than others.

JK stated that this has been a very long and drawn out process, with the Government's response to the recommendations of the Review taking an inordinately long time and creating a great deal of uncertainty for residents of the island. Given that there will probably be a NSW State election in about 12 months, and there will therefore be a period where obtaining changes made to the various pieces of legislation will be very difficult.

JK recommended that the Board write to the Minister requesting that the recommended legislative changes be enacted as expeditiously as possible due to the uncertainty that has been created on the island for such a long time.

It was moved JK, seconded CW, that the Board write to the Minister requesting that the recommended legislative changes be enacted as expeditiously as possible due to the uncertainty that has been created on the island as a result of the extended time taken for the Government's response to the recommendations of the Handley Review.

The Board then adopted the motion.

9 (ii) Transfer of Perpetual Lease Policy: Proposed Amendment

JL gave an overview of the paper.

SS stated that the requirement for proposed transferees to complete a statutory declaration regarding their intention to reside on the lease sets a much higher threshold. She added that there are significant implications if someone swears a statutory declaration which is later proven to be untrue.

It was moved GC, seconded RP, that:

1. the proposed amendment of the existing Transfer of Perpetual Lease policy be placed on public exhibition for 28 days, and
2. the Board adopt the amended policy if no public submissions are received during that time.

The Board then adopted the motion.

10 FINANCE AND BUSINESS MANAGEMENT

10 (i) Finance Report

Closed Session.

10 (ii) Fees and Charges for FY 2018/19

Closed Session.

11 LEASING AND LAND ADMINISTRATION

11 (i) Transfer of Perpetual Lease – W and G Thompson

Due to a conflict of interest GC left the room while this matter was considered.

It was moved MR, seconded CW, that the Board seek the Minister's approval to the transfer of perpetual lease 1963/03 by way of gift from William Frederick Thompson and Geoffrey Spurling Chase Thompson as tenants in common to Geoffrey Spurling Chase Thompson as sole tenant.

The Board then adopted the motion.

12 GOVERNANCE

Closed session.

13 OPERATIONS AND SERVICES

13 (i) Rodent Eradication Progress Report

PH gave an overview of the paper.

Andrew Walsh, the Board's Project Manager, Rodent Eradication Project, provided details of the paper, including the following:

- The required permit from the Australian Pesticides and Veterinary Medicines Authority (APVMA) has not been received, and is not expected to be received before May 2018,
- If and when issued, the permit is likely to be subject to conditions that will impact operational requirements. This presents significant risks to the Program in that until the permit is received and approval conditions are known, final logistics and planning cannot be undertaken; including finalisation of the aerial and ground based operational plans and individual property management plans. It also includes ordering the correct quantity and sizes of bait, number of bait stations and even number of staff required to implement the plan,
- Delays in receiving the permit increase the risk of failure as the operation cannot be planned to the standard required. This makes it impractical to proceed with the project in the current timeframe,

- Although there is a high level of support for the Program, there is still significant opposition. Although everyone wants to be rid of the rodents, the main point of contention is the methodology, with an increased use of bait stations in the settlement area in place of hand broadcasting as one compromise that may satisfy some residents,
- An increased use of bait stations will necessitate more time and resources on the ground during the eradication, and
- In view of the above factors the eradication has an unacceptable risk of failure if attempted in 2018.

AW then presented the following three options for the Board's consideration, and outlined the benefits and risks of each:

1. Delay implementation of the program until 2019 with a change to methodology to bait stations only in the settlement area, or
2. Pause the rodent eradication and assess the community and funders' acceptability of proceeding with a rat only eradication, or
3. Do not proceed with a rodent eradication. Increase ongoing rodent control to a level that significantly increase protection for ecological and World Heritage values at high risk from rodents.

AW stated that the Project Steering Committee (which includes the funding bodies) considered Options 2 and 3 unacceptable, would not fund them, and had recommended Option 1 to the Board.

A member of the public, Helen Tiffin, stated that the Program had caused bitterness and uncertainty in the community over a long period. She added that another year of uncertainty will affect residents, particularly lodge owners. She further added that the matter will not "settle down", as the Board seems to think it will.

Helen Tiffin asked what evidence the Board had that the use of bait stations only in the Settlement area will change community views and address the issues a lot of islanders have, such as the distribution of the bait outside the Settlement area.

Jaclyn Pearson, the Assistant Manager, Rodent Eradication Program, replied to Ms Tiffin's questions, making the following points:

- She had spoken to most people in the community, and has a very good understanding of how most people feel about the project,
- She acknowledged that there are certain people in the community who are concerned about the methodology, including the dropping of bait from a helicopter, and
- In her opinion there was a great deal of community support for the Project, particularly in light of the proposed change to the methodology.

A member of the public, Judy Riddle, stated that she was in favor of postponing the eradication to 2019. She added that it was important to implement the eradication as soon as possible, as most people on the island were already using brodifacoum to control rodents on their leases.

RP spoke in favour of the recommendation.

TT made the following points:

- A number of compromises are now being made, contrary to the original plan.
- Every compromise could seriously jeopardise the outcome.
- Postponing the eradication for a further 12 months was unfair to the community.
- Tourism operators had already made plans for the eradication to occur in 2018.
- The Program should never have been given approval to proceed to Stage 2 as benchmarks had not been met.
- The property management plans were never finalised. A large number of residents signed documents stating that they would not allow access to their properties.
- In her view Option 3 is the only option.

MR spoke in favor of the recommendation, stating that brodifacoum, the same poison that the Program proposes to use, is already being used by residents on the island in an attempt to control rodents. He added that the mice on the island are already four times more resistant to brodifacoum than in other places, and if we don't take action soon an even stronger poison will be required. He further added that he supported to postponement until 2019.

GC stated that he agreed with MR, and that it would disappoint him greatly to think that members of the community might deliberately jeopardise the outcome of the eradication, should the decision be made for it to proceed.

CW endorsed the remarks made by TT, and made the following points:

- The community has been divided on this issue for about 17 years, and extending it by another year is completely unacceptable to the community.
- A lot of the language that comes from the rodent eradication team suggests that only a few people are resisting, whereas, in fact, there are a large number of islanders and leaseholders who are dead against the program.
- If the Board voted in favor of Option 1, the program should revert to Stage 2, as we don't have the APVMA permit.
- The Board needs to comprehensively review property management arrangements because we don't want to get to the eleventh hour and find that property management arrangements and access approvals have not been worked out completely
- Before moving to Stage 3 again the Board needs the APVMA permit.

JK stated that he shared peoples' concerns regarding the delay caused by the inefficiency of the APVMA in providing the final approval. He added that the Board had sought, and provided to the community, the best available evidence and expert opinion to support its decisions. He further added that he strongly supported the recommendation.

SS stated that she supported the recommendation, and acknowledged that this issue is causing some division in the community. She added that the process to date has been robust.

It was moved RP, seconded JK, that the Board delay implementation of the Lord Howe Island Rodent Eradication Program (REP) until winter 2019, with a change in methodology to bait stations only in the settlement area.

TT and CW opposed the motion.

The Board then adopted the motion.

13 (ii) Renewable Energy Project Update

JT gave an overview of the paper.

It was moved GC, seconded CW, that the Board write to ARENA regarding the status of the project and advise of its endorsement of Option 4 as the best option to progress.

The Board then adopted the motion.

13 (iii) Airport Terminal Upgrade Project Update

JT gave an overview of the paper.

The Board noted the information provided in the paper.

13 (iv) Airport Runway Extension Feasibility Study Update

JT gave an overview of the paper.

SS requested that a paper on the results of the first stage of the study be prepared for the May Board meeting, and that information on the results be circulated to Board members when available.

JT replied that this would be done.

JK stated that the feasibility study is absolutely essential. He added that airlines are the lifeblood of the island, and without it there would be no tourism industry. He further added that the results of the study will inform the Board of feasible options.

The Board noted the information provided in the paper.

14 WH&S AND PUBLIC RISK MANAGEMENT

11 (i) Workplace Health and Safety and Public Risk Management Update

BM gave an overview of the paper.

The Board noted the information provided in the paper.

14 INTERVIEWS

Closed Session.

16 GENERAL BUSINESS & QUESTIONS ON NOTICE

Slipway

CW requested an update on the financial aspects of the Slipway project.

PH replied that funding of about \$700,000 would be provided by Roads and Maritime Services, but the total cost of the project will be \$1.5 million or more. She added that, to date, the Board had not been successful in obtaining the additional funding required.

Water Supply

A member of the public, Helen Tiffin, asked if the Board had considered the problem of a future lack of fresh water on the island caused by climate change.

PH replied that the Board is investing in additional water storage. She added that a mobile desalination plant would be brought to the island if and when required. She further added that the Board plans to develop a Water Security Strategy to address this issue, and funding will be sought from the Water Directorate for this purpose.

SS stated that the Board was considering how it could incentivise the installation of additional water storage tanks by leaseholders and businesses.

Helen Tiffin asked that the Board consider options other than desalination, as the outflow from desalination plants is very environmentally destructive.

RP agreed with Ms Tiffin.

GC stated that the Board is not the water provider for the island, as is the case with mainland councils. He added that although the Board is considering emergency responses to water shortages, there is a responsibility on households and businesses to take appropriate action to achieve water security.

CW stated that people should be encouraged to create their own storage, sufficient to meet their needs during dry periods.

Meat Processing Facility

A member of the public, Esven Fenton, informed the Board and those present that it was highly likely that two local people would very soon be qualified to certify locally butchered meat for public consumption.

SS thanked Esven for his perseverance over several years in order to achieve this outcome.

SS thanked members of the public for attending the meeting.

The public meeting closed at 11:40 am on Tuesday 20 March 2018.

Next Meeting

The dates for the next ordinary Board meeting are 14 and 15 May 2018. A special meeting will be held by teleconference on in late April to consider the draft budget for FY 2018/19.

LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Adoption of Minutes of Previous Meeting

RECOMMENDATION

Submitted for the Board's information.

BACKGROUND

The adopted process for distributing Board minutes from the previous meeting is:

- Draft minutes will be produced within five working days of a Board meeting, and posted to Board members on the sixth working day, unless delayed for a valid reason agreed to between the Chief Executive Officer and the Chairperson.
- Board members are to return their endorsement, or otherwise, of minutes on a pro forma document provided by the Administration no later than seven working days after date of posting.
- Seven working days after date of posting, the Board will deem the minutes of the meeting to be endorsed, subject to any amendments which were received prior to that date, and agreed for inclusion by the Chairperson.

CURRENT POSITION

Minutes of the March 2018 meeting were distributed to each Board member and have been endorsed through the above process with amendments.

A copy of the endorsed Minutes is attached.

RECOMMENDATION

Submitted for the Board's information.

Prepared: Chelsea Holden, Administration Officer

Endorsed: Penny Holloway, Chief Executive Officer

Attachments:

Attachment A: Board Meeting Minutes – March 2018

Board Meeting: May 2018	Agenda Number: 2	Record: ED18/3539
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LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Out of Session Papers Status Report

RECOMMENDATION

Submitted for the Board's information.

BACKGROUND

Since the last Board Meeting in March 2018, no matters were considered at an out of session meeting.

CURRENT POSITION

There are no results of 'Out of Session' papers since the last Board meeting to report.

RECOMMENDATION

Submitted for the Board's information.

Prepared: Chelsea Holden, Administration Officer

Endorsed: Penny Holloway, Chief Executive Officer

Board Meeting: May 2018	Agenda Number: 3	Record Number: ED18/2426
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LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Actions from Previous Meeting – Status Report

RECOMMENDATION

Submitted for the Board's information.

BACKGROUND

As a matter of process and procedure, a list of actions is prepared after each Board meeting to ensure that the Board's resolutions are systematically carried out by staff.

CURRENT POSITION

A list of actions from decisions of the March 2018 Board meeting, and previous meetings, is attached for the Board's information.

RECOMMENDATION

Submitted for the Board's information.

Prepared: Bill Monks, Manager Business and Corporate Services

Endorsed: Penny Holloway, Chief Executive Officer

Attachments:

Attachment A: Action Sheet from March 2018 Board Meeting and Previous Meetings

LORD HOWE ISLAND BOARD

Action Sheet from March 2018 Board Meeting and Previous Meetings

Agenda Item No.	Item	Actions (refer to full minutes for detail)	Estimated Completion Date	By Whom	Progress	Actual Completion Date
10(iv) September 2015	Review of the LEP 2010	<ol style="list-style-type: none"> 1. Review the Vegetation Rehabilitation Plan, and 2. Seek funding from Government programs to support the LEP review process. 	December 2017	MECS	<p>In progress although, given the decrease in available funding for this activity over the past few years, priority for the review could be reassessed.</p> <p>No funding available from DPE to support review of LEP</p>	
7(iv) September 2016	DA2016-31 Vessel Launching and Retrieval Facility	Deferred commencement conditions in Part 1 of the recommendation be considered out of session before proceeding to Part 2.	December 2018	MIES	In progress, RMS revisiting options and speaking to Treasury for additional funding - see Agenda item 11(iv)	
12(vii) November 2016	Commercial Tour Operator Licensing System	Investigate opportunities to align with Ecotourism Australia accreditation program.	December 2017	MECS	Consultation with operators undertaken. Further development work required as result. This action unlikely to be completed until June 2018	
7 (iii) March 2017	OC2017-07 Shearwater Cottage (Owens)	Complete a market demand study on staff and residential accommodation on behalf of the Board.	June 2018	MECS	Will form part of greater LEP Phase 2 review budgeted for 2 nd half 17/18 financial year.	

Agenda Item No.	Item	Actions (refer to full minutes for detail)	Estimated Completion Date	By Whom	Progress	Actual Completion Date
10 (iv) March 2017	Review of Boatshed Foreshore Encroachments	<ol style="list-style-type: none"> Review and adjust rentals where there has been, or will be, an approved increase in the footprint area of fixed improvements. Follow up anomalies identified in the assessment. 	Ongoing	MECS/MBCS	Ongoing	
			December 2017	MECS	In progress. Not likely to be completed before June 2018.	
15 March 2017	General Business	Consider improving the community hall in order that the doors can be closed to keep out the noise from vehicles when the hall is in use. e.g. air conditioning; venting to improve airflow.	September 2019	MIES	Application for funding for major upgrade of community hall approved.	
12 (iv) May 2017	Strategic Asset Management Plan Update	Look into expediting the repairs of the jetty stairs, and follow up RMS funding for a second set of stairs.	June 2018	MIES	In progress, repair works to be undertaken with pile replacement.	
13 (i) May 2017	WHS and Public Risk Management Update	Investigate the exposed star pickets on walking tracks issue and advise the Board out of session.	January 2018	MECS	Substantially complete. However work continues on an opportunistic basis.	
15 (iv) May 2017	Island Trader Access to the Lagoon	The Board seek a blanket approval from the relevant authority to transfer cargo by lighter from the ship on those occasions when the ship could not access the jetty due to low tides.	May 2018	CEO	In progress.	
8 (vi) September 2017	Dog Importation and Management Policy	Clarify the status of the dog off-leash picnic area at the northern end of Old Lagoon Road and identify possible additional areas for off-leash activities.	May 2018	MECS/MIES	Picnic/BBQ in place. Site inspection by Board suggested regarding policy amendment	
12 (ii) November 2017	Renewable Energy Project Update	Obtain a cost estimate for the removal of the bird monitoring mast.	May 2018	MIES	\$60k and requires dry access conditions. Recommended to be done when/if solar project approved.	
9 (i) March 2018	Handley Review Implementation	Write to the Minister requesting that the recommended legislative changes be enacted ASAP.	April 2018	CEO	Letter sent from Chair COMPLETED	March 2018

Agenda Item No.	Item	Actions (refer to full minutes for detail)	Estimated Completion Date	By Whom	Progress	Actual Completion Date
10 (ii) March 2018	Fees and Charges 2018/19	Introduce stepped increases in charges for other than the first supply of water.	April 2018	MBCS	See agenda item 9(ii)	May 2018
13 (i) March 2018	Renewable Energy Project Update	Write to ARENA re status of the project and advise of Board's endorsement of Option 4.	April 2018	CEO	Letter sent from Chair COMPLETED	March 2018

ENVIRONMENT & COMMUNITY SERVICES UNIT
March to May 2018

Biodiversity Management

- Biosecurity detection dogs, dog handlers (except Tim Solomon) and MEWH undertook training and inspections at the Port Macquarie Seafreight wharf facility, focussing on training the dogs to smell for live snake and lizards. Both dogs and two of the handlers were assessed and passed certification.
- Liaison with Birdon staff regarding biosecurity improvements at the Port Macquarie wharf facility.
- Saving Our Species grant implementation. This project includes weed search and control, targeted threatened plant monitoring, development and implementation of translocation plans for Sand Spurge *Chamaesyce psammogeton* and Phillip Island Wheat Grass *Elymus multiflorus*. Both species have been successfully germinated at the Board but have been subject to heavy browsing of seedling stems and leaves. Surveillance camera captured rodent browsing. Seedlings now require caging to prevent heavy losses. This explains the ongoing decline of the Sand Spurge population on Blinky Beach and the low population levels for Phillip Island Wheat Grass at Dawson’s Point. The number of Phillip Island Wheat Grass in propagation now exceeds the wild population by almost double.
- Undertook targeted removal of the introduced plant Dune Fan Flower *Scaevola calendulaceae* from Blinky Beach dune, which was smothering the main Sand Spurge population. The cleared area will be used for translocation of Sand Spurge.
- Commenced monitoring and recovery actions for Lord Howe Island Morning Glory *Calystegia affinis* at Old Settlement undertaking hand weeding of annual weeds and mulching with thatch and the control of the exotic Flea Beetle *Arispoda* sp. with permethrin insecticide.
- Search for threatened species plots at the Get Up Place including collection and germination of LHI Broom *Carmichaelia exsul* seed for translocation.

Research & Volunteers

The following persons were approved to stay in/use the Research Station during the reporting period.

Name	No. People	No. Nights	Project
Peter Puskic	1	3	Jennifer Lavers FFSW Assistant
Mark Derwent	1	6	Annual Food Safety Inspections
Owen Osbourne	1	28	Disentangling the mechanisms of ecological speciation in sympatric palm species
Terry O’Dwyer	1	11	REP – Biodiversity Benefits Black-winged Petrel
Andrew Baird	6	11	Coral Biodiversity

Rodent Eradication

- See Agenda Item - Rodent Eradication progress report.

Quarantine

- Attended meeting with DPI legal branch to review biosecurity measures suitable for LHI under the Biosecurity Act 2015 (the Act) and Biosecurity Regulation 2017 (the Regulation) to enhance biosecurity risk management arrangements for Lord Howe island. It is proposed to manage the biosecurity risks to LHI using a range of management tools, including:
 1. List as prohibited matter on LHI, plant and animal pests and diseases, and weeds that are not present on LHI but are likely to have significant impact on the economic, environmental or community if they were introduced or became established.
 2. Implement a control order to support the eradication of animal pests and diseases, that are present on LHI and identified for eradication or deemed new emerging threats.
 3. Advertise biosecurity risk matter identified for eradication on LHI under a General Biosecurity Duty, detailing control measures required to be undertaken.

Weed Management

- The Board is currently running four externally funded weed eradication grant programs (including the NSW Environmental Trust, North Coast Local Land Services, Saving Our Species, NSW Weeds Action Plan). Over 460 hectares of weed search has been achieved this financial year, keeping on track with the yearly target of 500 hectares.
- **North Coast Local Land Services 'Progressing the treatment and eradication of invasive weeds and African Big Headed Ants (ABHA)'**. This program is due for reporting in May 2018. This grant has provided funds for weed search labour, ABHA and the removal of tree weeds from the Settlement.
- **NSW Environmental Trust 'The Tide is Turning'**. The remainder of this grant is focused on technical programs. Methods to detect target weeds using spectral signatures, plant geometry or high definition imagery applied with Unmanned Automated Vehicles ('Drones') and the application of aerial treatment methods using UAV (lance spray) and Herbicide Ballistic Technology. EOIs are currently being reviewed for the weed detection project work.
- **Saving our Species LHI Threatened Species Recovery Program – Project 2 (2017 -2021)**. This four-year grant has reporting requirements to release funds yearly. This project is focused on the survey, translocation and management of 10 threatened flora species and their habitats. The majority of threatened species occur in the southern mountains requiring target search in remote terrain.

Revegetation

- Maintenance of revegetation sites has been undertaken in accordance with the Revegetation Work Schedule.
- Restoration of Sallywood Swamp Forest EEC at the Golf Club and establishment of new plantings continues with funding provided by North Coast Local Land Services.
- Revegetation at Calystegia site at the start of Max Nicholls track hand weeded for annual weeds and then mulched (funded by the Saving Our Species program).

Incident Management

- Nil

Community Programs & Education

- Contribute to Signal and Community Information Bulletin.

Visitor Infrastructure

- Walking Track Audit completed;
- Works required following audit commenced on track system;
- Mt Gower ropes replaced and rock anchor system tested.
- Replaced interpretation signs where degradation was observed.
- Sallywood Swamp Forest interpretation sign ordered for erection at Cobbys Corner.

Marine Management / Moorings

- LHIB monthly mooring inspections were completed for the reporting period;
- Approximately 14 yachts visited the Island and attached to LHIB public moorings during the reporting period.

Human Resource Management

- Erin Mayo awarded position of Field Supervisor, Bush Regeneration and Weed Eradication. Erin is requesting a temporary capacity for 6 months to lead into a permanent position.

Training

- Biosecurity detection dog handling training ongoing.
- Chemcert.

Work Health & Safety

- Nil time-lost incidents during the period.

Environmental Assessment

- Ecological assessments for all OC / DAs referred completed
- Tree risk assessments completed.

Land Administration

- Respond to applications for suspension of residency, lease transfers, minor land transactions, subleasing and tenure related project work.

Development Assessment

- Continue assessments for Owner Consent, Development Applications and s96 modification applications

INFRASTRUCTURE AND ENGINEERING SERVICES

21 March 2018 to 02 May 2018

Airport

- AECOM Australia Pty Ltd have reported on the first stage of the Feasibility of a Runway Extension. The report determines the extent of the extension that could be built in line with safety regulations, physical obstacles that could affect landing and take-off, and the width of the airfield. It also identifies aircraft able to land with, and without, an extension and airlines interested in providing this service.

Lead members of the AECOM team will be on the Island 14 and 15 May 2018 to present the findings of the first stage directly to the Board.

The AECOM team is programmed to undertake the second stage of the project with geophysical investigations into the potential footprint of an extension, namely aerodrome surrounds and the lagoon floor, commencing in late May 2018.

- At the time of writing (Wednesday 2 May 2018) there has been one (1) bird strike recorded for 2018 at the aerodrome. A C-130 Hercules struck a Pacific Golden Plover during night training operations on Monday 5 February 2018. A QantasLink DHC8 struck a white tern over the lagoon on Sunday 18 February 2018 but as this is outside the field of influence of aerodrome staff, the strike is not included in the statistics.

From 1 January 2018 to 30 April 2018, there were 716 aircraft movements, which equates to 1.40 strikes per 1000 movements. For the corresponding period in 2017 there was one (1) strike recorded (Pacific Golden Plover) with 724 aircraft movements. This equates to 1.38 bird strikes per 1,000 aircraft movements.

- As of March 2018, the additional bird harassment at the aerodrome was discontinued due to decreased activity of the Migratory Wader species. Bird harassment is now only undertaken once daily with ongoing monitoring of all bird species.
- Board staff are working closely with Airservices Australia to facilitate the installation of an Automatic Dependent Surveillance Broadcast (ADS-B) repeater at a suitable location on the Island. ADS-B is an air traffic surveillance technology that enables aircraft to be accurately tracked by air traffic controllers and other pilots. The ADS-B repeater would be supplementary to the existing Air Navigation Equipment on the Island.
- Planning for removal and relocation of demountable buildings is underway.
- Portable toilets removed and shipped off the island late March and returned to Coates Hire.
- Pedestrian gate installed on southern property alignment of Sinclair/Curtin lease.

Building Construction Maintenance and Management

- Further erosion prevention works at Pinetrees boatshed undertaken south and north of the geotextile sandbag wall. Concrete blocks have been completed and are being

stockpiled ready for installation. Three rolls of geotextile fabric arrived last ship ready for next phase of repair works programmed for this month.

- Repair to jetty shed front window as the timber frame was failing.
- Continue repairs to nurses' flats at Hospital with the removal of failing lattice screens in old carport.
- Two new BBQ settings built, painted and positioned at Ned's Beach
- Northern most hardwood BBQ setting "Under the Pines" was removed, repaired, relocated after centre bracing failed.
- Repairs to LHIB depot fuel shed.
- Concrete bunding constructed at the WMF for the waste chemical and oil storage area.
- Repaired and repainted fence poles at Cenotaph ready for this year's ANZAC day service.
- Bollards removed from outside Marine Parks shed.

Emergency Management

- The Local Emergency Management Committee (LEMC) met on Thursday 8 March 2018. A Consequence Management Guide for Utilities Failure was approved by the LEMC and subsequently endorsed by the Regional Emergency Management Committee (REMC) at its meeting on 28 March 2018.
- Members of the LEMC have been assisting the Regional Emergency Management Committee (REMC) with the development of Lord Howe Island specific responses/contingencies for the Regional Emergency Management Plan. Special considerations are resources, communications and critical infrastructure.
- After direction by the Environment Protection Authority (EPA) investigations were made into possible soil, sediment and groundwater contamination from the use of Fire Fighting Foam (FFF) containing per- and poly-fluoroalkyl substances (PFAS).

PFAS In recent years, it has been discovered that PFAS does not readily breakdown in the environment. The persistent, bio-accumulation and toxic nature of PFAS in the environment can lead to issues when it enters groundwater systems and/or aquatic ecosystems.

The Preliminary Investigation Report has revealed the presence of PFAS in soil and ground water at the test sites, in particular the Aerodrome. As per EPA directives, detailed site assessments will now take place into the nature, extent, fate and transport of the PFAS.

- Air Ambulance patient retrievals year to date (Wednesday 2 May 2018) total three (3) all of which were residents. Two (2) residents required treatment for illness and one (1) for an injury.

Patient retrievals for the same period in 2017 totalled three (3), two (2) residents and one (1) visitor all requiring treatment for illness.

- Assistance given to Qantas engineers providing safe access to tail rudder repairs. Man cage fitted to telehandler allowing height access. All height safety equipment supplied by LHIB
- 15 April SES call out re tree down during severe weather outside Pinetrees blocking road.
- Continued successful testing of emergency siren 1000 hrs first Wednesday of each month.
- SES North Region Controller Tony Day visited the island in an official capacity April 16-20. Tony meet with LHIB CEO and Board members to discuss and explain the 'One Unit Emergency' model utilising a combination of SES and RFS personnel. The concept was agreed in principle and will now be further developed between the two mainland agencies.
- On Sunday 22 April in the early morning a fire at the WMF started in the waste paper, that was responded to and extinguished by Macca and Keith initially, and later additional RFS volunteers and Board staff, in a very proficient manner. The site was monitored throughout the next day and night to extinguish any flare-ups and turn the material over so that water could be applied.

General Items/Other

- LHIB staff have been assisting Norfolk Island Regional Council with their transition to State legislation, particularly in the areas of Airport Management, Development Application and Assessment processes, Vehicle Importation and Waste Management.
- LHIB staff continue to monitor the Board's drinking water quality for NSW Health compliance.
- LHIB staff continue to monitor mosquito larvae as per the Lord Howe Island Mosquito Surveillance and Vector Monitoring Program. This program is part of a National scheme run by the Federal Government.
- LHIB staff continue to monitor wastewater discharge at the WMF with reporting for EPA licence compliance.
- LHIB staff continue to assist residents and businesses with their onsite wastewater management system installations and/or upgrades.
- LHIB staff continue to conduct building inspections and provide certification for Construction Certificates as part of the Development Application process.
- Manager Infrastructure Engineering Services, John Teague, and Team Leader Compliance and Projects, Kate Dignam have been successful in qualifying to conduct asbestos assessment associated with removal. Their training was undertaken by Alert Force in Sydney during the week of 23 April 2018.

Maritime Facilities and Coastal Activities

- Recently purchased work barge 'Silver Eye' is operating very successfully. Several additional masters (coxswain licence holders) have been inducted and trained in safety management systems (SMS) of the vessel. The vessel has been utilised for solar powered drinking water treatment plant installed at North Bay, thatch transfer from WMF to Old Settlement walking track (ground cover for revegetation). Mooring maintenance by Marine Parks and LHIB.
- The jetty stairs and boat ramp were both high temperate (140 degrees) pressure cleaned in mid-March. Treatment currently overdue as the gurney pump switch has failed which the Senior Electrical Officer attending to repair as time permits.
- The swimming pontoon is scheduled for maintenance removal end of May. During the time out of water, the pontoon will be inspected, cleaned, repaired if required and ground tackle replaced. It is expected the pontoon will be out of the water for several days only.

Roads, Parks and Visitor Facilities

- Extensive pothole repairs are being carried out on a weekly basis.
- Road base has been used to repair several driveway entrances where rainwater runoff has caused damage.
- Four dangerous trees were identified and removed from locations on the island within the road reserve. The trees were removed without incident with assistance of local arborist.
- Works Staff have completed extensive road verge hedge trimming along the kerb and gutter section of Windy Point.
- Extensive spraying for broadleaf and weeds will commence in mid May 2018.

Waste Management Facility

- General maintenance and service on all equipment has been undertaken.
- Hotrot food composting dispensing area has now been enclosed.
- Further concrete pouring operations were conducted on the compost storage area at the rear of the WMF facility.

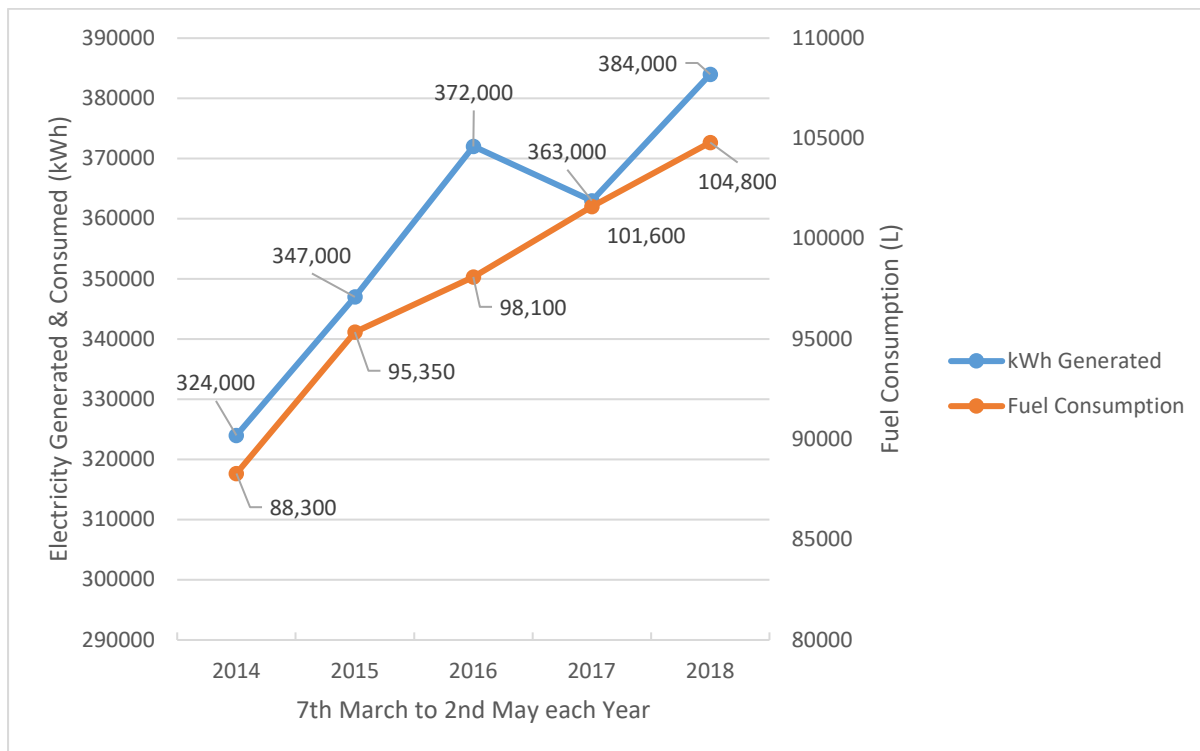
ELECTRICAL SERVICES UNIT

Overview of Activities

- Routine maintenance on Generating Units 1, 2 and 3 was completed.
- Routine maintenance on Generator No.1, 2 and 3 battery banks was completed.
- Routine maintenance on Generator No.3 Air Circuit Breaker was completed.
- Routine maintenance on Generator No.2 and 3 day fuel tanks and pumping systems was completed.
- Powerhouse 12 monthly safety checklist inspections were completed.
- Routine maintenance on Generator no. 2, 3 and control board battery chargers was completed.
- Routine maintenance on Substation No.3 Beachcomber and No.4 LHIB Workshop distribution pillars was completed.
- Routine maintenance on Substations No.2 Neds Beach Road and No. 11 Mountainview was completed.
- Supply load surveys were carried out on Substations No.3 Beachcomber and No.4 LHIB Workshop along with their associated distribution pillars. Distribution pillars were monitored for their voltage levels. Substations were monitored for maximum demand and voltage levels. All maximum demand and voltage levels in the surveyed areas were within acceptable limits.

Information for Board Members

- Energy demand for the reporting period was 348 000 kWh.
- Fuel consumption for the reporting period was 104,800 litres.
- Fuel energy efficiency for the reporting period was 3.66 kWh/L
- Presently there are 109 kW of privately owned solar panels connected to the electrical distribution system.
- Maximum demand for the period was 467 kW on the 22nd April.
- There were no powerhouse supply interruptions during the reporting period.
- There were no distribution system supply interruptions during the reporting period.
- No new customers were connected to the supply system. There are currently 288 customers connected to the electrical supply system.



Board Meeting: May 2018	Agenda Number: 4	Record Number: ED18/3535
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LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

Chief Executive Officer's Report to May 2018 Meeting of the Board

The following briefing provides an overview of key issues managed by the Board during the reporting period, and their status. It is intended that this document be available to the public as part of the minutes of the meeting. Matters which are subject to confidentiality, business in confidence or legal action are shaded and are not included in the public copy of the report.

Number of items excluded from this public edition:
 Business & Corporate Service Report
 Reason: Business in Confidence

MATTER	STATUS	ACTION REQUIRED BY BOARD AT THIS MEETING
Community Strategic Plan	An implementation plan has been prepared for the Board on the steps to be taken to produce a community-driven community strategic plan for the Island	See agenda item 8 (i)
Runway Feasibility Study	Consultants AECOM have completed stage one of the Feasibility Study with a report on future aircraft requirements for the island, plane characteristics, existing runway/site limitations and CASA requirements. A decision is needed to progress to stage two.	See agenda item 12 (iii)
Rodent Eradication Program	Work continues in preparation for the implementation of the rodent eradication project. The new permit from the APVMA has not yet been received.	See agenda item 12 (i)
Renewable Energy Project	The Australian Renewable Energy Agency has not yet made a decision about whether the funding agreement will be varied to enable funding of a revised project.	See agenda item 12 (ii)
Boat retrieval system (slipway)	Further work has been undertaken on the Slipway project; however, there is insufficient funding to enable the preferred solution to be implemented. Further negotiation on funding is required.	See agenda item 12 (iv)
Grant funding	The Board was successful in round one of the NSW Government's Stronger Country Communities fund receiving close to \$1 million for the upgrading the community hall and old powerhouse site. Round two funding applications were submitted on 4 May 2018 for a number of projects, including sports-related projects.	For noting

Prepared: Penny Holloway, Chief Executive Officer

Attachments:

- Attachment A: Chief Executive Officer Report – BCS Unit - **Closed**
- Attachment B: Chief Executive Officer Report – ECS Unit - **Open**
- Attachment C: Chief Executive Officer Report – IES Unit - **Open**

Board Meeting: May 2018

Agenda Number: 5

Record: ED18/3540

LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Motor vehicle importation or transfer status report.

RECOMMENDATION

The report is submitted to the Board for information.

BACKGROUND

Since the last Board meeting 1 application to import or transfer vehicles was determined by the Chief Executive Officer under the 'Vehicle Importation, Transfer and Use Policy':

CURRENT POSITION

There will not be an increase of vehicles to the island since the last Board meeting.

Applicant	Vehicle Type	Preferred Vehicle	Use	Variation	Comment
Belinda Panckhurst and Deon Nobbs	Toyota Hilux	No	Private	0	Approved 28/03/2018 Replacement

As at May 2018

Registered Road Vehicles						
Essential	Commercial	Private	Hire	Plant & Equipment	Imported Without Approval	Total
28	89	153	8	26	69	373

At the May 2010 meeting it was requested that further differentiation in the vehicle statistics to identify motor vehicles and motor cycles / scooters and trucks separately be presented. This information is presented below.

Registered Road Vehicles						
Car/Utility	Bus	Motorcycle / Scooter	Truck	Plant & Equipment	Trailers	Total
173	31	50	9	30	80	373

At the June 2016 meeting it was requested that future reports include trends in regards to vehicles imported without approval and clarification that these are vehicles which pre-date the

Board approval and monitoring process. There has been a total of 72 vehicles imported without approval:

- 65 vehicles were imported without approval prior to 2014. The majority of these vehicles were trailers.
- One vehicle, a boat trailer, was imported without approval in 2015.
- Three vehicles, all boat trailers, were imported without approval in 2016.

The following table shows further differentiation in the vehicle statistics to identify the types of vehicles that have been imported without written approval.

Vehicles Imported Without Approval – By Type						
Car/Utility	Bus	Motorcycle / Scooter	Truck	Plant & Equipment	Trailers	Total
6	1	12	1	3	46	69

RECOMMENDATION

The report is submitted to the Board for information.

Prepared: Chelsea Holden, Administration Officer

Endorsed: Penny Holloway, Chief Executive Officer

LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

List of Owner's Consents dealt with under Delegated Authority.

RECOMMENDATION

The report is submitted to the Board for information.

BACKGROUND

The Minister for the Environment has approved delegated authority regarding the issuing of owners consents by the CEO providing:

1. The development value is not more than \$2 million,
2. Does not relate to development for the purpose of a new dwelling, and
3. Complies with any planning instrument in force relating to the Island.

CURRENT POSITION

The following Owner's Consent applications complied with the above requirements and have been processed by the CEO since the last Board meeting. The table also includes two applications, which were approved in September but had not been reported on previously as detailed below:

OC	Applicant	Site	Proposal	Zone	Decision
OC2018.01	Gary Payten	Res 12	Re-cladding, installation of a replacement door on the northern side of the boatshed	Zone 7 Environmental Protection	Approved subject to conditions 27/09/2017
OC2018.02	Corey Davies	Lot 282	Additions to existing dwelling	Zone 2 Settlement	Approved subject to conditions 27/09/2017
OC2018.06	Stephen Sia and Janet Taka	Lot 361	Construct a single detached one bedroom staff accommodation	Zone 2 Settlement	Approved subject to conditions 29/04/2018

OC2018.07	John Green	Lot 91	Construct additional tourist and staff accommodation	Zone 2 Settlement	Approved subject to conditions 26/04/2018
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RECOMMENDATION

The report is submitted to the Board for information.

Prepared: Chelsea Holden, Administration Officer

Endorsed: Penny Holloway, Chief Executive Officer

Board Meeting: May 2018

Agenda Number: 7 (ii)

Record: ED18/3542

LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

List of Development Applications dealt with under Delegated Authority.

RECOMMENDATION

The report is submitted to the Board for information.

BACKGROUND

The Minister for the Environment, under section 80(1) of the Environmental Planning & Assessment Act, issued authority to the CEO to determine development applications providing:

1. The development value is not more than \$150,000
2. No more than 3 written objections are received within the exhibition period; and
3. The application has not been called up for full Board determination by any Board Member. (All Lord Howe Island Board development applications are to be determined by the full Board)

CURRENT POSITION

The following development applications complied with the above requirements and have been determined by the CEO since the last Board meeting, as detailed below:

DA	Applicant	Site	Proposal	Zone	Decision
DA2018.08	Denise and Kevin Rickard	Portion 205	Alterations and additions to existing dwelling	Zone 2 Settlement	Approved subject to conditions 29/03/2018

RECOMMENDATION

The report is submitted to the Board for information.

Prepared: Chelsea Holden, Administration Officer

Endorsed: Penny Holloway, Chief Executive Officer

LORD HOWE ISLAND BOARD

Planning Assessment Report

Item DA 2018.04 – Acknowledgment of the Shearwater Cottage dwelling entitlement on Lot 10 and undertake alterations to the existing Shearwater Cottage and Cyclone Alley to consolidate those two cottages, at 78 Anderson Road, Lord Howe Island.

1 Summary Assessment Report

Assessment Officer	Michelle Chapman – AAP Consultant Planner
Address/Property Description	Lot 10 DP 1202580 78 Anderson Road, Lord Howe Island
Proposal	Acknowledgement of the Shearwater Cottage dwelling entitlement on Lot 10 and undertake alterations to Shearwater Cottage and Cyclone Alley to consolidate those two cottages.
DA No	DA 2018.04
Applicant	Ms Diane Owens
Owner Consent Granted	OC 2018-03 refused 27 November 2017 The recommendation of this report includes a proposed resolution to grant owners consent.
Estimated Cost of Development	Nominated Cost - \$200,000.00. LHIB reviewed cost for works proposed: \$40,000.00
Site Inspection	A site inspection has been carried out on the subject site.
Zone	Zone 2 Settlement. The proposed development is permissible with consent.
Significant Native Vegetation Map	No Significant Native Vegetation (SNV) will be damaged or removed as part of this application.
Notification	The DA was placed on public exhibition from 21/02/2018 to 07/03/2018
Submissions Received	No objections were received.

2 Consent Authority

The LHIB CEO and Chairperson has delegation to grant consent to DAs (DAs) subject to the following conditions:

- The value of the development must not total \$150,000 or more (as calculated by the LHIB).
- The DA must not relate to the subdivision of land or the erection of new dwellings.
- No more than 3 written submissions received within 14 days of the public exhibition period.

In light of the reviewed Estimated Cost for the development, the subject DA complies with the

above delegations to the CEO (on the basis of the proposed works only being internal renovations to consolidate the Shearwater Cottage and Cyclone Alley dwellings). In addition, the subject proposal is not to erect a new dwelling but to consolidate two existing dwellings into one and for the acknowledgement that an existing dwelling entitlement will be retained on the subject site.

Despite the above, the subject application is referred to the LHIB in light of the past (and current) applications made on the site.

3 Site Description

The subject site is legally described as Lot 10 in DP1202580, Lord Howe Island. The lot is irregular in shape and has an approximate site area of 12,177sqm. Anderson Road intersects the site into southern and northern parts.

The northern part of the site contains the following buildings and structures:

- Dwelling (referred to as 'Di Owens dwelling') comprising attached garage and detached shed
- Tourist accommodation reception and restaurant area (including cool room, kitchen and bathroom) attached to Di Owens dwelling. It is noted the restaurant is not currently in operation
- Previous Staff accommodation building – now comprising 2 dwellings referred to as Cyclone Alley and Shearwater Cottage
- Tourist accommodation units, and transit lounge; and
- Infrastructure building

The southern part of the site is not developed and is heavily vegetated. The site is zoned 2 Settlement and contains mapped significant native vegetation (SNV) in the north and north-eastern parts of the northern part and within the southern part (Figure 1 and 2). The subject existing building/ dwelling is outside of mapped SNV.

Vehicular access to the northern part of the site is provided via an existing Right of Way (ROW) of variable width located in the south-western corner of Lot 174 from Anderson Road.



Figure 1: Extract from the Lord Howe Island Local Environmental Plan 2010 (LEP 2010) Zoning Map. Site boundaries outlined in blue.

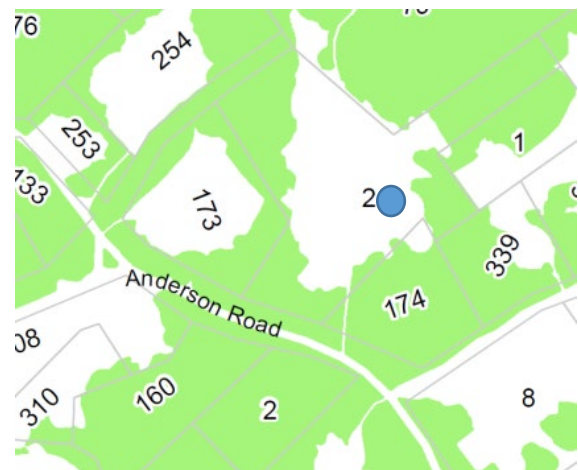


Figure 2: Extract from the LEP 2010 SNV Map. Location of staff accommodation units identified by blue circle.

3.1 Relevant Site History

The site has been the subject of a number of relevant applications, including:

- DA1989.01 – consent for the construction of a self-contained staff accommodation unit for Lorhiti Lodge
- OC 2016 – 25 – approved on 7th June 2016 for a change of use of Cyclone Alley to residential. Advice was sought from Lindsay Taylor Lawyers in relation to the proposal and which confirmed that the building was a dwelling.
- MDC 2017-01 – Modification to remove restriction on use of Cyclone Alley for accommodation of staff only
- MDC 2018-02 – Modification to remove restriction on use of Shearwater Cottage for accommodation of staff only – LHIB meeting March 2017
- OC 2018-03 – Relocate Shearwater Cottage to the Infrastructure Building - refused 27 November 2017.
- DA 2018-04 was originally lodged proposing to transfer the Shearwater Cottage dwelling entitlement to the Infrastructure Building on site, however the subject application was subsequently amended to propose a transfer of the dwelling entitlement to a paved northern section of Diane Owen's lease.

On the basis of OC 2018-03 being refused and in any case being for a different proposed development (which previously involved the infrastructure building), an owner's consent for the development now proposed in the subject DA is required. Accordingly, the attached recommendation includes a proposed resolution to grant owner's consent for the subject works.

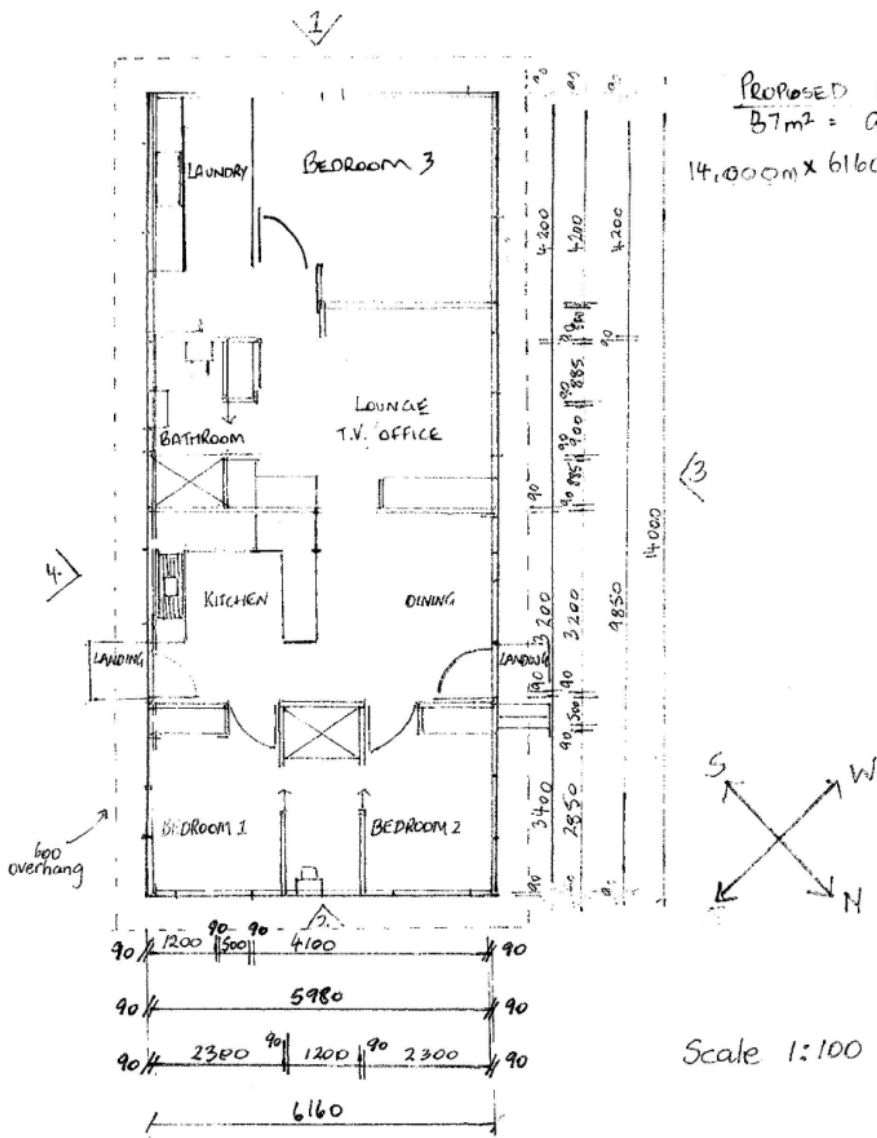
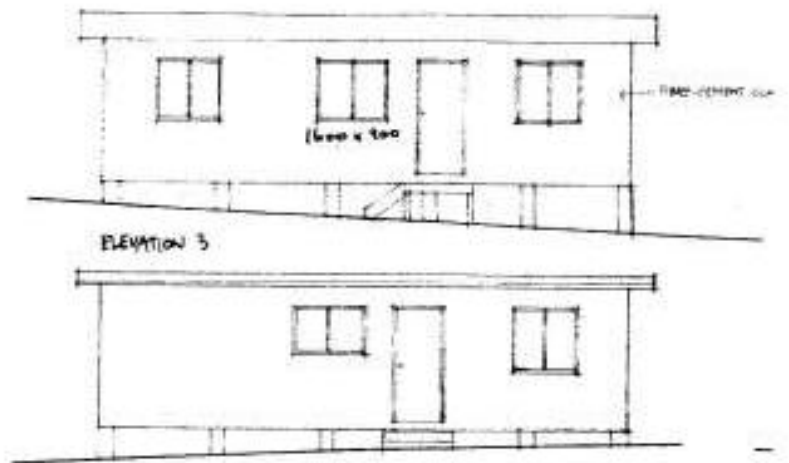
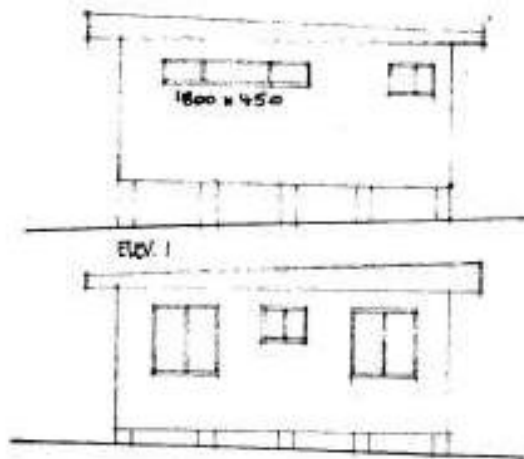
4 Proposed Development

The proposed development is for the acknowledgement of the Shearwater Cottage dwelling entitlement on Lot 10 that will be retained under this subject proposal and the undertaking of alterations to Shearwater Cottage and Cyclone Alley to consolidate those two cottages, at 78 Anderson Road, Lord Howe Island.

The specific proposed alterations and additions to Cyclone Alley and Shearwater Cottages include:

- Removal of the existing kitchen in Cyclone Alley to make this space into an internal laundry
- Creation of a door through the existing common boundary wall between the two existing cottages to connect the two areas and make the two cottages into one dwelling.
- Total proposed internal floor space for the single consolidated dwelling will remain at the existing total GFA of 87m².

The acknowledged dwelling entitlement for Shearwater Cottage will be available to permit the future construction of a dwelling elsewhere on the subject site. As an existing dwelling entitlement this will not be counted as a new dwelling under clause 26 of the LHI LEP. Such a dwelling will need to be the subject of a future OC and DA to be made to the Board. Confirmation of the above is included in the proposed recommendation and conditions attached to this report.



Above: Proposed modifications to Shearwater Cottage and Cyclone Alley Cottage to make one dwelling



Above: Photographs of the Shearwater and Cyclone Alley Cottages

5 Referrals

The LHIB has advised that the application was distributed to the relevant internal specialists for review. No objections to the proposal were raised. The table below outlines the issues raised by these specialists and the response.

5.1 Comments received from internal specialists

Specialist	Issue	Comment
Manager Environment World Heritage (Hank Bower)	<p>The property is zoned Zone No. 2 – Settlement according to the Lord Howe Island Local Environmental Plan 2010. The objectives of this zone are: to provide opportunities for limited residential and commercial development. The proposal is consistent with these objectives.</p> <p>The proposed renovations are located wholly within existing development footprints and will not result in any vegetation removal or habitat disturbance providing all construction and demolition materials are stockpiled outside of areas known to be utilized as nesting habitat by Flesh-footed Shearwaters <i>Ardenna carneipes</i> during the nesting season commencing 1st September and ending 31st May annually and do not contain any native vegetation. The construction and demolition stock pile areas must be shown on a map and must be used for that purpose during the construction period.</p> <p>No vegetation is identified for removal and will therefore not remove or damage any mapped Significant Native Vegetation (SNV).</p> <p>There is native vegetation in the Study area which is mapped by Sherringham et al 2016 as community 19 Maulwood – Kentia Palm – Cottonwood - Greybark lowland forest, 12b Banyan – Kentia Palm forest on coral sands and calcarenite and Ep – Environmental planting. The vegetation at the</p>	Noted and recommended accordingly

Subject site is mapped by Pickard (1983) as vegetation associations Da-Ct *Drypetes australasica* – *Cryptocarya triplinervis* and Hf *Howea forsteriana*. The Sherringham et al 2016 mapping is considered accurate. There is vegetation mapped by Sherringham et al 2016 as Ep – Environmental planting, which could be impacted during construction, but this is considered part of an established garden and is exempt from requiring approval for removal.

The subject site provides known or potential habitat for at least 7 threatened species being; LHI Gecko *Christinus guentheri*, LHI Currawong *Strepera graculina crissalis*, LHI Golden Whistler *Pachycephala pectoralis contempta*, LHI Silvereye *Zosterops lateralis tephroleura*, Lord Howe Woodhen *Gallirallus sylvestris*, LHI Placostylus *Placostylus bivaricosus* and Flesh-footed Shearwater *Ardenna carneipes*.

The LHI Currawong, LHI Golden Whistler, LHI Silvereye and LH Woodhen are all widely distributed across the Island and regularly occupy forests and gardens within the settlement. They are commonly found co-habiting with human infrastructure within the settlement area and in the case of the LHI Currawong, LHI Golden Whistler, LHI Silvereye and LH Woodhen will forage and roost around dwellings and associated infrastructure. However, the core habitat resources for all these species is dense native vegetation.

The Flesh-footed Shearwater nest seasonally on LHI in burrows, predominantly in areas of calcarenite soils with dense native vegetation. The Flesh-footed Shearwater has known nesting habitat at the Subject site, particularly in the forested area and edges of lawns and in gardens. To avoid impacts to their nesting habitat all construction and demolition stock pile sites must be mapped and be outside of known nesting areas during their nesting season from 1st September to 31st May and must not be located in native vegetation.

The LHI Gecko is known to occur throughout the settlement of LHI where it can utilise human made structures and stock piled building materials (e.g. sheets of corrugated iron etc) as sheltering habitat. It can be found within cavities of dwellings that exclude rodents and shelters within cracks and cavities in trees and rocks. It is possible that LHI Gecko could be present within the existing building and could be detected during renovations. Any animals detected during works must be moved to similar habitat structures in the adjacent area (e.g. fallen timber within dense native vegetation, old dwellings/structures) away from the development site

The Subject site includes areas mapped as modelled High Quality Habitat (A) for LHI Placostylus. This mapping is considered accurate where there is intact native vegetation. The LHI Placostylus favours forested habitats on calcarenite soils with a dense shaded canopy, continuity with large areas of vegetation and a thick moist leaf layer in which they can burrow during dry times. This habitat is present at the Subject site, although is mostly restricted to boundaries and does not include any areas impacted by this proposal. The lease already conducts rodent baiting in accordance with the Boards rodent baiting schedule.

	<p>A 5 Part Test of significance was not submitted with the DA as the proposal is located within existing development footprints. This assessment concludes that the proposed development will not result in any significant impacts on any Threatened species, populations or ecological communities, or their habitats providing:</p> <ul style="list-style-type: none"> • all construction and demolition materials are stockpiled outside of areas known to be utilized as nesting habitat by Flesh-footed Shearwaters <i>Ardenna carneipes</i> during the nesting season commencing 1st September and ending 31st May annually; • must not be located in areas supporting any native vegetation; and • the construction and demolition stock pile areas must be shown on a map and must be used for that purpose during the construction period. <p>Recommendations That the development be approved subject to:</p> <ul style="list-style-type: none"> • If any live LHI Gecko or LHI <i>Placostylus</i> are detected during works they must be moved to similar habitat structures in the adjacent area (e.g. fallen timber within dense native vegetation, old dwellings/structures) away from the development site so they can escape predation by predators such as LHI Currawong and LH Woodhen; • all construction and demolition materials are stockpiled outside of areas known to be utilized as nesting habitat by Flesh-footed Shearwaters during the nesting season commencing 1st September and ending 31st May annually; • must not be located in areas supporting any native vegetation; and • the construction and demolition stock pile areas must be shown on a map and must be used for that purpose during the construction period. 	
<p>Team Leader, Compliance and Projects (Kate Dignam)</p>	<p>Building Class: Class 1a.</p> <p>Notes Relating to issuing of a Construction Certificate</p> <p>I have assessed the applicant's DA and note the following:</p> <ul style="list-style-type: none"> • All construction work is to be carried out and completed in accordance with the National Construction Code (NCC)/Building Code of Australia (BCA). • Ensure Construction Certificate Plans are the same as the approved Development Application Plans. • Prior to the issuing of a Construction Certificate the applicant is to provide detailed structural engineering plans for the development works. The applicant is to ensure the structural plans address compliance with construction in Wind Zone A and are certified by an appropriately qualified Structural Engineer in accordance with AS1170.2. • Prior to the issuing of a Construction Certificate the applicant is to provide evidence of payment of a Long 	<p>Noted and recommended accordingly</p>

Service Levy as per section 34 of the Building and Construction Industry Long Service Payments Act 1986.

- As 'Cyclone Alley' is a Class 1a building construction must be overseen by a licenced builder. The licenced builder is to be nominated in the Construction Certificate application.
- Prior to the issuing of a Construction Certificate the applicant is to provide evidence that the licensed contractor/builder undertaking the residential building work ('Cyclone Alley') has taken out Home Warranty Insurance with a minimum cover of \$340,000 as per the Home Building Act 1989.
- Prior to the issuing of a Construction Certificate the applicant is to ensure compliance with any/all conditions imposed by the Board as part the Development Application approval process.

Access for People with a Disability

- No relevant matters.

Fire Safety

- The applicant is to ensure that fire detection and early warning devices, such as automatic smoke detectors, are installed so that occupants may evacuate, in the event of fire, to a place of safety. The placement of early warning devices is to be in accordance with AS1851.8.

Flood Management

- No relevant matters.

Water

- All plumbing work, including the disconnections and connections to the wastewater system, is to be undertaken by a licensed plumber.
- All waterproofing of wet areas, such as bathrooms, is to be certified by an appropriate person and certification to be provided to the Board before an Occupancy Certificate is issued.
- Applicant to ensure all stormwater from the new roof structure of 'Shearwater Cottage' is diverted to existing rainwater tanks as outlined in the application or an appropriate absorption trench provided. The method of management of the stormwater is to be shown on the construction drawings.

Waste Management

- There is no discussion of potential for asbestos in the existing building. This should be clarified by the applicant.
- Any waste generated from the proposed development is to be contained within the site and then be recycled or disposed of at the authorised waste management facility on the Island. This excludes asbestos waste, if any, which

	<p>is the responsibility of the applicant to remove from the Island.</p> <ul style="list-style-type: none"> • Waste disposal fees will be charged in accordance with the Lord Howe Island Board's schedule of fees and charges. • No waste shall be placed in any location or in any manner that would allow it to fall, descend, blow, wash, percolate or otherwise escape from the site. <p>Construction</p> <ul style="list-style-type: none"> • No excavation to be carried out until the site is inspected by the LHIB Senior Electrical Officer. • Any electrical work must be carried out by a licensed electrician and an Electrical Compliance Certificate supplied to the Board before any Occupancy Certificate for the development works. • All works are to be undertaken in accordance with approved Construction Certificate documentation. • Pre-Commencement meeting to be arranged with the Owner, Builder and Board Personnel prior to any work commencing on site. If the applicant is nominating the Lord Howe Island Board as the Principal Certifying Authority, this meeting will constitute the pre-commencement inspection. <p>Inspections</p> <ul style="list-style-type: none"> • The Principal Certifying Authority (PCA) will require the following mandatory inspections to be undertaken during development works: <p>Class 1a -</p> <ol style="list-style-type: none"> a) Pre-commencement b) Prior to covering of the framework for any floor, wall, roof or other building element c) Prior to covering waterproofing in any wet areas d) Storm-water connections e) Final Inspection after the building work has been completed and prior to any Occupation Certificate being issued in relation to the building. 	
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6 Planning Assessment

The following planning assessment has been undertaken for the proposed development taking into account the relevant statutory controls, and other relevant matters as detailed below in this report.

6.1 Commonwealth legislation

6.1.1 *Environmental Protection and Biodiversity Conservation Act 1999*

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) provides for the protection of certain matters of national environmental significance (NES) listed under the Act, which include:

- World Heritage Areas
- National Heritage Places

- Ramsar wetlands of international importance
- Commonwealth listed threatened species and ecological communities
- Listed migratory species
- Commonwealth marine areas
- Great Barrier Reef Marine Park
- Nuclear actions.

Under the EPBC Act, Commonwealth approval is required from the Minister of Sustainability, Environment, Water, Population and Communities (Minister) for any action that will have or is likely to have a significant impact on a NES, or on the environment of Commonwealth land or on the environment if the action is proposed to be taken by a Commonwealth agency (known as a 'controlled action').

A person proposing to take a controlled action must refer the proposal to the Minister for determination. A person proposing to take an action that the person thinks is not a controlled action may refer the proposal to the Minister for the Minister's decision whether or not the action is a controlled action.

Lord Howe Island is a declared World Heritage Property. Section 12 of the EPBC Act 1999 requires approval of actions that involve a significant impact on a declared World Heritage Property.

An Advisory Note has been included in the recommendation to this report, that the applicant make independent enquiries with the Australian Government's Department of the Environment and Energy, to confirm whether they consider the proposed actions as detailed in this report are likely to have any impact on the heritage values of the:

- *World Heritage and National Heritage listed Lord Howe Island Group - ID 105085 and 105694, and*
- *Register of the National Estate listed Lord Howe Island Group and Marine Environs - ID 201.*

6.2 NSW legislation

6.2.1 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (NSW) (BC Act) sets the framework for the listing of threatened species, populations and ecological communities, and key threatening processes in NSW, and the preparation and implementation of recovery plans and threat abatement plans.

The BC Act also provides the mechanism for applying for and obtaining licences to take actions, which could result in harm to a threatened species, population or ecological community, or their habitat, or damage to critical habitat.

Please refer to the internal referral comments received from Hank Bower (Manager Environment World Heritage) provided earlier in section 6.1 of this report. No adverse environmental or ecological impact from the proposal are envisaged, nevertheless appropriate conditions to address any potential environmental impacts have been included in the attached report recommendation.

6.2.2 NSW Heritage Act 1977

The main objective of the Heritage Act 1977 (Heritage Act) is to encourage the conservation of the heritage of NSW. Pursuant to Section 4.45 of the EP&A Act 1979, Section 58 and Section 57(1) of the Heritage Act are triggered by this application.

The Lord Howe Island Group is listed on the State Heritage Register. Section 57 (1) of the Heritage Act requires that all applications to carry out development on Lord Howe Island, be referred to and granted concurrence by the NSW Heritage Office. This provision is overridden however by the operation of Section 57 (2), in the circumstance of the Minister issuing a Heritage Exemption Order.

On 9 January 2015, the NSW Minister for Heritage published an order under section 57(2) of the Heritage Act, providing for an exemption to refer specific activities to the Heritage Division, instead requiring referral of only those applications requiring consent under clause 39 of the LHI LEP 2010. The site does not require consent under clause 39 as it is not a listed heritage item within the LEP 2010. Therefore referral to the NSW Heritage Division of this application is not required.

6.3 Local Statutory Plans and Policies

6.3.1 Lord Howe Island Local Environmental Plan 2010

The LEP 2010 is the principal environmental planning instrument applying to the proposal.

The following summary table details the various LEP provisions relevant to the subject proposal with assessment and/or comment included as required.

LEP 2010 compliance summary table:

LEP 2010 Clause		Compliance Y/N	Comment
Part 1 Preliminary			
2	Commencement and Aims of Plan	Y	Each of the aims of the LEP 2010 have been considered in the assessment of this application. As assessed and recommended for amendment in this report, the proposed renovation/consolidation works on the cyclone alley/shearwater cottage can be undertaken with minimal negative environmental impact and/or disturbance to protected flora and fauna native to the Island.
3	Land to which plan applies	Y	The LEP 2010 applies to the subject site which is part of Lord Howe Island, as defined in Section 3 of the Lord Howe Island Act 1953.
6	Who is the consent authority for this Plan?	Y	The Lord Howe Island Board (LHIB) is the relevant consent authority.
7	Maps	Y	Noted.
9	Exempt Development	N/A	The proposed works are not listed as Exempt Development within Schedule 1 of the LEP.
11	Matters that must be satisfied before development consent granted	Y	All relevant matters contained within clause 11 are satisfied – refer to the clause 11 assessment following.

Part 2 General Provisions applying in particular zones			
12	Land Use Zones	Y	The land is zoned Zone 2 Settlement
14	Zone 2 Settlement	Y	Residential accommodation and building works on same comply with the LEP zone objectives and are permissible with consent of the LHIB.
Part 3 Special Provisions			
Division 1 Provisions for particular kinds of development			
26.	Limit on number of dwellings to which consent may be given	N/A	The proposal does not constitute a new dwelling only the consolidation of cyclone alley/ shearwater cottage. As such, Clause 26 is not relevant to this proposal.
27(1)	Enlargements or extensions of dwellings	Y	The proposal is assessed as satisfactory pursuant to clause 27 of the LEP 2010, as follows: <ul style="list-style-type: none"> a) The gross floor area of the consolidated cyclone alley/ shearwater cottage is not proposed to change and will remain as less than 300 square metres, b) No SNV will be removed as a result of this proposal (ref ecological comments in section 5 of this report), c) The subject site will continue to have at least 50% of the allotment being landscaped area, with at least 35% of this landscaping comprising native vegetation.
29	Maximum height of buildings	N/A	No external building work is proposed only internal works to the consolidated cyclone alley/ shearwater cottage. Therefore this clause does not apply to this application.
Division 2 Provisions that apply to particular land			
32 (2)	Setbacks of buildings in Zone 1, 2 or 5: <ul style="list-style-type: none"> - 10m to a road frontage and - 5m all other boundaries 	N/A	As stated earlier in the description of the proposal no new dwellings or external construction are proposed. Therefore this clause does not apply to the subject DA.
33	Landscaping to be carried out in Zone 2	Y	As stated earlier in the description of the proposal no new dwellings or external construction are proposed in the subject DA. In light of this no adverse impact on the existing landscaped character or dispersed pattern of housing will occur thus complying with the LEP.
34.	Land Adjoining Zone 7 or 8	Y	The proposed development is not within 10 metres of adjoining land within Zone 7 Environment Protection.

Clause 11 Matters that must be satisfied before development consent granted

Clause 11 of the LHI LEP 2010 provides that the consent authority must not consent to the carrying out of development unless it is satisfied of the following matters (to the extent that they are of relevance to the proposed development):

Clause 11 Compliance summary table:

CLAUSE 11 REQUIREMENT	COMPLIANCE Y/N	DISCUSSION
a) <i>The proposed development is consistent with the aims of this plan and the objectives of any zone, as set out in the plan, within which the development is proposed to be carried out,</i>	Y	The subject site falls within Zone 2 – Settlement under the LEP 2010 and is consistent with the zone objectives.
b) <i>There is an adequate area available for the disposal or treatment of any effluent treatment of any effluent treatment or disposal system and any such system will not have any adverse impact on groundwater quality,</i>	Y	The subject consolidation of cyclone alley/ shearwater cottage will not change the waste disposal load of the subject site. The existing (2 + 1=) 3 bedrooms will be retained.
c) <i>No part of the proposed development:</i> i. <i>will result in any damage to, or removal of, significant native vegetation, or</i> ii. <i>will have a significantly adverse impact on the habitat of any plants, or animals, that are native to the Island,</i>	N/A	No external physical works are proposed in the subject DA.
d) <i>Access is, or will be, available to the site of the proposed development and the provision of any such access will not:</i> i. <i>result in any damage to, or the removal of, significant native vegetation, or</i> ii. <i>have a significantly adverse impact on the habitat of any plants, or animals, that are native to the Island,</i>	N/A	No physical works are proposed in the subject DA.
e) <i>Any proposed landscaping will provide various species of plants that are native to the Island and common in the locality to enhance any significant native vegetation,</i>	N/A	No physical works are proposed in the subject DA.
f) <i>The proposed development will not be adversely affected by any landform limitations, including flooding, landslip, unstable soils and steep slopes,</i>	N/A	The site is not located in a flood hazard area.
g) <i>Adequate services in respect of the proposed development can be provided without significant additional cost to the Board or the community of the Island,</i>	Y	No additional infrastructure services are required.
h) <i>The appearance of the proposed development (when considered by itself or in conjunction with existing buildings and works) will not have any significantly adverse impact on the locality,</i>	N/A	No physical works are proposed in the subject DA.
i) <i>The proposed development will not cause any significant overshadowing of adjoining land,</i>	N/A	No physical works are proposed in the subject DA.
j) <i>The proposed development will not cause any significant reduction in the privacy of occupiers of adjoining land</i>	Y	No privacy issues will result and no physical works are proposed in the subject DA.

6.3.2 Lord Howe Island Development Control Plan 2005

The Lord Howe Island Development Control Plan 2005 (DCP 2005) applies to the subject site

and an assessment of the provisions of the DCP relevant to the subject proposal is included in the following table.

DCP Compliance summary table

LHI DCP 2005 Clause		Complies Y/N	Comment
Part 1 Introduction			
1.2	Plan Objectives	Y	The proposed works as assessed and recommended for amendment by condition in this report are consistent with the Plan objectives.
1.4	Where does plan apply?	Y	This DCP applies to the subject site.
Part 2 Design Principles			
2.1	Introduction	Y	Noted.
2.2	Objectives	Y	The proposed works as assessed and recommended for amendment by condition in this report will be consistent with the DCP's design objectives.
2.3	Design Context	Y	The proposal does not include any external physical works and therefore is consistent with the character and nature of the site and locality.
2.4	Bulk and Scale	Y	Refer to above comment in regard to 2.3, LHI DCP.
2.5	Building Forms	Y	Refer to above comment in regard to 2.3, LHI DCP.
2.6	Building Materials & Colours	Y	Refer to above comment in regard to 2.3, LHI DCP.
2.7	Energy and water efficiency	Y	On the basis that the cost of works related to the subject consolidation of cyclone alley/ shearwater cottage is less than \$50,000.00 it will not require a BASIX Certificate. Nevertheless, the existing structures will continue to incorporate access to natural light and ventilation complying with the DCP.
2.8	Landscaping design	Y	Refer to above comment in regard to 2.3, LHI DCP.
2.9	Site access and parking	Y	Refer to above comment in regard to 2.3, LHI DCP. No change to the existing site access or parking is proposed.
Part 3 Development Control Policy			
3.2	Single Dwellings	N/A	No new dwellings are proposed in the subject DA. Refer also to the above comment in regard to 2.3, LHI DCP and the assessment provided earlier under the same provision of the LHI LEP 2010 clauses 27 and 32.

7 Environmental Effects

7.1 Environmental Planning and Assessment Act 1979

Under the provisions of Section 4.15, (previously 79C(1)) of the EP&A Act, in determining a DA, a consent authority is to take into consideration the following matters as are of relevance to the development the subject of the DA.

- a) the provisions of the following that apply to the land to which the development application relates:
- i. any environmental planning instrument
Comment: an assessment against the LHI LEP 2010 has been undertaken (see Section 6.3.1) and the proposed development was found to comply with all relevant provisions subject to the conditions of approval included in the recommendation of this report.
 - ii. any proposed instrument that is or has been the subject of public consultation under this Act
Comment: N/A
 - iii. any development control plan
Comment: An assessment of the proposal against the LHI DCP 2005 has been undertaken in Section 6.3.2 and was found to comply subject to the conditions of approval included in the recommendation of this report.
 - iiia) any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4,
Comment: There are no planning agreements relevant to the application.
 - iv. the regulations (to the extent that they prescribe matters for the purposes of this paragraph),
Comment: There are no relevant matters prescribed by the regulations.
 - v. any coastal zone management plan (with the meaning of the Coastal Protection Act 1979)
Comment: There are no coastal zone management plans relevant to the application
- b) The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts on the locality

An assessment of the environmental impacts of the proposed consolidation works have been considered elsewhere in this section of the subject report. The table below provides further assessment of any likely impacts.

Likely environmental impacts:

Potential Impacts	Proposal
Access, Transport and Traffic	No change to existing access arrangements is required for the cottage modifications.
Public Domain, Visual and Streetscape	The proposed works to the existing cottages is internal and will not impact on the public domain.
Ecological	As stated in section 5.1 of this report, the LHIB's Manager Environment World Heritage has confirmed that the proposal will not result in the removal of any SNV or result in a significant effect for any threatened species, populations or ecological communities, or their habitats.
Flood	The site is not identified as flood affected.
Heritage	The subject site is not listed as a heritage item.
Views	No view impacts are identified.

Privacy	No privacy impacts are identified in respect of the minor cottage works.
Open Space	Open space will not be impacted by the proposal.
Social and economic Impact in Locality	There will be no adverse social or economic impact. The proposal will increase the size and functionality of the cottage for a future resident.
Construction	Potential impacts from construction activities will be minimised through the recommended conditions of the consent.

c) The suitability of the site for the development

Having regard to its location, and the preceding assessment, the site will adequately accommodate the proposed works to the existing cottages and is suitable for the site as recommended for conditional approval for the reasons outlined in this report.

d) Any submissions made in accordance with this Act or the Regulations

No submissions were received.

e) The public Interest

For the reasons outlined in the preceding assessment, it is considered that the proposed internal works on the existing cottages will be in the public interest, subject to appropriate conditions included in the attached recommendation.

8 Conclusion

This DA has been assessed with regard to the provisions of Section 4.15 of the EP&A Act, the LEP 2010 and DCP 2005 and the relevant codes and policies of the Lord Howe Island Board.

The application for internal Alterations to the existing Cyclone Alley and Shearwater Cottages on site is considered to have Planning merit and is supported subject to the application of a number of conditions outlined in the following recommendation.

An acknowledgement that a dwelling entitlement credit remains on the subject site if the two existing cottages are made into one larger single dwelling is included in the description of the subject development and the following proposed conditions.

9 Recommendation (Conditional Approval)

- A. That the Lord Howe Island Board grant an Owner's Consent to acknowledge the existence of a Shearwater Cottage dwelling entitlement on Lot 10 and to undertake alterations to the existing Shearwater Cottage and Cyclone Alley to consolidate those two cottages, at 78 Anderson Road, Lord Howe Island further as referenced in the following conditions.
- B. That DA No. 2018.04 for acknowledgement of the Shearwater Cottage dwelling entitlement on Lot 10 and undertake alterations to Shearwater Cottage and Cyclone Alley to consolidate those two cottages at Lot 10 in DP 1202580, 78 Anderson Road, Lord Howe Island, be approved subject to the following conditions:

1. Approved Plans and Supporting Documentation

The development is to be carried out in accordance with the plans and documentation provided with DA No. 2018.04 as listed below and endorsed with the Lord Howe Island Board's stamp, except where amended by other conditions of consent.

- a) Completed DA Form prepared by Diane Owens, dated 19th February 2018
- b) Amended Statement of Environmental Effects in the DA Form prepared by Diane Owens, dated 19 February 2018
- c) The following plans:
 - Site Plan, Floor Plan, Elevations prepared by Diane Owens submitted as part of the amended DA documentation received in February 2018.

Reason: To ensure the development is carried out in accordance with the details submitted in the DA.

2. Dwelling Entitlement and Construction of a New Dwelling

A dwelling entitlement is acknowledged in respect of the subject application for consolidation of the two existing dwellings being Cyclone Alley and Shearwater Cottages, into one dwelling. This development consent however grants no approval for any such future dwelling on the subject site.

To activate the above dwelling entitlement a separate Owner's Consent and Development Application will be required to be lodged and approved by the LHIB for any dwelling on the subject site in accordance with the acknowledged dwelling entitlement. For clarity it is noted that such an application will not be considered to be a new dwelling under clause 26, LHI LEP 2010.

Reason: To provide clarity as to what is approved as part of the subject DA and to confirm there is an available dwelling entitlement credit related to this subject DA.

3. Construction Certificate

- a) A construction certificate is required to be approved and issued by an Accredited Certifier, prior to the commencement of any works on site, in respect of the proposed consolidation building works to the existing Cyclone Alley and Shearwater Cottages.
- b) All construction work is to be carried out and completed in accordance with the National Construction Code (NCC)/ Building Code of Australia (BCA).
- c) The applicant is to ensure that the Construction Certificate Plans are the same as the approved DA Plans.
- d) Prior to issuing a Construction Certificate the applicant is to provide evidence of **payment of a Long Service Levy** as per section 34 of the Building and Construction Industry *Long Service Payments Act 1986*.
- e) Prior to the issuing of a Construction Certificate the applicant is to provide evidence that the licensed contractor/builder undertaking the residential building work has taken out **Home Warranty Insurance** with a minimum cover of \$340,000 as per the Home Building Act 1989.
- f) Prior to the issuing of a Construction Certificate the applicant is to ensure compliance with any/all conditions imposed by the Board as part the Development Application approval process.

Reason: To ensure construction is undertaken in accordance with requirements.

4. Ecology and Habitat

- a) Construction shall occur outside of the nesting season for Flesh-footed Shearwater from 1 September to 30 May. If construction needs to commence within the nesting season a prior site inspection shall be conducted by the MEWH to ascertain if there are any active nest burrows within the subject site. If there are active nests then construction shall be suspended until the end of the nesting season. If there is no activity construction can commence.
- b) If any live LHI Gecko or LHI Placostylus are detected during works they must be moved to similar habitat structures in the adjacent area (e.g. fallen timber within dense native vegetation, old garage bedsits/structures) away from the development site so they can escape predation by predators such as LHI Currawong, LHI Woodhen and rodents.
- c) All building materials and building activity are restricted to being stock piled on cleared open areas.

Reason: To ensure ecological communities are not adversely impacted by the development.

5. Fire Safety

The applicant is to ensure that fire detection and early warning devices, such as automatic smoke detectors, are installed so that occupants may evacuate, in the event of fire, to a place of safety. The placement of early warning devices is to be in accordance with AS1851.8.

Reason: To ensure the resulting development is fire safe

6. Water

- a) The applicant is to ensure that all plumbing work, including the disconnections and connections to the wastewater system, is to be undertaken by a licensed plumber.
- b) The applicant is to ensure that all waterproofing of wet areas such as bathrooms is to be certified by an appropriate person. The **waterproofing certification** is to be provided to the Board **before issuance of an Occupancy Certificate**.
- c) The applicant is to ensure all stormwater is diverted to existing rainwater tanks as outlined in the application or an appropriate absorption trench is to be provided. The method of management of the stormwater is to be shown on the construction drawings.

Reason: To ensure works are undertaken appropriately.

7. Waste Management

- a) The applicant is to ensure that any waste generated from the proposed development is to be contained within the site and then be recycled or disposed of at the authorised waste management facility on the Island. This excludes asbestos waste, if any, which is the responsibility of the applicant to remove from the Island.
- b) No waste shall be placed in any location or in any manner that would allow it to fall, descend, blow, wash, percolate or otherwise escape from the site.
- c) The applicant is advised that waste disposal fees will be charged in accordance with the Lord Howe Island Board's schedule of fees and charges.

Reason: To ensure the proper removal of waste is carried out.

8. Waste Management – Asbestos

If any material containing asbestos is found on site during the demolition process the material is to be removed and disposed of in accordance with WorkCover requirements. An appropriately licensed asbestos removalist must complete all asbestos works if they consist of the removal of more than 10m² of bonded asbestos and/or any friable asbestos.

Reason: To ensure the proper removal of waste is carried out.

9. Construction

- a) The applicant is to ensure that any electrical work must be carried out by a licensed electrician and an **Electrical Compliance Certificate issued with, or before, the application for Occupancy Certificate** for the building additions and alterations.
- b) All works are to be undertaken in accordance with approved Construction Certificate documentation.
- c) Pre-Commencement meeting to be arranged with the Owner, Builder and Board Personnel prior to any work commencing on site. If the applicant is nominating the Lord Howe Island Board as the Principal Certifying Authority, this meeting will constitute the pre-commencement and site set-out inspection.
- d) No excavation is to be carried out until the site is inspected by the LHIB Senior Electrical Officer.

Reason: To ensure works are undertaken appropriately.

10. Inspections

The Principal Certifying Authority (PCA) will require the following mandatory inspections to be undertaken during development works:

Class 1a -

- f) Pre-commencement and site set-out
- g) Prior to covering of the framework for any floor, wall, roof or other building element
- h) Prior to covering waterproofing in any wet areas
- i) Storm-water connections
- j) Final Inspection after the building work has been completed and prior to any Occupation Certificate being issued in relation to the building

Please note: It is the applicant or their representative's responsibility to book inspections with the Lord Howe Island Board at least 48 hours prior. Failure to do so may result in a delay in the inspection being undertaken.

Reason: This condition is prescribed under the Environmental Planning and Assessment Regulation 2000.

11. Construction Hours

To limit the impact of the development on adjoining owners, all construction work shall be restricted to the hours of 7.00am to 6.00pm Monday to Friday and 8.00am to 1.00pm

Saturdays. No construction work shall take place on Sundays or Public Holidays.

Reason: To limit the potential for any loss of amenity to adjoining owners and/or occupiers associated with the construction of the approved works.

12. Notice of Commencement

Notice must be given to the Lord Howe Island Board at least two (2) days prior to the commencement of building work.

Reason: This is a legislative requirement.

13. Erection of construction signs

A sign must be erected in a prominent position on any site on which building work, is being carried out:

- a) showing the name, address and telephone number of the principal certifying authority for the work, and
- b) showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours, and
- c) stating that unauthorised entry to the work site is prohibited.
- d) Any such sign is to be maintained while the building work is being carried out, but must be removed when the work has been completed,

Reason: This condition is prescribed under the Environmental Planning and Assessment Regulation 2000.

14. Site Landscaping

Existing site landscaping and all major areas of native plantings on site are to be protected and maintained. No significant native vegetation is to be removed or damaged.

Reason: To minimise vegetation removal.

ADVICE TO APPLICANT:

1. Significant Native Vegetation

Damage to, or removal of Significant Native Vegetation is prohibited, as per Clause 11 of LEP 2010.

2. Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* provides that a person must not take an action which has, will have, or is likely to have a significant impact on


A matter of national environmental significance (NES) matter; or Commonwealth land without an approval from the Commonwealth Environment Minister.

This application has been assessed in accordance with the New South Wales Environmental Planning & Assessment Act, 1979. The determination of this assessment has not involved any assessment of the application of the Commonwealth legislation.

It is the proponent's responsibility to consult Environment Australia to determine the need or otherwise for Commonwealth approval and you should not construe this grant of consent as notification to you that the Commonwealth EPBC Act does not have application.

The Commonwealth EPBC Act may have application and you should obtain advice about this matter. There are severe penalties for non-compliance with the Commonwealth legislation.

Section 8.7 and 8.10 of the Act confers on an applicant who is dissatisfied with the determination of a consent authority a right of appeal to the Land and Environment Court. This right of appeal is only valid for six months from the date of the consent. To determine the extent to which the consent is liable to lapse refer to Section 4.53 of the Act.

Report prepared by:	Endorsed by:
	
Peter & Michelle Chapman Date: 29 April 2018 LHI Consultant Town Planners All About Planning	Penny Holloway Date: 3 May 2018 Chief Executive Officer Lord Howe Island Board

Board Report: May 2018	Date of Issue: 7 (iv)	Rec. No: ED18/3557
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LORD HOWE ISLAND BOARD

Planning Assessment Report

Item DA 2018.06 – Ground and first floor alterations and additions to an existing dwelling, including a 7m x 4.1m first floor covered deck at Portion 282, Middle Beach Road, Lord Howe Island.

1 Summary Assessment Report

Assessment Officer	Peter and Michelle Chapman – AAP Consultant Planners
Address/Property Description	Portion 282 – Middle Beach Road, Lord Howe Island
Proposal	Alterations and Additions to Existing Dwelling
DA No	DA 2018.06
Applicant	Mr Corey Davies
Owner Consent Granted	Owner consent application number OC 2018-02 granted 27 September 2017
Estimated Cost of Development	\$150,000.00
Site Inspection	Two separate site inspections have been carried out by the LHIB's town planners including inspection of an adjoining property related to which objections to this DA have been received.
Zone	Zone 2 Settlement. The proposed development is permissible with consent from the LHI Board.
Significant Native Vegetation Map	A couple of small areas at the very rear of the site are mapped SNV however no SNV will be damaged or removed as part of this application.
Notification	The DA was placed on public exhibition from 31/01/2018 to 14/02/2018.
Submissions Received	A number of objections have been received from adjoining neighbours residing on Portion 295, Middle Beach Road and who operate the 'Treehouse' tourist accommodation unit.

2 Consent Authority

The LHIB CEO and Chairperson has delegation to grant consent to Development Applications (DAs) subject to the following conditions:

- The value of the development must not total \$150,000 or more (as calculated by the LHIB).
- The DA must not relate to the subdivision of land or the erection of new dwellings.
- No more than 3 written submissions received within 14 days of the public exhibition period.

The subject DA proposal does not comply with the above delegations to the CEO, as the estimated cost of development is \$150,000.00.

3 Site Description

The subject site is legally described as Portion 282, Middle Beach Road, Lord Howe Island. The lot is irregular in shape and has a total site area of approximately 6,007m². The site has an oblique angled 47m frontage to Middle Beach Road and three existing driveway entrances (as detailed in figure 1 following).

The subject site currently contains four residential dwellings and associated structures and some landscaping. The dwelling at the northern portion of the site currently occupied by Corey Davies is the subject of this application.



Figure 1: Aerial of subject site Portion 282 with context of surrounding properties

The site is immediately adjoined by a residential L shaped lot with a detached dwelling to the south west, the dis-used LHIB quarry on Middle Beach Road to the north and another L shaped portion to the north east (Portion 295), which includes a dwelling and a self-contained, detached tourist accommodation unit known as the Treehouse.

The site is located within Zone 2 Settlement. The site is surrounded by the Settlement zone to the northeast and southwest, with the LHIB quarry being zoned Special Uses. Zone 7 Environment Protection adjoins the site to the southeast and east. (Figure 2).

There are mapped areas of significant native vegetation (SNV), at the rear of the site as shown in Figure 3 but this vegetation is not in vicinity of the proposed works.

The site is not flood prone.

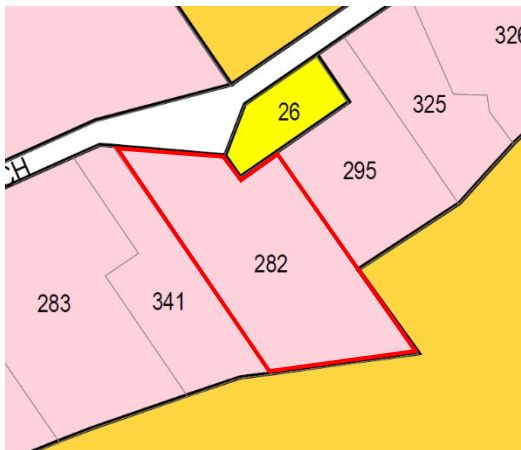


Figure 2: Extract from the Lord Howe Island Local Environmental Plan 2010 Zoning Map Zone 2 Settlement.

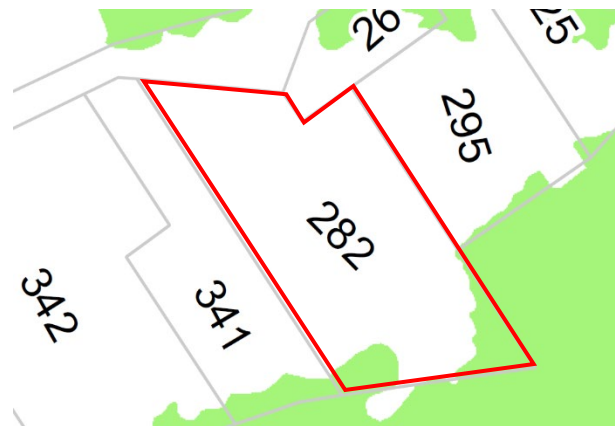


Figure 3: Extract from the LEP 2010 SNV Map. Approximate location of subject site is identified in red.

3.1 Site History

- OC 2018-02 Additions to existing dwelling (the subject of this DA assessment) consented to on 27 September 2017
- MDC 2016-04 for modification to include a roof over an existing deck
- DA 1999-5 for the construction of a dwelling

Comment: The approved plans submitted with OC 2018-02 included an 8.3m x 3.6m, ground and first floor addition to the existing dwelling and a 5m x 3.6m first floor covered deck. The OC consent issued by the LHIB in 2017 differs from the plans submitted with the subject DA which propose an 8.3m x 4m, ground and first floor dwelling addition and a 7m x 4.1m first floor covered deck. The applicant has advised the reason for the longer proposed deck was to avoid the required support posts affecting an area of existing paving.

Noting the above, to maintain broad consistency between the approved OC and proposed DA plans and to avoid additional building bulk and minimise potential noise impacts, this assessment includes a recommendation to cut the first floor deck and associated roof back to 5m in length, as per the 2017 approved OC.

4 Proposed Development

The proposed development is for alterations and additions to the front dwelling closest to Middle Beach Road, this being one of four (4) existing detached dwellings on the subject site. The proposed alterations and additions to this dwelling include:

- An 8.3m x 4m, ground and first floor (2 storey) addition attached to the eastern side of the existing dwelling within an excavated area immediately adjoining the dwelling.

At ground level the additions will include a new bedroom and ensuite, a study and bathroom, and at first floor level a new open lounge area. The proposed additional internal floor space totals 67.23m². Existing floor space for the subject dwelling is 84.88m², resulting in a proposed total floor area of 152.1m²

- A 7m x 4.1m first floor covered timber deck, extending directly north of the above additions. The total proposed deck area = 28.7m². The deck is proposed to be open on three sides and has a skillion metal roof falling west into the site.
- Minor ground level front and rear deck additions to the dwelling.
- The subject application was recently amended to include the closure of the existing (central) driveway access for the subject dwelling and establish a new native planting area across this part of the site's frontage.

The plans also indicate a proposal for a new timber retaining wall, however it is noted that this wall was already constructed at the time of AAP's first site inspection in November 2017.

The proposed dwelling additions, including the elevated timber deck will at their closest be located 11m from the front boundary of the site with Middle Beach Road, 6m from the corner boundary with the LHIB Quarry and around 28m from the common boundary to the northeast with Portion 295.



Above: Internal view of front of existing dwelling



Above: Internal panorama of front of existing dwelling



Above: View of subject site from Middle Beach Road, showing the existing centrally positioned driveway that is proposed to be closed and revegetated



Above and below: Proposed area for ground and first floor additions, showing constructed retaining walls

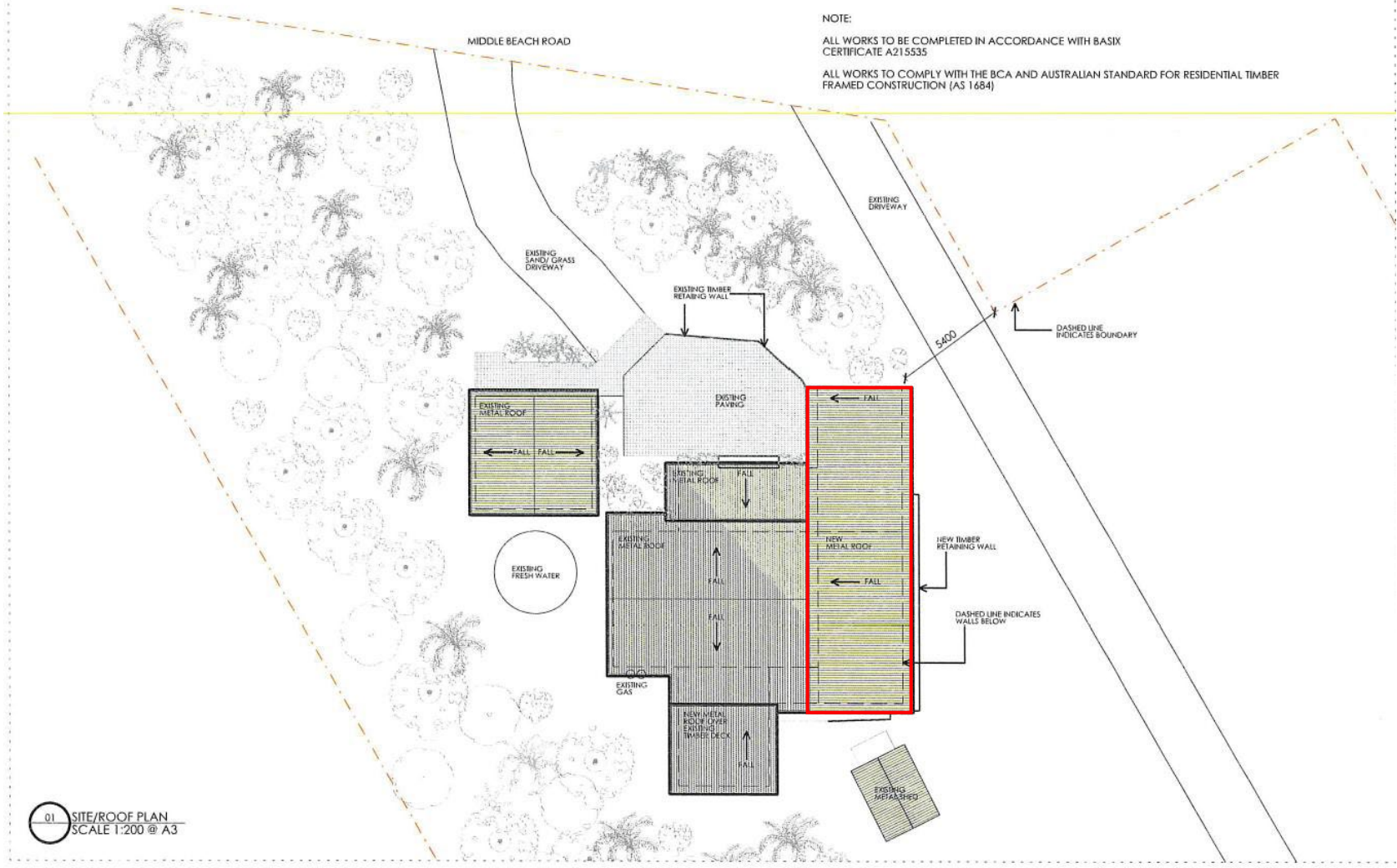


Plans including a site plan, floor plan and elevations were submitted, as reproduced below.

DRAWING REGISTER:		ISSUE DATE+REVISION		
DRWG NO.	DRWG TITLE	SCALE	03.10.17	27.10.17
012 DA-A-00	SITE / ROOF PLAN	1:200@A3	DA SUBMISSION	DA SUBMISSION
012 DA-D-01	GROUND & FIRST FLOOR PLAN	1:100@A3	DA SUBMISSION	DA SUBMISSION
012 DA-E-01	ELEVATIONS - NORTH & SOUTH	1:100@A3	DA SUBMISSION	DA SUBMISSION
012 DA-E-02	ELEVATIONS - EAST & WEST	1:100@A3	DA SUBMISSION	DA SUBMISSION
012 DA-F-01	SECTION A-A	1:100@A3	DA SUBMISSION	DA SUBMISSION

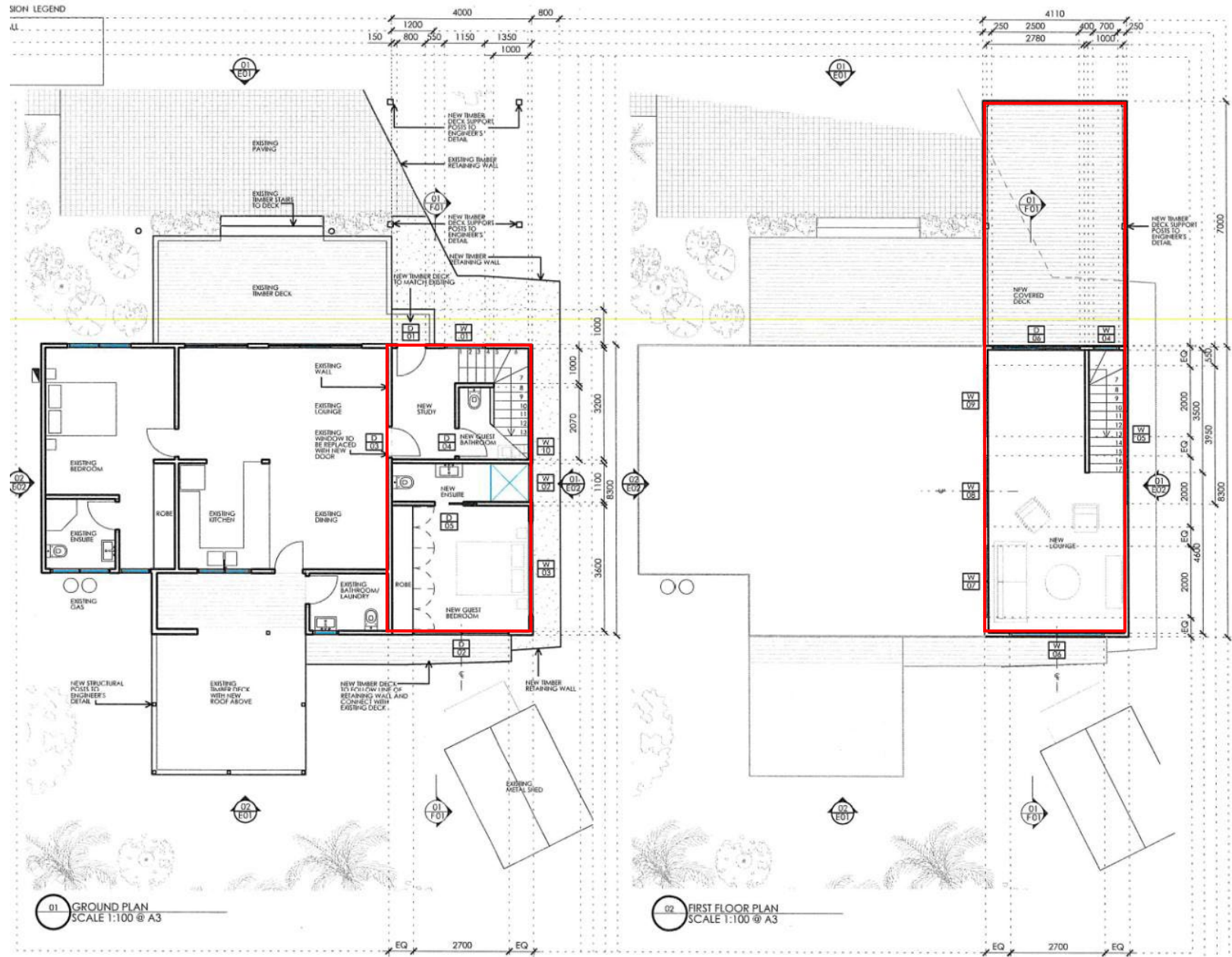
AREA CALCULATIONS	
SITE INFO	AREA
EXISTING DWELLING	66 SQM
EXISTING GARAGE	31 SQM
PROPOSED EXTENSION (GROUND)	31.5 SQM
PROPOSED EXTENSION (LEVEL Q1)	31.5 SQM

NOTE:
 ALL WORKS TO BE COMPLETED IN ACCORDANCE WITH BASIX CERTIFICATE A215535
 ALL WORKS TO COMPLY WITH THE BCA AND AUSTRALIAN STANDARD FOR RESIDENTIAL TIMBER FRAMED CONSTRUCTION (AS 1684)



01 SITE/ROOF PLAN
 SCALE 1:200 @ A3

Site Plan



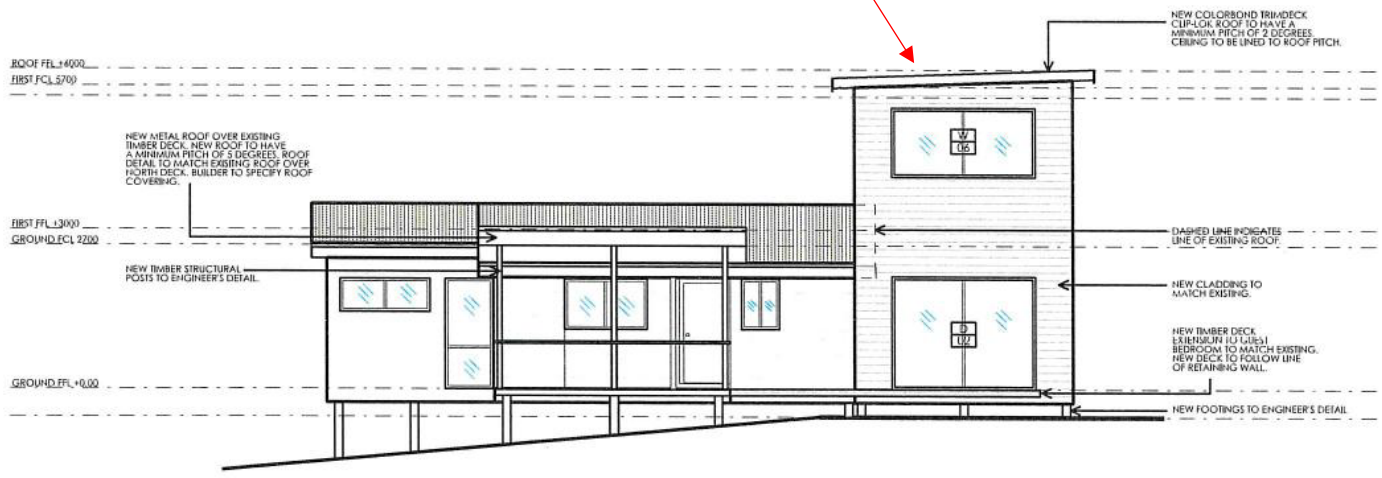
Floor Plan

Front & Rear Elevations



01 NORTH ELEVATION
SCALE 1:100 @ A3

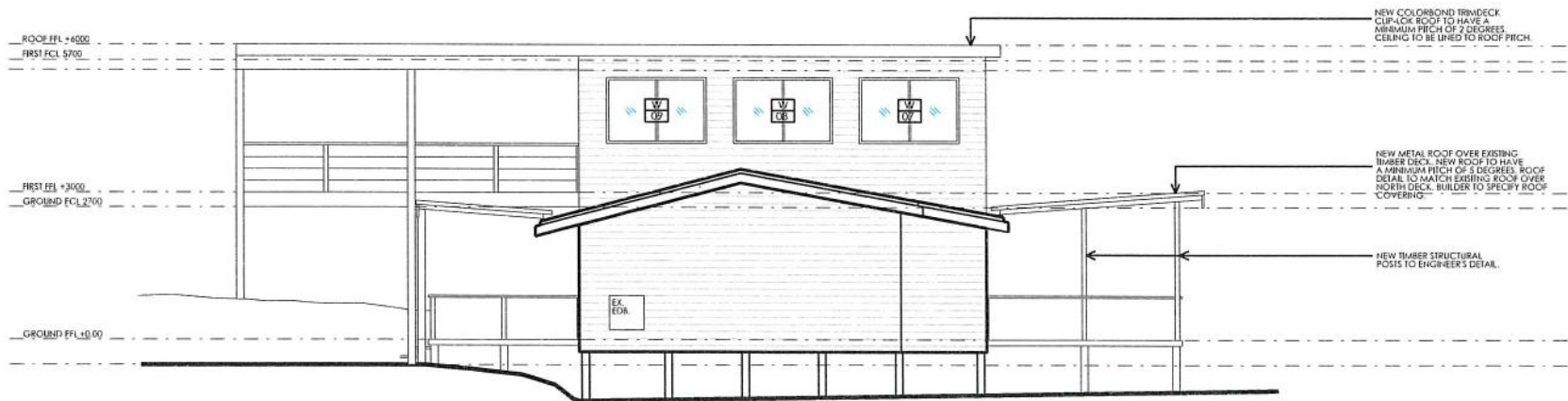
Proposed 2 Storey Addition



02 SOUTH ELEVATION
SCALE 1:100 @ A3



01 EAST ELEVATION
SCALE 1:100 @ A3



02 WEST ELEVATION
SCALE 1:100 @ A3

Eastern & Western (side) Elevations

5 Referrals

The LHIB has advised that the application was distributed to the relevant internal specialists for review. No objections to the proposal were raised subject to relevant conditions. The table below outlines the issues raised by these specialists and the response.

5.1 Comments received from internal specialists

Specialist	Issue	Comment
Manager Environment World Heritage (Hank Bower)	<p>The property is zoned Zone No. 2 – Settlement according to the Lord Howe Island Local Environmental Plan 2010. The objectives of this zone are: to provide opportunities for limited residential and commercial development. The proposal is consistent with these objectives.</p> <p>The proposed construction/extension to an existing dwelling is located wholly within an existing development footprint and established garden and will therefore not result in the removal of any native vegetation.</p> <p>Subsequently, the proposal will not result in the removal of any mapped Significant Native Vegetation (SNV).</p> <p>There is native vegetation in the study area mapped by Sherringham et al 2016 as community 19 Maulwood – Kentia Palm – Cottonwood - Greybark lowland forest, 12a Kentia Palm Forest on coral sand and calcarenite, Nr – Native remnant, Np – Plantation and Ep – Environmental planting. There is vegetation at the study area mapped by Pickard (1983) as vegetation associations Hf <i>Howea forsteriana</i>. The Sherringham et al 2016 mapping is considered accurate. There is no vegetation identified for removal for this proposal.</p> <p>The subject site provides potential habitat for at least 7 threatened species being; LHI <i>Placostylus bivaricosus</i>, LHI <i>Gecko Christinus guentheri</i>, LHI Currawong <i>Strepera graculina crissalis</i>, LHI Golden Whistler <i>Pachycephala pectoralis contempta</i>, LHI Silvereye <i>Zosterops lateralis tephroleura</i>, Lord Howe Woodhen <i>Gallirallus sylvestris</i>, and Black-winged Petrel <i>Pterodroma nigripennis</i>.</p> <p>The LHI Currawong, LHI Golden Whistler, LHI Silvereye and LH Woodhen are all widely distributed across the Island and regularly occupy forests and gardens within the settlement. They are commonly found co-habiting with human infrastructure within the settlement area and in the case of the LHI Currawong, LHI Golden Whistler, LHI Silvereye and LH Woodhen will forage and roost around dwellings and associated infrastructure. However, the core habitat resources for all these species is dense native vegetation, which will not be impacted by the proposal.</p> <p>The Black-winged Petrel nest seasonally on LHI in burrows, predominantly in areas with dense native vegetation. The Black-winged Petrel has known nesting habitat in forested areas upslope of the lease and could potentially have nests in areas of native vegetation within the Study area. No areas of native vegetation are to be removed so there will be no impact to this species.</p> <p>The LHI Gecko is known to occur throughout the settlement of LHI</p>	Noted and recommended accordingly

	<p>where it can utilise human made structures and stock piled building materials (e.g. sheets of corrugated iron etc) as sheltering habitat. It can be found within cavities of dwellings that exclude rodents and shelters within cracks and cavities in trees and rocks. It is possible that LHI Gecko could be present within the existing building and could be detected during renovations. Any animals detected during works must be moved to similar habitat structures in the adjacent area (e.g. fallen timber within dense native vegetation, old dwellings/structures) away from the development site</p> <p>The Subject site includes areas mapped as modelled High Quality Habitat (A) for LHI Placostylus. This mapping is considered accurate where there is intact native vegetation, which will not be impacted by this proposal so will not impact this species. The LHI Placostylus favours forested habitats on calcarenite soils with a dense shaded canopy, continuity with large areas of vegetation and a thick moist leaf layer in which they can burrow during dry times. This habitat is present at the Subject site, although is mostly restricted to boundaries and does not include any areas impacted by this proposal. The lease already conducts rodent baiting in accordance with the Boards rodent baiting schedule.</p> <p>A 5 Part Test of significance was not submitted with the DA as the proposal is located within an existing development footprint and on adjacent cleared land. This assessment concludes that the proposed development will not result in any significant impacts on any Threatened species, populations or ecological communities, or their habitats providing the recommendations below are adhered to.</p> <p>Recommendations That the development be approved subject to:</p> <ul style="list-style-type: none"> • If any live LHI Gecko or LHI Placostylus are detected during works they must be moved to similar habitat structures in the adjacent area (e.g. fallen timber within dense native vegetation, old dwellings/structures) away from the development site so they can escape predation by predators such as LHI Currawong and LH Woodhen. • All building materials and building activity are restricted to being stock piled on cleared open areas. 	
<p>Team Leader, Compliance and Projects (Kate Dignam)</p>	<p>Building Class: Class 1a.</p> <p>Notes Relating to issuing of a Construction Certificate</p> <p>I have assessed the applicant's DA and note the following:</p> <ul style="list-style-type: none"> • All construction work is to be carried out and completed in accordance with the National Construction Code (NCC)/Building Code of Australia (BCA). • Ensure Construction Certificate Plans are the same as the approved Development Application Plans. • Prior to the issuing of a Construction Certificate the applicant is to provide detailed structural engineering plans for the additions to dwelling, including covered decks and the new retaining wall. The applicant is to ensure the structural plans address compliance with construction in Wind Zone A and are certified by an appropriately qualified Structural Engineer in accordance with AS1170.2. 	<p>Noted and recommended accordingly</p>

	<ul style="list-style-type: none"> • Prior to the issuing of a Construction Certificate the applicant is to provide a Basix Certificate for the dwelling as per the EP&A Regulation 2000. • The Construction Certificate plans are to include BASIX commitments nominated in the BASIX Certificate. BASIX Commitments are to be certified by a certifying authority before the issuing of an Occupation Certificate. • Prior to the issue of a Construction Certificate the applicant is to provide evidence of payment of a Long Service Levy as per section 34 of the Building and Construction Industry Long Service Payments Act 1986. • Prior to the issue of a Construction Certificate the applicant is to provide evidence that the licensed contractor/builder undertaking the residential building work has taken out Home Warranty Insurance with a minimum cover of \$340,000 as per the Home Building Act 1989. • Prior to the issue of a Construction Certificate the applicant is to ensure compliance with any/all conditions imposed by the Board as part the Development Application approval process. <p>Access for People with a Disability</p> <ul style="list-style-type: none"> • No relevant matters. <p>Fire Safety</p> <ul style="list-style-type: none"> • The applicant is to ensure that fire detection and early warning devices, such as automatic smoke detectors, are installed in the new living spaces so that occupants may evacuate, in the event of fire, to a place of safety. The placement of early warning devices is to be in accordance with AS1851.8. <p>Flood Management</p> <ul style="list-style-type: none"> • No relevant matters. <p>Wastewater</p> <ul style="list-style-type: none"> • The wastewater treatment system for this dwelling does not comply with the LHI On-site Wastewater Management Strategy. • The applicant should be advised that the deadline for the conversion/upgrade of a Medium Risk Treatment System (AWTS) to a compliant NSW Health, and LHI On-site Wastewater Management Strategy, wastewater treatment system was 31 October 2017. <p>Water</p> <ul style="list-style-type: none"> • All plumbing work, including the disconnections and connections to the wastewater system, is to be undertaken by a licensed plumber. • All waterproofing of wet areas such as bathrooms is to be certified by an appropriate person and certification to be provided with application for Occupancy Certificate. • Applicant to ensure all stormwater from the new roof structure is diverted to existing rainwater tanks or an appropriate absorption trench provided. The method of management of the stormwater is to be shown on the construction drawings. 	
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	<p>Waste Management</p> <ul style="list-style-type: none"> • Any waste generated from the proposed development is to be contained within the site and then be recycled or disposed of at the authorised waste management facility on the Island. This excludes asbestos waste, if any, which is the responsibility of the applicant to remove from the Island. • Waste disposal fees will be charged in accordance with the Lord Howe Island Board's schedule of fees and charges. • No waste shall be placed in any location or in any manner that would allow it to fall, descend, blow, wash, percolate or otherwise escape from the site. <p>Construction</p> <ul style="list-style-type: none"> • Any electrical work must be carried out by a licensed electrician and an Electrical Compliance Certificate issued with, or before, the application for Occupancy Certificate for the development works. • All works are to be undertaken in accordance with approved Construction Certificate documentation. • Pre-Commencement meeting to be arranged with the Owner, Builder and Board Personnel prior to any work commencing on site. This meeting will constitute the pre-commencement inspection. <p>Inspections</p> <ul style="list-style-type: none"> • The Principal Certifying Authority (PCA) will require the following mandatory inspections to be undertaken during development works: <ul style="list-style-type: none"> a) Pre-commencement and site set-out b) After excavation for, and prior to the placement of, any footings – including the retaining wall c) Prior to pouring any in-situ reinforced concrete building element d) Prior to covering of the framework for any floor, wall, roof or other building element e) Prior to covering waterproofing in any wet areas f) Storm-water connections g) Final Inspection after the building work has been completed and prior to any Occupation Certificate being issued in relation to the building. 	
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6 Planning Assessment

The following planning assessment has been undertaken for the proposed development taking into account the relevant statutory controls, and other relevant matters as detailed below in this report.

6.1 Commonwealth legislation

6.1.1 *Environmental Protection and Biodiversity Conservation Act 1999*

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) provides for the protection of certain matters of national environmental significance (NES)

listed under the Act, which include:

- World Heritage Areas
- National Heritage Places
- Ramsar wetlands of international importance
- Commonwealth listed threatened species and ecological communities
- Listed migratory species
- Commonwealth marine areas
- Great Barrier Reef Marine Park
- Nuclear actions.

Under the EPBC Act, Commonwealth approval is required from the Minister of Sustainability, Environment, Water, Population and Communities (Minister) for any action that will have or is likely to have a significant impact on a NES, or on the environment of Commonwealth land or on the environment if the action is proposed to be taken by a Commonwealth agency (known as a 'controlled action').

A person proposing to take a controlled action must refer the proposal to the Minister for determination. A person proposing to take an action that the person thinks is not a controlled action may refer the proposal to the Minister for the Minister's decision whether or not the action is a controlled action.

Lord Howe Island is a declared World Heritage Property. Section 12 of the EPBC Act 1999 requires approval of actions that involve a significant impact on a declared World Heritage Property.

An Advisory Note has been included in the recommendation to this report, that the applicant make independent enquiries with the Australian Government's Department of the Environment and Energy, to confirm whether they consider the proposed actions as detailed in this report are likely to have any impact on the heritage values of the:

- *World Heritage and National Heritage listed Lord Howe Island Group - ID 105085 and 105694, and*
- *Register of the National Estate listed Lord Howe Island Group and Marine Environs - ID 201.*

6.2 NSW legislation

6.2.1 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (NSW) (BC Act) sets the framework for the listing of threatened species, populations and ecological communities, and key threatening processes in NSW, and the preparation and implementation of recovery plans and threat abatement plans.

The BC Act also provides the mechanism for applying for and obtaining licences to take actions, which could result in harm to a threatened species, population or ecological community, or their habitat, or damage to critical habitat.

Please refer to the internal referral comments received from Hank Bower (Manager Environment World Heritage) provided earlier in section 6.1 of this report. No adverse environmental or ecological impact from the proposal is envisaged, nevertheless appropriate conditions to address any potential environmental impacts have been included in the attached report recommendation.

6.2.2 NSW Heritage Act 1977

The main objective of the Heritage Act 1977 (Heritage Act) is to encourage the conservation of the heritage of NSW. Pursuant to Section 4.45 of the EP&A Act 1979, Section 58 and Section 57(1) of the Heritage Act are triggered by this application.

The Lord Howe Island Group is listed on the State Heritage Register. Section 57 (1) of the Heritage Act requires that all applications to carry out development on Lord Howe Island, be referred to and granted concurrence by the NSW Heritage Office. This provision is overridden however by the operation of Section 57 (2), in the circumstance of the Minister issuing a Heritage Exemption Order.

On 9 January 2015, the NSW Minister for Heritage published an order under section 57(2) of the Heritage Act, providing for an exemption to refer specific activities to the Heritage Division, instead requiring referral of only those applications requiring consent under clause 39 of the LHI LEP 2010. The site does not require consent under Clause 39 as it is not a listed heritage item within the LEP 2010. Referral of this application to the NSW Heritage Division is therefore not required.

6.3 Local Statutory Plans and Policies

6.3.1 Lord Howe Island Local Environmental Plan 2010

The LHI LEP 2010 is the principal environmental planning instrument applying to the proposal. The following summary table details the LEP provisions relevant to the subject proposal, together with assessment and/or comment as required.

LEP 2010 compliance summary table:

LEP 2010 Clause		Complies Y/N	Comment
Part 1 Preliminary			
2	Commencement and Aims of Plan	Y	Each of the aims of the LEP 2010 has been considered in the assessment of this application. As assessed and recommended for amendment in this report, the proposed work to the subject existing dwelling can be undertaken with minimal negative environmental impact and/or disturbance to protected flora and fauna native to the Island.
3	Land to which plan applies	Y	The LEP 2010 applies to the subject site, which is part of Lord Howe Island, as defined in Section 3 of the Lord Howe Island Act 1953.
6	Who is the consent authority for this Plan?	Y	The Lord Howe Island Board (LHIB) is the relevant consent authority.
7	Maps	Y	Noted.
9	Exempt Development	N/A	The proposed works are not listed as Exempt Development within Schedule 1 of the LEP.
11	Matters that must be satisfied before development consent granted	Y	All relevant matters contained within Clause 11 are satisfied – refer to the Clause 11 assessment following.
Part 2 General Provisions applying in particular zones			
12	Land Use Zones	Y	The land is zoned Zone 2 Settlement

14	Zone 2 Settlement	Y	There is no change of use proposed with this application, the subject DA complies with the LEP zone objectives and is permissible with the consent of the LHIB.
Part 3 Special Provisions			
Division 1 Provisions for particular kinds of development			
27(1)	Enlargements or extensions of dwellings	Y	The proposal is assessed as satisfactory pursuant to clause 27 of the LEP 2010, as follows: a) The gross floor area of the subject dwelling will be a total 152.1m ² , well under the 300m ² maximum GFA requirement. b) No SNV will be removed as a result of this proposal as outlined earlier in this report, c) On the 6,007m ² subject site with 707.5m ² of (the 4) existing and proposed enlarged dwellings and structures, the site will continue to have 88.2% of the allotment being landscaped area, with at least 35% of this landscaping comprising native vegetation.
29	Maximum height of buildings	Y	The two-storey addition to the existing dwelling will have a maximum height in the order of 6.1m and will therefore comply with the 7.5m height limit of the LEP.
Division 2 Provisions that apply to particular land			
32 (2)	Setbacks of buildings in Zone 1, 2 or 5: <ul style="list-style-type: none"> - 10m to a road frontage and - 5m all other boundaries 	Y & N	As stated earlier in the description of the proposal the extensions will be approximately 11m from the front boundary with Middle Beach Road, 6m from the corner boundary with the LHIB Quarry and around 28m from the common boundary to the northeast with Portion 295. The above setbacks comply with clause 32(2) of the LEP.
33	Landscaping to be carried out in Zone 2	Y	The proposed development will not have a detrimental impact on the established landscape character or dispersed pattern of housing. This is partly due to the applicant's proposal to close the existing central driveway access for the subject dwelling and establish a new native planting area across this part of the site's frontage. A suitable condition to this effect is included in the recommendation to this report.
Division 4 Miscellaneous			
41	What DA's are required to be advertised?	Y	As stated in the introduction of this report, the application has been formally notified with submissions being received from the immediately adjoining property to the east – Portion 295 Middle Beach Road. The issues raised are discussed later in this report in Section 7.
42	Requirement for environmental report	NA	The proposal is not likely to have a significant adverse impact on the environment and therefore an environmental report is not required.

Clause 11 Matters that must be satisfied before development consent granted

Clause 11 of the LHI LEP 2010 provides that the consent authority must not consent to the carrying out of development unless it is satisfied of the following matters (to the extent that they are of relevance to the proposed development).

Clause 11 Compliance summary table:

CLAUSE 11 REQUIREMENT	COMPLIES Y/N	DISCUSSION
<p>a) <i>The proposed development is consistent with the aims of this plan and the objectives of any zone, as set out in the plan, within which the development is proposed to be carried out,</i></p>	<p>Y</p>	<p>The subject site is zoned 2 Settlement under the LHI LEP 2010. The proposal as assessed and recommended for amendment in this report is consistent with the aims of the LHI LEP 2010 and objectives of Zone 2 settlement.</p>
<p>b) <i>There is an adequate area available for the disposal or treatment of any effluent treatment or disposal system and any such system will not have any adverse impact on groundwater quality,</i></p>	<p>Y (subject to recommended condition)</p>	<p>The proposed additions to the dwelling will add to the existing waste water load on the site. It is noted (as advised earlier in the internal staff referrals) that the existing wastewater treatment system for this dwelling does not comply with the LHI On-site Wastewater Management Strategy and that the deadline for the conversion/upgrade of a Medium Risk Treatment System (AWTS) to a compliant NSW Health, and LHI On-site Wastewater Management Strategy, wastewater treatment system was 31 October 2017.</p> <p>The recommendations of this report includes a condition requiring that prior to release of the Construction Certificate for the proposed dwelling alterations and additions (as amended) the existing onsite wastewater treatment system for the subject dwelling shall be upgraded in compliance with the LHI On-site Wastewater Management Strategy.</p>
<p>c) <i>No part of the proposed development:</i></p> <ul style="list-style-type: none"> i. <i>will result in any damage to, or removal of, significant native vegetation, or</i> ii. <i>will have a significantly adverse impact on the habitat of any plants, or animals, that are native to the Island,</i> 	<p>Y</p>	<p>Further to the earlier discussion of the proposal under Clause 27(1)(c) of the LEP, and the referral comments/ assessment from the Manager Environment World Heritage (ref Section 5 of this report), it has been established that there will be no unreasonable impact on the mapped SNV located on the site or the existing native landscaped character and dispersed pattern of housing in the area.</p> <p>The closure of the central driveway and proposed new native landscape plantings across the existing driveway and site frontage to Middle Beach Road will support native vegetation on the site and Island and also improve the landscape quality of the site.</p>
<p>d) <i>Access is, or will be, available to the site of the proposed development and the provision of any such access will not:</i></p> <ul style="list-style-type: none"> i. <i>result in any damage to, or the removal of, significant native vegetation, or</i> ii. <i>have a significantly adverse impact on the habitat of any plants, or</i> 	<p>Y</p>	<p>The applicant's proposed closure of the central driveway, this being one of three existing driveways into the subject site, is considered a positive outcome that will reduce potential for traffic conflicts on Middle Beach Road and allow additional native vegetation planting.</p> <p>The two remaining driveways will provide adequate access to the property.</p>

<i>animals, that are native to the Island,</i>		
<i>e) Any proposed landscaping will provide various species of plants that are native to the Island and common in the locality to enhance any significant native vegetation,</i>	Y	Refer to the above comments in relation to c11(c) & (d), and the earlier assessment provided in section 6.3.1 of this report under clause 27(1)(c) of the LHI LEP 2010.
<i>f) The proposed development will not be adversely affected by any landform limitations, including flooding, landslip, unstable soils and steep slopes,</i>	Y	The subject site is not identified as being affected by any identified hazard or land form limitation including being flood prone or adjacent to flood prone land, which would otherwise adversely impact the proposed development.
<i>g) Adequate services in respect of the proposed development can be provided without significant additional cost to the Board or the community of the Island,</i>	Y	No additional infrastructure services are required for the proposed alterations and additions to the existing main dwelling.
<i>h) The appearance of the proposed development (when considered by itself or in conjunction with existing buildings and works) will not have any significantly adverse impact on the locality,</i>	Y	As assessed and recommended for amendment in this report, the proposal will not result in a detrimental impact on the visual amenity of the subject site or the locality.
<i>i) The proposed development will not cause any significant overshadowing of adjoining land,</i>	Y	As a two-storey development on a 6,007m ² site, the proposed setbacks to the side and front boundaries, will ensure no overshadowing of any adjoining property will occur.
<i>j) The proposed development will not cause any significant reduction in the privacy of occupiers of adjoining land</i>	Y	<p>As discussed in Section 7 of this assessment, objections to the proposal on the basis of detrimental impacts on acoustic privacy and visual privacy have been received from the neighbours residing on adjoining Portion 295.</p> <p>Visual Privacy</p> <p>As a two-storey development on a 6,007m² site, with complying overall height and complying proposed side and front setbacks to boundaries, it has been assessed that no detrimental visual privacy impacts will occur.</p> <p>The visual impact of the proposal was carefully analysed at a site inspection undertaken in March 2017 by AAP – refer to the detailed discussion of submissions at Section 7 of this report and which includes relevant site photographs.</p> <p>Whilst it has been identified that a small portion of the roof of the proposed deck component of the dwelling extension will be visible, this is assessed to be an overall inconsequential modification to the existing views achieved from the elevated west facing deck of the Treehouse tourist accommodation unit on Portion 295. No</p>

		<p>loss of water/lagoon views will result.</p> <p>The lack of visual impact associated with the proposal is largely attributed to the significant drop in ground level between the subject site and Portion 295 and a setback between the tourist unit and subject dwelling of at least 28m.</p> <p>Acoustic Privacy Aural privacy impacts, especially potential impacts associated with use of the proposed elevated timber deck, on the elevated tourist accommodation unit on Portion 295 have also been carefully considered – refer Section 7.</p> <p>It is assessed as likely that the proposed elevated timber deck, with three open sides and a proposed length of 7m, has potential for acoustic privacy impacts as the deck design is conducive to use for social gatherings. Additionally, the topography of the immediate area is such that noise generated on the subject proposed elevated deck will travel up to the elevated large west facing timber deck of the Treehouse tourist accommodation unit.</p> <p>This assessment recommends modification of the subject proposed deck to reduce the potential for negative acoustic privacy impacts on the occupants of the adjacent tourist accommodation unit in particular.</p>
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6.3.2 Lord Howe Island Development Control Plan 2005

The Lord Howe Island Development Control Plan 2005 (DCP 2005) applies to the subject site and an assessment of the provisions of the DCP relevant to the subject proposal is included in the following table.

DCP Compliance summary table:

LHI DCP 2005 Clause		Complies Y/N	Comment
Part 1 Introduction			
1.2	Plan Objectives	Y	The proposed works as assessed and recommended for amendment by condition in this report are consistent with the Plan objectives.
1.4	Where does plan apply?	Y	This DCP applies to the subject site.
Part 2 Design Principles			
2.1	Introduction	Y	Noted.
2.2	Objectives	Y	The proposed works as assessed and recommended for amendment by condition in this report will be consistent with the DCP's design objectives.
2.3	Design Context	Y	The proposal as assessed and recommended for amendment by condition in this report is consistent with the character and nature of the site and locality.
2.4	Bulk and Scale	Y	The proposal is broadly consistent with the character, existing form and scale of the site and its surrounds. There will be limited

			filtered site lines to the proposed works from Middle Beach Road especially with the proposed closure and landscaping of the existing driveway entrance.
2.5	Building Forms	Y	The built form of the proposed works as recommended for conditional approval will be in keeping with the established low-density residential form and character of the Island.
2.6	Building Materials & Colours	Y	The proposed works will be consistent with the existing dwelling on the site. A condition requiring the selected new materials and finishes to complement the existing structures on site has been included in the attached recommendation.
2.7	Energy and water efficiency	Y	The existing dwelling and proposed alterations and additions incorporate access to natural light and ventilation complying with the DCP.
2.8	Landscaping design	Y	The proposed works will not have a detrimental impact on the established site landscaping. Additional native landscaped area will be provided in the development as discussed elsewhere in this report
2.9	Site access and parking	Y	Refer to the assessment provided under clause 11(c) & (d) of the LHI LEP, earlier in this report.
Part 3 Development Control Policy			
3.2	Single Dwellings	Y	Please refer to the assessment provided earlier under the same provision of the LHI LEP 2010 clauses 27 and 32. The proposal will also comply with the Design Guidelines within Section 3.2 of the DCP.

7 Environmental Effects

7.1 Environmental Planning and Assessment Act 1979

Under the provisions of Section 4.15, (previously 79C (1)) of the EP&A Act, in determining a DA, a consent authority is to take into consideration the following matters as are of relevance to the development the subject of the DA.

- a) the provisions of the following that apply to the land to which the development application relates:
 - i. Any environmental planning instrument
Comment: An assessment against the LHI LEP 2010 has been undertaken (see Section 6.3.1) and the proposed development was found to comply with all relevant provisions subject to the conditions of approval included in the recommendation of this report.
 - ii. Any proposed instrument that is or has been the subject of public consultation under this Act
Comment: N/A
 - iii. Any development control plan
Comment: An assessment of the proposal against the LHI DCP 2005 has been undertaken in Section 6.3.2 and was found to comply subject to the conditions of approval included in the recommendation of this report.
 - iiia) Any planning agreement that has been entered into under section 7.4, or any draft planning agreement that a developer has offered to enter into under section 7.4,
Comment: There are no planning agreements relevant to the application.
 - iv. The regulations (to the extent that they prescribe matters for the purposes of

this paragraph),

Comment: There are no relevant matters prescribed by the regulations.

- v. Any coastal zone management plan (with the meaning of the Coastal Protection Act 1979)

Comment: There are no coastal zone management plans relevant to the application

- b) The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts on the locality

An assessment of the environmental impacts of the proposed alterations and additions on the existing dwelling has been considered elsewhere in this section of the subject report. The table below provides further assessment of any likely impacts.

Likely environmental impacts

Potential Impacts	Proposal
Access, Transport and Traffic	There will be no detrimental impacts on the existing access into or within the subject site or public pedestrian or vehicular movement on Middle Beach Road from the proposed development. Reducing the existing number of site driveways from 3 to 2 will only improve traffic flows and reduce potential for vehicle conflicts on Middle Beach Road.
Public Domain, Visual and Streetscape	The proposed work to the existing dwelling will be in keeping with the established residential context of the site. In addition, the proposed built form will continue to be in keeping with the established residential form and character of the Island. Only filtered sight lines will be possible to and from the public domain of Middle Beach Road due to the existing and proposed additional landscaping across the front of the site. A condition has been recommended requiring the proponent prepare a Landscape Revegetation Plan for the front setback of the site from Middle Beach Road to the subject dwelling, for submission with the application for a Construction Certificate. This landscape revegetation plan is to include details of the proposed species and location of all new plantings within the front setback of the site, a weeding and maintenance regime during the vegetation establishment period and the plan is to be prepared in consultation with the LHIB.
Ecological	As stated in Section 5.1 of this report, the LHIB's Manager Environment World Heritage has confirmed that the proposal will not result in the removal of any SNV or result in a significant effect for any threatened species, populations or ecological communities, or their habitats.
Flood	The site is not identified as flood affected.
Heritage	The subject site is not listed as a heritage item.
Views	Submissions concerning views from the adjoining property at Portion 295 are discussed below under Section 4.15 (d), EPA Act 1979.
Privacy	Visual privacy will not be impacted by the works however neighbouring aural privacy is considered likely to be impacted. Please refer to the discussion (Section 4.15 (d), EPA Act 1979) of submissions received to the DA which addresses aural privacy issues, amongst other matters
Open Space	Open space will not be impacted by the proposal.
Social and economic Impact in Locality	There will be no adverse social or economic impact. The proposal will improve the quality and use of the dwelling for the resident.

Construction	Potential impacts from construction activities will be minimised through the recommended conditions of the consent.
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c) the suitability of the site for the development

Having regard to the location and this assessment, which includes a number of recommended amendments/modifications to the proposed dwelling, the site will adequately accommodate the proposed works as amended to the existing dwelling and the proposed amended development is considered suitable for the site for the reasons outlined in this report.

d) any submissions made in accordance with this Act or the regulations

As confirmed earlier in this report, the subject DA was placed on public exhibition from 31/01/2018 to 14/02/2018. A number of submissions by way of objection were received from Rex and Louise Wilson at Portion 295, which is located immediately to the north east of the subject site. These submissions particularly relate to the negative acoustic impacts currently experienced by tourist occupants of their Treehouse accommodation, which they are concerned will not only continue but be accentuated as a result of the proposed works.

In response to the submissions received, AAP met with Rex Byrne and Louise Wilson on their site and undertook an inspection of their tourist accommodation in March 2017. This inspection included accessing the subject site (with the applicant's permission) with a height pole to assist in assessing the extent of the visual impact of the proposed development. This assessment was in addition to an earlier pre-DA lodgement site inspection and meeting with the applicant in November 2017 by AAP. A number of issues have been raised in the submissions, which are summarised as follows:

- i. **Visual Impact** – concern regarding view loss and the visual impact of the proposed residential extension on the Treehouse tourist accommodation unit
Comment: Portion 295 is located on a significant upslope from the subject site. Additionally, the western end of the Treehouse tourist unit is elevated above natural ground level by approximately 2.0 – 3.0m.

AAP inspected the Treehouse tourist accommodation and with Mr Davies' consent placed a height pole at the position of the proposed additions on the subject site to assess its visual impact. The Treehouse is an attractive tourist accommodation unit with an open plan internal living area that opens directly onto an approximate 4m deep western facing deck which looks out over the subject site, towards with the LHI Lagoon, existing established vegetation and horizon. There is generous established landscaping planted along the western side of the accommodation which partially screens the accommodation from the west.

Arising from the inspection it was determined that whilst a small portion of the proposed roof of the subject extension will be visible from the north-western corner of the western deck of the Treehouse the visual impact will be quite inconsequential. None of the works will be visible from the interior of the accommodation. From where the proposed roof will be visible, the extension will remain nestled into existing vegetation, not project above existing vegetation lines and will not be a prominent feature in the landscape when viewed from the Treehouse's elevated timber deck.

On the above basis the visual impact of the addition viewed from the Treehouse on Portion 295 is not considered unreasonable. It is noted that the required cutting back of the proposed deck from 7m to 5m in length (as mentioned earlier in Section 3.1) will only further reduce any visual impact. Photos of the visual analysis follow.





Above: Existing elevated west facing deck of the Treehouse tourist accommodation unit on Portion 295

- ii. **Acoustic Impact** – significant concern regarding current acoustic impacts from semi regular social gatherings held by the applicant has been raised in submissions. Submissions made to the LHIB during the public exhibition period state that existing social gatherings at the subject site have been negatively affecting both the residents on Portion 295 and most importantly tourists occupying the Treehouse tourist

accommodation. The submissions further state that this existing acoustic issue will be accentuated if the proposed development was approved.

Comment: The submissions refer to 'anti-social and disrespectful noise and behaviour' created by social gatherings held at the subject dwelling. The Treehouse operators have been receiving complaints from their tourist guests, including two written complaints. Louise Wilson and Rex Byrne are concerned that the existing and anticipated worsening acoustic impacts will negatively affect their business. They are especially concerned that the proposed first floor living area with its one large window orientated east towards their site and the large 7m x 4m roofed open timber deck will worsen existing acoustic impacts.

The submissions have included attachments in the form of two letters from customers attesting to the situation together with a letter from NSW Police, LHI Station confirming they have responded to noise related complaints at the subject site from January 2015 to February 2018 (the date of the letter).

AAP has additionally received informal confirmation with the owner of another nearby property that the site has been the source of some disruptive and anti-social noise on occasion.

The above details confirms that social gatherings at the subject site have detrimentally affected the amenity of nearby neighbours and tourists over the past few years. Whilst noise complaints between neighbours are a civil matter, a relevant town planning consideration is how a proposed development's design is likely to affect the acoustic amenity of neighbouring properties.

As there is substantiated evidence that the proposed first floor living area and new deck could result in an accentuation of existing acoustic impacts on neighbouring property and particularly the Treehouse tourist accommodation unit, some modification of the proposed design is considered warranted. In response to identified acoustic impacts is recommended that:

- 1) A full height solid wall be erected along the entire length of the eastern side of the proposed timber deck
- 2) The proposed first floor living room window within the eastern elevation of the proposed addition shall not be openable and instead have fixed glazing installed.

iii. **Possible Use of Additions as Separate Dwelling**

Comment: The subject application is for alterations and additions to the existing dwelling and not for any separate occupation or tourist accommodation use. Any departure from this description will be enforceable as a compliance action (under the Environmental Planning and Assessment Act 1979 and the Local Government Act 1993) by the LHIB.

Additionally, the proposed plans for the additions do not include any separate kitchen or laundry facilities, which would be required for the extension to be considered a separate domicile, and there is an internal connecting door proposed between the main area of the additions and the existing dwelling.

iv. **Parking** - concern has been raised regarding extra parking generated on the site when the earlier mentioned social gatherings are held.

Comment: the generation of additional parking during social events is not a matter for consideration for the subject DA. Additionally, it is noted that the proponent has submitted a hand drawn landscape plan as part of additional application

documentation detailing how the existing central driveway access is to be abandoned and planted out with native landscaping, which will restrict parking opportunities on site and improve the overall visual landscape quality of the site.

- v. **Unapproved Earth Works** – concern that the site excavation required for the proposed works has already been undertaken without the required LHIB approval.
Comment: At the time of inspection of the site, it was clear that the excavation and approximate 1.4m high treated pine retaining walls had already been constructed for the proposed works.

The above work required the consent of the LHIB, which has not been obtained. Consequently, as it is not legal to issue a retrospective approval for work already undertaken, the attached recommendation includes a requirement for the applicant to successfully obtain a Building Certificate from the LHIB for the excavation and retaining walls prior to issue of the CC for the proposed amended development (and that this Building Certificate be accompanied by a Structural Engineer's certification in respect of the retaining wall).

- vi. **Impacts During Construction** – concern that construction works will detrimentally affect the occupiers of the Treehouse tourist accommodation and request made that construction be limited to the non-peak or winter period.
Comment: From a technical perspective and based on the characteristics of the site, it would be unreasonable to recommend a condition to any approval issued limiting construction to outside the peak tourist season. The standard conditions limiting construction to business hours, waste disposal requirements and notification of commencement or works to the LHIB are the standard requirements applied. In addition to the above standard requirements, a requirement for a two (2) week prior notification to the neighbours of the commencement of construction should also be applied which is included in the recommended conditions of this report.
- vii. **Proposed Dwelling Extension Should be Relocated to the South eastern side of the dwelling and be single storey**
Comment: based upon the overall assessment of the subject development as outlined in this report, there is insufficient basis for requiring the addition to be single storey and relocated to the southeastern side of the dwelling. Additionally, it is noted that such a relocation of the extension would achieve an additional 10m separation from the adjacent Treehouse tourist accommodation unit, which is not a significant additional setback from an aural viewpoint.

- e) the public interest

For the reasons outlined in the preceding assessment, it is considered that the proposed alterations and additions to the existing dwelling, as amended by recommended conditions of consent, will be in the public interest.

8 Conclusion

This DA has been assessed with regard to the provisions of Section 4.15 of the EP&A Act, the LEP 2010 and DCP 2005 and the relevant codes and policies of the Lord Howe Island Board.

The application for alterations and additions to the existing dwelling has planning merit and is supported subject to the application of a number of conditions outlined in the following recommendation.

9 Recommendation (Conditional Approval)

That DA 2018.06 for alterations and additions to an existing dwelling proposing a ground and first floor addition and first floor covered deck at Portion 282 Middle Beach Road, Lord Howe Island be approved subject to the following conditions:

1. Approved Plans and Supporting Documentation

The development is to be carried out in accordance with the plans and documentation provided with No. 2018.06 as listed below and endorsed with the Lord Howe Island Board's stamp, except where amended by other conditions of consent.

- a) Completed DA Form prepared by Corey Davies, dated 22/01/2018.
- b) Statement of Environmental Effects in the DA Form prepared by Corey Davies, (undated)
- c) The following plans:
 - Architectural Site Plan, Floor Plan, Elevations and Sections prepared by Room On Fire, Plan Nos: A-00, D-01, E-02, E-01, and F-01, dated: 27/10/2017 submitted as part of the DA documentation.
 - A hand drawn landscaping plan confirming appropriate location of proposed new native planting area

Reason: To ensure the development is carried out in accordance with the details submitted in the DA.

2. Plan Amendments

The following amendments are to be made to the proposed development and are to be detailed on the plans submitted with the associated construction certificate:

- a) To maintain the required consistency between the approved OC 2018-02 and subject DA plans, the proposed first floor deck and associated roof shall be cutback from 7m to 5m in length.
- b) A full height, double-skinned wall with no windows shall be erected on the full length of the eastern side of the proposed first floor deck.
- c) The proposed first floor windows on the eastern elevation of the proposed lounge room addition shall not be openable and instead shall have fixed glazing installed.
- d) The existing (central) driveway access for the subject dwelling shall be removed and in its place a new native planting area shall be established across this part of the site's frontage to a width matching the existing front landscaping or a minimum of 5m (whichever is the greater).

Reason: To ensure compliance with the Owner's Consent and Development Application approvals and to minimise the environmental impacts of the proposal.

3. Building Certificate

The applicant shall seek a Building Certificate from the LHIB (for the excavation and retaining walls constructed without approval) prior to issue of the Construction Certificate for the development. This Building Certificate shall be accompanied by a Structural Engineers certification of the adequacy of the retaining wall, or what works are required to rectify same as required.

Reason: To address the unauthorised retaining wall building work that has been undertaken on the subject site.

4. Construction Certificate

- a) All construction work is to be carried out and completed in accordance with the National Construction Code (NCC)/Building Code of Australia (BCA).
- b) The applicant is to ensure that the Construction Certificate Plans are the same as the approved Development Application Plans (as amended by these conditions of development consent).

- c) Prior to the issuing of a Construction Certificate the applicant is to provide **detailed structural engineering plans** for the additions to dwelling, including covered decks and the new retaining wall. The applicant is to ensure the structural plans address compliance with construction in Wind Zone A and are certified by an appropriately qualified Structural Engineer in accordance with AS1170.2.
- d) Prior to the issuing of a Construction Certificate the applicant is to provide a BASIX Certificate for the dwelling as per the EP&A Regulation 2000.
- e) The Construction Certificate plans are to include Basix commitments nominated in the BASIX Certificate. BASIX Commitments to be certified by a certifying authority before the issuing of an Occupation Certificate.
- f) Prior to the issuing of a Construction Certificate the applicant is to provide evidence of payment of a Long Service Levy as per section 34 of the Building and Construction Industry Long Service Payments Act 1986.
- g) Prior to the issuing of a Construction Certificate the applicant is to provide evidence that the licensed contractor/builder undertaking the residential building work has taken out Home Warranty Insurance with a minimum cover of \$340,000 as per the Home Building Act 1989.
- h) Prior to the issuing of a Construction Certificate the applicant is to ensure compliance with any/all conditions imposed by the Board as part the Development Application approval process.

Reason: To ensure construction is undertaken in accordance with requirements.

5. Landscape Revegetation Plan

The applicant is to prepare a Landscape Revegetation Plan for the driveway area of the front setback of the site extending from the Middle Beach Road boundary towards the subject front dwelling, for submission with the application for a Construction Certificate.

The landscape revegetation plan is to include details of the proposed species and location of all new landscape plantings within the driveway area in the middle front of the site and a weeding and maintenance regime during the landscaping establishment period. This plan is to be prepared in consultation with the LHIB.

Reason: To ensure the new proposed native planting area within the front setback of the site includes species appropriate for the locality and that will enhance the visual and ecological quality of the area and to ensure the proposed native planting area will be managed and maintained during the critical establishment period.

6. Ecology and Habitat

- a) If any live LHI Gecko or LHI Placostylus are detected during works they must be moved to similar habitat structures in the adjacent area (e.g. fallen timber within dense native vegetation, old garage bedsits/structures) away from the development site so they can escape predation by predators such as LHI Currawong, LHI Woodhen and rodents.
- b) All building materials and building activity are restricted to being stock piled on cleared open areas.

Reason: To ensure ecological communities are not adversely impacted by the development.

7. Fire Safety

The applicant is to ensure that fire detection and early warning devices, such as automatic smoke detectors, are installed so that occupants may evacuate, in the event of fire, to a place of safety. The placement of early warning devices is to be in accordance with AS1851.8.

Reason: To ensure the resulting development is fire safe

8. Wastewater

The existing onsite wastewater treatment system for the subject dwelling shall be upgraded in compliance with the LHI On-site Wastewater Management Strategy prior to release of the Construction Certificate for the subject works.

Reason: To achieve compliance with the LHI On-site Wastewater Management Strategy.

9. Water

- a) The applicant is to ensure that all plumbing work, including the disconnections and connections to the wastewater system, is to be undertaken by a licensed plumber.
- b) The applicant is to ensure that all waterproofing of wet areas such as bathrooms is to be certified by an appropriate person. The **waterproofing certification** is to be provided to the Board **before issuance of an Occupancy Certificate**.
- c) The applicant is to ensure all stormwater from the new roof structure is diverted to existing rainwater tanks as outlined in the application or an appropriate absorption trench is to be provided. The method of management of the stormwater is to be shown on the construction drawings.

Reason: To ensure works are undertaken appropriately.

10. Waste Management

- a) The applicant is to ensure that any waste generated from the proposed development is to be contained within the site and then be recycled or disposed of at the authorised waste management facility on the Island. This excludes asbestos waste, if any, which is the responsibility of the applicant to remove from the Island.
- b) No waste shall be placed in any location or in any manner that would allow it to fall, descend, blow, wash, percolate or otherwise escape from the site.
- c) The applicant is advised that waste disposal fees will be charged in accordance with the Lord Howe Island Board's schedule of fees and charges.

Reason: To ensure the proper removal of waste is carried out.

11. Waste Management – Asbestos

If any material containing asbestos is found on site during the demolition/ construction process the material is to be removed and disposed of in accordance with WorkCover requirements. An appropriately licensed asbestos removalist must complete all asbestos works if they consist of the removal of more than 10m² of bonded asbestos and/or any friable asbestos.

Reason: To ensure the proper removal of waste is carried out.

12. Construction

- a) The applicant is to ensure that any electrical work must be carried out by a licensed electrician and an **Electrical Compliance Certificate issued with, or before, the application for Occupancy Certificate** for the building additions and alterations.
- b) All works are to be undertaken in accordance with approved Construction Certificate documentation.
- c) Pre-Commencement meeting to be arranged with the Owner, Builder and Board Personnel prior to any work commencing on site. If the applicant is nominating the Lord Howe Island Board as the Principal Certifying Authority, this meeting will constitute the pre-commencement and site set-out inspection.

Reason: To ensure works are undertaken appropriately.

13. Inspections

The Principal Certifying Authority (PCA) will require the following mandatory inspections to be undertaken during development works:

- a) Pre-commencement and site set-out
- b) After excavation for, and prior to the placement of, any footings – including the retaining wall
- c) Prior to pouring any in-situ reinforced concrete building element
- d) Prior to covering of the framework for any floor, wall, roof or other building element
- e) Prior to covering waterproofing in any wet areas
- f) Storm-water connections
- g) Final Inspection after the building work has been completed and prior to any Occupation Certificate being issued in relation to the building.

Please note: It is the applicant or their representative's responsibility to book inspections with the Lord Howe Island Board at least 48 hours prior. Failure to do so may result in a delay in the inspection being undertaken.

Reason: This condition is prescribed under the Environmental Planning and Assessment Regulation 2000.

14. Construction Hours

To limit the impact of the development on adjoining owners, all construction work shall be restricted to the hours of 7.00am to 6.00pm Monday to Friday and 8.00am to 1.00pm Saturdays. No construction work shall take place on Sundays or Public Holidays.

Reason: To limit the potential for any loss of amenity to adjoining owners and/or occupiers associated with the construction of the approved works.

15. Notice of Commencement

Written notice must be given to the Lord Howe Island Board and the lessee of the adjoining portion 295 at least two (2) weeks prior to the commencement of building work.

Reason: This is a legislative requirement.

16. Erection of construction signs

A sign must be erected in a prominent position on any site on which building work, is being carried out:

- a) showing the name, address and telephone number of the principal certifying authority for the work, and
- b) showing the name of the principal contractor (if any) for any building work and a telephone number on which that person may be contacted outside working hours, and
- c) stating that unauthorised entry to the work site is prohibited.
- d) Any such sign is to be maintained while the building work is being carried out, but must be removed when the work has been completed,

Reason: This condition is prescribed under the Environmental Planning and Assessment Regulation 2000.

17. Retention of Site Landscaping

Existing native site landscaping and vegetation including all mapped significant native vegetation and the proposed new native plantings within that front setback of the site previously used as the central driveway are to be protected and maintained.

Reason: To minimise vegetation removal.

18. Materials and Colours

The materials and colour selection for the proposed works are to complement the existing dwelling on the site and the natural landscape setting of the subject locality. Details of the selected materials and colours shall be submitted with the construction certificate application.

Reason: To ensure that the proposed development complements the surrounds.

ADVICE TO APPLICANT:

1. Significant Native Vegetation

Damage to, or removal of Significant Native Vegetation is prohibited, as per Clause 11 of LEP 2010.

2. Conversion/ Upgrade of Onsite Wastewater Treatment System

The applicant is advised that the deadline for the conversion/upgrade of a Medium Risk Treatment System (AWTS) to a compliant NSW Health, and LHI On-site Wastewater Management Strategy, wastewater treatment system was 31 October 2017.

3. Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The *Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* provides that a person must not take an action which has, will have, or is likely to have a significant impact on

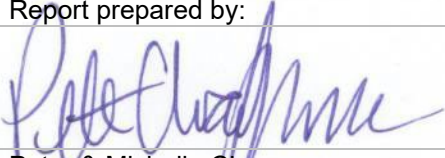

A matter of national environmental significance (NES) matter; or Commonwealth land without an approval from the Commonwealth Environment Minister.

This application has been assessed in accordance with the New South Wales Environmental Planning & Assessment Act, 1979. The determination of this assessment has not involved any assessment of the application of the Commonwealth legislation.

It is the proponent's responsibility to consult Environment Australia to determine the need or otherwise for Commonwealth approval and you should not construe this grant of consent as notification to you that the Commonwealth EPBC Act does not have application.

The Commonwealth EPBC Act may have application and you should obtain advice about this matter. There are severe penalties for non-compliance with the Commonwealth legislation.

Section 97 of the Act confers on an applicant who is dissatisfied with the determination of a consent authority a right of appeal to the Land and Environment Court. This right of appeal is only valid for six months from the date of the consent. To determine the extent to which the consent is liable to lapse refer to Section 95 of the Act.

Report prepared by: 	Approved by: 
Peter & Michelle Chapman Date: 29 April 2018 LHI Consultant Town Planners All About Planning	Penny Holloway Date: 2 May 2018 Chief Executive Officer Lord Howe Island Board

Board Report: May 2018	Date of Issue: 7 (v)	Rec. No: ED18/3557
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LORD HOWE ISLAND BOARD

Planning Assessment Report

Item: DA 2018-09 – Septic Sludge Dewatering System - Lord Howe Island Board Waste Management Facility, Airport Drive, Lord Howe Island.

1.0 Summary Assessment Report

Assessment Officer	Peter Chapman – Consultant Planner & Director All About Planning Pty Ltd.
Address/Property Description	Lord Howe Island Board Waste Management Facility, Airport Road, Lord Howe Island, (LHI)
Proposal	Decommissioning of the existing septic sludge drying beds and installation of a Septic Sludge Dewatering System - Lord Howe Island Board Waste Management Facility.
Development Application No.	DA 2018-09
Applicant	Lord Howe Island Board (LHIB)
Owner Consent Granted	Not required by virtue of the proposal being a LHIB application
Estimated Cost of Development	\$500,000.00
Site Inspections	AAP has inspected the subject site
Zone	Zone 5: Special Uses. Proposed development is permissible with Consent of the LHIB within this zone.
Significant Native Vegetation Map	The proposed Septic Sludge Dewatering System will be located within the existing development footprint of the WMF and within an existing cleared area of the site. The proposal will not result in the removal of any SNV.
Notification	The LHIB has confirmed that the subject application was placed on public exhibition from 16 th February to 2 nd March 2018.
Submissions Received	No submissions were received.

2.0 Consent Authority

The subject development application (DA) seeks consent for the installation of a Septic Sludge Dewatering System at the LHIB's Waste Management Facility, Airport Road, LHI.

The Board's CEO and Chairperson has delegation to grant consent to DAs subject to the following conditions:

- The value of the development must not total \$150,000 or more (as calculated by the Board).
- The DA must not relate to the subdivision of land or the erection of new dwellings.
- No more than 3 written submissions received within 14 days of the public exhibition period.

The proposal does not comply with the above delegations to the CEO due to the estimated cost of development

being \$500,000.00. In addition this application has been referred to the Board for determination as it is a LHIB application.

3.0 Site Description

LHI's WMF is located in the central part of Lord Howe Island to the south-west of the Aerodrome. The LHI Waste Management Facility (WMF) is legally referred to as unidentified crown land bordered by Lot 108 and 109 DP 757515 to the east and Cobbys Beach to the west. The site is shown in Figures 1 and 4 below.

The site is irregular in shape with a largely flat topography. The LHI WMF consists of several colorbond sheds, a composting unit, drying beds for septic pump outs, open storage areas and bays, mulch storage area (partly within the beach dune), machinery areas, the existing WMS for the WMF (which includes an aerated wastewater treatment system (AWTS)) and an existing surface irrigation area located within the Cobbys Beach dune.

The subject unidentified crown land has an approximate area of 4.8ha including the area of the unidentified entrance road, the bottom of the Cobbys Beach dune and extending to the north west corner of the airport boundary.

The Waste Management Facility is located within Zone 5: Special Uses under the LHI Local Environmental Plan 2010 (LHI LEP 2010) as illustrated in Figure 2.

The site is accessed via an un-named road to the WMF off Airport Drive. The Facility has a lockable gate to restricts vehicular access. The Facility is open on the following days / hours:

- Winter, Wed & Sat (6:30am-3pm).
- Summer, Wed, Fri & Sat (6:30am-3pm).

The vegetated areas of the site comprise mapped Significant Native Vegetation (SNV), this vegetation being those areas immediately north and south of the WMF refer Figure 3. The site is not mapped as being flood prone land but is located within the LEP's Foreshore Building Line as identified in Figure 2 below.

Neighbouring uses beyond the adjacent Waste Management Facility include:

- Portion 108 to the north-east, containing various industrial uses for the Board such as sheds, wood storage and bulky goods.
- Portions 183, 21 and 20 to the south-east comprising a residential heritage listed dwelling and studio garage, held under perpetual lease by Sinclair / Curtin.
- Further to the east is the Lord Howe Island Airport and Bureau of Meteorology.

As seen in the aerial view of the site in Figure 1, the WMF is positioned within an existing cleared area, well screened by mapped SNV from adjoining properties, public roads and the airport. The nearest residential dwelling to the proposal is approximately 150m away. The site is also screened from the LHI Lagoon and Cobbys Beach by existing vegetation and sand dunes to the west.

The existing Waste Management System (WMS) is subject to an existing EPA licence for operation of a sewage treatment system processing up to 6 kilolitres/ day. As a condition of this licence the existing WMS was upgraded and the previous irrigation area was relocated from its previous dune location to the north east of the main WMF building in accordance with DA 2017- 02 in 2017.



Figure 1: Aerial view of subject site – LHI WMF

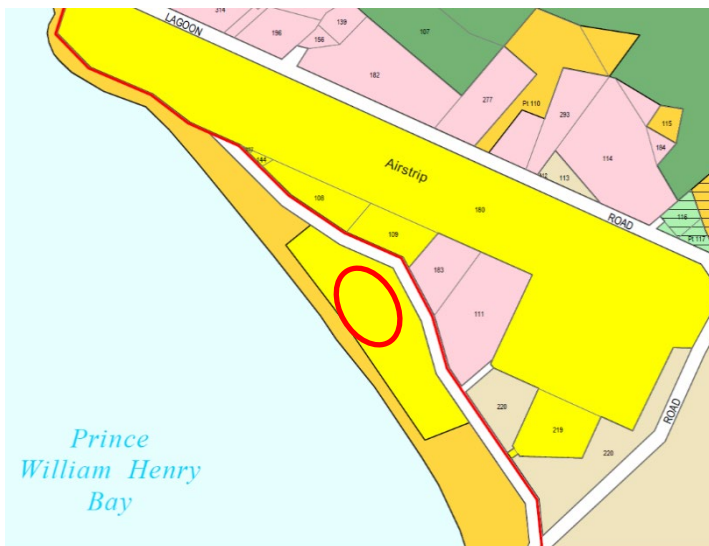


Figure 2: Extract from the LEP 2010, Zoning Map Zone 5: Special Uses in yellow and foreshore building line in red



Figure 3: Extract from the LEP 2010 Significant Vegetation Map, SNV in light green.



Figure 4: Existing Sludge Drying Beds and Location of Proposed Sludge Dewatering System at the LHIB WMF

4.0 Proposed Development

The subject development application (DA) seeks consent for the decommissioning of the existing septic sludge drying beds and installation of a Septic Sludge Dewatering System at the LHIB's Waste Management Facility, Airport Road, LHI.

The proposed system will replace the existing beds which rely upon the sun to dry septic sludge. The new system introduces a mechanical process which separates out the primary water component which is stored in an existing holding tank on site, with the remaining dry solid waste then being combined with other organic waste in the "Hotrot" composting unit for separate disposal.

Proposed site works include the decommissioning of the existing septic sludge drying beds which are now under-capacity for the volume of septic sludge being received at the WMF. LHIB staff have advised that the possible option of increasing the existing drying bed capacity to suit the increasing volume of septic waste was not viable due to the relatively small overall size of the WMF site and the locational need for other infrastructure at the facility.

In addition, this current system requires man-handling of effluent throughout the whole processing procedure which is inefficient, time consuming and an occupational hazard for staff.

The proposed replacement dewatering system will include the installation of a 12m x 3m concrete slab on ground as the base for the new processing system and associated infrastructure (which overall size compares favourably to the existing drying beds which have a larger area of 16m x 6m).

The capacity of the new dewatering system is such that it will easily process the existing level of septic sludge being generated on the Island together with additional capacity to cater for any population increase. Another advantage of the proposed system is that being mechanical, it will require minimal to no manual handling of sludge waste by staff.

AAP is advised that the subject proposed sludge dewatering system will satisfy the Board's WMF's existing licence requirements with the Environment Protection Authority (EPA).

On the following page is a plan of the proposed sludge dewatering facility.

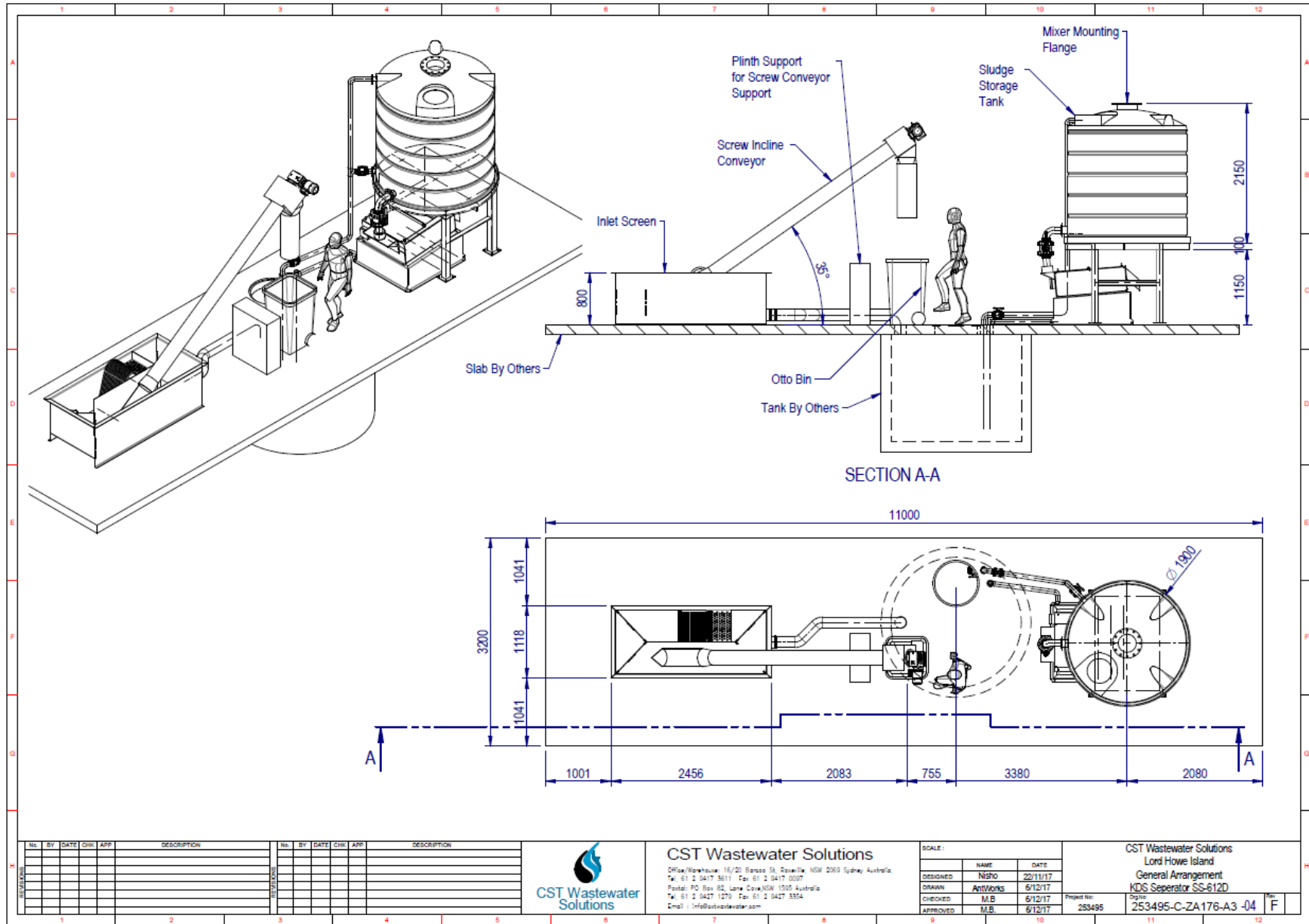


Figure 5: Proposed Septic Sludge Dewatering System Plan

5.0 Referrals

The Board distributed the subject application to relevant internal specialists for review. No objections to the proposal were raised. Table 1 outlines the issues raised by these internal specialists and the response.

Table 1 Comments received from internal specialists

Internal specialist	Issue	Planner's Comment
<p>Hank Bower - Manager Environment /World Heritage</p>	<p>The property is zoned Zone No. 5 – Special Uses according to the Lord Howe Island Local Environmental Plan 2010. The objectives of this zone are:</p> <p>(a) to provide utility services that are essential to the community's needs in a manner that is in sympathy with the World Heritage values of the natural environment of the Island,</p> <p>(b) to maintain efficient services (such as education, health and transport services and the administration of the Island) and associated infrastructure.</p> <p>The proposal is consistent with these objectives.</p> <p>The proposal will not require the removal of any native vegetation as the subject site is located wholly within an existing development footprint (the operational part of the WMF) and is cleared of any vegetation. Subsequently, the proposal will not result in the removal or damage of any Significant Native Vegetation (SNV). The Study area contains vegetation mapped as SNV, which is located outside the development footprint.</p> <p>The proposal will not result in any significant impacts on any Threatened species, populations or ecological communities, or their habitats as it only involves the demolition and construction of replacement WMF infrastructure from a cleared and operational part of the WMF.</p> <p>The subject site includes some areas partly mapped as modeled High Quality Habitat (A) for LHI <i>Placostylus bivaricosus</i>. This mapping is not considered accurate for cleared areas used for WMF operations. It is considered accurate in the adjacent natural bushland, which will not be impacted by this proposal. The proposal will not be removing or disturbing any native vegetation so will not impact LHI <i>Placostylus</i>.</p> <p>The subject site provides known or potential habitat for at least 5 threatened species being; LHI Gecko <i>Christinus guentheri</i>, LHI Currawong <i>Strepera graculina crissalis</i>, LHI Golden Whistler <i>Pachycephala pectoralis contempta</i>, LHI Silvereye <i>Zosterops lateralis tephroleura</i> and Lord Howe Woodhen <i>Gallirallus sylvestris</i>. The proposal will not impact any habitat structures or resources for these species as it does not require the removal of any vegetation.</p> <p>The LHI Currawong, LHI Golden Whistler, LHI Silvereye and LH Woodhen are all widely distributed across the Island and regularly occupy forests and gardens within the settlement. They are commonly found co-habiting with human infrastructure within the settlement area and in the case of the LHI Currawong, LHI Golden Whistler, LHI Silvereye and LH Woodhen will forage and roost around and under dwellings and associated infrastructure. However, the core habitat resources for all these species is dense native vegetation, which is provided by adjacent native vegetation.</p>	<p>Noted and recommended accordingly</p>

Internal specialist	Issue	Planner's Comment
	<p>The LH Woodhen is found across the island where there is suitable surface soil moisture for the persistence of terrestrial and subterranean invertebrates, which comprise their favoured diet. They are readily found foraging in understorey habitats throughout the settlement and across the WMF, particularly compost piles and where food scraps spill from the VCU. They readily traverse the WMF during daily operations and readily move away from vehicle/plant movements. They are unlikely to be impacted by the proposed activities as the proposed activities are consistent with the existing pattern of daily operational activity (vehicle movements, heavy machinery, wood chippers etc. Their potential breeding and roosting habitat is in natural bushland adjacent to the cleared area of the WMF, which will not be impacted by the proposal.</p> <p>The LHI Gecko is known to occur throughout the settlement of LHI where it can utilise human made structures and stock piled building materials (e.g. sheets of corrugated iron etc) as sheltering habitat. It can be found within cavities of dwellings that exclude rodents and shelters within cracks and cavities in trees and rocks. The existing drying beds may provide some sheltering habitat and if found during demolition should be moved to similar sheltering habitat on site.</p> <p>A 5 Part Test of significance was not submitted with the DA as the proposal is located within an existing development footprint and on adjacent cleared land and the area to be disturbed does not constitute suitable habitat for any of the listed species.</p> <p>The proposal will not result in any significant impacts on any Threatened species, populations or ecological communities, or their habitats. A 5 part test of significance has not been prepared as the area to be disturbed is already cleared land that operates as a WMF and does not constitute suitable habitat for any of the listed species.</p> <p>Recommendations That the development be approved subject to.</p> <ul style="list-style-type: none"> • If any live LHI Gecko detected during works must be moved to similar habitat structures in the adjacent area (e.g. fallen timber within dense native vegetation, old dwellings/structures) away from the development site so they can escape predation by predators such as LHI Currawong, LH Woodhen and rodents. • All building materials and building activity are restricted to being stock piled on cleared open areas. 	
<p>Kate Dignam – Team Leader Compliance & Projects</p>	<p>Building Class: Class 10b.</p> <p>Notes Relating to issuing of a Construction Certificate</p> <p>I have assessed the applicant's DA and note the following:</p> <ul style="list-style-type: none"> • All construction work is to be carried out and completed in accordance with the National Construction Code (NCC)/Building Code of Australia (BCA). • Ensure Construction Certificate Plans are the same as the approved Development Application Plans. • Prior to the issuing of a Construction Certificate the applicant is to provide detailed structural engineering plans for the concrete slab and all other structural elements of the Septic Sludge Dewatering System. <ul style="list-style-type: none"> ○ The applicant is to ensure the structural plans address 	<p>Noted and recommended accordingly</p>

Internal specialist	Issue	Planner's Comment
	<p>compliance with construction in Wind Zone A and are certified by an appropriately qualified Structural Engineer in accordance with AS1170.2.</p> <ul style="list-style-type: none"> • Prior to the issuing of a Construction Certificate the applicant is to provide evidence of payment of a Long Service Levy as per section 34 of the Building and Construction Industry Long Service Payments Act 1986. • Prior to the issuing of a Construction Certificate the applicant is to ensure compliance with any/all conditions imposed by the Board as part the Development Application approval process. <p>Access for People with a Disability</p> <ul style="list-style-type: none"> • No relevant matters. <p>Fire Safety</p> <ul style="list-style-type: none"> • No relevant matters. <p>Flood Management</p> <ul style="list-style-type: none"> • No relevant matters. <p>Wastewater</p> <ul style="list-style-type: none"> • The wastewater treatment system at the WMF complies with the LHI On-site Wastewater Management Strategy. <ul style="list-style-type: none"> ◦ This development will not alter the design parameters of the approved wastewater system. <p>Water</p> <ul style="list-style-type: none"> • All plumbing work, including any connections/disconnections to the wastewater treatment system, is to be undertaken by a licensed plumber. <p>Waste Management</p> <ul style="list-style-type: none"> • Any waste generated from the proposed development is to be contained within the site and then be recycled or disposed of at the authorised waste management facility on the Island. This excludes asbestos waste, if any, which is the responsibility of the applicant to remove from the Island. • No waste shall be placed in any location or in any manner that would allow it to fall, descend, blow, wash, percolate or otherwise escape from the site. <p>Construction</p> <ul style="list-style-type: none"> • No excavation to be carried out until the site is inspected by the LHIB Senior Electrical Officer. • Any electrical work must be carried out by a licensed electrician. A copy of the Electrical Compliance Certificate for the works must be provided to the Board before issuance of an Occupancy Certificate. • All works are to be undertaken in accordance with approved Construction Certificate documentation. • Pre-Commencement meeting to be arranged with the Owner, Builder and Board Personnel prior to any work commencing on site. If the applicant is nominating the Lord Howe Island Board as the Principal Certifying Authority, this meeting will constitute the pre-commencement and site set-out inspection. <p>Inspections</p> <ul style="list-style-type: none"> • The Principal Certifying Authority (PCA) will require the following mandatory inspections to be undertaken during development works: <ol style="list-style-type: none"> a) Pre-commencement and site set-out b) After excavation for, and prior to the placement of, any footings c) Prior to pouring any in-situ reinforced concrete element 	

Internal specialist	Issue	Planner's Comment
	d) Prior to covering of the framework for any floor, wall, roof or other element e) Storm-water connections f) Final Inspection after the building work has been completed and prior to any Occupation Certificate being issued in relation to the building.	
Gary Millman	The general position of the proposed Sludge Dewatering System at the WMF has been staked as per the aerial photo site plan due to existing evaporation beds some of which will be removed to accommodate the concrete slab 12 x 3 metres.	Noted

6.0 Planning Assessment

The following planning assessment has been undertaken for the proposed development taking into account the relevant statutory controls, and other relevant matters as detailed below in this report.

6.1 Commonwealth legislation

6.1.1 Environmental Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) provides for the protection of certain matters of national environmental significance (NES) listed under the Act, which include:

- World Heritage Areas
- National Heritage Places
- Ramsar wetlands of international importance
- Commonwealth listed threatened species and ecological communities
- Listed migratory species
- Commonwealth marine areas
- Great Barrier Reef Marine Park
- Nuclear actions.

Under the EPBC Act, Commonwealth approval is required from the Minister of Sustainability, Environment, Water, Population and Communities (Minister) for any action that will have or is likely to have a significant impact on a NES, or on the environment of Commonwealth land or on the environment if the action is proposed to be taken by a Commonwealth agency (known as a 'controlled action').

A person proposing to take a controlled action must refer the proposal to the Minister for determination. A person proposing to take an action that the person thinks is not a controlled action may refer the proposal to the Minister for the Minister's decision whether or not the action is a controlled action.

Lord Howe Island is a declared World Heritage Property. Section 12 of the EPBC Act 1999 requires approval of actions that involve a significant impact on a declared World Heritage Property.

An Advisory Note has been included in the recommendation to this report, that the applicant make independent enquiries with the Australian Government's Department of the Environment and Energy, to confirm whether they consider the proposed actions as detailed in this report are likely to have any impact on the heritage values of the:

- *World Heritage and National Heritage listed Lord Howe Island Group - ID 105085 and 105694, and*
- *Register of the National Estate listed Lord Howe Island Group and Marine Environs - ID 201.*

6.2 NSW legislation

6.2.1 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (NSW) (BC Act) sets the framework for the listing of threatened species, populations and ecological communities, and key threatening processes in NSW, and the preparation and implementation of recovery plans and threat abatement plans.

The BC Act also provides the mechanism for applying for and obtaining licences to take actions, which could result in harm to a threatened species, population or ecological community, or their habitat, or damage to critical habitat.

Please refer to the internal referral comments received from Hank Bower (Manager Environment World Heritage) provided earlier in Section 5 of this report. Appropriate conditions to address or mitigate potential environmental impacts have been included in the attached report recommendation.

6.2.2 NSW Heritage Act 1977

The main objective of the *Heritage Act 1977* (Heritage Act) is to encourage the conservation of the heritage of NSW. Pursuant to Section 4.46 (previously Section 91) of the EP&A Act 1979, Section 58 and Section 57(1) of the Heritage Act are triggered by this application.

The Lord Howe Island Group is listed on the State Heritage Register. Section 57 (1) of the Heritage Act requires that all applications to carry out development on Lord Howe Island, be referred to and granted concurrence by the NSW Heritage Division. This provision is overridden however by the operation of Section 57 (2), in the circumstance of the Minister issuing a Heritage Exemption Order.

On 9 January 2015, the NSW Minister for Heritage published an order providing for an exemption to refer, instead requiring referral of only those applications requiring consent under Clause 39 of the LHI LEP 2010. The site does not require consent under Clause 39 as it is not a listed heritage item within the LEP 2010. Therefore, referral to the NSW Heritage Division of this application is not required.

6.3 Local Statutory Plans and Policies

6.3.1 Lord Howe Island Local Environmental Plan 2010

The LHI LEP 2010 and its amendments are the principal environmental planning instrument applying to the proposal.

The following summary table details the various LEP provisions relevant to the subject proposal with assessment and/or comment included as required.

Table 2 LEP 2010 compliance summary table

LEP 2010 Clause		Complies Y/N	Comment
Part 1 Preliminary			
2.	Commencement and Aims of Plan	Y	Each of the aims of the LEP 2010 has been considered in the assessment of this application. The proposed works will not harm or remove SNV subject to satisfactory adherence to the proposed conditions of consent.

LEP 2010 Clause		Complies Y/N	Comment
3.	Land to which plan applies	Y	The LEP 2010 applies to the subject site which is part of Lord Howe Island, as defined in Section 3 of the <i>Lord Howe Island Act 1953</i> .
6.	Who is the consent authority for this Plan?	Y	The Lord Howe Island Board (LHIB) is the relevant consent authority.
7.	Maps	Y	Noted.
9.	Exempt Development	NA	The installation of septic sludge dewatering systems on Lord Howe Island (LHI) are not listed as exempt development in the LHI LEP 2010.
11.	Matters that must be satisfied before development consent granted	Y	All relevant matters are satisfied. Refer to Section 6.3.1.2 below.
Part 2 General Provisions applying in particular zones			
12.	Land Use Zones	Y	The land is zoned 5: Special Uses
15	Zone 5: Special Uses	Y	Development is permitted with the consent of the Board within this zone under the LEP definition of "wastewater management systems". The land (as assessed in this report) is capable of supporting the proposed development and is suitable in terms of the land's physical constraints.
Part 3 Special Provisions			
Division 2 Provisions that apply to particular land			
34.	Land adjoining Zone 7 or 8	N/A	None of the proposed works will be within 10m of the adjoining land (Cobbys Beach and dunes) that is zoned 7 Environment Protection.
35.	Foreshore development	Y	See discussion in Section 6.3.1.3 below.
Division 4 Miscellaneous			
41.	What DA's are required to be advertised?	Y	As stated earlier in this report the LHIB has confirmed that the subject application was placed on public exhibition from 16 th February to 2 nd March 2018, by way of a householder, information on noticeboards and Board website. No submissions were received.
42.	Requirement for environmental report	N/A	Based on the assessment undertaken within this report, the proposal is not likely to have a significant adverse impact on the environment, therefore an environmental report is not required.

6.3.1.2 Clause 11 Matters that must be satisfied before development consent granted

Clause 11 provides that the consent authority must not consent to the carrying out of development unless it is satisfied of the following matters (to the extent that they are of relevance to the proposed development):

Table 3 Clause 11 Compliance summary table

CLAUSE 11 REQUIREMENT	COMPLIES Y/N	DISCUSSION
a) <i>The proposed development is consistent with the aims of this plan and the objectives of any zone, as set out in the plan, within which the development is proposed to be carried out,</i>	Y	The subject site is zoned 5: Special Uses under the LHI LEP 2010. The installation of a "septic sludge dewatering system" is consistent with both the overall LEP objectives and the specific zone objectives.
b) <i>There is an adequate area available for the disposal or treatment of any effluent treatment or disposal system and any</i>	Y	As stated earlier in the description of the development in section 4.0, the current sludge drying beds are not

CLAUSE 11 REQUIREMENT	COMPLIES Y/N	DISCUSSION
<i>such system will not have any adverse impact on groundwater quality,</i>		<p>operating efficiently and are now under capacity of septic sludge received at the WMF.</p> <p>The capacity of the new system is such that it will easily process the existing level of septic sludge being created on the Island along with any anticipated population increases. It will also avoid the current need for manual handling of the waste and will satisfy the Board's WMF existing licence requirements with the Environment Protection Authority (EPA).</p> <p>Accordingly, the new system will have improved environmental outcomes and complies with the Lord Howe Island Board On-site Wastewater Management Strategy.</p>
<p>c) <i>No part of the proposed development:</i></p> <p>i. <i>will result in any damage to, or removal of, significant native vegetation, or</i></p> <p>ii. <i>will have a significantly adverse impact on the habitat of any plants, or animals, that are native to the Island,</i></p>	Y	<p>Being located wholly within the existing development footprint of the WMF the proposal will ensure the new system will not result in any damage or removal of mapped SNV or the habitat of any native plants or animals.</p>
<p>d) <i>Access is, or will be, available to the site of the proposed development and the provision of any such access will not:</i></p> <p>i. <i>result in any damage to, or the removal of, significant native vegetation, or</i></p> <p>ii. <i>have a significantly adverse impact on the habitat of any plants, or animals, that are native to the Island,</i></p>	NA	<p>No change to the current vehicular access is proposed.</p>
<p>e) <i>Any proposed landscaping will provide various species of plants that are native to the Island and common in the locality to enhance any significant native vegetation,</i></p>	NA	<p>No additional landscaping is proposed or required by the proposed development.</p>
<p>f) <i>The proposed development will not be adversely affected by any landform limitations, including flooding, landslip, unstable soils and steep slopes,</i></p>	NA	<p>The proposed facility is not flood prone as it is outside of the mapped flood hazard area.</p>
<p>g) <i>Adequate services in respect of the proposed development can be provided without significant additional cost to the Board or the community of the Island,</i></p>	Y	<p>No additional infrastructure services are required. Power supply for new system will come from existing mains to the property.</p>
<p>h) <i>The appearance of the proposed development (when considered by itself or in conjunction with existing buildings and works) will not have any significantly adverse impact on the locality,</i></p>	Y	<p>Being within the existing WMF footprint, the proposal will not create any negative visual impact on the locality and will not be prominent in the landscape.</p> <p>This is due to existing structures on the site and the dense vegetation and setbacks surrounding it along with the vegetated dunes between the WMF and the beach.</p>
<p>i) <i>The proposed development will not cause any significant overshadowing of adjoining land,</i></p>	N/A	<p>No overshadowing issues will result.</p>
<p>j) <i>The proposed development will not cause any significant reduction in the privacy of occupiers of adjoining land</i></p>	N/A	<p>No privacy issues will result.</p>

6.3.1.3 Clause 35 Foreshore development

The entire WMF site falls within the foreshore building line (as shown in figure 6 earlier) and Clause 35 is therefore required to be considered for the development falling within this area:

(a) the proposed development is in the public interest and does not significantly reduce public access to the foreshore, and

The proposal is in the public interest in that (as stated above and earlier in Section 4.0), the current sludge drying beds on the site are not operating efficiently or performing to the required standard. The new sludge drying facility will improve treatment of the current wastewater load, cater for any additional population growth over time, meet current EPA licence requirements and comply with the Lord Howe Island Board's On-site Wastewater Management Strategy.

(b) the bulk and scale of the proposed development will not detract from the visual amenity of the foreshore area, and

As stated earlier under the assessment of clause 11 (h) of the LHI LEP, being within the existing WMF footprint, the proposal will not create any negative visual impact on the locality and will not be prominent in the landscape. This is due to the existing infrastructure on the site and the existing established vegetation and setbacks surrounding the site along with the vegetated dunes between the WMF and Cobbys Beach.

(c) the proposed development addresses any need to restore lost or disturbed plants that are native to the Island, particularly if restoring those plants may enhance visual amenity, and

As stated earlier under the assessment of Clause 11 (e) LHI LEP, no additional landscaping is proposed or required by the proposed development.

(d) there is a demonstrated Island community-based, or marine-based, business need for it, and

There is a community-based need for the proposal. The new dewatering system is an important part of the Boards ongoing Wastewater Strategy, which is needed to protect both the environment and public health and to meet existing EPA Licence requirements for the WMF.

(e) the proposed development will not be adversely affected by, or adversely affect, coastal processes, and

Coastal processes will not be impacted.

(f) in the case of proposed development involving the erection of a structure—the purpose of that structure could not practicably be fulfilled by an existing structure, and

This clause relates to re-use of existing building structures before a new building/structure is erected. This proposal relates to a new septic sludge dewatering system which replaces old sludge drying beds which are now under capacity for the volume of septic sludge received at the WMF.

LHIB staff have advised that the possible option of increasing the existing drying bed capacity to suit the increasing volume of septic waste is not viable due to the size of the WMF site and the locational need for other infrastructure at the facility. In addition, the current system requires man-handling of effluent throughout the whole procedure which is inefficient, time consuming and an occupational hazard for staff.

Accordingly, no other reasonable alternatives to this proposal have been identified.

(g) in the case of development proposed to be carried out on land that is also within Zone 9 Marine Park—the proposed development is not inconsistent with any advice about the development that is provided to the consent authority by the Marine Parks Authority.

N/A

6.3.2 Lord Howe Island Development Control Plan 2005

The Lord Howe Island Development Control Plan 2005 (DCP 2005) provides detailed guidance for individuals and the community to achieve the aims and strategies of LEP 2010. In particular, DCP 2005 relates to the design of dwellings and is not highly prescriptive in regard to Waste Management Facilities.

The location of the proposed septic sludge drying facility within the existing footprint of the WMF, is well screened and physically separated from surrounding properties. As stated earlier, the new sludge drying facility will improve treatment of the current wastewater load, cater for any additional future population and/or tourist growth over time, meet existing EPA licence requirements and comply with the Lord Howe Island Board On-site Wastewater Management Strategy. On the above basis it is not expected that the proposed works will have any detrimental impacts on the World Heritage values of the island.

The proposal is consistent with all relevant controls within DCP 2005.

7.0 Environmental Effects

7.1 Environmental Planning and Assessment Act 1979

Under the provisions of Section 4.15, (previously 79C(1)) of the EP&A Act, in determining a DA, a consent authority is to take into consideration the following matters that are of relevance to the development the subject of the DA:

- a) the provisions of the following that apply to the land to which the development application relates:
 - i. Any environmental planning instrument

Comment: An assessment against the LHI LEP 2010 has been undertaken (see Section 6.3.1) and the proposed development is found to comply with all relevant provisions.

- ii. Any proposed instrument that is or has been the subject of public consultation under this Act

Comment: N/A

- iii. Any development control plan

Comment: An assessment of the proposal against the LHI DCP 2005 has been undertaken in Section 6.3.2 and was found to comply.

- iiia) Any planning agreement that has been entered into under Section 7.4, or any draft planning agreement that a developer has offered to enter into under Section 7.4,

Comment: There are no planning agreements relevant to the application.

iv. The regulations (to the extent that they prescribe matters for the purposes of this paragraph),
Comment: There are no relevant matters prescribed by the regulations.

v. Any coastal zone management plan (with the meaning of the Coastal Protection Act 1979)

Comment: There are no coastal zone management plans relevant to the application.

b) The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts on the locality

Comment: An assessment of the environmental impacts of the proposed alterations and additions to the main dwelling have been considered elsewhere in this report.

The table below provides further assessment of any likely impacts.

Likely environmental impacts

Potential Impacts	Proposal
<i>Suitability of the site</i>	The subject development is proposed within the existing LHIB WMF, immediately adjoining the WMF. As stated earlier in the description of the development in section 4.0, the current system is not operating efficiently or performing to the required standard. The new treatment system will improve treatment of the current wastewater load, cater for additional future population increases on Island, meet EPA licence requirements and comply with the Lord Howe Island Board On-site Wastewater Management Strategy.
<i>Access, Transport and Traffic</i>	Access, transport and traffic within the WMF will not be impacted by the works.
<i>Public Domain, Visual and Streetscape</i>	As stated earlier, the proposal will not create any negative visual impact on the locality and will not be prominent in the landscape. It will be screened by the existing infrastructure within the site, along with the dense vegetation and sand dunes surrounding the site.
<i>Ecological</i>	As reported in the referral comments on the subject application in Part 5 of this report, the proposal will not result in any significant impacts on any Threatened species, populations or ecological communities, or their habitats. The area to be disturbed is already cleared land that operates as a WMF and does not constitute suitable habitat for any of the listed species.
<i>Health</i>	As stated earlier the current septic sludge drying beds are not operating efficiently or performing to the required standard. The new treatment system will improve treatment of the septic sludge generated on the Island and cater for possible future population increases. It will also meet EPA licence requirements and comply with the LHIB On-site Wastewater Management Strategy.
<i>Flood</i>	As outlined earlier in this report the proposed development will be located outside of the mapped Flood hazard area.
<i>Heritage</i>	There are no heritage items within the near vicinity of the proposal.
<i>Views</i>	Views will not be impacted by the works.
<i>Privacy</i>	NA
<i>Open Space</i>	Open space will not be impacted by the proposal.
<i>Social and economic Impact in Locality</i>	There will be no social or economic impact.
<i>Construction</i>	Potential impacts from construction activities will be minimised through the recommended conditions of the approval.

c) likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts on the locality

Having regard to its location, and the preceding assessment, the site will adequately accommodate the proposed upgraded wastewater system and is suitable for the proposal for the reasons outlined in this report.

d) any submissions made in accordance with this Act or the regulations

The LHIB has confirmed that the subject application was placed on public exhibition from 16th February to 2nd March 2018. No submissions were received by the LHIB to this notification.

e) the public interest

For the reasons outlined in the preceding assessment, it is considered that the proposed development will be in the public interest subject to the application of appropriate conditions.

8.0 Conclusion

This application has been assessed with regard to the provisions of Section 4.15 of the EP&A Act, the LHI LEP 2010 and DCP 2005 and the relevant codes and policies of the Lord Howe Island Board.

The existing septic sludge drying facilities for the LHIB Waste Management Facility are unsatisfactory and the overall environmental benefits of employing the proposed new sludge dewatering/drying facility is clear.

In light of the preceding assessment, the application for decommissioning of the existing system and installation of a replacement septic sludge dewatering system at the LHIB Waste Management Facility, Airport Road, Lord Howe Island is supported subject to the application of a number of standard and proposal specific conditions.

9.0 Recommendation (Conditional Approval)

That the Board APPROVE Development Application 2018-09 for decommissioning of the existing sludge drying beds and installation of a replacement Septic Sludge Dewatering System at the Lord Howe Island Board Waste Management Facility, Airport Road, Lord Howe Island at unidentified crown land bordered by Lot 108 and 109 DP 757515 to the east and Cobbys Beach to the west, Lord Howe Island, subject to the following conditions:

1. Approved Plans and Supporting Documentation

The development is to be carried out in accordance with the plans and documentation provided with DA No. 2018-09 as listed below and endorsed with the Lord Howe Island Board's stamp, except where amended by other conditions of consent.

- a) Completed Development Application Form prepared by Bill Monks dated 14 February 2018.
- b) Statement of Environmental Effects dated 14 February 2018
- c) General Arrangement Plan Drg No. 253495-C-ZA176-A3-04, Rev: F, prepared by CST Wastewater Solutions, dated:6/12/17
- d) Lord Howe Island, Waste Management Facility Masterplan, prepared by LHIB, undated.

Reason: To ensure the development is carried out in accordance with the details submitted in the Development Application.

2. Biodiversity

- a) If any live LHI Gecko detected during works must be moved to similar habitat structures in the adjacent area (e.g. fallen timber within dense native vegetation, old dwellings/structures) away from the development site so they can escape predation by predators such as LHI Currawong, LH Woodhen and rodents.
- b) All building materials and building activity are restricted to being stock piled on cleared open areas.

3. Construction Hours

To limit the impact of the development on adjoining owners, all construction work shall be restricted to the hours of 7.00am to 6.00pm Monday to Friday and 8.00am to 1.00pm Saturdays. No construction work shall take place on Sundays or Public Holidays.

Reason: To limit the potential for any loss of amenity to adjoining owners and/or occupiers associated with the construction of the approved works.

4. Notices and Inspection requirements

The Principal Certifying Authority (PCA) will require the following mandatory inspections to be undertaken during development works:

- a) Pre-commencement and site set-out
- b) After excavation for, and prior to the placement of, any footings
- c) Prior to pouring any in-situ reinforced concrete element
- d) Prior to covering of the framework for any floor, wall, roof or other element
- e) Storm-water connections
- f) Final Inspection after the building work has been completed and prior to any Occupation Certificate being issued in relation to the building.

Reason: To ensure installation of wastewater system is in accordance with LHIB requirements.

5. Construction Certificate

- a) All construction work is to be carried out and completed in accordance with the National Construction Code (NCC)/Building Code of Australia (BCA).
- b) Prior to the issuing of a Construction Certificate the applicant is to provide evidence of payment of a Long Service Levy as per section 34 of the Building and Construction Industry Long Service Payments Act 1986.
- c) Prior to the issuing of a Construction Certificate the applicant is to ensure compliance with any/all conditions imposed by the Board as part the Development Application approval process.

Reason: This condition is prescribed under the Environmental Planning and Assessment Regulation 2000.

6. Water

All plumbing work, including any connections/disconnections to the wastewater treatment system, is to be undertaken by a licensed plumber.

Reason: To ensure installation of the new dewatering system is in accordance with LHIB requirements and Standards Australia.

7. Waste Management

a. Any waste generated from the proposed development is to be contained within the site and then be recycled or disposed of at the authorised waste management facility on the Island. This excludes asbestos waste, if any, which is the responsibility of the applicant to remove from the Island.

b. No waste shall be placed in any location or in any manner that would allow it to fall, descend, blow, wash, percolate or otherwise escape from the site.

Reason: To ensure installation of the wastewater system is in accordance with NSW Government legislation.

8 Construction

- a) No excavation to be carried out until the site is inspected by the LHIB Senior Electrical Officer.
- b) Any electrical work must be carried out by a licensed electrician. A copy of the Electrical Compliance Certificate for the works must be provided to the Board before issuance of an Occupancy Certificate.
- c) All works are to be undertaken in accordance with approved Construction Certificate documentation.
- d) Pre-Commencement meeting to be arranged with the Owner, Builder and Board Personnel prior to any work commencing on site. If the applicant is nominating the Lord Howe Island Board as the Principal Certifying Authority, this meeting will constitute the pre-commencement and site set-out inspection.

Advice to Applicant:

Significant Native Vegetation

Damage to, or removal of Significant Native Vegetation is prohibited, as per Clause 11 of LEP 2010.

Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides that a person must not take an action which has, will have, or is likely to have a significant impact on

A matter of national environmental significance (NES) matter; or Commonwealth land without an approval from the Commonwealth Environment Minister.

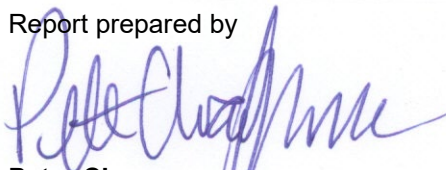
This application has been assessed in accordance with the New South Wales *Environmental Planning & Assessment Act, 1979*. The determination of this assessment has not involved any assessment of the application of the Commonwealth legislation.

It is the proponent's responsibility to consult Environment Australia to determine the need or otherwise for Commonwealth approval and you should not construe this grant of consent as notification to you that the Commonwealth EPBC Act 1999 does not have application.

The Commonwealth EPBC Act 1999 may have application and you should obtain advice about this matter. There are severe penalties for non-compliance with the Commonwealth legislation.

Section 8.7 and 8.10 of the EP&A Act 1979 confers on an applicant who is dissatisfied with the determination of a consent authority a right of appeal to the Land and Environment Court. This right of appeal is only valid for 12 months from the date of the consent. To determine the extent to which the consent is liable to lapse refer to Section 95 of the EP&A Act.

Report prepared by



Peter Chapman

Date: 26 April 2018

LHI Consultant Town Planner & Director
ALL ABOUT PLANNING PTY LTD

Endorsed:



Penny Holloway

Date: 1 May 2018

Chief Executive Officer
Lord Howe Island Board

Community Strategic Plan - Community Engagement Strategy

The development of the Community Strategic Plan needs to be community driven if it is to have acceptance by the community.

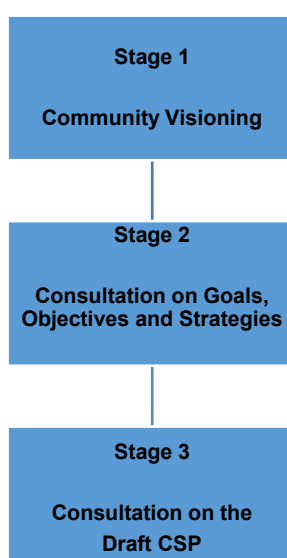
Community engagement will be undertaken to identify the community’s aspirations for the future of Lord Howe Island, the long-term objectives of the community and strategies to achieve these objectives.

The methods chosen need to maximise opportunities for input from all sections of the community and all demographics – young and old, families and singles, as well as residents living temporarily off the island.

The methods are encapsulated in the framework below and the most appropriate level will be selected for different types of engagement.

LEVEL OF PARTICIPATION	DESCRIPTION
INFORM	Provide balanced and objective information to help the community understand problems, alternatives, opportunities and/or solutions
CONSULT	Obtain community feedback on alternatives and/or decisions
INVOLVE	Work directly with the community throughout the process to ensure that community concerns and aspirations are consistently understood and considered
COLLABORATE	Partner with the community in each aspect of developing the strategy, including development of alternatives and identification of solutions
EMPOWER	Final strategy will be signed off by the community

Community engagement opportunities will be provided at all stages of the process of development the Community Strategic Plan:



All stages will be covered by the following activities:

Collaborate and empower

Establish a Community Reference Group

The community project group would consist of community members representing different demographic groups in the community (e.g. young and old, families, businesses). The role of the community reference group would be to advise on the CSP process, provide feedback to the Board throughout the process of developing the CSP and sign off on the final CSP.

Involve

Online Forum

The Board will use an external website provider to host an online discussion forum to reach the wider community, including LHI residents living off the Island, who prefer providing input via the internet and/or social media.

Focus Groups – community conversations

Community conversations will be organised around key themes, and for particular sections of the community.

Inform

Community Assets Paper

A review of the outcomes of the Community Strategy 2010 – 2015 will be undertaken, identifying what has been achieved and what is still outstanding.

A community assets paper will be developed based on the current and future issues facing Lord Howe Island to cover identified planning themes and distributed to the community and published on the Board's website. The Paper will help to inform the community and form a basis for consulting them on their views for the future.

Newsletters – electronic and paper

The Board will distribute newsletters to the community with the latest news of the CSP development and provide details of consultations to come.

Consult

Community Survey

The purpose of the survey is to find out what the community values about LHI and what they would like to see for the future.

The community survey will ask 3 questions:

1. *What are the 3 things you value about living on Lord Howe Island?*
2. *What are the 3 things you would you like to see in the future of Lord Howe Island?*
3. *Please rank the issues (to be identified) that are most important to you?*

Appointment of a community engagement facilitator is required to work with the Community Reference Group and to engage the community in conversations about Lord Howe Island and what people want to see happening in the future.

Community Strategic Plan – Proposed timeline

Date/Month	Stage	Actions
May 2018	<ul style="list-style-type: none"> • Inform community about community strategic plan • Commence recruitment of Strategic Planning Project Officer 	<p>Newsletter No 1: Community Strategy planning process and timeline</p> <p>Undertake recruitment process</p> <p>Set up Community Strategic Plan website page and FaceBook page</p> <p>All information about the strategy process to be available on a variety of media</p> <p>Hard copy/email/website/FaceBook distribution</p>
June	<ul style="list-style-type: none"> • Appoint Strategic Planning Project Officer • Establish Community Reference Group 	<p>Complete appointment</p> <p>Call for nominations for CRG</p> <ul style="list-style-type: none"> - Householder - Signal - Direct contact <p>Newsletter No 2: CRG establishment and membership</p>
July	<ul style="list-style-type: none"> • Review Community Strategy 2010-2015 	<p>Review outcomes of the Community Strategy 2010 – 2015</p> <p>Identify achievements and gaps</p> <p>Newsletter No 3: Review of community strategy – what has been achieved</p>
August	<ul style="list-style-type: none"> • Community Survey • Community Assets Review 	<p>Survey what the community values what they would like to see for the future.</p> <p>Review community issues and assets.</p> <p>Newsletter No 4: Community survey and community assets review</p>
September	<ul style="list-style-type: none"> • Community Assets Review • Draft key themes of strategy • Online Forum • Focus Groups – community conversations 	<p>Complete review and prepare paper</p> <p>Identify key themes from survey and review of past strategy and community assets review</p> <p>Set up on-line forum</p> <p>Hold focus groups around key themes, and for different demographic groups</p> <p>Report on progress to Board</p>

		Newsletter No 5 : Key themes, on-line forum and focus groups
October	<ul style="list-style-type: none"> • Online Forum • Focus Groups – community conversations 	<p>Consult via on-line forum</p> <p>Hold focus groups around key themes, and for different demographic groups</p> <p>Newsletter No 6 : Information from on-line forum and focus groups</p>
November	<ul style="list-style-type: none"> • Collation of themes, strategies and actions 	<p>CRG and project officer gather and analyse information</p> <p>Report on progress to Board</p> <p>Newsletter No 6 : Information from on-line forum and focus groups</p>
December	<ul style="list-style-type: none"> • Collation of themes, strategies and actions 	<p>CRG and project officer gather and analyse information</p> <p>Newsletter No 7: Update on progress, themes and strategies</p>
January 2019	<ul style="list-style-type: none"> • Draft Community Strategy 	<p>CRG and project officer draft community strategy</p> <p>Newsletter No 8: Update on progress in drafting strategy</p>
February	<ul style="list-style-type: none"> • Community workshops • Consultation on Draft Strategy 	<p>Community workshops on draft strategy</p> <p>Newsletter No 9: Update on community workshops</p>
March	<ul style="list-style-type: none"> • Community workshops • Consultation on Draft Strategy 	<p>Community workshops on draft strategy</p> <p>Report on progress to Board</p> <p>Newsletter No 10: Progress report on the plan – information on aspects of the plan</p>
April	<ul style="list-style-type: none"> • Final Draft of Strategy 	<p>CRG and project officer prepare final draft of community strategic plan</p> <p>Newsletter No 11: Progress report on the plan – information on aspects of the plan</p>
May	<ul style="list-style-type: none"> • Report to Board for adoption 	<p>Community Strategic Plan adopted.</p> <p>Newsletter No 12: Celebration of the final plan – product of community collaboration</p>

Lord Howe Island Board

Development of a ten year LHI Community Strategic Plan

October 2017

BACKGROUND

All Councils in NSW must develop a ten year Community Strategic Plan as part of the Integrated Planning and Reporting requirements of the *Local Government Act 1993*. The Lord Howe Island Board is not bound by the local government legislation. However, as the Board operates like a Council, it is good practice for the Board to undertake strategic planning with the community in an integrated and planned way.

In 2010, the Board funded the preparation of a community strategic plan to guide the community in achieving desired goals and objectives. The Island's residents were consulted extensively through a comprehensive "community conversation" facilitated by external consultant Peter Kenyon of the consultancy Bank of IDEAS.

The LHI Community Strategy 2010-2015 was developed following the conversation and released in August 2010. In implementing the Community Strategy a Community Development Group (CDG) was set up consisting of community members to support the implementation of actions and provide advice to the Board. A Community Development Officer position was also created at the Board on a part-time basis for an initial 12 month period.

The Board oversaw the implementation of the actions in the Strategy with a report to the Board in early 2013 indicating that 70% of the 61 actions identified had been commenced or completed. While very good work had taken place in developing the Strategy and in the first years of implementation, it appears that the community process had lost impetus by early 2013.

The Board now wishes to undertake the development of a new Community Strategic Plan to create a vision and guide the future direction of the Lord Howe Island community and the Board.

The vision will be developed with the community and key stakeholders during 2017 and 2018, and will guide the priorities and direction for Lord Howe Island over the next ten years.

PROPOSAL

1. *Developing the Plan*

The Community Strategic Plan (CSP) should be the highest level plan developed by the Board in conjunction with the community. All other plans would then relate to the key directions of the CSP, including the three year Corporate Plan, the one year Operations Plan and the annual budget. The Local Environment Plan also needs to be guided by the aspirations of the CSP.

In developing a Community Strategic Plan (CSP) there needs to be a structure, a process and a timeframe. A Community Strategic Plan should establish strategic objectives together with strategies for achieving those objectives. The CSP essentially needs to address four key questions for the community:

- Where are we now?
- What do we want to be in ten years' time?
- How will we get there?
- How will we know that we have arrived?

These questions will be addressed through the CSP development process which needs to cover a number of key elements and steps:

- **Information and analysis (where are we now)**

This involves examination, analysis and understanding of what Lord Howe Island is all about in relation to its community, environment, economy and governance. This needs to include an examination of the strengths, weaknesses, opportunities and threats. This needs to focus on community assets rather than issues, looking at "what's right with us", discovering underutilised assets and untapped potential.

Inputs into this phase include:

- o Communications and Community Engagement Survey 2016 – detailed results provide important feedback from the community
- o Views and aspirations of different age cohorts need to be captured, including those of children and young people
- o Visitor Information Survey 2017 – detailed results and feedback on visitors to the Island

- **Community engagement and involvement (what do we want to be in ten years' time)**

Meaningful engagement by the Board with the LHI community is needed in identifying their aspirations for the future of the Island in relation to community, environment, economy and governance. This should also identify the long term objectives of the community and strategies to achieve these objectives. A community engagement strategy needs to be prepared in a format that can be used for community consultation. Other stakeholder engagement, including other government agencies, needs to be undertaken. See attached draft outline of a Community Engagement Strategy.

- **Development of the Community Strategic Plan framework (how will we get there)**

The framework for the CSP, which will be filled in through the community engagement process, will include:

- o Vision
- o Aspirations
- o Outcomes
- o Goals
- o Strategies
- o Responsibilities
- o Budget

- **Evaluation, review and reporting (how will we know that we have arrived)**

The development of three year Corporate and one year Operations Plans will turn strategies into actions and identify the budget and resources needed to achieve the outcomes on a year by year basis.

Regular evaluation, review and reporting to the community on progress and results will ensure that the community knows when their aspirations have been met.

2. Resourcing the development of the Plan

The development of the Community Strategic Plan cannot be rushed, if the background work that is needed is to be done thoroughly and community input is to be meaningful.

It is anticipated that the research, community engagement process and development of the CSP itself will take 12 months.

Resourcing needed includes:

- Board staff member's time to support the planning, communication and consultation process – (approx. \$10,000 in-kind)
- Consultant to prepare Issues Paper - (approx. \$30,000)
- Consultant to undertake community engagement (focus groups and community conversations) – (approx. \$50,000)
- Preparation of the Community Strategic Plan document – (approx. \$5000)

It is estimated that an additional budget amount of \$85,000 is required to resource and support a comprehensive process.

DRAFT OUTLINE

Community Strategic Plan - Community Engagement Strategy

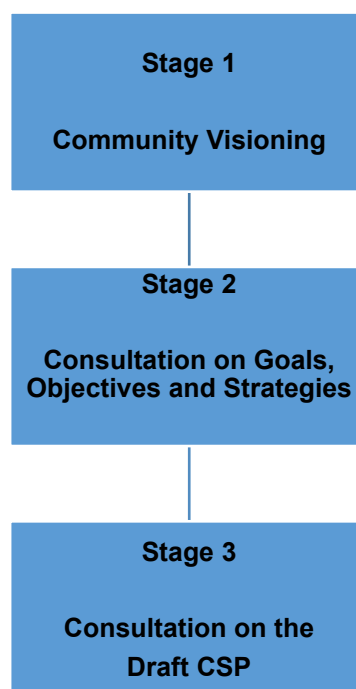
Community engagement will be undertaken to identify the community's aspirations for the future of Lord Howe Island, the long-term objectives of the community and strategies to achieve these objectives.

The methods chosen need to maximise opportunities for input from all sections of the community and all demographics – young and old, families and singles, as well as residents living temporarily off the island.

The methods are encapsulated in the framework below and the most appropriate level will be selected for different types of engagement.

LEVEL OF PARTICIPATION	DESCRIPTION
INFORM	Providing balanced and objective information to help the community understand problems, alternatives, opportunities and/or solutions
CONSULT	Obtain community feedback on alternatives and/or decisions
INVOLVE	Work directly with the community throughout the process to ensure that community concerns and aspirations are consistently understood and considered

Community engagement opportunities will be provided at all stages of the process of development the Community Strategic Plan:



All stages will be covered by the following activities:

Inform

Discussion Paper – Community Assets-based

A Paper will be developed identifying current and future issues as well as the community assets of Lord Howe Island. This will identify a number of planning themes and be distributed to the community and published the Board's website. The Assets-based Paper will help to inform the community and form a basis for consulting them on their views for the future.

Newsletters – electronic and paper

The Board will distribute newsletters to the community with the latest news of the CSP development and provide details of consultations to come.

Consult

Community Survey

The purpose of the survey is to find out what the community values about LHI and what they would like to see for the future.

The community survey will ask 3 questions:-

1. *What are the 3 things you value about living on Lord Howe Island?*
2. *What are the 3 things you would you like to see in the future of Lord Howe Island?*
3. *Please rank the issues (to be identified) that are most important to you?*

Involve

Establish a Community Reference Group

The community project group would consist of community members representing different demographic groups in the community (e.g. young and old, families, businesses). The role of the community reference group would be to advise on the CSP process and provide feedback to the Board and consultants throughout the process of developing the CSP.

Online Forum

The Board will use an external website provider to host an online discussion forum to reach the wider community, including LHI residents living off the Island, who prefer providing input via the internet and/or social media.

Focus Groups – community conversations

Appointment of an external community engagement facilitator to engage the community in conversations about Lord Howe Island and what they want to see happening in the future.

LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Development of a ten year LHI Community Strategic Plan

RECOMMENDATION

That the Board approve the process and timeline for developing a ten year LHI Community Strategic Plan.

BACKGROUND

In October 2017, the Board considered in Closed Session a proposal for development of a ten year Community Strategic Plan for Lord Howe Island. Attached is the proposal, which was reported to the October meeting (Attachment C).

At the October meeting, the Board approved the overall resourcing for developing a plan, but requested some changes to the community engagement strategy and proposed structure of plan.

The commencement of the community strategic planning process was delayed pending:

- The LHI Board elections, as it was felt that the plan should be owned by the newly constituted Board with new or re-elected Board members
- Allocation of a budget for the project through the annual budget process

These issues having been addressed, the strategic planning process is now ready to commence.

CURRENT POSITION

1. Developing the Plan

Meaningful engagement with the LHI community is essential for the plan to have community ownership. The plan needs to be community-driven.

Accordingly, the Community Engagement Strategy has been modified to place the community first (see: Attachment A). It is proposed to establish a Community Reference Group, consisting of interested and committed community members, who will oversee the planning process from beginning to end.

A Strategic Planning Project Officer will be recruited to work with the Community Reference Group in developing the community strategic plan.

Consultants will be engaged as needed throughout the process.

2. Resourcing the development of the Plan

Resourcing for the community strategic plan has been included in the draft 2018/2019 budget. It includes:

- Part-time Strategic Planning Project Officer to support the community engagement, planning, communication and consultation process – \$48,000
- Preparation of the community strategic plan document and consultancy services – \$30,000

3. Timeline for the Plan

The development of the Community Strategic Plan cannot be rushed. It is anticipated that the community engagement process, research and development of the CSP itself will take 12 months.

A proposed timeline is outlined in Attachment B.

RECOMMENDATION

That the Board approve the process and timeline for developing a ten year LHI Community Strategic Plan.

Prepared: Penny Holloway, Chief Executive Officer

Attachments:

Attachment A: Community Engagement Strategy

Attachment B: Proposed Timeline

Attachment C: Development of a Ten Year LHI Community Strategic Plan

DOG OBEDIENCE ASSESSMENT CHECKLIST

Prior to importation, dogs over the age of four months must have completed Obedience Dog Training and be certified by an accredited trainer or Veterinary Surgeon as having attained a Basic Level of Obedience Training according to the following criteria:

Criteria	Description	Validation	Comments
Sociability <i>On lead</i>	In an open area, a non-aggressive dog or puppy on lead approaches the dog with a person two meters away. The person has a short conversation with the owner. The dog must remain under the owner's control, not displaying any signs of aggression, stress or vocalizations towards the other dog or puppy.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Heel <i>On lead</i>	Hold dog by owner's side while walking. Dog must not pull.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Sit <i>On lead</i>	Dog must be controlled and focused on the handler. Dog must sit on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Drop and Down <i>Off lead</i>	Dog must drop and dog must lie down on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Stay <i>Off lead</i>	Dog must not move until commanded to move, dog must stay.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Come <i>Off lead</i>	Dog must return to handler on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
No <i>Off lead</i>	Dog must stop behaviour on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	

Overall Assessment

PASS

FAIL

Validators name: Position:

Validators Signature: Date:

In the event the dog is under the age of four months and/or considered too young to be trained, a bond equivalent to 10 penalty units (\$1,100.00) must be lodged with the Lord Howe Island Board prior to importation.

This bond will be refunded upon the production of the appropriate training certificate or veterinary certificate demonstrating compliance with this clause prior to the dog reaching one year of age.

Failing to have the dog certified to a Basic Level of Obedience following the criteria above before reaching one year of age, will be deemed to be a breach of the conditions of the approval to import and will result in the approval being terminated.

LORD HOWE ISLAND BOARD POLICY

LORD HOWE ISLAND BOARD POLICY			
TITLE	Dog Importation and Management Policy		
DATE ADOPTED	November 2014	AGENDA ITEM	8 (i)
CURRENT VERSION	July 2015	AGENDA ITEM	CEO approval
REVIEW	5 Years	FILE REFERENCE	PO0001 & CO0002
ASSOCIATED LEGISLATION	<i>Lord Howe Island Act 1953 Lord Howe Island Regulation 2014 Veterinary Surgeons Act 1986 Companion Animals Act, 1998 National Parks & Wildlife Act, 1974</i>		
ASSOCIATED POLICIES	N/A		

CONTENTS

1	Introduction	2
2	Objectives.....	2
3	Policy.....	2
3.1	Approval Process and Conditions	2
3.3	Eligibility	4
3.4	Transfer of Ownership	4
3.5	Responsibility of Dog Owners	4
3.6	Restricted and Dangerous Dogs.....	4
3.7	Nuisance Dogs.....	5
3.8	Dog Management Zones.....	5
3.9	Public Places.....	6
3.10	Designated Dog Exercise (Off-Leash) Areas	6
3.11	Prohibited Place	6
3.12	Special Circumstances.....	7
3.13	Outdoor Dining Areas	7
3.14	Dogs on Leasehold Land.....	7
3.15	Dogs defecating in public place	7
3.16	Communication – education.....	8
3.17	Enforcement	8
3.18	Penalties.....	8

3.19	Seizure of Dogs.....	8
3.20	Dangerous Dogs	8
4	Appendix A: Dog Management Areas.....	10
5	Appendix B: Application to Import a Dog	21
6	Appendix C: Application to Transfer a Dog.....	27

1 Introduction

This document sets out specific policies and procedures for the importation and management of dogs on Lord Howe Island (LHI). The policy has been prepared by the LHI Board (LHIB) in accordance with the *Companion Animals Act, 1998 (CA Act)*, the *Lord Howe Island Regulation 2014 (LHI Regulation)* and the *National Parks & Wildlife Act, 1974*.

2 Objectives

The policy encourages responsible dog ownership and aims to provide adequate areas for dogs and their owners to exercise both on and off leash.

The policy restricts the number, type and the areas where dogs are permitted, consistent with the natural heritage values of the Island.

The policy will be managed through an integrated process of community education, cooperation, enforcement and ongoing review.

3 Policy

3.1 Approval Process and Conditions

3.1.1 Approval may be given under Clause (CI) 62 (2) of the *LHI Regulation* to import a Dog to LHI, subject to the following sub-clauses:

- a) 62 (3) (a) The dog is free of disease ~~and parasites, and~~
- b) 62 (3) (b) A veterinary practitioner (within the meaning of the *Veterinary Practice Act 2003*) has certified that the dog is de-sexed or is permanently incapable of reproduction.
- c) 62 (4) Despite subclause (3) (b), the LHIB may grant approval for the bringing of a dog (such as a trained sniffer dog, a dog trained in search and rescue or a specialist hunting dog) onto the Island for a short period for a specified project.
- d) 62 (5) This CI does not prevent a person with a disability from bringing an assistance animal (within the meaning of the *Disability Discrimination Act 1992*) onto the Island, subject Clause 2 below and prior approval from the LHIB.

3.1.2 In order to satisfy CI 62 (3) (a), the applicant will be required to provide a certificate (not more than one month prior to the date of import) signed by a Veterinary Surgeon registered under the *Veterinary Surgeons Act 1986*, certifying that the dog has current:

- a) C5 vaccination (protection against distemper, hepatitis, parvovirus and canine cough (parainfluenza and bordetella bronchiseptica);
- b) Heartworm protection;
- c) Broad spectrum intestinal worm control;
- d) External parasites control including flea, tick and mites.

Please note that this condition applies to any dog that leaves the island. For example, if a resident takes their dog on a holiday with them, the dog will need to be certified free from ~~pest and~~ disease and parasites prior to returning to the island.

~~3.1.23.1.3~~ In order to satisfy CI 62 (3) (b), the applicant will be required to provide a certificate (not more than 1 month prior to the date of import) signed by a Veterinary Surgeon registered under the *Veterinary Surgeons Act 1986*, certifying that the dog is de-sexed, or otherwise rendered permanently incapable of reproduction, prior to importation to the Island.

~~3.1.23.1.4~~ Male dogs under the age of four months may be permitted provided the dog is de-sexed or otherwise rendered permanently incapable of reproduction prior to seven months of age. In this instance a bond equivalent to 10 penalty units must be lodged with the LHIB prior to importation of the dog. This bond will be refunded upon production of the appropriate veterinary certificate demonstrating compliance with this clause. All female dogs must be de-sexed prior to importation.

~~3.1.43.1.5~~ In accordance with the *CA Act*, dogs must be micro-chipped prior to importation and registered at the LHIB's Administration Office within seven (7) days of the dog arriving on the Island. All dogs must be entered into the NSW Companion Animals Lifetime Registration database.

~~3.1.53.1.6~~ An annual 'animal permit fee' is payable to the LHIB. Fees are listed in the LHIB's schedule of fees and charges.

~~3.1.7~~ Prior to importation, dogs over the age of four months must have completed Dog Obedience ~~Dog Training~~ and be ~~certified-validated~~ by an accredited trainer or veterinary surgeon as having attained a ~~Basic~~ Level of Obedience Training—according to the ~~following criteria: criteria listed in Appendix D. An overall pass grade must be obtained before approval can be issued by the Chief Executive Officer. If an overall fail grade is obtained, the Lord Howe Island Board members must consider the application~~

- ~~a) Heel (on lead): Hold dog by owner's side while walking; dog must not pull.~~
- ~~b) Sit (on lead): Dog must be controlled and focused on the handler; dog must sit on command.~~
- ~~c) Drop and Down (off lead): Dog must drop; dog must lie down on command.~~
- ~~d) Stay (off lead): Dog must not move until commanded to move; dog must stay.~~
- ~~e) Come (off lead): Dog must return to handler on command.~~
- ~~No (off lead): Dog must stop behaviour on command.~~

~~3.1.63.1.8~~ In the event the dog is under the age of four months and/or considered too young to be trained, a bond equivalent to 10 penalty units (~~\$1,100.00~~) must be lodged with the LHIB 'prior to importation. This bond will be refunded upon the production of the appropriate training certificate ~~or veterinary certificate~~ demonstrating compliance with this clause prior to the dog reaching one year of age. Failing to have the dog certified to a Basic Level of Obedience following the criteria above before reaching one year of age, will be deemed to be a breach of the conditions of the approval to import and will result in the approval being terminated.

~~3.1.73.1.9~~ In the event the dog is too young to be trained (prior to 4 months of age), and is a male dog and is not de-sexed at the time of importation, a bond of 10 penalty units will suffice

for both conditions. The bond will be refunded at such time as the owner demonstrates both conditions (4 & 8) have been met. Failure to meet both conditions will result in the approval being terminated.

3.1.10 Where approval to bring (import) a dog to the Island under clause 62 (2) of the *LHI Regulation* is granted, the dog must be imported within twelve (12) months from the approval being given, otherwise the approval will lapse and a new application will be required.

~~3.1.8~~

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3.2 Eligibility

- 3.2.1 Applicants must show valid reasons why they wish to import a dog.
- 3.2.2 Persons may be permitted to import dogs to the island if they:
 - a) Are a leaseholder or have lived on the island for more than two years immediately prior to lodging their application; or
 - b) Own a dog prior to becoming a temporary resident of the island, provided that they have documentary evidence that their term of employment will be at least two years duration.
- 3.2.3 Not more than one dog per household shall be permitted and dogs must be kept at the normal place of residence.

3.3 Transfer of Ownership

- 3.3.1 Dogs imported to the Island must be kept at the normal place of residence of the approved importer. Where dog owners require someone else to care for their dog for periods greater than 90 days, an application to transfer the dog ownership is required.
- 3.3.2 Written applications for the transfer of dog ownership can be made on the prescribed application form. The person applying must satisfy all relevant conditions of this Policy. Applications outside the transfer of ownership criteria will be assessed on their merits and agreed to by the LHIB.

3.4 Responsibility of Dog Owners

- 3.4.1 Approval to import and keep a dog on the Island will be subject to the owner of the dog complying with the conditions of this policy.
- 3.4.2 Failure to comply with this policy will be deemed to be a breach of the conditions of the approval to import and may at the discretion of the LHIB, result in approval to keep the dog on the Island being withdrawn, in which case enforcement action such as the issue of a penalty notice, prosecution or deportation of the dog may occur.
- 3.4.3 If an approval to import a dog to the Island has been terminated, the dog must be removed from the Island within 2 weeks from the date of the notice for termination being issued. Failing to remove the dog from the Island within the time specified may result in the dog being seized by officer(s) appointed by the LHIB, a Police Officer or any other person and may result in fines to the owner.

3.5 Restricted and Dangerous Dogs

- 3.5.1 It is an offence in New South Wales to sell, acquire or breed dogs on the restricted dog list.

The breeds of dogs that are prohibited from importing to the Island are as follows:

- a) American Pit-bull Terrier or Pit-bull Terrier;
- b) Japanese Tosa;
- c) Dogo Argentino (Argentinean fighting dog);
- d) Fila Brasileiro (Brazilian fighting dog);
- e) * Any dog declared by the LHIB under Division 6 of the CA Act to be a restricted dog;
- f) Any other dog of a breed kind, or description prescribed by the Regulation.

* Refers to any dog where the LHIB is of the opinion that the dog is ~~of~~ a breed ~~of~~ dog on the restricted dog list, or a cross-breed of any such breed or dog.

3.6 Nuisance Dogs

3.6.1 The provisions of Section 21 –of the CA Act apply to LHI in respect ~~of~~ Nuisance Dogs. A dog is a nuisance if the dog:

- a) Is habitually at large, or
- b) Makes a noise, by barking or otherwise, that persistently occurs or continues to such a degree or extent that it unreasonably interferes with the peace, comfort or convenience of any person in any other premises, or
- c) Repeatedly defecates on property (other than a public place) outside the property on which it is ordinarily kept, or
- d) Repeatedly runs at or chases any person, animal (other than vermin and, in relation to an animal, otherwise than in the course of droving, tending, working or protecting stock) or vehicle, or
- e) Endangers the health of any person or animal (other than vermin and, in relation to an animal, otherwise than in the course of droving, tending, working or protecting stock), or
- f) Repeatedly causes substantial damage to anything outside the property on which it is ordinarily kept.

3.6.2 Where there is evidence that a nuisance dog complaint is justified, the LHIB will issue the owner of the dog with an abatement notice. This presents the owner with a realistic definite timeline in which to take action to abate the nuisance. If requested the LHIB will provide advice as to corrective measure that may be employed, but it remains the owners responsibility to determine and implement the necessary corrective action.

3.6.3 Where the nuisance has not been abated after the abatement period the LHIB may issue an Infringement Notice. In the case of continued nuisance the LHIB may revoke any prior approvals and order the dog to be removed from the Island.

3.7 Dog Management Zones

3.7.1 For the purpose of this policy, land is classified into the following zones:

- a) Public Place
- b) Designated Dog Exercise Area
- c) Prohibited Place
- d) Leasehold Land

3.7.2 Maps showing specific locations are provided in Appendix A.

3.7.3 Bona fide assistance animals (including guide dogs, hearing assistance dogs and trained animals) are generally exempt from all ~~prohibitions-zonal restrictions~~

3.8 Public Places

3.8.1 Under the CA Act a public place is defined as:

- a) Any pathway, road, bridge, jetty, wharf, road-ferry, reserve, park, beach or garden; and
- b) Any other place that the public are entitled to use.

3.8.2 A dog that is in a public place must be under the effective control of some competent person by means of an adequate chain, cord or leash that is attached to the dog and that is being held by (or secured to) the person.

3.9 Designated Dog Exercise (Off-Leash) Areas

3.9.1 The LHIB has declared the following public places as “Off-Leash” areas:

- a) The grassed open space area west of Lagoon Road and the adjoining section of Lagoon Beach from the southern side of the Aquatic Club (fence), south to the southern-most boundary of the oval;
- b) The southern section of Blinky Beach south of the main access track;
- c) Lagoon Beach, from the south-western boundary of the airstrip (airstrip rocks) to the northern bank of Cobby’s Creek ~~(1 May to 29 September only).~~

3.10 Prohibited Place

3.10.1 Dogs are prohibited in the following places (whether or not they are leashed or otherwise controlled):

- a) Children’s play areas: meaning any public place, or part of a public place, that is within 10 metres of any playing apparatus provided in that public place or part for the use of children).
- b) Recreation areas where dogs are prohibited: meaning any playing area of a sports ground or tennis court on which sport is being played.
- c) School grounds and Child care centres.
- d) All beaches excluding those identified as Designated Dog Exercise Areas, and Middle Beach.
- e) All public buildings.

3.10.2 In addition, the LHIB has declared the following locations as Prohibited Places:

LOCATION	DEFINITION OF PROHIBITED PLACES
The Permanent Park Preserve	All of the Permanent Park Preserve with the exception of: a) The southern walking track to Middle Beach; b) The Transit Hill walking track from Bowker Ave to Blinky Beach (but not including the northern end of the beach area). Dogs must be leashed at all times whilst on the tracks identified above.
The Pines Precinct	All of the area generally west of Lagoon Road from the rock cairn at Signal Point to the northern end of the car park north of the boat sheds, including the whole of the BBQ area and adjacent beach.
The Island Cemeteries	Any area of Crown land reserved for the purposes of a cemetery together with such areas on leasehold as are clearly defined as private cemeteries.
Neds Beach	The whole of the Neds Beach area, from where the palm tree forest ends on Neds Beach Road, including the beach, BBQ areas and open recreational areas.
Blinky Beach	The northern end of Blinky Beach, northwards from where the carpark

	access track meets the beach.
Old Settlement Beach	The entire length of Old Settlement Beach including access tracks and BBQ areas on the western side of Lagoon Rd.
Little Island	The part of the Little Island Track and foreshore south from the boulder section at Little Island marking the northern boundary of Far Flats to Little Island (where the palm tree forest starts).
Cobby's Corner	All the area west of Lagoon Road at Cobby's Corner including the beach and BBQ area to the northern bank of Cobby's Creek. Seasonally (30 September – 30 April): All the area north of the northern beach access track to the airstrip revetment.
The Waste Management Facility (WMF)	Dogs will be prohibited from the area occupied by the WMF and adjacent revegetation areas.

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3.10.3 The above prohibition does not apply to dogs such as a trained sniffer dogs, dogs trained in search and rescue or other specialist dogs imported to the Island in accordance with CI 62(4) of the LHI Regulation.

3.11 Special Circumstances

3.11.1 Dogs are permitted in some public places, subject to the following conditions:

LOCATION	DEFINITION OF PROHIBITED PLACES
The Aerodrome (Portion 180)	Dogs will be prohibited from Portion 180, except for the purpose of loading or unloading a dog from an aircraft.

3.12 Outdoor Dining Areas

3.12.1 Dogs are prohibited from all outdoor dining areas including 10m from BBQ facilities at the following areas:

- a) Old Settlement Beach
- b) The Playground
- c) Cobby's Corner
- d) North Bay
- e) Neds Beach
- f) The Pines precinct
- g) BBQ area at the Jetty
- h) The Aquatic Club

3.12.2 The above prohibition does not apply to dogs such as a trained sniffer dogs, dogs trained in search and rescue or other specialist dogs imported to the Island in accordance with CI 62(4) of the LHI Regulation.

3.13 Dogs on Leasehold Land

3.13.1 Dogs do not have to be on a leash if they are on the dog owner's property.

3.13.2 A dog must not be on any other lease without the lease owner's consent.

3.14 Dogs defecating in public place

3.14.1 If a dog, ~~while in~~ under the control of any person, defecates in a public place, that person must immediately remove the faeces and properly dispose of them. Proper disposal means complete removal from the site and later disposal at the Waste Management Facility. Burying faeces onsite is not acceptable.

3.15 Communication – education

3.15.1 Information and maps will be provided to all registered dog owners. The policy will be available on the LHIB's website for all residents to download.

~~3.15.2~~ Where the boundaries of designated dogs areas are difficult to identify may be confusing (i.e. Cobby's Beach, Aquatic Club and Old Settlement Beach, Clear Place Track), ~~"No Dog"~~ signs appropriate signage will be installed.

~~3.15.2~~

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3.16 Enforcement

3.16.1 The policy will be given -effective and enforced by LHIB staff.

3.17 Penalties

3.17.1 Penalties (enforceable by an on-the-spot fine or in court) may be imposed on the owner of a dog for a number of offences. Some of these are:

- a) Dog found in a public place and not under control by leash etc;
- b) Dog found in a Prohibited Place;
- c) Dog attacking or injuring persons or animals;
- d) Dog fouling a public place, and failure of ~~the owner~~ the person controlling the dog to remove and appropriately dispose of faeces;
- e) Failure to notify the LHIB of transfer of ownership of dog; and
- f) Where an Authorised Officer is satisfied that a dog is a nuisance.

3.17.2 Offences under the *CA Act* attract fines of up to \$1,000. In addition, penalties under the *National Parks and Wildlife Act 1972* where dogs harm ~~a~~-protected fauna may attract fines up to \$10,000.

3.18 Seizure of Dogs

3.18.1 If a dog is found in contravention of the policy, the dog may be seized. A dog may be seized by officer(s) appointed by the LHIB, a Police Officer or any other person. A dog that has been seized under the Companion Animals Act must be delivered to the officer in charge of the LHIB's dog pound immediately. If your dog is seized, the LHIB will notify you as soon as practicable. Your dog can then be released on payment of a release fee (\$50) and a maintenance fee (\$5 / hour or part thereof) for the dog while it has been in the pound. If your dog is seized on a 2nd or subsequent occasion within 12 months of it first being seized, the release fee on each occasion is \$300. Dogs found to be continually wandering will be seized and will be declared a 'nuisance dog' under the Companion Animals Act, resulting in fines to the owner.

3.19 Dangerous Dogs

3.19.1 Dogs attacking or injuring persons or animals can be declared dangerous. A dog declared

Board Meeting: May 2018 **Agenda Number:** 8 (ii) **Rec No:** ED18/3516 **OPEN** Attachment: B

dangerous is subject to very strict controls and ultimately a destruction order may be issued for the dog.

4 Appendix A: Dog Management Areas



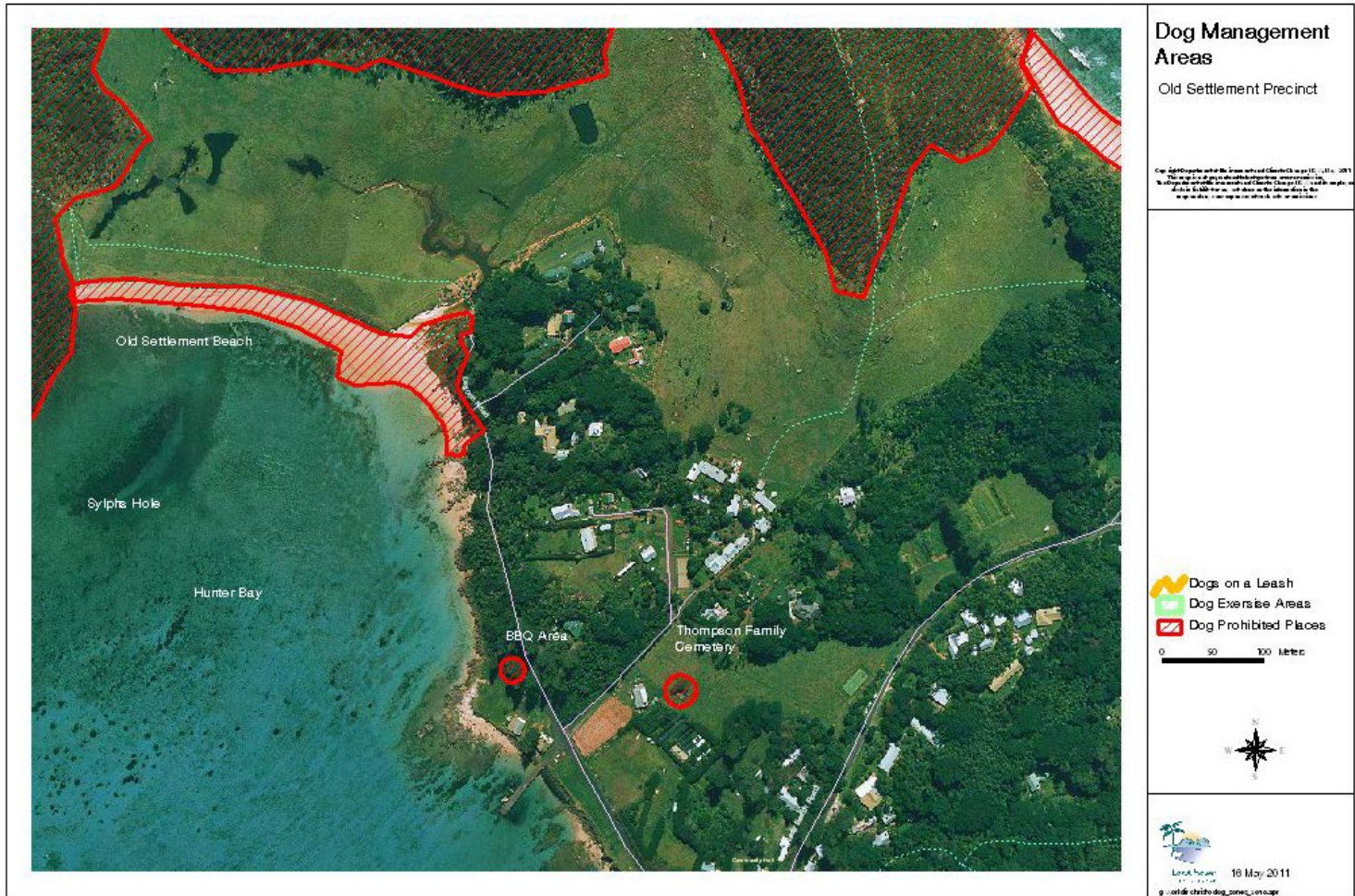
















5 Appendix B: Application to Import a Dog

LORD HOWE ISLAND BOARD

APPLICATION TO IMPORT A DOG

Please complete the following details to enable your dog importation application to be assessed.

Name of applicant	
Address	
Lease where dog will be kept	
Breed of dog	
Age of dog	
<u>Is the dog free of disease and parasites and certificate is attached?</u> <i>(See section 3.1.2 of the Policy)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u>Is the dog de-sexed and certificate attached?</u> <i>(See section 3.1.3 of the Policy)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <u>A bond must be lodged (10 Penalty units; \$1,100).</u> <u>All female dogs must be de-sexed prior to importation.</u> <u>Male dogs under the age of four months may be permitted provided the dog is de-sexed or otherwise rendered permanently incapable of reproduction prior to seven months of age.</u>
<u>Has the dog completed the Dog Obedience Assessment Checklist and certificate attached?</u> <i>(See Appendix B: Application to Import a Dog)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No <u>A bond must be lodged (10 Penalty units; \$1,100).</u>
Reason for importation	

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I, being the applicant, have read the Lord Howe Island Board's *Dog Importation and Management Policy 2014* and understand the provisions and conditions therein. I understand that failure to abide by the conditions of the policy may result in the termination of approval to have a dog on the Island, that fines may be imposed, and that it may also render future applications ineligible.

Signature: Date:

OFFICE USE ONLY

Criteria	Yes	No
Does the applicant meet the residency requirement?		
Does the applicant M meet the dogs per household requirement?		
Does the applicant P provide a reason for importing the dog?		
Is the dog free of disease and parasites and certificate is attached? Is the dog trained & the certificate attached?		
Is the dog de-sexed and certificate attached? Is the dog incapable of reproduction?		
Has the dog completed formal Dog Obedience Assessment Checklist and certificate attached?		
Is a bond required?		

If all criteria meet the conditions of importation under the *Dog Importation and Management Policy 2014*, approval can be issued by the Chief Executive Officer. If all criteria are not met, the Lord Howe Island Board members must consider the application.

APPROVED

DEFERRED FOR BOARD CONSIDERATION

..... Date:

Penny Holloway
CHIEF EXECUTIVE OFFICER

Assessment Notes:

DOG OBEDIENCE ASSESSMENT CHECKLIST

Prior to importation, dogs over the age of four months must have completed Obedience Dog Training and be certified by an accredited trainer or Veterinary Surgeon as having attained a Basic Level of Obedience Training according to the following criteria:

<u>Command</u> <u>Criteria</u>	<u>Description</u> <u>Criteria</u>	<u>Validation</u>	<u>Comments</u>
<u>Sociability</u> <u>On lead</u>	In an open area, a non-aggressive dog or puppy on lead approaches the dog with a person two meters away. The person has a short conversation with the owner. The dog must remain under the owner's control, not displaying any signs of aggression, stress or vocalizations towards the other dog or puppy.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
<u>Heel</u> <u>On lead</u>	Hold dog by owner's side while walking. Dog must not pull. Hold dog by owner's side while walking. Dog must not pull.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
<u>Sit</u> <u>On lead</u>	Dog must be controlled and focused on the handler. Dog must sit on command. Dog must be controlled and focused on the handler. Dog must sit on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
<u>Drop and Down</u> <u>Off lead</u>	Dog must drop and dog must lie down on command. Dog must drop and dog must lie down on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
<u>Stay</u> <u>Off lead</u>	Dog must not move until commanded to move, dog must stay. Dog must not move until commanded to move, dog must stay.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
<u>Come</u> <u>Off lead</u>	Dog must return to handler on command. Dog must return to handler on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
<u>No</u> <u>Off lead</u>	Dog must stop behaviour on command. Dog must stop behaviour on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	

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Overall Assessment

PASS

FAIL

Validators name: Position:

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Validators Signature: Date:

In the event the dog is under the age of four months and/or considered too young to be trained, a bond equivalent to 10 penalty units (\$1,100.00) must be lodged with the Lord Howe Island Board prior to importation.

This bond will be refunded upon the production of the appropriate training certificate or veterinary certificate demonstrating compliance with this clause prior to the dog reaching one year of age.

Failing to have the dog certified to a Basic Level of Obedience following the criteria above before reaching one year of age, will be deemed to be a breach of the conditions of the approval to import and will result in the approval being terminated.

6 Appendix C: Application to Transfer a Dog

LORD HOWE ISLAND BOARD

APPLICATION TO TRANSFER A DOG

Please complete the following details to enable the transfer of ownership application to be assessed.

<u>Name of applicant (transferee)</u>	
<u>Address</u>	
<u>Lease where dog will be kept</u>	
<u>Name of previous owner of dog (transferor)</u>	
<u>Name of dog</u>	
<u>Breed of dog</u>	
<u>Age of dog</u>	
<u>Is the dog free of disease and parasites and certificate is attached?</u> <u>(See section 3.1.2 of the Policy)</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u>Is the dog de-sexed and certificate attached?</u> <u>(See section 3.1.3 of the Policy)</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No <u>A bond must be lodged (10 Penalty units; \$1,100).</u>
<u>Has the dog completed the Dog Obedience Assessment Checklist and certificate attached?</u> <u>(See Appendix B: Application to Import a Dog)</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No <u>A bond must be lodged (10 Penalty units; \$1,100).</u>
<u>Reason for transfer</u>	

TRANSFEEEE

I, being the applicant, have read the Lord Howe Island Board's *Dog Importation and Management Policy 2014* and understand the provisions and conditions therein. I understand that failure to abide by the conditions of the policy may result in the termination of approval to have a dog on the Island, that fines may be imposed, and that it may also render future applications ineligible.

Signature: Date:

TRANSFEROR

I, approve the transfer of my dog,
 to

Signature: Date:

OFFICE USE ONLY

Criteria	Yes	No
Does the applicant meet the residency requirement?		
Does the applicant <u>meet</u> the dogs per household requirement?		
Does the applicant <u>provide</u> a reason for transferring the dog?		
Is the dog free of disease and parasites and certificate is attached? <u>Is the dog trained?</u>		
Is the dog de-sexed and certificate attached? <u>Is the dog incapable of reproduction?</u>		
Has the dog completed formal Dog Obedience Training and certificate attached?		
Is a bond required?		

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If all criteria meet the conditions of transfer under the *Dog Importation and Management Policy 2014*, approval can be issued by the Chief Executive Officer. If all criteria are not met, the Lord Howe Island Board members must consider the application.

APPROVED

DEFERRED FOR BOARD CONSIDERATION

..... Date:

Penny Holloway
 CHIEF EXECUTIVE OFFICER

Assessment Notes:

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Appendix D: Dog Obedience Training and Validation Assessment

Commented [DB1]: Bird Aversion?

Prior to importation, dogs over the age of four months must have completed Dog Obedience Training and be certified by an accredited trainer as having attained a Basic Level of Obedience Training according to the following criteria:

Criteria	Description	Validation	Comments
Sociability <i>On lead</i>	In an open area, a non-aggressive dog or puppy on lead approaches the dog with a person two meters away. The person has a short conversation with the owner. The dog must remain under the owner's control, not displaying any signs of aggression, stress or vocalizations towards the other dog or puppy.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Heel <i>On lead</i>	Hold dog by owner's side while walking. Dog must not pull.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Sit <i>On lead</i>	Dog must be controlled and focused on the handler. Dog must sit on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Drop and Down <i>Off lead</i>	Dog must drop and dog must lie down on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Stay <i>Off lead</i>	Dog must not move until commanded to move, dog must stay.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
Come <i>Off lead</i>	Dog must return to handler on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	
No <i>Off lead</i>	Dog must stop behaviour on command.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	

Overall Assessment

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PASS

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FAIL

Validators name: Position:

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Validators Signature: Date:

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LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Amendment - Lord Howe Island Dog Importation and Management Policy

RECOMMENDATION

It is recommended that:

- The Board approve the draft amendments to the Dog Importation and Management Policy and;
- Place the draft amended policy on public exhibition for a period of 28 days, with the draft only being reported back to the Board if there are any submissions opposing, or seeking modification of, the proposed changes to the policy.

BACKGROUND

The most recent version of the Dog Importation and Management Policy was approved by the Board in 2014.

Section 3.1 of the policy defines the approval process and conditions required to import a dog. Presently, the policy only briefly outlines the veterinary health and obedience requirements necessary to meet importation conditions.

With reference to veterinary health, Section 3.1.2 of the policy states:

In order to satisfy CI 62 (3) (a), the applicant will be required to provide a certificate (not more than one month prior to the date of import) signed by a Veterinary Surgeon registered under the Veterinary Surgeons Act 1986, certifying that the dog is free from disease and parasites prior to importation to the island.

Section 3.1.2 does not detail the specific veterinary health checks and vaccinations required by dogs prior to importation.

With reference to dog obedience, Section 3.1.7 of the policy states:

Prior to importation, dogs over the age of four months must have completed Obedience Dog Training and be certified by an accredited trainer as having attained a Basic Level of Obedience Training according to the following criteria:

- a) Heel (on lead): Hold dog by owner's side while walking; dog must not pull.*
- b) Sit (on lead): Dog must be controlled and focused on the handler; dog must sit on command.*
- c) Drop and Down (off lead): Dog must drop; dog must lie down on command.*
- d) Stay (off lead): Dog must not move until commanded to move; dog must stay.*
- e) Come (off lead): Dog must return to handler on command.*

f) No (off lead): Dog must stop behaviour on command

Currently, there is no compulsory checklist within the dog importation application that allows for verification of the above skills. When undertaking assessment of dog importation applications, it is not uncommon to receive ambiguous statements from certifying veterinary surgeons that do not reference the criteria listed in section 3.1.7. Additionally, there is no socialisation assessment to ensure that dogs are not aggressive and/or show signs of stress around other people and animals.

Finally, Section 3.11: *Prohibited Places* and 3.12: *Outdoor Dining Areas* list areas where dogs are prohibited (whether or not they are leashed or otherwise controlled). Presently there is no exemption for dogs such as a trained sniffer dogs, dogs trained in search and rescue or other specialist dogs.

COMMENT

With reference to section 3.1.2:

Advice has been sought from a registered veterinary surgeon regarding specific veterinary health checks. It is recommended section 3.1.2 of policy is amended to state:

In order to satisfy CI 62 (3) (a), the applicant will be required to provide a certificate (not more than one month prior to the date of import) signed by a Veterinary Surgeon registered under the Veterinary Surgeons Act 1986, certifying that the dog has current:

- a) C5 vaccination (protection against distemper, hepatitis, parvovirus and canine cough (parainfluenza and bordetella bronchiseptica);*
- b) Heartworm protection;*
- c) Broad spectrum intestinal worm control;*
- d) External parasites control including flea, tick and mites.*

This amendment will clarify the standards set out in the policy to ensure all dogs imported to the island meet veterinary health standards and are free of disease and parasites. It will also streamline the approval process for both the applicant and Ranger in charge of processing the dog importation application.

With reference to section 3.1.7:

It is recommended that a *Dog Obedience Assessment Checklist* such as that in Attachment A is included in the *Application to Import a Dog* (Appendix B of the Policy), and that this checklist also include a socialisation assessment. This will ensure all dogs over the age of four months have a basic level of obedience and socialisation prior to importation, and that this has been verified by an accredited trainer or veterinary surgeon. It will also streamline the approval process for both the applicant and Ranger in charge of processing the dog importation application.

It is recommended section 3.1.7 is amended to state:

Prior to importation, dogs over the age of four months must have completed Dog Obedience Training and be validated by an accredited trainer or veterinary surgeon as having attained a basic level of obedience according to the criteria listed in the Dog Obedience Assessment Checklist (Appendix B). An overall pass grade must be obtained before approval can be issued by the Chief Executive Officer. If an overall fail grade is obtained the application is to be submitted for Board consideration.

In addition to the current obedience criteria detailed in the Policy, the addition of a socialisation aspect of the assessment will ensure the dog is able to socialise with other dogs and people and

does not display any signs of aggression, stress or whining. The socialisation aspect will require the dog to pass the following assessment:

In an open area, a non-aggressive dog or puppy on lead approaches the dog with a person two meters away. The person has a short conversation with the owner. The dog must remain under the owner's control, not displaying any signs of aggression, stress or vocalizations towards the other dog or puppy.

With reference to Section 3.10 and 3.12:

In accordance with CI 62(4) of the LHI Regulation, it is recommended that section 3.10 and 3.12 are amended to allow for trained sniffer dogs, dogs trained in search and rescue or other specialist dogs imported to the Island to be exempt from all prohibitions, stating:

The above prohibition does not apply to dogs such as a trained sniffer dogs, dogs trained in search and rescue or other specialist dogs imported to the Island in accordance with CI 62(4) of the LHI Regulation.

Finally, a number of minor amendments have been made to associated forms to reflect the above amendments, as well as to reference updated clauses in the Regulation, correct typographic errors and generally improve some wording. A full copy of the policy with amendments highlighted is attached.

RECOMMENDATION

It is recommended that:

- The Board approve the draft amendments to the Dog Importation and Management Policy and;
- Place the draft amended policy on public exhibition for a period of 28 days, with the draft only being reported back to the Board if there are any submissions opposing, or seeking modification of, the proposed changes to the policy.

Prepared: Hank Bower, Manager Environment/World Heritage

Endorsed: Penny Holloway, Chief Executive Officer

Attachments:

Attachment A: Dog Obedience Assessment Checklist

Attachment B: Draft amended Dog Importation and Management Policy

LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Dog, Avian and Stock Importation Policies - Moratorium

RECOMMENDATION

That the Board approve acceptance of applications to import chickens and approval of compliant applications subject to the normal conditions of importation and an additional condition that:

All chickens imported after May 2018 must be destroyed or removed from the island and all feed be removed from the island or sealed within rodent proof metal containers at least two weeks prior to implementation of the Rodent Eradication Program with destruction/removal being at the cost of the importer.

ISSUE

At the May 2017 meeting, the Board approved the following:

1. *Extract from May 2017 minutes:*
 - a) *A moratorium on the importation of chickens, livestock and dogs be implemented with immediate effect until the September 2017 Board meeting, at which time a "go/no go" decision will be made in regard to the Rodent Eradication Project (REP).*
 - b) *Residents be informed by way of a "householder" of the moratorium, subject to the "go/no go" decision to be made at the September Board meeting.*
 - c) *Residents be informed by way of a householder of the Board's decision at the September Board meeting.*
2. *If the decision to proceed with the REP in 2018 is made in September 2017:*
 - a) *Maintain the moratorium on chickens and livestock until the Board obtains confirmation of rodenticide breakdown in the environment after the REP.*
 - b) *Accept applications for dog importation and advise that the Board will not compensate owner for transportation and kennel cost during the REP.*
 - c) *Formally advise current owners of chickens, livestock and dogs of amended conditions and responsibilities and that failure to comply may result in approval for the animal(s) being revoked.*
 - d) *Revise the Avian Importation Policy (Revised July 2015), Dog Importation and Management Policy (Revised July 2015), Stock Importation Policy (Revised July 2015) and Plant Importation Policy to accommodate any REP requirements as required only for the duration of the REP.*

3. *If the REP does not proceed cease the moratorium on imports and accept and process importation applications under the existing policies.*

CURRENT POSITION

- The Board agreed at its September 2017 meeting that the REP should proceed in 2018.
- In line with the May 2017 decision, applications to import dogs have been accepted and approved subject to normal conditions and the condition that “...*the Board will not compensate [the] owner for transportation and kennel cost during the REP.*”
- In line with the May 2017 decision, applications to import chickens and livestock are not currently being accepted or approved.
- At the March 2018 meeting, the Board deferred operational commencement of the REP until 2019.
- The current moratorium prevents the importation of poultry, with several residents claiming their current flocks are aging with subsequent decreases in egg production.

COMMENT

To ensure local egg production is maintained until implementation of the REP in winter 2019, it is proposed that applications to import chickens be accepted and approved subject to the normal conditions of importation and an additional condition that:

All chickens imported after May 2018 must be destroyed or removed from the island and all feed be removed from the island or sealed within rodent proof metal containers at least two weeks prior to implementation of the Rodent Eradication Program with destruction/removal being at the cost of the importer.

RECOMMENDATION

That the Board approve acceptance of applications to import chickens and approval of compliant applications subject to the normal conditions of importation and an additional condition that:

All chickens imported after May 2018 must be destroyed or removed from the island and all feed be removed from the island or sealed within rodent proof metal containers at least two weeks prior to implementation of the Rodent Eradication Program with destruction/removal being at the cost of the importer.

Prepared: Hank Bower Manager Environment/World Heritage

Endorsed: Penny Holloway Chief Executive Officer

**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE LORD HOWE ISLAND MUSEUM, AND
THE LORD HOWE ISLAND BOARD**

In recognition of the mutual benefits that can be achieved by a cooperative partnership, the Lord Howe Island Museum and the Lord Howe Island Board enter into this non-binding memorandum of understanding (**MoU**).

1. Definitions

a) Lord Howe Island Museum (**Museum**)

The mission of the Museum is to develop the Lord Howe Island Museum as a community centre for promoting the Island's World Heritage values; and to record, conserve and present the unique local cultural values of the community

b) The Lord Howe Island Board (**Board**)

The LHIB is a statutory authority established under the provisions of the *Lord Howe Island Act 1953*. The Board reports to the NSW Minister for the Environment. The Board is charged with the care, control and management of the Island and the affairs and trade of the Island. It is also responsible for the care, improvement and welfare of the Island and residents. "Island" as defined by the Act includes Lord Howe Island and all adjacent islands and coral reefs within one marine league of the Island. Ball's Pyramid and adjacent islands are also included in this definition.

c) The **Parties** – a and b

2. Objectives

The Parties are both important stakeholders in the past, present and future cultural, community and scientific affairs of Lord Howe Island, and recognise the mutual benefits that can be achieved by a cooperative partnership. This MOU will guide cooperation and collaboration between the Parties.

The objectives of this MOU are to:

- a) Support the preservation of the Island's history, heritage and culture
- b) Support the scientific study and preservation of the flora and fauna of LHI
- c) Support enhanced engagement, collaboration and information sharing in areas of shared strategic interest
- d) Develop joint programs and projects for the mutual benefit of the Parties
- e) Use the partnership to leverage resources and enhance outcomes

3. Expected Outcomes

The Museum and the Board expect to collaborate in the following ways:

- a. supporting scientific research about LHI
- b. developing and staging exhibitions at the Museum to mutual benefit
- c. promoting the scientific study and preservation of the culture, the flora and fauna of LHI
- d. sharing specific expertise, facilities and equipment where appropriate
- e. developing projects or programs to engage the residents in stewardship of LHI, and provide opportunities for visitors to contribute, such as Citizen Science

The Museum and the Board will use their best endeavors to collaborate in the following areas:

- f. undertaking activities in support of the Museum and the Board
- g. identifying and engaging with philanthropists who have an interest in or passion for LHI
- h. fund raising activities in support of conservation, culture and heritage, whilst not restricting the rights and discretions of either Party with respect to fundraising

4. Research and Policy Advice

The Museum and the Board will keep each other informed of activities or opportunities of common interest, as appropriate.

5. Public Exhibitions

The Museum and the Board will, within available resources and by mutual agreement, work together on the development and production of exhibitions, which will promote LHI's natural and cultural history to local, mainland and visiting audiences.

6. Education and Scientific Research

The Museum and the Board will, within available resources and by mutual agreement, exchange resources and information relevant to natural and cultural history and education programs.

7. Project Action Plans

The mechanism for delivery of specific projects identified through the MOU will be a project action plan (attached as schedules to this MOU) detailing scope, outcomes, funding, resources and responsibilities of both parties. Each party will agree the plan of action prior to implementation.

8. Communications

The Museum and the Board will consult one another about new or proposed strategies for meeting the objectives of this MoU and will look for opportunities for joint publicity on matters of common interest.

9. Agreements with other institutions

This MoU does not preclude either the Museum or the Board from entering into compatible cooperative agreements with other organisations.

10. Governance

The Museum and the Board will work together to identify and develop management and governance arrangements that might reasonably enhance the operation of this MoU.

Each Party will nominate a point of contact for this MOU

11. Insurance

Each party must maintain adequate insurances for:

- Equipment and assets used in programs or projects under this MOU
- Liability against death, injury or damage to person or property on premises or activities under that Party's control
- Meeting statutory obligations in accordance with work health and safety and workers' compensation laws in New South Wales

12. Monitoring and Review

This MoU will be kept in review by the Parties and altered, if necessary, by mutual agreement of the Parties after a period of not more than two years from the date of signature.

13. Term and Termination

This MOU commences on the last date of execution by the Parties and continues until the earlier of:

- I. The expiration of 5 years
- II. One party gives the other Party 60 days written notice of termination

On termination of the MOU, all activities commenced will cease unless otherwise agreed.

On the written agreement of both Parties, this MOU may be extended for a mutually agreed period.

EXECUTION

FOR LORD HOWE MUSEUM:

By: Signature: _____ Date: _____

Name:

Title:

FOR LORD HOWE ISLAND BOARD:

By: Signature: _____ Date: _____

Name:

Title:

LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Memorandum of Understanding, LHI Board and LHI Museum

RECOMMENDATION

That the draft Memorandum of Understanding between the LHI Board and the LHI Museum be endorsed

BACKGROUND

Memoranda of understanding have been developed where necessary in order to document the way in which the Board and various stakeholders work together and in partnership both on Lord Howe Island and in other locations.

A memorandum of understanding (MOU) is non-binding in that it is not a legal contract. However, it provides a good way of identifying the benefits and expected outcomes of working in partnership as well as the mutual expectations of the parties to the MOU. An MOU is two-way in that there must be benefits to both parties involved in the partnership.

The Board already has memoranda of understanding with a number of organisations, including:

- The Port Macquarie Hastings Council
- The LHI Tourism Association
- The Office of Environment and Heritage, Science Division
- LHI Marine Parks

CURRENT POSITION

The LHI Museum has approached the Board about entering into an MOU with the aim of building a partnership of mutual benefit. A draft MOU has been prepared and agreed between Museum and Board staff (see Attachment A). The objectives of the MOU are to:

- a) Support the preservation of the Island's history, heritage and culture
- b) Support the scientific study and preservation of the flora and fauna of LHI
- c) Support enhanced engagement, collaboration and information sharing in areas of shared strategic interest
- d) Develop joint programs and projects for the mutual benefit of the Parties
- e) Use the partnership to leverage resources and enhance outcomes

It should be noted that the MOU does not make a commitment to any financial contribution from the Board to the Museum. However, joint projects may be identified through the MOU, which could lead to agreement about a financial contribution for a specific project. A project plan is required to be developed for any joint project, and the financial arrangements would be an essential part of any plan.

There is benefit for the Board in entering into the MOU with the Museum and the draft MOU is therefore supported.

RECOMMENDATION

That the draft Memorandum of Understanding between the LHI Board and the LHI Museum be endorsed.

Prepared: Penny Holloway Chief Executive Officer

Attachments:

Attachment A: Draft Memorandum of Understanding – LHI Board and LHI Museum

Operators Meeting Agenda

Thursday 10th May		
Time	Session	Presenter
9:00	Interpretation Training/ Storytelling	Rod Hillman
9:30		
10:00		
10:30		
11:00		
11:30		
12:00	LUNCH BREAK	
12:30	LUNCH BREAK	
13:00	REP Key Information & Updates	Jaclyn Pearson
13:30	Citizen Science/ Ecotourism/ Research	Ian Hutton
14:00	WEP Key Information & Updates	Sue Bower
14:30	Waste Management Key Information & Updates	TBC
15:00	Questions	All
15:30	END	

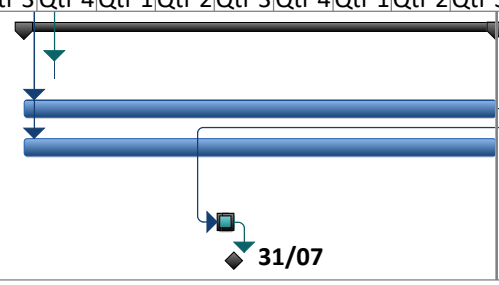
Friday 11th May		
Time	Session	Presenter
9:00	Overview - Day 1 & Ecotourism	Rod Hillman
9:30	World Heritage Values & Biosecurity Updates	Hank Bower
10:00	Marine Parks Key Information & Updates	Sallyann Gudge
10:30	Weather Trends for Winter 2018	Amy Debattista
11:00	LHIB Projects Key Information & Updates	John Teague
11:30	Tourism Key Information & Updates	LHITA TBC
12:00	Ecotourism Information and Certification	Rod Hillman
12:30	Questions	All
13:00	LUNCH BREAK	
13:30	LUNCH BREAK	
14:00	Interpretation/ Storytelling - Finalising Plans	Rod Hillman
14:30		
15:00		
15:30	END	

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	2016			2017			2018			2019			2020			2021			
							Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
1		LHI Rodent Eradication Project	912 days?	Wed 14/03/18	Fri 10/09/21																				
2		Phase 3 Implementation	464 days?	Wed 14/03/18	Mon 23/12/19																				
3		Approvals / Post Approvals	71 days?	Mon 21/05/18	Mon 27/08/18																				
4		APVMA	22 days?	Mon 21/05/18	Tue 19/06/18																				
5		Submision of RMP	1 day?	Mon 21/05/18	Mon 21/05/18																				
6		APVMA Approval	21 days	Tue 22/05/18	Tue 19/06/18	5																			
7		EPBC	61 days?	Mon 4/06/18	Mon 27/08/18																				
8		Submission of Mitigation Plan and Biosecurity Plan	1 day	Mon 4/06/18	Mon 4/06/18																				
9		Approval of Plans	60 days?	Tue 5/06/18	Mon 27/08/18	8																			
10		Marine Parks	61 days?	Mon 4/06/18	Mon 27/08/18																				
11		Submission of Monitoring Plan	1 day	Mon 4/06/18	Mon 4/06/18																				
12		Approval of Plan	60 days?	Tue 5/06/18	Mon 27/08/18	11																			
13		Ongoing consultation	109 days	Wed 14/03/18	Mon 13/08/18																				
14		Agreed Property Management Plans	109 days	Wed 14/03/18	Mon 13/08/18																				
15		Final Decision to Proceed			Tue 18/09/18																				
16		IEAG Technical Feasibility- Memo	2 wks	Tue 14/08/18	Mon 27/08/18	14																			
17		SC Recommendation	4 days	Tue 28/08/18	Fri 31/08/18	16																			
18		Final LHIB Papers Due	2 days	Mon 3/09/18	Tue 4/09/18	17																			
19		Board Meeting - Final Go / No Go Decision	1 day	Tue 18/09/18	Tue 18/09/18	6,18																			
20		Bait Order and Shipping	125 days	Mon 26/11/18	Fri 17/05/19																				
21		Order and Manufacture	4 mons	Mon 26/11/18	Fri 15/03/19																				
22		Ship to Aus	20 edays	Sat 16/03/19	Fri 5/04/19	21																			
23		Customs and Quarantine	14 days	Mon 8/04/19	Thu 25/04/19	22																			
24		Ship to LHI	3 wks	Fri 26/04/19	Thu 16/05/19	23																			
25		Target Date Bait on LHI	1 day	Fri 17/05/19	Fri 17/05/19	24																			
26		Helicopter	255 days	Fri 1/06/18	Thu 23/05/19																				
27		Revised Contract Finalised	1 day	Fri 1/06/18	Fri 1/06/18																				
28		Fuel order and delivery	2 mons	Fri 29/03/19	Thu 23/05/19																				
29		mobilisation Tas to LHI	5 days	Tue 14/05/19	Mon 20/05/19																				
30		Target Helicopters Arrive on LHI	1 day	Mon 20/05/19	Mon 20/05/19	29																			
31		Recruitment	80 days	Mon 28/01/18	Fri 17/05/19																				
32		Bait Station deployment crew (local)	49 days	Fri 15/02/19	Wed 24/04/19																				
33		Advertising	2 wks	Fri 15/02/19	Thu 28/02/19																				
34		Selection	2 wks	Fri 1/03/19	Thu 14/03/19																				
35		Training and Preparation	3 wks	Thu 4/04/19	Wed 24/04/19	34FS+14 days																			
36		Rest of Field crew	80 days	Mon 28/01/18	Fri 17/05/19																				
37		Advertising	2 wks	Mon 28/01/18	Fri 8/02/19																				
38		Selection	2 wks	Tue 12/02/19	Mon 25/02/19	37																			
39		Relocation	7 wks	Mon 11/03/18	Fri 26/04/19	38																			
40		Training and Preparation	3 wks	Mon 29/04/18	Fri 17/05/19	39																			
41		Captive Management	186 days?	Mon 8/04/19	Mon 23/12/19																				
42		Repairs	25 days	Mon 8/04/19	Fri 10/05/19																				

Board Meeting: May 2018
Agenda Number: 12 (i)
Rec No: ED18/3522
OPEN Attachment: B

Project: Project_23April2018 Date: Tue 24/04/18	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only			
	Summary		Inactive Task		Duration-only		Finish-only			

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	2016			2017			2018			2019			2020			2021		
							Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1
79		Phase 4 Monitoring and Evaluation	522 days	Wed 11/09/19	Fri 10/09/21																			
80		Livestock and Poultry Reintroduction	1 day	Mon 28/10/19	Mon 28/10/19	67FS+100 days																		
81		Ongoing Rodent Detection	730 edays	Wed 11/09/19	Fri 10/09/21	72																		
82		Ongoing Biodiversity Outcome Monitoring	730 edays	Wed 11/09/19	Fri 10/09/21	72																		
83		Second Dog Search	20 days	Mon 6/07/20	Fri 31/07/20	81																		
84		Declaration of freedom from rodents	0 days	Fri 31/07/20	Fri 31/07/20	83																		



Project: Project_23April2018
Date: Tue 24/04/18

Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline		Progress
Split		External Tasks		Inactive Summary		Manual Summary		Progress		
Milestone		External Milestone		Manual Task		Start-only				
Summary		Inactive Task		Duration-only		Finish-only				

LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Lord Howe Island Rodent Eradication Progress Report

RECOMMENDATION

That the Board note the LHI Rodent Eradication Program (REP) update and endorse the nomination of Board member Matthew Retmock to the Rodent Eradication Project Steering Committee.

BACKGROUND

On 18 May 2015, after the community consultation process over late 2014 and early 2015 ending with the community survey, the LHI Board decided to proceed with the planning and approvals stage of the Program leading towards implementation of the rodent eradication plan, if the required approvals were received.

The rodent eradication program has been divided into three stages:

Stage One: Preliminary planning and community consultation

This stage has previously been completed. It involved undertaking required initial trials including captive management and toxin resistance trials as well as initial operational planning. It included the biosecurity review and progression of biodiversity outcome monitoring. Finally it included the community consultation and engagement process and the community survey.

Stage Two: Planning and Approvals

This stage is now complete. The key tasks during this stage were:

- Assembling key personnel to undertake the work on the next stages
- Reviewing the Rodent Eradication Plan to ensure that it takes into consideration all new information since it was drafted in 2009
- Developing individual property and livestock management plans, which inform the eradication plan and the approval process. This involved a detailed property by property consultation with individual leaseholders and residents.
- Continue working with community to fully understand the programs objectives
- Undertake any necessary studies required for the approval process, including independent human health risk assessment
- Continue the relevant baseline outcome monitoring
- Further develop detailed planning and all necessary risk assessments;

- Obtain required permits and approvals,
- Update operational details;
- Prepare key tender documentation

Final Go / No Go Decision

The Board made the decision to proceed to implementation of the project at the Board meeting 12 Sept 2017 considering:

1. The status of key approvals
2. Safety of the environment
3. The advice of the NSW Chief Scientist and Engineer regarding a further independent Human Health Risk Assessment
4. Social Acceptability
5. Budget considerations
6. Technical Feasibility
7. Steering Committee recommendation

Because of a change in approval status in November 2017, i.e. after the Board meeting, the Board has had to reconsider the timing of implementation.

Stage Three: Implementation and evaluation of the eradication plan

This Stage is now underway. The timing has changed because of a decision by the Board at its March 2018 meeting to defer implementation for a further year. The main reason for deferral was that the required permit from the Australian Pesticides and Veterinary Medicine Authority (APVMA) had not been received.

Stage Three will now involve the eradication plan being implemented in winter 2019. Key elements are:

- Finalise detailed logistics and operational planning including Property Management Plans
- Assemble and train remaining resources
- Capture of woodhens and currawongs
- Operational readiness check
- Implementation of ground and aerial baiting
- Follow up monitoring and release of woodhens and currawongs
- Maintaining an ongoing biosecurity and rodent detection monitoring network

CURRENT POSITION

1. Approvals

The new application for a Minor Use Permit from the Australian Pesticides and Veterinary Medicine Authority (APVMA) is still under assessment. On 24 April 2018, the APVMA formally requested that further information be provided in the Risk Mitigation Plan and for the Plan to be endorsed by the Technical Advisory Group (TAG). The TAG was established as a condition of the approval from the Department of the Environment and Energy. The additional information needs to be submitted to the APVMA before 22 May. A decision is expected within two to three weeks of providing the information.

2. Rodent Eradication Project Steering Committee Membership

On 23 April, the Board nominated Matthew Retmock to be the Board representative on the Project Steering Committee.

3. Community Acceptability and Property Access

Whilst consultation continues with the community, individual Property Management Plans cannot be finalised until the APVMA permit is received and any conditions are known. In the meantime, communication with the community continues in the following areas:

- One on one discussions regarding changes to the methodology
- Weekly REP newsletters, <http://lhiroderadicationproject.org/news-updates/> videos and Facebook communications to the community
- Sharing of letters of support from tourists and science advocates
- The team has also been working with lodges affected by cancellation of staff accommodation bookings.

Ecotourism update

The REP team has continued to develop the ecotourism campaign and citizen science activities offering for winter 2018. <http://lhiroderadicationproject.org/get-involved/>. People already booked have been encouraged to continue to travel in 2018 regardless of the delay. As at end of March approximately 400 visitors have booked for travel in winter 2018 using the “Protecting Paradise” booking code. Winter 2018 will be used as a trial for Winter 2019. The package is still on offer with Qantas releasing their normal winter fares in May.

Local operators will receive some upskilling in interpretation and engagement through a workshop facilitated by Rod Hillman CEO of Ecotourism Australia in preparation for a more eco savvy visitor. Operators will also be updated on the various Board conservation programs. The workshop will be held on the 10 and 11 May. The Agenda is included as Attachment A.

Social Science / Behavioural Change

The team met with Associate Professor Rosemary Black from Charles Sturt University (Port Macquarie) in April to discuss social science collaboration opportunities. Professor Helene Marsh who is the Chair of the Federal Threatened Species Scientific Committee (TSSC) also attended the meeting. Professor Marsh was interested in helping to address social challenges and invited Andrew to present on the REP at their next meeting in June. Professor Black will prepare a proposal to be considered by the TSSC for additional funding.

The team will be meeting with Associate Professor Liam Smith (BehaviourWorks Australia – Monash University) on 22 and 23 May to discuss the REP.

4. Staffing

Delay of the REP until winter 2019 has the following implications on staffing:

- The project manager’s contract is currently until November 2018. This will be extended.
- The assistant project manager’s visa is in place until 22 May. A visa extension is being sought with initial steps commenced.
- The GIS officer is currently seconded until the end of August 2018. Discussions are underway with NZ Department of Conservation regarding suitable arrangements.
- Technical adviser, Pete McClelland, is currently contracted until the end of August 2018. The technical adviser has indicated that he is already committed to another project in winter 2019 and will not be available.

- Major contractors (Helicopter and Ground Baiting contractor) have expressed a desire to continue providing their services but revised contracts need to be confirmed as soon as possible.

5. Biosecurity

Dogs and handlers travelled to Port Macquarie in March to:

- Undertake ongoing proficiency assessment. All handler and dog combinations passed examination
- Inspect biosecurity measures and risks at LHI Sea Freight premises
- Undertaken additional scent training on live risk species that cannot be undertaken on LHI (i.e. snakes)

A possible detection of a rat was reported on the Island trader on 24 February. Both dogs alerted to the area separately and scat was found present. The rat was not found, however additional baiting was undertaken on the ship. Until eradication of rodents on LHI, it is important to note that the rat could have come from LHI (i.e. in waste skips).

The detection teams participated in the official community opening of the new airport terminal and look forward to an improved working environment.

Handlers now run a weekly “Meet the Biosecurity Dogs” talk and demonstration for visitors, which is also open to the community.

6. Operational Planning

Operational planning continues in preparation for implementation:

- Construction on the captive management facility is practically complete with Taronga Zoo signing off on the contractors’ work in mid-April. A maintenance regime will be implemented to keep the aviaries in the best possible condition for use in 2019.
- Bait storage and transport options continue to be worked through with the bait manufacturer who is currently trialing transport options.
- Bait bucket calibration trials have been rescheduled for May 2019 pending confirmation that the existing contract will be maintained.
- Field data collection system development is underway with trials expected to be rolled out in May.
- A ground baiting trial was conducted in February 2018 with the ground baiting contractor Biodiversity Restoration Specialists.
- The Island Eradication Advisory Group reviewed the latest version of the LHI REP Operational Plan at their meeting in April 2018. They will provide formal advice on managing project risks.
- The Stage 3 Business Plan has been approved by the Environmental Trust (Biodiversity and Green Corridors sub-committee) subject to the APVMA permit being received. The committee noted it was an excellent plan. A variation will need to be submitted to account for the delay.
- The project schedule has been updated to reflect the decision to delay implementation until winter 2019. The first bait drop is scheduled for 3 June 2019. See Attachment B for the detailed project schedule.
- The budget will be updated once FY2017/18 costs are known and revised quotes are received from key contractors

RECOMMENDATION

That the Board note the LHI Rodent Eradication Program (REP) update and endorse the nomination of Board member Matthew Retmock to the Rodent Eradication Project Steering Committee.

Prepared: Andrew Walsh Project Manager, Rodent Eradication Project

Endorsed: Penny Holloway, Chief Executive Officer

Attachments:

Attachment A: Tourism Operators Workshop agenda

Attachment B: Project Schedule

Board Meeting: May 2018	Agenda Number: 12 (ii)	Record Number: ED18/3500
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LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Renewable Energy Program Update

RECOMMENDATION

It is recommended that the Board note the renewable energy program update.

BACKGROUND

Funding for the LHI Renewable Energy project is provided through a \$4 million grant from the Federal Government via the Australian Renewable Energy Agency (ARENA), a \$5.9 million loan from NSW Treasury (to be paid back via diesel fuel savings), and \$0.5 million from the Board.

Consultants Jacobs were engaged by the Board in 2014 to lead the technical elements of the project, and community consultation. Jacobs completed a Technical Feasibility Study which showed that using 450 kW of solar panels (around 2,000 panels), a 400kWh battery and two small 275kW wind turbines, would reduce the Island's diesel fuel consumption from 541,000 litres per year to around 180,000 litres per year, a 66% reduction. This combination would also provide 67% of the Island's annual electricity needs.

Solar, Battery and Control System Contract

The tender for the solar, battery and control system contract package of work was advertised on NSW e-tendering between 15 June and 24 August 2016. The assessment of the tenders by Jacobs and the Board is complete. However, ARENA has delayed the awarding of the contract by the Board until after their Go\No Go decision about the future of the project.

Wind Turbines

In May 2017, the Federal Minister for the Environment and Energy decided that that the "proposed action of constructing and operating two wind turbines on Lord Howe Island would have unacceptable impact on World Heritage values and the National heritage values of the Lord Howe Island Group". This means that it is not possible to proceed with the wind turbine component at this stage.

ARENA Funding

In June 2017, ARENA representatives indicated that they did not believe that the ARENA Board would support continued funding for the project in its current form. Without the wind turbine component, the project with just solar and battery storage, saving 35% of diesel fuel

was not seen as sufficiently innovative and would not serve as a demonstration case for other remote areas.

After extensive negotiations, ARENA approved the funding for the development of further options, comprising solar and other renewable approaches, which may be acceptable to their Board and lead to a variation in the Board's funding agreement with ARENA.

Consultants Jacobs completed their other Options Analysis Report on the project economics and potential demonstration value in December 2017.

The Options Report was presented to the Board in March 2018, with the Board endorsing Option 4 – Optimised Solar and battery configuration with enabling technologies, as the preferred option.

CURRENT POSITION

Preferred option

Jacobs are now preparing new tender documents to include the changes for option 4 with optimised solar and battery configuration ready for the repricing by the two successful tenderers. Jacobs have also been requested to provide timelines to award the contract and complete the works, based on the tenderers' response.

The ARENA Board will consider the preferred Option 4 at their next Board meeting in July 2018, with a view to deciding on continued funding.

Budget

The total cost of the project from July 2014 to date is \$2.4 million. Expenditure has been frozen since ARENA indicated that it was reconsidering the funding agreement with the Board.

To date ARENA has provided funding of \$500,000, and NSW Treasury provided \$60,000 to meet the cost of the preparation of the business case, leaving a shortfall (overspend) of approximately \$1.85 million. This overspend includes approximately \$500,000 that has been spent on the supply of road base materials for the access road construction, which is now on hold. Pending a decision on the future of the renewable energy project, these materials will be diverted to other road projects on the Island and the funds recouped from other capital project budgets.

In order for ARENA to approve the additional alternative investigation works by Jacobs they approved a change to the existing Deed of Agreement for the funding through a "Deed of Variation" which has inserted a new milestone 5: Alternative Scenarios Report and pushed back the other milestones consecutively up to milestone 12. Approximately \$100,000 has been earmarked by ARENA for the further investigation works.

Invoices amounting to \$850,000 (ex GST) have now been sent to ARENA for both Milestone 4 and Milestone 6. ARENA has agreed to pay all of Milestone 4 and partial Milestone 6 amounting to \$700,000 (ex GST). This is due to Milestone 6 containing requirements pertaining to the wind turbine which cannot be met until the current deed is updated.

RECOMMENDATION

It is recommended that the Board note the above information.

Prepared: John Teague, Manager, Infrastructure & Engineering Services

Endorsed: Penny Holloway, Chief Executive Officer

Attachments: Nil

LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Airport Runway Extension Feasibility Study Update

RECOMMENDATION

It is recommended that the Board note this report and endorse further investigation of the '570m runway extension' option to the NW.

BACKGROUND

Lord Howe Island's restricted runway length of 888 metres limits the type of commercial aircrafts that can operate on the Island. While other options have been considered such as leasing or hiring other aircrafts to operate on Lord Howe Island or to get other airlines to operate; without extending the runway, airlines will be restricted in the types of aircrafts that can service the Island. A sustainable and viable long-term solution is therefore needed to secure the provision of air services to Lord Howe Island.

In late November 2017, AECOM Australia Pty Ltd was contracted to undertake the Lord Howe Island Airport Runway Extension Feasibility. The scope of the study includes the future aircraft requirements for the island, plane characteristics, existing runway/site limitations, CASA requirements, conceptual design, geotechnical investigation, environmental assessment, community consultation and economic impacts/costs. The project is broken down into a number of milestones.

Milestone	Description	Anticipated time
1.	Completion of detailed assessment of extended runway and suitable aircraft options	March 2018
2.	Completion of preliminary geotechnical investigation	June 2018
3.	Completion of conceptual engineering design	August 2018
4.	Completion of preliminary environmental assessment	September 2018
5.	Undertake economical assessment and preliminary business case	October 2018
6.	Final presentation and report	December 2018

The funding for the project comes predominately from a Restart NSW grant through Infrastructure NSW with a small amount of Board staff wages for project management as shown below:

1. Infrastructure NSW - Restart NSW funding	\$450,000
2. Board staff wages	\$ 19,000
TOTAL	\$469,000 (excl. GST)

CURRENT POSITION

AECOM visited the island in December 2017 to undertake their inception meeting, various site inspections and to gather additional background reports of works previously undertaken by the Board.

AECOM have been in consultation with various airline operators in Australia to understand their current and future plans in respect to aircraft type and operations. AECOM have also consulted with airline manufacturers, CASA and Airservices Australia in order to complete the attached report for the milestone 1 requirements of this project.

AECOM's "***Detailed Assessment of Extended Runway Requirements and Suitable Aircraft Report***" provides a detailed review of the runway requirements for operation of the existing DHC8- 200 regular passenger transport (RPT) aircraft at Lord Howe Island Airport (LDH), and the requirements for alternative aircraft types such as the DHC8-300/400, ATR42/72 and Fokker 50.

In addition future aircraft design trends were investigated, including electric aircraft. It was concluded that electric aircraft of comparable size will be developed within the next 15-20 years but at this point no conclusions can be drawn on their runway requirements except that they are expected to be similar to current aircraft.

The predominant western-designed and in production turbo-prop aircraft in the 30-70 seat class is the ATR42 (48 seats), ATR72 (68 seats) and the Bombardier DHC-400 with 74 seats. These aircraft are the preferred choice of the "mainline" airlines such as Qantas and Virgin Australia. Older types no longer in production such as the DHC8-200/300, the Saab 340 and Fokker 50, while capable aircraft, are confined to the small regional airlines such as Rex and Skytrans.

The following runway options were investigated during this study:

- **Option 1:** Do Nothing.
- **Option 2:** 450m runway extension.
- **Option 3:** 570m runway extension.
- **Alternative Option 1:** Runway realignment.
- **Alternative Option 2:** Leasing or purchasing of aircraft.

It is proposed the current runway orientation should be retained due to the likely considerable cost associated with a full realignment and is not recommended for further study.

A 'Do' Nothing' approach could leave the island with no RPT service from March 2022 onwards once the current agreement with Qantas expires; this is not considered a viable solution.

Although a 450m extension option provides for the future operation of some candidate aircraft, it does not provide sufficient "future proofing" for efficient operation of the ATR72 and DHC8-400 and therefore the recommendation is to further investigate a 570m extension option.

Conclusion

The recommendation of the review is to further investigate the '570m runway extension' option to the NW.

Pending the outcome of the '570m runway extension' feasibility study, leasing or purchasing of aircraft could be investigated although the significant operational, logistical and legal aspects would need to be considered in further detail.

In addition to this project AECOM will update the Obstacle Limitation Surfaces (OLS) map for the current runway along with a recalculation of the current PCN (pavement classification number) for the runway following the overlay in 2015

RECOMMENDATION

It is recommended that the Board note this report and endorse further investigation of the '570m runway extension' option to the NW.

Prepared: John Teague, Manager Infrastructure & Engineering Services

Endorsed: Penny Holloway, Chief Executive Officer

Attachments:

Attachment A: AECOM - Detailed Assessment of Extended Runway Requirements and Suitable Aircraft Report

RUNWAY EXTENSION FEASIBILITY STUDY

DETAILED ASSESSMENT OF
EXTENDED RUNWAY REQUIREMENTS
AND SUITABLE AIRCRAFT

Lord Howe Island Board | 20 April 2018

Detailed Assessment of Extended Runway Requirements and Suitable Aircraft

Client: Lord Howe Island Board

Co No.: N/A

Prepared by

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20-Apr-2018

Job No.: 60559990

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Quality Information

Document Detailed Assessment of Extended Runway Requirements and Suitable Aircraft
 Ref 60559990
 Date 20-Apr-2018
 Prepared by Jed Mills
 Reviewed by Richard Murran

Revision History



Rev	Revision Date	Details	Authorised	
			Name/Position	Signature
A	07-Mar-2018	For Client Comment	Jed Mills Project Manager	
B	20-Apr-2018	Final Issue	Jed Mills Project Manager	

Table of Contents

Executive summary		i
1.0	Introduction	1
	1.1	Scope of this report
	1.2	Reference documents
	1.3	Acronyms and descriptions
2.0	Lord Howe Island Airport and operating environment	4
	2.1	Location
	2.2	Weather patterns
3.0	Existing operating conditions	6
	3.1	Existing runway
	3.1.1	Runway length and orientation
	3.1.2	AIP runway declared distance data
	3.1.3	Runway strip width
	3.1.4	Runway end safety area
	3.1.5	Obstacle limitations surfaces
	3.1.6	Visual segment surface
	3.1.7	Approach and lighting
	3.1.8	Instrument flight procedures
	3.1.9	Aerodrome rescue and firefighting service
	3.1.10	Runway strength
	3.2	Current aircraft operations
	3.2.1	RPT operations
	3.2.2	Emergency medical operations
	3.2.3	Military operations
	3.2.4	General aviation
4.0	CASA requirements	13
	4.1	Applicable standards
	4.2	Runway design code
	4.3	Runway length
	4.4	Runway strip width
	4.5	Runway End Safety Area (RESA)
	4.6	Aerodrome rescue and fire fighting
	4.7	Air Services Australia
5.0	Existing runway limitations	15
	5.1	Runway length
	5.2	Effect of flight path obstructions
	5.2.1	General
	5.2.2	South east runway end flight path obstructions
	5.2.3	North west runway end flight path obstructions
	5.3	Runway design code
	5.4	Runway strip width
	5.4.1	Widen the strip width to 140m.
	5.4.2	Airline seeks dispensation from CASA
	5.4.3	Aerodrome seeks upgrade to Code 3 with dispensation from CASA for 90m wide strip
	5.5	Obstacle limitation surfaces
	5.6	Runway strength
6.0	Candidate RPT aircraft types	23
	6.1	Aircraft performance considerations
	6.2	Relevant aircraft types- next 15 years
	6.2.1	Aircraft types
	6.2.2	Operators and fleets
	6.2.3	Runway length requirements
	6.2.4	Route payload capability
	6.3	Relevant aircraft types beyond 15 years

	6.3.1	Aircraft design trends	28
7.0		Non-RPT operations	29
	7.1	Emergency medical services	29
	7.2	RAAF	29
	7.3	Private operator requirements	29
8.0		Runway extension options	30
	8.1	General comments	30
	8.2	Option 1 – Do Nothing	31
		8.2.1 Operational Length	32
		8.2.2 Operational considerations	33
		8.2.3 CASA compliance	33
		8.2.4 Runway Strength	33
		8.2.5 OLS and VSS	33
	8.3	Option 2 – 450m Runway Extension	35
		8.3.1 Operational length	36
		8.3.2 Operational considerations	37
		8.3.3 CASA compliance	38
		8.3.4 Runway strength	38
		8.3.5 OLS and VSS	38
	8.4	Option 3 – 570m Runway Extension	42
		8.4.1 Operational length	43
		8.4.2 Operational considerations	44
		8.4.3 CASA compliance	44
		8.4.4 Runway strength	44
		8.4.5 OLS and VSS	45
	8.5	Extension Option Aircraft Performance	50
	8.6	Alternate option 1 – Optimal runway reorientation	53
		8.6.1 Runway usability - crosswinds	53
		8.6.2 Indicative runway realignment	54
		8.6.3 Optimal operational runway realignment	55
	8.7	Alternate option 2 – Aircraft leasing	56
		8.7.1 Aviation PLC Group	56
9.0		Conclusion	57
Appendix A			
		Lord Howe Island Aerodrome Technical Inspection 2017	A
Appendix B			
		Runway layout and Indicative OLS drawings	B

Executive summary

Being 590 km from the closest town on the Australian mainland and 790 km from Sydney, Lord Howe Island is one of the most remote communities in NSW and among the most remote of any Australian territory. With no marine passenger service to the mainland, the residents of Lord Howe Island are dependent on the regular airline services between Sydney and Brisbane to support not only the major economy on the island (tourism) but also their daily requirements including health education, mail and freight.

This report provides a detailed review of the runway requirements for operation of the existing DHC8-200 regular passenger transport (RPT) aircraft at Lord Howe Island Airport (LDH), and the requirements for alternative aircraft types such as the DHC8-300/400, ATR42/72 and Fokker 50.

In addition future aircraft design trends were investigated, including electric aircraft. It was concluded that electric aircraft of comparable size will be developed within the next 15-20 years but at this point no conclusions can be drawn on their runway requirements except that they are expected to be similar to current aircraft.

The predominant western-designed and in production turbo-prop aircraft in the 30-70 seat class is the ATR42 (48 seats), ATR72 (68 seats) and the Bombardier DHC-400 with 74 seats. These aircraft are the preferred choice of the “mainline” airlines such as Qantas and Virgin Australia. Older types no longer in production such as the DHC8-200/300, the Saab 340 and Fokker 50, while capable aircraft, are confined to the small regional airlines such as Rex and Skytrans.

The following runway options were investigated during this study:

- Option 1: Do Nothing;
- Option 2: 450m runway extension;
- Option 3: 570m runway extension;
- Alternative Option 1: Runway realignment; and
- Alternative Option 2: Leasing or purchasing of aircraft.

It is proposed the current runway orientation should be retained due to the likely considerable cost associated with a full realignment and is not recommended for further study.

A ‘Do’ Nothing’ approach could leave the island with no RPT service from March 2022 onwards once the current agreement with Qantas expires; this is not considered a viable solution.

Although a 450m extension option provides for the future operation of some candidate aircraft, it does not provide sufficient “future proofing” for efficient operation of the ATR72 and DHC8-400 and therefore the recommendation is to further investigate a 570m extension option.

Conclusion

The recommendation of the review is to further investigate the ‘570m runway extension’ option to the NW.

Pending the outcome of the ‘570m runway extension’ feasibility study, leasing or purchasing of aircraft could be investigated although the significant operational, logistical and legal aspects would need to be considered in further detail.

1.0 Introduction

AECOM has been engaged by the Lord Howe Island Board (LHIB) to undertake a runway extension Feasibility Study to investigate the viability of a runway extension and subject to LHIB approvals, progress technical studies, develop conceptual engineering plans and undertake community engagement.

Lord Howe Island is among Australia's premier tourist destinations, known nationally and internationally for its natural beauty and biodiversity, as recognised in the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Listing.

Consideration of a runway extension at Lord Howe Island needs to take into account the potential impacts that any development would have on the island and impact on the unique environment.

1.1 Scope of this report

This report is a summary of the desktop aviation assessment undertaken as part of the Lord Howe Island Airport Runway Extension Study Milestone 1 deliverable.

The scope of this report includes the following:

- Review of existing operations and physical conditions;
- Evaluation of suitable Regular Passenger Transport (RPT) aircraft;
- Determination of a suitable runway length, width and pavement strength;
- Assessment of runway extension options, including review of CASA compliance, obstacle and flight path impacts; and
- Outline of next steps and conclusion of the AECOM evaluation.

1.2 Reference documents

In developing this report, AECOM have considered the documentation in Table 1 in the analysis and generation of options.

Table 1 Reference documents

Document name	Version	Date
CASA Manual of Standard Part 139-Aerodromes	1.14	Jan 2017
Three Consulting -Lord Howe Island Air Services	Final draft	Jun 2017
Airport operational support Pte Ltd - Lord Howe Island Aerodrome Technical Inspection 2017		Aug 2017
Australian AIP	Current issue	
Australian Board of Meteorology Lord Howe island weather statistics, http://www.bom.gov.au/climate/averages/tables/cw_200839.shtml		1988-2018
CASA Lord Howe Island Aerodrome Audit Report	ARN:513956	Oct 2016
ICAO Annex 14 - Aerodromes	7th Ed	Jul 2016

1.3 Acronyms and descriptions

Table 2 Table of acronyms

Acronym	Definition
ACN	Aircraft Classification Number
AIP	Aeronautical Information Publication
ARFFS	Airport Rescue and Firefighting Service
ASA	Air Services Australia
ASDA	Accelerate-stop distance available
BNE	Brisbane Airport
CASA	Civil Aviation Safety Authority
DME	Distance Measure Equipment
EMS	Emergency Medical Services
GA	General Aviation
GNSS	Global Navigation Satellite System
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IF	Instrument Flight
IFP	Instrument Flight Procedure
ISA	International Standard Atmosphere
LDA	Landing Distance Available
LDH	Lord Howe Island Airport
LHIB	Lord Howe Island Board
Load factor	The percentage of an aircraft's maximum payload load that can be carried over a specific route (e.g. due to take-off or landing restrictions)
MCTOW	Maximum Classified Take-Off Weight
Minima	The minimum visibility and cloud base weather conditions aircraft can take-off or land at an aerodrome
MLW	Maximum Landing Weight
MOS	Manual of Standards
MZFW	Maximum Zero Fuel Weight
NDB	Non Directional Beacon
Non-precision	An instrument approach with minima typically cloud base 300ft or more and visibility 1600m or better.
NSW	New South Wales
OEW	Operating Empty Weight
OLS	Obstacle Limitation Surface
PANS-OPS	Procedures for Air Navigation Services – Aircraft Operations.
PAPI	Precision Approach Path Indicator
Payload	The weight of commercial load that can be carried in an aircraft over a specific route.
PCN	Pavement Classification Number

Acronym	Definition
RAAF	Royal Australian Air Force
RESA	Runway End Safety Area
RFDS	Royal Flying Doctor Service
RLR	Runway Length Required
RNAV	Random Area Navigation
RPT	Regular Public Transport
STOD	Supplementary Take-off Distance
STODA	Supplementary Take-off Distance Available
STOL	Short Take-off and Landing
TBA	To Be Announced
TODA	Take-off Distance Available
TORA	Take-off Run Available
VASIS	visual approach slope indicator systems
VPA	Vertical Path Angle
VSS	Visual Segment Surface

2.0 Lord Howe Island Airport and operating environment

2.1 Location

Lord Howe Island is considered remote, located some 790km from Sydney, 740km from Brisbane, 900km from Norfolk Island and 1,570km from Auckland. The closest mainland town is Port Macquarie approximately 590km to the west. Figure 1 below shows the location of Lord Howe Island.

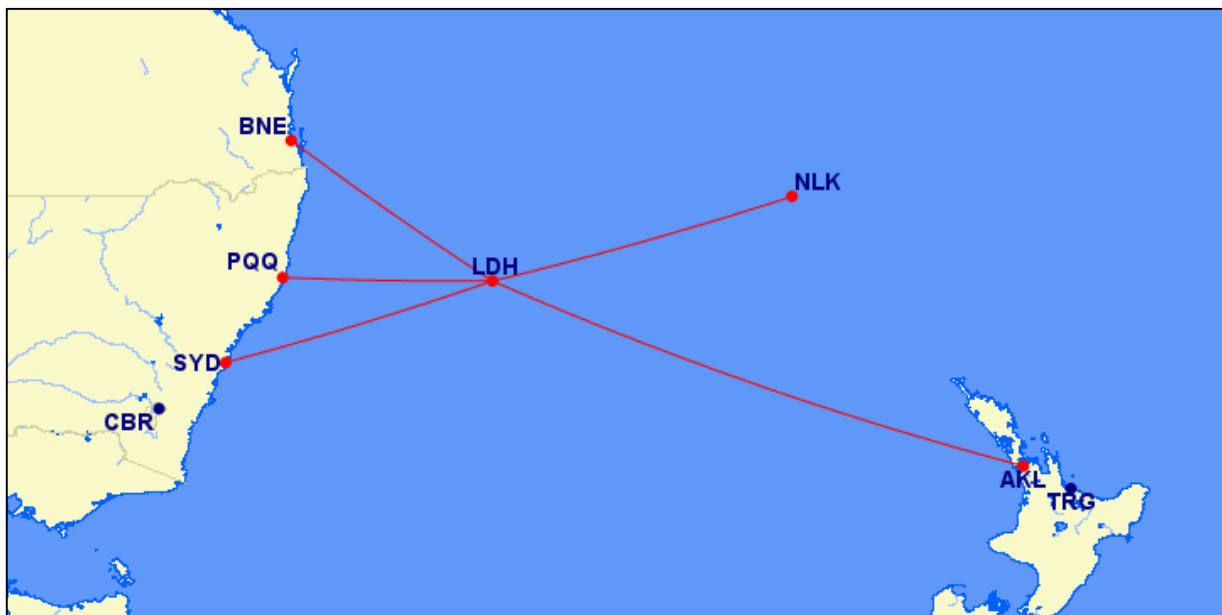
This remoteness requires aircraft operating into Lord Howe Island Airport (IATA code – LDH) to carry a substantial amount of reserve fuel, sufficient to divert to Port Macquarie airport should a landing at LDH not be possible. This combined with the relatively high operating minima (minimum weather conditions in which a landing can be made), the short runway and frequent turbulent winds on approach, make operations a challenge.

The types of propeller powered aircraft operating to LDH are generally at or near the limit of their range capability. This combined with the short runway which restricts take-off and landing weight, leaves very little operational flexibility to carry additional fuel or payload.

Rugged terrain adjacent to the airport and strong wind gusts generate turbulence which particularly affects the approach on runway 10.

Lord Howe Island Aerodrome is classified by CASA as a Restricted Use International Airport.

Figure 1 Location of Lord Howe Island



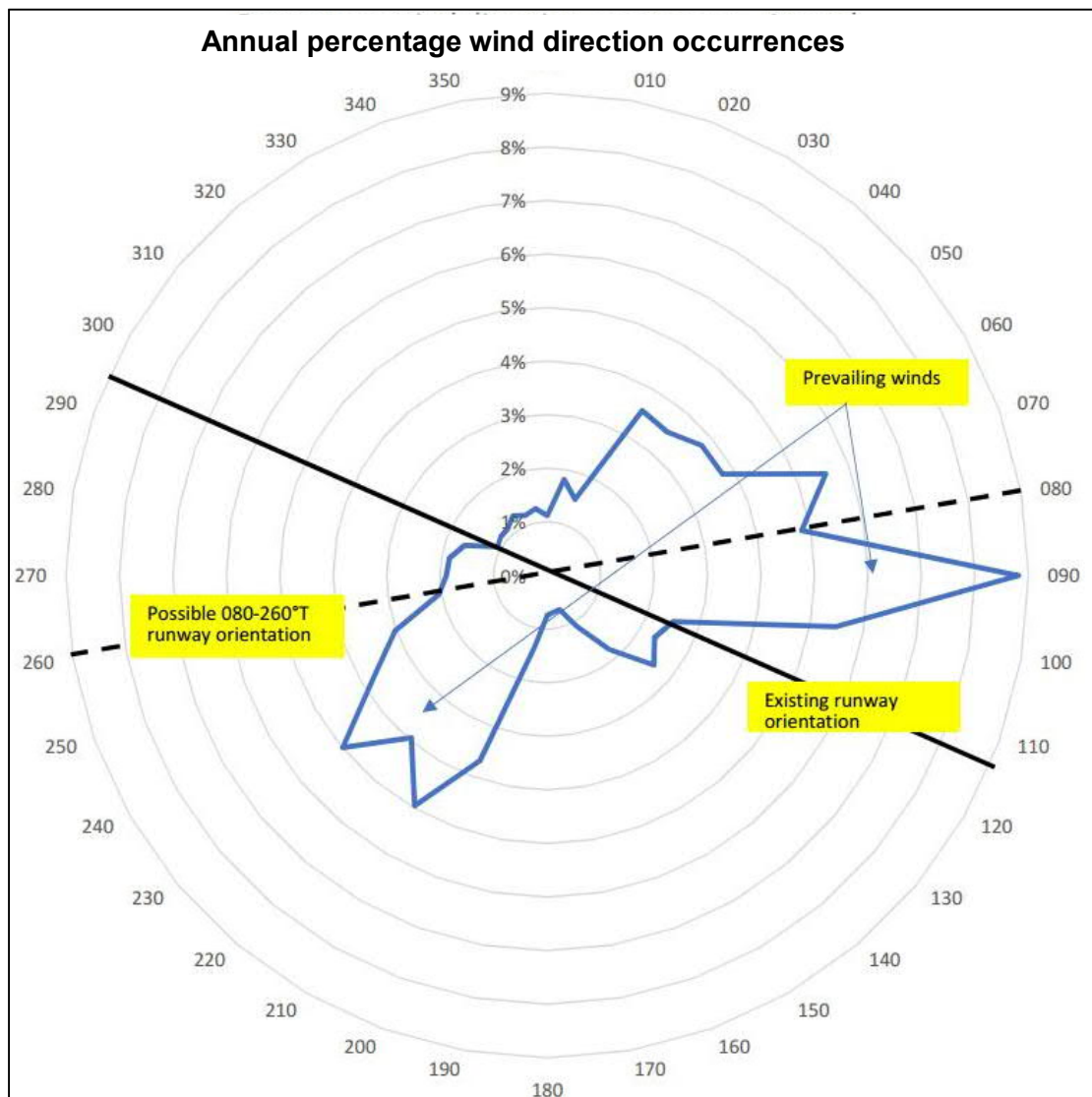
2.2 Weather patterns

Weather patterns have been based on statistics provided by the Australian Bureau of Meteorology between 1988 and 2018.

The Island's climate is temperate to sub-tropical with an annual mean daily temperature of 22°C and minimum 17°C. Annual rainfall is about 1,500mm with the wettest period between March to July.

A consistent average daily wind speed of 22km/hr (approximately 13knots) is recorded. The prevailing winds on an annual basis are south-west (SW) and west (W) but in the summer months through until April, east (E) and north-east (NE) winds prevail, these are depicted in a wind rose shown in Figure 2.

Figure 2 Lord Howe Island wind rose



The sky is predominantly cloudy with the annual average mean number of cloudy days (defined as more than 6/8ths cloud cover) being 106 compared to clear days (defined as 2/8th cloud cover or less) being much less at 68.

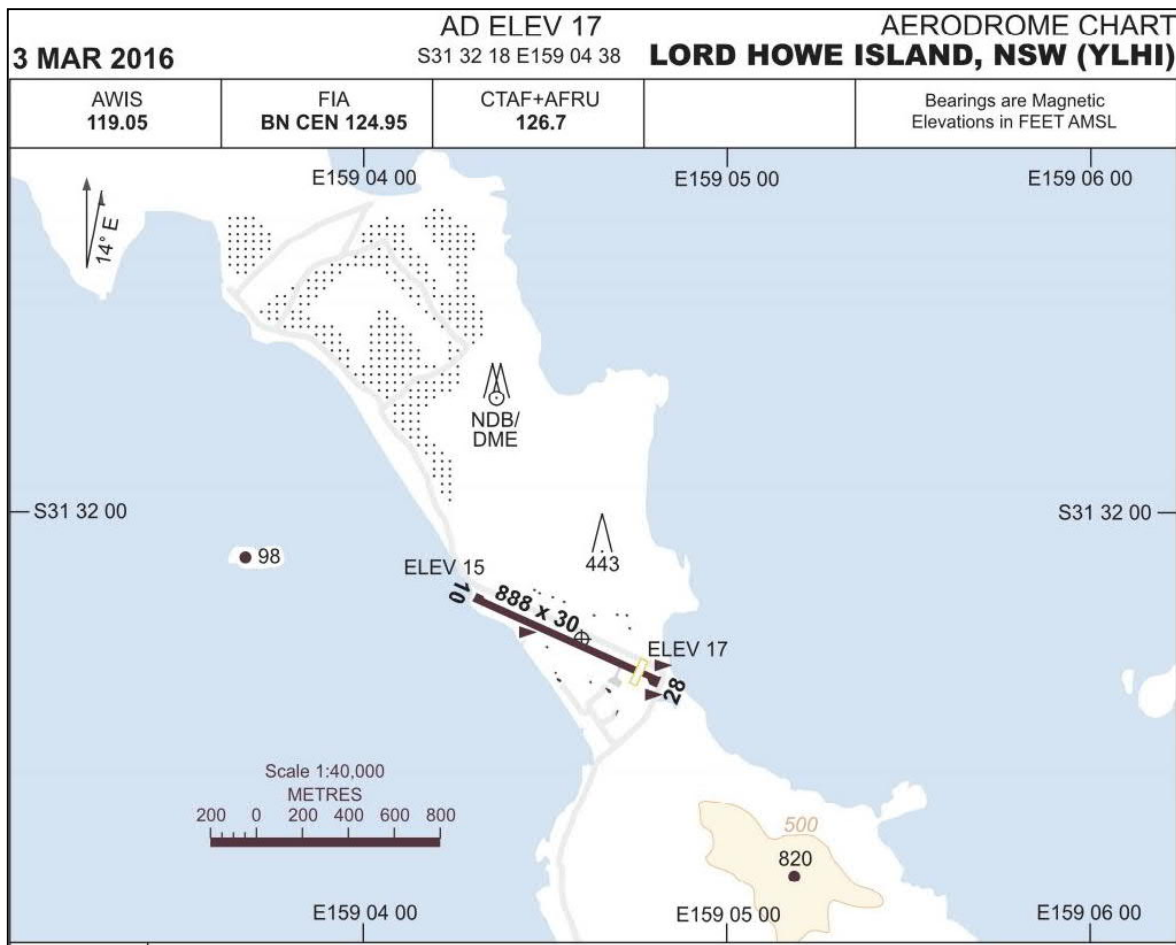
3.0 Existing operating conditions

3.1 Existing runway

3.1.1 Runway length and orientation

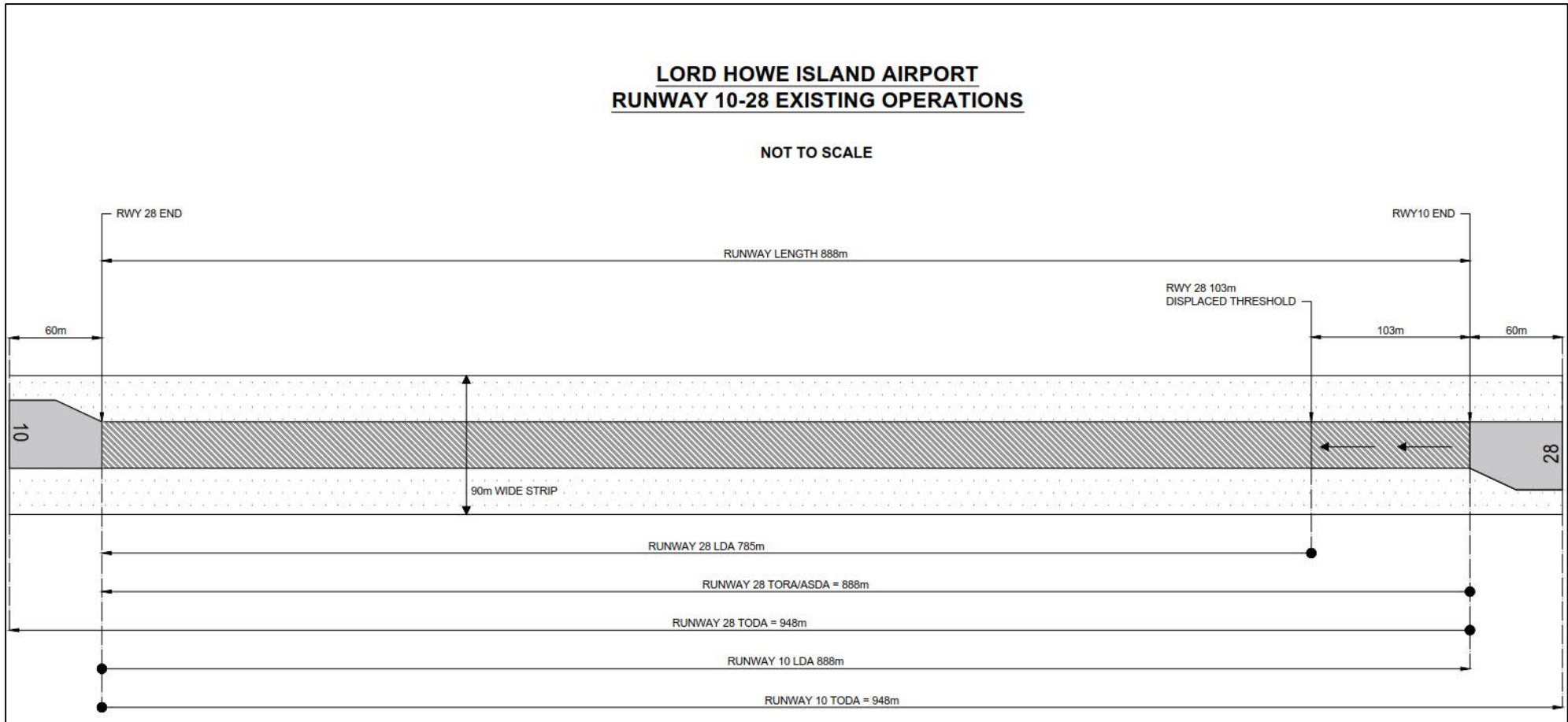
The existing runway layout is shown in Figure 3, taken from the Australian Aeronautical Information Publication (AIP). The runway runs north-west (NW) to south east (SE); take-off or landing towards the SE is on runway 10 and towards the NW is on runway 28.

Figure 3 Lord Howe Island Aerodrome Chart



The runway has a basic sealed length of 888m with additional sealed turn bays approximately 60m long at each end. The runway operational lengths are shown in Figure 4 on the following page.

Figure 4 Existing runway operational lengths



The Runway 28 threshold is inset 103m, reducing the landing distance in that direction to 785m, this is due to a 10ft high sand dune on the north side of the runway close to the threshold, and this also reduces the runway 10 take-off distance at 2.5% gradient by 82m to 803m. In addition to the engineering complexities of removing the sand dunes, the presence of an endangered sand spurge (*Chamaecrista psammae*) has been recorded.

The runway is 30m wide and has a bearing strength of PCN10/F/A/550 (80psi)/U, there are no precision approach path indicators (PAPI) or visual approach slope indicator systems (VASIS) providing glide slope guidance.

The runway is classified as Code 2 in the AIP and therefore as shown in Table 3 it is suitable for aircraft with a reference take-off field length 800m but less than 1200m.

Table 3 Aerodrome Reference Code

Code Number	Aeroplane Reference Field Length	Document Reference
1	Less than 800m	
2	800m up to but not including 1200m	<i>Civil Aviation Safety Authority, Manual of Standards Part 139 – Aerodromes, Version 1.14, Table 2.1-1</i>
3	1200m up to but not including 1800m	
4	1800m and over	

3.1.2 AIP runway declared distance data

The Australian Aeronautical Information Publication (AIP) Runway Distance Supplement YLH-1 issued 9th November 2017 provides the declared distances for Lord Howe Island, this have been shown in Table 4

Table 4 Lord Howe Island Runway declared distances

Runway	TORA ¹ (m)	TODA ² (m)	ASDA ³ (m)	LDA ⁴ (m)
10	888	948 (2%)	888	888
28	888	948 (1.6%)	888	785
<i>Notes</i>				
1. TORA = Take-off run available				
2. TODA = Take-off distance available				
3. ASDA = Accelerate-stop distance available				
4. LDA = Landing distance available				

In addition, Supplementary TODA (STODA) have been published for runway 10 that take account of the sand dunes at the SE runway end, these are provided for 2.5%, 3.3% and 5.0%. Advisory STOD for 1.6%, 1.9% and 2.2% have been calculated by based on data contained within the Australian AIP Runway Distance Supplement YLH-1. The distances are shown in Table 5 below.

Table 5 Lord Howe Island Runway 10 supplementary take-off distances

Gradient	1.6%	1.9%	2.2%	2.5%	3.3%	5.0%
STODA	593m	687m	755m	803m	877m	906m

3.1.3 Runway strip width

The runway strip width is currently 90m which meets the CASA requirements for a Code 2 runway, although recent CASA Audit reports have remarked on a narrowing of the strip at the runway ends effectively reducing the strip width to less than 90m in those areas. CASA have indicated in discussions that they require this to be rectified irrelevant of any runway extension works.

It is to be noted that infrastructure and vegetation on either side of the runway (road to the NE, apron and terminal building on the SW side) may make any strip width increases cost prohibitive.

3.1.4 Runway end safety area

The existing runway has no Runway End Safety Area (RESA), which is a “grandfather situation” arising as the airport was built prior to the RESA standard being adopted. Any runway extension work would need to include the provision of RESA’s.

3.1.5 Obstacle limitation surfaces

Obstacle limitation surfaces (OLS) are required to protect aircraft on taking off, landing and circling an aerodrome from objects infringing their flight paths. An indicative assessment of the current OLS surface penetrations has been shown in Figure 5, surface levels are based on Light Detection and Ranging (LiDAR) survey information available from the NSW government. It is to be noted the LiDAR survey information does not provide a level of detail great enough to accurately determine the penetrations, but merely to give an indication.

Sand dunes at the SE end of the runway penetrate the OLS and result in a significant reduction in STODA, as listed in Table 2, compared to the physical runway plus clearway length of 948m.

The transitional OLS is penetrated along the north runway strip edge; in addition the inner horizontal and conical surfaces are penetrated by Mount Lidgbird, Mount Gower, Mount Eliza and Malabar Hill.

Figure 5 Lord Howe Island Indicative Existing OLS Surface Penetrations

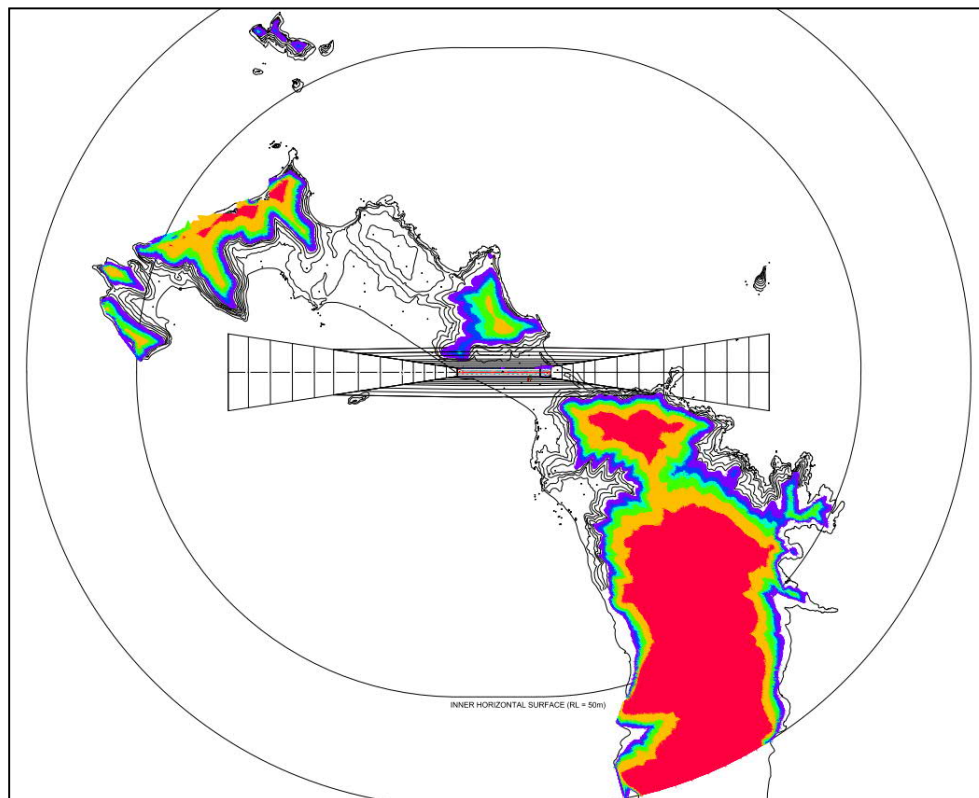
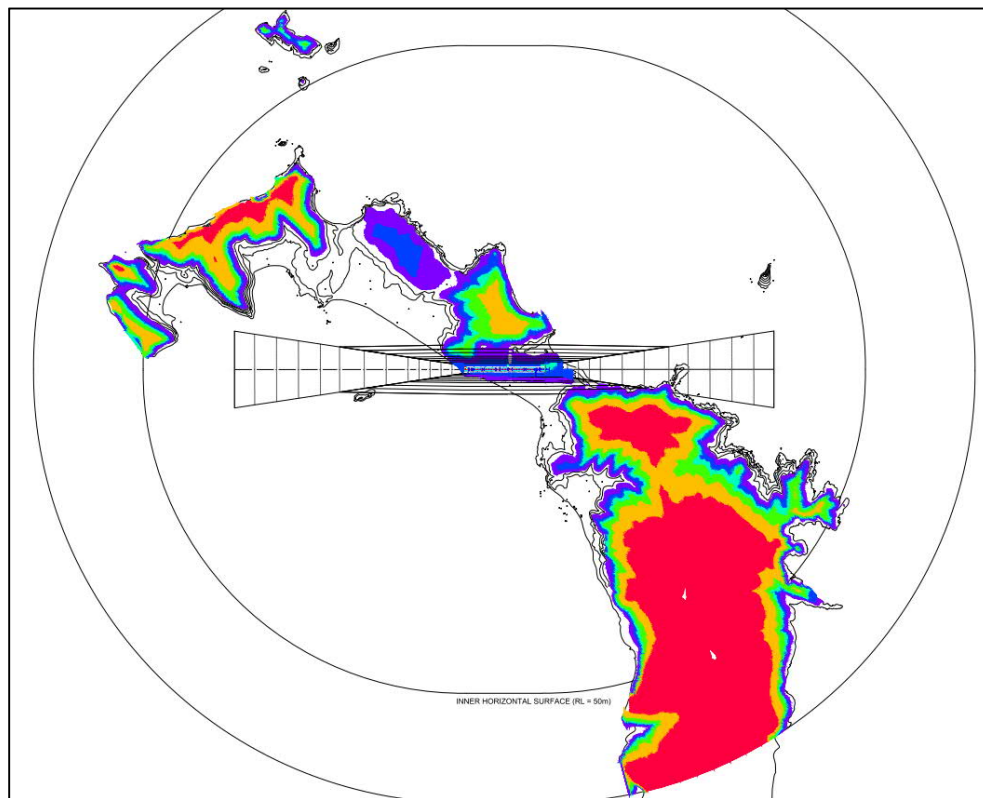


Figure 5 does not take into account the height of vegetation, as LiDAR scanning typically only picks up the ground surface. An indicative 20m has been added to the ground surface to account for vegetation, as shown in Figure 6 this significantly increases the OLS penetrations. Given the height of vegetation will vary across the island, the actual OLS penetrations will probably be a combination between Figure 5 and Figure 6.

Figure 6 Lord Howe Island Indicative Existing OLS Surface Penetrations including 20m vegetation



3.1.6 Visual segment surface

This surface, required for the protection of aircraft making instrument approaches, has a similar planform shape to the approach OLS; however it splays out at a larger angle and rises at a steeper gradient. Obstacles infringing the Visual Segment Surface (VSS) affect the operating minima and Vertical Path Angle (VPA) required for the approach. The dunes at the NE end do not affect the VSS; however terrain and vegetation on Intermediate Hill do affect the approach to runway 28.

North Head lies under the approach to Runway 10, however with the threshold in its current location there is no infringement.

3.1.7 Approach and lighting

The runway has Global Navigation Satellite System (GNSS) approaches available in each runway direction, supplemented by a Non Directional Beacon (NDB) and Distance Measure Equipment (DME) circling approach.

There is no runway lighting for RPT flights, but emergency lighting is available for medical evacuations and declared aircraft emergencies

3.1.8 Instrument flight procedures

Both runway directions have non-precision instrument approaches as below:

Runway 10: Random Area Navigation (RNAV)-Z (GNSS) straight in minima 1090ft-5km Codes A-C

Runway 28: RNAV-Z (GNSS) straight in minima 1340ft-5km Codes A-C

Either runway: NDB-A Circling minima 1580ft -2.5km (Codes A&B), 1680ft-4km (Code C)

3.1.9 Aerodrome rescue and firefighting service

No Airport Rescue and Firefighting Service (ARFFS) is provided. It is not required by CASA as the passenger numbers passing through the airport are below the CASA threshold at which ARFF is required. It is assumed LDH has an Aerodrome Emergency Plan and related emergency service procedures including firefighting and rescue services.

3.1.10 Runway strength

The runway strength is listed as pavement classification number (PCN) 10 /F /A /550 (80PSI) /U in the AIP. Table 6 below lists the corresponding aircraft classification numbers (ACN) for a range of aircraft typically operating at LDH.

Table 6 Lord Howe Island Current Operating Aircraft Loading

Aircraft	ACN	Tyre Pressure (kPa)
DHC8-200	9	900
King Air 350	3	730
C130J Hercules	29	670
C27J Spartan	8	440

Generally, it is acceptable to exceed a runway's published PCN by 10% without causing distress to the runway, therefore based on this the existing aircraft can comply with runway strength limits except for the C130J. The tyre pressure of the DHC8-200 exceeds the 550kPA allowed, although LDH issue a dispensation to Qantas for this.

It is to be noted that the PCN for LDH has not been recalculated following the runway resurfacing completed in 2015.

3.2 Current aircraft operations

3.2.1 RPT operations

Currently the only Regular Passenger Transport (RPT) service to the Island is provided by QantasLink using a Code 2B 36 seat Bombardier DHC8-200 aircraft.

This service which operates from Sydney (SYD) approximately 12 times per week, and from Brisbane (BNE) approximately twice a week, has payload limitation outbound from LDH, Qantas indicated this is typically 29 passengers in summer months.

Landing on Runway 28 when the runway is wet is also limiting due to the 103m displaced threshold resulting from the sand dunes. The estimated maximum landing weight in this condition is also around 29 passengers although conditions favouring the use of Runway 28 for landing are less common, based on an estimated wet runway landing limit weight of 15,000kg.

Operating an aircraft with a restriction in payload to about 80% of the aircraft's seating capacity can be inefficient and may significantly increase per seat operating costs.

3.2.2 Emergency medical operations

The Royal Flying Doctor Service (RFDS) (NSW) provide Emergency Medical Services (EMS) to LDH using Beechcraft King Air 250 and 350 aircraft. Occasionally, the RFDS are required to perform night operations but only if the weather is favourable and it's a "priority 1" emergency.

3.2.3 Military operations

On occasions the Royal Australian Airforce (RAAF) will also provide EMS using C130J Hercules or C27J Spartan aircraft on behalf of the RFDS for "priority 1" emergencies at night during bad weather. Other than for EMS we are informally advised by the RAAF that it has no operational need to use LDH.

3.2.4 General aviation

There are two general aviation (GA) aircraft based at LDH. Occasionally GA aircraft use LDH as a transit stop enroute to and from Australia and New Zealand or the Pacific islands.

These aircraft are generally Code 1 or 2 and can operate adequately on the existing runway. There are some 300-400 GA aircraft movements through LDH annually, ranging from small single engine piston powered aircraft, to business jets.

4.0 CASA requirements

Consultation with CASA has been undertaken to discuss the runway extension. CASA have raised the issues included within Section 4.0.

4.1 Applicable standards

CASA advised that the applicable Manual of Aerodrome Standards (MOS139) is currently undergoing detailed review. A final draft is currently out for industry consultation and is expected to be adopted by the end of 2018. This updated MOS139 has updated requirements for both the runway strip and also the Runway End Safety Area (RESA).

Should a runway extension be commissioned at LDH, it is highly likely the final design would be completed following approval of the draft MOS. Accordingly, this report has been based on the draft MOS139, although reference has been made to the current MOS139 (Version 1.14 Jan 2017) for comparison.

4.2 Runway design code

An aerodrome is assessed by CASA based on the design code nominated by the aerodrome operator. The aerodrome must then meet all the standards applicable to that code or obtain a dispensation from CASA. This does not limit the airport to exceeding any Code criteria. For example, a runway can exceed the Code 2 length of 1200m, but if it doesn't meet all design requirements for a Code 3 runway, it will remain designated as Code 2.

The design code is not intended to preclude the operation of a higher Code aircraft. For example, a Code 3 aircraft can be operated on a Code 2 runway, however the aircraft operator must obtain approval from CASA based on a risk assessment of any aspects of the runway that do not meet the aircraft code.

4.3 Runway length

MOS139 does not determine runway length required for operation of any specific aircraft type. It is quite common for example for a Code 4 aircraft to be operated on a Code 3 length runway. Safe operation of the aircraft on a shorter runway is achieved via restrictions on take-off and landing weight to ensure the aircraft performance matches the runway length.

Therefore, extension of the LDH runway to more than 1200m (the Code 3 threshold) would not automatically require the runway (or the whole aerodrome) to satisfy all Code 3 parameters.

4.4 Runway strip width

The draft version of MOS139 requires the runway strip width for a Code 2 instrument non-precision runway to be a minimum 90m; including 10m "fly over" which has a less stringent grading requirement. For a Code 3 runway this increases to 140m, although the additional 50m would be designated as "fly over" and be subject to less stringent grading requirements.

Widening the strip beyond the existing 90m at LDH could be cost prohibitive due to the removal of vegetation and relocation of infrastructure. If the strip remained at 90m, CASA would regard this as the limiting factor on the design code i.e. the runway will always be Code 2.

This does not preclude operations of Code 3 aircraft but the aircraft operator (and possibly the aerodrome operator as well) will need the appropriate dispensation from CASA. This makes the ability to accommodate larger aircraft less certain and potentially subject to ongoing review. At present Qantas operate Dash 8-400's (a Code 3 aircraft) at Blackall Airport (Queensland) which has a strip width of 90m.

CASA will not stipulate the requirements for a dispensation (other than the need for the operator to provide an acceptable safety case) ahead of an operator actually applying. However, discussion between the potential operator (such as QantasLink) and CASA would provide a reasonable guide of what CASA's stance will be in the future.

At this point we believe restrictions could be placed on:

- Cross wind limits;
- Operating minima;
- Night operations (not applicable at LDH); and
- Pilot experience.

The current version of MOS139 requires a Code 3 runway strip width to be 150m (including 60m "flyover").

4.5 Runway End Safety Area (RESA)

Under MOS139 (both current and draft version), LDH is required to have a RESA at each runway end as it is a Code 2 instrument runway. Although it is not currently required as the RESA standard was introduced after the runway was built, i.e. the runway is "grandfathered" as non-RESA compliant.

CASA made it clear that any extension of the runway would trigger a requirement for RESA under MOS139 6.25 (draft version). The minimum RESA length for a Code 2 runway is 60m measured from the end of the runway strip, and a minimum width of 60m (being twice the runway width). The preferred length of a Code 2 runway RESA is 120m. For a Code 3 runway, CASA require a minimum 90m long RESA, although the preferred length is stated as 240m.

Should a RESA less than the preferred length be provided, then CASA may require a safety case be produced to justify this. Informal indication from CASA is that the minimum RESA length would be acceptable at LDH.

The current version of MOS139 only requires a 60m long RESA for Code 3 runways only being used by propeller aircraft, this relaxation has been removed from the draft MOS139.

4.6 Aerodrome rescue and fire fighting

ARFF requirements are related to the number of RPT passengers through the airport, not on the code of aircraft operated. LDH would continue to operate under the current Aerodrome Emergency Plan, although it is to be noted should international RPT services begin to operate then ARFF would be required.

4.7 Air Services Australia

Air Services Australia (ASA) are required by CASA to design Instrument Flight (IF) procedures in accordance with ICAO Standards. This requires ASA to apply appropriate IF protection surfaces to approach paths that are separate from the OLS specified in MOS139. These are typically more stringent than the OLS approach surface, therefore restricting the allowable height of objects beneath the approach path.

5.0 Existing runway limitations

5.1 Runway length

At 888m in physical length (plus 60m turn arounds at each end which act as the existing clearway), the runway is very short for 30+ seat RPT aircraft, being just above the Code 2 threshold of 800m. In addition, the dunes at the NE end reduce the effective runway length by up to 350m for the 1.6% take-off surface.

Often aircraft can operate efficiently (i.e. with a full or near full payload) from a shorter than normal runway length if the destination is relatively close, which allows for a reduced fuel load. However, the long flight distance from LDH to SYD or BNE means most take-offs from LDH are at or near the aircraft's maximum classified take-off weight (MCTOW).

Similarly, on landing at LDH, the high reserve fuel load carried to cover possible diversion to Port Macquarie, requires aircraft to be at or close to their maximum structural landing weight (MLW) on arrival at LDH, this requires a longer landing runway length.

Table 7 below lists the indicative take-off and landing weights required for full payload operation from SYD to LDH as a percentage of the aircraft's maximum. The figures for BNE –LDH are very similar.

Table 7 Required take-off and landing weights and runway lengths at LDH

Aircraft	MCTOW (kg)	MCTOW % required	RLR for MCTOW (m) ¹	MLW ² (kg)	MLW % required	RLR for MLW (m) ³
DHC8-200	16466	99%	1050	15649	99%	775
DHC8-300	19505	100%	1400	19051	97%	1025
DHC8-400	28998	100%	1450	28009	97%	1311
ATR42-500	18600	100%	1170	18300	95%	1109
ATR72-500	22500	100%	1350	22350	95%	1051
Fokker 50	20820	98%	1280	19730	100%	1288
Saab 340	12925	100%	-	12340	98%	-
<u>Notes</u>						
1. RLR for MCTOW = Take-off runway length required when taking off at ISA + 10°C (25°C)						
2. MLW = Maximum landing weight						
3. RLR for MLW = Landing runway length required when landing on a wet runway						

As the existing take-off runway length available on either runway is only 888m, the runway is shorter than any of the listed aircraft require for efficient operation. This also doesn't take into consideration any reduced operational length because of the sand dunes.

Similarly, apart from the DHC8-200, the landing runway length available is too short to allow the required landing weight for efficient operation for any of the listed aircraft.

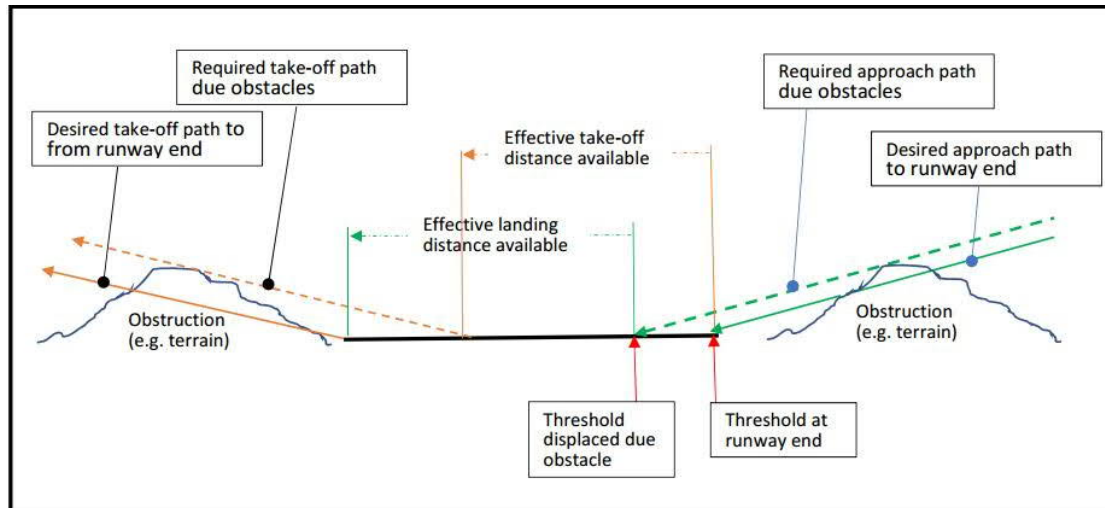
While the DHC8-200 can operate from 888m long runway, it does so at a much-reduced payload of 29 passengers i.e. 80% of a full load of 36. This means the operation is not efficient which drives up per seat operating costs and ticket prices.

5.2 Effect of flight path obstructions

5.2.1 General

Flight path obstructions reduce the effective runway length below the physical runway length available. This is because aircraft can only take-off and land at relatively fixed angles (referred to as gradients) of climb and descent and any obstacles penetrating a surface of this gradient from the ends of the runway will reduce the effective runway length. This is illustrated in Figure 7 below:

Figure 7 Effect of flight path obstacles



For landing an aircraft's descent angle (referred to as vertical path angle or VPA) is relatively fixed at 3° to 4°, depending on the size of the aircraft. For example, small aircraft can accommodate a much steeper VPA compared to a large jet aircraft. The approach OLS provides a protection surface below the VPA as a safety margin. Obstacles penetrating the approach OLS reduce the safety margin requiring the threshold to be displaced such that no penetration occurs on the displaced path.

The displacement reduces the effective landing distance available to less than the runway length, which can result in aircraft landing weight restrictions occurring.

The take-off gradient the aircraft (assuming a twin engine RPT aircraft) can achieve must cater for the possibility of one of the two engines failing during take-off.

The take-off OLS for Code 2 aircraft specified in MOS139 is 4.0%; this is too steep for twin engine RPT aircraft to achieve as CASA require the possibility of one engine failing during take-off to be accounted for. Therefore a take-off OLS gradient of 1.6% clear of obstacles is required to ensure twin engine aircraft are not restricted by flight path obstacles. Depending on the aerodynamic (flap setting) characteristics of individual aircraft, higher gradients may be acceptable under some situations, but rarely above 2.0%

This greatly reduces gradient capability. If obstacles are present the take-off weight of the aircraft must be reduced until the gradient at the lift off point is sufficient to clear the most limiting obstacle. The actual gradient required and therefore the limiting allowable take-off weight is determined by the aircraft's weight and the location of the take-off point along the runway, which is influenced by take-off flap setting, wind component along the runway, air temperature and air pressure.

Therefore without in depth aircraft performance analysis being carried out, it is not possible to say whether an STOD of 1.9%, or 2.2% or any other figure above 1.6% will be adequate for an aircraft to take-off unrestricted. What is more certain is that if an STOD of 1.6% equal to the runway length plus any available clearway is available then it is unlikely the aircraft's take-off weight will be reduced due to flight path obstacle.

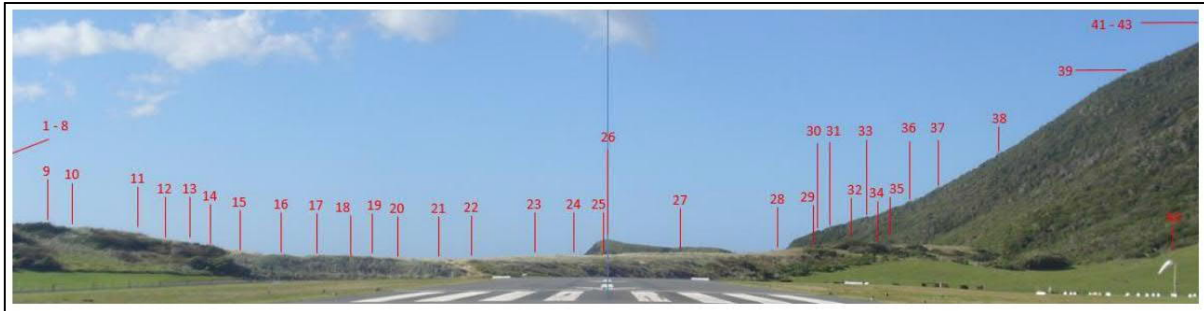
The objective therefore in any aerodrome siting is to be able to provide an approach OLS appropriate to the category of aircraft and a take-off OLS of 1.6% clear of obstacles. Difficulties arise at LDH

because both approach and take-off OLS are penetrated by obstacles. Any runway extension, depending on its direction, can exacerbate or mitigate the difficulty.

5.2.2 South east runway end flight path obstructions

The SE runway end has a line of sand dunes close to the runway end which substantially penetrate both the 1:30 (3.3%) approach OLS and the 1.6% take-off OLS. Further out, Intermediate Hill penetrates the approach OLS. These are shown in Figure 8 below. Full details of the penetrations are contained in Section 10 of Appendix A.

Figure 8 South east runway end flight path obstructions



The dunes penetrating the take-off and approach OLS are numbers 16-35 (excluding 26 which is Mutton Bird Point and 30, 31 and 33 which are Intermediate Hill). The penetrations, along with Intermediate Hill, result in a displacement of 103m in the runway 28 landing threshold, reducing the effective landing distance to 785m in that direction.

Mutton Bird Point, which does not affect the approach OLS does impact the 1.6% take-off OLS however it would be possible to turn the take-off flight path immediately after take-off to avoid Mutton Bird Point. This also removes Intermediate Hill from the take-off OLS.

5.2.3 North west runway end flight path obstructions

The NW runway end take-off and approach OLS are clear of obstructions across the lagoon out to the end of the (Code 2) OLS at 2,500m from the end of the runway strip. Approximately 3,470m out, the runway extended centreline beyond the end of the approach OLS passes south of North Head (points 6, 7 & 8 in Figure 9 below). The remaining obstacles 4 to 13 do not impact the take-off or approach OLS. Should the runway be upgraded to Code 3, then the approach OLS will extend to 15,000m which may cause North Head to become an obstruction.

Figure 9 North West runway end obstructions



The visual segment surface (VSS) however does currently extend out to North Head. We are advised by ASA that to avoid the VSS being infringed by North Head, a VPA of 3.3° must be used. While steeper than the normal 3°, this does not require any special flight procedures.

It does mean that any extension of the runway to the NW will require a steepening of the VPA, which may itself require agreement of the operating airlines and special Instrument Flight Procedure (IFP). Based on advice received from ASA, the maximum the NW (runway 10) threshold could be shifted with a runway extension over the lagoon is 400m. This is based on a VPA of 3.5°, increasing the steepness of the VSS approach will be in jeopardy of an airline not accepting operating it, making any additional extension redundant.

5.3 Runway design code

The Runway design code, a proxy for aircraft speed and size, determines the size of the protection areas provided to aircraft using the runway and the airspace surrounding it. In particular the number part of the design code determines strip width and dimensions of the OLS and IFP protection areas.

There is a very large step up between the smaller codes 1 and 2, essentially providing for small aircraft below approximately 40 seats to the larger codes 3 and 4 which accommodate bigger aircraft, up to 400+ seats. Notably under MOS139, when moving from a Code 2 instrument non-precision to Code 3 instrument non-precision design standard:

- The strip width required increases from 90m to 140m;
- The approach OLS base width increases from 90 to 140m and the length from 2500m to 15,000m;
- The transitional OLS moves outward by 25m each side (due to the strip width increase) and its upslope reduces from 1:5 to 1:7; and
- The geometry of the PANS-OPS IFP protection areas based on the runway strip width (such as the VSS) also changes substantially.

The change in OLS and VSS geometry greatly extend the protection areas within which obstacles infringing on flight paths must be considered.

Consequently, it can be extremely difficult for a Code 2 runway, such as LDH, that is constrained by terrain to be able to achieve compliance with Code 3 standards.

Figure 10 and Figure 11 shows the difference in 2d coverage of the OLS for Code 2 (red) and Code 3 (blue) runways

Figure 10 Full OLS 2d comparison

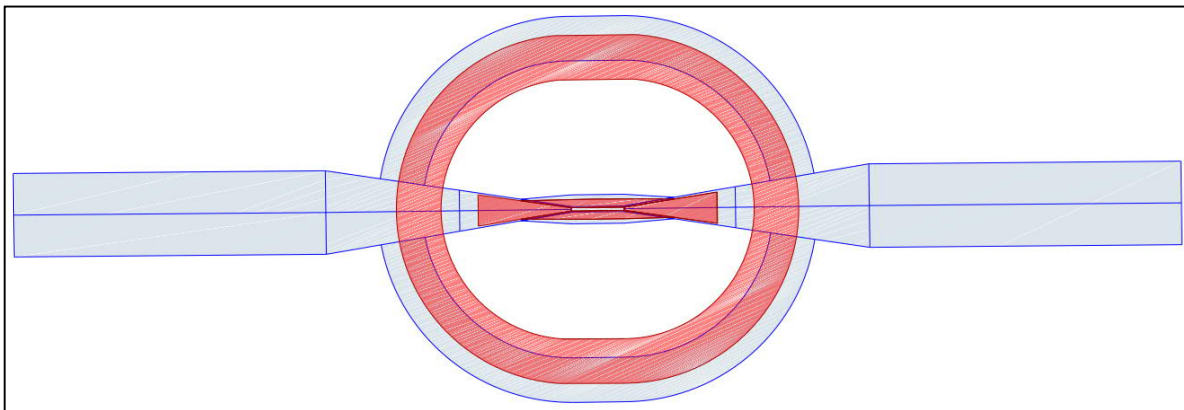
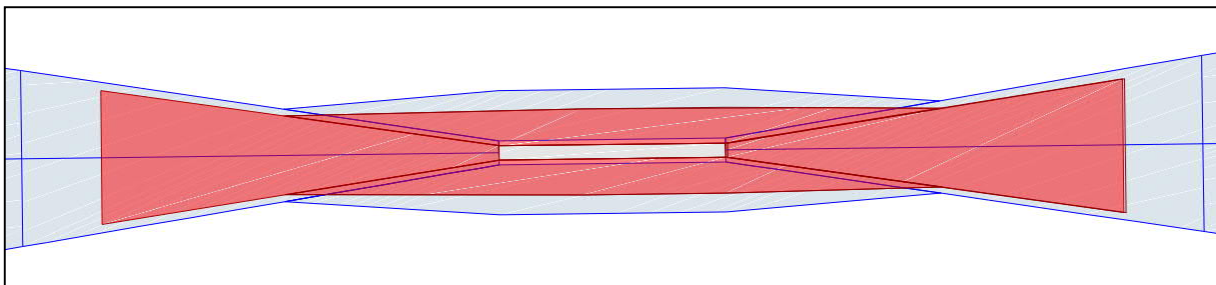


Figure 11 Runway strip, transitional surface and approach surface comparison



5.4 Runway strip width

The runway strip width is a fundamental design specification for a runway and an important safety consideration as it determines the amount of emergency run-off area available on either side of the runway. Clearly larger and faster aircraft require more safety area.

Under MOS139 standards the runway strip width of 90m is adequate for a Code 2 instrument non-precision runway. As the DHC8-200 is Code 2 its operation conforms to the runway Code.

If the replacement aircraft were to be Code 3, CASA requires an instrument non-precision runway to have a 140m wide strip. To accommodate Code 3 aircraft at LDH there are three options:

5.4.1 Widen the strip width to 140m.

Figure 12 shows the additional area that would be required by a Code 3 140m wide strip.

Figure 12 Potential effects of a 140m runway strip at LDH



Extending the runway strip width will require significant additional work such as vegetation removal and infrastructure relocation; there are two options with regards to the island road as discussed below

a) Retaining the existing road position

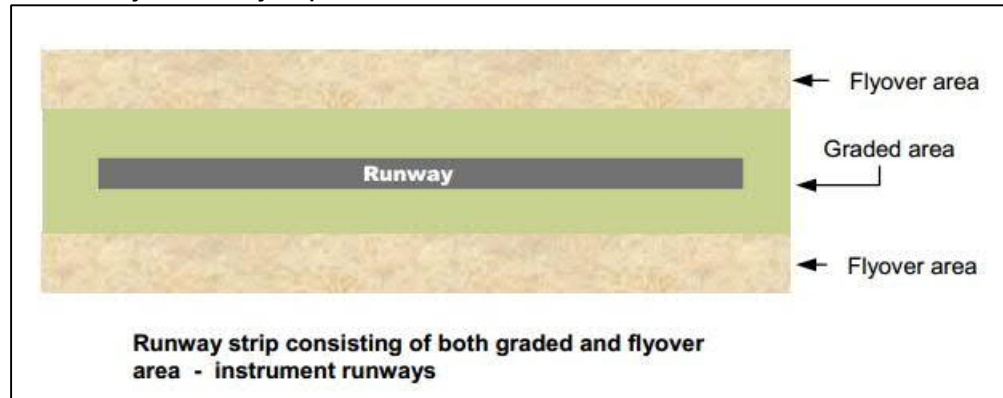
Subject to further discussions with CASA, the existing road alignment could be retained as it sits outside of the existing Code 2 strip and for any Code 2 aircraft manoeuvres it would not provide transient obstacle issues because cars would be beyond the edge of the strip. For all Code 3 aircraft manoeuvres physical controls would need to be installed in order to keep any pedestrians and vehicles outside of the runway strip.

b) Road realignment

If CASA do not accept the proposal above, the road running along the north side of the runway would need to be relocated approximately 45m further out from its existing location to remove it from within the expanded runway strip and to ensure any vehicles on it are kept under the 1:7 transitional surface. The alignment of the road as it passed the end of the runway would need to be reviewed for compliance with MOS139 7.1.6.4 which requires transient obstacles such as vehicles that may infringe an OLS to be referred to CASA for assessment. It is possible the road may still need to be controlled during RPT aircraft movements.

The additional Code 3 strip width of 50m (25m each side) would be treated as “flyover strip” under MOS139 6.2.18.2, as shown in Figure 13.

Figure 13 Graded and flyover runway strip areas



Flyover strip does not need to be graded to the same extent the central 90m of (existing) strip is. It can have ditches and depressions within it. However, MOS139 6.2.22.3 requires that no object within the graded area infringes a 1:5 slope outwards from the edge of the graded portion. This means the highest object or vegetation in the flyover strip could only be 1.5m high. This may provide limited relief but it is expected a substantial amount of scrub and possibly terrain clearance would be required along with side of the runway to accommodate the 140m strip and its associated 1:7 transitional surface.

As the size of the OLS and VSS obstacle protection surfaces is linked to strip width, substantially more obstacles could be bought into play if a 140m strip width was sought. This could adversely affect aircraft operations.

5.4.2 Airline seeks dispensation from CASA

The alternative to developing a 140m wide runway strip is for the runway to remain Code 2 and the operating airline to seek an appropriate dispensation from CASA for operation of its Code 3 aircraft on a Code 2 runway. There is at least one precedent for this; the QantasLink DHC8-400 operates to Blackall Airport (Queensland) which only has a 90m strip width.

In its Aerodrome Design Manual, ICAO makes it clear that the aerodrome design code is not intended to prevent operation of any aircraft on a runway:

“The aim of the specifications in [ICAO] Annex 14, Volume I is to give aerodrome planners a tool to design efficient aerodromes for safe aircraft operations. It is not intended, however, that the Annex be used to regulate aircraft operations. It may be permissible to operate at existing aerodromes with lower [specifications] than those specified in the Annex if an aeronautical study indicates that such lower [specifications] would not adversely affect the safety or significantly affect the regularity of operations of aircraft. The purpose of this material is to assist States in undertaking an aeronautical study by defining the criteria considered pertinent for the assessment of whether lesser [specifications] than those specified in Annex 14 Volume I, are adequate for the operation of new larger aeroplanes in the specific operational environment at an existing aerodrome. This may also result in operational restrictions or limitations. Notwithstanding the above, every effort must be made to conform with Annex 14, Volume I specifications at the earliest opportunity.”

ICAO makes this statement in the context of taxiway to runway separations; however the principle applies to other aerodrome design specifications. The key points are that:

- i. An aeronautical study would be required to establish whether Code 3 operations can, with appropriate risk mitigations, be made safe on a Code 2 Runway; and
- ii. Every effort should be made to bring the runway up to Code 3 specifications at the earliest opportunity i.e. it is only regarded as a temporary situation.

Relying on a dispensation therefore carries the risk that the conditions attached to Code 3 operations (for example a cross wind limit) will not be satisfactory and at some point compliance will be required by CASA at potentially high cost.

Our understanding is that the airline wishing to operate the Code 3 aircraft would have to apply for the dispensation, not the airport operator. However, it could be that the airport operator has to make runway/systems upgrades to support the operator's dispensation e.g. and improved crosswind monitoring system or placing controls on use of the public road parallel to the runway during aircraft operations.

5.4.3 Aerodrome seeks upgrade to Code 3 with dispensation from CASA for 90m wide strip

Much the same issues would apply as for the option discussed in Section 5.4.2, except the aerodrome operation would have to prepare the safety case.

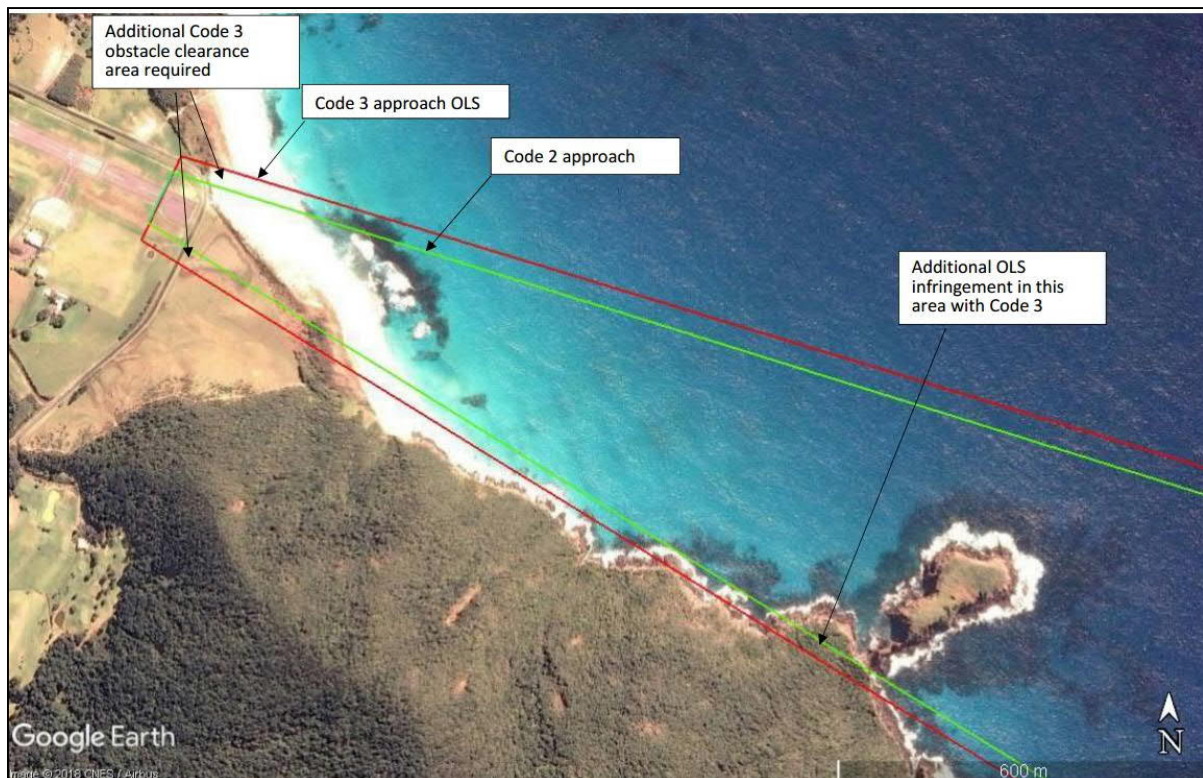
5.5 Obstacle limitation surfaces

As indicated previously, the OLS for the existing Code 2 runway are constrained. This affects not only the transitional OLS as discussed above, but also the take-off and approach OLS by virtue of their wider base ("inner edge") widths of 140m. The PANS OPS VSS is also affected as its base width is similarly increased.

Any additional OLS width brings more obstacles into the splay areas as illustrated in Figure 14.

At the SE end the wider approach splay will require more of the sand dune area to be cleared. The additional terrain on Intermediate Hill cannot be realistically cleared which would require CASA to approve the infringement. This situation already exists, albeit at a lower level, with the Code 2 OLS.

Figure 14 Additional Code 3 approach splay at SE end



5.6 Runway strength

Table 8 lists the ACN's of aircraft which may potentially operate at Lord Howe Island as part of the RPT services. These should not exceed the rated PCN for the pavement or a pavement concession will be required from CASA.

Table 8 Lord Howe Island Potential Operating Aircraft Loading

Aircraft	ACN	Tyre Pressure (kPa)
ATR42	9	720
ATR72	11	790
DHC8-200	9	900
DHC8-300	8	670
DHC8-400	14	670
Fokker 50	9	590
Saab 340B	6	820

While the rated pavement strength of PCN10/F/A/550 (80psi)/U is adequate for the current aircraft (DHC8-200) and the DHC8 -300, it is not adequate for the larger Code 3 aircraft (ATR72 and DHC8-400). A dispensation or structural pavement overlay may be required depending on the updated PCN results.

6.0 Candidate RPT aircraft types

6.1 Aircraft performance considerations

The existing runway is very short with sand dune obstacles at the SE end reducing the effective take-off distance on Runway 10 and the landing distance on Runway 28, without this obstacle the existing runway would be adequate for unrestricted landings of the DHC8-200.

It is beneficial to investigate removing the dunes because any obstructions infringing the 1.6% upslope take-off OLS can reduce aircraft take-off weight due to aircraft having to lift off further from the runway end to clear the obstacles in the emergency one engine inoperative take-off situation.

Assuming the sand dunes are retained, extending the runway would make operation of the DHC8-200 far more efficient enabling more fuel and payload to be carried resulting in a more cost effective and flexible operation.

Efficient operation of any Code 3 aircraft would require a runway extension and possibly the partial or complete removal of the dunes. Amendments to the sand dune heights may reduce the length of runway extension required.

Achievable emergency one engine take-off gradients vary between aircraft types, depending on propeller thrust and aircraft aerodynamic characteristics in the take-off configuration. Some aircraft may be able to achieve better than 1.6% climb gradient capability but rarely better than 1.9%. Based on the sand dunes being retained, an aircraft capable of 1.9% climb gradient would have an additional 94m take off distance available.

Given the unknown characteristics of future aircraft operating at LDH, it would be conservative to ensure a 1.6% clear OLS can be provided in both runway directions. This has the potential to result in an unrealistic length of runway extension, therefore we have sought a balance by assessing the extension requirements based on a 1.9% OLS with no dune changes, then studying the incremental effect of selective partial dune lowering or total removal. This has the potential to minimise the extension length required and reduce construction costs.

6.2 Relevant aircraft types- next 15 years

6.2.1 Aircraft types

The study assumes 30-80 seat turbo-prop aircraft types in use in Australia over the next 15 years with be the same as those in use today. There are no new turbo-prop designs being developed by the major Western aircraft manufacturers (including Embraer in Brazil) within this seating capacity range.

While new designs may be developed in Asia (including India and Indonesia), in the past these have not had widespread acceptance in Western countries for a variety of reasons including design, certification standards, reliability and customer support.

Table 9 lists the candidate aircraft types; expected to be relevant to LDH operations over the next 15 years, and their characteristics. These are based on representative weights but individual aircraft may vary. Table 10 provides comment on the various aircraft

Table 9 Candidate aircraft characteristics

Aircraft	Seats	MCTOW (kg)	MLW (kg)	MZFW ¹ (kg)	OEW ² (kg)	Fuel Capacity (kg)	Maximum payload ³ (kg)		Runway length required ⁴	
							SYD- LDH	LDH- SYD	Landing (m)	Take-off (m)
Saab 340B	34	13155	12930	12020	8620	2580	2243	2500	1200	1395
DHC8-100	36	15650	15380	14061	10245	2576	3000	3100	900	960
DHC8-200	36	16466	15377	14515	10600	2576	3700	3850	775	1050
ATR42- 500/600	48	18600	18300	16700	11700	4500	4950	5250	1109	1170
DHC8-300	50	19505	19050	17920	11630	2574	5600	5900	1025	1400
Fokker 50	50	20820	20030	18900	12800	4120	5800	5900	1288	1280
ATR72- 500/600	68	22800	22350	20800	13500	5000	6800	7050	1051	1350
DHC8-400	74	28998	27442	25174	16700	5318	8300	8750	1311	1450

Notes

1. MZFW = Maximum zero fuel weight
2. OEW = Operating empty weight
3. Indicative, assuming no runway length or obstacle restrictions
4. Indicative, assuming wet runway landing and 60m clearway on take off

Table 10 Comment on candidate aircraft

Aircraft	In production?	Code	Comment
Saab 340B	✗	3	Marginal range for LDH operation
DHC8-100	✗	2	Being phased out by airlines
DHC8-200	✗	2	A very popular aircraft, ideal for LDH with a small runway extension.
ATR42- 500/600	✓	2	None currently operating in Australia. Ideally suited to LDH with a small runway extension. A STOL version is under study by ATR.
DHC8-300	✗	2	Requires runway extension
Fokker 50	✗	3	Requires runway extension and strip widening, unless CASA dispensation is given on strip width
ATR72- 500/600	✓	3	Requires runway extension and strip widening, unless CASA dispensation is given on strip width
DHC8-400	✓	3	Requires runway extension, dune lowering and strip widening, unless CASA dispensation is given on strip width

It would be a reasonable assumption that all the aircraft in Table 9, apart from the ATR42 which is not currently operated in Australia, will still be in operation in Australia in 15 years' time. Even though the DHC8-100/200 and 300 will be 30-40 years old some should still have residual airframe life and operators may import more recent versions than those currently operating. Operation beyond that time (2033) cannot be assured.

Nevertheless, unless an Australian operator acquires the ATR42, the supply of Code 2 aircraft will steadily reduce over time leaving only Code 3 aircraft available for LDH. In particular the ATR72-600 series and the DHC8-400, which are still in production and likely to be for some years yet, will become the predominant types in service.

6.2.2 Operators and fleets

Based on the aircraft identified in Section 6.2.1, there are only a few operators in Australia with the relevant aircraft and within a reasonable geographic area of operation to potentially undertake RPT services to LDH. These operators and currently available or anticipated aircraft are listed in Table 11:

Table 11 Candidate RPT operators for LDH services

Operator	Existing Fleet		Comment on fleet plan
	Code 2	Code 3	
QantasLink	DHC8-200 DHC8-300	DHC 8-400	Have stated DHC8-200 will depart their fleet in 2022. Silent on future of 300 fleet which has an average age about 20 years. Their preferred aircraft for LDH is the Code 3 DHC8-400.
Virgin	-	ATR72	Have just recently quit operation of older ATR72-500 and are standardising on -600. Opposed to having a mixed fleet so unlikely to introduce any Code 2 ATR42.
REX	-	Saab340B	State that the Code 3 Saab 340 is ideal for their operation and they have a large fleet (approx. 50). May eventually consider Code 2 ATR42
Skytrans	DHC8-100	-	Stated they will move to the Code 2 DHC8-200 from Oct 18
Alliance	-	Fokker 50	Moving to an all jet fleet and out of contention for LDH operations

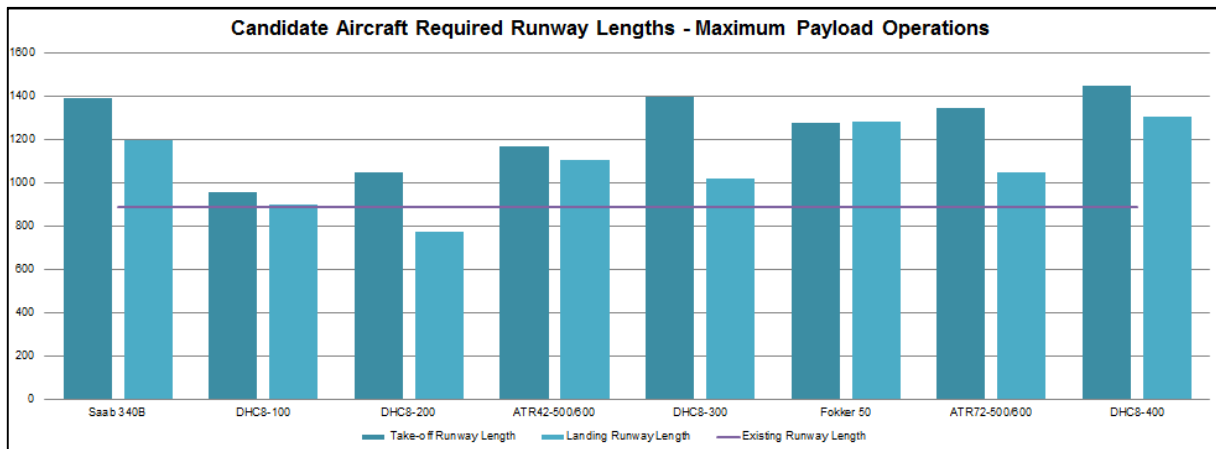
From the comments received it appears the only Code 2 aircraft available after the end of the current Qantas Regulated Route contract period will be the DHC8-200 of Skytrans. Skytrans, who have 8 DHC-100 in their fleet, have operated to LHD many times on charter. They are based in Cairns and currently operate RPT services to Northern Queensland, the Torres Strait Islands and Papua New Guinea.

6.2.3 Runway length requirements

The runway lengths are assessed assuming nil wind; 25°C ambient temperature and standard sea level air pressure (1013hPa), and assume a 60m clearway is available at the take-off end of the runway. No allowance is made for line-up distance at start of take-off as the turn pads currently provide this. Landing lengths are based on landing on wet runway.

All the candidate aircraft types require a runway extension and the dunes cleared for operation at maximum payload. Generally, the larger the aircraft (in terms of its MCTOW) the longer the runway length required is, although the Saab 340B is the exception to this. Figure 15 shows the respective runway length requirements.

Figure 15 Candidate aircraft required runway lengths – maximum payload operations



Some reductions in these lengths may be possible in discussion with the aircraft operators. However, that presents a risk as aircraft operators can change over time and a new operator may have more conservative policies than the existing. For this reason, the recommended runway lengths for preliminary design and costing purposes are those shown above.

6.2.4 Route payload capability

Currently the DHC8-200 is limited to 29 passengers; about 80% of its seating capacity which can restrict the ability to carry freight or even on occasion’s passenger’s bags. Ideally runway development for alternative aircraft should allow at least a full passenger load with baggage allowance, typically a combined “standard passenger weight” of 95kg per person. Any residual payload capacity over this provides operational flexibility including the ability to carry freight and mail which can be extremely beneficial to remote communities. However, operation at reduced payload may be the only viable option given the potential funding issues associated with any runway extension at LDH. Runway length requirements for operation at reduced payload have been included in Section 8.5. The runway lengths identified in Section 6.2.3 are based on MCTOW and therefore allow for maximum payload to be carried. This does not take into account the amount of reserve fuel required to divert back to the mainland in the event landing can’t be made at LDH, therefore payload on inbound flights to LDH are generally limited by aircraft maximum landing weight.

For outbound flights from LDH, if the runway is long enough that MCTOW can be achieved, then the maximum structural payload capacity can be carried outbound because there is no “diversion” fuel load requirement.

Figure 16 and Figure 17 below show the maximum passenger payload and residual for freight and mail available based on no runway restrictions for the candidate aircraft.

Figure 16 Inbound passenger and freight payloads (no runway restrictions)

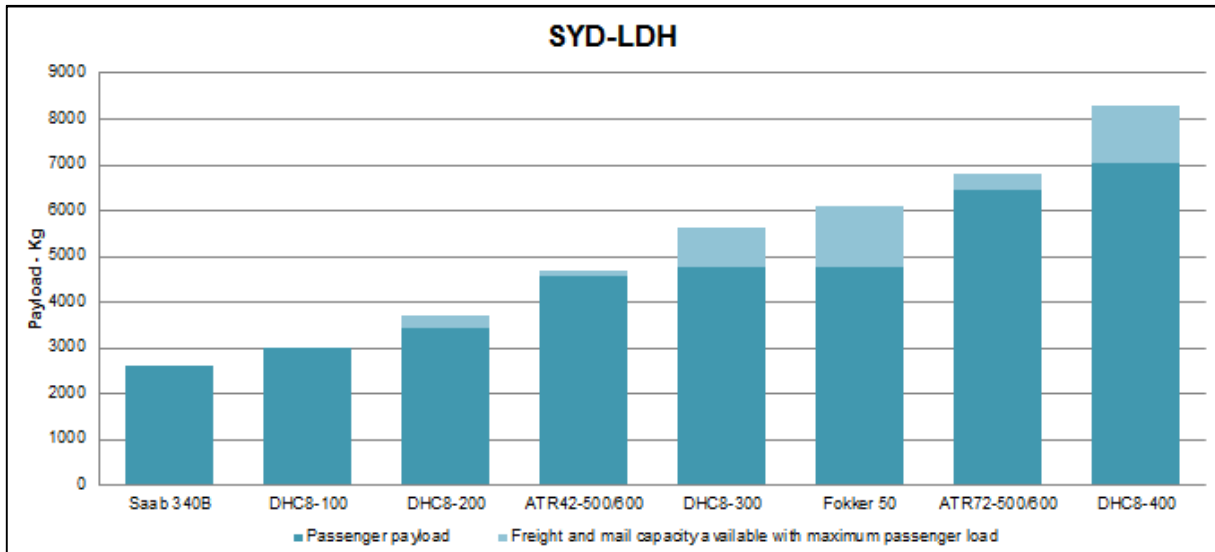
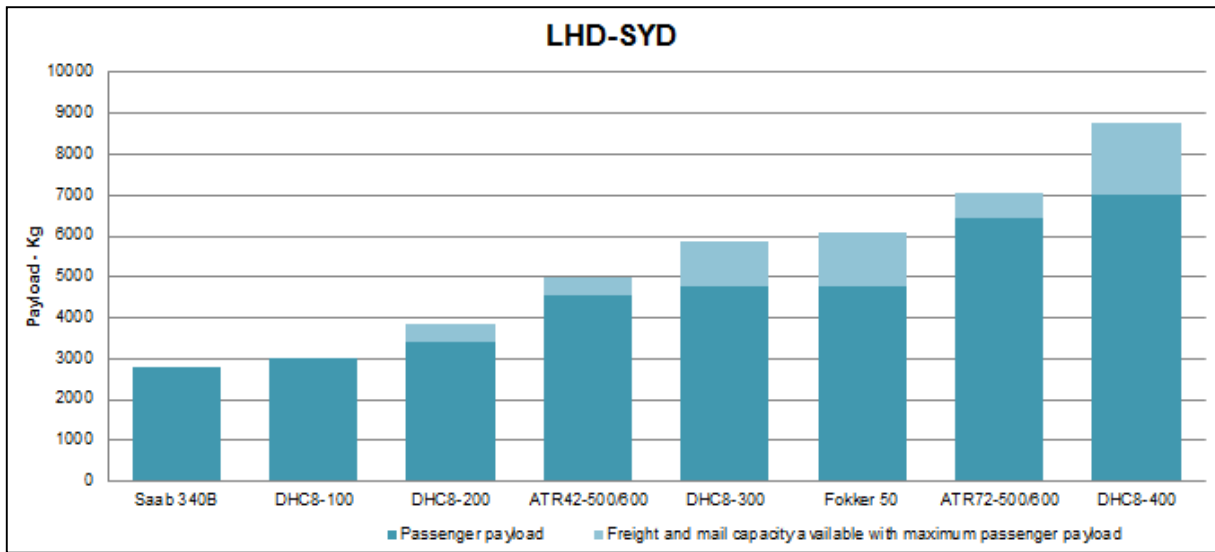


Figure 17 Outbound passenger and freight payloads (no runway restrictions)



Code 2 aircraft have very little capacity for freight and mail with a full passenger load. By contrast the Code 3 aircraft have significant capacity. Depending on how important reliable carriage of freight and mail is to the Island, there may be benefits in providing sufficient runway extension for the Code 3 aircraft. Although the 400 tourist bed limit on the island may limit passenger numbers for larger aircraft, which could reduce the frequency of flights and may have an adverse effect on freight and mail.

6.3 Relevant aircraft types beyond 15 years

6.3.1 Aircraft design trends

There are rapid technology changes occurring in aircraft design. Both Boeing and Airbus are heavily investing in electric powered aircraft concepts, both hybrid (gas turbine and electric motor) and pure electric designs are evolving. Airbus and Siemens are collaborating and test flying a British Aerospace 146 four-engined jet with one of the turbine engines replaced with an electrically driven fan providing the same level of thrust.

As battery storage technology advances it will become feasible to design small electric commuter aircraft (up to 10 seats), soon advancing to 30-40 seats. This has the potential to revolutionise airline operations given jet fuel typically accounts for 40% of an airlines operating cost and engine maintenance costs are also significant.

In addition to propulsion advances, aerodynamic improvements are providing fuel saving benefits which in turn reduces aircraft weight and runway length requirements.

It is unlikely electric aircraft of 30-60 seats will be in service prior to 2030 when existing Code 2 aircraft start to diminish in numbers, but they may be within 20 years.

It is too early to speculate what impact electric aircraft will have on runway length requirements, however it would be assumed they will not need more runway than existing equivalents, nor are they likely to be capable of vertical take-off and landing.

At this point we believe it is prudent to assume runways of around 1200m in length will be adequate for electric aircraft, and that the OLS obstacle clearance requirements will be unchanged.

7.0 Non-RPT operations

7.1 Emergency medical services

Currently emergency medical services (EMS) for LDH are provided by the Royal Flying Doctor Service (RFDS) NSW division who operate Beech King Air 200C and 350C aircraft.

In consultation RFDS advised that their preference is the King Air 350 as it allows a more flexible operation at LDH. The desired runway length at LDH for this aircraft is 1100-1200m, preferably 1200m. We were advised that, even though other RFDS divisions in Australia are acquiring the Pilatus PC24 jet, RFDS (NSW) would not be adopting this type. RFDS are confident a 1200m runway at LDH would meet all their foreseeable future requirements.

RFDS also requested the installation of PAPI visual glide slope guidance to facilitate night EMS operations; this would also be highly beneficial to day operations of larger RPT aircraft such as the ATR72 and DHC8-400.

7.2 RAAF

It is understood the RAAF occasionally operate EMS flights when RFDS cannot. Informal discussion with RAAF indicated the C130J Hercules and C27J Spartan are the only aircraft types used.

As the military do not need to observe CASA requirements both the C130J and C27J are able to operate off the existing runway length, the RAAF have confirmed that the present runway dimensions suit their projected operations. Although it was mentioned that removal or reduction of the sand dunes would be appreciated.

The RAAF informally advised us that its only use of LDH is for EMS operations. We have not ascertained if there are any other military or defence agencies that may have an interest in runway development.

7.3 Private operator requirements

We are advised by the LHIB that 300-400 private aircraft transit through LDH annually and that two privately owned aircraft (Cessna 172 single engine and a Cessna 310 twin light aircraft) are based on the Island.

Most of the transits are by light piston or turbine (Code 1) aircraft, requiring less than 800m runway length. Exceptions are Cessna Citation business jets, which can be code 2 or 3 depending on the model, and several RPT types such as the DHC8-100, -200 and -300, on non-scheduled operations.

Whilst a runway extension may benefit some of the Code 2 and 3 aircraft, most of private operations are not limited by the existing runway.

8.0 Runway extension options

8.1 General comments

It is apparent that runway improvements are required for operation of aircraft requiring longer runway lengths than the DHC8-100/200. The DHC-100 is not likely to be a candidate aircraft after March 2022 as the only likely operators, Skytrans, is re-equipping with -200 series within that timeframe. Even the -200 series cannot operate efficiently on the existing runway, being limited to 29 seats LDH-SYD, an 80% seat factor. Any larger aircraft will be even less economically efficient in terms of percentage of seats that can be sold as the payloads will be even more restricted.

For larger aircraft the issue is both take-off and landing runway length required, take-off on Runway 10 being significantly penalised by the dunes and landing on Runway 28 penalised by the 103m displaced landing threshold which is due in part to the dunes and in part to vegetation on "Intermediate Hill" some 1200m from the SE runway strip end infringing a 3.3% approach OLS.

The options to increase effective runway length, that is runway length available to the aircraft for take-off or landing after inclusion of obstacles in the take-off and approach OLS:

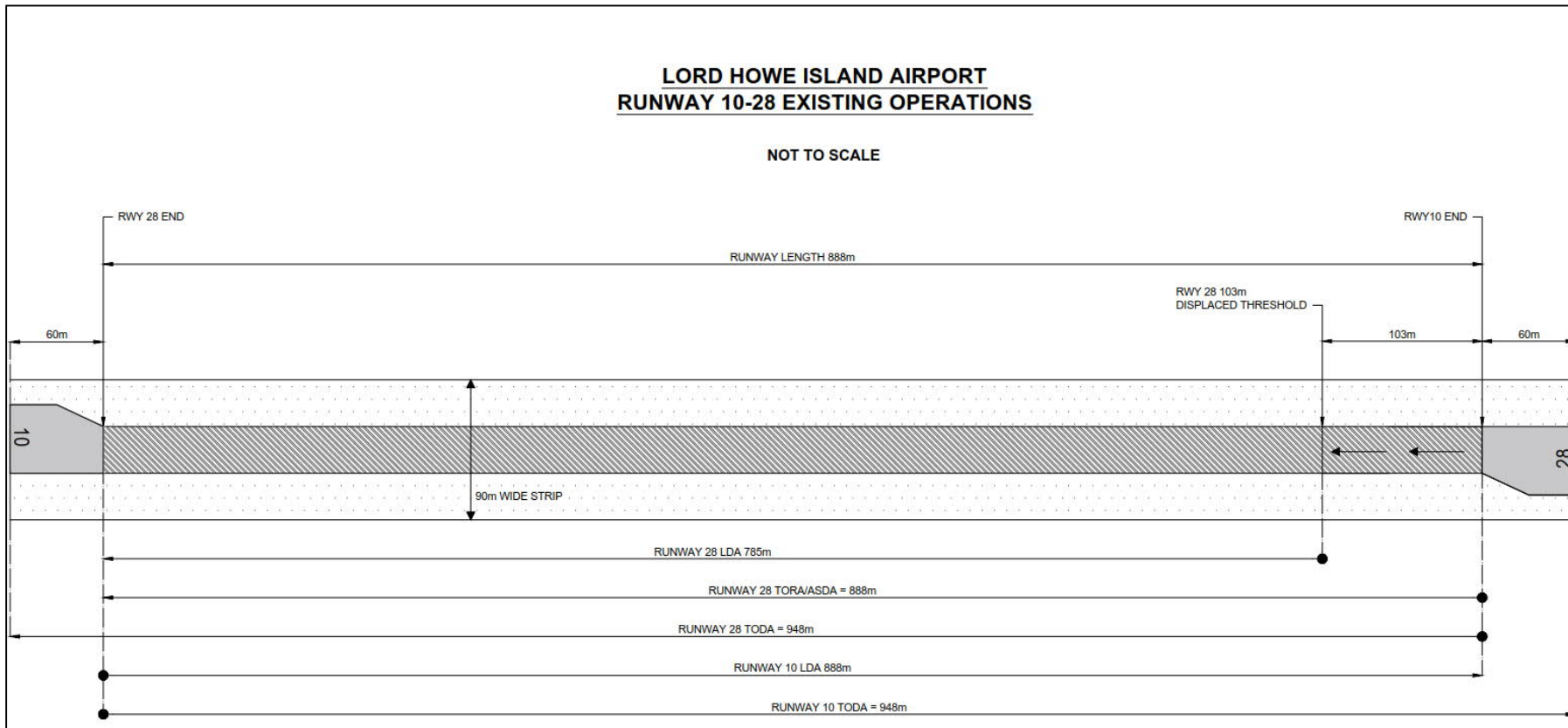
- Change in runway orientation to avoid infringing obstacles;
- Runway extension; and
- Removal of existing obstacles.

None of the options involve any extension to the SE, including for RESA or clearway. This is not only based on the issues with removing the sand dunes both from an engineering and environmental perspective but also significantly more coastal protection construction would be required given the lack of lagoon on the east of the island. In addition there are approach terrain limitations associated with Intermediate Hill.

Finally all options which allow for use of a Code 3 aircraft have initially been shown with a 140m Code 3 strip, this could potentially be reduced if CASA provide an exemption for the operation of Code 3 aircraft on a 90m Code 2 strip.

8.2 Option 1 – Do Nothing

Figure 18 Existing runway operational lengths



8.2.1 Operational Length

Figure 18 shows the existing runway operational length without any amendments being carried out on the sand dunes along Blinky Beach, Table 12 contains additional scenarios which estimate the additional operational length gained by reducing the height of the sand dunes.

Table 12 Effective operational lengths for existing runway options

Scenario	Runway 10					Runway 28				
	TORA	LDA	STOD			TORA	LDA	STOD		
	ASDA		1.6%	1.9%	2.2%	ASDA		1.6%	1.9%	2.2%
Do Nothing	888	888	593	687	755	888	785	948	948	948
Sand dune reduction 1¹	888	888	718	768	812	888	875	948	948	948
Sand dune reduction 2²	888	888	767	800	824	888	875	948	948	948

Notes

1. Dune 28 (**Figure 8**) reduced by 2.0m
2. Dune 28(**Figure 8**) reduced by 3.5m and Dune 24 & 25 reduced by 1.0m
3. Dune removal has not been included in landing length calculations as the terrain and vegetation on Intermediate Hill also influences the displace threshold.

8.2.1.1 Take-off and landing runway length

Keeping the operational length unchanged would still allow the current QantasLink DHC8-200 to continue operating to LDH, but given that Qantas have indicated that they will no longer be operating the aircraft beyond the current route agreement end date in March 2022 this does not provide a long term solution. Although reducing the sand dune heights does provide additional operational lengths, it would still not allow any aircraft to take off or land without restrictions which limits the financial viability of the route for airline operators.

Table 13 Aircraft performance on the existing runway

Aircraft	Maximum payload available (%)					
	Take Off		Landing (Nil Wind)		Landing (5 knot tail wind)	
	RWY 28	RWY 10	RWY 28	RWY 10	RWY 28	RWY 10
ATR42-600	< 50%		< 50%		< 50%	
ATR72-600	< 50%		< 50%		< 50%	
DHC8-200	60%		100%		100%	
DHC8-300	< 50%		50%		< 50%	
DHC8-400	< 50%		< 50%		< 50%	
Fokker 50	< 50%		< 50%		< 50%	

There have been rumours that ATR may investigate the option of a short take-off and landing (STOL) version of the ATR42 which may be ideally suited to the existing runway length at LDH, but no timeframes have been provided for if/when this will occur.

8.2.2 Operational considerations

8.2.2.1 RPT

QantasLink will continue to operate the route until March 2022 using their DHC8-200 with reduced payload, but are unlikely to continue this operation based on the significant upgrade costs required for the airframe.

Skytrans are the only other current airline which could operate the route, as they are upgrading their fleet from DHC8-100's to DHC8-200's. Their base in Cairns and the payload restrictions for DHC8-200 operations at LDH may make this a non-viable option.

Finally should an ATR 42 STOL version become available and be operated by an Australian airline, this may be ideally suited to the current runway extents at LDH

8.2.2.2 Non-RPT

The RAAF, RFDS and GA operators are able to currently operate on the existing runway, and therefore a "do nothing" option would be acceptable. Although this would not remove any of the operational restrictions they may have in place.

8.2.3 CASA compliance

Should the existing runway remain unchanged, then all "grandfathered" CASA exemptions would remain in place, although the "tapering" of the 90m runway strip at each end of the runway would need to be rectified.

8.2.4 Runway Strength

Based on the DHC8-200 (ACN = 9) currently operating at LDH, it is assumed that an ATR STOL version (ACN = 9) would have no operational restrictions applied with regards to runway pavement strength.

8.2.5 OLS and VSS

As mentioned in Section 8.2.3 any exemptions associated with OLS will remain in place given no upgrades will be carried out on the runway. The existing OLS surface has been modelled in 3D based on LiDAR for information. Figure 19 is based on the LiDAR surface level contours alone and Figure 20 has an indicative 20m vegetation height included. Obstacle penetrations can be seen in colour, more detailed versions of these figures can be found in Appendix B. The VSS will remain unchanged too.

Figure 19 Lord Howe Island Indicative Existing OLS Surface Penetrations

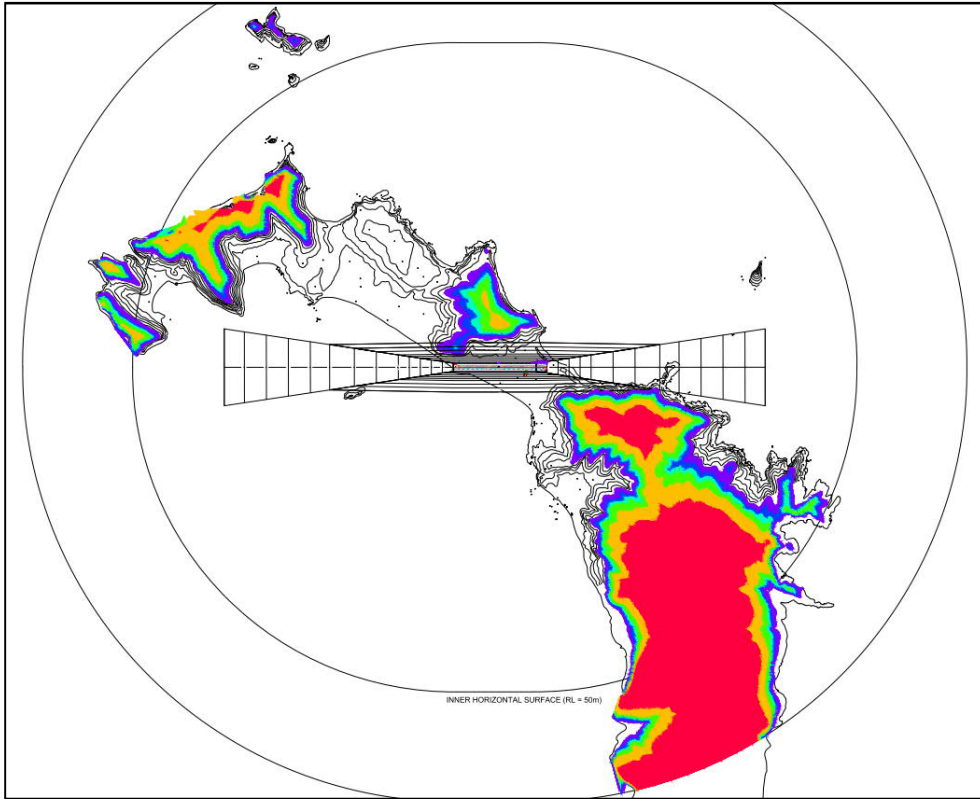
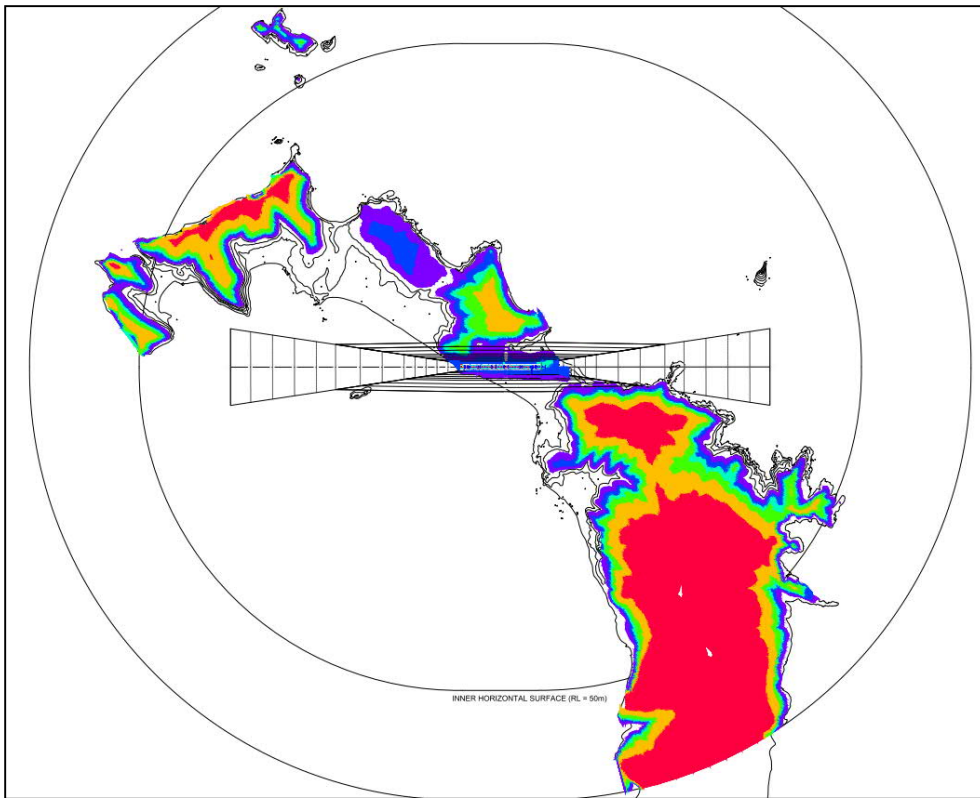


Figure 20 Lord Howe Island Indicative Existing OLS Surface Penetrations including 20m vegetation



8.3 Option 2 – 450m Runway Extension

Figure 21 450m runway extension layout

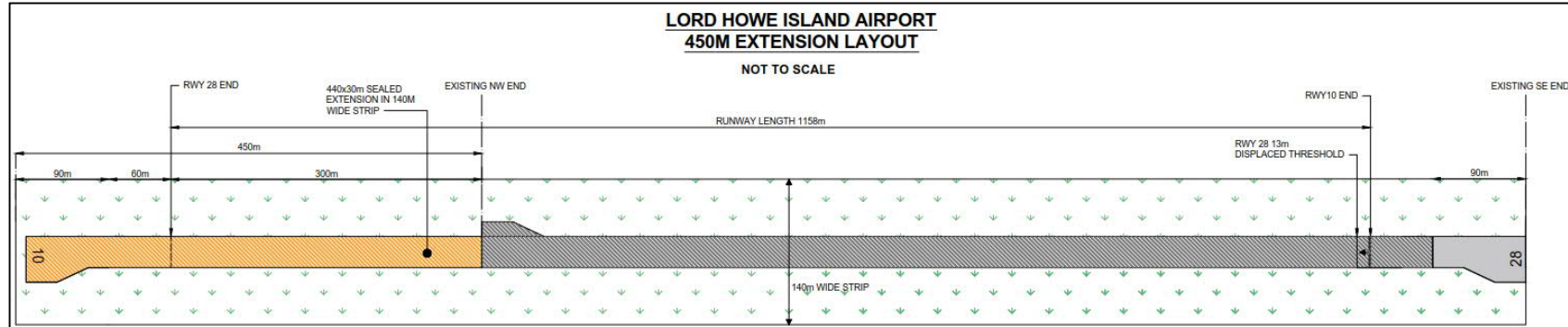


Figure 22 450m runway extension – Runway 10 declared distances

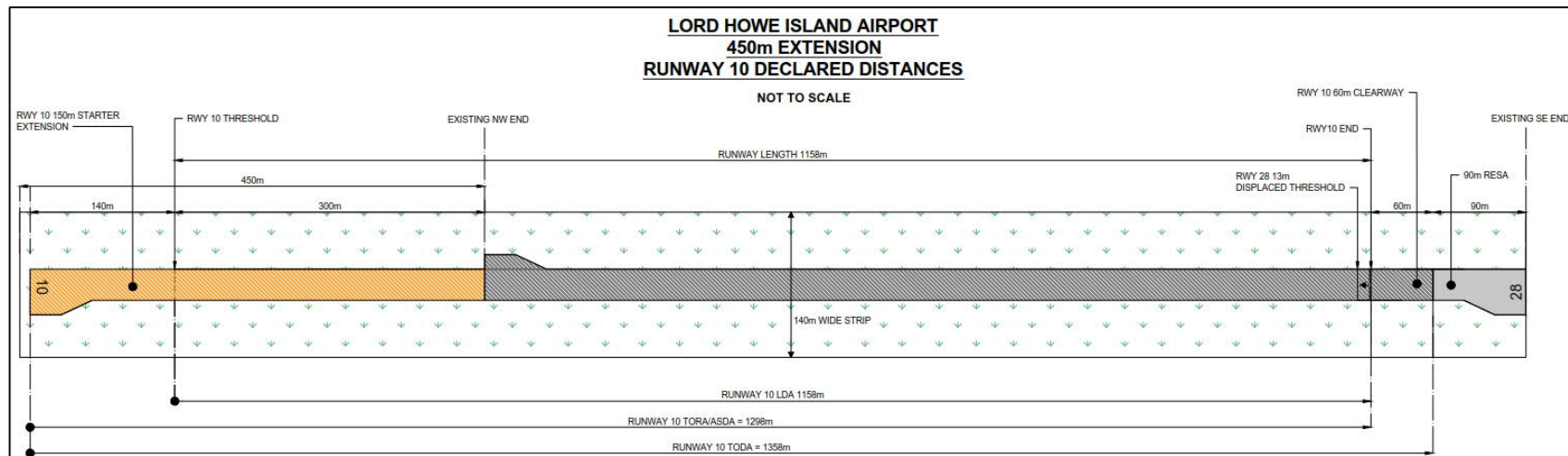
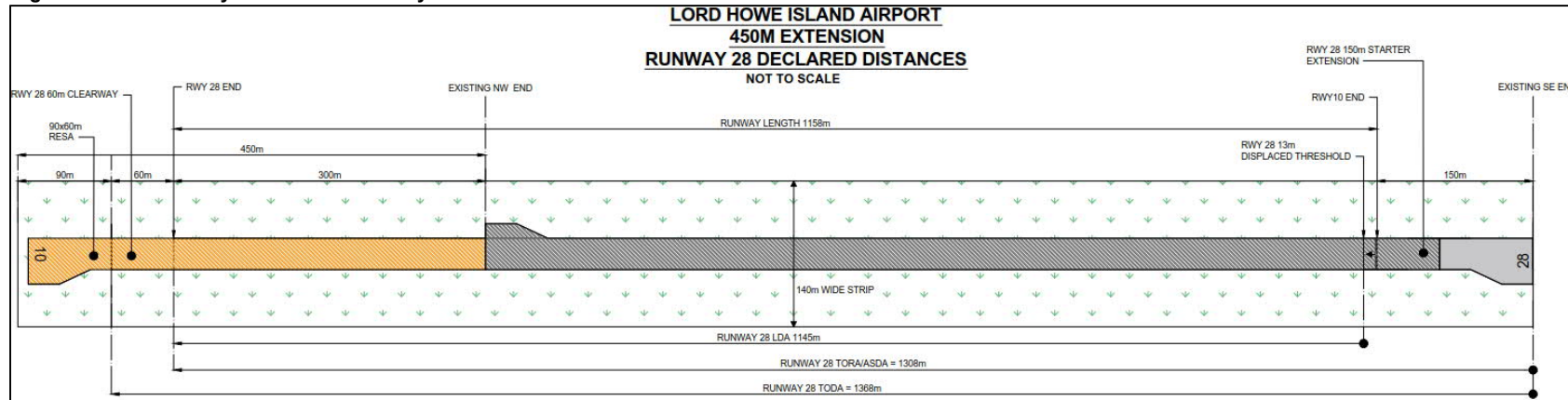


Figure 23 450m runway extension – Runway 28 declared distances



8.3.1 Operational length

Figure 21 shows the existing runway operational length with a 450m extension. Table 14 also contains additional scenarios which estimate the additional operational length gained by reducing the height of the sand dunes.

Table 14 Effective operational lengths for 450m runway extension options

Scenario	Runway 10					Runway 28				
	TORA	LDA	STOD			TORA	LDA	STOD		
	ASDA		1.6%	1.9%	2.2%	ASDA		1.6%	1.9%	2.2%
450m extension	1298	1158	863	957	1025	1308	1145	1368	1368	1368
Sand dune reduction 1	1298	1158	978	1038	1082	1308	1145	1368	1368	1368
Sand dune reduction 2	1298	1158	1038	1070	1094	1308	1145	1368	1368	1368

Notes

1. Dune 28 (Figure 8) reduced by 2.0m
2. Dune 28 (Figure 8) reduced by 3.5m and Dune 24 & 25 reduced by 1.0m
3. Dune removal has not been included in landing length calculations as the terrain and vegetation on Intermediate Hill also influences the displaced threshold.

8.3.1.1 Take-off and landing runway length

As discussed in Section 8.2, it is clear from the figures that the existing runway is constrained, even for the DHC8-200 in either runway direction, hence the existing payload limitation. A 450m extension would greatly improve the take-off weights available and hence outbound payloads, and enable unrestricted operation of DHC8-200. In addition the ATR72-600 and DHC8-300 could operate with minimal restrictions

Landing length has initially been assessed based on a wet runway with nil wind. In order to assess the most stringent landing conditions, they have also been assessed based on a wet Runway 10 with a 5 knot tail wind, this reflects the current QantasLink practice of landing with up to 5 knots tailwind on Runway 10 to avoid the more turbulent approach and currently shorter Runway 28. This severely restricts the ATR42-600, which in other conditions would be able to operate unrestricted.

Table 15 Aircraft performance on the 450m runway extension

Aircraft	Maximum payload available (%)				
	Take Off		Landing (Nil Wind)		Landing (5 knot tail wind)
	RWY 28	RWY 10	RWY 28	RWY 10	RWY 10
ATR42-600	100%	100%	100%	100%	50%
ATR72-600	90%	80%	100%	100%	90%
DHC8-200	100%	100%	100%	100%	100%
DHC8-300	80%	70%	100%	100%	90%
DHC8-400	80%	75%	55%	60%	< 50%
Fokker 50	100%	100%	60%	60%	< 50%

8.3.2 Operational considerations

8.3.2.1 RPT

QantasLink would be able to operate both their DHC8-200 and DHC8-300 aircraft on this runway extension. They provided performance data for the DHC8-300 based on a range of runway extension both with the existing dunes and also with them totally removed; this Qantas data confirms our initial analysis of the DHC8-300.

Virgin Australia only provided performance analysis data for maximum payload requirements; the 450m extension would provide sufficient operational length for this other than landing on Runway 10. Although based on initial analysis, ATR 72's would be able to operate but it would be at a reduced payload.

Skytrans advised that their DHC8-100 aircraft ideally require a take-off distance of 1150m at LDH. The 450m extension provides a 1.9% STODA of 957m (with existing dunes) on Runway 10 and 1308m on Runway 28. On this basis we believe the 450m extension could meet Skytrans needs for the -100 aircraft. However as previously discussed, Skytrans advised they plan to move to DHC8-200's starting this year. They did not indicate what runway length they believe the -200 requires. While we are confident the 450m extension would be sufficient we recommend further discussions with Skytrans in the next phase of the project.

The Fokker 50's operated by Alliance would be able to operate on this extended runway with almost no restrictions for take-off but a significantly reduced payload for the most stringent landing, as previously discussed in Section 6.2.2 Alliance are phasing out the Fokker 50's and converting to an all jet aircraft fleet.

8.3.2.2 Non-RPT

RFDS (NSW) indicated their preference to use the King Air 350 for EMS operations to LDH. Their desired runway length at LDH for this aircraft is 1100-1200m, preferably 1200m. The 450m runway extension provides 957m at 1.9% STODA for Runway 10 and 1308m on Runway 28. We believe this could address RDFS's requirement.

The RAAF and GA operators would have reduced or no operational restrictions because of the extended runway length available.

8.3.3 CASA compliance

As indicated in Section 5.4 the strip width requirement for Code 3 aircraft on an instrument-non precision runway is 140m, which has been provided for. However, MOS139 at 6.2.18.4 states:

"If an aerodrome operator wishes to provide a lesser runway strip width to that specified in the standards, the aerodrome operator must provide CASA with a safety case justifying why it is impracticable to meet the standard. The safety case must include documentary evidence that all relevant stakeholders have been consulted."

Elsewhere in MOS139, CASA indicates an adjustment to landing minima would be required for Code 3 operation on an instrument runway with a 90m strip. This adjustment, contained in MOS173, is fairly minor. What is not known is what other limitations CASA may place on the aircraft operator at LDH, for example cross wind limits.

Clearly CASA does provide for situations where the full 140m cannot be provided. We therefore recommend detailed discussion with CASA on this requirement, and any conditions likely to arise out of the safety case requirement. It is noteworthy that under MOS 139, 6.2.18.1 the aerodrome operator, not the aircraft operators, must provide the safety case. However, we believe this only applies if the aerodrome operator wishes to upgrade the aerodrome to a higher Code. As mentioned earlier in the report we believe there is an option that the aerodrome remains at Code 2 (due to strip width) and the aircraft operator seeks a dispensation to operate on the narrower strip width.

Clearly in any event the aircraft operator has to be consulted and concur with the proposed operation and any risk mitigations envisaged.

8.3.4 Runway strength

The 450m extension would allow the opportunity for more aircraft to viably operate from LDH; the ATR72 would present the highest ACN (11) of these aircraft. As previously discussed, it is acceptable to exceed a runway's published PCN by 10% without causing distress to the runway therefore the runway strength would be sufficient

8.3.5 OLS and VSS

Given that Code 3 aircraft would be using the runway and it would be at CASA's discretion if they were allowed to operate on a Code 2 runway, OLS surfaces have been modelled in 3D for both a Code 2 runway (Figure 24 and Figure 25) and also a Code 3 runway (Figure 26 and Figure 27). Obstacle penetrations can be seen in colour, more detailed versions of these figures can be found in Appendix B.

Figure 24 Lord Howe Island Indicative Code 2 runway 450m extension OLS Surface Penetrations

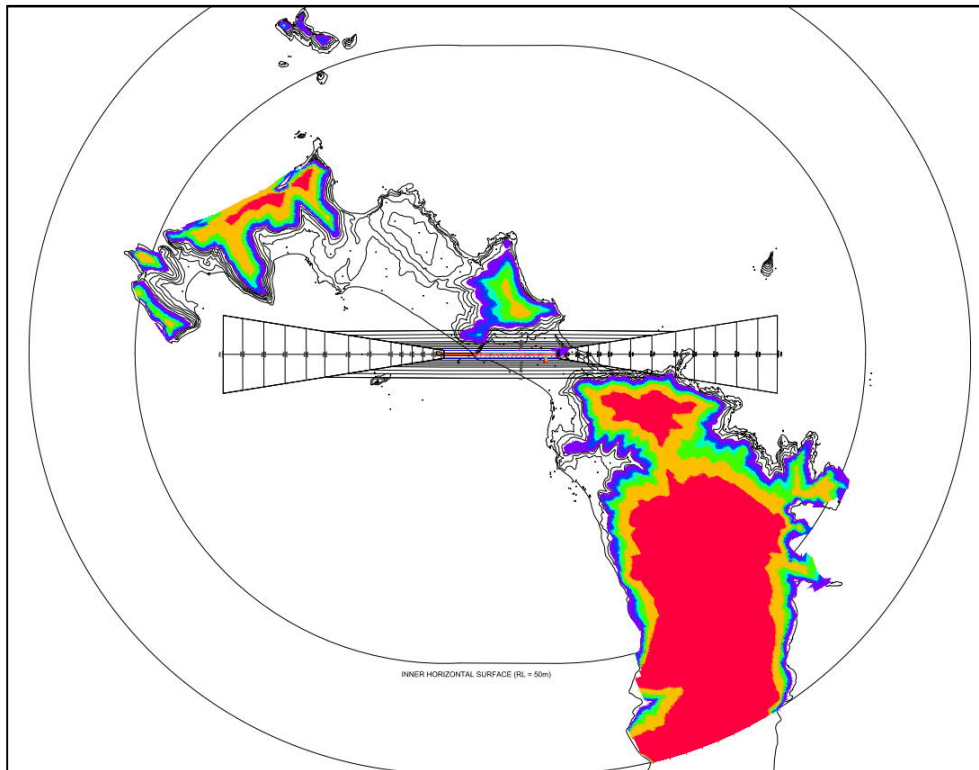


Figure 25 Lord Howe Island Indicative Code 2 runway 450m extension OLS Surface Penetrations with 20m vegetation

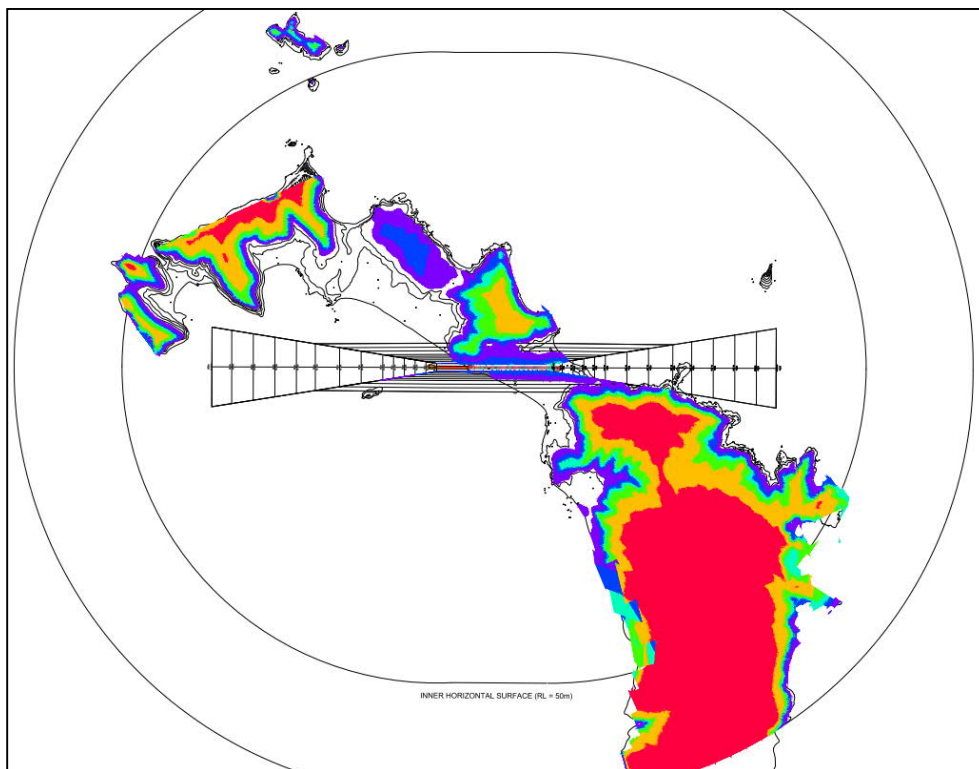


Figure 26 Lord Howe Island Indicative Code 3 runway 450m extension OLS Surface Penetrations

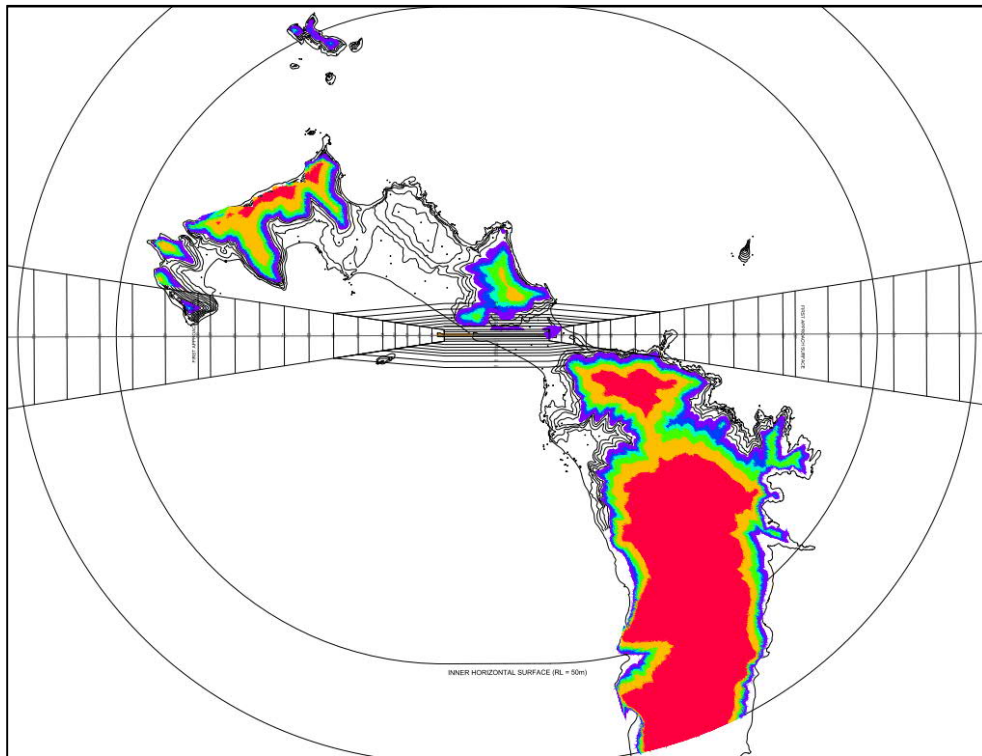
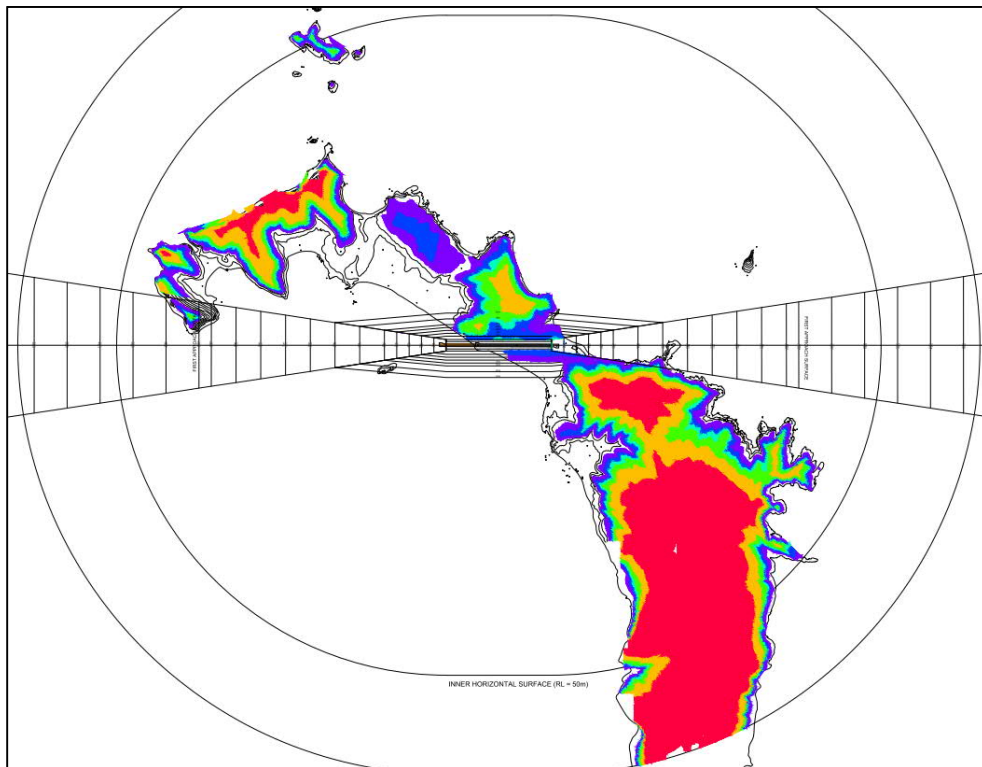


Figure 27 Lord Howe Island Indicative Code 3 runway 450m extension OLS Surface Penetrations with 20m vegetation



Although this runway extension option has a 450m extension, the Code 2 OLS approach surface for Runway 10 still does not extend over North Head. The VSS approach for Runway 10 will have to steepen to accommodate the extension and avoid North Head although this will still stay within industry accepted operational parameters.

The Code 3 OLS has significantly more obstructions; this is principally because of the extended approach surface length projecting over North Head and the widened runway strip (90m to 140m) with associated transitional surface. Should these potential obstructions be immovable, then dispensations would need to be sought from CASA.

8.4 Option 3 – 570m Runway Extension

Figure 28 570m runway extension layout

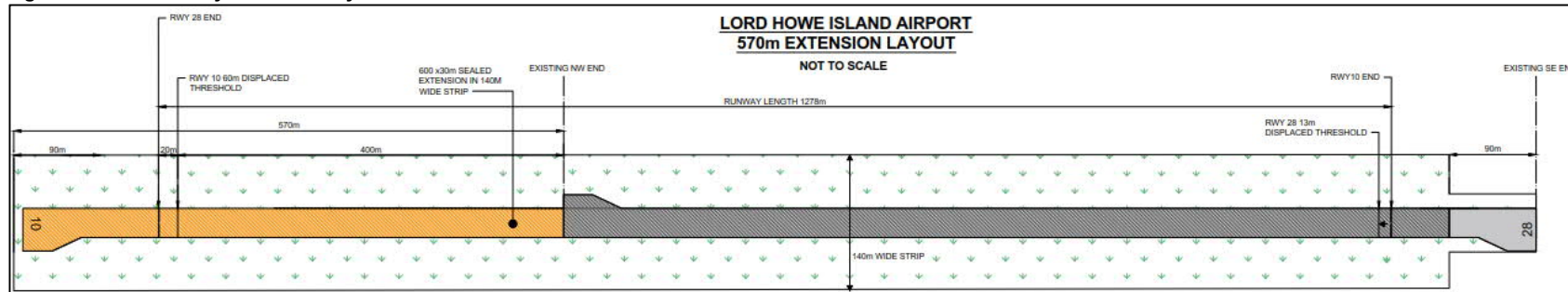


Figure 29 570m runway extension layout – Runway 10 declared distances

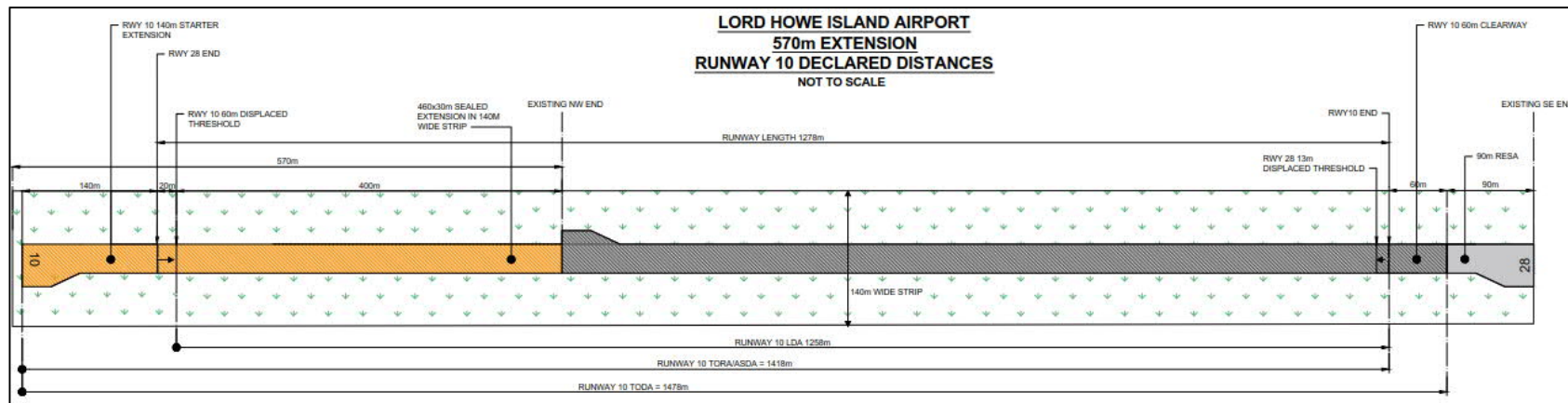
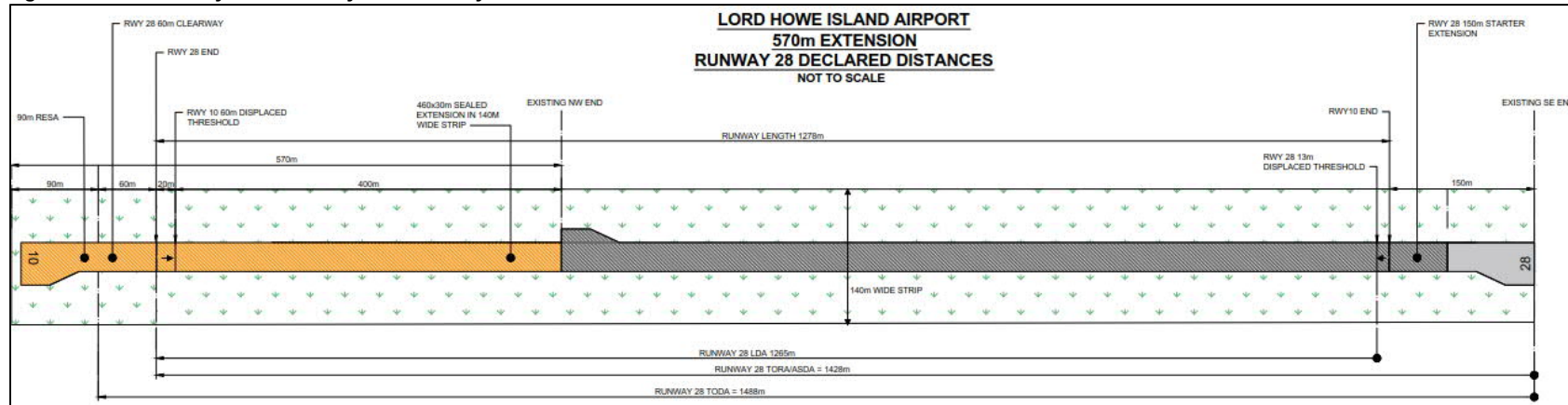


Figure 30 570m runway extension layout – Runway 28 declared distances



8.4.1 Operational length

Figure 28 shows the existing runway operational length with a 570m extension. Table 16 also contains additional scenarios which estimate the additional operational length gained by reducing the height of the sand dunes.

Table 16 Effective operational lengths for 570m runway extension options

Scenario	Runway 10					Runway 28				
	TORA	LDA	1.6%	1.9%	2.2%	TORA	LDA	1.6%	1.9%	2.2%
	ASDA					ASDA				
570m extension	1418	1258	1123	1217	1285	1428	1265	1488	1488	1488
Sand dune reduction 1¹	1418	1258	1238	1298	1342	1402	1265	1488	1488	1488
Sand dune reduction 2²	1418	1258	1298	1330	1354	1428	1265	1488	1488	1488
Sand dune removal³	1418	1258	1478	1478	1478	1428	1265	1488	1488	1488

Notes

4. Dune 28 (Figure 8) reduced by 2.0m
5. Dune 28(Figure 8) reduced by 3.5m and Dune 24 & 25 reduced by 1.0m
6. Total dune removal requires all dunes removed below 1.6% STOD, although more detailed analysis may enable removal to 1.9% STOD
7. Dune removal has not been included in landing length calculations as the terrain and vegetation on Intermediate Hill also influences the displace threshold.

8.4.1.1 Take-off and landing runway length

A 570m extension would enable the DHC8-200 and ATR42 to operate unrestricted and the ATR72, DHC8-300, DHC8-400 and Fokker 50 with 75-90% payload varying penalties which could be improved by dune height reduction.

Operation of the DHC8-400 from Runway 10 could have more significant penalties and would most likely require dune removal to 1.9% STODA. This enhancement could be made after the aircraft is introduced if in-service experience indicates it is necessary.

The 570m extension would remove all landing restrictions on all aircraft types but the Fokker 50 and DHC8-400 which could only operate at 60% payload respectively in the most stringent landing conditions.

It should be noted that due to terrain in the approach path and the assumption that the east runway end cannot be extended, a 400m extension of the threshold (limited by the VSS approach) is the maximum that provides any benefit for landing on runway 10.

Table 17 Aircraft performance on the 570m runway extension

Aircraft	Maximum payload available (%)				
	Take Off		Landing (Nil Wind)		Landing (5 knot tail wind)
	RWY 28	RWY 10	RWY 28	RWY 10	RWY 10
ATR42-600	100%	100%	100%	100%	100%
ATR72-600	100%	90%	100%	100%	100%
DHC8-200	100%	100%	100%	100%	100%
DHC8-300	90%	75%	100%	100%	100%
DHC8-400	95%	85%	95%	95%	60%
Fokker 50	100%	100%	85%	85%	60%

8.4.2 Operational considerations

8.4.2.1 RPT

As mentioned in Section 8.3.2.1, QantasLink performance data for the DHC8-200, 300 & 400 closely align with our assessment of aircraft performance capabilities.

Virgin's figures for the ATR72 at maximum payload show close agreement for take-off Runway 28. For Runway 10 take-off, Virgin estimates a significantly longer extension than 570m is required if the dunes remain, which is consistent with our analysis, but suggests total removal of dunes would be required for the ATR72. Although Virgin noted that further analysis might mitigate this saying: *"The next stage would be to identify what flight sectors we intend to travel, then run a payload analysis to determine what MTOW would be required to allow for maximum PAX on board. We may find that we don't require the full 23,000kg MTOW for our operations, making the runway extension more feasible."*

8.4.2.2 Non-RPT

It is likely that a 570m extension would remove all operational restrictions for RFDS, RAAF and GA users of LDH, subject to confirmation. It's to be noted that these users have indicated any extension would be beneficial to operations though.

8.4.3 CASA compliance

As per Section 8.3.3, this option has been based on a Code 3 runway strip, but a dispensation from CASA could be sought for a Code 2 runway strip.

8.4.4 Runway strength

Depending on the results of the revised PCN calculations following the runway overlay in 2005, a CASA pavement concession may be required by the aircraft operator should the DHC8-400(ACN of

14) begin regular RPT operations to LDH. Should the revised PCN not increase or a concession not be granted, then a structural overlay of the runway may be required as part of the extension work.

8.4.5 OLS and VSS

The obstacle penetrations of the OLS for the 570m extension will be very similar to those shown for the 450m extension in Section 8.3.5, and can be seen in Figure 31 and Figure 32 for a Code 2 runway and in Figure 33 and Figure 34 for a Code 3 runway. The required runway strip and associated OLS would be at CASA's discretion. Obstacle penetrations can be seen in colour, more detailed versions of these figures can be found in Appendix B.

Figure 31 Lord Howe Island Indicative Code 2 runway 570m extension OLS Surface Penetrations

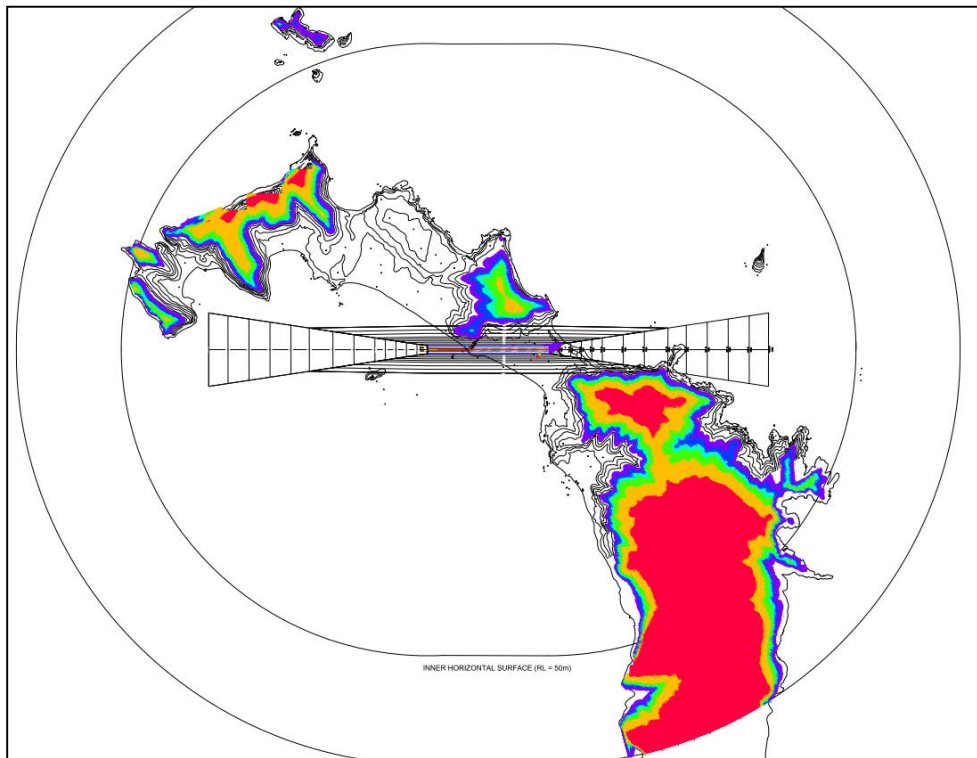


Figure 32 Lord Howe Island Indicative Code 2 runway 570m extension OLS Surface Penetrations with 20m vegetation

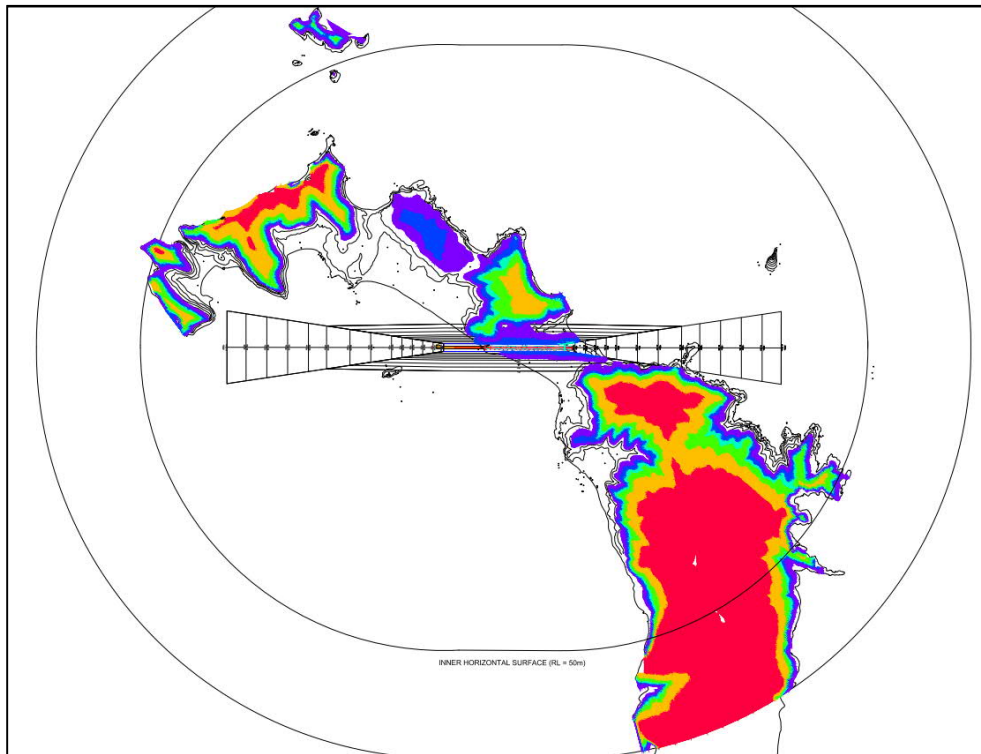


Figure 33 Lord Howe Island Indicative Code 3 runway 570m extension OLS Surface Penetrations

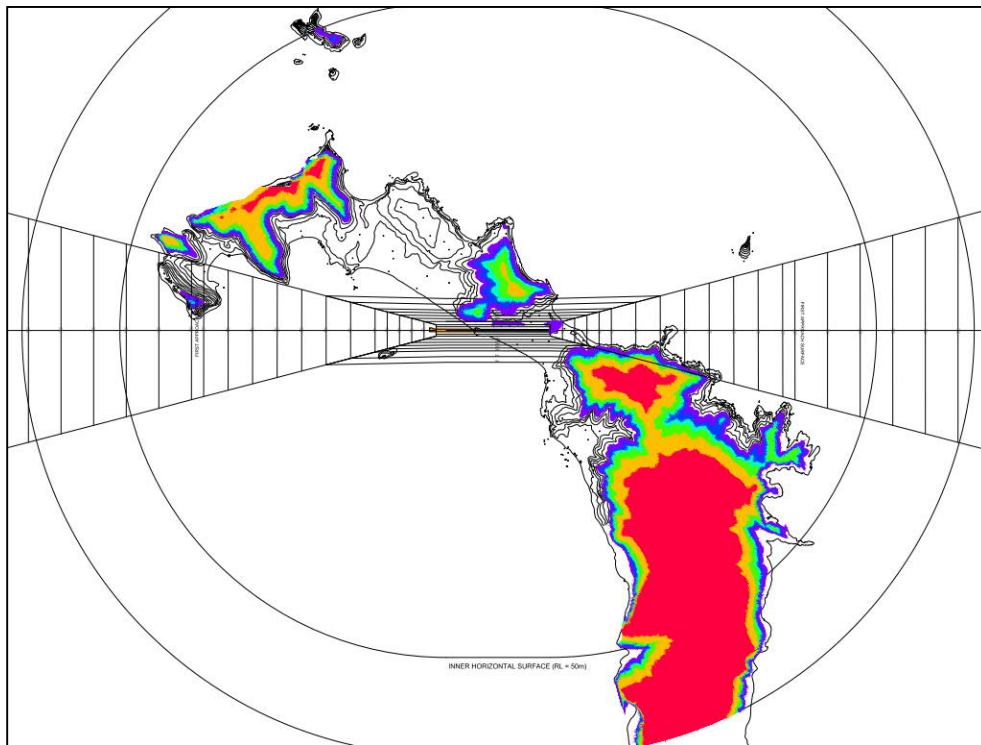
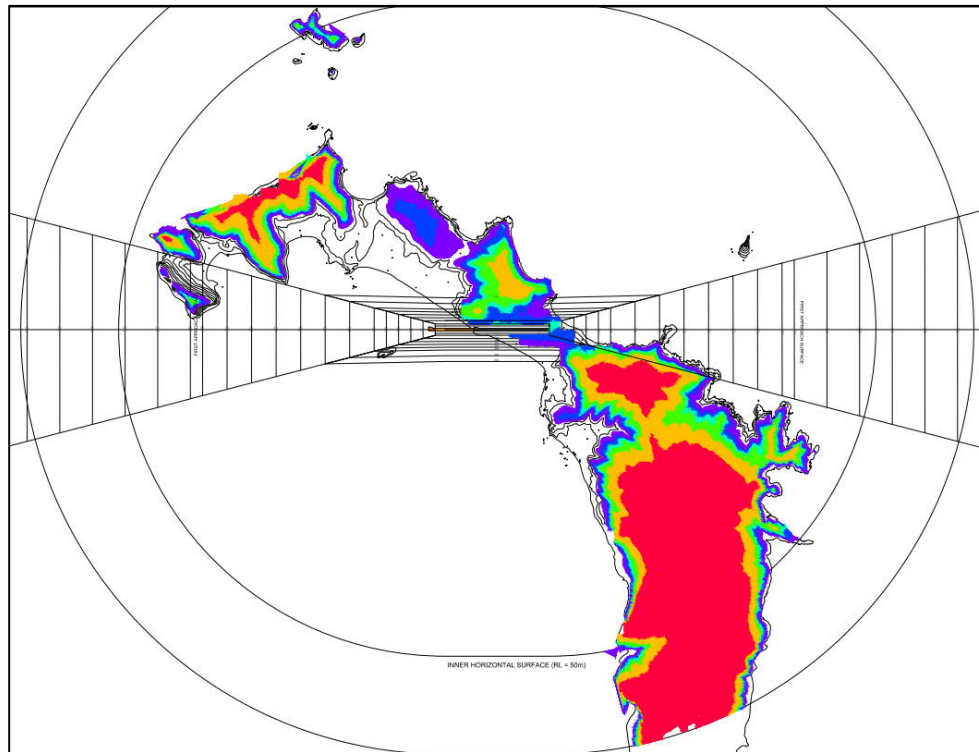


Figure 34 Lord Howe Island Indicative Code 3 runway 570m extension OLS Surface Penetrations with 20m vegetation



Based on the advice of both ASA and Qantas, the VPA which forms part of the VSS approach slope has been limited to a steepness of 4.5° this is because airlines may reject the risk of landing on runways with a VPA greater than this. In addition Airservices indicated that a steeper angle could preclude the use of vertical flight path guidance by future aircraft equipped for it meaning approach minima may not be able to be lowered from today's level.

In order to avoid the VSS approach slope being penetrated by North Head and retaining a maximum slope of 4.5° the runway 28 threshold can only be shifted 400m to the northwest. Therefore the VSS approach slope is the limiting factor for any runway extension to the northwest.

8.5 Extension Option Aircraft Performance

Figure 35 and Figure 36 depict the candidate aircraft take-off length requirements at varied payloads in comparison to the declared take-off run available for each runway option.

Figure 35 Runway 10 take-off distance required and available

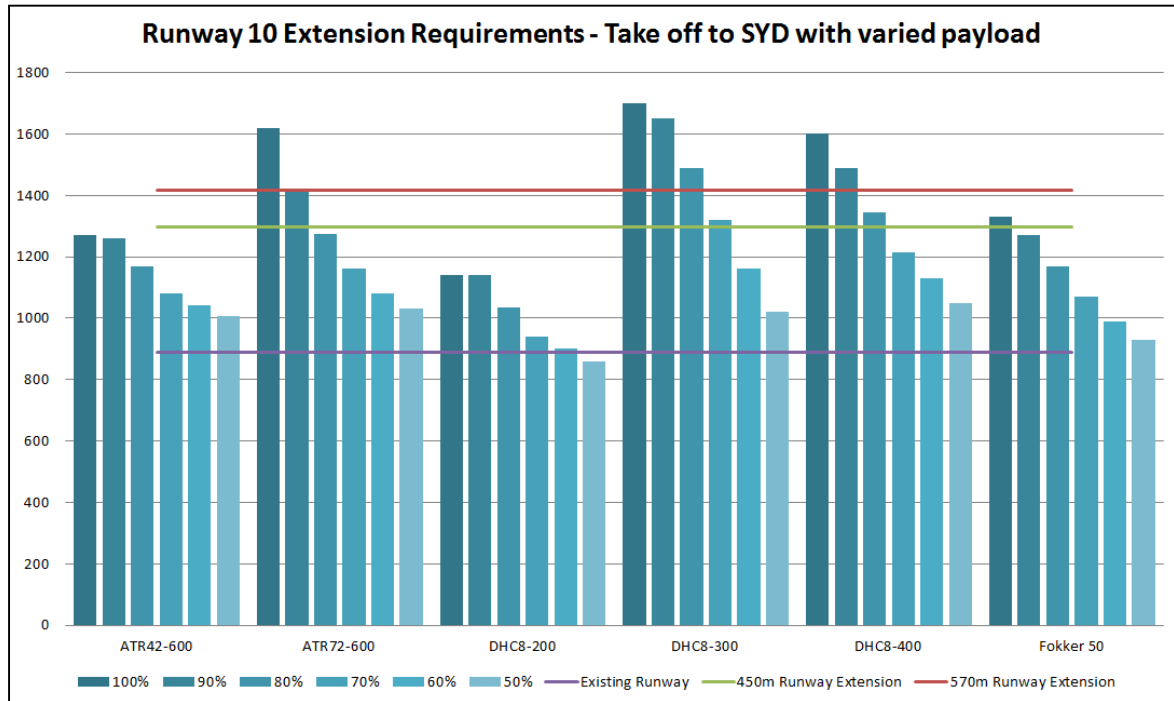


Figure 36 Runway 28 take-off distance required and available

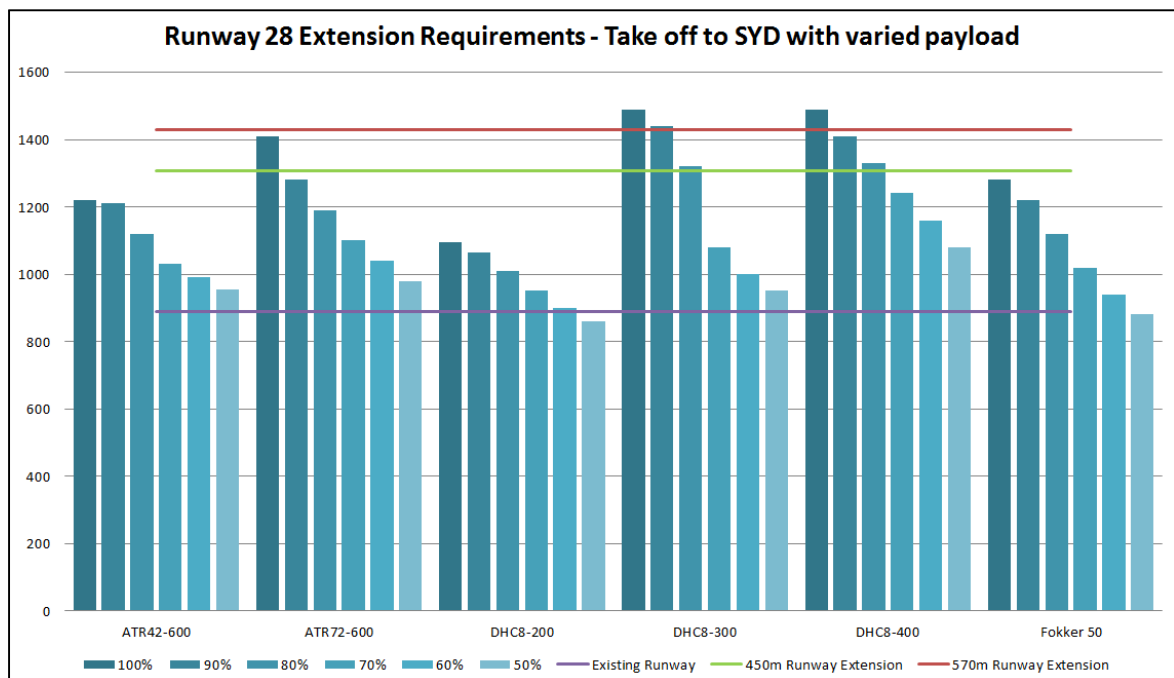


Figure 37 and Figure 38 depict the candidate aircraft landing length requirements for nil wind conditions at varied payloads in comparison to the declared landing distance available for each runway option. As previously discussed QantasLink currently land on Runway 10 with tailwinds of up to 5 knot in order to avoid the more turbulent approach on Runway 28. Figure 39 illustrates the additional aircraft landing length required for these operations.

Figure 37 Runways 10 landing distance required and available (nil wind)

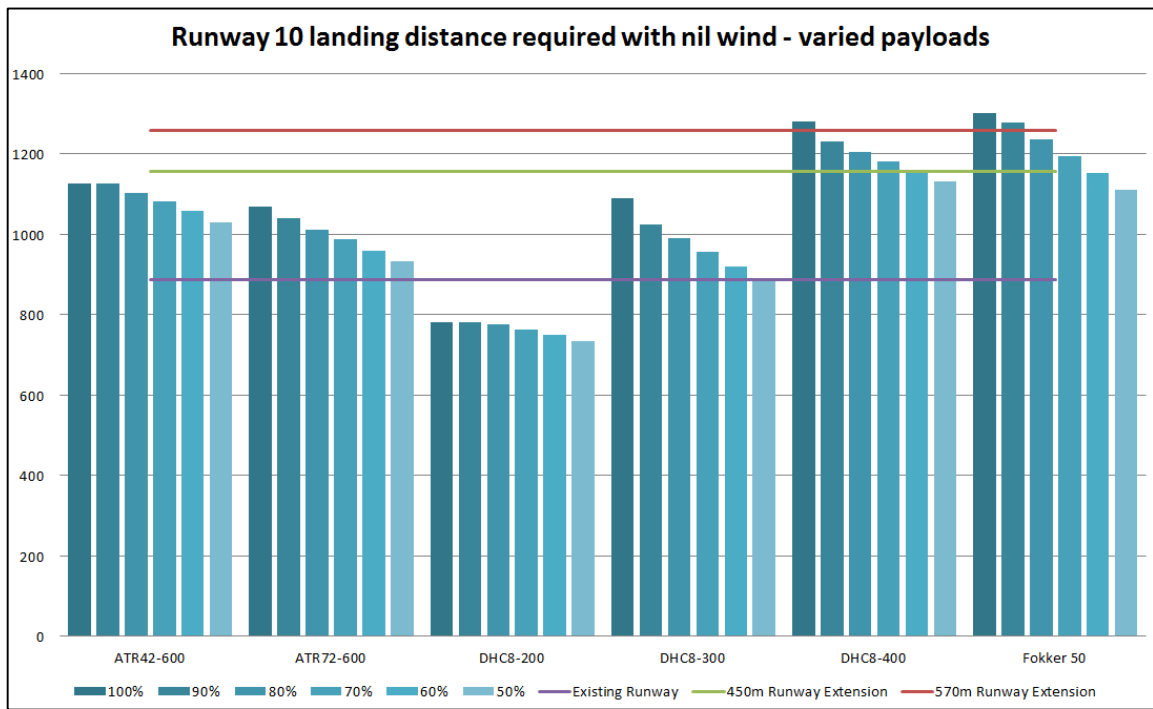


Figure 38 Runways 28 landing distance required and available (nil wind)

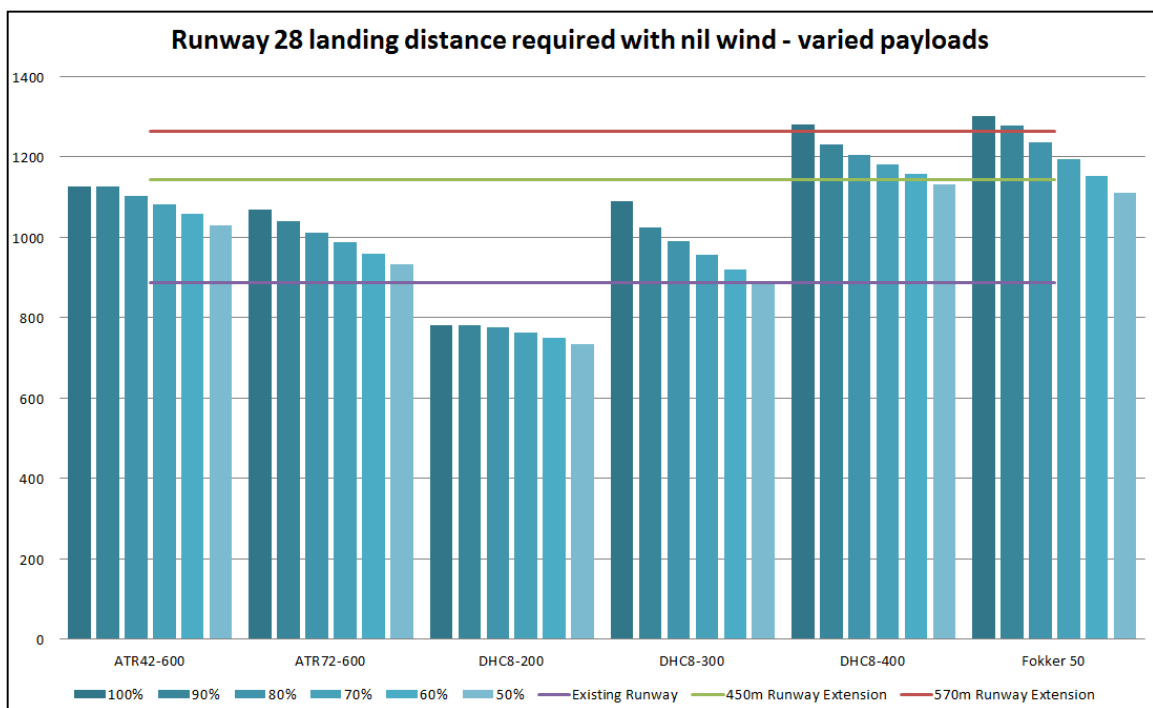
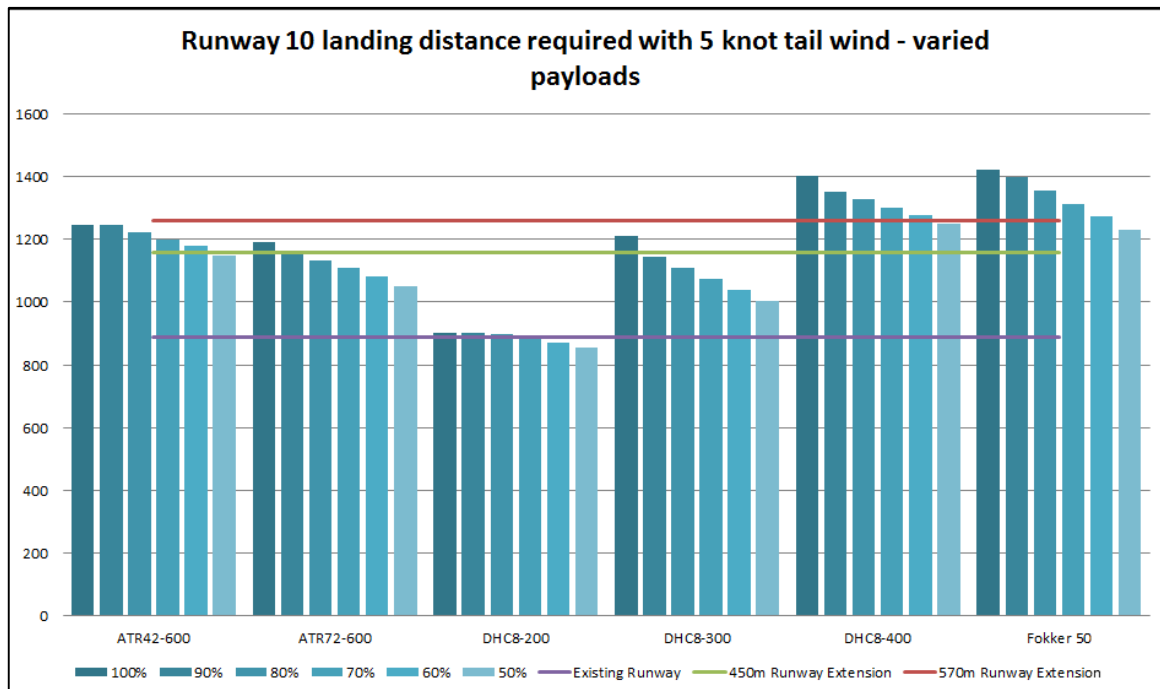


Figure 39 Runways 10 landing distance required and available (5 knot tail wind)

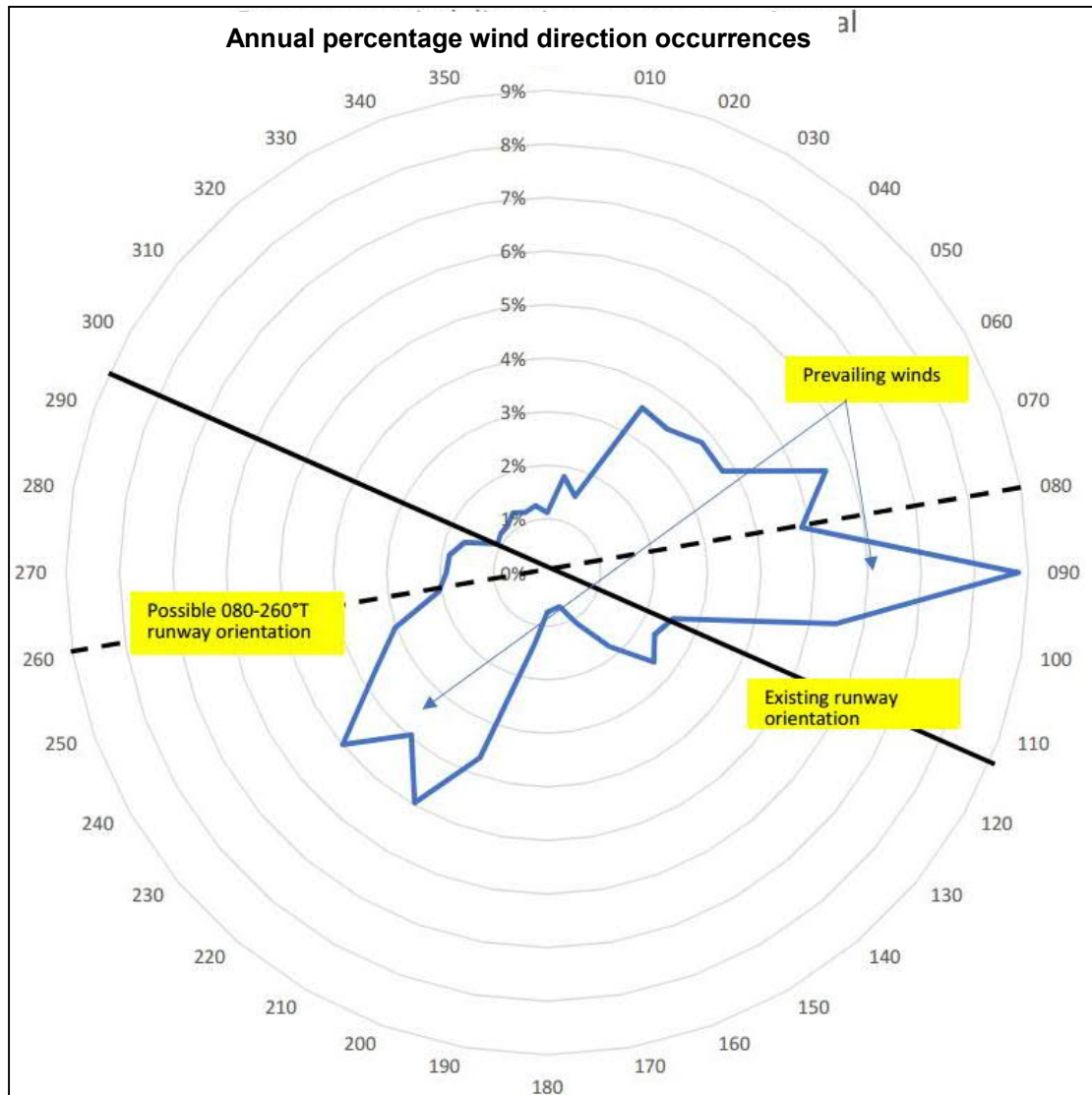


8.6 Alternate option 1 – Optimal runway reorientation

8.6.1 Runway usability - crosswinds

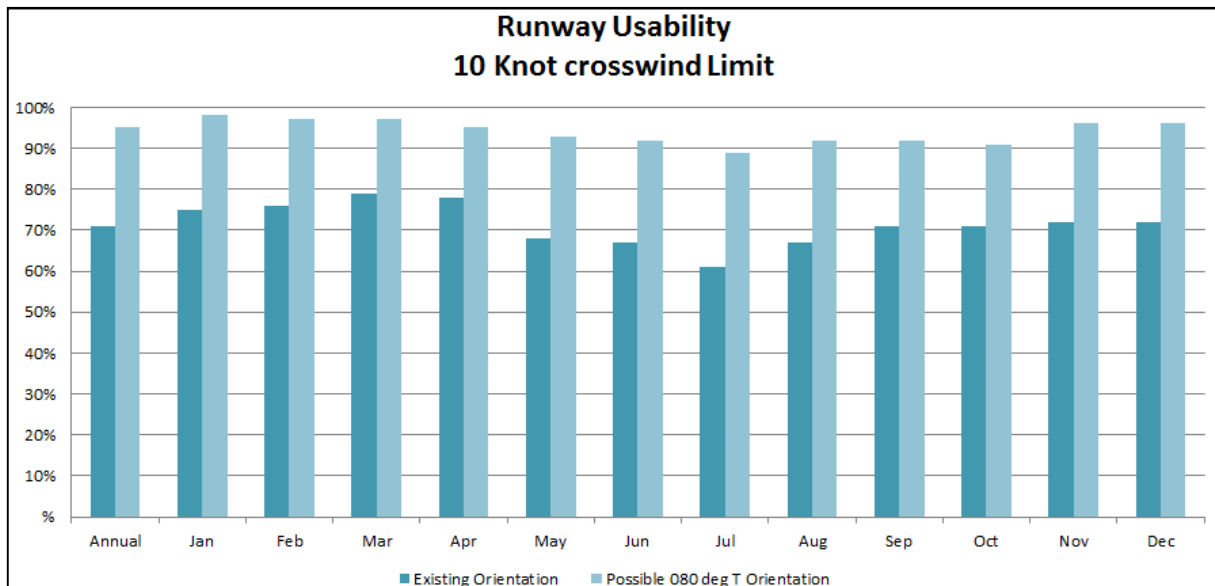
The existing runway orientation is not ideal for either prevailing winds or flight path obstructions. Figure 40 below shows the annual wind rose based on BOM data Jul 1994 – Jan 2013. Monthly wind rose data shows a strong prevalence of easterly winds Nov-Apr with south westerlies more prevalent May-Oct.

Figure 40 Lord Howe Island wind rose



A more east – west orientation (approximately 080-260° True) would be better aligned with the prevailing easterly and south westerly winds, lessening the prevalence of crosswinds. The runway usability factor, defined in ICAO Annex 14 as the percentage of time during which the use of a runway or system of runways is not restricted because of the crosswind component, would improve as shown in Figure 41 below.

Figure 41 Monthly runway usability factors



ICAO recommends that the number and orientation of runways at an aerodrome should be such that the usability factor of the aerodrome is not less than 95 per cent for the aeroplanes that the aerodrome is intended to serve based on a recommended crosswind limit of 10kts for aircraft with reference field length less than 1200m (Codes 1 and 2) and 13kts for reference field length 1200m up to 1500m. The 080-260 orientation would give an annual usability, with a 10kt crosswind limit, of 94%, increasing to 98% at 13kts. For the existing orientation the figures are 72% at 10kts and 89% at 13kts.

8.6.2 Indicative runway realignment

An indicative realignment was presented within the original proposal, as shown in Figure 42. Based on the wind data it would have a usability of 68% and in addition, the approaches at each end of the runway would be severely obstructed.

Figure 42 Indicative realignment proposal



Figure 1 Potential runway reorientation to be considered in Milestone 1

8.6.3 Optimal operational runway realignment

The flight paths for an east-west orientation are clear of Intermediate Hill and North Head, both of which affect approaches to the existing orientation.

Figure 43 Optimal operational runway realignment



The dunes to the east of the existing runway may still need to be removed. This would have to be subject to further study.

There are number of issues to consider with a realignment, not the least being construction cost due to the additional reclamation required over the lagoon. Flight path turbulence is also another important factor for which pilot advice should be sought, and has not been accounted for at this stage.

8.7 Alternate option 2 – Aircraft leasing

As previously discussed the ATR42 and the potential ATR42 STOL aircraft could be ideal for RPT operations to Lord Howe Island, although based on current discussions with candidate airlines and ATR themselves there are no plans for ATR42 aircraft to be in operation in Australia in the near future. Airlines are typically guarded in discussions around future aircraft fleet plans, so it is difficult to predict their fleet make up in 2022 but it would be conservative to assume there will be no ATR42 aircraft in operation.

There would be significant operational, logistical and legal aspects to be considered for this alternative option, which may make it not a viable solution. One of the key concerns would be an airlines willingness to commit to training, operating and maintenance of two aircraft they don't operate on any of their other routes.

8.7.1 Avation PLC Group

Initial discussions were held with Avation (a commercial aircraft leasing company) with regards to the feasibility of a leasing arrangement with a government agency, as there are precedents of non-airline entities leasing aircraft and contracting operators to fly them. The following information has been provided by Avation with regards to ATR aircraft, and has been based on the aircraft being provided in 2021. Indicative costs and financial commitments were provided, but these would be subject to more detailed discussions in the future.

1. Avation currently has the potential to obtain up to 20 aircraft from ATR for delivery in 2021, these can be either ATR42 or ATR72;
2. Two of these could be allocated to a government agency, for aircraft to be delivered late 2021;
3. ATR has very recently lifted activity on the proposed ATR42 short field. It is expected the option will be offered this year and would be available by 2021. However, its performance specifications are not yet known so it is not possible to say whether it would require a runway extension. This should become clear over the next 6-9 months;
4. Should a government agency proceed to lease the aircraft, the lease commitment period would be 10-12yrs.
5. The cost of this over 10 years could be offset by reimbursements from the operating airline as follows;
6. More than 50% lease payment may be able to be clawed back from the operating airline as the aircraft could be used on the operator's other routes, not just LDH;
7. The risk is that no operator is found then worst case a government agency is stuck with the aircraft leasing costs;

9.0 Conclusion

It is clear a runway extension would be required to adequately accommodate projected future aircraft types and of great benefit for the DHC8-200 operation even if either QantasLink or Skytrans operate the route from 2022.

If operation was to remain with the DHC8-200 indefinitely we would suggest the 450m extension as being sufficient. However, it is expected that QantasLink will phase the -200 out, and Skytrans, being a smaller operator based in Cairns may not have the resources or the intent to set up a SYD or BNE based operations just for LDH.

We also suggest the 450m extension would be adequate if the ATR42 was a serious contender, and even more so should ATR develop the "Short Field" version of the aircraft currently under consideration. However, at this time no Australian operator has the ATR42 within its fleet, and in discussion, Virgin who currently operate the ATR72, indicated they have no appetite for a sub-fleet of ATR42's even though the differences between the aircraft are not great.

Realignment of the runway shown in alternative option 1 would significantly increase the runways usability and also remove the obstruction issues associated with Intermediate Hill and North Head, but the significant cost of building a new runway in addition to the extension into the lagoon makes this option non-viable from a financial perspective.

Direct leasing or purchase of aircraft by LHIB has the potential to remove or reduce the required runway extension, although this would be subject to available aircraft and airline operator agreements at the time. This appears to be a viable solution should state funding not be available for a runway extensions. Although further understanding and investigation of the operational, logistical and legal aspects of this solution would be required, therefore this should continue to be seen as an alternate solution, pending the results of the full runway extension feasibility study for LDH.

For these reasons, we believe the 570m extension would open LDH to a much wider range of candidate aircraft and operators and recommend this option for further study. Any dune reduction and removal could be made depending on the aircraft operating to LDH and the subsequent airlines specific requirements.

For a less, remote aerodrome we would recommend staged extension construction in which the 450m extension could be built initially and the further 110m to make 570m later. However, given the difficulties of construction at LDH, we understand it may prove far more cost effective to build to 570m in one phase than two.

Further discussions will be required with airlines, CASA and Airservices at subsequent stages of the runway extension design to ensure the final design meets the relevant user and stakeholder requirements.

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LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Boat Retrieval System (Slipway) Update and proposal for interim and long-term boat storage arrangements

RECOMMENDATION

It is recommended that the Board discuss and consider this matter to provide a response back to the NSW Roads and Maritime Services.

BACKGROUND

The planning and development of an improved boat ramp and boat retrieval system (slipway) for the Island has been under consideration for many years. In May 2014, the Board adopted the option of minor improvements to the existing boat ramp at Wilson's Landing and a separate slipway facility located at the Waste Management Facility (two site solution).

NSW Roads and Maritime Services (RMS) had already approved funding of \$680,000 from the Better Boating program for an upgraded boat ramp and development of a slipway.

After considerable investigation of options for a slipway at the WMF and taking into account cost, available funding and environmental impacts, a proposal for a slipway consisting of a wheeled cradle capable of being winched across sand was developed. A development application was considered by the Board in September 2016, and consent given:

To construct a vessel launching and retrieval facility including two concrete bunded work areas, a cradle, electric winch and pollution control system at the Waste Management Facility

This was subject to deferred commencement conditions to be satisfied prior to the consent becoming operative:

1. Detailed design

Drawings showing the detailed design of the vessel launch and retrieval system are to be provided to the Board for planning review and sign off, showing all proposed structures with dimensions, materials and colours. This is also to include:

- a) Details and location of the proposed 6,000L water tank. It is to be in a location which is hidden behind the dune by vegetation and not visible from the foreshore.
- b) Details of any piling, foundations or other structures required that were not provided on the submitted plans.
- c) Details of any excavation and piping required to transport the waste generated to the wastewater management system at the Waste Management Facility.

The acceptability of the impacts of the above final designs will be considered in the review.

2. Comments from NSW Department of Primary Industries – Lord Howe Island Marine Park

Referral comments from the NSW Department of Primary Industries in relation to the Marine Park are to be obtained and it is to be demonstrated to the Board's satisfaction that their general terms of approval will be complied with.

Subsequent to development consent, and in order to meet the deferred commencement conditions, consultants Advisian were engaged to investigate possible modification options for the existing slipway cradle, which was originally designed to operate on rails. The cradle is owned by the LHI Slipway Association.

Due to concerns regarding issues and risks identified, Advisian advised that the cradle operating on sand was not the best option for the site. As a result, alternate options for a vessel launching and retrieval facility were considered by Advisian,

After thorough analysis, construction of an elevated, piled, railed slipway for use with the existing cradle was recommended by Advisian as the preferred option.

In the meantime, larger vessels using Lord Howe Island waters have been experiencing difficulties with no access to a slipway, and interim arrangements are needed.

Slipway development

The plan is to return to the option of an elevated, piled, railed slipway for use with the existing cradle at the Waste Management Facility. In relation to the development consent, the change to a railed slipway will be dealt with under the deferred commencement conditions. A detailed design needs to be submitted to the Board for assessment in satisfying the first deferred commencement condition.

The changed design will require additional funding. It is estimated that an elevated, piled, railed slipway would cost \$1.5 million on the mainland. However freight costs to the Island could almost double that estimate to \$2.5 million. Applications have been submitted for funding in addition to that already committed by Roads and Maritime Services. To date there has been no formal response to these applications and telephone discussions with RMS Grants and Projects Manager have not provided any certainty of additional project funding.

Interim Arrangements for boat storage

The Lord Howe Island Police Officer has instructed all boat trailer owners to have the trailers registered to enable them to be used on public roads. Most trailer owners are able to comply with this direction, with the exception of a number of owners of larger vessels. The boat trailers for a number of larger vessels have been constructed on the Island and are not able to be upgraded to the point of being registrable. This means that these trailers cannot be taken on public roads limiting the ability of the owners to store their larger vessels in the long-term storage area. This limitation applies to between two and four trailers.

In the absence of a slipway, an interim solution was proposed to enable identified larger vessels to be taken out of the water and stored near the boat ramp so that they do not have to be towed on the public road network.

The short-term storage area is adjacent to the boat ramp at Wilson's Landing (see plan below). At the November 2017 meeting, the Board approved long-term storage in this designated area,

including waiving short-term storage fees on a case-by-case basis and relying on evidence that there was no alternative registrable trailer option for a particular vessel.



Longer-term arrangements for boat storage

In the longer-term, when the slipway is constructed at the Waste Management Facility (WMF) site, it is proposed that a site for long-term vessel storage be designated in a suitable area adjacent to the WMF. This will enable larger vessels without registrable trailers to be stored close to the slipway. The Board would approve transport of the larger vessels with conditions for the short distance from the long term storage area through the WMF to the slipway again on a case by case basis.

CUURENT POSITION

Correspondence has been received from the RMS Grants and Projects Manager advising that, with the significant cost variation, it would be difficult to accommodate a project of the cost proposed in the current Round 1 Boating Now funding program. As such, RMS and Transport for NSW (TfNSW) has undertaken further research to identify a solution that is more in line with the grant funds available but still achieve similar intended outcomes. As part of this approach, RMS has attempted to enhance/improve the current slipping process on the island and has identified that procuring the following items may aid with slipping activities (see photographs for similar examples):

- A 20t vessel trailer with max draft of approx. 2.5m draft which would cost approximately \$160k with modifications + Freight
- A tractor to tow the trailer to the intended destination following the slipping activities which would cost approximately \$150k + Freight (optional).



Whilst work will need to be done with the relevant vehicle registration team(s) to confirm that the above can be registered on the island, RMS would like to gauge from the Board if this would be a viable solution. If so, there may be potential savings in the current grant that RMS can be consider allocating to other value adds to further enhance boating infrastructure in Lord Howe Island depending on the Board's preference.

In consideration of this proposal by RMS, the Board must also consider the following issues:-

Current boat ramp

- In the past, the Board did not approve a development application for the slipway and boat cleaning at the current boat ramp location due to inconsistency with the LEP for a number of reasons.

Proposed trailer

- Trailer would require special registration approval for the island
- Road not really suitable for this size vehicle (width and height)
- Would require pilot vehicles when moving along the road
- Unlikely to get around tight bends along the road network
- Stress on vessels when towing along the road, really only suitable for flat, level land
- Time taken to move vessel with crane from jetty to WMF

Waste management facility

- Land area required at WMF to unload and load vessels not readily available
- Would require a number of cradles also for standing vessels in the hardstand when survey being undertaken
- Would need a bunded area and connected to the wastewater system at the WMF for boat cleaning activities

RECOMMENDATION

It is recommended that the Board consider its position on this matter and provide a response to NSW Roads and Maritime Services.

Prepared: John Teague, Manager Infrastructure and Engineering Services

Endorsed: Penny Holloway, Chief Executive Officer



Lord Howe
I S L A N D B O A R D

STRATEGIC ASSET MANAGEMENT PLAN
AND
ASSET STRATEGY
2018 to 2028

1 May 2018

Lord Howe Island Board

Bowker Ave, Lord Howe Island

Version 1 revision 6

Document version control

Distribution:	LHIB Management Team
Document name:	Strategic Asset Management Plan and Asset Strategy 2018 to 2028
Version:	Version 1.6
Document status:	For Board Approval
File name:	LHIB TAM Plan and Asset Strategy
Date:	1 May 2018

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Contents

1. Executive Summary	i
2. Introduction	1
Lord Howe Island.....	1
Managing the Island’s Assets - The Board	2
Future Directions.....	2
3. Services Planning.....	4
Overview	4
10-Year Services Outlook	5
Non Asset Solutions	5
Heritage Assets.....	5
Asset Management Implications.....	5
4. Asset Planning & Management.....	6
LHIB Asset Management Approach	6
The Asset Planning Framework.....	6
Asset categories	7
Decision Tools	7
Capital Investment	7
Asset Maintenance.....	7
Asset Disposal.....	8
Support Systems.....	8
Asset Funding	8
5. Roads and Drainage.....	9
The Roads of LHI.....	9
Road and Traffic Projections	9
Standards	10
Condition Monitoring.....	10
Maintenance	10
Future strategies	11
Asset Disposals	12
Planned Expenditures	12
6. The Airport.....	13
Introduction	13
The Runway and Apron	13
The Terminal	14
Airport Supporting Infrastructure	15
Non Asset Strategies	15
Planned Expenditures	15
7. Marine Infrastructure	16
Sea Access	16

The Jetty	16
Boat ramp.....	17
Seawalls and Revetments.....	18
Asset Disposals	19
Planned Expenditures	19
8. Power Generation and Reticulation	20
Current Situation	20
Future Directions.....	20
System Maintenance.....	21
Risk Management.....	22
Non Asset Strategies	22
Asset Disposals	22
Planned Expenditures	22
9. Waste Management	23
Introduction	23
The Waste Management Infrastructure	23
Strategic Directions and Proposed Capital Works	24
Maintenance Strategies	24
Risk Management.....	25
Asset Disposals	25
Planned Expenditures	25
10. Operational Plant and Equipment	26
Overview	26
Strategic considerations.....	26
Future purchases/replacements	26
Maintenance	27
Risk Management.....	27
Asset Disposals	27
Planned Expenditures	27
11. Buildings	28
Building Assets	28
Strategic issues	29
Future Capital Works.....	29
Maintenance	29
Hazardous materials.....	30
Disposals.....	30
Risks	30
Planned Expenditures	30
12. Information & Communications Technology	31
Introduction	31
Current Environment	31

Current Approaches to ICT Asset Management.....	31
Future Strategies	32
Planned expenditure	32
Service Risk Summary	32
Asset Disposals	32
Planned Expenditures	32
13. Public Open Space and Permanent Park Preserve.....	33
Public Open Space.....	33
Future Strategies	33
The Permanent Park Preserve (PPP)	33
Capital and maintenance programs.....	35
Risk Management.....	35
Planned Expenditures	35
14. Governance & Risk Management of Asset Plan Delivery.....	36
Governance	36
Risks and consequences.....	36
15. Appendix 1: LHIB Strategy Directions & Strategies.....	37
16. Appendix 2: Proposed Asset Expenditure Plan 2018 - 2028.....	39

1. Executive Summary

The LHIB is charged with the care, control and management of the Island and of the affairs and trade of the Island. Its responsibilities include:

- protection of World Heritage values;
- development control;
- administration of all Crown Land including the island's Permanent Park Preserve;
- the provision of community services and infrastructure; and
- the delivery of sustainable tourism.

In meeting these responsibilities, the LHIB provides a wide range of services:

<i>Service</i>	<i>Delivery Mechanism & Assets Involved</i>
Enable access by air and sea	Operate and maintain airport & jetty
Enable vehicular and pedestrian movement	Construct and maintain roads and pathways
Supply electrical power	Generate and reticulate electrical power
Manage and maintain public lands and the Permanent Park Preserve	Manage and protect flora and fauna, install and maintain walking tracks, footbridges, lookouts, sporting field, playground, shelter sheds and toilets
Waste management	Operate and maintain a waste management facility
Waste water management	Regulate the operation of on-site wastewater systems
Facilitate drainage of public lands	Build and maintain drainage network
Protect foreshore infrastructure from erosion	Construct and maintain seawalls and revetments and undertake dune stabilisation
Ensure availability of emergency services (fire, rescue)	In partnership with Rural Fire Service and SES, supply operate and maintain a fire tanker, and associated rescue resources
Ensure emergency water supply	Install and maintain water reservoirs
Facilitate community amenity	Provide and maintain cemetery, public buildings
Accommodate key workers	Provide and maintain residential accommodation for key staff and Island service providers

Wherever feasible, the option of outsourcing the provision of services and or the ownership and operation of physical assets is explored in order to take advantage of competitive markets. However, the burden of distance and the small scale of Island operations tempers opportunities for outsourcing in many cases and therefore, to enable delivery of services, the Board owns and operates an array of assets that was valued at \$52 million in June 2017.

In this TAM Plan, the relationship between service delivery and the associated assets is identified, the management strategies applied to the assets are explained and 10 year budget forecasts for the assets are developed.

The 10 year asset expenditure forecast is presented in Table 1. Within the 10 asset categories that make up this forecast the capital expenditure is distributed fairly balanced, with four significant areas. They are:

Buildings	15%
Roads and Drainage	23%
Power Supply	11%
Plant and Equipment	17%

The only significant item in the buildings category is some additional funding to increase the number of bedrooms at the Research facility. The Roads and Drainage is the ongoing minor refurbishment works to keep them in good condition. With the power supply as the Federal Minister for the Environment and Energy determined that the “proposed action of constructing and operating two wind turbines on Lord Howe Island would have unacceptable impact on World Heritage values and the National heritage values of the Lord Howe Island Group”. This decision means that it is not possible to proceed with the wind turbine component at this stage. While the Board negotiate further options for solar and battery the funds provided by ARENA and the NSW Treasury loan have not been included and funds are for general improvements required to maintain the network.

For recurrent expenditure, the PPP is the dominant consumer of funding, accounting for 57% of the 10 year forecast. For this version of the Plan, the majority of capital funding for PPP improvements relies on grant applications for track upgrades.

The PPP is the primary asset of the Island community and given the extensive scale of work involved and the ongoing nature of maintenance required within the PPP, it is not surprising that it is the most expensive item. There is an ongoing tension between expectations of PPP infrastructure standards and the constraints imposed by budget limitations and consequently the LHIB is engaged in a continuing assessment of appropriate service standards as well as monitoring the effectiveness and efficiency of the maintenance activities undertaken.

Looking at the overall expenditure forecast, in 2018/19 maintenance consumes around 3.4% of the value of the assets. Although marginally higher than the commonly accepted rule of thumb of 2% to 2.5%, this figure is considered reasonable given the high cost of obtaining materials and specialist trades on the Island, as well as the adverse terrain encountered in maintaining the PPP.

The major changes to the Plan as part of this current revision include:

1. An increase in capital expenditure on buildings, due to an identified need to undertake renovations of a number of residences and public buildings to maintain their condition.
2. An increase in capital expenditure on waste management with the machinery shed and concrete bunkers.



TABLE 1 - 10 Year Asset Expenditure Forecast

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	Totals
Capital Investments											
Buildings	\$ 210,000	\$ 155,000	\$ 120,000	\$ 50,000	\$ 130,000	\$ 155,000	\$ 155,000	\$ 265,000	\$ 125,000	\$ 125,000	\$ 1,490,000
Roads & Drainage	\$ 46,850	\$ 127,570	\$ 249,696	\$ 421,327	\$ 427,023	\$ 34,845	\$ 315,770	\$ -	\$ 251,388	\$ 436,232	\$ 2,310,702
Marine	\$ 245,000	\$ 200,000	\$ 125,000	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 70,000	\$ 30,000	\$ 870,000
Permanent Park Preserve	\$ 10,000	\$ -	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000
Power supply	\$ 155,000	\$ 145,000	\$ 195,000	\$ 30,000	\$ 30,000	\$ 130,000	\$ 30,000	\$ 30,000	\$ 240,000	\$ 130,000	\$ 1,115,000
Airport	\$ 95,000	\$ 41,000	\$ 25,000	\$ 10,000	\$ 10,000	\$ 20,000	\$ 15,000	\$ 305,000	\$ 50,000	\$ 10,000	\$ 581,000
Plant & Equipment	\$ 40,000	\$ 115,000	\$ 46,000	\$ 303,000	\$ 421,000	\$ 36,000	\$ 75,000	\$ 64,300	\$ 15,000	\$ 590,000	\$ 1,705,300
ICT	\$ 61,000	\$ 83,000	\$ 153,500	\$ 103,000	\$ 76,000	\$ 68,000	\$ 122,000	\$ 164,500	\$ 56,000	\$ 13,000	\$ 900,000
Public Open Space	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ 125,000	\$ -	\$ -	\$ -	\$ 40,000	\$ -	\$ 265,000
Waste Management	\$ 256,000	\$ 10,000	\$ 45,000	\$ 115,000	\$ -	\$ 27,000	\$ 51,000	\$ 30,000	\$ 180,000	\$ 125,000	\$ 839,000
Total Capex	\$ 1,168,850	\$ 876,570	\$ 1,019,196	\$ 1,042,327	\$ 1,329,023	\$ 480,845	\$ 863,770	\$ 883,800	\$ 1,052,388	\$ 1,484,232	\$ 10,201,002
Maintenance											
Buildings	\$ 148,719	\$ 145,720	\$ 164,720	\$ 130,219	\$ 120,719	\$ 131,231	\$ 120,731	\$ 121,231	\$ 121,231	\$ 121,231	\$ 1,325,751
Roads & Drainage	\$ 22,000	\$ 35,402	\$ 31,000	\$ 22,500	\$ 22,000	\$ 29,500	\$ 22,000	\$ 22,500	\$ 22,500	\$ 29,502	\$ 258,904
Marine	\$ 40,500	\$ 39,000	\$ 39,000	\$ 39,000	\$ 42,500	\$ 39,008	\$ 21,006	\$ 42,008	\$ 42,008	\$ 42,012	\$ 386,042
Permanent Park Preserve	\$ 955,900	\$ 955,900	\$ 955,900	\$ 960,900	\$ 970,900	\$ 970,900	\$ 970,900	\$ 970,900	\$ 970,900	\$ 970,900	\$ 9,654,000
Power supply	\$ 258,048	\$ 228,048	\$ 258,048	\$ 243,048	\$ 243,048	\$ 243,048	\$ 243,048	\$ 243,048	\$ 243,048	\$ 243,048	\$ 2,445,480
Airport	\$ 25,000	\$ 21,000	\$ 28,500	\$ 22,000	\$ 24,000	\$ 29,000	\$ 25,500	\$ 24,000	\$ 24,000	\$ 10,500	\$ 233,500
Plant & Equipment	\$ 102,430	\$ 92,474	\$ 92,724	\$ 90,474	\$ 90,474	\$ 80,224	\$ 90,224	\$ 80,224	\$ 80,224	\$ 89,696	\$ 889,168
ICT	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,001	\$ 600,001
Public Open Space	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000	\$ 790,000
Waste Management	\$ 26,103	\$ 26,103	\$ 26,103	\$ 26,103	\$ 26,103	\$ 26,103	\$ 26,103	\$ 26,103	\$ 26,103	\$ 26,103	\$ 261,032
Total Maintenance	\$ 1,717,701	\$ 1,682,647	\$ 1,734,995	\$ 1,673,244	\$ 1,678,744	\$ 1,688,014	\$ 1,658,512	\$ 1,669,014	\$ 1,669,014	\$ 1,671,993	\$ 16,843,879

2. Introduction

Lord Howe Island

Lord Howe Island (LHI) is small, remote, environmentally unique and financially dependent on tourism. These factors have a major influence on the asset management goals and strategies of the Lord Howe Island Board (LHIB).

The Island has a population of about 380 people and is situated 760 kilometres north east of Sydney on about the same latitude as Port Macquarie. It is 1,455 hectares in area, 11 kilometres long and between 0.3 and 2 kilometres wide.



About 16,000 people visit the Island each year. To conserve the culture and environment of the island, tourist accommodation is capped at 400 beds.

In 1982, the LHI Group¹ was inscribed on the World Heritage List. The World Heritage site includes 1,131 hectares of Permanent Park Preserve which is managed in accordance with a Plan of Management that is required to be prepared as if it were a national park under the National Parks and Wildlife Act 1974 (NSW). The World Heritage listing covers the whole island region. The Commonwealth Government has obligations and accountability for protecting the Island's heritage values and any activity that is likely to have a significant impact on these values requires the approval of the Federal Minister for the Environment.

Consequently all aspects of infrastructure planning and operation must consider the impact on the natural environment. For example it is not permitted to quarry rock on the island for road-works or seawall revetments; all waste water discharges must be treated to minimum advanced secondary standards; all physical waste not recycled on the island must be shipped back to the mainland for disposal; and street lighting must consider the impact on local fauna.

The Island is supplied by:

- A (typically) fortnightly coastal vessel service, currently out of Port Macquarie.
- Regular air freight by small plane from Port Macquarie.
- An air service from Sydney on most days, and from Brisbane on weekends. A seasonal weekly air service to the Island is also available from Port Macquarie.

¹ The Lord Howe Island Group includes the offshore Admiralty Islands, Mutton Bird Island, Ball's Pyramid and the associated coral reefs and marine environments.

Materials, equipment and fuel are more expensive than on the mainland and deliveries of bulky items take longer to arrive. Many professional and trade skills are not available and must be flown in. The small size of activities means that economies of scale and competition are often limited².

Managing the Island's Assets - The Board

The Board is a NSW Statutory Authority established under the *Lord Howe Island Act 1953* and is responsible to the NSW Minister for the Environment. It is charged with the care, control and management of the island and of the affairs and trade of the Island³. Its responsibilities include:

- protection of World Heritage values;
- development control;
- administration of all Crown Land including the island's Permanent Park Preserve;
- the provision of community services and infrastructure; and
- the delivery of sustainable tourism.

The Board is comprised of seven members, four elected from the Islander community and three appointed by the Minister. The full Board meets on the island every three months and, on a day-to-day basis, the affairs of the island are managed by the Board's administration through a staff of approximately 40 (full time equivalent) people. The staff includes an experienced Engineer to manage the assets and infrastructure of the Island.

Revenue is raised through fees and charges applied to Island residents, visitors and businesses and from the sale and distribution of liquor by the Board. Government grants and subsidies are sought for specific purposes. In the financial year 2016/17, \$9.6 million was raised to meet budget commitments, made up of around 42% from fees and charges, 31% from the Board's business activities and 27% from government grants and subsidies.

In June 2017 the Board was notified that the NSW Government's Expenditure Review Committee approved the Board's proposal for annual capital funding of \$1.028 million (in today's dollar terms) from FY 2017/18 onwards. The Board can now implement its Total Asset Management Plan, valued at \$10.28 million over the next 10 years. Moreover, the Board's capital program can be rolled out at no additional cost to the community

Land on the Island is vested in the Crown - there is no freehold title. Land use and development on the settled part of the Island is closely regulated under the Lord Howe Island Local Environmental Plan 2010 (LEP) for which the Board is the consent authority.

Future Directions

The Board's 2016 – 2019 Corporate Plan sets out the priority issues, outcomes sought to address the priority issues and the strategies to achieve these outcomes. The priority issues nominated in the current Plan are shown below, to make clear the alignment of the asset strategies with the LHIB's Corporate Plan:

- *Effective Governance and Leadership*
- *Strong and Sustainable Economy*
- *Sound Infrastructure and Services*
- *Outstanding Environment*
- *Responsible Land Management*
- *Strong and Engaged Community*

² For example, a residence built in 2011/12 cost in the order of \$1.2M. On the mainland, the same structure might be expected to cost between \$400k and \$500k. As a second example, replacement of the fire damaged power generation plan was initially estimated by Treasury Managed Fund to be \$350,000 based on mainland data. The actual cost to rebuild was \$1.2 million.

³ S11 and 12, Lord Howe Island Act 1953



In response to the Corporate Plan's directions, an annual Operational Plan is prepared which outlines specific outputs, activities and performance measures. Progress towards implementing the Corporate and Operational Plans is reported to the Board and the community at the end of each financial year. The Strategy Directions and Strategies are listed at Appendix 1.



3. Services Planning

Overview

The LHIB’s legislative responsibility for providing community services and infrastructure sets the context for services planning. The various services provided by the LHIB include:

<i>Service</i>	<i>Delivery Mechanism</i>
Enable access by air and sea	Operate and maintain airport & jetty with associated infrastructure
Enable vehicular and pedestrian movement	Construct and maintain roads and pathways with associated signage and lighting
Supply electrical power	Generate and reticulate electrical power
Manage and maintain public lands and the Permanent Park Preserve	Manage and protect flora and fauna, install and maintain walking tracks, footbridges, lookouts, sporting field, playground, shelter sheds, toilets
Waste management	Operate and maintain a waste management facility
Waste water management	Regulate the operation of on-site wastewater systems
Facilitate drainage of public lands	Build and maintain drainage network
Protect foreshores infrastructure from erosion	Construct and maintain seawall revetments and undertake dune stabilisation as required
Ensure availability of emergency services (fire, rescue)	In conjunction with volunteer Brigade and SES, supply operate and maintain a fire tanker and associated rescue resources
Provide emergency water storage	Install and maintain water reservoirs
Facilitate community amenity	Provide and maintain cemetery, public buildings
Accommodate key workers	Provide and maintain residential accommodation for key staff and Island service providers
Safe and healthy workplace for employees	As required by Work Health & Safety (WHS) legislation

These services are planned and delivered within a comprehensive framework of LHIB policies and procedures, and close interaction with other state and federal agencies.

Most services are delivered by LHIB staff due to the absence of alternative service providers. In many cases it is simply too expensive for mainland contractors to provide competitive services. However, outsourcing of services is constantly being reviewed and opportunities pursued wherever possible.

10-Year Services Outlook

Demand for LHIB services is not expected to grow significantly in scale over the next ten years, given that the resident population and tourism numbers are constrained by availability of housing and beds. Environmental protection will remain a primary challenge and tourism the major industry. Changes in technology may influence how some services are delivered and outsourcing may allow some LHIB services to be redesigned and reduced. However, at this stage any potential service changes are not envisaged to have a significant impact on the number of assets required or their operation.

The major potential change in services is the introduction of large scale renewable energy through solar photovoltaics (solar PV) and wind turbines. If completed as currently planned, from late 2019, diesel consumption will be reduced by up to 70% on an annual basis, resulting in lower costs for the diesel generators through reduced maintenance. The Senior Electrical Officer and Electrical Apprentice are expected to see their reduction in diesel generator maintenance replaced equally with maintenance on the solar PV and wind turbines.

Non Asset Solutions

Strategic asset management includes consideration of non-asset solutions, and within LHIB services this includes demand reduction strategies in areas such as power consumption and the generation and disposal of waste.

A second non-asset strategy is the long established partnership of the LHIB with the Island community in service planning and delivery. The LHIB adopts a facilitative role in involving community participation and has been modifying and evolving its service delivery model to ensure it maximises the opportunities to engage with the community in all key areas, including energy management, waste management, emergency response and protection of the Island's environment.

Heritage Assets

The overriding heritage asset of the island is the natural environment. This is managed in accordance with the Plan of Management prepared under the *National Parks and Wildlife Act 1974*. All physical infrastructure and its operation complies with the requirements of the Plan of Management.

A community managed Museum houses a collection of historic items from the Island and is a centre for regular educational programs.

Asset Management Implications

The asset management implications of the above include:

- Environmental considerations are paramount in all aspects of asset management from initial planning through to asset disposal. This has implications for the design of infrastructure, the selection of materials, operating procedures and staff awareness.
- Asset management activities are costlier than mainland equivalents. The isolation of the island and the cost of sea transport also affect infrastructure design, material selection and operating procedures as well as the availability of contractors and the retention of stores.
- Sustaining effective maintenance programs in line with service demand is crucial to ensuring availability of assets and minimum life-cycle costs. Owing to the high cost of replacement, longer life cycles are required from assets compared to mainland situations.
- Greater use will be sought of new technologies as their practical deployments become beneficial and cost-effective, for example in power generation and ICT.
- In the interests of long term sustainability, a regular review of assets that do not provide value-for-money service into the future is required and carried out.
- Analysis of administrative arrangements is an ongoing activity with the aim of minimising long-term operational costs.

4. Asset Planning & Management

LHIB Asset Management Approach

LHIB services depend on the availability and performance of its assets. The approach being followed to manage the assets is:

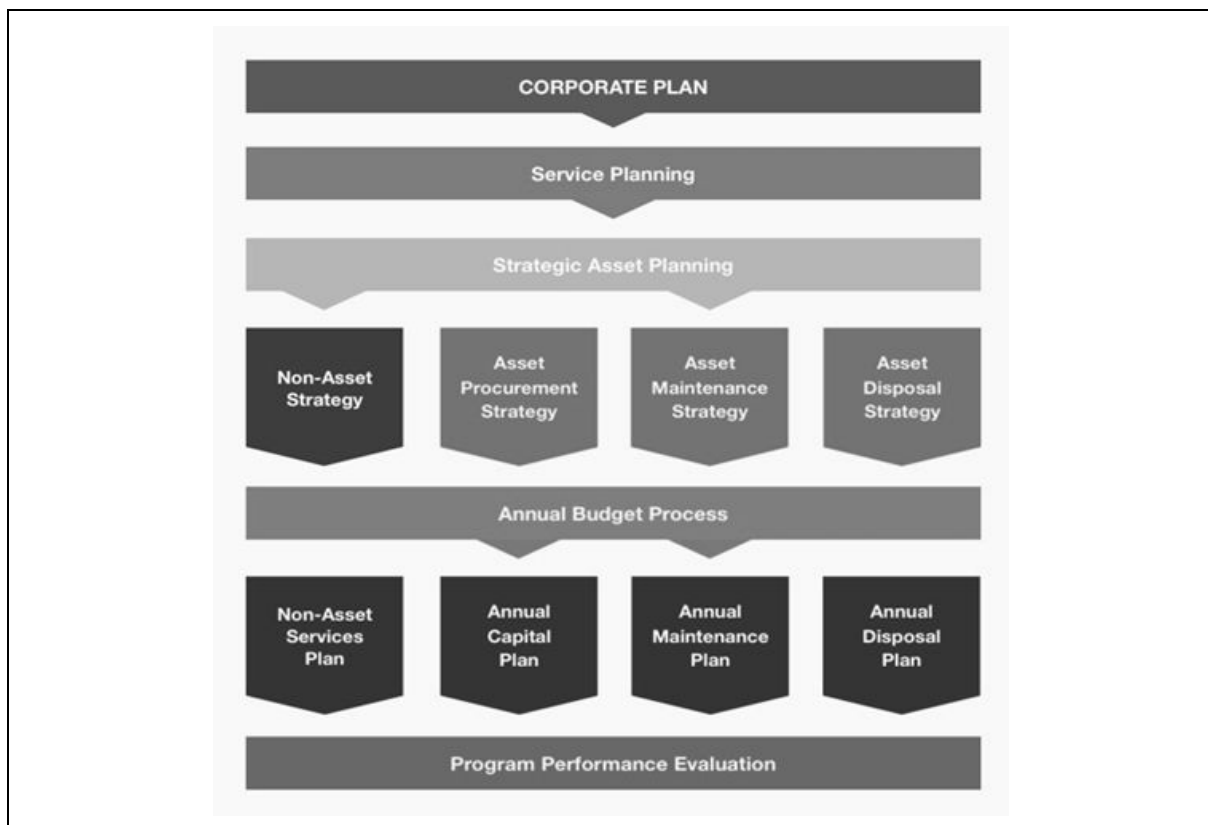
- An asset planning framework has been introduced which provides a consistent approach to guide preparation of asset investment, maintenance and divestment plans.
- Assets are managed in separate categories according to their service function, life span and maintenance routines in order to provide methods that are appropriate to each category.
- Detailed plans are prepared for each asset category within each service and aggregated to form an integrated Strategic Asset Plan that is aligned with the LHIB Corporate Plan.
- Decision tools are applied at key decision points.
- The Board is committed to effective management of assets and allocates appropriate resources to ensure outcomes are achieved wherever practicable.

The Asset Planning Framework

The framework has two main elements:

- An asset planning model comprising a generic planning process that business units follow to develop their asset plans, with a checklist of support tools to be used in the planning process.
- An asset planning calendar to enable a rolling program of asset management activities.

The planning model is shown in the following diagram.



The model is corporate and services driven in the first instance with asset alignment and

appropriateness tested to identify gaps. Asset strategies are then developed to address the gaps.

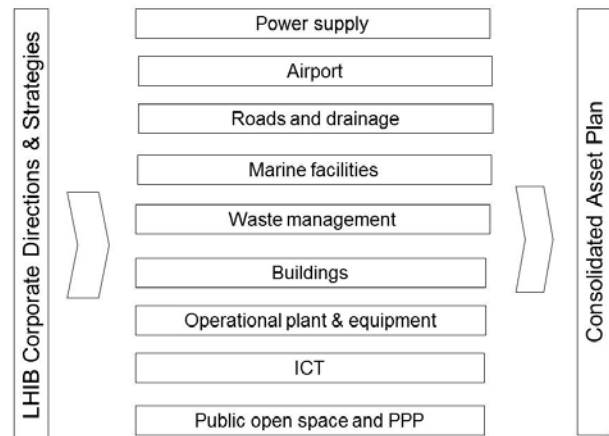
The resulting long-term asset plan assesses future requirements and sets out actions to meet these requirements. The LHIB considers the range of external and internal issues including changes in demand for services and their associated infrastructure, advances in technology, environmental implications, asset maintenance, life cycle replacement and asset exit strategies.

Asset categories

The main asset categories are shown in the attached diagram. Each category requires a different approach to asset planning.

Under each asset category is a range of sub-groups which have their own standards and maintenance routines. For example, under the power generation and reticulation, are grouped generators, substations, high and low voltage reticulation, fuel tanks, solar generation and wind generation.

The individual plans are then consolidated into an integrated asset plan aligned to corporate priorities.



Decision Tools

For key asset decisions a Business Case is developed and submitted for approval that includes:

- a financial appraisal of costs and benefits;
- a risk assessment; and
- a value management review (used to ensure strategic planning considers all stakeholder needs and identifies the full range of viable asset and non-asset strategic options).

Capital Investment

Investment in new assets and improvement of existing assets is set out in the Expenditure Plan (refer Appendix 2). New works originate from two sources - top-down via long-term corporate planning and bottom-up via a process of forecast requirements from the various service areas in conjunction with the Manager Infrastructure & Engineering Services. All potential investment options are assessed to meet service delivery requirements including purchase, lease and service contracts together with the supporting resources required (HR, ICT etc.).

Asset Maintenance

Assets in service are expected to perform to specified standards, such as safety and reliability, at the lowest possible life-cycle cost, and maintenance strategies to achieve this goal are set out in the Asset Maintenance sections of each asset category. Maintenance planning covers both routine maintenance and periodic maintenance. Routine maintenance is conducted on a short-term basis with a frequency usually less than 12 months while major periodic maintenance is work that occurs outside the routine maintenance cycle. Given the high cost of replacement (owing to the Island’s isolation), an increased emphasis on strategic maintenance to extend the operating life is a continuing focus.

For each of the major asset categories:

- service levels (performance, availability, reliability, safety) is nominated;
- the maintenance required to meet nominated service levels is assessed;
- maintenance strategies are developed;
- maintenance priorities are defined;
- maintenance programs, budgets and cash-flows are prepared; and
- procedures are specified to implement and monitor the programs.

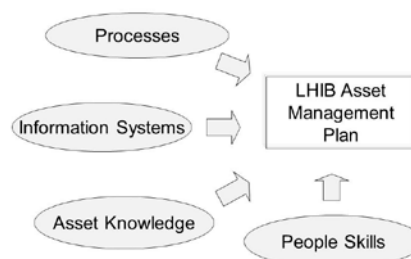
Asset Disposal

Assets that are no longer required are removed from the asset portfolio. This is discussed in the Asset Disposal sections of each asset category of this Plan.

Support Systems

Supporting systems and processes are in place or are being developed to:

- Monitor and report performance. This will enable control to be exercised over asset performance and remedial measures introduced where appropriate.
- Manage asset-related data and information through an up-to-date and comprehensive asset register / database.
- Monitor & report asset-related financial activities.
- Conduct life-cycle costing in order to understand the full cost implications of owning and operating assets, and to ensure a sustainable system.
- Prepare plans and project proposals and to evaluate decisions in a consistent manner using economic and financial appraisals to measure of resource allocation.



Asset Funding

Lhib funds its assets through NSW Government capital allocations and internal recurrent raised from the various Island revenue streams. Grants are received under various State and Federal government programs (environmental grants, Roads to Recovery, Regional Development Australia etc.) as well as from some private organisations.

5. Roads and Drainage

The Roads of LHI

LHI has approximately 12.3 kms of roads of which 99% is sealed. Their purpose is to enable all weather movement of vehicular traffic, cyclists and pedestrians.

The loads on the roads are relatively low owing to the small number of vehicles and the speed limit of 25 km/h. The only heavy vehicles on the island are those operated by the LHIB and the Shipping Company.

The low traffic loads are fortunate for 2 reasons – the roads were initially built to minimal standards and construction was mainly limited to the materials available on the island. Conventional roads are built up in several layers consisting of sub-grade, sub-base, base and surface layer. These layers constitute the pavement and spread the forces caused by the traffic so that the road foundation is protected from deformation. The Island roads however were generally formed by simply grading and compacting local calcareous⁴ material, with a bituminous surface layer to resist the abrasive forces caused by the combined effects of weather and traffic, and prevent surface water from penetrating and weakening the sub-grade. Road drainage is basic, with limited shoulder drains to remove water from the pavement and a small number of pipe culverts to provide for drainage transfer under the road.

The isolation of the Island and tourism issues affect the delivery and cost of road construction and maintenance.

<i>Issue</i>	<i>Impact</i>
No mining or quarrying for road-base or aggregate can be undertaken on the Island (World Heritage listing condition)	Aggregate required for road works must be shipped in. Impact = higher cost.
Not financially viable to contract out small construction or maintenance activities	Must retain essential road maintenance plant such a grader, bitumen sprayer, roller, backhoe, trucks as well as to store all road-making materials. Impact = higher cost.
Pedestrian and cyclist require smooth wearing surface, hence 7mm gravel used where coarser gravel would have better wearing properties.	This is primarily a design feature. There is no significant impact on initial costs, but life-cycle costs may be marginally greater.
Street lighting affects local endangered fauna.	Minimal lighting levels are used.

The replacement value of the road infrastructure (as at June 2016) is estimated to be \$6.7 million.

Road and Traffic Projections

Only one new road is planned during the term of this Plan, for access to the solar panels near the Powerhouse.

⁴ The geotechnical properties of calcareous sands differ from the more common silica sands. In particular, calcareous sands are frangible and may undergo volume reduction when subject to compressive stress. This affects their suitability as a road base.

The volume of traffic on the Island is not expected to increase markedly and the size of vehicles available to residents is restricted. Hence traffic loadings on pavements will not increase to any significant degree.

Standards

Road pavements on the Island are intended to be suitable for safe all-weather carriage of:

- low vehicular traffic volumes (both in number and speed of traffic movements);
- resident and visitor bicycle use;
- resident and visitor pedestrian use.

The latter two factors require that surfaces should be even and small aggregate (7 mm) is used to maximise cycling and pedestrian comfort and safety.

There is minimal signage and line marking.

Condition Monitoring

Given the small length of roads involved, condition monitoring is undertaken based on daily usage by LHIB staff of the road network and residents reporting any defects or problems.

Culverts and piped drains are periodically inspected by LHIB staff, particularly before and after heavy rainfall.

Major defects and condition shortfalls are logged and added to the maintenance register. Minor defects such as potholes are typically repaired within a week of identification and not logged.

Maintenance

Maintenance aims to preserve the pavement structure and wearing surface so that they do not deteriorate below condition targets. If the pavement or wearing surface is allowed to deteriorate below this condition, then it may need a more expensive treatment to restore it. Restoration is usually significantly costlier than maintenance, so the aim is to avoid dropping below the target condition, particularly so given the initial low design and construction standards of the pavements.

Under the LHI pavement management system, maintenance is divided two categories:

- Routine maintenance comprises minor repairs to worn pavements to minimise further deterioration. Localised pavement and surface defects are patched using either a cold mix asphalt product, or a conventional removal of old material, refill and compact, and reseal with bitumen and aggregate; transverse culverts are cleared as required; and verges are mowed and vegetation managed. Routine maintenance is undertaken on an “as required” basis.
- Preventative maintenance comprises scheduled resealing or resurfacing treatments that aim to waterproof the pavement, improve road surface condition and reduce deterioration (of the road’s surface and potentially its strength). Preventative maintenance is undertaken on a scheduled basis that considers that priority of the work and economies gained by bundling with other projects.

On the Island, the following assumptions are made regarding longevity of road surfaces:

life of pavement = 25 years

life of surface seal = 12 years



Lagoon Road. Note absence of side drains.



Ned's Beach Road – the highest trafficked location.



Typical patch using cold bitumen and 7mm gravel.



Environmentally sensitive street lighting

Future strategies

In this Plan, three strategies have been considered:

- upgrade the standard by installing shoulder drainage on roads where saturation of the pavement occurs;
- retain all roads in the current minimum standard / sealed state.
- lower the overall standard by returning some of the lesser-used roads to an unsealed state (i.e. graded calcareous base without a bitumen wearing surface). This will reduce the cost of maintenance but the surface will not be as even as for a sealed road.

For the foreseeable future, the second option (i.e. Status quo) will be adopted. A road classification/hierarchy for the islands road system remains to be developed, which will identify the appropriate strategies for individual roads. This road classification will then be used to develop ongoing maintenance plans for individual roads. The road classification system will define three classes of road (1,2,3). The following will define the classifications:

Class 1 – A priority road. A road that is highly (relative to LHI) utilised by residents and tourists. On these roads a high standard is required to ensure a safe environment for pedestrians, cyclists and vehicles. These roads will be prioritised for maintenance. Some examples of class 1 roads would be Lagoon road from Settlement to Capella. Ned's beach Road, Anderson Road to Middle Beach Road, and Middle Beach Rd.

Class 2 – A medium priority road. A road that has medium levels of use by tourists and residents. On these roads a lower standard than class 1 is acceptable reflecting the levels of use. The roads will remain sealed and safe for pedestrian, cyclist and vehicle use. Examples of class 2 roads may include Anderson Rd from Middle Beach Rd to Powerhouse, Ocean View Drive, Lagoon Road from Capella to Little Island bend, the WMF access road.

Class 3 – a Low priority road. These roads receive relatively low levels of use by residents and tourists and consequently a lower standard is acceptable. These roads will remain unsealed or over time some parts may be returned to an unsealed condition. Low levels of use mean that these roads can be maintained quite inexpensively by regular grading of the road surface. Examples of a class 3 road may include Old Lagoon Road.

It is expected that most roads will be classified as either a class 1 or 2 road. A financial analysis of the three options will be undertaken to reveal the whole of life costs which, together with considerations of functional aspects, safety and environmental impacts will enable an informed decision on the classification of each road.

Asset Disposals

No road disposals are relevant.

Planned Expenditures

The 10 year future planned expenditure on roads and drainage is listed in detail at Appendix 2. Renewals are listed as capital expenditure while maintenance includes all patching and repairs.

6. The Airport

Introduction

The LHI airport is the gateway for most travel to the Island. It is essential infrastructure for the tourism industry which is the major industry of the Island.



The operations of the airport itself generate two income streams for the LHIB through:

- *Environmental Levy:* The environmental levy is set at \$21.12 per sector per passenger. This levy contributes to addressing the environmental impact of visitors on the Island environment.
- *Passenger Levy:* The air passenger levy is set at \$31.67 per sector per passenger. This levy goes towards airport operations, including runway maintenance and works.

Demand for airport services by tourists and residents is expected to remain at current levels into the future given the constraint on residential and tourist accommodation on the Island. Destination NSW, the Lord Howe Island Tourism Association and the Board are working to increase visitation in shoulder and off-peak periods.

The holder of the licence for the route, QantasLink, flies Bombardier Dash 8-Series 200 planes to the Island.

There is the potential for another Regular Public Transport (RPT) operator to commence scheduled flights to and from Port Macquarie in the near future. This would result in the need to provide additional apron parking to accommodate two QantasLink planes and an additional aircraft. This has not been considered as part of this Plan.

From an asset management perspective the airport comprises three main components:

- the runway and apron;
- the terminal building; and
- supporting infrastructure.

The Runway and Apron

The runway pavement was constructed in 1974. The surface consisted of a 2-coat seal of 10-15 mm thick over a compacted pavement of local material. It was resealed following storms in 1996.



During 2015, the \$8M project (jointly funded by the NSW Government and Federal Department of Infrastructure and Regional Development's, *Community Infrastructure Fund*), installation of the asphalt overlay and drainage improvements was completed. The extension of the runway to accommodate larger planes will be considered as part of the \$450,000 feasibility study. This has not been included in this Plan. Other than this study, there are no major expenditure items for the runway and apron in the term of this Plan.

Runway Standards

Air services linking smaller communities within NSW to Sydney Airport are regulated by the NSW Government under the *Air Transport Act 1964*. The Aerodrome regulator is CASA under Clause 139 of the *Civil Aviation Safety Regulation 1998*. As owner of the facility the LHIB holds the Aerodrome Certificate and operates the Aerodrome in accordance with the Manual of Standards part 139. The manual is the overriding document against which the annual compliance audit is conducted to ensure that aerodrome features such as runway condition, hazard management, emergency management arrangements, safety management systems and communications are compliant.

Pavement Maintenance

As for the Island roads, maintenance aims to preserve the pavement structure and wearing surface so that they do not deteriorate below condition targets. Maintenance is divided into two categories:

- *Preventative maintenance* where sections of the runway and taxiway are resurfaced using liquid emulsion products or cold-mix asphalt products;
- *Routine maintenance* where localised pavement and surface defects are patched by removal of old material, and refilling and compacting with a cold-mix asphalt product.

The maintenance funding for the pavement is listed in the budgets.

The Terminal

The terminal configuration consists of one building holding a common ticketing and waiting area with several exits leading to a small aircraft parking apron for boarding. This is a new facility completed in 2018. It also accommodates refreshments, Customs, fuel agent, equipment storage and toilets.



The LHI Airport Terminal Building has been upgraded funded by a grant of \$1.8m from NSW Government's *Regional Tourism Infrastructure Fund Airports* and supplemented with funds from the Boards capital budget.

Airport Supporting Infrastructure

Airport supporting infrastructure includes fuel storage and transport, pavement and apron marking and lighting, visual and navigation aids, drainage, signage, fencing, access roads and parking areas. Standards are generally set under the CASA Manual of Standards which is audited on an annual basis.

Non Asset Strategies

The airport is owned and operated by the LHIB, similar to most regional airports in. As a macro strategy, the option of outsourcing the operation and maintenance of the airport is not considered to be viable. It is unlikely that the private sector would be interested in owning the airport given the relatively light levels of use and the limited opportunities for development of nearby areas.

At a micro level, activities at the airport are outsourced wherever feasible. This includes fuel supply and refreshments.

Planned Expenditures

The 10 year future planned airport expenditure is listed in detail at Appendix 2. Renewals are listed as capital expenditure while maintenance includes all patching and repairs.

7. Marine Infrastructure

Sea Access

The majority of supplies arrive by sea. Hence the jetty located within the Lagoon is perhaps the most vital item of infrastructure on the island.

A regular fortnightly sea freight service to the Island is provided by the *MV Island Trader* from Port Macquarie on the NSW mid north coast. It brings bulky items that are unsuitable for air freight including fuel, food, building materials, plant and equipment. It takes away unwanted bulky items including waste materials for disposal on the mainland.

Other marine activity centred on the jetty includes a variety of commercial tourist boating enterprises, provisioning of cruising yachts, sea rescue, tidal monitoring, fishing and other recreational activities.



MV Island Trader

The Jetty

The LHIB owns and operates the jetty. It is responsible for ensuring that the jetty:

- can meet the functional requirements of the vessels that operate to and from the island;
- is maintained in a safe condition; and
- delivers its various services to the Island community as cost effectively as possible.



Built in 1982, the jetty has a timber deck and mix of steel and timber piles. Given its age, it is in quite good condition⁵ - over the years individual piles, headstocks and sections of decking have been replaced to counteract wear, deterioration and marine organism infestation, leaving a mix of ages and materials. In the period since the last update to this Plan, the problems associated with berthing and mooring the supply vessel alongside the jetty during rough seas have been resolved with the installation of high quality, plastic fenders.

⁵ Ref: WMAwater email of 2 April 2012 to LHIB Manager, Infrastructure and Engineering Services.

Jetty Future Directions

While the life of individual components of a jetty such as decking, headstocks, piles have clearly defined economic lives, the life of the structure itself can be extended almost indefinitely by replacing the individual components as they deteriorate or wear out. Therefore, given appropriate maintenance, the jetty potentially should continue in service well beyond the term of this Plan.

The longitudinal beams of the jetty are showing signs of splitting, some up to one-third of their depth at some locations. This has affected the load rating of the jetty and has resulted in very clearly labelled areas for setting up the crane and its outriggers. Changes to the configuration of the jetty, for example to lengthen it or to increase its load-bearing ability, may need to be reconsidered if a different vessel is commissioned to supply the island which has different berthing and unloading requirements. It is noted that the current vessel is designed to be able to rest on the lagoon bottom at low water.

Jetty Maintenance

Maintenance encompasses the work needed to retain the jetty at a standard that is appropriate, effective and efficient in support of the long-term operation of the Island supply vessel and other jetty users. The general principles guiding maintenance are:

- the jetty is kept in a safe and functional condition;
- work is delivered cost-effectively and complies with relevant codes⁶, regulations and statutory requirements in order to meet LHIB duty of care;
- minimum asset life costs are sought, consistent with ensuring sustainable operations over the short and long term; and
- risks are identified and managed.

The jetty condition is monitored by regular inspections in the course of activities of LHIB staff and commercial operators reporting issues and problems as they become evident. As well, a condition review was undertaken in January 2017 by consultants Royal Haskoning DHV. The outcomes of this condition report are reflected in this Plan.

Jetty maintenance tasks are prioritised in the following order:

1. meets WH&S requirements and obligations - it must be safe for all who use the facility;
2. ensures “business continuity” – the Island depends on the jetty for essential supplies; and
3. maintains the condition required to ensure performance and/or reduce life costs.

The jetty is maintained using:

- (i). Major maintenance is assessed and programmed in the above priority order.
- (ii). Minor and urgent repairs are undertaken on a responsive basis.

Boat ramp

A small narrow boat ramp is located to the north of the jetty in Hunter Bay. The ramp falls short of the standards nominated by NSW RMS in terms of width and depth at low water, and safety concerns have been raised by the local boating community.

⁶ Ref: Design Guidelines for Wharves and Jetties – NSW Public Works 1990 and BS6349 British Standard Code of Practice for Maritime Structures



The LHIB is continuing to investigate an upgrade to the boat ramp, through funding from Transport for NSW. The upgrade would not necessarily allow the boat ramp to meet the Australian Standard *AS 3962-2001 Guidelines for Design of Marinas*, but would improve its functionality and safety for small boat users. Separately, a large boat launch and retrieval facility (slipway) is being planned for the Waste Management Facility. Funded by Transport for NSW, the slipway is critical to enabling larger commercial vessels on the Island to be surveyed annually and continue to operate as tourist vessels.

Seawalls and Revetments

Seawalls and revetments are used to protect infrastructure from the effects of coastal processes. The current structures have been built to varying standards from informal placement of rock to complex revetments.

Seawalls protect:

- the end of the air strip where it protrudes into the Lagoon;
- Lagoon Road to the north of the air strip;
- adjacent to the jetty; and
- Ned's Beach in front of the shed.

Most of these require little to no maintenance, however changes to coastal processes will require some ongoing protection works to occur in the Pinetrees Boatshed Area. A 60m long rock revetment wall was constructed in 2015 to protect the end of the Seabee wall, Lagoon Road and the buried electrical cables. The 5 to 10 year design life was chosen to provide a reasonable short term solution while further studies are carried out in the Lagoon. In the period since the last update to this Plan in 2016, erosion protection works have been carried out in the area north of the rock revetment up to and including the Pinetrees Boatshed.

A Coastal Hazard Study was finalised in 2014 and identified interim management strategies to address some identified short term risks.

Following on from the Coastal Hazard Study, a Coastal Zone Management Plan for parts of the Island will be required and out of this plan additional infrastructure assets are likely to be required. The Coastal Zone Management Plan will also consider the impact of any sea level rise due to climate change as this may accelerate current problems. A Sediment Tracing Study for the Lagoon is also an essential element for any future planning. Grant funding has previously and is currently being sought for this study, but is not currently available.

Future Asset Management Plans will be developed reflecting these infrastructure works. They are not included in this plan as the extent of the works is not known at this time.



Asset Disposals

No disposal of marine infrastructure is envisaged.

Planned Expenditures

The 10 year future planned Marine infrastructure expenditure is listed in detail at Appendix 2.

8. Power Generation and Reticulation

Current Situation

The power generating plant is located behind Middle Beach at the end of Anderson Rd. It comprises three identical 300kW Detroit Series 60 diesel units operating in parallel (any two of which are rated to carry the required load, allowing one to be maintained at any time). A 450kW backup unit is located near Capella Lodge, south of the airport so that, should the site of the main three generators be disabled for any reason, the standby unit operating from a separate location can maintain supply to the whole Island. A central PLC controls the feeders, load shedding as required. A Detroit fully fitted long motor is held as a spare and can be installed at short notice if required.

Since the last Plan update in 2016, the power line communication system to control the hot water booster load was decommissioned as part of the old Powerhouse switchyard removal and replacement. A new load control and power line communication system is currently being purchased and installed.

Diesel for the generators is delivered by the *MV Island Trader*. Above ground storage through 3 fuel tanks of approximately 68,000 litres is located at the Powerhouse.

Power is reticulated at high voltage (6.6kV) by underground cables in a ring the main configuration so that, if the cable is damaged, supply can be maintained to most premises. The underground cable is considered to have 25 years remaining life before replacement is required.

The high voltage is stepped down at 18 substations distributed across the settled area to 415V 3 phase and 240V single phase.

Although installed in 1979, the substations were built to high-quality specifications and remain in good condition.

They are maintained to a high standard to ensure reliability of supply and are estimated to have 20 years remaining life before replacement is required. Spare units and parts are held on the Island.



Substation

Future Directions

Reliance on diesel generators has a number of drawbacks. The cost of electrical power is exposed to fluctuations in the price of diesel fuel; the community is solely dependent upon a fuel whose future availability cannot be guaranteed; and the consumption of fossil fuels and the diesel emissions are at odds with Island environmental goals. Therefore the Board has explored alternative power generation options and the community has embraced a target of up to 70% of energy from renewable sources.

A “Roadmap” has been formally adopted⁷ plotting how this might be achieved. The roadmap is based on a comprehensive assessment of the available options for renewable energy generation, energy storage and energy demand management.

The proposal to install 450kW Solar PV plus two medium scale 200kW wind turbines is currently on hold as the wind turbine part of the project was not approved by the Federal Minister for Environment

⁷ Powercorp Operations Pty Ltd, *Lord Howe Island Renewable Operations Energy Supply Roadmap*, August 2011

and Energy. ARENA approved the funding for the development of further options, comprising solar and other renewable approaches, which may be acceptable to their Board and lead to a variation in the Board's funding agreement with ARENA. Jacobs are undertaking further investigative work on behalf of the Board to explore an expanded solar and enabling technologies approach which has been positively received by Arena at this stage. Also under consideration is the introduction of time-of-use tariffs and demand controlled devices, including electric vehicles and "off-peak" hot water systems.



Provision has been included in the capital investment budget for the implementation of the Roadmap.

The Independent Pricing and Regulatory Tribunal (IPART) now has responsibility for safety management of NSW power generators and distributors. Since being advised of this in early 2015, the LHIB has been working with IPART to ensure the LHIB obtains compliance with the legislation. The main impact to date has been the need to prepare a Safety Management System (SMS) for the electricity generation and distribution system. The SMS has been prepared and implemented, and will continue to have some short term impact on the recurrent budget as issues such as training are addressed. The SMS was audited in the third quarter of 2017 and is currently being updated to include recommendations coming from the audit.

Substation upgrades are being considered in the term of this updated Plan, so that limitations on demand growth are removed where feasible. As an example, where a 150kVA substation is nearing capacity due to demand, it would be replaced with a 200kVA for example. The 150kVA substation would then be utilised to replace a 100kVA substation somewhere else on the Island.

System Maintenance

Because of the durability of diesel engines, most maintenance of the generator sets is preventative in nature. Preventative diesel engine maintenance consists of general inspection, lubrication service, cooling system service, fuel system service, verifying control panel readings and indicators and servicing and testing starting batteries, following the maintenance schedule provided by the manufacturer. The Detroit diesels are typically taken off-line and sent back to the mainland after 20,000 hours service for a major rebuild which takes approximately 8 weeks.

The diesel maintenance work is undertaken by the Senior Electrical Officer (SEO), Electrical Apprentice and Mechanic, with all other aspects of the electrical grid maintenance being completed by the SEO and Apprentice.

Emergency maintenance is undertaken as required, with staff on call for this purpose.

Maintenance of the renewable energy generation equipment will comply with the procedures and schedules provided by the manufacturers. With the implementation of renewable energy generation systems, no additional staff resources are expected.

Risk Management

The Roadmap addresses several major strategic risks to power generation and distribution on the Island – reliance on a single generation source, the possible interruption to the supply of fuel, a significant escalation in the cost of fuel and the environmental concerns related to the burning of fossil fuels and the creation of emissions.

The Powerhouse has been designed with risk management in mind, particular being as fire resistant as practicable.

The backup generator is capable of meeting maximum demand should the three 300kW generators and/or the renewables be taken off-line for any reason. It has being located separately in the south of Island so that, if an event such as a fire in the Powerhouse, the standby would not be damaged.

The looped reticulation main allows service to be delivered to most premises if the main is severed/damaged for any reason.

An experienced Senior Electrical Officer and qualified officer is required and available for both preventative and emergency maintenance as required. Critical spare parts are stored on the Island.

Non Asset Strategies

Demand management is being actively promoted by a range of policy and infrastructure measures in an endeavour to both reduce overall energy consumption and to spread consumption more evenly across the day. As mentioned above, these measures include the potential adoption of time-of-use tariffs demand controlled devices such as electric vehicles and “off-peak” hot water systems and energy storage devices.

Asset Disposals

No disposal of power generation infrastructure is envisaged at this stage however with the introduction of significant renewable energy there may be the opportunity to remove some infrastructure.

Planned Expenditures

The 10 year future planned power generation and reticulation infrastructure expenditure is listed in detail at Appendix 2.

9. Waste Management

Introduction

Managing and minimising solid waste is a fundamental part of protecting the natural environment of the Island and the LHIB aims to provide a solid waste management service to the community and the tourist industry that is efficient, cost-effective and environmentally responsible. The current comprehensive approach includes:

- providing a policy and regulatory framework that controls the sustainable and effective management and disposal of solid wastes in order to maximise reuse, minimise harm to the environment and minimise the amount destined for export by sea to the mainland landfill⁸. This includes a user pay policy for waste disposal⁹;
- encouraging demand management including education programs that promote waste avoidance in general, waste separation at source, and in-house re-use/recycling initiatives such as composting where appropriate;
- providing infrastructure to receive residual waste that cannot be re-used or recycled at source;
- sorting, recovering, recycling and disposing of waste depending on its composition.

The first two points are, in effect, non-asset strategies that have strong and active community endorsement. The latter two points relate to the waste disposal infrastructure that is the focus of the following text.

The Waste Management Infrastructure

The LHIB owns and operates a waste management facility that is located to the south of the airport.

In essence a resource recovery facility, it comprises zones for:

- waste drop-off by residents and business;
- sorting of waste into 14 categories, e.g. glass, food, paper and cardboard, plastics, metals etc;
- packing / baling of recyclables for transfer to the mainland;
- composting of recoverable materials that are organic in nature such as plant material, food scraps and paper products. The previous VCU¹⁰ unit has been replaced by a new “HotRot” composting system, as well as conventional composting bays. The resulting material is currently unable to be reused until the EPA issues the compost exemption order
- glass crushing to create glass aggregate (sand). It is used for applications such as concrete slab aggregate and wastewater system media; and
- residual waste that cannot be re-used or recycled. This is compacted in bales and transported to the mainland for disposal in landfill.

⁸ Disposal of solid waste as landfill on the Island is proscribed under the provisions of the Island LEP. Hence all solid waste that cannot be re-used is shipped back to the mainland for disposal.

⁹ Charges are calculated on 100% cost recovery. Two audits are undertaken each year where the volume of waste deposited at the waste management facility is measured and, based on the results, charges are assessed. Charges are also applied to items such as building waste. There is a Waste Transfer levy which covers the shipping costs.

¹⁰ VCU is a vertical composting unit. It is a structure similar to a silo that holds an insulated, self-aerating chamber that enables accelerated processing of organic waste.

The facility performance standards are contained within the environmental compliance conditions specified by the EPA based on legislative requirements along with best environmental management practices. The waste management Facility operates under an EPA licence which documents these compliance conditions. The EPA periodically audits these conditions.

Strategic Directions and Proposed Capital Works

The Waste Management Facility is widely regarded as a community asset, with its success due to the cooperation between the community and the LHIB to manage waste in a sustainable and cost effective way. The review of the 2000 Waste Strategy in 2010 showed a high level of achievement against the original objectives, including a current diversion rate of 84% from landfill.

The construction of a new composting system has been completed with it being commissioned in July 2017, the sludge press and compost bunkers are expected to be completed by June 2018. It is expected that any excess compost will become available to the community once an EPA compost exemption order is granted.



The key asset management goal is maintaining a level of service that:

- meets EPA requirements and community expectations;
- is cost efficient and financially sustainable; and
- complies with WHS and other relevant codes and regulations.

The quantity of waste deposited at the facility is growing and EPA compliance requirements are widening, requiring a progressive expansion of the facility. Proposed capital investments in the immediate term include:

- Enhanced sludge management facilities to increase capacity and compliance
- Expanded compost/green and paper hardstand and bays
- Enhanced fencing of the facility to meet compliance

Maintenance Strategies

The facility buildings (main shed, resolve, chemical storage) are maintained using:

- A planned maintenance program for identified tasks.
- A repairs program for minor and urgent tasks.

Operational plant and equipment are maintained using:

- Cyclic and preventative maintenance that is scheduled to manufacturer's specifications.
- Breakdowns and minor repairs are undertaken on a responsive basis.

The civil structures, e.g. hardstand, bunding, waste water treatment are maintained using:

- Major maintenance is assessed and programmed on condition-based criteria.
- Minor repairs are undertaken on a responsive basis.

Risk Management

The key risks are considered to be:

- Ensuring ongoing compliance with EPA conditions that are evolving over time. Should the EPA conditions change in future, this may necessitate capital investments that are currently unplanned.
- Responding to demand for sludge management from wastewater systems.
- Future transport costs of waste from the Island, which are related to factors such as future oil availability and price.

Asset Disposals

No disposal of the waste management infrastructure is envisaged.

Planned Expenditures

The 10 year future planned waste management infrastructure expenditure is listed in detail at Appendix 2.

10. Operational Plant and Equipment

Overview

The LHIB utilises a wide variety of plant and equipment in order to deliver its various asset-related services. Where a mainland Council might outsource road maintenance, or hire a crane, or tender for the steelwork fabrication, in most cases these options are not available on the Island. Hence the LHIB owns and operates a significant number of pieces of plant and equipment.

Strategic considerations

The scale of the LHIB construction and maintenance operations is such that much of the plant receives relatively little use. In fact, some items may be used 100 hours per annum. Therefore, the purchase and retention of expensive plant is difficult to justify. On the other hand, the low levels of use means that the plant has a far longer economic life than if it were used intensively and consequently LHIB strategy is:

- to retain the more expensive items of plant for long periods;
- to where feasible and economical, procure cheaper good quality 2nd hand plant; and
- to maintain these items so that they can continue to deliver effective service.

Smaller vehicles such as the Hilux tray-tops are also retained for longer than on the mainland in view of the low mileage they accrue on the Island and the cost involved in shipping them back for sale by auction. They are replaced generally at 100,000 kms or 10 years whichever comes first.

The LHIB self-insures items of major plant and equipment. The likelihood of road accidents is low owing to the low level of use.



Miscellaneous Plant

The requirement for plant and vehicles will be monitored over the life of the Plan as changing levels of service provided by the LHIB will result in changing requirements for vehicles and plant.

Future purchases/replacements

In the first half of this Plan, replacements or new purchases are expected to be made for:

- Yard forklift
- light vehicles
- Backhoe replacement
- WMF Telehandler replacement

- Mulcher replacement

Maintenance

Plant and equipment is serviced and maintained by LHIB staff in accordance with the manufacturer's specified requirements. Essential spare parts are retained at the depot. With a number of critical infrastructure projects planned through until late 2019, availability and reliability of the major pieces of plant will be a key focus of the Board's Mechanic.

Risk Management

The key risks facing the LHIB include:

- Unforeseen failure of an older item of plant, rendering it unfit-for-purpose and/or not available when required.
- Rusting of plant and equipment due to marine environment, rendering it unfit-for-purpose and/or not available when required.
- Inability to source replacement parts for the older items of plant.
- WHS issues related to working with older items of plant and equipment that lacks the safety features of more modern items.
- Unbudgeted capital expenditures that may arise to replace items should they become unserviceable.

Asset Disposals

Vehicles are returned to the mainland for sale by auction at the end of their economic life. The revenue gained from sale of 10 year and older vehicles is not significant after disposal costs (including sea transfer) are deducted.

Planned Expenditures

The 10 year planned expenditure is listed in detail at Appendix 2.

11. Buildings

Building Assets

The LHIB owns eight residences that are leased to staff. They are:

Met House 3	SEO House	Douglass Drive House
Met House 4	Doll's House	MEWH House
	Government House	Doctor's House

They are generally older style buildings that have been maintained in reasonable condition.

The LHIB owns buildings that are used for its own operational purposes. These are:

Administration Depot	Chemical shed (plumbing shed)	North Bay Sheds
Admin Office	Carpenter's shed	Ned's Beach shed
Works & Ranger's office	Ranger's shed	Jetty building
Storage/pump shed	Liquor store	Public Hall Toilets
RFS shed	Research facility	Public Hall
SES shed	Poison shed	Trax shed
Workshop		
Dangerous goods shed		

The Board owns buildings which are leased under commercial arrangements to other parties:

Post Office	Boatshed 1 (Greenback)	Island Showcase
Coop/Beach Boutique	Boatshed 2 (Prodiva)	Cargo shed
Hospital	Boatshed 3 (Riddle/Busteed)	Old Electrical Workshop
Nurses flats	Boatshed 4 (Dignam)	



Community Hall



Boatsheds



Hospital



Neds Beach Shelter Shed

Strategic issues

Providing residences is considered essential to attract key staff to the Island in view of the fact that the private rental market on the Island is small. It is proposed to retain the residences and potentially expand these with one or two additional properties from the Bureau of Meteorology. This plan identifies LHIB only providing certain appliances being a washing machine, fridge and microwave as these items often need to fit into existing kitchens and laundries so these appliances need to be ordered to fit the space.

A minimum of 10,000 gallons of storage is now provided at all residences.

LHIB will continue to upgrade the wastewater systems of all Board properties (residences and administrative, operational and commercial buildings) in accordance with the Board's *On-Site Wastewater Management Strategy*.

The administrative and operational buildings have been accumulated over time. If the LHIB was starting over with a clean sheet of paper, in all probability the structures would be configured differently but there are higher priorities at the moment than replacing the current buildings, which are in reasonable condition.

The arrangements regarding buildings that are commercially leased were assessed by the Board in 2016 and it has been determined to maintain Board ownership of all existing buildings.

In 2016, NSW Health provided funding to undertake some upgrades at the Hospital, which included electrical, landscaping, air conditioning and floor coverings. It is hoped that this injection of funds will be ongoing, in lieu of rental payments.

Future Capital Works

In the early years of this plan the following works are planned:

- Renovations to maintain the standard of properties, as tenants change over

Maintenance

The repair and maintenance of properties is designed to:

- comply with the various requirements of relevant legislation and bye-laws including the provisions of the BCA, the Work Health and Safety Act, the Residential Tenancies Act, agreed building industry standards and all applicable relevant health & safety standards;
- enable an appropriate standard of occupancy for tenants / users;
- make the property safe;
- protect the property against further deterioration and achieve minimum overall life costs consistent with ensuring sustainable operations over the long-term; and
- as far as practicable, uniform cash flows from year to year are sought.

The condition of properties is monitored at two separate levels and the information gathered is used to develop a Program of Works. Firstly, property condition audits are undertaken annually and secondly, tenants/occupants report property defects and concerns as they arise.

Upgrades are considered as part of the planned maintenance process to ensure that each property remains appropriate for its intended purpose.

The maintenance work is delivered both by LHIB staff and private sector trades.

Hazardous materials

Given the age of the properties, most contain hazardous materials¹¹ to some degree. Hazmat studies have been undertaken and remedial measures put in place.

Disposals

At this stage no disposals are programmed but the potential disposal of some assets has been identified in this Plan.

Risks

The risks associated with owning and operating buildings include:

- the high cost of maintenance arising from the aggressive marine environment, the cost of materials and the scarcity of specialist trades on the Island jeopardises the financial viability of commercial leasing;
- ongoing funding from NSW Health, in lieu of rent, to maintain and upgrade the facility to meet escalating health standards.

Planned Expenditures

The 10 year future planned expenditure is listed in detail at Appendix 2.

¹¹ includes asbestos, lead paint, pcbs, synthetic mineral fibres, etc

12. Information & Communications Technology

Introduction

ICT is an important component of the services delivered by the LHIB. Whilst the services delivered by LHIB will change little over the coming 5 to 10 years the importance of ICT will increase given the rate of technology development and greater community expectations for access to information and a more open and transparent organisation.

Rapid advances in technological development and obsolescence of ICT infrastructure make it a dynamic asset category. Planned management of hardware is required to maintain the ongoing availability of equipment and to replace obsolete equipment.

Current Environment

The LHIB ICT assets fall within three broad functional areas:

Information Technology – encompassing the various IT infrastructure assets which are used within the organisation which includes:

- Server infrastructure
- Desktop infrastructure
- Telecommunications infrastructure
- IT network infrastructure – routers, terrestrial lead-in services (internet) and remote satellite communications.

Business Systems – encompassing the various applications and programs, the major being:

- Office systems – Microsoft Office Suite
- Database platforms
- Email and internet security systems
- Geospatial Information Systems
- Corporate Management Systems – finance, HR asset management
- Online services – internet.

Radio Communications – encompassing the high frequency radio communication assets

- Handheld radios, vehicle mounted radios, repeaters and office radios.

Current Approaches to ICT Asset Management

The asset strategy for these units will be based on ensuring robust and resilient ICT infrastructure in line with the following criteria:

- the match of assets to specific needs;
- the condition and expected level of use of current assets identified for replacement;
- the expected level of use of requested additional assets;
- the potential availability of backup and support.

Rolling replacement programs are in place for the majority of IT assets based on appropriate lifecycles for the assets. These are generally 4 years for most items.

Radio communications assets are managed mainly on an ad-hoc basis with replacement equipment purchased when required. No upgrades are required in the short to medium term.

Future Strategies

With the recent implementation of a new financial management system, various ICT infrastructures have been upgraded. Beyond this upgrade the future development of ICT should generally be limited to ongoing upgrade of software and rolling replacement of hardware, apart from the following issue.

Secondly, the LHIB is looking to introduce communication infrastructure to enable the application of demand management technology for the Islands electrical infrastructure. This technology will be essential for the LHIB to achieve significant renewable energy input into the electrical system and is likely to be through Ethernet connections to enable the remote control of electrical loads.

Planned expenditure

In the first half of this plan the following expenditure is planned:

- server upgrade
- replace desktop PCs
- replace digital Photocopier

Service Risk Summary

The following table summarises the risk that asset performance will hinder services being delivered as planned, or will not support required service levels:

<i>Asset Class</i>	<i>Risk Identified</i>	<i>Mitigation Strategies</i>
Computer Hardware	Capacity – Capacity will not be available in line with demand	Capacity planning and demand management which informs the capital investment budget.
	Availability - Ageing or unsupported infrastructure may cause service disruption	Progressive replacement / updating will facilitate availability and reliability of the infrastructure
Computer Software	Function - Business Systems may not adequately support delivery of service	Office systems are being evaluated to enable ongoing service support at an appropriate level.
	Confidentiality – Information assets may be accessed by unauthorised individuals	Information security measures are in place.
	Integrity – Asset data may not be accurate and complete	Date records are being progressively cleansed and updated...
Radio Hardware	Radio hardware may prove unreliable and/or incompatible with other emergency and rescue agency systems.	The recent major upgrade addressed this risk.

Asset Disposals

Disposals of out-dated ICT asset are deemed to have immaterial value.

Planned Expenditures

The 10 year future planned ICT expenditure is listed in detail at Appendix 2.

13. Public Open Space and Permanent Park Preserve

Public Open Space

The LHIB is responsible for the care control and management of public open space on the Island. The main items of public open space infrastructure are¹²:

- the Lagoon Road playground;
- various picnic facilities (BBQs, tables);
- the sports field;
- the cemetery; and
- open space in general

The service level expected from this infrastructure is that it:

- satisfies the Board’s duty of care and WHS obligations regarding safety and security;
- meets community and tourist industry needs, interests and expectations regarding utility, hygiene and image;
- complies with relevant standards regarding flora & fauna management, weed management, pest control; and
- is financially sustainable with regard to maintenance and ongoing operational costs.

Future Strategies

Improving facilities to continue to meet tourist expectations whilst maintaining the “low key” feel of the island will be the challenge for the LHIB. Increasing servicing and maintenance costs required the LHIB to previously investigate more efficient practices and assets. Significant costs are incurred by the LHIB in servicing wood BBQs. The LHIB has previously installed an electric BBQ at Ned’s Beach and after several attempts, a second unit was installed at the Playground. The difficulties associated with the installation of these units means that no more will be installed. BBQ numbers will be maintained at present levels.

The Permanent Park Preserve (PPP)

The PPP is the Island’s most precious asset. From an asset management perspective, key responsibilities of the LHIB are flora & fauna management, weed management, rehabilitation and revegetation, specific fauna initiatives, quarantine and protection of World Heritage values. The main items of PPP infrastructure are:

- walking tracks and bridges;
- fencing;
- signage;
- North Bay Infrastructure;
- BBQs, both gas and wood;
- sheds;
- toilets; and
- water tanks

¹² Note that shelter sheds on public open space are addressed within the Building section of this Plan

The service level expected from this infrastructure is equivalent to the standards set for public open space infrastructure, plus it must also satisfy the relevant requirements of the Plan of Management.

Strategic Issues

There is an ongoing tension between community and tourist expectations of improving infrastructure standards, with a resulting increase in costs, and the constraints imposed by budget limitations. The LHIB is engaging in community and industry debate to determine appropriate service standards and levels, and has initiated the monitoring of capital expenditures to track whether they match depreciation expenses over the longer term, in order to avoid the generation of a renewals gap.

Ongoing grant funding is being sourced including the *Rebuilding NSW Regional Growth – Environment & Tourism Fund*. This grant funding would be used to implement the Lord Howe Island Walking Track Strategy 2017-2020. No significant funding has been allocated from within the Board’s budget for major capital improvements for walking tracks in this plan and we are reliant on receiving grant funding.



Walking trails



Footbridge



Wood-fired BBQ and picnic tables



Gas fired BBQs



Playground, Lagoon Road



Shelter shed and picnic facilities, North Beach

Examples of Public Open Space and PPP infrastructure

Capital and maintenance programs

All infrastructure is inspected to identify maintenance requirements at least annually and after exceptionally adverse weather. Capital replacements and upgrades are scheduled in advance, as is preventative maintenance. Routine maintenance is undertaken as required, for example to ensure track stability and erosion control. A key objective of maintenance is to minimise whole of life costs by intervening to correct problems before costs escalate.

Both capital and maintenance work is undertaken by LHIB staff. Given that the 10 year expenditure on PPP maintenance is the largest of all LHIB ongoing asset expenditures, consuming over 57% of the 10 year total asset expenditure, the effectiveness and efficiency of delivery of PPP maintenance is an ongoing focus.

Risk Management

Managing the public open space and PPP infrastructure attracts the interacting risks of:

- damage to infrastructure arising from climate change and resulting more frequent and intense extreme weather events, particularly the Mutton Bird Point walking track;
- the ongoing challenge of managing pest, weed and disease outbreaks (and resulting costs);
- the accelerating wear and tear on infrastructure arising from growing tourism activities;
- LHIB's duty of care associated with tourist use of hazardous walking trails etc; and
- ensuring financial sustainability in the face of rising cost pressures.

Planned Expenditures

The 10 year future planned expenditure is listed in detail at Appendix 2

14. Governance & Risk Management of Asset Plan Delivery

Governance

Managers and Senior Managers meet monthly as part of the scheduled management meeting program. It has the role of ensuring:

- A clear alignment and consistency between service objectives and priorities, policy frameworks and asset strategies across the various services delivered by the Board;
- Effective stakeholder representation occurs in asset-related decision-making and major issues management;
- An appropriate degree of rigour and co-ordination is applied to project planning, gap and risk analysis at agreed key asset planning decision-making points;
- Timely development of business cases;
- That the annual planning and budget cycle meets LHIB timeframes;
- Effective implementation of approved plans and works programs and associated monitoring of asset-related budget performance and service outcomes

Risks and consequences

The risk approach aims to ensure that the LHIB infrastructure is adaptable to changes in the risk profile arising from evolving tourist expectations, environmental and climate challenges and energy resource costs. The main risks that are being actively addressed are:

- Withdrawal of the current sea service and replacement with a different vessel that requires different jetty arrangements.
- The impact of potential changes to the marine weather patterns and sea level upon shoreline erosion.
- Eliminating inefficiencies and unnecessary costs from the delivery and operation of physical assets.
- Managing the Island's infrastructure on a sustainable whole-of-life basis to demonstrate value-for-money.
- Procurement risk related to the renewable energy capital projects.
- Demonstrating resource needs to the government and the LHI community based on robust planning and risk awareness.

15. Appendix 1: LHIB Strategy Directions & Strategies

Strategy Direction	Strategies
Effective Governance & Leadership	<ul style="list-style-type: none"> 1.1 Ensure accountability, fairness, and transparency in the Board’s decision-making and relationship with all its stakeholders. 1.2 Ensure corporate governance practices meet legislative requirements. 1.3 Work to achieve long term financial sustainability. 1.4 Ensure risks are properly managed. 1.5 Provide internal IT and communications systems which are secure, stable and support business operations. 1.6 Provide efficient and effective records management and information management. 1.7 Ensure effective management of human resources 1.8 Provide timely and proactive communication to all stakeholders
Strong & Sustainable Economy	<ul style="list-style-type: none"> 2.1 Market the island as a tourist destination. 2.2 Foster an environment that supports sustainable economic development. 2.3 Effectively manage the Board’s business enterprises. 2.4 Effectively manage the Board’s commercial leases. 2.5 Take action to ensure appropriate and adequate servicing of the island by a major airline.
Sound Infrastructure & Services	<ul style="list-style-type: none"> 3.1 Provide sound asset management. 3.2 Maintain recreational facilities for visitor and community use. 3.3 Operate Aerodrome safely for Regular Passenger Transport (RPT) services, medical evacuations and general aviation. 3.4 Maintain road network in good condition for all road users. 3.5 Maintain wharf to serve shipping contractor, charter operators and visiting boats. 3.6 Maintain Board building and property assets. 3.7 Provide facilities in conjunction with Roads and Maritime Services for all Island boat users to safely and efficiently launch, retrieve and maintain boats in an environmentally sound manner. 3.8 Provide reliable and efficient electricity supply. 3.9 Provide efficient and environmentally sustainable waste and recycling management services.
Outstanding Environment	<ul style="list-style-type: none"> 4.1 Protect and manage the environment in a manner that recognises and promotes the World Heritage values of the Island. 4.2 Work to prevent the introduction of exotic pests and pathogens to and eradicate exotic pests from the Island. 4.3 Identify, protect and value heritage items. 4.4 Improve awareness and understanding of the environment through education and research. 4.5 Improve environmental sustainability of Board programs and operations (waste disposal; waste water; renewable energy).

<p>Responsible Land Management</p>	<p>5.1 Design land use and development policies that balance environmental, economic and social outcomes.</p> <p>5.2 Provide an efficient and effective development planning and assessment service.</p> <p>5.3 Provide an effective lease administration system.</p> <p>5.4 Protect and manage the LHI Permanent Park Preserve in a manner that recognises the World Heritage values of the Island.</p> <p>5.5 Protect and manage vacant crown lands.</p> <p>5.6 Rehabilitate degraded areas.</p>
<p>Strong and Engaged Community</p>	<p>6.1 Plan for appropriate services for the community.</p> <p>6.2 Improve relationship with the community through engagement and consultation.</p> <p>6.3 Provide professional environmental and public health services.</p> <p>6.4 Support capacity building in community organisations.</p> <p>6.5 Promote programs that provide for children.</p> <p>6.6 Manage the Local Emergency Management Committee (LEMC) and Emergency Management Plan (EMPLAN).</p>

16. Appendix 2: Proposed Asset Expenditure Plan 2018 - 2028

The 10 year future budgets for capital investment and maintenance are listed in the following pages. All costs are in real (i.e. present-day) dollars.

Lord Howe Island Board TAM Plan												
10 Year Asset Expenditure Forecast												
(\$ not escalated)												
	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	Totals	
Capital Investments												
Buildings	\$ 210,000	\$ 155,000	\$ 120,000	\$ 50,000	\$ 130,000	\$ 155,000	\$ 155,000	\$ 265,000	\$ 125,000	\$ 125,000	\$ 125,000	\$ 1,490,000
Roads & Drainage	\$ 46,850	\$ 127,570	\$ 249,696	\$ 421,327	\$ 427,023	\$ 34,845	\$ 315,770	\$ -	\$ 251,388	\$ 436,232	\$ 2,310,702	\$ 2,310,702
Marine	\$ 245,000	\$ 200,000	\$ 125,000	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ 70,000	\$ 30,000	\$ 870,000	\$ 870,000
Permanent Park Preserve	\$ 10,000	\$ -	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ -	\$ 25,000	\$ 25,000	\$ 25,000	\$ 125,000	\$ 125,000
Power supply	\$ 155,000	\$ 145,000	\$ 195,000	\$ 30,000	\$ 30,000	\$ 130,000	\$ 30,000	\$ 30,000	\$ 240,000	\$ 130,000	\$ 1,115,000	\$ 1,115,000
Airport	\$ 95,000	\$ 41,000	\$ 25,000	\$ 10,000	\$ 10,000	\$ 20,000	\$ 15,000	\$ 305,000	\$ 50,000	\$ 10,000	\$ 581,000	\$ 581,000
Plant & Equipment	\$ 40,000	\$ 115,000	\$ 46,000	\$ 303,000	\$ 421,000	\$ 36,000	\$ 75,000	\$ 64,300	\$ 15,000	\$ 590,000	\$ 1,705,300	\$ 1,705,300
ICT	\$ 61,000	\$ 83,000	\$ 153,500	\$ 103,000	\$ 76,000	\$ 68,000	\$ 122,000	\$ 164,500	\$ 56,000	\$ 13,000	\$ 900,000	\$ 900,000
Public Open Space	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ 125,000	\$ -	\$ -	\$ -	\$ 40,000	\$ -	\$ 265,000	\$ 265,000
Waste Management	\$ 256,000	\$ 10,000	\$ 45,000	\$ 115,000	\$ -	\$ 27,000	\$ 51,000	\$ 30,000	\$ 180,000	\$ 125,000	\$ 839,000	\$ 839,000
Total Capex	\$ 1,168,850	\$ 876,570	\$ 1,019,196	\$ 1,042,327	\$ 1,329,023	\$ 480,845	\$ 863,770	\$ 883,800	\$ 1,052,388	\$ 1,484,232	\$ 10,201,002	\$ 10,201,002

Provisional 10 Year Projection (\$ not escalated)

Buildings

	Replacement Cost	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
CAPITAL PROGRAM													
Total CAPEX	\$ 6,590,993	210,000	155,000	120,000	50,000	130,000	155,000	155,000	265,000	125,000	125,000		
Residences		40,000	150,000	100,000	50,000	75,000	-	50,000	-	-	-		
Met House 1		-	50,000	-	-	-	-	-	-	-	-		
Met House 2		-	-	50,000	-	-	-	-	-	-	-		
Met House 3	\$ 247,500	-	-	-	-	-	-	-	-	-	-		
Met House 4	\$ 185,000	15,000	-	-	-	-	-	-	-	-	-		
SEO House	\$ 225,000	-	-	-	-	75,000	-	-	-	-	-		
Dolls House	\$ 327,500	-	-	-	-	-	-	50,000	-	-	-		
Government House	\$ 350,000	-	-	50,000	-	-	-	-	-	-	-		
MTS House	\$ 242,500	25,000	-	-	-	-	-	-	-	-	-		
MEWH House	\$ 217,500	-	100,000	-	-	-	-	-	-	-	-		
Doctors House	\$ 342,500	-	-	-	50,000	-	-	-	-	-	-		
Commercial Buildings		125,000	5,000	20,000	-	55,000	140,000	75,000	265,000	75,000	125,000		
Boatshed (swimming)	\$ 11,500												
Boatshed (Prodive)	\$ 24,500	-	-	20,000	-	-	-	-	-	-	-		
Boatshed(Riddle/Busteed)	\$ 32,500	-	-	-	-	-	-	-	-	50,000	-		
Dignam Boatshed	\$ 20,000	-	-	-	-	-	-	-	-	-	-		
Administration Depot		-	-	-	-	-	-	-	-	-	-		
Admin Office	\$ 617,500	-	-	-	-	-	-	-	80,000	-	-		
Vehicle & Plant Shed	\$ 212,500	-	-	-	-	-	50,000	-	-	-	-		
Works & Rangers office	\$ 311,293	-	-	-	-	-	20,000	-	50,000	-	-		
RFS Shed	\$ 70,000	-	-	-	-	20,000	-	-	-	-	-		
SES shed	\$ 22,500	-	-	-	-	-	-	-	-	-	-		
Fuel & Dangerous goods shed	\$ 12,500	-	-	-	-	-	-	10,000	-	-	-		
Chemical shed	\$ 12,250	-	-	-	-	-	-	-	-	-	-		
Rangers shed	\$ 21,500	-	-	-	-	-	-	-	-	-	-		
Tool shed	\$ 2,500	-	-	-	-	-	-	20,000	-	-	-		
Enviro shed	\$ -	-	-	-	-	-	-	20,000	-	-	-		
Carpenters Shed	\$ 67,500	-	-	-	-	-	-	-	-	-	-		
Workshop \ Store Shed	\$ 152,500	-	-	-	-	-	-	-	-	-	-		
Liquor store shed	\$ 22,500	-	-	-	-	-	-	-	-	-	-		
Phasmid Enclosure	\$ 4,500	-	-	-	-	-	-	-	-	-	-		
Research facility	\$ 300,000	100,000	-	-	-	-	50,000	-	-	-	-		
Jetty Cargo shed	\$ 52,500	-	-	-	-	25,000	-	-	-	-	-		
North Bay Sheds	\$ 37,500	-	-	-	-	-	20,000	-	-	-	-		
Neds Beach shed	\$ 60,000	-	-	-	-	-	-	-	15,000	-	-		
Post Office	\$ 152,500	-	-	-	-	-	-	-	25,000	-	-		
Coop/Beach Boutique	\$ 140,000	-	-	-	-	-	-	-	25,000	-	-		

Enviro shed	-	-	-	-	-	-	-	-	-	-
Tool Shed	-	-	-	-	-	-	-	-	-	-
Carpenters Shed	-	-	-	-	-	-	-	-	-	-
Workshop \ Store Shed	-	-	-	-	-	-	-	-	-	-
Liquor store shed	-	-	-	-	-	-	-	-	-	-
Phasmid Enclosure	-	-	-	-	-	-	-	-	-	-
Research facility	7,441	7,441	7,441	7,441	7,441	7,441	7,441	7,441	7,441	7,441
Jetty Cargo shed	-	-	-	-	-	-	-	-	-	-
North Bay Sheds	-	-	-	-	-	-	-	-	-	-
Neds Beach shed	-	-	-	-	-	-	-	-	-	-
Post Office	-	-	-	-	-	-	-	-	-	-
Coop/Beach Boutique	10,000	-	-	-	-	-	-	-	-	-
Island Showcase	-	-	-	-	-	-	-	-	-	-
Old Electrical Workshop	-	-	-	-	-	-	-	-	-	-
Jetty building	-	-	20,000	-	-	-	-	-	-	-
Public Hall Toilets	-	1,000	-	1,000	-	-	-	-	-	-
Public Hall	-	-	-	-	-	-	-	-	-	-
Trax shed	-	-	-	-	-	-	-	-	-	-
Aviation Refuelling Shed	2,000	-	-	-	-	10,000	-	-	-	-
Nursery	-	-	-	-	-	-	-	-	-	-
igloos	-	-	-	-	-	-	-	-	-	-
shade house	-	-	-	-	-	-	-	-	-	-
Merchandise shed	-	-	-	-	-	-	-	-	-	-
General Building maintenance	8,000	8,000	8,000	8,000	8,000	8,001	8,001	8,001	8,001	8,001
Health Facilities	9,500	9,500	9,500	10,000	9,500	10,002	9,502	10,002	10,002	10,002
Hospital	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500
Nurses Flat 1	2,000	2,000	2,000	2,000	2,000	2,001	2,001	2,001	2,001	2,001
Nurses Flat 2	1,000	1,000	1,000	1,000	1,000	1,001	1,001	1,001	1,001	1,001
Garage \ morgue	-	-	-	500	-	500	-	500	500	500

Potential Disposals

Assumptions											
Annual Maintenance Expenditure as a Percentage of Replacement Cost											
Programmed % maintenance cost based on Replacement Value	total	2.26%	2.21%	2.50%	1.98%	1.83%	1.99%	1.83%	1.84%	1.84%	1.84%
Programmed % maintenance cost based on Replacement Value	Residential	2.42%	2.80%	2.80%	2.05%	1.67%	1.67%	1.67%	1.67%	1.67%	1.67%
Programmed % maintenance cost based on Replacement Value	Commercial	1.96%	1.72%	2.14%	1.72%	1.69%	1.92%	1.69%	1.69%	1.69%	1.69%

2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
\$ 210,000	\$ 155,000	\$ 120,000	\$ 50,000	\$ 130,000	\$ 155,000	\$ 155,000	\$ 265,000	\$ 125,000	\$ 125,000		
\$ 148,719	\$ 145,720	\$ 164,720	\$ 130,219	\$ 120,719	\$ 131,231	\$ 120,731	\$ 121,231	\$ 121,231	\$ 121,231		
\$ 358,719	\$ 300,720	\$ 284,720	\$ 180,219	\$ 250,719	\$ 286,231	\$ 275,731	\$ 386,231	\$ 246,231	\$ 246,231		

Provisional 10 Year Projection (\$ not escalated)

Roads & Drainage

current year 2017

RENEWAL

Road Name. From To

			2018	2019	2020	2021	2022	2023	2024
			2019	2020	2021	2022	2023	2024	2025
Airport Road			\$ -	\$ -	\$ 46,907	\$ -	\$ -	\$ -	\$ -
Airport Carpark			\$ -	\$ -	\$ 13,402	\$ -	\$ -	\$ -	\$ -
Airport Road	Lagoon Road	Airport Terminal	\$ -	\$ -	\$ 33,505	\$ -	\$ -	\$ -	\$ -
Neds Beach Rd			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Neds Beach Road	Lagoon Road	Anderson Rd	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Neds Beach Rd	Anderson Road	Neds Beach	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cemetery Road	Neds Beach Rd	Anderson Road	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Anderson Road			\$ 5,388	\$ 49,420	\$ 16,082	\$ -	\$ -	\$ -	\$ -
Anderson Road	Neds Beach Road	Mutton bird drive	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Anderson Road	Mutton bird drive	Middle beach road	\$ -	\$ 49,420	\$ -	\$ -	\$ -	\$ -	\$ -
Anderson Road	Middle Beach Road	C&B Wilson's D'Way	\$ -	\$ -	\$ 9,046	\$ -	\$ -	\$ -	\$ -
Anderson Road	C&B Wilson's D'Way	Corner	\$ -	\$ -	\$ 7,036	\$ -	\$ -	\$ -	\$ -
Anderson Road	Corner	Cow Bale	\$ 5,388	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Anderson Road	Cow Bale	Powerhouse	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Powerhouse	Solar Panels	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bowker Avenue	Lagoon Road	Board's Garage	\$ -	\$ 16,753	\$ -	\$ -	\$ -	\$ -	\$ -
Bowling Club Rd	Lagoon Road	Bowling Club	\$ 6,701	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Golf Club Road	Lagoon Road	Golf Club	\$ -	\$ -	\$ -	\$ 15,077	\$ -	\$ -	\$ -
Lagoon Road			\$ -	\$ 22,867	\$ 145,663	\$ 325,000	\$ 427,023	\$ 34,845	\$ 156,804
Lagoon Road	Kings Beach	Smoking Tree Ridge Rd	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lagoon Road	Smoking Tree Ridge Rd	Sth T V Dish	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 34,845	\$ -
Lagoon Road	Sth T V Dish	Airport Road	\$ -	\$ -	\$ -	\$ -	\$ 62,822	\$ -	\$ -
Lagoon Road	Airport Road	Blinky's Beach Corner	\$ -	\$ -	\$ 50,090	\$ -	\$ -	\$ -	\$ -
Lagoon Road	Blinky's Beach	Pinetrees Lodge	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 156,804
Lagoon Road	Pinetrees Lodge	Bowker Avenue	\$ -	\$ -	\$ -	\$ -	\$ 39,201	\$ -	\$ -
Lagoon Road	Bowker Avenue	Middle Beach Road	\$ -	\$ 22,867	\$ -	\$ -	\$ -	\$ -	\$ -
Lagoon Road	Middle Beach Rd	Neds Beach Rd	\$ -	\$ -	\$ 72,957	\$ 325,000	\$ 325,000	\$ -	\$ -
Lagoon Road	Neds beach Rd	Ocean View Drive	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lagoon Road	OceanView Drive	Old Settlement	\$ -	\$ -	\$ 22,616	\$ -	\$ -	\$ -	\$ -
Jetty Hardstand			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Magee's Parade	Skyline Drive	Anderson Road	\$ 10,052	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TC Douglas drive			\$ -	\$ -	\$ -	\$ 25,129	\$ -	\$ -	\$ -
TC Douglas drive	Lagoon Road	cnr	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TC Douglas drive	cnr	end	\$ -	\$ -	\$ -	\$ 25,129	\$ -	\$ -	\$ -

Middle Beach Rd			\$ 24,710	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 158,966
Middle Beach Rd	Lagoon Road	Nursery Road	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 158,966
Middle Beach Rd	Nursery Road	Anderson Road	\$ 24,710	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Milky Way Road	M/Way Car Park	Sainsbury's	\$ -	\$ -	\$ 13,402	\$ -	\$ -	\$ -	\$ -
Mulley Drive	Lagoon Road	Esven Fenton's	\$ -	\$ 11,727	\$ -	\$ -	\$ -	\$ -	\$ -
Mutton Bird Drive	Anderson Road	Ebbtide Flats	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Nursery Road			\$ -	\$ -	\$ 27,642	\$ -	\$ -	\$ -	\$ -
Nursery Road	Middle Beach Rd	Steven's Trail	\$ -	\$ -	\$ 17,590	\$ -	\$ -	\$ -	\$ -
Nursery Road	Internal Roads		\$ -	\$ -	\$ 10,052	\$ -	\$ -	\$ -	\$ -
Ocean View Rd	Lagoon Road	K .Wilson's & Dignam \ Wi	\$ -	\$ -	\$ -	\$ 17,590	\$ -	\$ -	\$ -
Skyline Drive	Mutton Bird Drive	Old Met Site	\$ -	\$ 26,804	\$ -	\$ -	\$ -	\$ -	\$ -
Smoking Tree Ridge Rd			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Smoking Tree Rd	Lagoon Road	Giles Gate	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Smoking Tree Rd	Giles Gate	Lance Wilson's	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Thompsons Rd			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Thompsons Rd	Neds Beach Rd	B&T Thompson Cnr	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Thompsons Rd	B&T Thompson Cnr	Sia's	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dump Road	Airport Road	WMF	\$ -	\$ -	\$ -	\$ 16,753	\$ -	\$ -	\$ -
WMF	Internal Roads		\$ -	\$ -	\$ -	\$ 21,778	\$ -	\$ -	\$ -
Old Lagoon Road	Airport	Anemometer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Met Houses Road			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		Totals	\$ 46,850	\$ 127,570	\$ 249,696	\$ 421,327	\$ 427,023	\$ 34,845	\$ 315,770

Provisional 10 Year Projection

Marine

CAPEX

Jetty

Jetty Structure

- piles
- pile heads
- Bracing
- Headstocks
- beams
- deck & kerb
- Ladders

Jetty Fenders

- camel fender
- steel piles
- timber piles
- Walers
- fenders

Jetty Bollards

- Kidney Bollards

Walkway & Platform

- supports
- Beams
- deck
- Handrail

Lower level landing

- Low level Landing

- Piles
- beams
- beams
- deck
- treads
- treads
- handrail
- barrier
- fenders
- cleats

Lighter Boat

Lighter trailer

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Jetty	\$ 245,000	\$ 200,000	\$ 125,000	\$ -	\$ 100,000	\$ -	\$ 100,000
Jetty Structure	\$ 145,000	\$ 120,000	\$ 125,000	\$ -	\$ -	\$ -	\$ -
piles							
pile heads	\$ 30,000						
Bracing	\$ 30,000						
Headstocks	\$ 10,000						
beams	\$ 75,000						
deck & kerb		\$ 120,000	\$ 125,000				
Ladders							
Jetty Fenders	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
camel fender							
steel piles							
timber piles	\$ 100,000						
Walers							
fenders							
Jetty Bollards	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Kidney Bollards							
Walkway & Platform	\$ -	\$ 80,000	\$ -	\$ -	\$ -	\$ -	\$ -
supports		\$ 40,000					
Beams		\$ 40,000					
deck							
Handrail							
Lower level landing	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000
Low level Landing					\$ 100,000		\$ 100,000
Piles							
beams							
beams							
deck							
treads							
treads							
handrail							
barrier							
fenders							
cleats							
Lighter Boat							
Lighter trailer							

Boat ramp
Public Moorings
Swimming Pontoon

Totals	\$ 245,000	\$ 200,000	\$ 125,000	\$ -	\$ 100,000	\$ -	\$ 100,000

Conveyors	\$	85,000	1.5%	\$	1,275	\$	1,275	\$	1,275	\$	1,275	\$	1,275	\$	1,275
Paper shredder	\$	70,000	1.5%	\$	1,050	\$	1,050	\$	1,050	\$	1,050	\$	1,050	\$	1,050
Paper press	\$	42,595	0.5%	\$	213	\$	213	\$	213	\$	213	\$	213	\$	213
skip bins	\$	42,000	0.5%	\$	210	\$	210	\$	210	\$	210	\$	210	\$	210
trommel	\$	70,000	1.0%	\$	700	\$	700	\$	700	\$	700	\$	700	\$	700

TOTAL	\$	282,103	\$	36,103	\$	71,103	\$	141,103	\$	26,103	\$	53,103	\$	77,103
% maintenance		1.40%		1.40%		1.40%		1.40%		1.40%		1.40%		1.40%

		2018-19		2019-20		2020-21		2021-22		2022-23		2023-24		2024-25
Total Capex	\$	256,000	\$	10,000	\$	45,000	\$	115,000	\$	-	\$	27,000	\$	51,000
Total Maintenance	\$	26,103	\$	26,103	\$	26,103	\$	26,103	\$	26,103	\$	26,103	\$	26,103
Total	\$	282,103	\$	36,103	\$	71,103	\$	141,103	\$	26,103	\$	53,103	\$	77,103

Provisional 10 Year Projection	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Public Open Space (\$ not escalated)							
Cemetery	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
CAPEX	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Playground	\$ 51,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 126,000	\$ 1,000	\$ 1,000
CAPEX	\$ 50,000	\$ -	\$ -	\$ -	\$ 125,000	\$ -	\$ -
Maintenance	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Picnic (BBQs, tables)	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
CAPEX	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
Grounds Maintenance	\$ 62,000	\$ 62,000	\$ 62,000	\$ 62,000	\$ 62,000	\$ 62,000	\$ 62,000
CAPEX	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance	\$ 62,000	\$ 62,000	\$ 62,000	\$ 62,000	\$ 62,000	\$ 62,000	\$ 62,000
Sports field	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CAPEX	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Public Toilets (Ned's. Old Settlement, Playground - not Hall or North Bay)	\$ -	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ -
CAPEX	\$ -	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ -
Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total CAPEX	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ 125,000	\$ -	\$ -
Total Maintenance	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000	\$ 79,000
Total CAPEX & Maintenance	\$ 129,000	\$ 79,000	\$ 129,000	\$ 79,000	\$ 204,000	\$ 79,000	\$ 79,000

Provisional 10 Year Projection

(\$ not escalated)

Capital ICT

		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
COMP5100/13	Sonicwall				\$ 3,000			
COMP5100/14	Server upgrades			\$ 50,000				\$ 50,000
Expensed	UPS			\$ 5,000				\$ 5,000
COMP5100/15	Windows Server Licences			\$ 2,000				\$ 2,000
COMP5100/16	Cisco 24 Port Switch				\$ 3,000			
COMP5100/17	Wireless Access Point				\$ 1,000			
Expensed	HP Ultrium 920 Tapedrive				\$ 5,000			
COMP5100/3	Cables and Faceplates				\$ 10,000			
COMP5100/9	Practical FMIS System							
Expensed	Desktop Replacement - 4 yrs (as per IT schedule)	\$ 6,000	\$ 10,000	\$ 30,000		\$ 6,000	\$ 10,000	
Expensed	Laptop Replacement - 4 yrs (as per IT scehdule)		\$ 3,000	\$ 1,500			\$ 3,000	
OFF5428	Multi Function Printer				\$ 25,000			
COMP5359	HP Laserjet3005X - Admin Printer				\$ 2,000			
COMP5374	HP Laserjet P3015 - IES Printer				\$ 2,000			
Expensed	Printer Enviro				\$ 2,000			
OFF5423	Hybrex Digital Telephone System							
Expensed	GIS Licences							
Expensed	Authority FMIS (includes RM8 ALF's)	\$ 50,000	\$ 65,000	\$ 50,000	\$ 50,000	\$ 65,000	\$ 50,000	\$ 50,000
Expensed	Microsoft Office			\$ 15,000				\$ 15,000
	UHF Radio Handsets	\$ 5,000	\$ 5,000			\$ 5,000	\$ 5,000	
	UHF Base station							
	UHF vehicle mount radio							

Network

E

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total CAPEX	\$ 61,000	\$ 83,000	\$ 153,500	\$ 103,000	\$ 76,000	\$ 68,000	\$ 122,000
Total Maintenance	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
Total	\$ 121,000	\$ 143,000	\$ 213,500	\$ 163,000	\$ 136,000	\$ 128,000	\$ 182,000

Provisional 10 Year Projection

(\$ not escalated)

Permanent Park Preserve

	Replacement Value	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
CAPEX		\$ 10,000	\$ -	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ -
Walking tracks	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bridges	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fencing	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Signage	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	
Pest Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
North Bay Infrastructure		\$ -	\$ -	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -
Gas BBQ	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	\$ -
Wood BBQ	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sheds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Toilet	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Tanks & Treatment System	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MAINTENANCE		\$ 116,900	\$ 92,900	\$ 92,900	\$ 92,900	\$ 97,900	\$ 107,900	\$ 107,900
Walking tracks	\$ -	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000	\$ 65,000
Bridges	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ 5,000	\$ 15,000	\$ 15,000
fencing	\$ -	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000	\$ 12,000
Signage								
North Bay Infrastructure		\$ 24,900	\$ 15,900	\$ 15,900	\$ 15,900	\$ 15,900	\$ 15,900	\$ 15,900
Gas BBQ	\$ -	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000	\$ 4,000
Wood BBQ	\$ -	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000
Sheds	\$ -	\$ 10,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000	\$ 1,000
Toilet	\$ -	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000
Water Tanks & Treatment System	\$ -	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900	\$ 900
	\$ -							
Flora & Fauna Management		\$ 863,000	\$ 863,000	\$ 863,000	\$ 863,000	\$ 863,000	\$ 863,000	\$ 863,000
Weed Management	\$ -	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000
Rehabilitation & Revegetation	\$ -	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000
Pest Management	\$ -	\$ 101,000	\$ 101,000	\$ 101,000	\$ 101,000	\$ 101,000	\$ 101,000	\$ 101,000
Quarantine	\$ -	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000
World Heritage Values	\$ -	\$ 192,000	\$ 192,000	\$ 192,000	\$ 192,000	\$ 192,000	\$ 192,000	\$ 192,000

2018-19 2019-20 2020-21 2021-22 2022-23 2023-24 2024-25

Total Capex	\$ 10,000	\$ -	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ -
Total maintenance	\$ 979,900	\$ 955,900	\$ 955,900	\$ 955,900	\$ 960,900	\$ 970,900	\$ 970,900
Total CAPEX & Maintenance	\$ 989,900	\$ 955,900	\$ 965,900	\$ 965,900	\$ 970,900	\$ 980,900	\$ 970,900

Provisional 10 Year Projection

(\$ not escalated)

Power supply

		2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
CAPEX	Replacement Value							
Anderson Road Public Lighting	\$ 6,500							
Substation No.10 Anderson Road	\$ 13,510							
BGE 6600V Transformer	\$ 50,000							
BGE 6600V Transformer	\$ 23,000							
Electrical Switch Gear Cabinet	\$ 6,000							
Reticulation System (HI)	\$ 814,000							
Transformer Upgrade	\$ 23,000							
Substation No. 2 Ned's Beach	\$ 48,000							
Substation No. 3 Beachcomber	\$ 53,000		\$ 105,000	\$ 30,000				
Substation No. 4 LHIB	\$ 81,000							
Substation No.5 Waimarie	\$ 50,000							
Substation No. 6 Middle Beach Rd	\$ 53,000			\$ 110,000				
Substation No. 7 Mulley Drive	\$ 53,000							
Substation No. 8 Airport	\$ 48,000							
Substation No. 9 Oceanview	\$ 81,000							
Substation No. 10 Anderson Road	\$ 53,000							
Substation No. 11 Mountain View Road	\$ 48,000							
Switching Point - Blue Lagoon	\$ 38,000							
Substation Reticulation	\$ 301,000							
Reticulation System Low Voltage System	\$ 1,629,000			\$ 25,000				
Poly Tank	\$ 5,600							
Poly Tank	\$ 16,900							
Emergency Generator 424KW	\$ 150,000							
Battery Chargers	\$ 6,300							
RSJ Gantry Crane	\$ 7,500							
McColl Electric Cabinet	\$ 6,300							
Emetcon Control Unit	\$ 106,000							
Emetcon Control Unit	\$ 106,000							
19000 Litre in Ground Tank	\$ 23,000							
16000 Litre in Ground Tank	\$ 23,000							
Old Powerhouse	\$ 400,000							
New PowerHouse	\$ 1,600,000							
Above-Ground Fuel Tank (1)	\$ 50,000							
New Above-Ground Fuel Tank (2)	\$ 50,000							
Acoustic Tailpipes	\$ 20,000							

ELECT Buildings Maintenance	\$	10,261	\$	10,261	\$	10,261	\$	10,261	\$	10,261	\$	10,261	\$	10,261
ELECT Safety Equipment	\$	4,500	\$	4,500	\$	4,500	\$	4,500	\$	4,500	\$	4,500	\$	4,500
ELECT Safety Audit	\$	1,180	\$	1,180	\$	1,180	\$	1,180	\$	1,180	\$	1,180	\$	1,180

		2018-19		2019-20		2020-21		2021-22		2022-23		2023-24		2024-25
Total Capex	\$	155,000	\$	145,000	\$	195,000	\$	30,000	\$	30,000	\$	130,000	\$	30,000
Total Maintenance	\$	258,048	\$	228,048	\$	258,048	\$	243,048	\$	243,048	\$	243,048	\$	243,048
Total	\$	413,048	\$	373,048	\$	453,048	\$	273,048	\$	273,048	\$	373,048	\$	273,048

Provisional 10 Year Projection (\$ not escalated)

Airport

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Civil Infrastructure	\$ 57,500	\$ 12,500	\$ 34,500	\$ 19,500	\$ 20,500	\$ 35,500	\$ 20,500
Buildings							
Terminal Building	\$ 50,000	\$ 5,000	\$ 20,000	\$ 10,000	\$ 10,000	\$ 20,000	\$ 10,000
Capex	\$ 50,000	\$ -	\$ 10,000	\$ 5,000	\$ 5,000	\$ 10,000	\$ 5,000
Maintenance	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 5,000	\$ 10,000	\$ 5,000
Routine Maintenance	\$ -	\$ 5,000	\$ 10,000	\$ 5,000	\$ 5,000	\$ 10,000	\$ 5,000
Runway	\$ 7,000	\$ 7,000	\$ 14,000	\$ 9,000	\$ 10,000	\$ 15,000	\$ 10,000
Capex	\$ 5,000	\$ 5,000	\$ 10,000	\$ 5,000	\$ 5,000	\$ 10,000	\$ 5,000
Pavement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Surface	\$ 5,000	\$ 5,000	\$ 10,000	\$ 5,000	\$ 5,000	\$ 10,000	\$ 5,000
subsoil Drainage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance	\$ 2,000	\$ 2,000	\$ 4,000	\$ 4,000	\$ 5,000	\$ 5,000	\$ 5,000
Pavement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Surface	\$ 2,000	\$ 2,000	\$ 4,000	\$ 4,000	\$ 5,000	\$ 5,000	\$ 5,000
Runway Apron	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Capex	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pavement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Surface	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Maintenance	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Pavement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Surface	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Drainage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CAPEX	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pipe Culvert Extraction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Concrete Culvert Headwalls	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Armoured Revetments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MAINTENANCE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pipe Culvert Extraction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Concrete Culvert Headwalls	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Armoured Revetments	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
MISCELLANEOUS	\$ 62,500	\$ 49,500	\$ 19,000	\$ 12,500	\$ 13,500	\$ 13,500	\$ 20,000
Tie Down Anchor Blocks	\$ 1,000	\$ -	\$ 1,000	\$ -	\$ 1,000	\$ 1,000	\$ 1,000

CAPEX	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Maintenance	\$	1,000	\$	-	\$	1,000	\$	-	\$	1,000	\$	1,000
Boundary Fencing	\$	-	\$	500	\$	-	\$	500	\$	-	\$	-
CAPEX	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Maintenance	\$	-	\$	500	\$	-	\$	500	\$	-	\$	-
Painted Lines to Airstrip	\$	1,000	\$	1,000	\$	1,000	\$	1,000	\$	1,000	\$	1,000
CAPEX	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Maintenance	\$	1,000	\$	1,000	\$	1,000	\$	1,000	\$	1,000	\$	1,000
Airstrip Markers - gables & cones	\$	-	\$	-	\$	1,500	\$	-	\$	-	\$	1,500
CAPEX	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Maintenance	\$	-	\$	-	\$	1,500	\$	-	\$	-	\$	1,500
Windsocks	\$	500	\$	500	\$	5,500	\$	500	\$	500	\$	5,500
CAPEX	\$	-	\$	-	\$	5,000	\$	-	\$	-	\$	5,000
Maintenance	\$	500	\$	500	\$	500	\$	500	\$	500	\$	500
Signage	\$	-	\$	1,000	\$	-	\$	-	\$	1,000	\$	1,000
CAPEX	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Maintenance	\$	-	\$	1,000	\$	-	\$	-	\$	1,000	\$	1,000
Solar Airport Runway Lighting	\$	-	\$	36,500	\$	-	\$	500	\$	-	\$	-
CAPEX	\$	-	\$	36,000	\$	-	\$	-	\$	-	\$	-
Maintenance	\$	-	\$	500	\$	-	\$	500	\$	-	\$	-
Grassed areas	\$	50,000	\$	10,000	\$	10,000	\$	10,000	\$	10,000	\$	10,000
CAPEX	\$	40,000	\$	-	\$	-	\$	-	\$	-	\$	-
Maintenance	\$	10,000	\$	10,000	\$	10,000	\$	10,000	\$	10,000	\$	10,000
Tree Maintenance	\$	10,000	\$	-	\$	-	\$	-	\$	-	\$	-
CAPEX	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Maintenance	\$	10,000	\$	-	\$	-	\$	-	\$	-	\$	-
Blinky Dune management	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
CAPEX	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Maintenance	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Documentation	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-

	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Total CAPEX	\$ 95,000	\$ 41,000	\$ 25,000	\$ 10,000	\$ 10,000	\$ 20,000	\$ 15,000
Total Maintenance	\$ 25,000	\$ 21,000	\$ 28,500	\$ 22,000	\$ 24,000	\$ 29,000	\$ 25,500
Totals	\$ 120,000	\$ 62,000	\$ 53,500	\$ 32,000	\$ 34,000	\$ 49,000	\$ 40,500

Provisional 10 Year Projection

Plant & Equipment

Replacement Cost (not escalated)

CAT 963 Traxcavator \$127K	\$	180,000
Capex		
Maintenance		
CAT 323D Excavator \$205K	\$	280,000
Capex		
Maintenance		
MERLO Telehandler \$118K	\$	118,000
Capex		
Maintenance		
CAT Backhoe \$50K	\$	75,000
Capex		
Maintenance		
New Holland Farm Tractor \$30K	\$	45,000
Capex		
Maintenance		
Jacobsen Mower - New	\$	35,000
Capex		
Maintenance		
Jacobsen Mower - Old	\$	35,000
Capex		
Maintenance		
Kobelco 25T Crane \$350K	\$	400,000
Capex		
Maintenance		
KUBOTA 4x4 ATV \$28K	\$	28,000
Capex		
Maintenance		
Mulcher \$70K	\$	70,000
Capex		
Maintenance		
Daedong WMF Tractor \$22k	\$	22,000
Capex		
Maintenance		
Noram 65E Turbo Grader \$6.5K	\$	130,000
Capex		
Maintenance		
Drum Roller \$18.5K	\$	35,000
Capex		

Maintenance		
Wheel Roller \$36K	\$	36,000
Capex		
Maintenance		
ELGRA Cement Mixer \$7.3K	\$	7,300
Capex		
Maintenance		
Bobcat	\$	80,000
Capex		
Maintenance		
LINDE Yard Forflift \$12K	\$	12,000
Capex		
Maintenance		
Bitumen Sprayer & Truck	\$	60,000
Capex		
Maintenance		
Yamaha Outboard Motor \$13K	\$	13,000
Capex		
Maintenance		
Holden Colorado 4 x 4 Single cab ute	\$	35,000
Capex		
Maintenance		
Toyota Tarago	\$	45,000
Capex		
Maintenance		
Toyota Hilux 2 x 2 Dual cab ute - SEO	\$	40,000
Capex		
Maintenance		
Toyota Hilux 2 x 2 Dual cab ute	\$	40,000
Capex		
Maintenance		
Toyota Hilux 2x2 Single Cab Traytop	\$	40,000
Capex		
Maintenance		
Toyota Hilux 4x4 Dual cab tray	\$	40,000
Capex		
Maintenance		
Toyota Hilux 2x2 Single Cab Traytop	\$	40,000
Capex		
Maintenance		
Toyota Hilux 4X4 Dual cab traytop - old SES	\$	40,000
Capex		
Maintenance		

Toyota Hilux 4X4 Dual cab traytop Capex Maintenance	\$	40,000
Toyota Hilux 4 X4 Dual cab ute Capex Maintenance	\$	40,000
Toyota Hilux 2x2 Single cab traytop Capex Maintenance	\$	40,000
Toyota Hilux 2 x 2 Dual cab ute Capex Maintenance	\$	40,000
Toyota Hilux 2x2 Single cab traytop Capex Maintenance	\$	30,000
Toyota Hilux 4 X4 Dual cab ute Capex Maintenance	\$	45,000
Toyota 4 Tonne tipper \$50k Capex Maintenance	\$	50,000
Toyota 4 Tonne tipper \$50K Capex Maintenance	\$	50,000
Builders trailer Capex Maintenance	\$	6,000
Tractor slasher Capex Maintenance	\$	70,000
Fuel Tanker (on skids) Capex Maintenance	\$	13,000
Green John Deere Tractor - old WMF Capex Maintenance		
Public Bin Trailer Capex Maintenance	\$	20,000
Emergency Flare Trailer Capex Maintenance		
Daedong Aviation Refuelling Tractor	\$	35,000

Capex		
Maintenance		
Jet A1 Tanker Trailer	\$	20,000
Capex		
Maintenance		
AVGAS Tanker Trailer	\$	15,000
Capex		
Maintenance		
New Aluminium Punt & Trailer & Outboard	\$	66,000
Capex		
Maintenance		
Diesel Fuel Tank - Depot	\$	15,000
Capex		
Maintenance		
Lifting Chains, Slings & Shackles		
Unleaded Fuel Storage IBC	\$	15,000
New Plant Trailer\Fuel Trailer	\$	12,500
Capex		
Maintenance		
Public Bin Trailer	\$	11,000
Capex		
Maintenance		
	\$	2,634,800
Total Capex		
Total Maintenance		
Total Maint. & Capex		

Board Meeting: May 2018	Agenda Number: 12 (v)	Record: ED18/3622
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LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

LHIB Strategic Asset Management Plan Update

RECOMMENDATION

It is recommended that the Board:

1. Note this paper; and
2. Approve Version 1, Revision 6 of the LHIB Strategic Asset Management Plan.

BACKGROUND

In 2002 the Board's Internal Auditors observed that the process for monitoring and authorising preventative maintenance and repairs on Board owned plant and equipment was informal and that the majority of work is carried out on a judgement basis.

The Board manages assets across a broad range of categories, including roads, electricity generation and distribution network, aerodrome, jetty and marine facilities, commercial, residential and public buildings, visitor and recreational facilities, Permanent Park Preserve infrastructure, waste management facility and plant and equipment.

To improve Board management of its assets a Strategic Asset Management Plan (SAMP) was prepared and adopted in 2013. The SAMP was previously updated last year in May 2017 and continues to be updated annually.

CURRENT POSITION

Version 1, Revision 6 of the SAMP, dated 01 May 2018, has undergone minor changes, taking into account works and planning undertaken, and funding arrangements achieved during the last 12 months.

The revised SAMP is included as Attachment A to this paper. Attachment B is a spreadsheet showing a summary and detail of the 10 year Asset Expenditure Forecast.

The major changes to the SAMP, details of which are included in Attachment A, or items of note, include:

1. As of 30 June 2017, Board assets were valued at approximately \$52M.
2. Over the next 10 years the Board should spend:

- a. \$10.2M on capital, which is in line with the average spend for the ten year period. It should be noted that no allowance has been made for the Hybrid Renewable Energy project.
 - b. \$17M on Maintenance of Assets, unchanged since the previous version.
3. 23% of the next ten years' capital works is programmed for roads and drainage works mainly in years three to five.
 4. 57% of the next ten years' maintenance spend is for walking tracks in the Permanent Park Preserve.

RECOMMENDATION

It is recommended that the Board:

1. Note this paper.
2. Approve Version 1, Revision 6 of the LHIB Strategic Asset Management Plan.

Prepared: John Teague, Manager Infrastructure & Engineering Services

Endorsed: Penny Holloway, Chief Executive Officer

Attachments:

Attachment A: LHIB Strategic Asset Management Plan and Asset Strategy 2018 to 2028

Attachment B: LHIB TAM Plan Data Table

LORD HOWE ISLAND BOARD

Business Paper

OPEN SESSION

ITEM

Work Health and Safety (WH&S) and Public Risk Management Update

RECOMMENDATION

It is recommended that the Board note the information provided on Public Risk and WH&S matters.

BACKGROUND

The Board has requested information on Public Risk and WH&S matters be presented on a quarterly basis.

CURRENT POSITION

Workplace Health and Safety

At 31 March 2018, 9 claims have been lodged for the 2017-18 financial year. There have been no new claims since the last reporting period.

2017/18				
No	Date of Injury	Type of Injury	Cause of Injury	Hours lost
1	3/07/2017	Disc bulge or prolapse	Bending over	TBC
2	12/07/2017	Tenosynovitis of extensor tendon R forearm	Jackhammering	Medical expenses only
3	13/07/2017	L lower costo-chondral cartilage tear	Removing rubble from tracks	45.6
4	2/08/2017	Petrol in R ear	Working on air blocked fuel line	Medical expenses only
5	4/08/2017	R pectoral muscle strain	Shovelling	Medical expenses only
6	31/10/17	Laceration L thumb	Angle grinder jumped and cut through glove	Medical expenses only
7	15/11/17	Sore knees	Walking mountain tracks and carrying equipment	Medical expenses only
8	21/11/17	Puncture wound right palm	Tripped and fell sharp stick puncturing right palm	30.4
9	9/1/18	Jarred right shoulder and cervical spine	Slipped on boardwalk near conference room at Board's offices	Medical expenses only

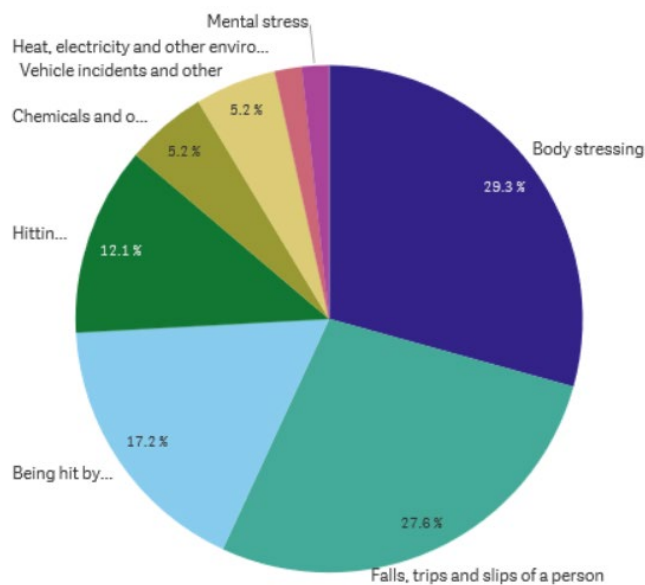
The updated data tables are provided below. Note this data is accurate as at 31/03/2018:

Workers compensation statistics for the last five years:

Financial Year Occurred	Q	Number of Claims #	Average Net Incurred Cost	Net Incurred Cost \$	Total Amount Paid \$	Latest Estimate \$	Amount Recovered \$
Totals		58	6759.6343183448	392858.79	283295.31	108763.48	0.00
FY 17-18		9	9097.13	81874.17	12959.57	68914.60	0.00
FY 16-17		18	11369.9133333333	204658.44	164809.56	39848.88	0.00
FY 15-16		9	4356.4444444444	39208.00	39208.00	0.00	0.00
FY 14-15		8	969.5725	7756.58	7756.58	0.00	0.00
FY 13-14		14	4182.9714285714	58561.60	58561.60	0.00	0.00

Mechanism of Injury

Specific to selected Financial Years only



Actions taken to address the incidence of injury include Workplace WH&S matters being discussed and addressed at monthly staff meetings, including reviews of Job Safety Analysis and Hazard Identification.

Public Risk Management

On 22 and 23 April, Kate Dignam and John Teague attended training with regard to Asbestos Assessment Associated with Removal.

RECOMMENDATION

It is recommended that the Board note the information provided on WH&S and Public Risk matters.

Prepared: Lynda Shick, A/Manager Administration

Endorsed: Penny Holloway, Chief Executive Officer