s22

From: Kim Farrant
Sent: Friday, 5 July 2019 5:30 PM
To: s22
Subject: FW: MS17-000635 [SEC=UNCLASSIFIED]
Attachments: MS17-000635.docx

Follow Up Flag: Follow up
Flag Status: Completed

Kim Farrant
Assistant Secretary |International Branch
International Climate Change and Energy Innovation Division
☎ s22
✉: kim.farrant@environment.gov.au
: GPO Box 787 CANBERRA ACT 2601

From: Farrant, Kim
Sent: Friday, 12 May 2017 4:12 PM
To: s47F
Cc: de Brouwer, Gordon ; Knudson, Dean ; Cahill, Matt ; s22 ; s22 ; s22
Subject: MS17-000635 [SEC=UNCLASSIFIED]

Hi s47F

Please see attached the slightly modified brief – the changes are only to the second sentence of para 22b.

The brief etc will come up in PDMS now.

Thanks

Kim

s42

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From: s47F
Sent: Wednesday, 17 May 2017 6:18 PM
To: Matt Cahill
Cc: s47F Kim Farrant ; s47F ; de Brouwer, Gordon ; Dean Knudson ; s22 ; s22 s22 ; s22
Subject: Re: Lord Howe Island letter from Minister RE: MS17-000635 [SEC=UNCLASSIFIED]

Thanks Matt. Appreciate the approach.

On 17 May 2017, at 6:12 pm, Cahill, Matt <Matt.Cahill@environment.gov.au> wrote:

> s47F and s47F
>
> Kim, s22 and I had a phone hook-up with s47F and s47F earlier this afternoon. We talked them through the letter from the Minister on the Lord Howe Island wind turbine project, and have now emailed them a copy. We emphasised the importance of considering options and have agreed to have another phone hook-up with them on Friday.
>
> Regards
> Matt
>
> Matt Cahill
> First Assistant Secretary
> Environment Standards Division
> Department of the Environment and Energy
> GPO Box 787 Canberra ACT 2601
> Tel: 02 6274 1077
>
> **From:** s47F
> **Sent:** Tuesday, 16 May 2017 9:11 AM
> **To:** s47F s47F
> **Cc:** Cahill, Matt <Matt.Cahill@environment.gov.au>; Farrant, Kim <Kim.Farrant@environment.gov.au>; s47F <s47F >
> **Subject:** Fwd: MS17-000635 [SEC=UNCLASSIFIED]
>
> s47F - please let myself and Matt know when the originals arrive.

Thanks again Kim for the quick turnaround.

MC

Begin forwarded message:

From: "s47F " s47F >
To: "s47F >
Subject: RE: MS17-000635 [SEC=UNCLASSIFIED]

Here you go ive given it all back to him is that right or do I send the signed originals back to you?

s47F
Office of the Hon Josh Frydenberg MP
Federal Member for Kooyong | Minister for the Environment and Energy

Electorate Office | 695 Burke Road, Camberwell VIC 3124 | t: s47F
Parliament House Office | M1:17, Parliament House, Canberra ACT 2600 | t: s47F

e: s47F | w: www.joshfrydenberg.com.au

From: s47F]
Sent: Friday, 12 May 2017 4:12 PM
To: s47F (J. Frydenberg, MP)
Subject: FW: MS17-000635 [SEC=UNCLASSIFIED]

Please have him sign this version of the covering brief. TY!!

From: Farrant, Kim
Sent: Friday, 12 May 2017 4:12 PM
To: s47F
Cc: de Brouwer, Gordon <Gordon.deBrouwer@environment.gov.au>; Knudson, Dean <Dean.Knudson@environment.gov.au>; Cahill, Matt <Matt.Cahill@environment.gov.au>; s22 s22 ; s22 <s22 ; s22 s22 >
Subject: MS17-000635 [SEC=UNCLASSIFIED]

Hi s47F

Please see attached the slightly modified brief – the changes are only to the second sentence of para 22b.

The brief etc will come up in PDMS now.

Thanks

Kim

s22

From: s47F
Sent: Friday, 2 June 2017 12:21 PM
To: Kim Farrant
Cc: de Brouwer, Gordon ; Dean Knudson ; Matt Cahill ; s22 ; s22
Subject: RE: LHI Wind Turbine decision brief [SEC=UNCLASSIFIED]

Thank you all. Will let you know if we have any questions.

s22

From: Farrant, Kim
Sent: Friday, 2 June 2017 12:06 PM
To: s47F >
Cc: de Brouwer, Gordon <Gordon.deBrouwer@environment.gov.au>; Knudson, Dean <Dean.Knudson@environment.gov.au>; Cahill, Matt <Matt.Cahill@environment.gov.au>; s22 ; s22
Subject: LHI Wind Turbine decision brief [SEC=UNCLASSIFIED]
Importance: High

Hi s47F

Please find attached the Lord Howe Island Wind Farm cover brief, EPBC decision brief (Attachment 1) and the various attachments (B – J) for the Minister's consideration. Attachment A is the referral for which a link is provided in the EPBC decision brief.

s42

Documents to follow shortly in PDMS.

Happy to discuss.

Thanks

Kim

s22

✉: kim.farrant@environment.gov.au

🖃: GPO Box 787 CANBERRA ACT 2601

DEPARTMENT OF THE ENVIRONMENT AND ENERGY

PDR: MS17-000763

Copy to:

Secretary
Mr Knudson
Mr Cahill
Ms Moore
Mr Oxley
Mr Archer
Mr Frischknecht

Chief of Staff

Mr Richards

To: Minister for the Environment and Energy (for decision)

REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790]

Timing: 2 June 2017

Recommendation:

1. That you consider the recommendations and make the decisions under the *Environmental Protection and Biodiversity Conservation Act 1999* as set out in the brief and supporting documents at Attachment 1.

Considered / Please discuss

Minister: Date:

Comments:

Clearing Officer: Sent 2/6/17	Kim Farrant	Assistant Secretary Assessments and Fuel Branch	s22 s22
Contact Officer:	s22	Director, Northern NSW Assessments	s22 s22

Key Points:

1. The purpose of this brief is to seek your consideration of the referral decision for the Lord Howe Island Board to construct and operate two wind turbines on Lord Howe Island (EPBC 2016/7790) which comprise Stage 2 of the Island's Renewable Energy Project.

2. Information is provided at Attachment 1 to enable you to make a decision about whether or not you consider that the proposed action to construct and operate two wind turbines would have clearly unacceptable impacts on the world and National Heritage values of the Lord Howe Island Group.

3. Should you decide that the referral is clearly unacceptable, you are required to notify the proponent and provide a statement of reasons. A letter to the Lord Howe Island Board, a formal notice and a draft statement of reasons are included as part of the package at Attachment 1.

4. Should you decide that the project is not clearly unacceptable, the Department will provide you with further briefing.

Consultation: YES

5. General Counsel Branch, Energy Innovation Branch, Wildlife, Heritage and Marine Division and ARENA were consulted in the preparation of this brief.

ATTACHMENTS

1: EPBC Act referral decision: Lord Howe Island Renewable Energy Project Stage 2 Wind Turbines (EPBC 2016/7790)

DEPARTMENT OF THE ENVIRONMENT AND ENERGY

ATTACHMENT 1

PDR: 2016/7790

To: Minister (for decision)

EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES (EPBC 2016/7790)

Timing: 2 June 2017

Recommendations:

1. That you consider the information in this brief and the referral for the Lord Howe Island Renewable Energy Project – Stage 2 – Wind Turbines (EPBC 2016/7790) (see link to the referral in list of attachments).

Considered / Not considered

2. That you decide whether or not, on the basis of the information in this brief and the referral, you consider that the proposed action would have clearly unacceptable impacts on a matter protected by a provision of Part 3 of the EPBC Act, specifically the world and National Heritage values of Lord Howe Island Group, and that Division 1A of Part 7 should apply to the referral.

Clearly unacceptable / Not clearly unacceptable

3. If you decide that the proposed action is clearly unacceptable, that you sign the decision notice at **Attachment B** and the draft statement of reasons at **Attachment C**, having made any modification you consider necessary to ensure that the statement reflects your reasons.

Signed / Not signed

4. If you decide that the proposed action is clearly unacceptable, that you advise the Lord Howe Island Board of your decision by signing the letter at **Attachment D**.

Signed / Not signed

5. If you decide that the proposed action is not clearly unacceptable, agree that a new referral decision brief would be provided to enable you to decide whether the proposed action is a controlled action under section 75 of the EPBC Act.

Agreed / Not applicable

Minister**:** Date:

Comments:

Clearing Officer: Sent 2/ 6/ 17	Kim Farrant	Assistant Secretary, Assessments (NSW, ACT) and Fuel Branch	s22
Contact Officer:	s22	Northern NSW Assessments	s22 s22

Key Points:

Your power to decide that an action is clearly unacceptable

1. The EPBC Act contains a special process for dealing with a proposed action that will have clearly unacceptable environmental impacts.

2. You can decide to apply Division 1A of Part 7 of the EPBC Act to the referral of a proposed action if you consider, on the basis of the information in the referral, that it is clear that the action would have unacceptable impacts on a matter protected by a provision of Part 3.

3. The effect of a clearly unacceptable decision is to prevent the taking of the relevant action in its current design, unless you subsequently reconsider your view and decide that Division 1A of Part 7 should not apply to the action (see paragraph 5).

4. If you make a clearly unacceptable decision, you are required under section 74C of the Act to give written notice of your decision to the person proposing to take the action.

    a. The notice must state that you consider that the action would have unacceptable impacts on a matter protected by a provision of Part 3 of the Act.

    b. The notice must also set out the reasons for your decision.

5. If the person proposing to take the action requests reconsideration of the clearly unacceptable decision then the EPBC Act sets out a number of further statutory requirements. These include:

    a. publication on the internet of your proposal not to approve the action, including the reasons for your decision, and an invitation for public comment within 10 business days;

    b. the preparation by the Secretary of a written report about the relevant impacts, having regard to public comments received. The Secretary must give you this report within 10 business days of the conclusion of the public comment;

    c. within 20 business days of receiving the report from the Secretary you must either decide to refuse to approve the taking of the action, or decide that the action should proceed in accordance with the ordinary process (in which case, you would need to decide whether or not the action is a controlled action). Notice for either of these decisions must be given to the person proposing to take the action.

The basis on which you may find the Lord Howe Island Renewable Energy Project Stage 2 Wind Turbines referral to be clearly unacceptable

6. If you are satisfied, on the basis of the information in this brief and the referral (see link on list of attachments)**,** that the Lord Howe Island Renewable Energy Project Stage 2 will have clearly unacceptable impacts on a matter protected by Part 3 of the EPBC Act, you can decide to apply Division 1A of Part 7 to the referral of the proposed action.

7. The Lord Howe Island Board (the Board) proposes to install two mid-sized wind turbines (and associated transformers, cabling and access roadworks) for public electricity generation on Lord Howe Island, NSW. The turbines would be located in a cleared paddock near the existing powerhouse and solar farm site.

    a. The solar farm element of the renewable energy project was previously referred under the EPBC Act and determined to be not a controlled action on 15 September 2015 (EPBC 2015/7544).

8. The referral for the wind turbine project was received by the Department on 4 November 2016. In its referral for the wind turbine project, the Board stated its belief that the proposal is not a controlled action as it considered the turbines would not have significant impacts on matters protected by Part 3 of the EPBC Act.

9. Following receipt of the referral, the Department considered that the proposal could potentially have impacts on four relevant matters protected by Part 3 of the EPBC Act. These were listed threatened species and communities, listed migratory species, and the world heritage and National Heritage values of the Lord Howe Island Group.

10. The Northern NSW Assessment Section sought advice about the proposal from the Department's Migratory Species Section (**Attachment E**) in relation to potential impacts on listed migratory birds that inhabit the Island Group, and from the Department's Natural Heritage Section (**Attachment F**) in relation to potential impacts on world heritage and National Heritage.

Listed Migratory Species

11. The advice from the Migratory Species Section raised concerns about the potential impacts of the proposal on listed migratory birds, in particular concerning the potential for listed migratory birds to collide with the turbine blades. The Department considers that impacts on listed migratory birds could potentially be mitigated, for example through development and implementation of the adaptive management approach proposed in the referral.

World and National Heritage Values

12. The Lord Howe Island Group was inscribed on the World Heritage List in December 1982 and listed as a National Heritage Place on 21 May 2007. : The Lord Howe Island Group is included on the World Heritage list under criteria (vii) and (x). It is included in the National Heritage list under criteria (a), (b), (c) and (e). The Department considers that if the proposed action has a significant or unacceptable impact on the world heritage values of the property, it will also have a significant or unacceptable impact on its National Heritage values.

13. The Lord Howe Island Group is considered to be an outstanding example of oceanic islands of volcanic origin and an area of spectacular and scenic landscapes. It meets the World Heritage criterion relating to superlative natural phenomena and areas of exceptional natural beauty and aesthetic importance. It also meets the criterion relating to significant natural habitats and for in-situ conservation of biological diversity. A full description of the statement of outstanding universal value for the Island Group as a World Heritage property is provided at **Attachment G**.

Consideration of the World and National Heritage impacts

14. An action is likely to have a significant impact on a property's world and National Heritage values if there is a real chance or possibility that it will cause one of more of the values to be lost, degraded, damaged, notably altered, modified, obscured or diminished. The Natural Heritage Section's 23 November 2016 advice was that the proposed action is unlikely to significantly impact the Island Group's world heritage values. It may be open to you to reach a different conclusion about this.

15. The Board included a *landscape and visual impact assessment* as part of the referral information for the wind turbine project, however the Department considers that this did not include a detailed assessment of the impact of the proposal on the aesthetic values of the property for which it was inscribed on the World Heritage List.

16. On 17 May 2017, you wrote to the Lord Howe Island Board advising of your concern that the proposed placement of the two wind turbines may introduce an intrusive element with a substantial and long term impact on the Island Group's world and National Heritage values and that you would consider this outcome to be unacceptable. A copy of your letter is at **Attachment H**.

17. On 30 May 2017, s47F on behalf of the Lord Howe Island Board, replied to your letter. s47F reply (at **Attachment I**) provides information about the proposed action, its impacts and alternatives that were considered in developing their project, but does not propose varying this referral. The information includes that:

    a. The renewable energy proposal, in planning since the 1980s has involved community consultation in the selection of the turbine locations taking into account access to a good wind resource, distance from residences and limiting noise and visual impact.

    b. Lord Howe Island is not a pristine environment. The 177 years of human occupation on the Island have resulted in a range of impacts through land clearing and built infrastructure including buildings, roads, electricity facilities, an airport, aviation towers, a wharf and coastal erosion protection works. The island achieved world heritage status in 1982 even with the presence and impact of the existing infrastructure.

    c. The wind turbines will reduce the Island's reliance on diesel fuel for electricity generation and are likely to be seen as symbolising a modern solution to sustainable living in a remote island location.

    d. The continued importation of large quantities of diesel for electricity generation is not considered to be economically or ecologically sustainable and reducing the Island's reliance on imported diesel fuel will reduce the risks to the marine and land

environments from fuel management. The Board claims that under the UNESCO (2008) Operational Guidelines for World Heritage properties, human activities may be 'consistent with the Outstanding Universal Value of the area where they are ecologically sustainable'.

e. An energy alternative of building a larger solar farm instead of the wind turbines is suboptimal in the amount of diesel fuel it displaces, and would encounter land suitability constraints.

f. Alternative turbine designs have been considered but either lack sufficient capacity (and would therefore require a greater number of turbines) or are still developmental (and suffer reliability issues).

g. A detailed process has been undertaken for selecting the turbine site selection, including community consultation and consideration of the wind resource, visual impacts, construction challenges and potential impacts on aircraft operations.

h. The proposed turbine site was selected because it is in close proximity to the existing powerhouse and electricity network and is one of the least visible cleared pieces of elevated land on the Island. Practical access and operation considerations limit the turbines physical size. The turbines are not permanently fixed but can be lowered for maintenance and other purposes. The proposed turbines are a similar scale to the existing aviation towers near the project site.

i. The visual, noise and social assessments were conducted by specialist consultants and are based on established methodology, empirical surveys and extensive community and visitor consultation. The turbines will not be able to be seen from most locations in the settlement area and will be distant structures in the landscape from key vantage points around the Island.

18. You should consider the above information from the Board in deciding whether the proposed action is clearly unacceptable.

The Lord Howe Island Strategic Plan

19. The Strategic Plan for Lord Howe Island Group World Heritage Property (at **Attachment J**) is a document that provides an overarching framework for consistent and coordinated management of the Lord Howe Island Group World Heritage Property by the Lord Howe Island Board and the various NSW and Commonwealth government agencies with responsibilities in the area.

    a. The objective of the Plan is to ensure that the management of the world heritage property complies with Australia's obligations under the World Heritage Convention.

20. The Plan states that scenic values on Lord Howe Island are vulnerable to visual impacts from inappropriate development and that the establishment of alternative technologies has the potential to create intrusive visual impacts. The Plan acknowledges that to the extent feasible, efficient and non-polluting energy systems that are compatible with the protection of World Heritage values will be provided.

Will the proposed action have clearly unacceptable impacts?

21. Taking the information in the referral and in this brief into account, it would be open to you to be satisfied the proposed action will have the following impacts on the world and National Heritage values of the Lord Howe Island Group:

    a. The turbines will be intrusive and highly visible in the landscape, including from popular vantage points, and will have a negative impact on the spectacular and scenic landscapes for which the Island Group is listed.

    b. Although the proposed turbine models can be lowered manually for maintenance and protection during storms, it can be expected that the turbines will be in place most of their proposed 20-year lifetime, given the intention to use the wind resource for electricity generation. This means the negative impacts will persist for decades.

22. If you are satisfied that these impacts will occur, it would be open to you to conclude that the proposed action would cause one of the Lord Howe Island Group's world heritage and National Heritage values to be degraded, damaged, notably altered, modified, obscured or diminished.

23. Further, if you are satisfied that such impacts to the world heritage and National Heritage values of the Lord Howe Island Group could not be avoided and mitigated, and, having regard to the nature of those impacts, that the proposed action is an inappropriate development for Lord Howe Island, it would be open to you to conclude that the impacts of the proposed action on the Island's world heritage and National Heritage values are clearly unacceptable.

24. However, it is also open to you to conclude that further inquiry into the impacts of the proposed action under Parts 8 and 9 of the EPBC Act may affect your view as to the ultimate acceptability of the project's impacts on the world and Natural Heritage values of Lord Howe Island and that, as a result, you are not satisfied that that the proposed action is clearly unacceptable.

25. The interpretation of the impact on world and National Heritage values is contested and likely to be the area of close scrutiny. Should you make a decision that the proposed action is clearly unacceptable, you will need to notify the Board and provide reasons (paragraph 28 refers).

s42 LPP

s42 LPP

Next steps

28. If you consider the proposed action is clearly unacceptable, you must give written notice of the decision to the Board and set out the reasons for your decision. A draft notice and statement of reasons for your decision have been prepared for your consideration at **Attachments B** and **C**.

29. The Lord Howe Island Board can seek reconsideration of a clearly unacceptable decision. The reconsideration process is described at paragraph 5 above. If the Board were to request reconsideration, the Department would brief you separately on that matter.

30. If you decide that the proposed action is not clearly unacceptable, a referral decision brief would be provided to enable you to decide whether the proposed action is a controlled action under section 75 of the EPBC Act.

Sensitivities

31. The Board is a statutory authority established under the provisions of the *Lord Howe Island Act 1953 (NSW)*. The Board is responsible to the NSW Minister for the Environment and is charged with the care, control and management of the Island including its heritage values. The Development Application for the proposal was approved with conditions by the Board (as the consent authority) in November 2016. The NSW Government has provided a $5.9m loan for the Renewable Energy Project.

32. On 19 June 2014, the Australian Renewable Energy Agency Board approved grant funding of $4.5m for the Lord Howe Island Renewable Energy Project comprising solar and wind power. The Project was approved under the ARENA Industry – Regional Australia's Renewables Program due to its ability to demonstrate the viability of hybrid renewable energy solutions in a remote island community with high energy cost and improve uptake of renewable energy in similar communities in Australia.

Consultation

33. General Counsel Branch, Energy Innovation Branch, Wildlife, Heritage and Marine Division and ARENA were consulted in preparation of this brief.

ATTACHMENTS

Online:	Referral of proposed action: Lord Howe Island Hybrid Renewable Energy Project Stage 2 Wind Turbines – the referral comprises 18 documents viewable online at http://epbcnotices.environment.gov.au/_portal/modal-form-template-path/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?id=cf650c01-a6a4-e611-a2f2-005056ba00a8&entityformid=bd49f92c-14e8-431d-bd40-e6fdc206cddb&languagecode=1033
B:	Decision Notice: Clearly Unacceptable [FOR SIGNATURE]
C:	Statement of reasons for Clearly Unacceptable decision [FOR SIGNATURE
D:	Letter to Lord Howe Island Board advising of Clearly Unacceptable decision [FOR SIGNATURE]
E:	Referral Advice from Migratory Species Section
F:	Referral Advice from Natural Heritage Section
G:	Lord Howe Island Group: Statement of Outstanding Universal Value
H:	Letter of 17 May 2017 from Minister Frydenberg to s47F , Lord Howe Island Board
I:	Reply of 30 May 2017 from s47F , Lord Howe Island Board to Minister Frydenberg
J:	Strategic Plan for the Lord Howe Island Group World Heritage Property

Notification of
DECISION THAT THE ACTION IS CLEARLY UNACCEPTABLE

Lord Howe Island Renewable Energy Project – Stage 2 Wind Turbines (EPBC 2016/7790)

This decision is made under Section 74B of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Proposed action

proposed action	To construct and operate two wind turbines on Lord Howe Island [See EPBC Act referral 2016/7790]

Decision: Action is clearly unacceptable

status of proposed action	The proposed action will have clearly unacceptable impacts on a matter protected by Part 3 of the EPBC Act. Division 1A of Part 7 of the EPBC Act applies to this referral.
relevant protected matter	• World Heritage properties (sections 12 & 15A) • National Heritage places (sections 15B & 15C)
person proposing to take the action	The Lord Howe Island Board ABN: 33 280 968 043

Person authorised to make decision

Name and position	The Hon Josh Frydenberg MP Minister for the Environment and Energy
signature	
date of decision	June 2017

THE HON JOSH FRYDENBERG MP

MINISTER FOR THE ENVIRONMENT AND ENERGY

Statement of Reasons for a decision that the action is Clearly Unacceptable under the *Environment Protection and Biodiversity Conservation Act 1999*

I, Josh Frydenberg MP, Minister for the Environment and Energy, provide the following statement of reasons for my decision of …. June 2017, under section 74B of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), that the proposed action by the Lord Howe Island Board to construct and operate two wind turbines on Lord Howe Island as described in the referral received by the Department of the Environment and Energy (the **Department**) on 4 November 2016 (EPBC 2017/7730), would have clearly unacceptable impacts on a matter protected by a provision of Part 3 of the EPBC Act, and that Division 1A of Part 7 of the EPBC Act should apply to the referral of the proposed action.

Legislation

1. Relevant legislation is at Annexure A.

Background

2. On 4 November 2016, the Lord Howe Island Board (the **Board**) referred to the Department, a proposal to construct and operate two wind turbines for public electricity generation on Lord Howe Island (LHI), NSW.

3. The Board is a statutory authority established under the provisions of the *Lord Howe Island Act 1953 (NSW)*. The Board is responsible to the NSW Minister for the Environment and is charged with the care, control and management of the Island.

4. The proposed action is the second stage of the LHI Hybrid Renewable Energy Project. The first stage being the LHI Solar Photovoltaic Project (EPBC 2015/7544) which was found to be not a controlled action on 15 September 2015.

5. In its referral, the proponent stated its belief that the proposal was not a controlled action for the purposes of the EPBC Act.

6. The Lord Howe Island Group comprises a number of small islands, remnants of a volcano in the Tasman Sea, situated 779 km North-East of Sydney. Lord Howe Island is the main island of the group and has an area of 1,455 hectares. It is 11 km long and 2.8 km wide at its widest point. The island group supports a high level of endemic and significant species and communities including a variety of vegetation types.

7. The Lord Howe Island Group was inscribed on the World Heritage List in December 1982. The criteria for listing are outlined on the United Nations Educational, Scientific and Cultural Organization website at http://whc.unesco.org/en/list/186/ and mentioned in paragraphs 11, 12 and 14.

8. The Lord Howe Island Group is included on the world heritage list under criteria (vii) and (x). It is included in the National Heritage list under criteria (a), (b), (c) and (e).

9. On June 2017, I decided that the proposed action would have clearly unacceptable impacts on the world heritage and National Heritage values of the Lord Howe Island Group, being matters protected by the provisions of Part 3 of the EPBC Act, and that Division 1A of Part 7 of the EPBC Act should apply to the referral of the proposed action.

Evidence or other material on which my findings were based

10. My decision to apply Division 1A of Part 7 of the EPBC Act to the referral of the proposed action, was informed by the following documents:

    A: Referral documentation for the proposed action received by the Department on 4 November 2016

    B: Advice from the Department regarding impacts of the proposal

    C: Lord Howe Island Group Statement of Outstanding Universal Value

    D: Strategic Plan for Lord Howe Island Group World Heritage Property

    E: My letter to the proponent provided on 17 May 2017

    F: A response from the proponent to my 17 May 2017 letter, received on 30 May 2017.

Findings on material questions of fact

World Heritage Listing

11. The Lord Howe Island Group was included in the World Heritage List in December 1982 for reasons including that it is an outstanding example of an oceanic island of volcanic origin, having a unique biota of plants and animals, providing unique breeding grounds for colonies of sea birds, containing features, formations and areas of exceptional natural beauty, and providing the habitat for rare and endangered species.

12. I found that in 2012, a decision was made by UNESCO to retrospectively adopt a Statement of Outstanding Universal Values for the Lord Howe Island Group for its listing under Criterion (vii) and Criterion (x) specified in UNESCOs 2012 *Operational Guidelines for the Implementation of the World Heritage Convention*.

Lord Howe Island Group's world heritage and National Heritage values

13. The Lord Howe Island Group is a 'declared world heritage property' and a 'National Heritage place' for the purposes of the EPBC Act.

14. The Lord Howe Island Group has a number of world and National Heritage values including that it is grandiose in its topographic relief and has an exceptional diversity of spectacular and scenic landscapes within a small area, including sheer mountain slopes, a broad arc of hills

enclosing the lagoon and Balls Pyramid rising abruptly from the ocean (from Criterion (vii) of the Statement of Outstanding Universal Value).

Strategic Plan for Lord Howe Island Group World Heritage Property

15. The Strategic Plan for Lord Howe Island Group World Heritage Property provides an overarching framework for consistent and coordinated management of the Lord Howe Island Group World Heritage Property by the Lord Howe Island Board and the various NSW and Commonwealth government agencies with responsibilities in the area.

    a. The objective of the Plan is to ensure that the management of the world heritage property complies with Australia's obligations under the World Heritage Convention.

16. The Plan states that scenic values on Lord Howe Island are vulnerable to visual impacts from inappropriate development and that the establishment of alternative technologies also have the potential to create intrusive visual impacts. The Plan also states that, to the extent feasible, efficient and non-polluting energy systems that are compatible with the protection of world heritage values are to be provided.

Likely impacts to the world heritage and National Heritage Values of the LHIG

17. Based on the information in the referral and supporting information, I found that the proposed action will have the following impacts on the world and National Heritage values of the Lord Howe Island Group:

    a. The turbines will be intrusive and highly visible in the landscape, including from popular vantage points, and will have a negative impact on the spectacular and scenic landscapes for which the Island Group is listed. As such, I considered that the turbines would create an intrusive visual impact.

    b. Although the proposed turbine models can be lowered manually for maintenance and protection during storms, it can be expected that the turbines will be in place most of their proposed 20-year lifetime, given the intention to use the wind resource for electricity generation. Given the lifetime of the turbines, the negative impacts will persist for decades.

18. I considered information provided by the Lord Howe Island Board in its referral and supporting information, including a letter I received on 30 May 2017 from the Board. This information included arguments that the proposed action would be consistent with other elements of the built environment on the island, would be a clean and sustainable energy solution that would reduce the Island's reliance on diesel, and that the proposed wind turbines would generally not be visible in the settlement area and would appear as distant structures in the landscape from key vantage points around the Island.

The proposed action will have clearly unacceptable impacts on the world heritage and National Heritage values of the LHIG

19. Based on the information in the referral and supporting information, I concluded that the proposed action would significantly damage or degrade the spectacular and scenic landscapes as described in the Lord Howe Island Group's Statement of Outstanding Universal Value. This would constitute a significant adverse impact to the Island Group's world and National Heritage values, which I considered could not be avoided or mitigated.

20. I concluded, given the nature of the project's impacts, that it would be an inappropriate development for Lord Howe Island.

21. In light of the matters discussed in paragraphs 17-20, I concluded that the proposed action would have clearly unacceptable impacts on the world heritage and National Heritage values of the Lord Howe Island Group, being matters protected by the provisions of Part 3 of the EPBC Act.

Reasons for decision

22. In light of my findings above, I was satisfied that the proposed action would have clearly unacceptable impacts on the Lord Howe Island Group's World and National Heritage values that are protected by the provisions of Part 3 of the EPBC Act.

23. I therefore concluded that Division 1A of Part 7 of the EPBC Act should apply to the referral of the proposed action.

Signed

……..

JOSH FRYDENBERG

June 2017

Annexure A – EPBC Act extracts

Section 68 of the EPBC Act relevantly provides:

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

(2) 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.

…

Section 74B of the EPBC Act provides:

(1) This Division applies to the referral of a proposal to take an action if, within 20 business days after the Minister receives the referral:

(a) the Minister considers, on the basis of the information in the referral, that it is clear that the action would have unacceptable impacts on a matter protected by a provision of Part 3; and

(b) the Minister decides that this Division should apply to the referral.

(2) If this Division applies to a referral, any other provisions of this Chapter that would, apart from this subsection, have applied to the referral cease to apply to the referral.

(3) Subsection (2) has effect subject to paragraph 74D(6)(a).

Section 74C of the EPBC Act provides:

(1) As soon as practicable after making the decision under paragraph 74B(1)(b) in relation to a referral, the Minister must give written notice of the decision to:

(a) the person proposing to take the action that is the subject of the referral; and

(b) the person who referred the proposal to the Minister (if that person is not the person proposing to take the action that is the subject of the referral).

(2) The notice must:

(a) state that the Minister considers that the action would have unacceptable impacts on a matter protected by a provision of Part 3; and

(b) set out the reasons for the Minister's decision.

(3) After receiving the notice under subsection (1), the person proposing to take the action may:

(a) withdraw the referral and take no further action in relation to the proposed action; or

(b) withdraw the referral and refer a new proposal to take a modified action to the Minister in accordance with Division 1; or

(c) request the Minister, in writing, to reconsider the referral.

Note 1: Section 170C sets out the procedure for withdrawing a referral

Note 2: A referral of a proposal to take a modified action will be a new referral for the purposes of this Chapter

FOI 190614
Document 3e

THE HON JOSH FRYDENBERG MP
MINISTER FOR THE ENVIRONMENT AND ENERGY

PDR: MS17-000763

s47F

Dear s47F

DECISION THAT ACTION IS CLEARLY UNACCEPTABLE
LORD HOWE ISLAND RENEWABLE ENERGY PROJECT – STAGE 2 WIND TURBINES
(EPBC 2016/7790)

Thank you for submitting a referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). I am writing to advise you of my decision about the proposed action to construct and operate two wind turbines on Lord Howe Island.

On the basis of the referral and other relevant information including your 30 May 2017 letter, I have decided that it is clear that the proposed action will have an unacceptable impact on the World Heritage values and National Heritage values of the Lord Howe Island Group and accordingly that Division 1A of Part 7 of the EPBC Act applies. I have attached to this letter a notice of my decision and a statement of reasons.

In relation to your referral and this decision, section 74C (3) of the EPBC Act sets out the options that are available to you in these circumstances. The options are to (a) withdraw the referral and take no further action in relation to the proposed action (b) withdraw the referral and refer a new proposal to take a modified action, or (c) request reconsideration of the referral.

If you have any questions about this decision, please contact Ms Kim Farrant, Assistant Secretary, Assessments (NSW, ACT) and Fuel Branch by email at kim.farrant@environment.gov.au, or telephone (02) 6274 s22 and quote EPBC reference number EPBC 2016/7790.

Yours sincerely

JOSH FRYDENBERG

FOI 190614
Document 3f

s22

From: s22
Sent: Monday, 21 November 2016 6:23 PM
To: s22 ; s22
Cc: s22
Subject: FW: ACTION: Request for Line Area Advice on Referral EPBC: 2016/7790 Lord Howe Island Renewable Energy Project - Stage 2 Wind Turbines [SEC=UNCLASSIFIED] [SEC=UNOFFICIAL]

Hi s22 ,

Please see the Species Conservation Advice for this referral below. Apologies for the delay.

Migratory Species Section Advice - EPBC: 2016/7790 Lord Howe Island Renewable Energy Project - Stage 2 Wind Turbines

A number of listed migratory seabirds inhabit Lord Howe Island (LHI) which is one Australia's most important seabird breeding islands, specifically for Flesh-footed Shearwater, Providence Petrel and Red-tailed Tropicbird. Migratory Species Section has concerns regarding the location of the wind turbines and the potential impact on Flesh-footed Shearwaters, Red-tailed Tropicbird and Wedge-tailed Shearwater. The location of the wind turbines is located close to a main breeding colony of Flesh-footed Shearwater (7,800 breeding pairs in 2003). Flesh-footed Shearwater from this colony are known to use the airspace above the paddock, particularly to access the breeding colony. Mortalities due to blade strike are considered likely without appropriate mitigation measures in place.

To reduce impacts to flesh-footed shearwater the proponent proposes to:

- **Curtail** turbine operation during the peak daily return period of Flesh-footed Shearwaters to the nesting and roosting colony i.e. from 15 minutes before dusk to 2 hours after dusk during the Flesh-footed Shearwater breeding season (15 September to 15 May).
- Develop an Adaptive Management Plan (AMP) that incorporate threshold numbers of mortalities for bird species which triggers an interim shutdown of the turbines.
- If the operation results in high mortalities of migratory bird species, turbine operation **curtailed** each night of the Flesh-footed Shearwater breeding season (15 September to 15 May), from 30 minutes before dusk until at least 60 minutes after dawn.

The Migratory Species Section has a number of concerns including:

- The term **curtailed** is not defined and as such it is unclear what a turbine actually looks like when it is **curtailed**? We are pretty sure it does not refer to being shut down.
- The referral talks about the development of a AMP. This plan is important as it will include mortality thresholds that will trigger an interim shut down. It is critical that the department is involved with and approves the mortality trigger.
- There is inconsistent use of terminology. The referral states that AMP thresholds will trigger an interim **shutdown**, but it later states that high mortality will trigger the turbines being **curtailed** each night.

In its present form, the it is considered possible that the proposed action will '*seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species*'.

The Migratory Species Section considers that the proposed action is likely to result in adverse impacts to listed migratory birds.

Regards
s22

From: s22
Sent: Monday, 7 November 2016 5:03 PM
To: Species Conservation Referrals <SpeciesConservationReferrals@environment.gov.au>
Cc: s22 s22
Subject: EPBC: 2016/7790 Lord Howe Island Renewable Energy Project -Stage 2 Wind Turbines [SEC=UNCLASSIFIED]

Hello

I am writing to request comments on the following EPBC project:

EPBC Number: 2016/7790

Referral Title: Lord Howe Island Renewable Energy Project -Stage 2 Wind Turbines

Project stage: Referral

Project Documentation:
http://spire.environment.gov.au/spire/855732/855003/101/Forms/Agency%20Assessment%20File/docsethomepage.aspx?ID=112413&FolderCTID=0x0120D52000970F08C636A20F4A9DB76F3BD06A4B6603005FF2AC3CE2EABC4B8FB469139C33A9CA&List=1b6e8bc1-d125-4b73-a016-170dd339d3a8&RootFolder=%2Fspire%2F855732%2F855003%2F101%2F2016-7790%20Lord%20Howe%20Island%20Renewable%20Energy%20Project%20-Stage%202%20Wind%20Turbines

Potential Issues:
With regards the Lord Howe Island Renewable Energy Project -Stage 2 Wind Turbines:

- Listed Threatened Species; and
- Listed Migratory Species.

Note: I am primarily concerned with birds and will follow up with specific questions.

Timeframe for providing advice:

Please email your advice to the primary EAB contact officer by **18 November 2016**.

If you are missing information to conclude your decision making/assessment, please let us know what further information you require **as soon as possible** so that we may stop the assessment clock and request this information from the proponent.

Name of primary EAB contact officer:

s22)

Name of secondary EAB contact officer:

s22)

s22 | **Assessment Officer**
Assessments NSW North | Assessments and Fuel Branch
Environment Standards Division | Department of the Environment and Energy
P: s22 | E: s22 @environment.gov.au
GPO Box 787 Canberra ACT 2601 | www.environment.gov.au

Heritage Advice

Referral EPBC 2016-7790 - Lord Howe Island Renewable Energy Project NSW

Action

The proponent, the Lord Howe Island Board (LHIB) is a statutory body established under the provisions of the *Lord Howe Island Act 1953*. The LHIB is charged with the care, control and management of Lord Howe Island and its affairs and trade.

The LHIB is proposing to construct and operate two wind turbines for the provision of electricity on a paddock of introduced pasture grasses surrounded by native vegetation, close to a power station and next to site proposed for an array of solar panels. The turbines would be 71 metres high (base to blade tip at highest point) or 55 metres base to hub. An access road 3.5 metres wide, in a nine metre wide cleared corridor, would require the clearance of 200 square metres of native vegetation, proposed to be offset by vegetation restoration works close to the subject site.

World Heritage property ✓ **National Heritage place** ✓ **Commonwealth marine area** ☐

Commonwealth land ☐ **Commonwealth action** ☐

World Heritage property and National Heritage place and relevant listed values

The Lord Howe Island Group was inscribed on the World Heritage List in December 1982 and is an outstanding example of oceanic islands of volcanic origin containing a unique biota of plants and animals, as well as the world's most southerly true coral reef. It is an area of spectacular and scenic landscapes encapsulated within a small land area, and provides important breeding grounds for colonies of seabirds as well as significant natural habitat for the conservation of threatened species.

The property meets two World Heritage natural criteria[1]:

(vii) - to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

(x) - to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

The Statement of Outstanding Universal Value for the Lord Howe Island Group includes the following descriptions of values under each criteria:

> **Criterion (vii):** The Lord Howe Island Group is grandiose in its topographic relief and has an exceptional diversity of spectacular and scenic landscapes within a small area, including sheer mountain slopes, a broad arc of hills enclosing the lagoon and Balls Pyramid rising abruptly from the ocean. It is considered to be an outstanding example of an island system developed from submarine volcanic activity and demonstrates the nearly complete stage in the destruction of a large shield volcano. Having the most southerly coral reef in the world, it demonstrates a rare example of a zone of transition between algal

[1] World Heritage criteria referencing has changed over time. At the time of listing the property was inscribed under the following two criteria:
(iii) Contain unique, rare or superlative natural phenomena, formations or features or areas of exceptional natural beauty, such as superlative examples of the most important ecosystems to man, natural features (for instance, rivers mountains, waterfalls), spectacles presented by great concentrations of animals, sweeping vistas covered by natural vegetation and exceptional combinations of natural and cultural elements.
(iv)Be habitats where populations of rare or endangered species of plants and animals still survive. This category would include those ecosystems in which concentrations of plants and animals of universal interest and significance are found.

and coral reefs. Many species are at their ecological limits, endemism is high, and unique assemblages of temperate and tropical forms cohabit.

The islands support extensive colonies of nesting seabirds, making them significant over a wide oceanic region. They are the only major breeding locality for the Providence Petrel (*Pterodroma solandri*), and contain one of the world's largest breeding concentrations of Red-tailed Tropicbird (*Phaethon rubricauda*).

Criterion (x): The Lord Howe Island Group is an outstanding example of the development of a characteristic insular biota that has adapted to the island environment through speciation. A significant number of endemic species or subspecies of plants and animals have evolved in a very limited area. The diversity of landscapes and biota and the high number of threatened and endemic species make these islands an outstanding example of independent evolutionary processes.

Lord Howe Island supports a number of endangered endemic species or subspecies of plants and animals, for example the Lord Howe Woodhen, which at time of inscription was considered one of the world's rarest birds. While sadly a number of endemic species disappeared with the arrival of people and their accompanying species, the Lord Howe Island Phasmid, the largest stick insect in the world, still exists on Balls Pyramid. The islands are an outstanding example of an oceanic island group with a diverse range of ecosystems and species that have been subject to human influences for a relatively limited period.

The full SOUV is at:

http://www.environment.gov.au/heritage/places/world/lord-howe/values

The Lord Howe Island Group was included in the National Heritage List on 21 May 2007 for values similar to its Outstanding Universal Value. For the purpose of this assessment World Heritage values are used as a surrogate for the property's National Heritage Values. Potential impacts are therefore discussed in terms of the property's Outstanding Universal Value rather than its National Heritage values.

Nature and extent of impacts on the World Heritage and National Heritage values

The nature and extent of impacts on World Heritage values under **criterion (vii) – the property contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance**:

> The proposed action is unlikely to have major adverse impacts on the Lord Howe Island Group's spectacular and scenic landscapes. The proposed location is at relatively low altitude and the relatively narrow profile of the turbines means that although they would be visible in the landscape, they would not dominate the landscape in an unacceptable visually intrusive way. The Landscape and Visual Impact Assessment report concludes that they would be visible from key vantage points at the north and south of the island, that visual sensitivity was high for all the assessed viewpoints around the site, and that they would have a moderate visual impact within the local context (Referral page 16).

The nature and extent of impacts on World Heritage values under **Criterion (x)** - **contains the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation:**

> The main potential impacts would be on avian fauna and a species of bat, specifically 7 seabird species, 7 terrestrial bird species, 2 migratory bird species and one microbat species. Only 2% of bird flights have been recorded above 24 metres above ground level (Biodiversity Assessment Report page 22), compared to the lowest point of the turbine blade tips being 39 metres above ground level, and 'the turbines pose a low probability of blade strike to the Large Forest Bat from random interactions' (Bat Impact Report page 12). The proposed site of the turbines is a paddock supporting 'exotic pasture of little or no conservation value' (Biodiversity Assessment Report page 28). The main impact of the proposal on flora would be the loss of 200 square metres of native vegetation (Greybark-Blackbutt Closed Forest) for the access road easement. There is no reason given for the nine metre wide cleared corridor for the 3.5 metre wide access road. This width of

clearing seems greater than necessary for a minor access road, and should be reduced as much as practicable.

Tables 6.1 and 6.2 specify safeguards to avoid and mitigate impacts on fauna, flora and ecological communities and it is considered that if these measures are implemented, it is unlikely that there would be a major impact on fauna, flora and ecological community values.

Summary of Advice

The proposed action is unlikely to cause one or more of the World Heritage values to be lost, degraded or damaged, or notably altered, modified, obscured or diminished, particularly if the impact mitigation measures presented in the documents accompanying the referral are implemented and if the width of the cleared road easement is reduced as much as practicable.

Cleared By

s22

Director
Natural Heritage Section

November 2016

Sources

1. Nomination of the Lord Howe Island Group by the Commonwealth of Australia for inclusion on the World Heritage List (1981)
2. Statement of Outstanding Universal Value
3. Referral Documentation

Australian Government
Department of the Environment and Energy

World Heritage Places - Lord Howe Island Group - Outstanding Universal Value

New South Wales

Statement of Outstanding Universal Value

World Heritage Committee information for Lord Howe Island Group

Brief synthesis

The Lord Howe Island Group is an outstanding example of oceanic islands of volcanic origin containing a unique biota of plants and animals, as well as the world's most southerly true coral reef. It is an area of spectacular and scenic landscapes encapsulated within a small land area, and provides important breeding grounds for colonies of seabirds as well as significant natural habitat for the conservation of threatened species. Iconic species include endemics such as the flightless Lord Howe Woodhen (*Gallirallis sylvestris*), once regarded as one of the rarest birds in the world, and the Lord Howe Island Phasmid (*Dryococelus australis*), the world's largest stick insect that was feared extinct until its rediscovery on Balls Pyramid.

About 75% of the terrestrial part of the property is managed as a Permanent Park Preserve, consisting of the northern and southern mountains of Lord Howe Island itself, plus the Admiralty Islands, Mutton Bird Islands, Balls Pyramid and surrounding islets. The property is located in the Tasman Sea, approximately 570 kilometres east of Port Macquarie. The entire property including the marine area and associated coral reefs covers 146,300 hectares, with the terrestrial area covering approximately 1,540 hectares.

Criterion (vii): The Lord Howe Island Group is grandiose in its topographic relief and has an exceptional diversity of spectacular and scenic landscapes within a small area, including sheer mountain slopes, a broad arc of hills enclosing the lagoon and Balls Pyramid rising abruptly from the ocean. It is considered to be an outstanding example of an island system developed from submarine volcanic activity and demonstrates the nearly complete stage in the destruction of a large shield volcano. Having the most southerly coral reef in the world, it demonstrates a rare example of a zone of transition between algal and coral reefs. Many species are at their ecological limits, endemism is high, and unique assemblages of temperate and tropical forms cohabit.

The islands support extensive colonies of nesting seabirds, making them significant over a wide oceanic region. They are the only major breeding locality for the Providence Petrel (*Pterodroma solandri*), and contain one of the world's largest breeding concentrations of Red-tailed Tropicbird (*Phaethon rubricauda*).

Criterion (x): The Lord Howe Island Group is an outstanding example of the development of a characteristic insular biota that has adapted to the island environment through speciation. A significant number of endemic species or subspecies of plants and animals have evolved in a very limited area. The diversity of landscapes and biota and the high number of threatened and endemic species make these islands an outstanding example of independent evolutionary processes.

Lord Howe Island supports a number of endangered endemic species or subspecies of plants and animals, for example the Lord Howe Woodhen, which at time of inscription was considered one of the world's rarest birds. While sadly a number of endemic species disappeared with the arrival of people and their accompanying species, the Lord Howe Island Phasmid, the largest stick insect in the world, still exists on Balls Pyramid. The islands are an outstanding example of an oceanic island group with a diverse range of ecosystems and species that have been subject to human influences for a relatively limited period.

Integrity

The boundary of the property includes all areas that are essential for maintaining the ecosystems and beauty of the property. It includes all of the above water remains of the ancient shield volcano and surrounding reefs and a substantial proportion of the Lord Howe Island and Balls Pyramid seamounts. The island component of the property is largely Permanent Park Preserve (PPP) and the surrounding waters are Marine Parks. The land area not included in the PPP is managed to ensure that the property's values are maintained. The inscribed property would be strengthened by the inclusion of the entire Commonwealth Marine Park.

At time of inscription concern was raised with respect to a proposal to construct four telecommunications masts without thorough assessment by way of an Environmental Impact Statement. These were then built, although today no longer exist. Other potential threats to the integrity of the property include development pressures, introduced plants and animals and visitor / tourism pressures. Since inscription, a programme improving the conservation status of the Lord Howe Woodhen, and the successful eradication of feral pigs, cats and almost eradication of goats has contributed significantly to the enhancement of World Heritage values beyond their status at listing.

Protection and management requirements

The property is subject to a comprehensive protection, management and monitoring regime which is supported by adequate human and financial resources.

All World Heritage properties in Australia are 'matters of national environmental significance' protected and managed under national legislation, the *Environment Protection and Biodiversity Conservation Act 1999*. This Act is the statutory instrument for implementing Australia's obligations under a number of multilateral environmental agreements including the World Heritage Convention. By law, any action that has, will have or is likely to have a significant impact on the World Heritage values of a World Heritage property must be referred to the responsible Minister for consideration. Substantial penalties apply for taking such an action without approval. Once a heritage place is listed, the Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed.

Importantly, this Act also aims to protect matters of national environmental significance, such as World Heritage properties, from impacts even if they originate outside the property or if the values of the property are mobile (as in fauna). It thus forms an additional layer of protection designed to protect values of World Heritage properties from external impacts.

In 2007 the Lord Howe Island Group was added to the National Heritage List in recognition of its national heritage significance.

On-ground management of the terrestrial component of the property is by the Lord Howe Island Board under the statutory framework of the Lord Howe Island Local Environment Plan (2010), which emphasises World Heritage values. Planning for the Permanent Park Preserve is the responsibility of the New South Wales Department of Environment, Climate Change and Water. Management of the marine areas (both State and Commonwealth waters) is the responsibility of the New South Wales Marine Park Authority.

Key threats requiring ongoing attention include fishing, tourism, invasive animals, plants and pathogens, and anthropogenic climate change. Visitor numbers are limited to control impacts and new Marine Park management and zoning plans are being developed for state and Commonwealth waters. Measures are being taken to prevent the introduction of new invasive plant species while significant resources are being directed towards the management and eradication of weeds. A proposal to eradicate introduced rodents is being developed.

FOI 190614
Document 3i

THE HON JOSH FRYDENBERG MP
MINISTER FOR THE ENVIRONMENT AND ENERGY

EPBC Ref: 2016/7790

s47F

Dear s47F

I am writing to advise you that I am currently considering the Lord Howe Island Renewable Energy Project – Stage 2 Wind Turbines (EPBC 2016/7790), Lord Howe Island, New South Wales proposed by the Lord Howe Island Board, which was referred for consideration under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The proposed development is on the World and National Heritage listed Lord Howe Island Group which, among other attributes, is considered to be an outstanding example of oceanic islands of volcanic origin and an area of spectacular and scenic landscapes encapsulated within a small island area. The Island meets two World Heritage natural criteria, including that it contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance, and similar National Heritage values.

I am concerned that the proposed placement of the two wind turbines may introduce an intrusive element with a substantial and long term impact on the Island's World and National Heritage values. There is a real chance or possibility that this may cause one or more of the World and National Heritage values to be lost, degraded, obscured or diminished, an outcome I would consider to be unacceptable.

I expect to make a decision about the referral in the coming weeks including whether it is a not a controlled action, not a controlled action if carried out in a particular manner, a controlled action or clearly unacceptable. Should I decide the action is clearly unacceptable, you will have the following options under the EPBC Act:

- withdraw the referral and take no further action in relation to the proposed action; or
- withdraw the referral and refer a new proposal to take a modified action; or
- request that the referral decision be reconsidered.

Additional options available to you are to withdraw or vary the proposal at any time ahead of the referral decision being made having regard to the World and National Heritage values of the Island and other nationally protected matters. I would encourage you to discuss options for this proposal with the Australian Renewable Energy Agency.

The Department is also available to discuss the matter further with the Board. If you have any questions about the referral process or this letter, please contact Ms Kim Farrant, Assistant Secretary, Assessments (NSW, ACT) and Fuel Branch by email at kim.farrant@environment.gov.au or telephone s22 and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

JOSH FRYDENBERG

s47F

Lord Howe
ISLAND BOARD

Administrative Office
P.O. Box 5
Lord Howe Island 2898

Phone: 02 6563 2066
Facsimile: 02 6563 2127
Email: administration@lhib.nsw.gov.au

30 May 2017

The Hon Josh Frydenberg MP
Minister for the Environment and Energy
Parliament House
CANBERRA ACT 2600
BY EMAIL: josh.frydenberg.mp@aph.gov.au

Dear Minister,

I am writing in reference to your letter received on 17 May 2017 regarding the Lord Howe Island Renewable Energy Project – Stage 2 Wind Turbines (EPBC 2016/7790).

In response to the concerns raised in your letter, and following discussions with your Department representatives and ARENA, I would like to provide further information about the project to be considered as part of the referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The attached paper provides details addressing the following key areas:

1. **Community support for the project**
   Lord Howe Island is a long-established and enduring community settled in the mid-1800s. Since that time, and prior to World Heritage listing, infrastructure has been developed on the Island to meet the community's needs including buildings, roads, electricity facilities, an airport and wharf. Over the last thirty years, the Lord Howe Island community has worked on an alternative to the diesel powered electricity generators, concluding in 2010 in the design of a hybrid renewable energy system consisting of solar, wind turbines, battery storage and back-up diesel generator. The hybrid system will provide an affordable, secure, reliable and sustainable energy supply for the Island. Since funding was achieved from ARENA in 2014, the introduction of a renewable energy system on the Island has been the subject of an extensive community engagement process and there is generally good community support for the system.

2. **Impact of wind turbines**
   The two wind turbines proposed for the Island are relatively small and designed for remote locations with low demand for electricity. The proposed location of the wind turbines was selected through a community process considering a number of alternative locations around the Island and taking into account access to a good wind resource, distance from residences and limiting noise and visual impact. The wind turbines will not be able to be seen from most locations in the settlement area, and as distant structures in the landscape from key vantage points around the Island. Specialist assessment has concluded that the proposal will not result in significant aesthetic impacts to World Heritage and National Heritage values.

3. **Alternatives to wind turbines**
   The proposed hybrid renewable energy system includes both solar and wind turbines to enable a diversity of supply over day and night, to maximise the reduction in diesel consumption, and reduce the risks to marine and land environments from fuel management. The solar only option, delivering the same diesel savings of the hybrid solution (67%), has been considered and evaluated. The constraints associated with the solar only option are limits on the space available on the Island with good solar orientation, the visual impact of some solar array location options, the size of the battery required to store power overnight, the limited diesel savings achieved and the considerably higher cost. The cost of the solar only option has been assessed as being 50% above the budget of the current hybrid system project, and far beyond the funding available for the renewable energy project.

I urge you to take into account this additional information in assessing the Lord Howe Island wind turbine referral because of the importance of the hybrid renewable energy system for the sustainability of Lord Howe Island.

Yours sincerely

s47F

Enclosed:
Attachment - Response to Minister Frydenberg's Letter of 17 May 2017

CC:
Matt Cahill, First Assistant Secretary, Environment Standards Division
Kim Farrant, Assistant Secretary, Assessments (NSW, ACT) & Fuel, Environment Standards Division

Attachment - Response to Minister Frydenberg's Letter of 17 May 2017

1. Background

Lord Howe Island is a long established and enduring settled community within a World Heritage setting. Infrastructure to support the community has been developed since the first settlement in the mid-1800s, including buildings, roads, electricity assets, the airport, wharf, recreation and tourism facilities, amongst others.

The Lord Howe Island Hybrid Renewable Energy project is the result of more than three decades of investigations and discussions on the Island to secure its energy future. Wind turbines have been recurring elements of this discussion since the CSIRO proposed them in the 1980s and the Sustainable Energy Development Authority (SEDA) again in the 2000s.

The most recent efforts to secure the Island's energy supply commenced in earnest in 2010. Through the community led Sustainable Energy Working Group (SEWG), the Island's Energy Supply Road Map (Road Map) was adopted in 2012 by the Lord Howe Island Board (Board) to highlight the steps to finally achieve the Island's goals of having an affordable, secure, reliable and sustainable energy system.

The hybrid system, designed in close consultation with community, consists of a 450 kilowatt (kW) Solar Photovoltaic farm (Solar PV), 400kW from up to two small wind turbines and a 400kW battery, all integrated with the existing diesel generators.

The momentum continued in 2014 when the Board was successful in obtaining $4 million in funding from ARENA. ARENA recognised the value of the project in demonstrating the benefits and challenges of designing, building and operating a high penetration, hybrid renewable energy system on a remote Island.

The Board has also secured a $5.9 million loan from the NSW Treasury to fund the remainder of the $10.3 million project.

Since 2014, the Board has committed almost $2 million to the development of the project, and will soon commence on-ground construction of the solar PV component, with an access road due to commence in June 2017.

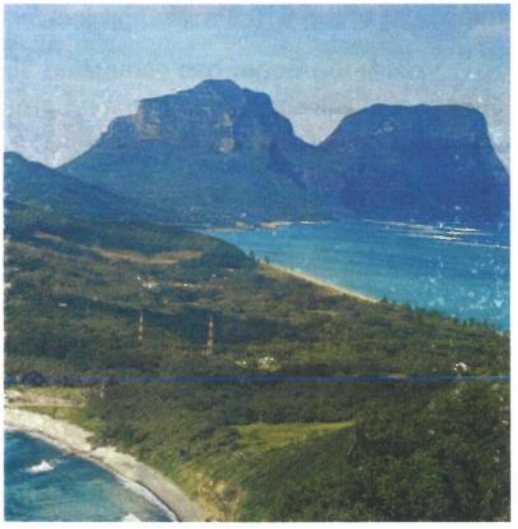
The proposed wind turbines are a contemporary technological solution to the problems of energy costs, fuel transport risks and climate change. The continued importation of large quantities of diesel for electricity generation is not considered to be economically or ecologically sustainable. It is noted that, under the UNESCO (2008) Operational Guidelines for World Heritage properties, human activities may be 'consistent with the outstanding universal value of the area where they are ecologically sustainable'.

We consider the hybrid power system to be an ecologically sustainable response to the energy needs of the island at this time. Specialist assessments and social survey results both suggest that the aesthetic impacts of the proposal would be minor, and interpreted positively within a sustainable management context. This underpins our conclusion that the proposal will not result in significant aesthetic impacts to World Heritage and National Heritage values.

2. Quick Facts

- The combined Solar PV, wind turbines and battery solution aims to reduce diesel consumption by 67% from 540,000 litres per year to 180,000 litres per year.
- A 450kW Solar PV and battery only solution would only deliver a 36% reduction in annual diesel consumption.
- The hybrid solution is the only affordable solution to achieve the ambitious diesel savings.
- The hybrid solution provides a diversity of supply, which naturally smooths the renewable energy supply by providing energy through the night, on cloudy days and during winter when solar production is low or non-existent. This means the size and cost of the battery can be reduced.
- The higher the diesel savings, the greater the protection for the Island community from future diesel price rises, which will affect the future price of electricity.
- The higher the diesel savings the lower the risk to the Island's marine and land environment through reduced potential for spills.
- The Island is at the end of the diesel fuel supply chain, so the security of that fuel supply is improved under a hybrid solution.
- Wind turbines and Solar PV are entirely reversible, and at the end of their 20 year life may be replaced with new technology.
- More private Solar PV is not effective. Most of the 104kW of private Solar PV already installed in the Island is affected by shading and poor orientation, which has resulted in their output over the last 4 or 5 years being an average of 20-30% lower than expected.
- The whole Island is not a pristine environment. 177 years of human occupation have resulted in impacts on the Island through land clearing and built infrastructure, such as buildings, an airport, aviation towers, a wharf and coastal erosion protection works.
- The Island achieved World Heritage Status in 1982 even with the presence and impact of the existing infrastructure.

The image here is from a book published in 1974, showing the aviation towers as viewed from Malabar at the northern end of the Island.



3. Wind Turbines

3.1 Proposed Project Site

The Board's project nominates a parcel of land adjacent to the existing Powerhouse near Transit Hill and Middle Beach for the infrastructure. The site already accommodates a range of infrastructure including the Airservices Australia navigation towers. The area contains relatively poor soils and is not prime agricultural land, and is used for a small herd (< 10) of dairy cattle. Importantly, the lessee has provided agreement to the resumption of part of the lease for the project.

The proposed site was selected because:

- it is in close proximity to the existing powerhouse and electricity network; and
- it is one of the least visible cleared pieces of elevated land on the Island.

3.2 Proposed Wind Turbines

The two small wind turbines proposed for Lord Howe Island are the result of significant research and assessment. The Island poses some challenges for the delivery, installation and operation of wind turbines, which narrows the field of potential turbine manufacturers and models.

The key factors in the selection of the wind turbines have included:

Power output	The Island's low electricity demand only requires small turbines in the range of 100 – 200kW.
Access and Construction	Narrow roads for site access limit the size of turbines and blades. The Island's crane has a small lifting capacity, so turbines which require a crane to install the nacelle and blades are not possible. Based on this, a tilt-up and down wind turbine with guy wires and slender pole is required.
Commercially proven	The isolation and remoteness of the Island requires that a turbine has a proven track record of reliable operation, so that the Island's reliable and secure electricity supply is not affected.

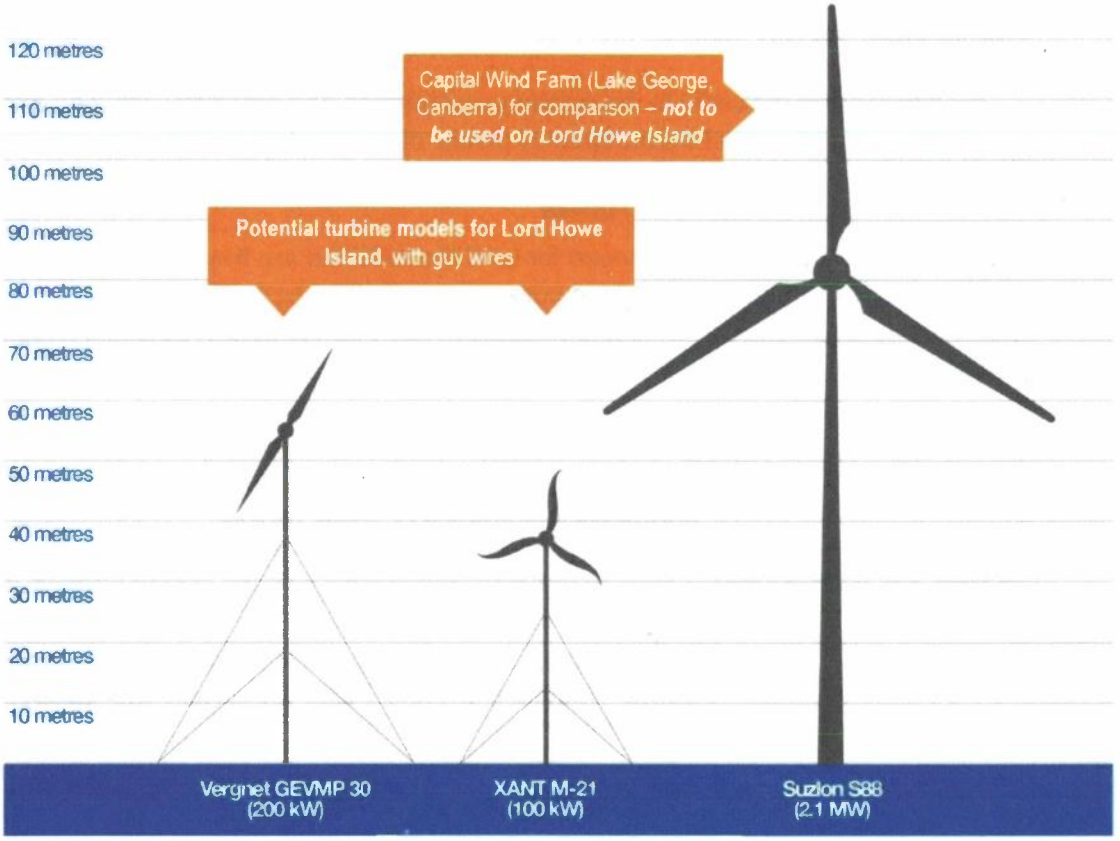
The assessment of the impact of the proposed turbines on visual and aesthetic values, community and social values, the acoustic environment and World Heritage and National Heritage values have been assessed in detail in supporting information within the project's Environmental Report attached to the Referral. The visual, noise and social assessments conducted by specialist consultants are based on established methodology, empirical surveys and extensive community and visitor consultation.

The assessments of significance in the project's Environmental Report address the listing criteria and the Commonwealth Significant Impact Guidelines. The assessments conclude that the proposal would not be likely to significantly affect the visual and

aesthetic values of the island, and we believe these conclusions are justified and defendable.

The following image details the dimensions and scale of two of the turbine options for the Island in comparison to a turbine near Lake George, NSW.

Turbine	Vergnet	XANT	Suzlon
Hub height	55 metres	38 metres	80 metres
Blade length	15 metres	10.5 metres	44 metres
Maximum blade tip height	70 metres	48.5 metres	124 metres
Number of blades	2 blades	3 blades	3 blades



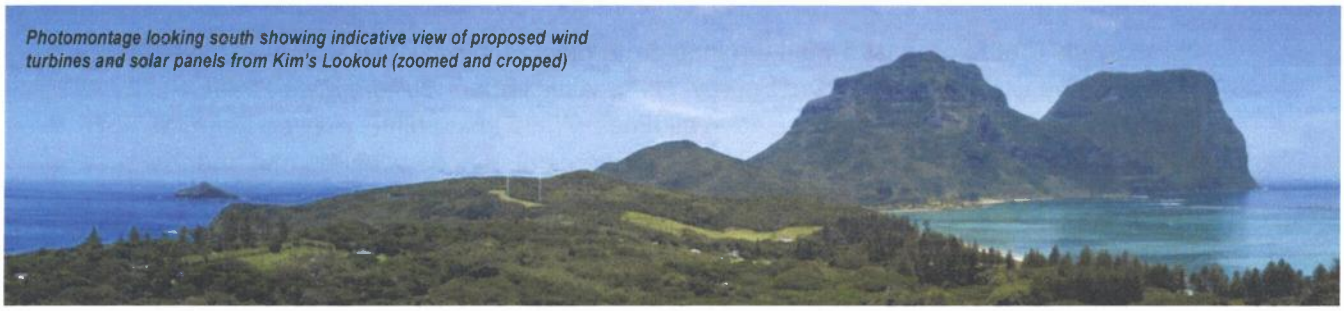
3.3 Close range views

The proposed turbines would be sited on a low ridge in the central lowlands of the island, in a cleared paddock between the settlement and the airport. The Visual Impact Assessment (attached to the Referral) found views to the turbines will be limited on the island because of the dense tree growth in the settlement area, although close range views will be available from some areas. The turbines may become a dominant element viewed from some points in the northern settlement area. Screen planting is an available option to mitigate local close range impacts.

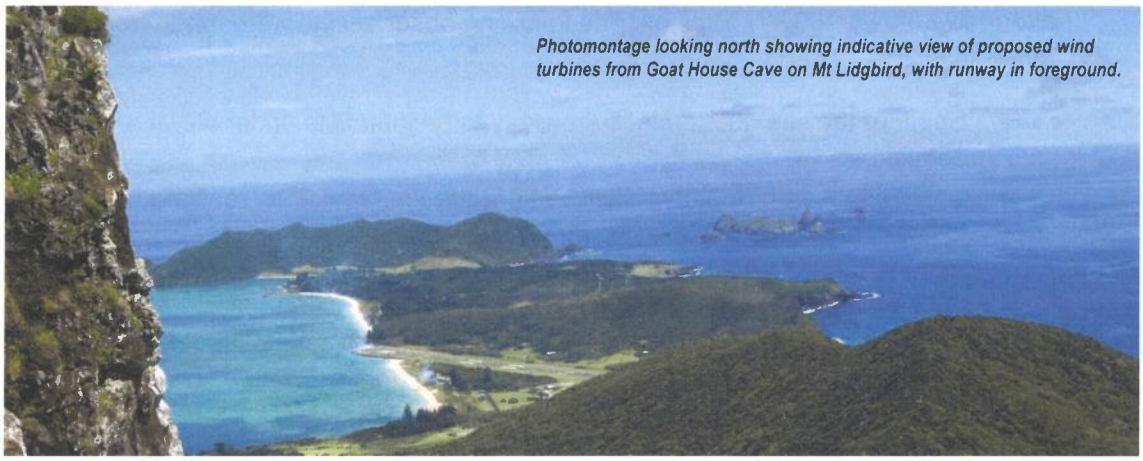
3.4 Long range views

Elevated views from walking tracks in the southern and northern hills, and from an aerial approach, would show the turbines to be small and distant features set in a wider context of native vegetation interspersed with existing settlement infrastructure. The proposed turbines are a similar scale to the existing Airservices Australia towers near the project

site. The existing airstrip the south of Transit Hill is a major modification to the landscape and would dwarf the turbines. While the wind turbines would affect localised visual character, the unique visual features which characterise Lord Howe Island would remain the dominant elements in the landscape. The viewpoint images in the Visual Assessment Report, some of which are shown below, clearly show the relative scale and impact of the turbine from these viewpoints.



Photomontage looking south showing indicative view of proposed wind turbines and solar panels from Kim's Lookout (zoomed and cropped)



Photomontage looking north showing indicative view of proposed wind turbines from Goat House Cave on Mt Lidgbird, with runway in foreground.

3.5 Aesthetic Responses

Lord Howe Island is not total wilderness. Evidence of human settlement is readily apparent from the air and over the central settled section of the island. Human structures have physical presence, but they also carry intangible meaning for viewers. Aesthetic responses to developments hinge on knowledge, values and interpretation. While the proposed wind turbines would be visible from some viewpoints, we contend that the turbines are likely to be seen as symbolising a modern solution to sustainable living in a remote island location.

3.6 Wind Turbine Noise Assessment

3.6.1 Background noise

Background noise is the ambient noise environment, made up of sounds from the ocean, wind, traffic and devices like refrigerators. Intermittent noise events such as planes or dogs barking are not considered part of the background noise unless they are present for at least 90% of the time. Generally speaking, noise from wind turbines increases as the wind speed increases, but so does the background noise. As part of the extensive

technical noise assessments undertaken for the project, background noise measurements and meteorological monitoring was carried out at four locations on the Island, on two occasions in 2015, to account for seasonal variations in insect activity and prevailing winds. Measurements show that existing background noise on the Island is high due to natural noise sources; including wind in palm trees, surf on the reef and beaches, and insects in summer months. This means that noise from the turbines would be effectively masked.

Noise levels for the proposed wind turbines are predicted to be below criteria in the NSW Planning and Environment's *Wind Energy: Noise Assessment Bulletin (Dec 2016)* (Guidelines), for all areas of the Island at all times. While the turbines may be heard at some locations, the most stringent criteria (e.g. the night period) would be met and the risk of adverse impacts to the community and amenity of the Island is low.

3.6.2 Audible noise

Wind moving across the blade is the dominant noise source for most modern turbines. In May 2016, predicted noise levels were modelled for the two 200 kW turbines and the alternative of two 100 kW turbines. The following observations were made from the modelling:

- South of the site, the turbines are likely to be inaudible under all wind speed conditions.
- Towards the centre of the Island, where the majority of the resident population is located, predicted noise levels for wind speeds above 6 m/s (11.5 knots) indicate that the turbines may be audible around 50% of the time in winter and 25% of the time in summer.
- To the north of the site, predicted noise levels for wind speeds greater than 6 m/s (11.5 knots) indicate that the turbines may be audible around 10% of the time during summer months and 50% of the time in the winter.
- To the west of the site, , predicted noise levels for wind speeds greater than 6 m/s (11.5 knots) indicate that the turbines may be audible around 50% of the time during the winter and 25% of the time in summer months.

3.6.3 Infrasound

Measurements of similar turbines at Coral Bay, Western Australia were used to analyse infrasound. The Coral Bay assessment found that while the operating turbines generated a small amount of infrasound, it was negligible in comparison with infrasound generated by natural sources such as wind and ocean waves. All measured infrasound was less than the most stringent thresholds of human perception, meaning that infrasound was neither audible nor physiologically perceptible.

3.6.4 Management of impacts

Once commissioned, operational noise monitoring would confirm actual turbine noise levels and compliance with the criteria. Noise management options in the Adaptive Management Plan to be prepared by the Board would include:

- identifying conditions and times that lead to undue impacts

- sector management (turning off one or both turbines during specific wind directions/strengths or times)
- consulting with the manufacturer to identify noise control options.

3.7 Wind Turbine Alternatives

3.7.1 Wind Turbine Sites

Suitable sites for wind turbines on the Island have been the subject of many investigations over the last three decades. In the 1980s, site selection and environmental impact studies were conducted for a number of sites in the northern half of the Island including Malabar in the north, Middle Beach Common (the site for the current proposal), Transit Hill and south of the airport.

In the 2000s, the same site south of the airport was chosen for a wind turbine under a SEDA program, but never built as the proposal from a contractor was not commercially satisfactory for the Island.

In early 2011, through the efforts of the Sustainable Energy Working Group (SEWG), a community survey was conducted to understand the Island community's site preference for a hybrid renewable energy solution.

The sites that were chosen for the survey were based on the SEWG's preferred sites for wind turbine placement from a visual perspective and ignored all of the other technical, logistical and land tenure issues that may exist.

The survey results showed that of the 33 responses:

- 5 selected sites in the Lagoon
- 6 selected the eventually proposed site north of Transit Hill
- 7 selected the site south of the airport previously considered in the 1980s and 2000s
- 10 selected a site beneath Intermediate Hill to the east of the airport
- the remainder selected other unsuitable sites

The selection of the site north of Transit Hill as the preferred one, and the discounting of the other sites was based on:

- The Lagoon site was highly visible, had construction challenges and was likely to be expensive.
- For both of the airport sites:
    - They posed difficulties with regard to aircraft operations, as any structure greater than 25m high in these locations would have represented an infringement on the aerodrome's Obstacle Limitation Surface (OLS) and would not have been approved by the Civil Aviation Safety Authority.
    - The higher than desirable turbulence and blocking of prevailing wind caused by the mountains to the south and east would mean higher wear and tear on the wind turbines and lower outputs.
    - The sites were highly visible to all visitors and residents on their journeys to and from the airport, on the only north-south link on the Island.

3.7.2 Wind Turbine Colours

The following images show how the two wind turbines (Vergnet) will look like with different coloured poles and blades.

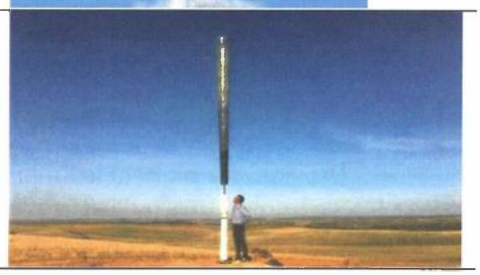
Photomontage looking south from off-shore near Middle Beach on eastern side of Island showing indicative view of proposed wind turbines – white paint.

Photomontage looking south from off-shore near Middle Beach on eastern side of Island showing indicative view of proposed wind turbines – grey \ galvanised paint.

3.7.3 Alternative Wind Turbine Models and Numbers

The optimum wind turbine output for the project is around 400kW. The project proposes using a maximum of two turbines to achieve as close as possible to this optimum.

There are many types of wind turbines available, many of which have been assessed in developing the project to the current solution. The alternatives assessed and their disadvantages are shown below.

TYPE	REASONS FOR NOT USING	
Vertical Axis	1. Not made at the kW output required or the height required to access the more efficient wind. 2. More turbines would be required. 3. Blades are thicker and more visible. 4. History of unreliable performance to date.	
Bladeless	1. Still in prototype phase. 2. Large number required to generate at required output of 200-400kW. 3. Inefficient performance due to surrounding vegetation impacts.	
Lower kW Output	1. More turbines required to generate at required output. 2. Greater visual impact. 3. Higher maintenance costs.	
Shorter in Height	1. Will operate in dirty or disturbed areas below top of vegetation. 2. Higher maintenance costs and potential for failure due to disturbed air flow. 3. Less efficient operation due to disturbed air flow, potentially required more turbines to match required output.	

4. Alternatives to Wind Turbines

4.1 Land Availability

The Island's renewable energy program has been deliberately designed as a hybrid system, combining existing diesel with Solar PV, batteries, and two small wind turbines,

so that the highest penetration of renewable energy is achieved in balance with the Island's limited land resources.

Lord Howe Island is very small, being only 11 km long and between 2.0 km and 0.3 km wide. The Island has an area of 14.55 km^2 (1,455 Hectares) of which 398 Ha is in the central settlement area. The northern and southern hills of the Island and a central section form the Permanent Park Preserve (equivalent to a National Park) and occupy up to three quarters of the available land on the Island. Significant Native Vegetation is protected on the Island, not allowing removal or development, so the focus of available land is on that already cleared.

4.2 Solar Only Solution – 36% Diesel Savings

A solar only solution, delivering 36% annual diesel savings, is considered a fall-back option should approvals not be obtained for the hybrid solution involving wind turbines. This solution is feasible, but is not considered optimal as it does not provide the level of fuel reduction to adequately meet the objectives of the project.

Under this option, 350,000 litres of diesel per annum would continue to be delivered to the Island, double that of the hybrid solution. The continued reliance on diesel for the majority of the Island's electricity needs does not:

- Provide the highest level of the protection to the Island community from future diesel price rises, which will affect the future price of electricity.
- Deliver the lowest risk to the Island's marine and land environment through reduced potential for spills.
- Deliver the highest level of fuel supply security.
- Adequately address the need to respond to climate change threats to the Island.

4.3 Solar Only Solution – 67% Diesel Savings

Extending on the previous section, a solar only solution, delivering 67% annual diesel savings (matching the hybrid solution) was considered in the development of the renewable energy solution for Lord Howe Island.

The cleared areas of the Island have been assessed for their suitability for placement of Solar PV. The assessment of suitability considers the following matters:

1. Flooding and known wet areas where construction will be difficult and access for maintenance will not be guaranteed.
2. Land tenure arrangements – Perpetual Leases where residences or businesses are established are not appropriate, but Special Leases where agricultural activities are underway are most appropriate.
3. Site access for construction including running buried cables back to the electricity network.
4. Steepness of land.
5. Solar orientation
6. Known future uses such as wastewater irrigation.
7. Much of the Foreshore Zone on the western edge of the Island, and adjacent to the Lagoon, is unavailable due to its high value as a recreational and visitor asset, and the high visual impact from the placement of structures in these areas.

Of the available 48 Ha of cleared land on the Island, 43 Ha of which is used for grazing, 12 Ha has been considered potentially suitable for Solar PV, following the above suitability assessment. A selection of sites from these 12 Ha were then prioritised for further detailed analysis, based on their superior solar access and ease of construction.

Working with these sites, consultants Jacobs have modelled and analysed the capacity and output of Solar PV on these areas. The results of this analysis are shown in Table 1 below.

Table 1 – Solar PV Only Solution to Reduce Diesel Consumption by 67%

(All costs excluding GST and contingency)

Solar PV	1,386kW (say 1.4MW)
Battery Energy Storage System (BESS)	954 kW / 3780 kWh
No. of Solar Panels	4,400
Annual Output	2,143 MWh pa
Diesel Savings	365,717 L per annum
Solar PV, BESS and Control System Capital Cost	$10.5M
Sunk Costs to 21 Apr 2017	$1.8M
Future Project Costs (eg. Network Upgrade, Road Construction, Design & Documentation, Project Management, Site Supervision)	$3.2M
TOTAL SOLAR ONLY	**$15.5M**
Future battery replacement cost at year 10	$2.2M

The total area occupied by a 1.4MW solar farm(s) is 3 Ha, all of which is agricultural land and represents 7% of the available agricultural land for grazing. The independence and self-sufficiency that stems from Island residents being able to raise and slaughter their own beef cattle for consumption is important, as are the links to the cultural history of the Island.

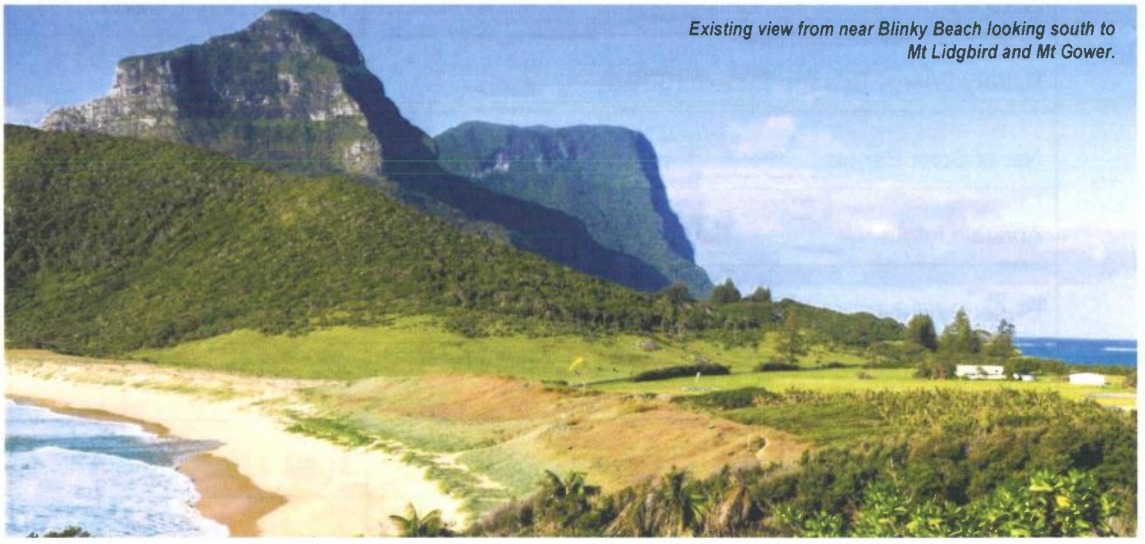
The capital cost of the Solar only (67%) solution described above is estimated to be $15.5 million (excl GST and contingency). This includes costs to date on the project. The budget for the hybrid solution is $10.3 million (excl GST), so the Solar only (67%) solution would be 50% higher than the project's budget, and therefore not considered affordable. In addition, the battery would need to be replaced 10 years after installation, which under the hybrid solution would cost approximately $656,000 (excl GST), and for

the Solar only (67%) solution, this cost would increase to $2.2 million (excl GST), which is not included in the budget for the project, and would need to be sought from NSW Treasury by the Board.

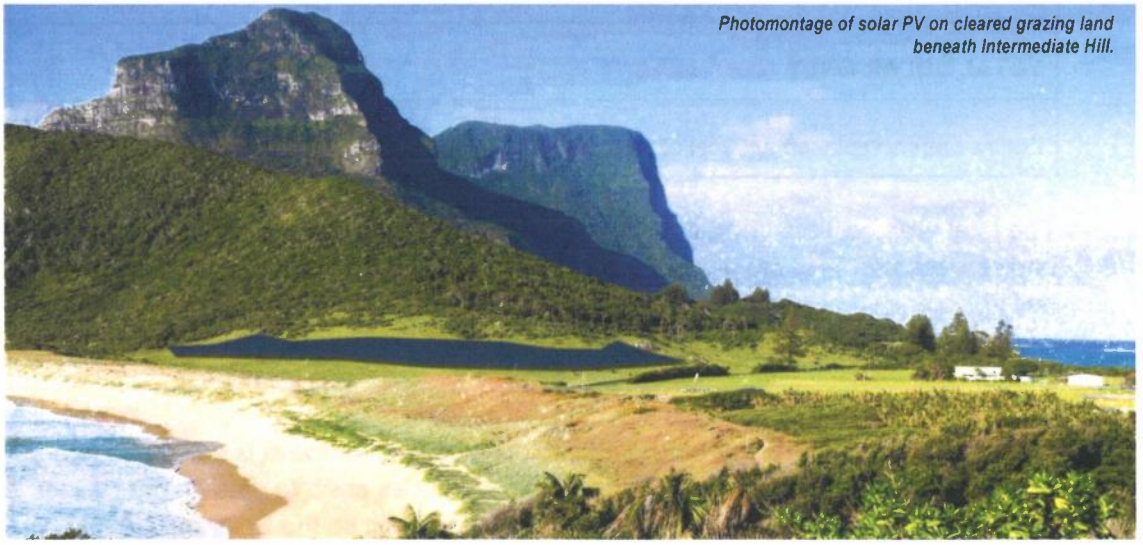
4.3.1 Visual Impact

The images below show a preliminary layout of the Solar PV on the preferred site to achieve a Solar only (67%) solution. The 1.1 Ha area of Solar PV represents the only feasible site on the Island which could be used to achieve the 67% target.

The site beneath Intermediate Hill to the east of the airport is highly visible to residents and tourists riding, walking and driving along Lagoon Road, on their way to the airport, the waste management facility and to access the southern part of the Island.

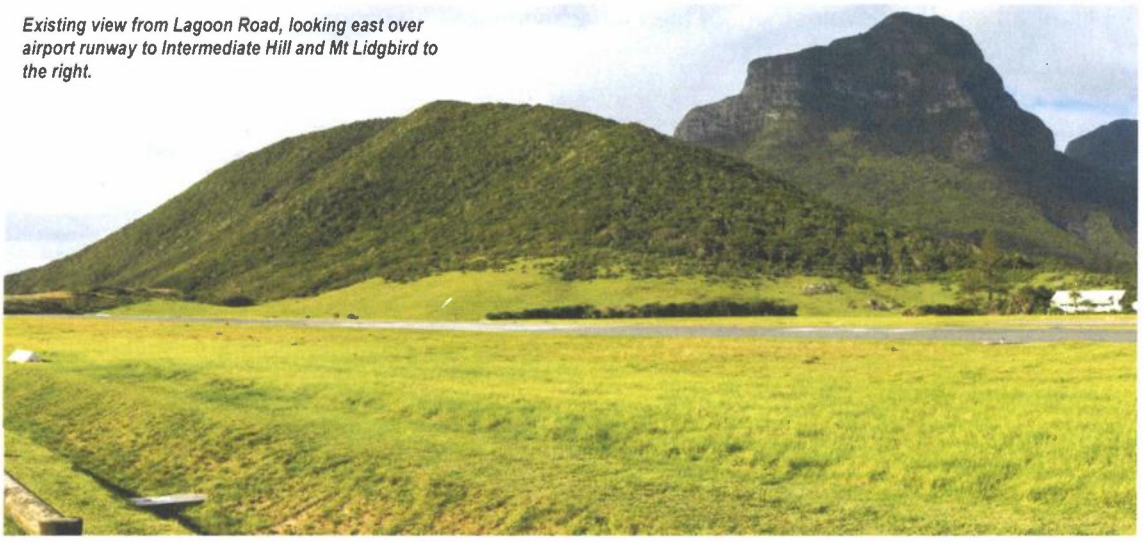


Existing view from near Blinky Beach looking south to Mt Lidgbird and Mt Gower.

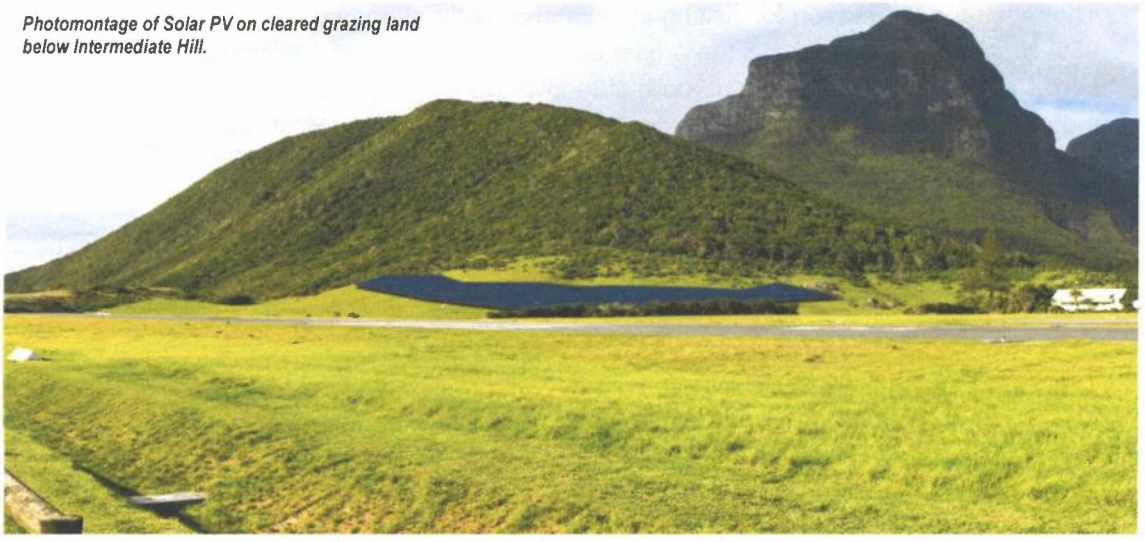


Photomontage of solar PV on cleared grazing land beneath Intermediate Hill.

Existing view from Lagoon Road, looking east over airport runway to Intermediate Hill and Mt Lidgbird to the right.



Photomontage of Solar PV on cleared grazing land below Intermediate Hill.



5. Community Engagement Process

The Lord Howe Island community has been involved in the development of the renewable energy solution for the Island for over thirty years.

Building on the great work of the SEWG in developing the project, an extensive community consultation program commenced in late 2014, to involve people who live and work on, and visit the Island, in the development of the hybrid renewable energy project.

A Community Engagement Plan was developed to guide the communications and engagement process, taking into account the community profile and community concerns, and setting out key messages and engagement tools, methods and

timeframes. The development of the plan was informed by community surveys undertaken in 2011 and 2014.

A 'Quick Poll' survey undertaken in December 2014, showed high levels of support from residents and visitors for the installation of wind turbines and a solar farm on the island and for renewable energy in general.

Support for wind turbines specifically was high (89% support based on 90 respondents). The survey showed that residents and visitors were both highly informed and knowledgeable about renewable energy and thought the island should not continue to rely on imported diesel.

A visitor survey conducted in September-October 2015 (202 respondents) found that there is a high level of support for renewable energy on the island amongst those visitors who value island's natural beauty. 91% of respondents were either very supportive or supportive of solar panels, and 68% were very supportive or supportive of wind turbines.

The most popular reason for visiting the island is 'Natural beauty (World Heritage site)'. 88% of respondents said that the presence of the hybrid renewable energy system on Lord Howe Island would make it more attractive to visit (76 people), that they would be more likely to return due to ecotourism benefits (50 people) or that it would not make any difference to their decision to visit the Island (67 people).

Attachment 1 presents a snapshot of the community engagement process stretching back to 2010.

5.1 Wind Turbine Consultation and Exhibition

The wind turbine proposal was displayed for community feedback for six weeks between 16 September and 28 October 2016. Due to significant community interest in the proposal, the original 28 day exhibition period was extended by two weeks to give people a total of 6 weeks to prepare their submissions. The normal public exhibition period for proposals on the Island is two weeks. The community was actively encouraged to provide feedback and to make submissions.

During the exhibition, submissions were received from 213 people, including residents on and off the Island, local businesses, members of the community-led Sustainable Energy Working Group (SEWG) and tourists. The high level of submissions is reflective of the importance of the proposal to the community and the extensive consultation activities that actively encouraged people to make submissions.

A total of 1,094 issues were raised in submissions received. In order, the most commonly raised issues and topics include:

- Infrasound and potential health impacts
- Visual impacts
- Audible noise
- Financial considerations of loan repayments
- Impact on birds and bats.

Of the 213 people who provided a submission, 100 people (47%) support the wind turbines and 113 people (53%) opposed the wind turbines.

The majority of submissions opposing the wind turbines were received as form letters signed by multiple people.

Of the 213 people who provided a submission:

- 171 were from Lord Howe Island
- 15 people were from elsewhere in New South Wales
- 12 from Queensland
- 2 from South Australia
- 3 from New Zealand
- 1 from the UK
- 9 people did not provide a postcode with their submission.

Of the 171 people from the Island, 62 people made positive submissions and 109 people raised issues with regards to the wind turbines.

The Board approved the wind turbine development in November 2016, noting a number of deferred commencement conditions that were required to be satisfied before the project could proceed to construction. One of the conditions is the preparation of an Adaptive Management Plan. This Plan will be prepared by a Committee, consisting of technical experts in birds and noise, and members of the community.

The Board is currently preparing an Expression of Interest for the community to nominate representatives for the committee so that the Adaptive Management Plan can be prepared before the end of the year. The Plan is expected to provide operational rules to manage the potential impact of the turbines on birds, and potential noise impacts on the community and visitors.

ATTACHMENTS

Attachment 1 – Snapshot of Community Engagement Process

30 years
of community involvement in Island's renewable energy journey

Lord Howe Island
Hybrid renewable energy project
Community Engagement Snapshot

Sustainable Energy Working Group (SEWG)

Community-led group advocating for renewable energy solution on the Island from 2010 to 2017

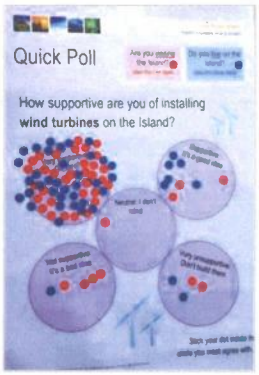
93%
of 160 respondents supported wind turbines in April 2014 survey

December 2014

Consultation visit 1: Community research exercise to understand community concerns, produce Community Issues Report and inform development of Community Engagement Plan.

- **Infographic postcard**
- **Q&A booklet**
- **Community market stall**

$250,000
invested in comprehensive community engagement program since late 2014



89%
of 90 participants supported wind turbines in December 2014 quick poll

May 2015

Consultation visit 2: Ongoing engagement to present noise assessment results and continue to gather community feedback.

- **Postcard**
- **Q&A booklet**
- **Community market stall**
- **Noise factsheet**
- **Individual resident meetings**

December 2015

Consultation visit 3: Ongoing engagement to provide project update, launch visitor survey, advise of second noise assessment (undertaken at request of community) and continue to gather community feedback.

- **Postcard**
- **Visitor survey**
- **Community market stall**
- **Tour guide information sheet**
- **Community investment discussion paper**
- **Museum display poster**

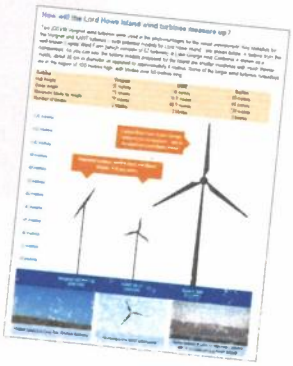
68%
of 202 respondents supported wind turbines in December 2015 visitor survey

88%
said a hybrid renewable energy system would make the Island more attractive to visit

February 2016

Consultation visit 4: Ongoing engagement about solar approval, to present updated noise results and visual impact assessment, feedback results of visitor survey and continue to gather community feedback.

- **Postcard**
- **Q&A booklet (updated)**
- **Community market stall**
- **Noise factsheet (updated)**
- **Visual factsheet**
- **Individual resident meetings**
- **Museum drop-in sessions**



May 2016

Consultation visit 5: Ongoing engagement to hold community meeting (as requested by community) to allow discussion with project team and noise expert about key issues, and continue to gather community feedback.

- **Postcard**
- **Q&A booklet (updated)**
- **Samoan Circle community meeting**

September 2016

Consultation visit 6: Ongoing engagement to launch public exhibition period and encourage submissions on wind turbine development application.

- **Postcards**
- **Posters**
- **Environmental Report summary booklet**
- **Q&A booklet (updated)**
- **Community market stall**
- **Submission forms**
- **Individual resident meetings**
- **Noise talks at museum**
- **Social media (Facebook)**

Submissions summary

6 week
public display period, extended from Island's normal 2 week period. Community was actively encouraged to make submissions.

213 people
made submissions including residents on and off the Island, local businesses, SEWG members and tourists

171 people
of the 213 were from the Island

100 people
(47%) support the wind turbines

113 people
(53%) are opposed to the wind turbines

38 people
in Residents Against Wind Turbines (RAWT) group, 9% of Island's population

1,094 issues
raised, in order:

1. Infrasound and potential health impacts
2. Visual impacts
3. Audible noise
4. Financial considerations of loan repayments
5. Impact on birds and bats.

Strategic Plan for the Lord Howe Island Group World Heritage Property

Lord Howe
ISLAND BOARD

CARING FOR OUR COUNTRY

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Disclaimer

Every effort has been made to ensure that the information provided in this report is current at the time of publication. The participating Organisations and persons associated with preparation of this report do not assume liability of any kind whatsoever resulting from the use and or reliance upon its contents. In particular, this report does not purport or seek to provide a complete comprehensive statement of all relevant legal obligations and legislation applicable to concerned parties. Independent professional advice on all matters discussed in this report should be obtained prior to using any instrument or making any decision based on information summarised in this report. The views expressed in this report should not necessarily be taken to represent the views of the participating Organisations.

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CONTENTS

Abbreviations

AFMA	Australian Fisheries Management Authority
AQIS	Australian Quarantine Inspection Service
DECCW	NSW Department of Climate Change, Environment and Water
DEWHA	Department of Environment, Water, Heritage and the Arts (Commonwealth)
LHI	Lord Howe Island
LHIB	Lord Howe Island Board
LHIG	Lord Howe Island Group
LHIMP	Lord Howe Island Marine Park
MPA	NSW Marine Parks Authority
NRCMA	Northern Rivers Catchment Management Authority

EXECUTIVE SUMMARY

The Lord Howe Island Group (LHIG) was inscribed on the World Heritage List in 1982 in recognition of its superlative natural landscapes and scenery and its rich terrestrial and marine biodiversity as an outstanding example of an island ecosystem developed from submarine volcanic activity.

This Strategic Plan provides a ten year overarching framework for consistent and coordinated management of the LHIG World Heritage Property by the Lord Howe Island Board and the various NSW and Commonwealth government agencies with responsibilities in the area. It is intended to ensure that day-to-day management of the Property complies with Australia's obligations under the World Heritage Convention to protect, conserve, rehabilitate, present and transmit World Heritage values. The Plan is also based on the Australian World Heritage Management Principles agreed to by the Commonwealth, State and Territory Governments.

The Strategic Plan replaces a previous Strategic Plan which was adopted in 2000. It builds upon the approaches developed in the previous Plan and includes strategies to address new knowledge and changed situations.

Maintaining the integrity of the World Heritage values of the LHIG, which have been largely untouched by human influences, faces major challenges. These include:

- achieving consistent and coordinated management approaches between several management agencies operating in a remote location;
- protecting biodiversity values vulnerable to threats from introduced plants, animals and organisms and degradation from pollution;
- minimising the intrusion of essential human development on the spectacular scenic beauty of Lord Howe Island;
- achieving sustainable settlement of the limited areas available on Lord Howe Island while protecting World Heritage values, maintaining the quality of life of the Island community, and offering a range of opportunities for visitors to experience and appreciate World Heritage values;
- obtaining and utilising the resources necessary to protect World Heritage values in an isolated location.

Key actions in this Strategic Plan are:

- updating of legislation, regulations, statutory instruments and management plans so they remain current and take account of new knowledge and changed situations;
- development of interagency, integrated plans for marine biodiversity and fisheries management (there is already an integrated plan for terrestrial biodiversity management);
- development of a coastal management plan to address ecological interactions at the land-sea interface and climate change, including impacts on the Lord Howe Island lagoon and coral reef;

- continued improvement in quarantine planning, education, enforcement and resources;
- providing opportunities for community involvement in implementation and ongoing management of the islands World Heritage values;
- continued progress towards sustainable land, energy and water systems on Lord Howe Island;
- planning for enhancements to interpretation for visitors on World Heritage values;
- introduction of an accreditation scheme for commercial tour operators;
- improved opportunities for research and monitoring of the integrity of World Heritage values, threatening processes and visitor use;
- a strategy to improve the resources available for management of World Heritage values.

The Strategic Plan provides for development of a plan to address the potential impacts of climate change in the light of emerging knowledge of climate trends which are likely to result in rising air and sea surface temperatures, drier winter and spring conditions, and sea level rises in the LHIG.

Part A. Context

1. Introduction

The Lord Howe Island Group (LHIG) is an area of spectacular island landscapes and rich terrestrial and marine ecosystems located 700 kilometres north east of Sydney. In 1982, the LHIG was inscribed on the World Heritage List under the United Nations' World Heritage Convention in recognition of its superlative natural phenomena and its rich terrestrial and marine biodiversity as an outstanding example of an island ecosystem developed from submarine volcanic activity.

The LHIG World Heritage Property covers an area of 146,300 hectares comprised of Lord Howe Island, the Admiralty Islands (North Rocks, Tenth of June, South Island and Roach Island), Mutton Bird Island, Blackburn Island, Gower Island, Balls Pyramid and offshore islets) and 145,000 hectares of marine environment (see Figure 1).

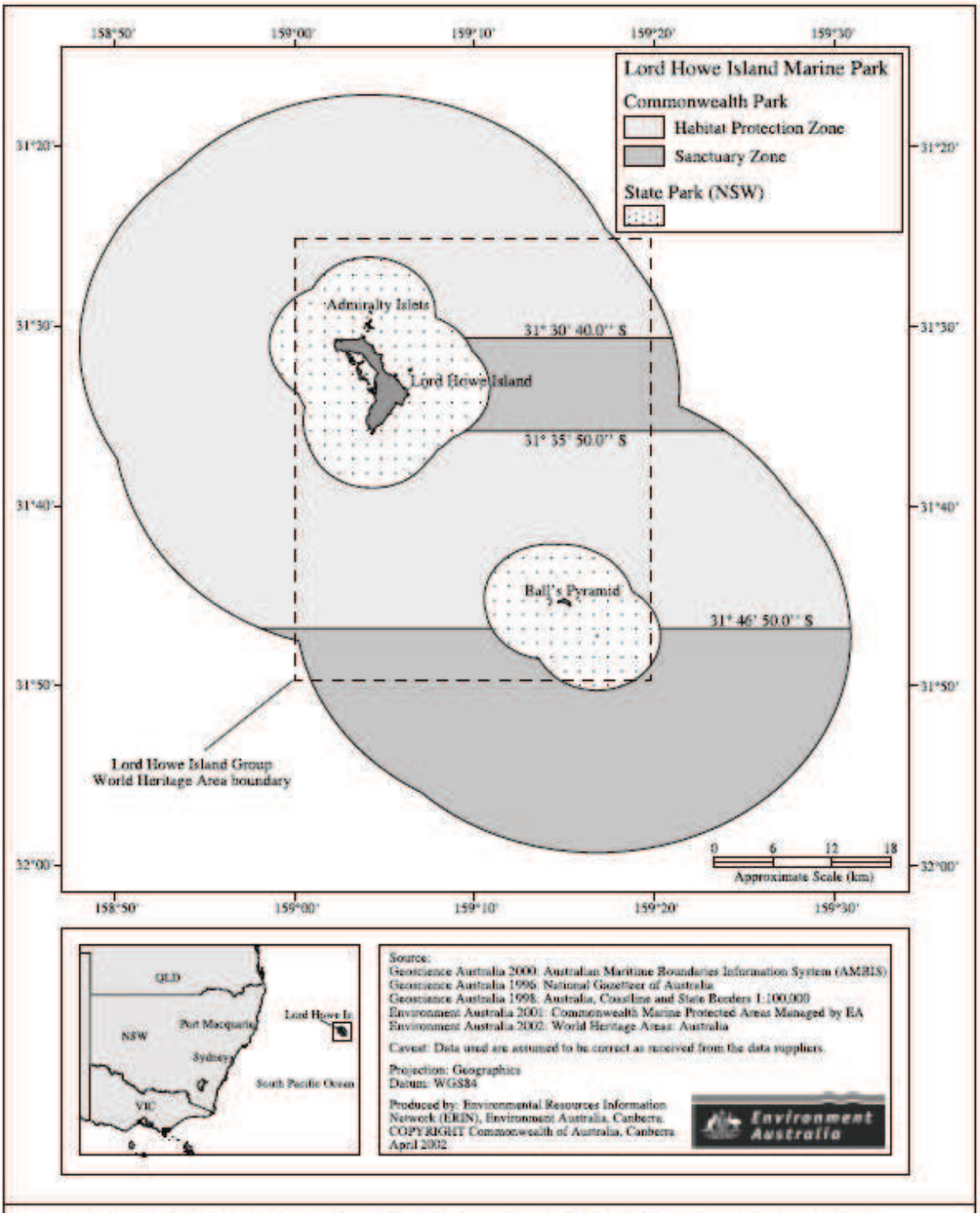
Lord Howe Island, the largest island in the LHIG, has an area of 1,455 hectares and is 11 km long and 2.8 km wide at its widest point. Prior to its discovery in 1788 and subsequent settlement in 1833, Lord Howe Island and the other islands in the Group remained isolated from human influences.

Lord Howe Island is the only settled island in the Group, with a resident population of about 350 people. The Island community plays a vital role in continued protection of the island's outstanding natural values.

Tourism provides the major income for the Island community, with up to 16,000 people visiting the Island annually. Palm seed export is also important for the island economy. Agricultural activities and fishing provide some food, but most of the island's food and materials are imported by air or by sea freight from Port Macquarie in New South Wales.

The islands in the Group are part of the State of New South Wales. Seventy-five percent of the main island and all of the outlying islands are protected for conservation purposes as a Permanent Park Preserve.

The majority of the marine areas on the World Heritage Property are protected by the Lord Howe Island Marine Park (LHIMP) which covers both NSW State Coastal Waters (within 3 nautical miles of land) and Commonwealth Waters outside the 3 mile limit.



Source: Environment Australia, 2002

Figure 1: Lord Howe Island Group World Heritage Property and Marine Park boundaries

2. Purpose of the Strategic Plan

This Strategic Plan provides a ten year overarching framework for consistent and coordinated management of the LHIG World Heritage Property by the various NSW and Commonwealth agencies with responsibilities in the area. It is intended to ensure that day-to-day management of the Property complies with Australia's obligations under the World Heritage Convention (see section 4) and that appropriate consideration is given to protection, conservation, presentation and transmission of World Heritage values.

The Strategic Plan is not a statutory document. It will be implemented by the Commonwealth and NSW Governments and agencies through the Environment Protection and Heritage Council (which includes the Commonwealth and NSW Environment Ministers), government legislation and planning instruments, statutory plans of management, and various other plans and policies.

This Strategic Plan replaces the 2000 Strategic Plan for Management for the LHIG World Heritage Property (Manidis Roberts, 2000). Many of the management structures and controls, which were a major focus of that previous Strategic Plan, have been put in place. Significant achievements include:

- establishment of the LHI Marine Park and development of related Commonwealth and NSW management and zoning plans;
- a range of plans and measures for biodiversity management and control of pest species and other threats, quarantine and rehabilitation;
- updating of land use and development controls in the Local Environment Plan and Development Control Plan;
- protection of shipping impacts through management and zoning plans, pollution and quarantine legislation and contingency planning for pollution incidents;
- planning for scientific research and monitoring, and establishment of a research facility and accommodation on Lord Howe Island; and
- advances in planning for and implementing sustainable resource use on Lord Howe Island.

Development of this new Strategic Plan included a review of implementation of the 2000 Strategic Plan and consultation with management agencies. The consultation process comprised:

- interviews and workshops with representatives and staff of the Lord Howe Island Board (LHIB), the NSW Marine Park Authority (MPA), the Department of Environment, Water, Heritage and the Arts (DEWHA);
- circulation of a Discussion Paper for comment from agencies and key stakeholder groups on LHI;
- discussion on draft with LHI Board;
- exhibition of a Draft Strategic Plan for comment from agencies, stakeholders and the community.

The approaches in this Strategic Plan build on the 2000 Plan and address ongoing and new knowledge, threats, management needs, and issues. The Plan also addresses the potential impacts of climate change in the light of emerging knowledge of climate trends.

3. World Heritage Values

The LHIG was inscribed on the World Heritage List under two of the criteria for natural values of outstanding universal significance:

(vii) containing superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

(x) containing the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

3.1 Superlative natural phenomena

The LHIG is an outstanding example of an oceanic island of volcanic origin containing features, formations and areas of exceptional natural beauty and aesthetic importance. The World Heritage values include:

- the exceptional diversity of spectacular and scenic landscapes within a small land area; and
- outstanding underwater vistas, including reefs considered to be among the most beautiful in the world.

On Lord Howe Island, the towering volcanic mountains of Mount Gower (875 metres) and Mount Lidgbird (777 metres) provide a spectacular backdrop to the low-lying centre of the island and the clear lagoon and its fringing reef. The coast of the island is a constantly changing vista of the reef and lagoon, sandy beaches, boulder beaches, sea caves, scree slopes and massive cliffs. Tall sea cliffs and stacks provide spectacular vistas on the offshore islands, especially the tall narrow Bas Pyramid, which rises vertically from the ocean to 551 metres in height.

3.2 Biodiversity values

The LHIG is an outstanding example of an oceanic island of volcanic origin with a unique biota of plants and animals and important and significant natural habitats for in-situ conservation of biological diversity. Its World Heritage values include:

- its high diversity of vegetation communities;
- the diversity of indigenous vascular plants, comprising at least 241 species, including many species of conservation significance, many of which are endemic to the island group;
- the diversity of birds, comprising 164 bird species, including species of conservation significance and many endemic species (such as the well known Lord Howe Island Woodhen, which is one of the few examples of successful in situ recovery of a species from the brink of extinction);
- seabird breeding habitats which together comprise one of the major breeding sites in the southwest Pacific, including four species of conservation significance;
- a rich diversity and high levels of endemism of terrestrial invertebrates, including spiders, snails and the large and spectacular Lord Howe Island Phasmid which survives on Balls Pyramid;
- the unusual combination of tropical and temperate marine flora and fauna, including many species at their distributional limits, reflecting

the extreme latitude of the coral reef ecosystems which are the southern-most true coral reefs in the world;

- the diversity of marine benthic algae species, which include many endemic species;
- the diversity of marine fish species including at least 500 species of which 400 are inshore species and 15 are endemic; and
- the diversity of marine invertebrate species, including more than 83 species of corals and 65 species of echinoderms of which 70% are tropical, 24% are temperate and 6% are endemic.

3.3 Other significant features

The LHIG contains other significant features which are integral to the protection of its World Heritage values. These include:

- its geodiversity and the geological and geomorphologic processes underpinning its spectacular scenic values;
- the ecological and biological processes and the ecosystems which support its high terrestrial and marine biodiversity; and
- its significance for scientific research and education, including as an isolated island group which was one of the last to experience human settlement.

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The Lord Howe Island residents, many of whom are descended from the early settlers, form a unique community with a strong sense of identity and community based on their history and isolation. The unique Island lifestyle and its safe, quiet, unpolluted and beautiful surroundings are highly valued by the community. Retention and recognition of the Island community's values and lifestyle will be important in maintaining their contribution and support to protection of World Heritage values.

As the major contributor to the Island's economy, tourism is a significant aspect of Island life and a major way in which the LHIG's World Heritage values are presented to the wider public. Sustainable management of tourism is vital to the protection of World Heritage values

4. Management Background

4.1 World Heritage Management Obligations

World Heritage Convention

The World Heritage Convention, which was adopted in 1972 by the United Nations Educational, Scientific and Cultural Organization (UNESCO), provides for the declaration of heritage of outstanding universal cultural and natural value as part of the World Heritage List. The Convention and the associated Operational Guidelines (UNESCO, 2008) provide guidance for the protection and conservation of World Heritage properties.

As a signatory to the World Heritage Convention, Australia has obligations under Article 5, including:

- to protect, conserve and present the World Heritage values of the property;
- to integrate the protection of the area into a comprehensive planning program;
- to give the property a function in the life of the Australian community;
- to conduct scientific and technical research and develop operating methods to counteract threats to World Heritage values; and
- to take appropriate scientific, technical, legal, administrative and financial measures necessary for achieving the foregoing objectives.

Convention signatories are also required to submit regular reports to UNESCO on the actions taken in applying the Convention. Ongoing monitoring and evaluation of management actions and the condition of a World Heritage Property is required to fulfil the reporting requirements.

Integrity (defined by the Operational Guidelines as the wholeness and intactness of the heritage values) is an essential attribute for a World Heritage property. For properties (such as the LHIG) listed for their outstanding natural values, biophysical processes and landform, features should be relatively intact and human activities (including those of local communities) should be 'consistent with the outstanding universal value of the area where they are ecologically sustainable' (UNESCO, 2008, section 90).

EPBC Act requirements

The Australian Government has enacted measures for implementation of its World Heritage obligations under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Under section 12 of that Act, an action likely to have a significant impact on World Heritage values may only be taken if it is:

- approved in accordance with an Australian Government environmental impact assessment process or an accredited State environmental impact assessment process (the NSW process under the Environmental Protection and Assessment Act 1979 in the case of LHIG);
- approved under a management plan accredited by the Australian Government Environment Minister.

Substantial penalties are provided for breaches of these provisions.

For World Heritage properties within States, section 321 of the EPBC Act

requires the Australian Government and its agencies to use its best endeavours to ensure that plans for managing the property are not inconsistent with Australia's obligations under the World Heritage Convention and the Australian World Heritage Management Principles.

Australian World Heritage Management Principles

The Australian World Heritage Management Principles, in Schedule 5 of the *Environment Protection and Biodiversity Conservation Regulations 2000*, provide guidelines for management of Australia's World Heritage Properties. The Management Principles require a World Heritage Property to be managed in accordance with Australia's obligations under the World Heritage Convention. They also require one or more management plans to be prepared for each Property which include:

- statement of the World Heritage values of the Property;
- provision for public consultation;
- mechanisms and actions for protection of World Heritage values and dealing with impacts and threats on those values;
- integration of Commonwealth, State and local government responsibilities for the Property;
- continuing monitoring and reporting.

The Commonwealth, State and Territory Governments have recently agreed to new World Heritage Management Principles as part of the Australian World Heritage Intergovernmental Agreement. At the time this Strategic Plan was being prepared, the inclusion of the new Principles in the EPBC Regulations was being considered as part of the review of the EPBC Act.

This Strategic Plan takes account of the new Australian World Heritage Management Principles, reproduced below.

Australian World Heritage Management Principles

(as incorporated in the Australian World Heritage Intergovernmental Agreement)

1. The objectives of management arrangements for Australia's World Heritage properties are to identify, protect, conserve, present, and transmit to future generations Australia's cultural and natural heritage of outstanding universal value, in accordance with Australia's obligations under the World Heritage Convention.
2. Jurisdictions with responsibility for managing a World Heritage property must have a World Heritage management system or management plan in place. This system or plan must ensure that the integrity and authenticity of the property at the time of inscription are maintained or enhanced.
3. The World Heritage management system or management plan may vary according to cultural and other jurisdictional and cross-jurisdictional factors. An effective World Heritage management system or management plan will:
   a) identify the outstanding universal value and potential threats to the property;
   b) document the legal, scientific, technical, administrative, and financial and visitor strategies which will be adopted and implemented to protect, conserve, and present the property for current and future generations;
   c) be developed in the context of legislative and policy instruments and the social and economic value of the property;
   d) identify the community, stakeholders and other partners, including Traditional Custodians, and how they will participate in property management and decision-making;
   e) document what research is required to better understand the values and threats to the property and the effectiveness of management actions;
   f) use a risk management approach to prioritise strategies within the management system or management plan;
   g) develop an implementation plan and allocate resources in accordance with the identified strategic priorities;
   h) assist in building knowledge and capacity within both staff and community members to implement the management system or plan;
   i) document a cycle of planning, review, monitoring, evaluation and reporting of the management system or plan;
   j) in the case of a cross-jurisdictional or serial nomination, provide details of any mechanisms for co-ordinated management; and
   k) assess the impact of proposed strategies on the outstanding universal value to ensure the strategies are acceptable and sustainable.

4.2 Ownership, control and administration

The LHIG World Heritage Property comes within the jurisdiction of the NSW and Australian Governments.

The islands and the marine areas within three nautical miles of land are part of the State of NSW and subject to NSW laws and administrative arrangements. The islands are all NSW Crown Land. There is no freehold title, and members of the Island community hold land under leasehold tenure. Seventy-five percent of the main island and all of the outlying islands are part of the Permanent Park Preserve established under the *Lord Howe Island Act 1953*.

Care, control and management of the islands and coral reefs within one marine league from the low-water mark come within the jurisdiction of a statutory body, the Lord Howe Island Board (LHIB), established under the *Lord Howe Island Act 1953*. The LHIB reports directly to the NSW Minister for Climate Change, Environment and Water.

The Lord Howe Island Marine Park (LHIMP) covers both NSW and Commonwealth Waters and is managed by both jurisdictions. The LHIMP (State Waters) covers NSW State Coastal Waters, which comprise the seabed and waters from the three nautical mile limit to the mean high water mark along island shores and the limit of tidal influence in creeks (see Figure 1). The LHIMP (State Waters) is managed by the NSW Marine Park Authority.

The part of the LHIG World Heritage Property outside the three nautical mile limit is within the jurisdiction of the Commonwealth Government. The majority of this area is within Australia's Territorial Waters (within twelve nautical miles of land) and is contained within the LHIMP (Commonwealth Waters), managed by Department of Water, Heritage and Environment (DEHWA). Two small sections which extend beyond the 12 nautical mile line into Australia's Exclusive Economic Zone (see Figure 1).

The Australian Government also has policy and legislative roles and responsibilities related to implementation of the World Heritage provisions of the EPBC Act, fisheries management and custom and quarantine requirements (as Lord Howe Island is a 'port of first entry' for arrivals from outside Australia).

Table 1 provides a summary of the main NSW and Commonwealth government agencies regularly involved in management of the LHIG World Heritage Property. Several other agencies are involved in management of the Property as required.

Table 1: LHIG World Heritage Property management agencies

Agency/Body	Roles and Responsibilities
NSW Government	
Lord Howe Island Board	Established under the *Lord Howe Island Act 1953*, with responsibility for care, control and management of the islands, including: • protection of World Heritage values; • protection of cultural heritage values; • administration of all Crown Land, including the Permanent Park Preserve; • development control; • provision of community services and infrastructure; • delivery of sustainable tourism. Consist of 7 members, of whom 4 are elected Islander community members and 3 members appointed by the Minister. LHIB undertakes quarantine inspections and provides information and education regarding quarantine issues (NSW Police undertake customs inspections on behalf of the Australian Customs and Border Protection Service).
NSW Department of Climate Change, Environment and Water (DECCW)	Biodiversity and threatened species conservation on the islands under the NSW *Threatened Species Conservation Act 1995*. Marine reptiles and mammals under the NSW *National Parks and Wildlife Act 1974*. Provides advice and assistance to the LHIB on management of the Permanent Park Preserve.
NSW Marine Parks Authority	Manages LHIMP (State Waters) in accordance with the NSW *Marine Parks Act 1997.*
NSW Maritime	Marine safety, regulation of commercial and recreational boating, marine pollution and oversight of port operations. Conducts checks of boats, sets up marker buoys.
NSW Industry & Investment	Regulation of commercial and recreational fisheries and marine threatened species (except for marine mammals and reptiles) under NSW *Fisheries Management Act 1994*.
Northern Rivers Catchment Management Authority (NRCMA)	Coordination of natural resource management in north east NSW under *Catchment Management Authorities Act 2003*. LHI included within its boundaries.
Australian Museum	Long term association with Lord Howe Island scientific research. Processes and identifies samples for the LHIB.
Commonwealth Government	
Department of the Environment, Water, Heritage and the Arts	Management of LHIMP (Commonwealth Waters) under the provisions of the EPBC Act. Protection of threatened species under the EPBC Act.. Protection of migratory species and their habit under international agreements. Implementation of World Heritage provisions of EPBC Act.
Australian Fisheries Management Authority	Management of fisheries in Commonwealth waters under the Commonwealth *Fisheries Management Act 1991*.
Australian Quarantine Inspection Service (AQIS)	Responsible for quarantine controls at international borders. Lord Howe Island is a 'port of first entry' proclaimed under the *Quarantine Proclamations Act 1998*.Inspections of boats and aircraft conducted by LHIB and local Police.

Planning for day-to-day management is governed by several statutory instruments and plans and a number of non-statutory plans (see Tables 2 and 3).

Table 2: Statutory instruments and plans applying to LHIG World heritage property

Statutory Instrument/Plan	Description and status
Lord Howe Island Local Environment Plan, 2010	Prepared under the NSW *Environmental Planning and Assessment Act 1979* for the area administered by the LHIB, it regulates and provides strategies for: • conservation of World Heritage values; • environmental and biodiversity management; • sustainable resource use; • conservation of local heritage values; • sustainable island development, including tourism; • land use planning.
LHI Development Control Plan	Provides detailed prescriptions for development approvals in accordance with the LEP.
Lord Howe Island Biodiversity Management Plan, 2007	Constitutes a formal National and NSW Recovery Plan for endangered and vulnerable species under the EPBC Act and the NSW *Threatened Species Conservation Act 1995*. Both statutory and non-statutory components - see Table 3 for non-statutory aspects.
Lord Howe Island Permanent Park Preserve, Draft Plan of Management (January 2009)	Required under the *Lord Howe Island Act 1953* (to be prepared in accordance with national park requirements under NSW *National Parks and Wildlife Act 1974*). Draft Plan awaiting formal adoption.
Operational Plan for LHIMP (NSW Waters), 2004	Prepared by NSW Marine Parks Authority under NSW *Marine Parks Act 1997*. General strategies for conservation and sustainable use of the Marine Park area, coordination with other relevant authorities, and community information. Under review in 2010.
Zoning Plan for LHIMP (NSW Waters), 2004	Prepared by NSW Marine Parks Authority under NSW *Marine Parks Act 1997*. Zoning plan for biodiversity protection and sustainable use, specifying Sanctuary, Special Use and Habitat Protection Zones. Under review in 2010.
LHIMP (Commonwealth Waters) Management Plan, 2002	Required under EPBC Act. Provides for protection of World Heritage values, a zoning scheme that aligns with the zones in the NSW sector of the Marine Park, and liaison and coordination with other agencies and stakeholders. Expired in 2009. Under review by DEHWA in 2010.

Table 3: Non statutory plans and strategies applying to LHIG World Heritage Property

Plan/Strategy	Description/Responsible agency
Biodiversity and threat management - general	
Lord Howe Island Quarantine Strategy, 2003	LHIB Covers importation of animal, plant and other material. Provides quarantine inspection arrangements.
Biodiversity and threat management - terrestrial	
Lord Howe Island Biodiversity Management Plan 2007 (both statutory and non-statutory components)	Prepared by NSW DECCW in association with LHIB, Australian Museum and DEWHA. Covers threats and management actions for protection of overall biodiversity and rare and significant species.
Weed Management Strategy	LHIB Outlines methods and resources to deliver eradication of priority weeds.
Draft Rodent Eradication Plan, 2009	LHIB Awaiting finalisation and funds for implementation.
Draft Revegetation Strategy 2010	LHIB Outlines methods and priorities for rehabilitation works. Largely focuses on revegetation. 2010 plan updates previous draft..
Draft Bush Fire Risk Management Plan, 2010	NSW Rural Fire Service Prepared in accordance with the Rural Fires Act and identifies community assets at risk of fire and sets out a 5 year program to reduce those risks.
Biodiversity and threat management - marine	
LHIMP (NSW Waters) Invasive Marine Pest Management Plan, 2009	NSW Marine Park Authority. Relates only to State Waters.
Pollution control	
Lord Howe Island Marine Oil and Chemical Spill Contingency Plan, 2003	Prepared by NSW Waterways Authority. Provides for coordinated responses to incidents by the relevant management agencies, including LHIB, Marine Parks Authority, DECCW.
Waste Minimisation Strategy	LHIB Covers recycling and establishment of a bio-waste facility.
Research and monitoring	
Research Policy 2010	LHIB Outlines research priorities that are consistent with the LHIBMP and LHIMP plans
LHIMP Research and Monitoring Plan 2010-2015	NSW Marine Park Authority Applies to State Waters section of the Marine Park.

4.3 Coordination and consultation arrangements

At the inter-governmental level, coordination and policy making related to LHIG World Heritage Properties is made by the Environment Protection and Heritage Council (EPHC), which includes the Australian and NSW Environment Ministers. The EPHC performs this role for all World Heritage Properties in Australia.

The LHIB is tasked as the 'responsible administration' for the World Heritage Property and acts as the coordinator for planning and management of the Property. A Memorandum of Understanding between the LHIB and NSW Marine Parks Authority provides for coordinated management of the islands and State Waters component of the Marine Park.

Planning for, and implementation of, sustainable tourism is assisted by the Lord Howe Island Tourism Association, which is comprised of representatives of the LHIB and tourism operators.

A Biodiversity Management Plan Implementation Group, chaired by DECCW and including the LHIB and 2 LHI community reps oversees implementation of the Biodiversity Management Plan.

Community and stakeholder consultation is undertaken by the LHIB in relation to its planning and management activities. Four of the Board members are elected from the local community.

Stakeholder advice and a consultation mechanism for the Marine Park is provided by the Lord Howe Island Marine Parks Advisory Committee, established by the NSW Marine Parks Authority. The Committee is comprised of representatives of the Commonwealth Government (DEWHA), conservation, science, tourism industry, charter fishers, scuba divers, recreational fishers, LHIB and the community.

Part B Strategies for the Future

5.1 Vision

The following Vision and Guiding Principles have been adopted for the LHIG World Heritage Property. This is the same Vision adopted in the 2000 Strategic Plan, divided into its key points to improve its readability.

Vision

The Lord Howe Island Group World Heritage Property will retain its outstanding universal natural values in perpetuity. Its ecosystems, biota and exceptional natural beauty will be respected, protected and conserved by government agencies, the Island's residents, visitors to the area, and the industries which use the resources of the area.

Guiding Principles

1. The Property will be transmitted to future generations unimpaired, with its values restored where there has been damage or deterioration caused by human activity.
2. The best available scientific evidence will contribute to sustainable ecosystem management.
3. Residents and visitors alike will appreciate and enjoy its landscapes and ecosystems.
4. Commonwealth and State government institutions and laws will protect the area, and these governments will provide the most secure future possible for this World Heritage Property through funding and other resources to support management.
5. The unique living community of people who live on Lord Howe Island and manage its resources will incorporate the ethos of an ecologically sustainable lifestyle within the World Heritage Property as an example to other communities.

5.2 Strategic Approach

The 2000 Strategic Plan divided strategies according to five goals based on the World Heritage obligations of protection, conservation, rehabilitation, presentation and transmission of World Heritage values; and a sixth goal seeking to integrate the Island community in management of World Heritage values.

This new Plan organises strategies and actions according to eight related issue areas and goals for ease of reference by managers and other readers.

A. Protection and Management – to ensure ongoing protection of World Heritage values through appropriate tenure, statutory, management and planning arrangements and consistent approaches by management agencies.

B. Biodiversity Conservation and Ecological Integrity – to ensure that the integrity of the LHIG's outstanding biodiversity, natural marine and terrestrial habitats (one of the criterion for World Heritage listing of the LHIG) and associated ecological processes is maintained.

C. **Scenic Protection** – to maintain the spectacular natural beauty of the LHIG World Heritage Property (the second criterion for World Heritage listing).

D. **Sustainable Use of Natural Resources** – to ensure that terrestrial and marine natural resources are used in a sustainable manner which does not degrade World Heritage values.

E. **Sustainable Living** – to ensure that Island development, population and environmental impacts are kept at a sustainable level that protects World Heritage values.

F. **Visitor Management and Presentation** – to achieve sustainable tourism and recreational use which contributes to the protection of World Heritage values and provides visitors with quality opportunities to appreciate those outstanding values.

G. **Information and Resources for Management** – to ensure that management of World Heritage values is supported by the best available scientific research and information and adequate resources.

H. **Community Engagement** – to provide for the ongoing engagement of the Island community, and recognition of the community's values, in protection and presentation of World Heritage values.

This Strategic Plan builds upon the approach in the 2000 Strategic Plan, taking account of experience in implementation of the previous Plan and actions that have been completed. Many core strategies and actions in the previous Plan are continued and new strategies and actions are included to addresses new and changed situations. The Plan incorporates strategies and actions to fulfil Australia's World Heritage obligations in relation to the LHIG World Heritage Property, and includes measures to implement the new Australian World Heritage Management Principles.

The Plan is intended to be implemented over ten years, after which time it will be reviewed and a new Strategic Plan developed. The priority for actions in the Plan are classified as:

- High (H) – actions which are critical for management arrangements (e.g. plans or actions which provide a framework for other actions, funding) or to address significant present threats;
- Moderate (M) – actions to address identified potential or future threats or which are dependent of other prior actions;
- Low (L) – actions which do not need to be completed immediately;
- Ongoing – continuing actions which are important for protection of World heritage values (e.g. implementation and review of legislation and plans)

5.3 Management Strategies

A. Protection and Management

Key Issues

Boundary

The Lord Howe Island Marine Park was established by the NSW and Australian Governments after the LHIG was inscribed on the World Heritage List. The boundaries of the World Heritage Property do not align with the boundaries of the Commonwealth Waters section of the Marine Park (see Figure 1). This has implications for administrative and management practicality and consistency. Nor does the Property boundary cover all of the marine areas relevant to the values, particularly the undersea geological structure known as the 'Lord Howe Rise' and the associated relatively shallow marine ecosystem.

Ways to improve the alignment of the Property boundary with the Marine Park should be investigated. The Commonwealth's Marine Biodiversity Planning process may offer an opportunity for this investigation.

Regulatory arrangements

To provide ongoing and effective protection of the World Heritage Property, statutory and regulatory arrangements for the area need to provide for the protection of World Heritage values and for consistent cross-tenure and cross-agency approaches. Legislation and statutory instruments and plans should remain current and reflect changed conditions and new knowledge. The relevant statutory management, zoning and operational plans for the Permanent Park Preserve and the Marine Park were all at various stages of review at the time of preparation of this Strategic Plan and replacement plans need to adopted as a high priority.

The *Lord Howe Island Act 1953* is under review, which may result in changes relevant to the World Heritage Property. Any amendments to that Act may need to be reflected in the Lord Howe Island Regulations and the Lord Howe Island Local Environment Plan (LEP). The statutory plans for the terrestrial and marine parks are all under review, and replacement plans need to be adopted.

Continued enforcement of the provisions of the *Marine Pollution Act 1987* and contingency planning for oil and chemical spills are important to protect the environment of the World Heritage Property from pollution.

Coordination

Clear and agreed coordination arrangements between agencies with responsibilities in the area are also desirable to ensure consistent and cooperative management across the World Heritage Property. While operational coordination mechanisms are provided in plans such as the Biodiversity Management Plan, greater clarity on overall agency roles and management consistency is needed at the agency level. The 2000 Strategic Plan provided for development of Memoranda of Understanding (MOUs) between management agencies. One MOU has been developed between the LHIB and NSW Marine Parks Authority.

Goal

Ongoing protection of World Heritage values is ensured through appropriate tenure, statutory, management and planning arrangements and consistent approaches by management agencies.

Strategies

1. Ensure all World Heritage values are incorporated within the World Heritage Property boundary.
2. Ensure that World Heritage values are protected through a current and consistent regulatory and planning framework.
3. Develop interagency coordination arrangements to clarify responsibilities and ensure consistent and coordinated management of World Heritage values.

Desired Outcomes

- All World Heritage values are incorporated within the World Heritage Property boundary and a consistent administrative regime is in place.
- World Heritage values are managed in a collaborative and consistent manner by all responsible agencies.

Actions

No.	Actions	Priority	Agency
A1	Investigate adjustment of the Property boundary to better incorporate values and, as far as possible, align with the LHI Marine Park boundaries.	L	DEWHA LHIB
A2	Review and amend legislation, regulations, statutory instruments and statutory plans as necessary and according to legislative requirements to ensure consistent protection of World Heritage values.	Ongoing	All
A3	Review *Lord Howe Island Regulations 2004* to reflect anticipate amendments to the *Lord Howe Island Act 1953*.	M	LHIB DECCW
A4	Review the Lord Howe Island Local Environment Plan & Development Control Plan.	H	LHIB NSW Dept Planning
A5	Finalise and adopt the revised Plan of Management for the LHI Permanent Park Preserve.	H	LHIB DECCW
A6	Complete review of Operation Plan and Zoning Plan for LHIMP (State Waters) and adopt new plans.	H	MPA
A7	Complete review of the Management Plan for LHIMP (Commonwealth Waters) and adopt new plan.	H	DEWHA
A8	Prior to adoption of the new statutory plans for the LHI Permanent Park Preserve and LHIMP, consider the need to amend the plans to: • reflect this Strategic Plan, where relevant; • provide for protection of the LHIG's World Heritage values in accordance with Australia's World	H	LHIB DECCW MPA DEWHA

No.	Actions	Priority	Agency
	Heritage obligations; • incorporate the new Australian World Heritage Management Principles for an effective management plan; • facilitate consistent and cooperative management of the LHIG World Heritage Property at the strategic and operational levels.		
A9	Review the NSW Marine Park Regulations if necessary to incorporate any changes related to the new LHIMP zoning and management plans.	M	MPA
A10	Prepare a management plan for Stevens Reserve on Lord Howe Island.	L	LHIB
A11	Continue to enforce the *Marine Pollution Act 1987* in relation to shipping.	Ongoing	NSW Maritime
A12	Maintain a contingency plan for marine oil/chemical spills and appropriate equipment and trained personnel.	Ongoing	LHIB MPA DECCW
A13	Develop MOUs confirming responsibilities and providing for consistent and coordinated management of the World Heritage Property, including with: • DEWHA and LHIB on WH management • DEWHA (MOU with NSW MPA)on management of LHIMP (Commonwealth Waters); • DECCW/LHIB on biodiversity management; • Northern Rivers Catchment Management Authority and LHIB on terrestrial natural resource management.	H	LHIB DEWHA DECCW NRCMA
A14	Consider the need for an overarching committee representing key agencies to guide implementation of this Strategic Plan and consistent management of the LHIG World Heritage Property.	H	LHIB MPA DEWHA DECCW

B. Biodiversity Conservation and Ecosystem Integrity

Key Issues

The isolation of the LHIG at the junction of tropical and temperate latitudes has led to the exceptional biodiversity which is one of the bases of the area's World Heritage listing. However, the isolation under which species and ecosystems evolved means the area's biodiversity is vulnerable to disturbance by human activities, habitat loss and the spread of introduced plants, animals and organisms – as demonstrated by the rate of species loss that followed human settlement and the introduction of weeds and feral animals.

Integrated biodiversity management

The Lord Howe Island *Biodiversity Management Plan 2007* (BMP) provides an integrated cross-agency approach to management of the terrestrial biodiversity of the LHIG, in particular the significant and threatened species and communities of the islands. The holistic ecosystem approach in the BMP enables common threatening processes, significant ecological areas, biodiversity 'hot spots', threatened areas and priority management sites to be identified and management actions and research to be prioritised accordingly. It assists an efficient use of resources through management of common threats and prioritisation of actions.

Biodiversity conservation in the marine areas of the LHIG is achieved through the provisions of the EPBC Act, the *Marine Parks Act 1997*, the *Fisheries Management Act 1994*, and individual threatened species recovery plans and the LHIMP zoning schemes. Terrestrial processes and impacts (such as runoff waters, the condition of estuaries and coastal erosion) also have implications for lagoon and reef ecosystems.

Development of an interagency, integrated marine biodiversity management plan (similar to the BMP) would assist in achieving a consistent and coordinated approach to marine biodiversity conservation.

Existing threats

In addition to the BMP, several operational plans address the impacts of threatening processes and restoration of degraded areas – the Weed Eradication Strategy, Revegetation Strategy and a draft Rodent Eradication Plan for Lord Howe Island; and an Invasive Pest Management Plan for the LHIMP.

Progress has been made in management of threats to biodiversity, including the elimination of feral pigs and cats and rehabilitation of disturbed areas. Intensive efforts and ongoing funding over several years are now required to eradicate the Ship Rat and House Mouse (which threatens bird, plant and insect populations) and control invasive weeds which pose a serious threat to native plant communities and animal habitat.

Potential introduction of new organisms

The potential introduction of new exotic animals, plants and other organisms (such as pathogens and diseases) from boats (e.g. on hulls and in ballast water), aircraft, cargo and passengers is a major ongoing threat to the terrestrial and marine biodiversity of the LHIG. Shipping impacts and the importation of plants, animals and materials are regulated through maritime and quarantine legislation, the Lord Howe Island Regulations and quarantine inspections. Improved resourcing for

quarantine enforcement and education and improved coordination between the responsible agencies is desirable to ensure effective enforcement of quarantine procedures.

Further action is needed to minimise the introduction and spread of the damaging root fungus *Phytophthora cinnamomi*, and other species on Lord Howe Island, which may be transported to the Island from spores attached to soil or root material on footwear and hiking poles.

Coastline and lagoon

A gap exists in planning for the interface between coastal areas and the Lord Howe Island lagoon and associated coral reefs. The environmental condition of the coastal areas and estuaries of Lord Howe Island is critical to protect the biodiversity and environmental quality of the lagoon and reefs. The lagoon area is vulnerable to pollution and nutrients in runoff and groundwater, impacts from intermittently closed estuaries, erosion and impacts from visitor use.

Climate change

The LHIG is expected to experience rising air and sea surface temperatures, drier winter and spring conditions, and sea level rises as a consequence of climate change (Australian National University, 2009). Specific research is required on climate change impacts on the World Heritage Property. Potential impacts extend across the terrestrial and marine environments and include:

- a rising cloud layer which may affect the viability of cloud forest on the mountains and associated endemic species, and reduce water flows to vegetation at lower levels;
- rising sea levels affecting coastal habitat, erosion and island infrastructure;
- decline in some seabird populations (e.g. Flesh-footed Shearwater) due to changes in marine population dynamics and food availability;
- impacts of warmer ocean temperatures and increased ocean acidity on cold-water reef systems, shallow water and marine shelf fish population and marine invertebrates;
- increased threats from invasive species (e.g. introduced Ship Rat, Crown of Thorns Starfish which is natural to the area, many weed species) and possible new risks from organisms in ballast water and on vessel hulls previously killed by cold water;
- coral bleaching.

Monitoring

Ongoing monitoring of plant and animal populations and communities is required to assess the integrity of the LHIG's biodiversity and alert managers to new threats and impacts. While biodiversity monitoring is addressed in the Biodiversity Management Plan 2007 and the LHIMP Research and Monitoring Plan, additional resources are required to extend the range of monitoring programs and review priorities.

Goal

The integrity of the LHIG's outstanding biodiversity, natural marine and terrestrial habitats and associated ecological processes is maintained.

Strategies

1. Develop and implement consistent and coordinated approaches to biodiversity conservation across the LHIG World Heritage Property.
2. Minimise and manage the impacts of threatening processes to

maintain the integrity of World Heritage values and natural ecosystems.

3. Obtain necessary resources to implement priority actions detailed in management plans.
4. Prevent the introduction of new species and organisms which have the potential to degrade World Heritage values.
5. Ensure that measures are developed to manage potential new threatening processes, including climate change.
6. Encourage and provide adequate resources for research and monitoring of biodiversity condition and threatening processes.

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Desired Outcomes

- Native plant and animal populations and communities are maintained at levels to ensure their ongoing viability in the wild.
- No new species and organisms with the potential to degrade World Heritage values have been introduced.
- Degraded values are restored or reinstated.
- Responses are developed to manage potential threats to World heritage values.
- Pest species are eradicated where possible

Actions

No.	Actions	Priority	Agency
B1	Continue to conserve the integrity of ecosystems in the LHIG World Heritage property through implementation of all relevant plans and strategies.	Ongoing	LHIB MPA DEWHA DECCW
B2	Continue to implement the *LHI Biodiversity Management Plan 2007*.	Ongoing	LHIB DECCW DEWHA
B3	Develop an interagency, integrated biodiversity management plan for marine biodiversity within the LHIG World Heritage Property.	H	MPA DEWHA DECCW LHIB
B4	Review and implement the LHI Weed Eradication Strategy	H	LHIB
B5	Finalise and implement the LHI Rodent Eradication Plan.	H	LHIB
B6	Seek secure ongoing funding and resources over several years for intensive rodent and weed eradication programs.	H	LHIB
B7	Implement the LHIMP Invasive Pest Management Plan.	Ongoing	MPA
B8	Review and update the LHI Quarantine Strategy, including: • mechanisms for coordination between relevant agencies; • rapid response protocols;	H	LHIB AQIS MPA NSW Maritime

No.	Actions	Priority	Agency
	• resource needs for effective implementation.		
B9	Engage with AQIS to obtain resources necessary for quarantine implementation.	H	LHIB AQIS
B10	Develop and deliver targeted education material and training to suppliers, stevedores, arriving passengers and the community (as appropriate).	H	LHIB
B11	Develop guidelines and education material on Phytophthora control. Implement a strategy to control spread of Phythopthora spp	H	LHIB
B12	Develop a Lord Howe Island coastal management plan that addresses runoff, erosion, estuary management, biodiversity conservation and habitat protection along the coast and in the lagoon and reef. Link the coastal management plan with relevant terrestrial and marine plans and strategies and climate change management plan.	H	LHIB DECCW MPA
B13	Develop a climate change management plan that includes research on potential impacts; monitoring requirements; risk assessment; and actions to reduce potential threats or cope with potential change (e.g. seed banks).	M	LHIB DECCW MPA DEWHA
B14	Continue and extend biodiversity research and monitoring to cover priority populations and communities and current and potential threatening processes.	H	LHIB DECCW MPA DEWHA
B15	Encourage and seek funding and resources for priority biodiversity and threatening process monitoring (see also Actions G1 – G3).	H	LHIB DECCW MPA DEWHA
B16	Finalise and implement the draft LHI Revegetation Strategy 2010.	Ongoing	LHIB
B17	Continue wetland restoration work and develop environmental and flood triggers for mechanical openings.	Ongoing	LHIB
B18	Complete and implement the LHI Bushfire Risk Management Plan.	H	LHIB NSW Rural Fire Service

C. Scenic Protection

Key Issues

The spectacular natural beauty of the island landscapes and underwater vistas is one of the values for which the LHIG was inscribed on the World Heritage List.

The scenic attraction of the LHIG is a major element in its tourism appeal, underpinning tourism's major contribution to the island economy.

Protection and conservation of terrestrial and marine scenic values has been provided by the management and operational plans for the Permanent Park Preserve and the Marine Park (under review at the time of preparation of this Strategic Plan). Rehabilitation of degraded vegetation is also assisting to restore scenic values within and on the edge of the settled areas.

Scenic values on Lord Howe Island are vulnerable to visual impacts from inappropriate development and introduced exotic tree species that out compete native vegetation. Minimisation of scenic impacts is addressed in the LHI LEP, Development Control Plan, application of the Building Code of Australia and the LHI Building Code. The possible need for an extended airport runway to cope with new aircraft is a potential future threat to scenic values (see Action F10). Establishment of alternative technologies also have the potential to create intrusive visual impacts.

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Goal

Maintain the spectacular natural beauty of the LHIG World Heritage Property.

Strategies

1. Ensure that conservation of scenic values is considered and addressed in all planning, management and development processes.

Desired Outcomes

- New developments including road upgrading do not degrade scenic values

Actions

No.	Actions	Priority	Agency
C1	Provide for protection of scenic values in new management and operational plans being developed for the Permanent Park Preserve and LHIMP.	H	LHIB DECCW MPA DEWHA
C2	Continue to implement Revegetation Strategy and Weed Management Strategy to rehabilitate degraded areas as necessary.	Ongoing	LHIB
C3	Review the LHI Local Environment Plan and Development Control Plan to ensure there is appropriate provision for protection of scenic values in relation to potential developments.	H	LHIB

D. Sustainable Use of Natural Resources

Key Issues

Agriculture and extractive industries

Agricultural and natural resource activities on Lord Howe Island include food production for local consumption, the economically important palm seed export industry (utilising plantations and harvesting from the Permanent Park Preserve) and extractive industries for local construction. In the limited area available on the island, sustainable practices and levels of use are critical to prevent adverse impacts on the biodiversity and scenic aspects of the Island's World Heritage values. Adverse impacts can include weed and animal pest introduction, vegetation clearance and vegetation windsheer and canopy dieback adjacent to cleared areas. Impacts associated with agricultural production are addressed in the BMP and LHI Revegetation Strategy.

The extent of agricultural land is governed by the zoning plan under the LHI LEP. Constraint mapping identifying prime agricultural land is required. Further action is required to address sustainable usage of non-productive agricultural land.

There is no current mineral or petroleum exploration or mining within or near the World Heritage Property. In the LHI Marine Park, exploration and mining are regulated under the EPBC Act and NSW *Marine Parks Act 1997* and, at the time of preparation of this Plan, were prohibited unless allowed under an approved management plan (for Commonwealth Waters) or an Act of Parliament (in NSW Waters). Part 5 Division 1 79 of LHI Regs Removal or destruction of substances forming part of the island – require approval of board to remove any stone, rock, shell, earth, sand, clay or gravel on the island.

Should exploration proposals within or near the World Heritage Property be made in the future, action is needed to alert Australian and NSW agencies responsible for mineral and petroleum exploration of the need to protect World Heritage values.

Fishing

Commercial and recreational fishing occurs in both Commonwealth and NSW Waters within the World Heritage Property. Sustainable fishing practices are important to maintain viable fish populations and ensure conservation of fish habitat and food species.

The LHIMP zoning scheme prohibits fishing in sanctuary zones and limits fishing activities in habitat protection zones and establishes bag and size limits for recreational fishing. Commercial fishing is governed by regulations under the NSW *Fisheries Management (General) Regulation 2002*.

However, licensing of commercial fishing (including charter operators who sell their catch) and active enforcement of fishing regulations is required to ensure fishing remains sustainable.

Development of an interagency, integrated fisheries management plan for both Commonwealth and State waters within the World Heritage Property is desirable to achieve a consistent approach to sustainable fishing, enforcement and protection of World Heritage values.

Tourism

Tourism largely relies on the island's natural resources which provide significant economic benefits to the island's community and environment.

An environmental levy on tourists provides funds for on-ground management of environmental impacts.

Goal

Natural resources are used and managed in a sustainable manner which does not degrade World Heritage values.

Strategies

1. Implement ecologically sustainable management of, and control of threatening processes on, agricultural land.
2. Ensure use of island natural resources is sustainable and consistent with the protection of World Heritage values.
3. Ensure fisheries management is sustainable, consistent with the protection of World Heritage values and coordinated across management agencies.
4. Enforce fisheries regulations and requirements.

Desired Outcomes

- Natural resources are sustainably managed and resource use does not degrade World Heritage values.

Actions

No.	Actions	Priority	Agency
D1	Implement actions in the Biodiversity Management Plan and Revegetation Strategy to control threatening processes related to agricultural land and rehabilitate degraded areas.	Ongoing	LHIB Community
D2	Undertake a review of lands suitable for sustainable agriculture as part of a comprehensive review of the LHI LEP 2010.	H	LHIB
D3	Work with NSW Agriculture to develop and provide advice to landholders on ecologically sustainable agricultural practices.	Ongoing	LHIB NSW Agriculture
D4	Assess new technology in the palm seed industry for potential ecological impacts.	Ongoing	LHIB NSW Industry & Investment
D5	Continue regulation of the island extractive industry to minimise impacts on World Heritage values.	Ongoing	LHIB
D6	Develop a voluntary agreement with Commonwealth and NSW government agencies responsible for mineral and petroleum exploration recognising the World Heritage values of the LHIG.	L	LHIB MPA DEWHA
D7	Liaise with NSW Industry & Investment to establish LHI as a Class 1 Fishery, licensing of commercial fishing operators and a system and resources for enforcement of fishing regulations.	H	LHIB MPA DEWHA
D8	Develop an interagency, integrated fisheries management plan for sustainable fisheries management in Commonwealth and State waters relevant to the LHIG. The plan should include measures for consistent management and enforcement between agencies, consider population biology and habitat requirements and identify research and monitoring needs.	H	LHIB MPA NSW Industry & Investment DEWHA AFMA
D9	Undertake a review of the current permit/licensing system for commercial fishing on Lord Howe Island.	H	LHIB NSW Food Authority

E. Sustainable Living

Key Issues

On Lord Howe Island, there is limited land suitable for settlement and limited water and energy resources. Fuel for electricity production and for vehicles and boats and most food and construction material has to be imported. The potential for uncontrolled development to degrade the island's scenic values and terrestrial, lagoon and reef ecosystems is high. Therefore, limitation of the number of residents and the development footprint is critical to protect World Heritage values on and near the island. Efficient, low impact energy and waste management systems are also important to reduce environmental impacts, reduce costs (such as fuel imports) and protect the future quality of life for island residents.

The LHI LEP addresses population levels by placing limits on the total number of new dwellings that can be approved. The LEP also controls the type and location of island infrastructure and facilities. Implementation of housing controls while ensuring there is adequate provision for island residents and staff needed to operate facilities and services is an ongoing issue.

Progress towards sustainable living has been made with the development of a Waste Management Plan and installation of a bio-waste facility. Fuel efficient diesel generators and solar hot water and some solar power systems have reduced reliance on costly and potentially polluting diesel generation, while an investigation into renewable power options has been conducted.

With limited surface water, groundwater is an important source of potable water. Groundwater extraction is currently unregulated. There is a risk of groundwater pollution and faecal contamination from runoff and wastewater disposal. Groundwater drawdown may also result in vegetation degradation due to lower water tables and saltwater intrusion. Pollutants in runoff and groundwater may also adversely affect lagoon and coral reef ecosystems.

Vehicle numbers and use are managed according to the Lord Howe Island Vehicle Policy. Applications to import or transfer and use a vehicle must demonstrate a genuine need for the import or transfer, and use of a vehicle and the type of vehicle selected. Vehicle applications must show they are in the public interest and minimise environmental impact on both the natural and built environments. Increases in vehicle numbers have the potential to impact the islands scenic amenity and sustainability. Investigation into alternative transport options need to be developed.

Goal

Island development, population and environmental impacts are kept at a sustainable level that protects World Heritage values.

Strategies

1. Ensure that the resident LHI population remains at a level that can be sustainably supported on the limited area available while protecting World Heritage values and maintaining quality of life.
2. To the extent feasible, provide efficient and non-polluting energy systems that are compatible with the protection of World Heritage values.

3. Manage water supplies and wastewater in a way that minimises ecological impacts and protects World Heritage values.
4. Ensure that the number of motor vehicles on the island is strictly limited by demonstrated need and that priority is given to the most energy efficient vehicles, including, where practicable, those powered by alternative, environmentally-sustainable technologies.

Desired Outcomes

- The LHI population is maintained at a sustainable level.
- There is an increase in the sustainability of energy production and use.
- Groundwater quality and quantity is monitored and protected.
- No adverse impacts occur on terrestrial, lagoon and reef ecosystems due to runoff and groundwater changes
- The LHI vehicle population is limited to a sustainable level with emphasis on clean, green technology

Actions

No.	Actions	Priority	Agency
E1	Continue limitations on residential housing in the reviewed LHI LEP.	H	LHIB
E2	Conduct an investigation into the population numbers that can be sustainably supported on Lord Howe Island while protecting World Heritage values and maintaining quality of life.	M	LHIB DoP
E3	Review and update the LHI Waste Management Plan.	H	LHIB
E4	Continue to pursue energy efficient systems and alternative power sources that are compatible with protection the range of World Heritage biodiversity and scenic values.	Ongoing	LHIB
E5	Complete and implement a sustainable wastewater strategy for Lord Howe Island which is compatible with protection of World Heritage values.	H	LHIB
E6	Develop and implement a 'total water cycle' management approach and monitoring plan.	H	LHIB
E7	Continue research on sustainable water management needs.	Ongoing	LHIB
E8	Undertake planning to minimise growth in the number and use of motor vehicles.	M	LHIB
E9	Investigate strategies for greater use of environmentally sustainable vehicles.	M	LHIB

F. Visitor Management and Presentation

Key Issues

Tourism is vital for the island economy and contributes to the World Heritage obligation of presentation of the Property's values, in ways that enhance visitor appreciation of and support for those values."

Tourism impacts

Careful management of tourism is essential to protect the values on which it is based, continue to provide experiences appropriate to a pristine natural environment, and protect the islander way of life. Impacts on sensitive ecosystems and habitats can include browsing, predation and trampling, spread of invasive plants and pathogens, litter, taking of marine species, pollution from boats, pollution from solid waste and wastewater and disturbance of seabird rookeries. Given the small size of Lord Howe Island, tourism infrastructure and facilities also have the potential to detract from its scenic beauty and add to the pressure on the island's ecosystems and limited natural resources.

Visitor numbers

The LHI LEP restricts development of tourist accommodation on Lord Howe Island to accommodate a maximum of 400 visitors at any time. Control of visitor impacts and activities in specific areas is addressed in the draft plan of management for the Permanent Park Preserve and zoning, operational and management plans for the LHI Marine Park (under review at the time of preparation of this Strategic Plan). However, ongoing monitoring and research is required to improve knowledge of the environmental and social impacts of tourism. The recent introduction of cruise ships to the island has the potential to impact on the island experience as well as increase numbers of visitors.

A corridor system for monitoring actual visitor numbers including persons staying in tourist accommodation to ensure there will be no more than 400 persons at any one time.

Communication and interpretation

Improved communication of World Heritage values to visitors and residents and the need for conservation and minimal impact behaviour are important ways to fulfil World Heritage obligations, enhance visitor experiences and minimise impacts. A consistent approach to communication and interpretation and an enhanced range of quality interpretation products needs to be developed. An accreditation scheme for commercial tour operators will also ensure that high quality and consistent messages are delivered by tour guides and that guided activities are conducted with the appropriate environmental controls. The NSW Parks Eco Pass scheme provides a possible model for an accreditation scheme.

Promotion

The World Heritage status of the LHIG is a significant attraction for many visitors and could be used more effectively to develop and promote tourism outcomes which contribute to the environmental and economic sustainability of the LHIG. A coordinated approach to tourism promotion between tourism organisations and operators is needed, as well as greater use of the internet (a major and increasing source of information for prospective tourists) for information and promotion.

Air transport

The vast majority of visitors and residents travel to Lord Howe Island by air. The length of the airport runway is a potential issue, as the aircraft currently operating on the route are being phased out. Extension of the runway, if required to accommodate replacement aircraft, is a potential threat to scenic values and environmental conditions. The future plans for aircraft operations on the Island need to be determined and options investigated that minimise impacts on World Heritage values.

Goal

Tourism and recreation in the LHIG is sustainable, contributes to protection of World Heritage values and provides visitors with quality opportunities to understand and appreciate its outstanding values

Strategies

1. Ensure that measures are in place to monitor and manage visitor impacts on World Heritage values.
2. Ensure there is consistent and accurate communication and interpretation of World Heritage values across the spectrum of visitor activities.
3. Develop a coordinated approach to promotion of the LHIG as a World Heritage destination.

Desired Outcomes

- Any adverse impacts from tourist activities or tourism infrastructure are prevented or minimised.
- Visitors to the LHIG understand, appreciate and protect its World Heritage values.
- Tourism in the LHIG is environmentally and economically sustainable.

Actions

No.	Actions	Priority	Agency
F1	Continue limiting visitor numbers to a maximum of 400 people at a time.	Ongoing	LHIB
F2	Introduce a system for visitor number monitoring on Lord Howe Island.	M	LHIB
F3	Develop a strategy for visitor impact management across the LHIG, including research and monitoring of visitor impacts.	M	LHIB MPA DEWHA DECCW
F4	Develop and implement a Communications and an Interpretation Plan for the LHIG based on current best practice to ensure that World Heritage values are communicated to visitors and residents in ways that are accurate, entertaining and which encourage further enquiry."	H	LHIB MPA DEWHA DECCW
F5	Develop an accreditation scheme for commercial tour operators.	H	LHIB DECCW MPA
F6	Implement interpretation activities (such as seasonal Discovery tours) that present World Heritage values and showcase work on the protection of values.	M	LHIB MPA
F7	Develop an appropriate visitor website for the LHIG, incorporating interpretation of, World Heritage values and information on visitor experiences, quarantine and management requirements.	H	LHIB MPA DEWHA LHI

No.	Actions	Priority	Agency
			Tourism Association
F8	Develop a coordinated approach to tourism promotion and planning between the LHIB, marine park managers, tourism organisations and tourism operators. Introduce an environmental sustainability rating system for accommodation providers.	H	LHIB MPA DEWHA LHI Tourism Association Tourism NSW
F9	Continue to work with tourism organisations and operators on inclusion of information on World Heritage values and their conservation on tourism websites and brochures.	Ongoing	LHIB LHI Tourism Association Tourism NSW
F10	Liaise with the Lord Howe Island airline operator to investigate future proposals and runway requirements for aircraft on the Lord Howe Island route. Investigate future air and sea transport options that minimise impacts on World Heritage values.	M	LHIB
F11	Review existing LHIB cruise ship policy and effectiveness to protect WH values and experience	H	LHIB

G. Information and Resources for Management

Key Issues

Research and monitoring

Scientific research and information about threats, impacts and system dynamics is essential for conservation of World Heritage values and is one of the obligations for management of World Heritage properties under the World Heritage Convention. Monitoring of the condition of the Property is required as a basis for periodic reports to the World Heritage Committee.

There are provisions for research and monitoring in several plans and strategies related to the LHIG. The Biodiversity Management Plan addresses terrestrial research priorities and forms a basis for seeking and responding to approaches with universities and other research institutions. The Biodiversity Management Plan Implementation Group also provides advice on terrestrial research needs and priorities. A Research and Monitoring Plan 2010-15 is in place for the LHIMP (State Waters). All research and monitoring in the NSW section of the Marine Park is approved by the MPA's Research and Monitoring Committee.

The LHI Board has developed a research priorities policy, which defaults to the BMP and the Marine Parks Authority to establish research directives. A research and accommodation facility has also been established on LHI to provide for visiting researchers.

However, the above mechanisms could be enhanced through the development of an interagency, integrated biodiversity management plan covering marine ecosystems within the World Heritage property and establishing a reporting procedure to the commonwealth.

Resources

Additional resources are needed by the LHIB and management agencies to maximise protection of World Heritage values through research, monitoring and management actions. The small size of the Island community means that the resources available to it are small in comparison to the task of managing the World Heritage Property. Secure ongoing funding (rather than short term grants) is also required to ensure the continuity of research, monitoring and management programs (e.g. weed eradication).

A range of measures should be investigated to improve the availability of resources for management of the World Heritage Property. Potentially, these might include improved base resourcing for the key management agencies; establishment of a LHIG foundation or trust for fund raising; and improvements in the financial efficiency and cost returns of LHIB operations.

Goal

Management of the LHIG's World Heritage values is supported by the best available scientific research and information and adequate resources.

Strategies

1. Ensure adequate planning and resourcing of natural and social science research and monitoring required to assist management of World Heritage values.
2. Ensure adequate long term funding is provided to the LHIB and other management agencies to fulfil obligations to protect the LHIG's World Heritage values.
3. Investigate alternative funding arrangements, partnerships and financial efficiencies to improve resources available for research, monitoring and management of World heritage values.

Desired Outcomes

- Adequate long term resources and funding are available for protection of World Heritage values.

Actions

No.	Actions	Priority	Agency
G1	Review the effectiveness of current planning, coordination and resourcing of natural and social science research and monitoring within the LHIG World Heritage Property. Develop an integrated strategy for research and monitoring that addresses prioritisation, coordination, encouragement of research and provision of resources.	H	LHIB DECCW MPA DEWHA
G2	Investigate partnership arrangements with research institutions to improve the level and continuity of research activities and assist in the provision of management advice.	H	LHIB DECCW MPA DEWHA Australian Museum & other institutions
G3	Seek Commonwealth and NSW Government commitments to ongoing funding for management of the Permanent Park Preserve and LHI Marine Park and for priority research, monitoring and management programs aimed at protection of World Heritage values.	H	LHIB DECCW MPA DEWHA

No.	Actions	Priority	Agency
G4	Prepare a long term LHIB financial strategy aimed at improving the Board's resources, including consideration of strategies for improving income, cost recovery and operational efficiency.	H	LHIB
G5	Investigate establishment of a Foundation or Trust for raising/accepting funds and resources for protection of the LHIG World Heritage Property.	H	LHIB DECCW MPA DEWHA
G6	Investigate a partnership with the Foundation for National Parks & Wildlife directed at resourcing conservation projects in the LHIG.	H	LHIB DECCW MPA DEWHA

H. Community Engagement

Key Issues

The Island community plays a vital role in protecting and presenting the LHIG's World Heritage values. This was acknowledged by the 2000 Strategic Plan for Management for the LHIG World Heritage Property, which sought to ensure compatibility between the Island community's lifestyle and values and the actions taken to protect World Heritage values.

This approach is continued in this Strategic Plan. The Island community should continue to be informed, consulted and engaged in decision making and management actions related to the World Heritage Property. The values and lifestyle of the Island community should also continue to make a significant contribution to the Island visitor experience and be integrated into the presentation of World Heritage values and planning for their protection.

Community based monitoring and land restoration programs are potential opportunities to involve and educate the community on World Heritage values. Several community based monitoring programs have been implemented.

Goal

The Lord Howe Island community is actively engaged and its values are recognised in protection and presentation of World Heritage values.

Strategies

1. Ensure that the unique local community values are included in presentation of the LHIG's values.
2. Ensure that impacts on local community values and lifestyle are considered in decision making and planning related to World Heritage values.
3. Consult and inform the LHI community in relation to key decisions affecting World heritage values and community values and lifestyle.
4. Assist the local community to participate in management of World Heritage values.
5. Liaise with the Lord Howe Island Central School and other relevant educational institutions to include study of LHIG World Heritage Property values in relevant key learning areas of the NSW Schools syllabus.

Desired Outcomes

- Active engagement and support by the Lord Howe Island community in protection and presentation of World Heritage values.
- Active engagement and support by the Lord Howe Island community at all age levels in the protection and presentation of World Heritage values

Actions

No.	Actions	Priority	Agency
H1	Include local community values in on-island interpretation and presentation of values and in development of an LHIG communication and interpretation plan (see Action F4).	Ongoing	LHIB
H2	Include an assessment of the impacts on the local community and its values in decisions related to World Heritage.	Ongoing	LHIB DECCW MPA DEWHA
H3	Consult the local community in relevant World Heritage decision making and planning processes including, as appropriate, community forums on specific issues.	Ongoing	LHIB DECCW MPA DEWHA
H4	Regularly inform the Island community about the condition of the World Heritage Property and implementation of this Strategic Plan, and provide opportunities for comments on performance.	Ongoing	LHIB
H5	Provide opportunities and training (e.g. in bush regeneration) for the local community to participate in monitoring and other programs for protection of World Heritage values.	Ongoing	LHIB DECCW MPA DEWHA
H6	Encourage teaching of LHIG World Heritage values in relevant key learning areas of the NSW schools syllabus at the Lord Howe Island Central School and other relevant educational institutions	Ongoing	LHIB DECCW, MPA DEWHA DET

5.4 Review and Evaluation

This Strategic Plan for the LHIG World Heritage Property will be reviewed in 10 years from the date of approval or as required and a new Plan will be prepared by the LHIB, in conjunction with NSW and Commonwealth agencies with management responsibilities within the area of the Property.

The review of this Plan will include an evaluation of:

- success in protecting World Heritage values and maintaining the integrity of the LHIG World Heritage Property;
- implementation of actions, including reasons for non-implementation;
- success in developing consistent and coordinated approaches between management agencies;
- adequacy of resources;
- perceived usefulness of the Strategic Plan.

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FOI 190614
Document 4

s22

From: Kim Farrant
Sent: Friday, 5 July 2019 5:21 PM
To: s22
Subject: FW: Lord Howe Island Wind Farm - Talking points for the call to the LHIB [SEC=UNCLASSIFIED]

Follow Up Flag: Follow up
Flag Status: Completed

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From: Farrant, Kim
Sent: Friday, 2 June 2017 4:30 PM
To: s47F
Cc: de Brouwer, Gordon ; Dean Knudson ; Matt Cahill ; s22 ; s22
Subject: RE: Lord Howe Island Wind Farm - Talking points for the call to the LHIB [SEC=UNCLASSIFIED]

Just finishing off the general points now.
Kim

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From: s47F
Sent: Friday, 2 June 2017 4:30 PM
To: Farrant, Kim <Kim.Farrant@environment.gov.au>
Cc: de Brouwer, Gordon <Gordon.deBrouwer@environment.gov.au>; Knudson, Dean <Dean.Knudson@environment.gov.au>; Cahill, Matt <Matt.Cahill@environment.gov.au>; s22 s22 s22 >
Subject: RE: Lord Howe Island Wind Farm - Talking points for the call to the LHIB [SEC=UNCLASSIFIED]

Thank you. Please send through more general TPs as soon as you are able.

The Minister has just considered and signed the brief.

Thank you all for your help on this.

s47F

From: Farrant, Kim
Sent: Friday, 2 June 2017 3:53 PM
To: s47F s47F >
Cc: de Brouwer, Gordon <Gordon.deBrouwer@environment.gov.au>; Knudson, Dean <Dean.Knudson@environment.gov.au>; Cahill, Matt <Matt.Cahill@environment.gov.au>; s22 >; s22
Subject: Lord Howe Island Wind Farm - Talking points for the call to the LHIB [SEC=UNCLASSIFIED]
Importance: High

Hi s47F

Please see below some points the Minister may wish to use when he calls the LHI Board to advise of his decision about the wind turbines.

The CEO of the Board is s47F :

s47F

We will shortly provide some further talking points that can be used in response to any public comment on the decision. In the interest of time, we have just provided some points for the phone call if the Minister wants to do that today.

Thanks

Kim

Talking Points for advising the Lord Howe Island Board about Clearly Unacceptable decision

- I am calling to advise you of my decision under the EPBC Act on the Board's referral to construct and operate two wind turbines on Lord Howe Island.
- You will shortly receive a letter from me about the decision, but I wanted to speak with you in advance of you receiving the letter.
- As you know from my letter last month, I have serious concerns about the impact of the proposed wind turbines on the world and national heritage values of the Island Group.
- My concerns remain after considering the arguments presented by Lord Howe Island Board about why the proposal will not have a significant impact on these values in the referral and the information provided by the Board earlier this week.
- I have therefore decided the proposal action is Clearly Unacceptable.
- I believe that the proposed wind turbines would create a considerable, intrusive visual impact and that this would affect the spectacular and scenic landscapes for which the Island Group in recognised.

- Given the 20-year lifetime of the proposed turbines, the impacts would persist for decades. I considered that the turbines can be manually lowered for maintenance or other reasons, but I concluded that the majority of the time the intention would be that they were in operation.

- For these reasons, I have concluded that the proposal would be an inappropriate development for Lord Howe Island and that the impacts on the Island Group's heritage values cannot be sufficiently avoided or mitigated.

- My letter that you will shortly receive includes a formal notice of my decision and also a full statement of reasons for my decision.

If asked about the Lord Howe Island Board's options following the decision that the referred action is Clearly Unacceptable

- My letter refers to your options from here under the EPBC Act.

    - These options are set out in section 74C of the Act, and include:
        - withdrawing the proposal and taking no further action
        - withdrawing the proposal and referring a new proposal to take a modified action
        - there is also the option of requesting that the referral decision be reconsidered

- You should take the time and seek your own advice in considering which of these options you will choose to pursue.

If asked about the ARENA funding for the Lord Howe Island Hybrid Renewable Energy Project

- I suggest that you talk to ARENA about the implications of the decision on the wind turbines for the broader Hybrid Renewable Energy Project.

- My decision only relates to the wind turbines element of the proposal. You are free to pursue the solar element, which was decided in 2015 to not be a controlled action under the EPBC Act.

If asked about the decision on the Lord Howe Island Board's other current project, the Rodent Eradication Proposal (EPBC 2016/7703)

- I'm advised that the Department is undertaking its assessment of this proposal, and was involved in a teleconference this week (on Thursday 1 June 2017) with the Lord Howe Island Board representatives and Taronga Zoo regarding protection of the Lord Howe Island Woodhen, which is a listed threatened species.

- The Department has committed to finalising its assessment of the Rodent Eradication Proposal as soon as possible so that a decision can be made under Part 9 of the EPBC Act.

Kim Farrant
Assistant Secretary |Assessments (NSW, ACT) & Fuel
Environment Standards Division
s22
✉: kim.farrant@environment.gov.au
: GPO Box 787 CANBERRA ACT 2601
Australian Government
Department of the Environment

FOI 190614
Document 5

s22

From: Kim Farrant
Sent: Friday, 5 July 2019 5:21 PM
To: s22
Subject: FW: Talking points on Lord Howe Island Wind Turbine project [SEC=UNCLASSIFIED]

Importance: High

Follow Up Flag: Follow up
Flag Status: Completed

Kim Farrant
Assistant Secretary |International Branch
International Climate Change and Energy Innovation Division
s22
✉: kim.farrant@environment.gov.au
: GPO Box 787 CANBERRA ACT 2601

From: Farrant, Kim
Sent: Friday, 2 June 2017 4:46 PM
To: s47F
Cc: de Brouwer, Gordon ; Dean Knudson ; Matt Cahill ; s22 ; s22
Subject: Talking points on Lord Howe Island Wind Turbine project [SEC=UNCLASSIFIED]
Importance: High

Hi s47F

Please see below some general talking points on the Lord Howe Island Wind Turbine decision.

Please let me know if you need anything further, and happy to discuss.

Thanks

Kim

Talking Points

- On 2 June 2017, I decided that the proposal to construct and operate two wind turbines on Lord Howe Island is clearly unacceptable because of its impacts on the world and national heritage values of the Island Group.

- I considered that the proposed wind turbines would create a considerable, intrusive visual impact and that this would affect the spectacular and scenic landscapes for which the Island Group in recognised. Given the 20-year lifetime of the proposed turbines, the impacts would persist for decades.

- I concluded that the proposal would be an inappropriate development for Lord Howe Island and that the impacts on the Island Group's heritage values cannot be sufficiently avoided or mitigated.

How can you refuse a renewable energy project that would reduce the Island's reliance on diesel?

- My responsibilities under the EPBC Act when assessing a referral include considering the impacts of the proposal on nationally protected matters.

- Lord Howe Island has significant world and national heritage values which I have a legislative responsibility to protect.

- I considered that the wind turbines would create a considerable, intrusive visual impact and that this would affect the spectacular and scenic landscapes for which the Island Group in recognised.

If asked about the ARENA funding for the Lord Howe Island Hybrid Renewable Energy Project

- My decision about the wind turbine proposal does not affect the solar component of the Island's broader Hybrid Renewable Energy Project.

- The Lord Howe Island Board is free to pursue the solar element which was decided in 2015 to not be a controlled action under the EPBC Act.

How does this project compare to others where a clearly unacceptable decision has been made?

- Each referral is considered under the EPBC Act in terms of its impacts on nationally protected matters.

- There have been nine previous decisions to prevent clearly unacceptable impacts on nationally protected matters including decisions to protect world and national heritage values, wetlands of international importance and listed threatened species and communities.

Kim Farrant
Assistant Secretary |Assessments (NSW, ACT) & Fuel
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: GPO Box 787 CANBERRA ACT 2601
Australian Government
Department of the Environment

FOI 190614
Document 6

s22

From: Kim Farrant
Sent: Friday, 5 July 2019 5:18 PM
To: s22
Subject: FW: MS17-000763 - REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790] [SEC=UNCLASSIFIED]

Follow Up Flag: Follow up
Flag Status: Completed

Hi s22
Sending through anything I have that might be relevant to the LHI request now.
Thanks
Kim

Kim Farrant
Assistant Secretary | International Branch
International Climate Change and Energy Innovation Division
s22
✉: kim.farrant@environment.gov.au
: GPO Box 787 CANBERRA ACT 2601

From: s47F
Sent: Wednesday, 7 June 2017 12:24 PM
To: s22 ; Kim Farrant
Subject: RE: MS17-000763 - REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790] [SEC=UNCLASSIFIED]

No worries s22 , I'll get in touch with s47F and let you know.
Cheers
s47F

From: s22
Sent: Wednesday, 7 June 2017 12:16 PM
To: Farrant, Kim <Kim.Farrant@environment.gov.au>; s47F s47F
Subject: RE: MS17-000763 - REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790] [SEC=UNCLASSIFIED]

Fyi Parl Services is posting out the letter, notice and SOR now (they just called me about it). It will likely take a few days in snail mail to make it to LHI, so if the Minister hasn't called them yet and still wants to, there's still the opportunity in next day or two before the letter would arrive there.

We need to put the notice up on the Department's website too, but I can delay doing that for another day or two.

s22

From: Farrant, Kim
Sent: Wednesday, 7 June 2017 10:09 AM
To: s47F

Subject: RE: MS17-000763 - REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790] [SEC=UNCLASSIFIED]

Thanks
Kim

Kim Farrant
Assistant Secretary |Assessments (NSW, ACT) & Fuel
Environment Standards Division
s22
✉: kim.farrant@environment.gov.au
: GPO Box 787 CANBERRA ACT 2601

From: s47F
Sent: Wednesday, 7 June 2017 10:07 AM
To: Farrant, Kim <Kim.Farrant@environment.gov.au>; s22 >
Subject: RE: MS17-000763 - REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790] [SEC=UNCLASSIFIED]

I've heard back from s22 and she hasn't seen him make the call either…

From: Farrant, Kim
Sent: Wednesday, 7 June 2017 10:02 AM
To: s47F s22
Subject: RE: MS17-000763 - REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790] [SEC=UNCLASSIFIED]

Thanks s47F
Kim

Kim Farrant
Assistant Secretary |Assessments (NSW, ACT) & Fuel
Environment Standards Division
s22
✉: kim.farrant@environment.gov.au
: GPO Box 787 CANBERRA ACT 2601

From: s47F
Sent: Wednesday, 7 June 2017 10:00 AM
To: Farrant, Kim <Kim.Farrant@environment.gov.au>; s22
Subject: RE: MS17-000763 - REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790] [SEC=UNCLASSIFIED]

Hi Kim

I'm trying to find out from the office, but so far no-one knows… I'll let you know if I hear from s22 .

Cheers
s47F

From: Farrant, Kim
Sent: Tuesday, 6 June 2017 7:38 PM
To: s47F s22 >
Cc: s22 s22
s22 s22 >; s22

Subject: RE: MS17-000763 - REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790] [SEC=UNCLASSIFIED]

Hi s47F
Do you know if the Minister called the LHI Board after he made the decision? I understood from a conversation with s47F that this was going to happen.
Thanks
Kim

Sent with Good (www.good.com)

From: s47F
Sent: Tuesday, 6 June 2017 4:36:52 PM
To: Farrant, Kim; s22
Cc: s22 ;s22 , s22 , s22

Subject: MS17-000763 - REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790] [SEC=UNCLASSIFIED]

Dear Kim and s22

Re: MS17-000763 - REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790]

The Minister has considered the above brief:

Recommendation 1: Considered

No annotations.

The signed brief will be returned to the department in the next courier run.

Any signed letters attached to your brief will be posted by Parliamentary Services. If you do not want the letters sent out, please contact Parliamentary Services immediately to make alternative arrangements.

Thank you
s47F

s47F
Departmental Liaison Officer
Office of the Hon Josh Frydenberg MP | Minister for the Environment and Energy
Ph: s47F
s47F | Parliament House, Canberra, ACT 2600

FOI 190614
Document 7

s22

From: Dean Knudson
Sent: Wednesday, 10 July 2019 12:01 PM
To: EA.DeanKnudson
Subject: FW: Talking points on Lord Howe Island Wind Turbine project [SEC=UNCLASSIFIED]

From: s22
Sent: Tuesday, 28 November 2017 4:04 PM
To: James Tregurtha ; Dean Knudson
Cc: s22
Subject: FW: Talking points on Lord Howe Island Wind Turbine project [SEC=UNCLASSIFIED]

Hi Dean and James

s47F was after an urgent update to the TPs about the LHI Wind Turbine project that the Minister decided earlier this year was clearly unacceptable. This was in response to the media article yesterday http://reneweconomy.com.au/frydenberg-condemns-lord-howe-island-to-fossil-fuel-future-its-just-not-acceptable-17914/

I was able to just add a little to the points Kim had provided at the time (in email below). Forgot to cc you in when I sent it up 25 mins ago sorry. s47F wanted TPs on the two specific claims I've addressed.

Cheers
s22

From: s47F
Sent: Tuesday, 28 November 2017 3:36 PM
To: s22 >
Cc: s22
Subject: RE: Talking points on Lord Howe Island Wind Turbine project [SEC=UNCLASSIFIED]

Thank you.

From: s22
Sent: Tuesday, 28 November 2017 3:34 PM
To: s47F >
Cc: s22 >
Subject: FW: Talking points on Lord Howe Island Wind Turbine project [SEC=UNCLASSIFIED]
Importance: High

Hi s47F

I've added some TPs to the existing ones below to address your two points – give me a call on s22 if you have further questions.

s22

From: s47F
Sent: Tuesday, 28 November 2017 2:44 PM
To: s22 >
Subject: FW: Talking points on Lord Howe Island Wind Turbine project [SEC=UNCLASSIFIED]
Importance: High

From: Farrant, Kim
Sent: Friday, 2 June 2017 4:46 PM
To: s47F
Cc: de Brouwer, Gordon <Gordon.deBrouwer@environment.gov.au>; Knudson, Dean <Dean.Knudson@environment.gov.au>; Cahill, Matt <Matt.Cahill@environment.gov.au>; s22 s22
Subject: Talking points on Lord Howe Island Wind Turbine project [SEC=UNCLASSIFIED]
Importance: High

Hi s47F

Please see below some general talking points on the Lord Howe Island Wind Turbine decision.

Please let me know if you need anything further, and happy to discuss.

Thanks

Kim

Talking Points

- On 2 June 2017, I decided that the proposal to construct and operate two wind turbines on Lord Howe Island is clearly unacceptable because of its impacts on the world and national heritage values of the Island Group.

- I considered that the proposed wind turbines would create a considerable, intrusive visual impact and that this would affect the spectacular and scenic landscapes for which the Island Group in recognised. Given the 20-year lifetime of the proposed turbines, the impacts would persist for decades.

- I concluded that the proposal would be an inappropriate development for Lord Howe Island and that the impacts on the Island Group's heritage values cannot be sufficiently avoided or mitigated.

How can you refuse a renewable energy project that would reduce the Island's reliance on diesel?

- My responsibilities under the EPBC Act when assessing a referral include considering the impacts of the proposal on nationally protected matters.

- Lord Howe Island has significant world and national heritage values which I have a legislative responsibility to protect.

- I considered that the wind turbines would create a considerable, intrusive visual impact and that this would affect the spectacular and scenic landscapes for which the Island Group in recognised.

If asked about the ARENA funding for the Lord Howe Island Hybrid Renewable Energy Project

- My decision about the wind turbine proposal does not affect the solar component of the Island's broader Hybrid Renewable Energy Project.

- The Lord Howe Island Board is free to pursue the solar element which was decided in 2015 to not be a controlled action under the EPBC Act.

How does this project compare to others where a clearly unacceptable decision has been made?

- Each referral is considered under the EPBC Act in terms of its impacts on nationally protected matters.

- There have been nine previous decisions to prevent clearly unacceptable impacts on nationally protected matters including decisions to protect world and national heritage values, wetlands of international importance and listed threatened species and communities.

The community-based Sustainable Energy Working Group claims no detailed reason has been given for the clearly unacceptable decision

- Consistent with requirements set out in Part 7, Division 1A of the EPBC Act, I provided detailed reasons at the time of my decision to the Lord Howe Island Board, who are the proponent for the project.

- It is now a matter for the Lord Howe Island Board as to how it proceeds. Section 74C (3) of the EPBC Act sets out options that are available to the proponent where a proposal has been decided to be clearly unacceptable.

The community-based Sustainable Energy Working Group claims that the Minister "out of the blue, cancelled the project"

- I gave thorough consideration to a range of matters when deciding that the wind turbine proposal would have clearly unacceptable impacts. This included consideration of the project referral submitted by the Lord Howe Island Board, and the world and national heritage values of the Island Group.

- In making my decision, I engaged with the Lord Howe Island Board as the proponent for the project, and I acted entirely in accordance with my responsibilities under the EPBC Act.

s42 LPP

s42 LPP

s42 LPP

s42 - LPP

Lord Howe Island Renewable Energy Project – Stage 2 Wind Turbines: additional information about the proposed turbines and location

The Turbines

The proposed turbines are required to generate 400kW of power to supplement the solar panel charging of the battery units being installed under EPBC 2015/7544. The turbines are to be constructed in an inset of the permanent park preserve at the location indicated in Figure 3. The turbines will be in the same field but to the south as Solar Area C and to the South-East of Solar Area A, which is in an adjacent field (see Figure 4). The field is comprised of exotic grass species which will be cleared to erect the pads and guywire anchor points for the turbine towers.

The specific model of turbine to be installed has not yet been determined, and the choice is to involve an open tender process. The referral documentation states that there are two commercially available turbine models within the specification range that meet the electricity generation requirements for the project. These are the Vergnet 200 kW GEV MP-C LnN (low noise) turbine (Vergnet) and the XANT 100 kW M21 Class 1A (XANT). The XANT is a smaller turbine and is at the lower end of the proposed size range. The Vergnet is a midsized turbine and is at the upper end of the proposed size range. A comparison between these two turbines and the turbines of the Capital Wind Farm (Lake George) can be seen in Figure 1.

Turbine	Vergnet	XANT	Suzlon
Hub height	55 metres	38 metres	80 metres
Blade length	15 metres	10.5 metres	44 metres
Maximum blade tip height	70 metres	48.5 metres	124 metres
Number of blades	2 blades	3 blades	3 blades

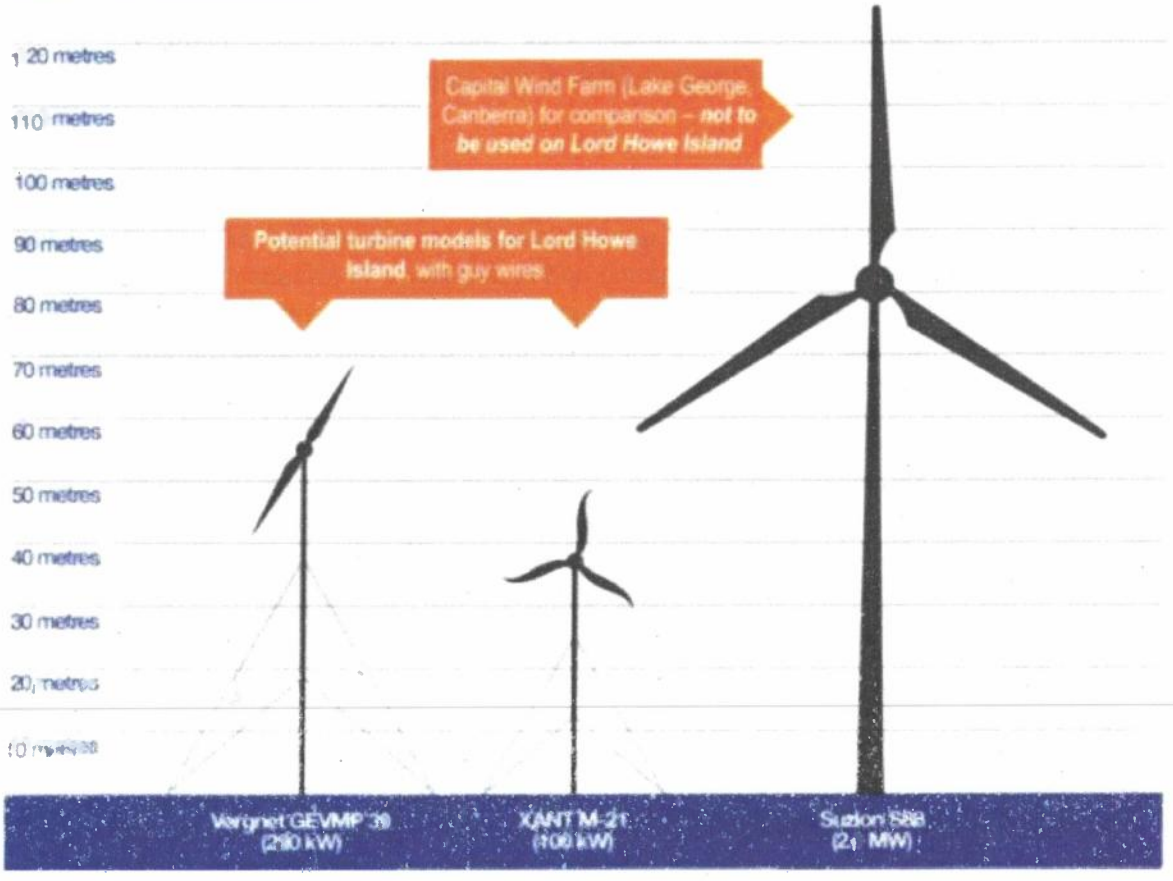


Figure 1: Height and rigging comparison between the Vergnet the XANT and the Suzion 80 turbine (installed at the Capital Wind Farm, Lake George, NSW).

The referral documentation and the supporting "*Environmental Report*", have been based on the installation of two midsized turbines generating 200 kW such as the Vergnet.

The two turbine towers are to be constructed of steel tube mounted on concrete foundation pads, with a nacelle housing the generator on top of the tower. The towers would be secured using wire cable guys attached to ground anchors in bedrock or steel rods cast in concrete footings at or near ground level, and raised steel posts which may be freestanding or braced. An observation and monitoring tower currently exists at the site and has similar guy wire supports as the proposed turbines (Figure 2).

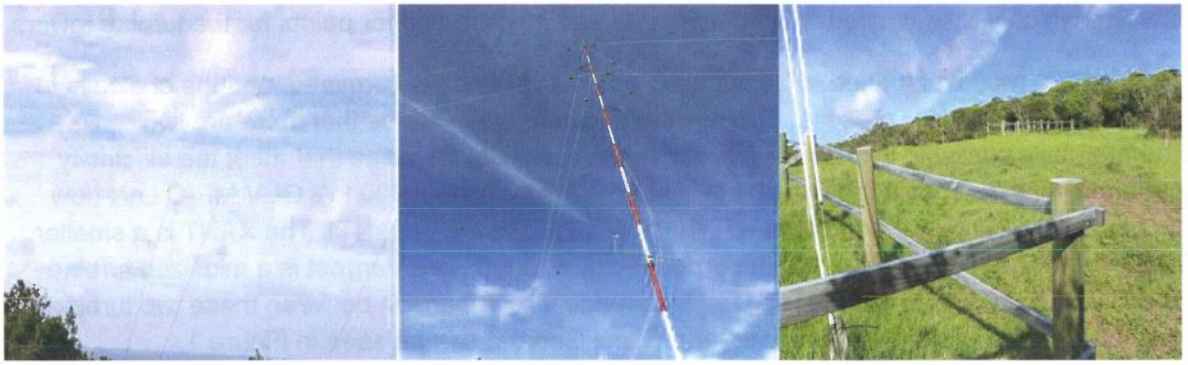


Figure 2: Monitoring tower at the proposed turbine site (taken during site visit, 15 March 2017).

During operation, the turbines would shut down automatically when wind speed is too low or too high for safe and effective operation. The turbines also have the capacity for automated regular shutdown during particular times, e.g. to minimise bird impacts. Both turbine models can be lowered manually for maintenance and protection during storms.

Access road

An access road will be constructed between the stage 1 solar farm site and the turbine site (Figure 4). The track would be sealed and used primarily to enable access for construction plant and future light vehicle access for maintenance and monitoring, and for leaseholder access for agricultural land use purposes. The sealed track is to be constructed over an existing dirt path and is to be 3.5 metre wide, with 1m wide shoulders within a 9m wide cleared corridor to allow turning space for transport of the towers.

However, approximately 50m of this track will pass through a narrow belt of native vegetation requiring an area of 200m^2 (0.02ha) of native vegetation to be cleared. This vegetation consists of seven endemic taxa: *Celtis conferta ssp. amblyphylla, Howea belmoreana, Sophora howinsula, Xylosma maidenii, Cassinia tenuifolia, Trophis scandens ssp. megacarpa* and *Parsonsia howeana*. Whilst a component of the world heritage values, none of these are specifically EPBC listed species and all occur widely over the island.

Transformers and cabling

Each turbine would be installed with a small kiosk transformer and underground power and communication cabling. This cabling would join up with the cabling to be installed for the solar phase of the project and connect the turbines to the powerhouse. Trenches would be between 1000 to 1200 mm deep and 600 mm wide. Bedding sand would be placed under, around and above the cabling and the trench would be backfilled with existing fill with cable markers in the trench. Direct buried cables may be required to have a nylon jacket for termite protection. As

can be seen in Figure 4 the cabling follows the envelope of clearing required for the access track. As such, no additional clearing of native vegetation is required for the installation to that describe above. In the field, the required clearing will consist of exotic grasses dominated by kikuyu (*Cenchrus clandestinus*).

Description of the environment

Lord Howe Island

The Lord Howe Island Group (LHIG) is a number of small islands, remnants of a volcano in the Tasman Sea. The LHIG are situated 779 km north-east of Sydney. Lord Howe Island is the main island of the group and measures 10km from north to south and 2km in width (14.55km^2). It is crescent shaped and encloses a coral reef lagoon on its south-western side. The island's topography is dominated by the southerly Mount Gower (875m) and Mount Lidgbird (777m). The LHIG supports a high level of endemic and significant species and communities including a variety of vegetation types. There are 241 native species of vascular plants on the island, including 105 endemics. Sixteen of these are considered rare, endangered or vulnerable. There are at least 129 native and introduced bird species, mostly vagrants, with 27 breeding regularly. The islands also supports two species of terrestrial reptile and many endemic invertebrate species.

Turbine Site

The proposed wind turbine site is located in the central lowlands and hills on the northern half of the island (Figure 3). The site is south of the existing diesel powerhouse and approximately 800m north of the airport. The site is a cleared 1.5ha paddock, located on a ridgeline that rises to the south. The groundcover in the paddock consists of exotic pasture grasses and weeds. The paddock is surrounded by native closed forest vegetation comprising of: *Celtis conferta ssp. amblyphylla, Howea belmoreana, Sophora howinsula, Xylosma maidenii, Cassinia tenuifolia, Trophis scandens ssp. megacarpa* and *Parsonsia howeana*. This vegetation is not listed under the EPBC Act but is considered to be a component of criterion vii of world heritage values. This area of vegetation is also a part of the island's Permanent Park Preserve. The referral states that the subject site was selected because it is close to the powerhouse, in an elevated position to access higher wind speeds, in a north facing position with no shading issues and is one of the least visible cleared pieces of elevated land on the island. Departmental officers visited the island between 15 and 19 March 2017. Using the adjacent wind monitoring mast as a guide, the site location is visible from most vantage points on the island and offshore locations.

Access track and cabling

Figure 4 depicts the proposed route of the underground cabling adjacent to the existing road. The route passes through a belt of trees (Area A in Figure 4) and a paddock with exotic grass species. The trench is to be backfilled and pasture re-established.

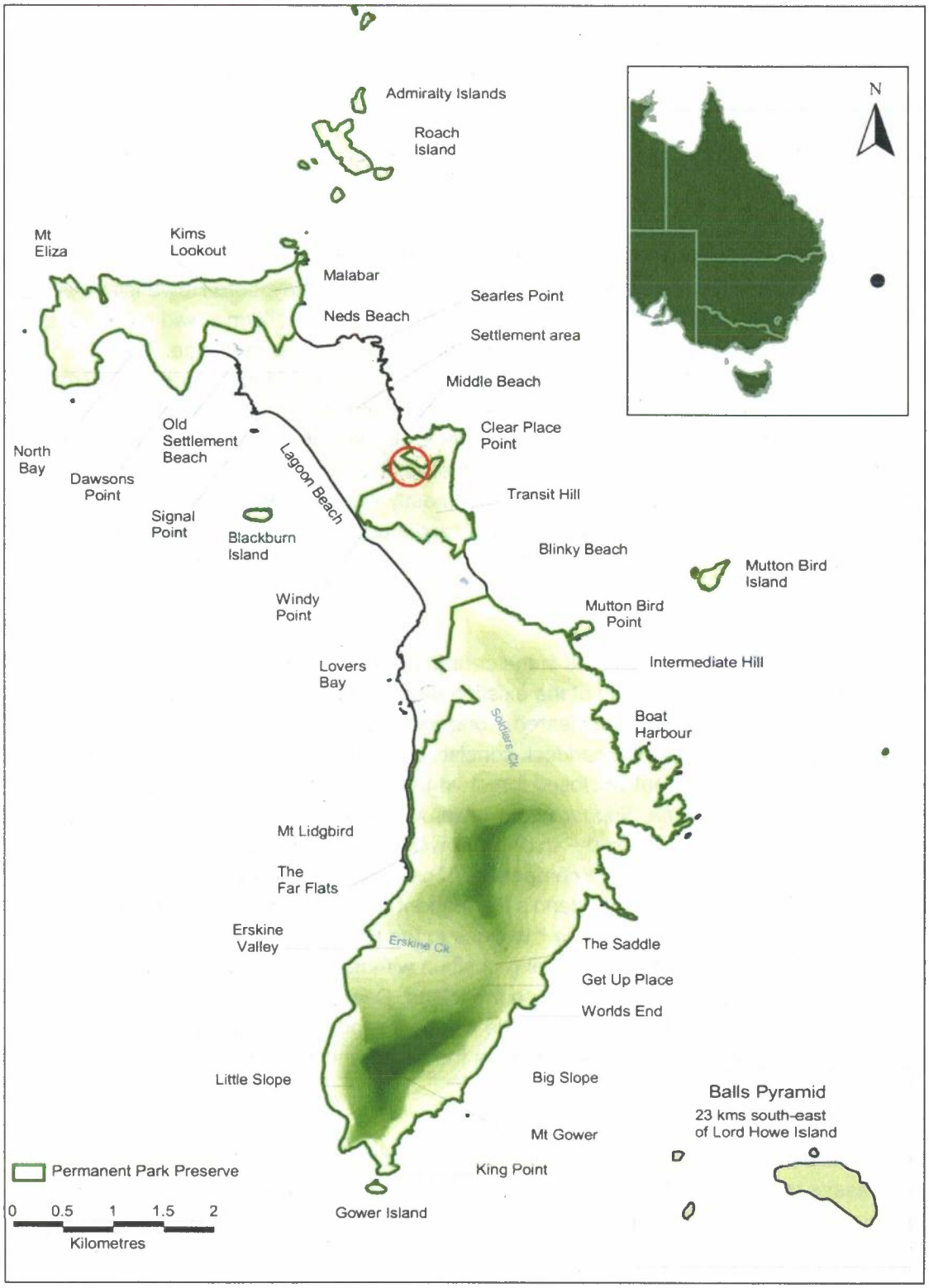


Figure 3: Location of the turbines on LHI.

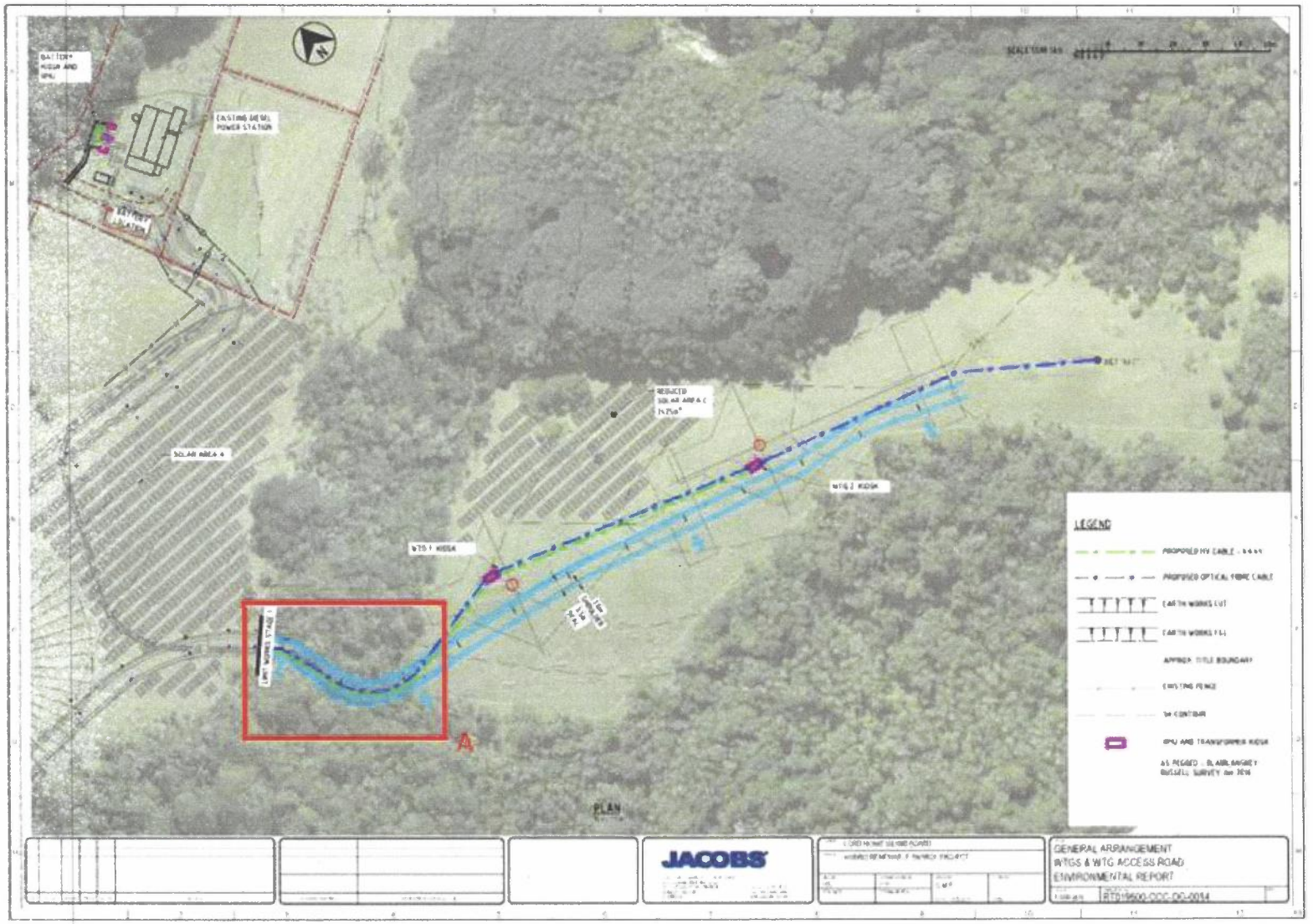


Figure 4: Position of turbines in relation to solar array. Area A depicts the access track.

Heritage Advice

Referral EPBC 2016-7790 - Lord Howe Island Renewable Energy Project NSW

Action

The proponent, the Lord Howe Island Board (LHIB) is a statutory body established under the provisions of the *Lord Howe Island Act 1953*. The LHIB is charged with the care, control and management of Lord Howe Island and its affairs and trade.

The LHIB is proposing to construct and operate two wind turbines for the provision of electricity on a paddock of introduced pasture grasses surrounded by native vegetation, close to a power station and next to site proposed for an array of solar panels. The turbines would be 71 metres high (base to blade tip at highest point) or 55 metres base to hub. An access road 3.5 metres wide, in a nine metre wide cleared corridor, would require the clearance of 200 square metres of native vegetation, proposed to be offset by vegetation restoration works close to the subject site.

World Heritage property ✓ **National Heritage place** ✓ **Commonwealth marine area** ☐

Commonwealth land ☐ **Commonwealth action** ☐

World Heritage property and National Heritage place and relevant listed values

The Lord Howe Island Group was inscribed on the World Heritage List in December 1982 and is an outstanding example of oceanic islands of volcanic origin containing a unique biota of plants and animals, as well as the world's most southerly true coral reef. It is an area of spectacular and scenic landscapes encapsulated within a small land area, and provides important breeding grounds for colonies of seabirds as well as significant natural habitat for the conservation of threatened species.

The property meets two World Heritage natural criteria[1]:

(vii) - to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

(x) - to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

The Statement of Outstanding Universal Value for the Lord Howe Island Group includes the following descriptions of values under each criteria:

> **Criterion (vii):** The Lord Howe Island Group is grandiose in its topographic relief and has an exceptional diversity of spectacular and scenic landscapes within a small area, including sheer mountain slopes, a broad arc of hills enclosing the lagoon and Balls Pyramid rising abruptly from the ocean. It is considered to be an outstanding example of an island system developed from submarine volcanic activity and demonstrates the nearly complete stage in the destruction of a large shield volcano. Having the most southerly coral reef in the world, it demonstrates a rare example of a zone of transition between algal

[1] World Heritage criteria referencing has changed over time. At the time of listing the property was inscribed under the following two criteria:
(iii) Contain unique, rare or superlative natural phenomena, formations or features or areas of exceptional natural beauty, such as superlative examples of the most important ecosystems to man, natural features (for instance, rivers mountains, waterfalls), spectacles presented by great concentrations of animals, sweeping vistas covered by natural vegetation and exceptional combinations of natural and cultural elements.
(iv)Be habitats where populations of rare or endangered species of plants and animals still survive. This category would include those ecosystems in which concentrations of plants and animals of universal interest and significance are found.

and coral reefs. Many species are at their ecological limits, endemism is high, and unique assemblages of temperate and tropical forms cohabit.

The islands support extensive colonies of nesting seabirds, making them significant over a wide oceanic region. They are the only major breeding locality for the Providence Petrel (*Pterodroma solandri*), and contain one of the world's largest breeding concentrations of Red-tailed Tropicbird (*Phaethon rubricauda*).

Criterion (x): The Lord Howe Island Group is an outstanding example of the development of a characteristic insular biota that has adapted to the island environment through speciation. A significant number of endemic species or subspecies of plants and animals have evolved in a very limited area. The diversity of landscapes and biota and the high number of threatened and endemic species make these islands an outstanding example of independent evolutionary processes.

Lord Howe Island supports a number of endangered endemic species or subspecies of plants and animals, for example the Lord Howe Woodhen, which at time of inscription was considered one of the world's rarest birds. While sadly a number of endemic species disappeared with the arrival of people and their accompanying species, the Lord Howe Island Phasmid, the largest stick insect in the world, still exists on Balls Pyramid. The islands are an outstanding example of an oceanic island group with a diverse range of ecosystems and species that have been subject to human influences for a relatively limited period.

The full SOUV is at:

http://www.environment.gov.au/heritage/places/world/lord-howe/values

The Lord Howe Island Group was included in the National Heritage List on 21 May 2007 for values similar to its Outstanding Universal Value. For the purpose of this assessment World Heritage values are used as a surrogate for the property's National Heritage Values. Potential impacts are therefore discussed in terms of the property's Outstanding Universal Value rather than its National Heritage values.

Nature and extent of impacts on the World Heritage and National Heritage values

The nature and extent of impacts on World Heritage values under **criterion (vii) – the property contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance**:

The proposed action is unlikely to have major adverse impacts on the Lord Howe Island Group's spectacular and scenic landscapes. The proposed location is at relatively low altitude and the relatively narrow profile of the turbines means that although they would be visible in the landscape, they would not dominate the landscape in an unacceptable visually intrusive way. The Landscape and Visual Impact Assessment report concludes that they would be visible from key vantage points at the north and south of the island, that visual sensitivity was high for all the assessed viewpoints around the site, and that they would have a moderate visual impact within the local context (Referral page 16).

The nature and extent of impacts on World Heritage values under **Criterion (x) - contains the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation:**

The main potential impacts would be on avian fauna and a species of bat, specifically 7 seabird species, 7 terrestrial bird species, 2 migratory bird species and one microbat species. Only 2% of bird flights have been recorded above 24 metres above ground level (Biodiversity Assessment Report page 22), compared to the lowest point of the turbine blade tips being 39 metres above ground level, and 'the turbines pose a low probability of blade strike to the Large Forest Bat from random interactions' (Bat Impact Report page 12). The proposed site of the turbines is a paddock supporting 'exotic pasture of little or no conservation value' (Biodiversity Assessment Report page 28). The main impact of the proposal on flora would be the loss of 200 square metres of native vegetation (Greybark-Blackbutt Closed Forest) for the access road easement. There is no reason given for the nine metre wide cleared corridor for the 3.5 metre wide access road. This width of

clearing seems greater than necessary for a minor access road, and should be reduced as much as practicable.

Tables 6.1 and 6.2 specify safeguards to avoid and mitigate impacts on fauna, flora and ecological communities and it is considered that if these measures are implemented, it is unlikely that there would be a major impact on fauna, flora and ecological community values.

Summary of Advice

The proposed action is unlikely to cause one or more of the World Heritage values to be lost, degraded or damaged, or notably altered, modified, obscured or diminished, particularly if the impact mitigation measures presented in the documents accompanying the referral are implemented and if the width of the cleared road easement is reduced as much as practicable.

Cleared By

s22

Director
Natural Heritage Section

November 2016

Sources

1. Nomination of the Lord Howe Island Group by the Commonwealth of Australia for inclusion on the World Heritage List (1981)
2. Statement of Outstanding Universal Value
3. Referral Documentation

THE HON JOSH FRYDENBERG MP
MINISTER FOR THE ENVIRONMENT AND ENERGY

s47F

EPBC Ref: 2016/7790

Dear s47F

I am writing to advise you that I am currently considering the Lord Howe Island Renewable Energy Project – Stage 2 Wind Turbines (EPBC 2016/7790), Lord Howe Island, New South Wales proposed by the Lord Howe Island Board, which was referred for consideration under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The proposed development is on the World and National Heritage listed Lord Howe Island Group which, among other attributes, is considered to be an outstanding example of oceanic islands of volcanic origin and an area of spectacular and scenic landscapes encapsulated within a small island area. The Island meets two World Heritage natural criteria, including that it contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance, and similar National Heritage values.

I am concerned that the proposed placement of the two wind turbines may introduce an intrusive element with a substantial and long term impact on the Island's World and National Heritage values. There is a real chance or possibility that this may cause one or more of the World and National Heritage values to be lost, degraded, obscured or diminished, an outcome I would consider to be unacceptable.

I expect to make a decision about the referral in the coming weeks including whether it is a not a controlled action, not a controlled action if carried out in a particular manner, a controlled action or clearly unacceptable. Should I decide the action is clearly unacceptable, you will have the following options under the EPBC Act:

- withdraw the referral and take no further action in relation to the proposed action; or
- withdraw the referral and refer a new proposal to take a modified action; or
- request that the referral decision be reconsidered.

Additional options available to you are to withdraw or vary the proposal at any time ahead of the referral decision being made having regard to the World and National Heritage values of the Island and other nationally protected matters. I would encourage you to discuss options for this proposal with the Australian Renewable Energy Agency.

The Department is also available to discuss the matter further with the Board. If you have any questions about the referral process or this letter, please contact Ms Kim Farrant, Assistant Secretary, Assessments (NSW, ACT) and Fuel Branch by email at kim.farrant@environment.gov.au or telephone s22 and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

JOSH FRYDENBERG

Attachment D

Lord Howe Island Renewable Energy Project

Advice from ARENA

Background

Project details:
The project is designed to deliver up to 70% diesel generation replacement through the design and construction of a hybrid wind, solar, battery and diesel power plant on Lord Howe Island. It is funded through a NSW government loan and up to $4.5 million of ARENA funding.

Rationale:
There are no proven models for using renewables in stand-alone systems at levels that deliver material savings (40-80% contribution) — primarily because the challenges associated with combining multiple technologies (solar, wind and storage) with existing diesel generation have not been solved. Through this and other projects, ARENA is building capability to deliver secure, reliable and affordable renewable energy solutions in remote and regional Australia.

Issues

ARENA is currently assessing the feasibility of different renewable configurations involving solar PV and batteries with or without augmentation by wind on Lord Howe Island. Our analysis shows that the only financially feasible option is a solution involving wind.

	Annual fuel savings (litres and % of total diesel)	Net Present Value
Option 1: PV and battery	215,000 (37%)	$ -821,395
Option 2: PV, battery and wind	330,000 to 400,000 (55 - 70%)	$ 356,676

Could the project be designed with solar PV only?

- The current solar PV and battery system would contribute a relatively small proportion of overall energy. Expansion of utility solar PV is not possible due to land constraints (rooftop solar may be possible).
- A solar PV only system is unable to take advantage of the complementary resource profiles for solar and wind.
- Although ARENA is prepared to commit further funds with a degree of risk that the wind component may not proceed, ARENA would need to review its continued support if it delivered a reduced scope (i.e. less innovative outcomes).

- The project is already delayed because of the complexities of approvals and community consultation at such an environmentally sensitive site. Any revision to the design would add further delay.
- ARENA would consider a reconfigured project, although it would likely require re-approval.

Would a solar only approach be commercially viable?

- As summarised above, the Net Present Value of an investment by the LHIB (together with the NSW Government) in a solar only project is negative even where ARENA's level of funding remains unchanged. However, the solar only option does not achieve ARENA's original objectives, so it is highly unlikely that ARENA's level of funding could be maintained in this scenario.
- If ARENA's level of funding was reduced by 50% (in proportion with the expected reduction in generation capacity), the solar only option would become significantly uneconomic even considering the potential environmental and tourism benefits, which are difficult to quantify.
- A substantial increase in electricity prices (roughly 4.5% tariff increase) on the island would be required to amortise the negative NPV and NSW Govt. loan over a 20 year period, or a greater subsidy provided by the NSW government. We have not tested the appetite of the local community or the NSW government for such an arrangement.

Photo credits: @prodivelordhowe, @davidconnorphoto, @ arajillarelreat, @james_lonergan, @trevortempleman

Lord Howe Island

Hybrid renewable energy project

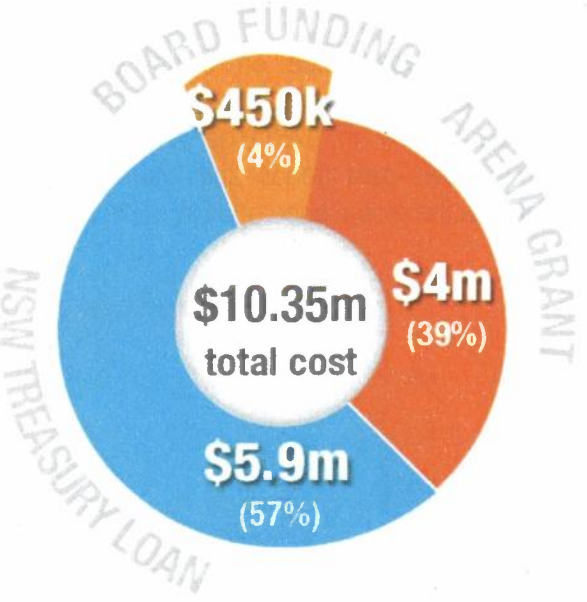
Project update: August 2016

Listening to the community has been our priority as we plan for the hybrid renewable energy system. You told us that you had questions about the project's funding, how fluctuating diesel prices have been considered and how we will pay back the loan to the NSW Government. This project update provides the facts and figures.

Where's the money coming from?

The total cost of the hybrid renewable energy system is $10.35 million.

Funding is provided through a $4 million grant from the Federal Government via the Australian Renewable Energy Agency (ARENA), a $5.9 million loan from the NSW Government and $450,000 from the Board.



How will we pay back the loan?

The Board will not charge the community more to cover the loan repayments.

Historically it has cost the Board more to provide electricity, than it charges the community to use it. From 2009 to 2016 the Board has received more than $11 million of funding from the NSW Government to provide services to the Island, of which more than $1.6 million has been used to make up the shortfall in electricity charges.

The Island will continue to receive this funding to support the cost of the Island's services. The savings in diesel from this project will pay back the $5.9 million loan to the NSW Government. The less money the Board spends on electricity generation, the more funding is available for other Board activities and services.

The Board will get favourable terms on the loan, including flexible repayments. A loan arrangement will be in place with the NSW Government for the solar panels, regardless of whether the wind turbines go ahead.

How much diesel would we save?

The Island currently uses around 540,000 litres of diesel a year or 45,000 litres a month – enough to drive from Sydney to Perth and back 95 times!

If the proposed wind turbines are approved, the hybrid renewable energy system would reduce diesel consumption on the Island by 360,000 litres a year – **that's 67% less diesel.**

The solar panels and battery (without the wind turbines) would reduce the Island's annual diesel usage by 193,000 litres a year – this is a 36% reduction from the current situation compared to 67% achieved with the wind turbines.

Continues over the page...

Photo credits: @prodivelordhowe, @davidconnorphoto, @ arajillaretreat, @ames_ionergan; @trevortempleman

Lord Howe Island

Hybrid renewable energy project

How have today's low diesel prices been accounted for in the costs?

Diesel prices today are lower than in 2014 when the project business case was developed so the cost-benefit of implementing hybrid renewable energy has shifted.

Even without price spikes, the projected price of oil is set to rise steadily in the next 20 years over the life of the project, which is why it's important to think about the longer term benefits.

Reducing dependence on diesel protects the Island from future fluctuations in global oil prices and uncertainty in exchange rates. The graph below shows past trends and future projections based on the global price of oil in US dollars.

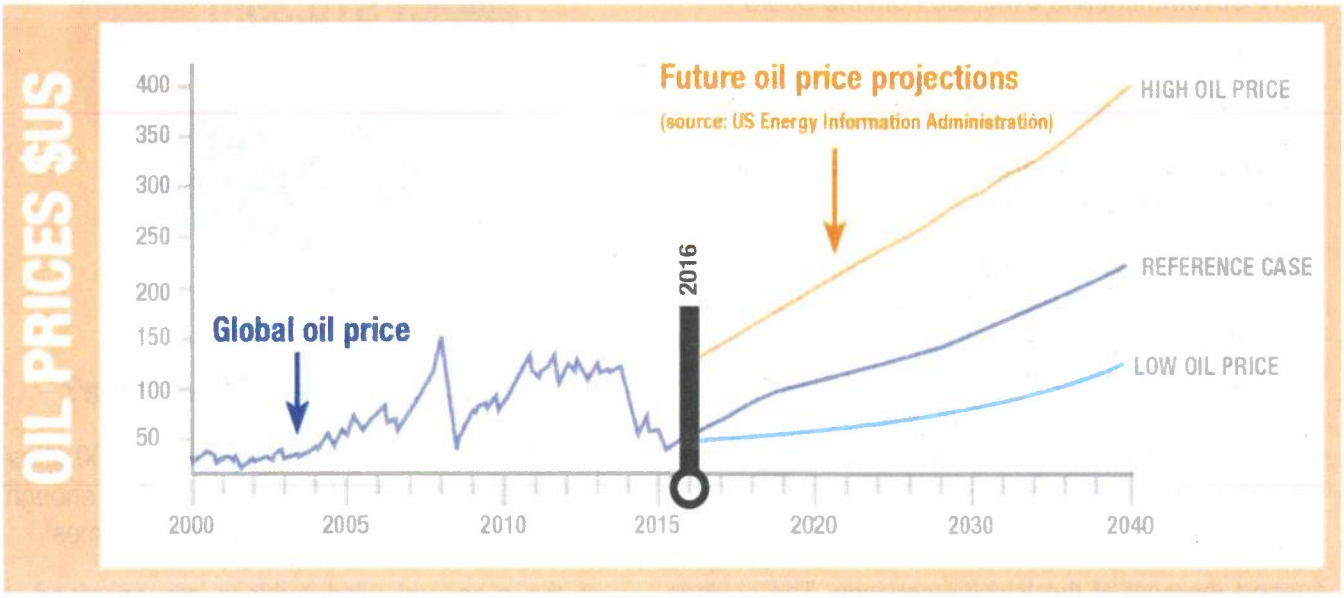
What is the environmental cost of diesel?

The value to the community and the environment from reducing diesel consumption is an important economic benefit – but hard to quantify.

When looking at the long term economic benefits, greenhouse gas emissions add an extra **17 cents per litre** to the price of diesel on the Island.

Also, the risk of a diesel spill in the lagoon, with clean-up costs and loss of tourism income, adds **8 cents per litre**.

The cost-benefit model for the project has included this environmental cost for diesel on top of the price that the Board could be expected to pay for diesel coming in on the ship.



LIKE US ON facebook

Like the 'Hybrid renewable energy project' Facebook page for updates about the project in your news feed

It's almost time to have your say on the proposed wind turbines.

The development application will be on public exhibition in September and we want to hear from you, whether you support or oppose the wind turbines. More information will be provided shortly about how to make a submission.

s42

s42 LPP

s42 LPP

PDR: MS17-000763

Copy to:

Secretary
Mr Knudson
Mr Cahill
s22
Mr Oxley
Mr Archer
s22

Chief of Staff

s47F

To: Minister for the Environment and Energy (for decision)

REFERRAL DECISION: EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES [EPBC 2016/7790]

Timing: 2 June 2017

Recommendation:

1. That you consider the recommendations and make the decisions under the *Environmental Protection and Biodiversity Conservation Act 1999* as set out in the brief and supporting documents at Attachment 1.

Considered / Please discuss

Minister:

Date: 2/6/17

Comments:

Clearing Officer: Sent 2/6/17	Kim Farrant	Assistant Secretary Assessments and Fuel Branch	s22
Contact Officer:	s22	Director, Northern NSW Assessments	s22

Key Points:

1. The purpose of this brief is to seek your consideration of the referral decision for the Lord Howe Island Board to construct and operate two wind turbines on Lord Howe Island (EPBC 2016/7790) which comprise Stage 2 of the Island's Renewable Energy Project.

2. Information is provided at Attachment 1 to enable you to make a decision about whether or not you consider that the proposed action to construct and operate two wind turbines would have clearly unacceptable impacts on the world and National Heritage values of the Lord Howe Island Group.

3. Should you decide that the referral is clearly unacceptable, you are required to notify the proponent and provide a statement of reasons. A letter to the Lord Howe Island Board, a formal notice and a draft statement of reasons are included as part of the package at Attachment 1.

4. Should you decide that the project is not clearly unacceptable, the Department will provide you with further briefing.

Consultation: YES

5. General Counsel Branch, Energy Innovation Branch, Wildlife, Heritage and Marine Division and ARENA were consulted in the preparation of this brief.

ATTACHMENTS

1: EPBC Act referral decision: Lord Howe Island Renewable Energy Project Stage 2 Wind Turbines (EPBC 2016/7790)

DEPARTMENT OF THE ENVIRONMENT AND ENERGY

ATTACHMENT 1

PDR: 2016/7790

To: Minister (for decision)

EPBC ACT REFERRAL DECISION: LORD HOWE ISLAND RENEWABLE ENERGY PROJECT STAGE 2 WIND TURBINES (EPBC 2016/7790)

Timing: 2 June 2017

Recommendations:

1. That you consider the information in this brief and the referral for the Lord Howe Island Renewable Energy Project – Stage 2 – Wind Turbines (EPBC 2016/7790) (see link to the referral in list of attachments).

Considered / Not considered

2. That you decide whether or not, on the basis of the information in this brief and the referral, you consider that the proposed action would have clearly unacceptable impacts on a matter protected by a provision of Part 3 of the EPBC Act, specifically the world and National Heritage values of Lord Howe Island Group, and that Division 1A of Part 7 should apply to the referral.

Clearly unacceptable / Not clearly unacceptable

3. If you decide that the proposed action is clearly unacceptable, that you sign the decision notice at **Attachment B** and the draft statement of reasons at **Attachment C**, having made any modification you consider necessary to ensure that the statement reflects your reasons.

Signed / Not signed

4. If you decide that the proposed action is clearly unacceptable, that you advise the Lord Howe Island Board of your decision by signing the letter at **Attachment D**.

Signed / Not signed

5. If you decide that the proposed action is not clearly unacceptable, agree that a new referral decision brief would be provided to enable you to decide whether the proposed action is a controlled action under section 75 of the EPBC Act.

Agreed / Not applicable

Minister: Date: 2/6/17

Comments:

Clearing Officer: Sent 2/ 6/ 17	Kim Farrant	Assistant Secretary, Assessments (NSW, ACT) and Fuel Branch	Ps22 s22
Contact Officer:	s22	Northern NSW Assessments	s22

Key Points:

Your power to decide that an action is clearly unacceptable

1. The EPBC Act contains a special process for dealing with a proposed action that will have clearly unacceptable environmental impacts.

2. You can decide to apply Division 1A of Part 7 of the EPBC Act to the referral of a proposed action if you consider, on the basis of the information in the referral, that it is clear that the action would have unacceptable impacts on a matter protected by a provision of Part 3.

3. The effect of a clearly unacceptable decision is to prevent the taking of the relevant action in its current design, unless you subsequently reconsider your view and decide that Division 1A of Part 7 should not apply to the action (see paragraph 5).

4. If you make a clearly unacceptable decision, you are required under section 74C of the Act to give written notice of your decision to the person proposing to take the action.

    a. The notice must state that you consider that the action would have unacceptable impacts on a matter protected by a provision of Part 3 of the Act.

    b. The notice must also set out the reasons for your decision.

5. If the person proposing to take the action requests reconsideration of the clearly unacceptable decision then the EPBC Act sets out a number of further statutory requirements. These include:

    a. publication on the internet of your proposal not to approve the action, including the reasons for your decision, and an invitation for public comment within 10 business days;

    b. the preparation by the Secretary of a written report about the relevant impacts, having regard to public comments received. The Secretary must give you this report within 10 business days of the conclusion of the public comment;

    c. within 20 business days of receiving the report from the Secretary you must either decide to refuse to approve the taking of the action, or decide that the action should proceed in accordance with the ordinary process (in which case, you would need to decide whether or not the action is a controlled action). Notice for either of these decisions must be given to the person proposing to take the action.

The basis on which you may find the Lord Howe Island Renewable Energy Project Stage 2 Wind Turbines referral to be clearly unacceptable

6. If you are satisfied, on the basis of the information in this brief and the referral (see link on list of attachments), that the Lord Howe Island Renewable Energy Project Stage 2 will have clearly unacceptable impacts on a matter protected by Part 3 of the EPBC Act, you can decide to apply Division 1A of Part 7 to the referral of the proposed action.

7. The Lord Howe Island Board (the Board) proposes to install two mid-sized wind turbines (and associated transformers, cabling and access roadworks) for public electricity generation on Lord Howe Island, NSW. The turbines would be located in a cleared paddock near the existing powerhouse and solar farm site.

    a. The solar farm element of the renewable energy project was previously referred under the EPBC Act and determined to be not a controlled action on 15 September 2015 (EPBC 2015/7544).

8. The referral for the wind turbine project was received by the Department on 4 November 2016. In its referral for the wind turbine project, the Board stated its belief that the proposal is not a controlled action as it considered the turbines would not have significant impacts on matters protected by Part 3 of the EPBC Act.

9. Following receipt of the referral, the Department considered that the proposal could potentially have impacts on four relevant matters protected by Part 3 of the EPBC Act. These were listed threatened species and communities, listed migratory species, and the world heritage and National Heritage values of the Lord Howe Island Group.

10. The Northern NSW Assessment Section sought advice about the proposal from the Department's Migratory Species Section (**Attachment E**) in relation to potential impacts on listed migratory birds that inhabit the Island Group, and from the Department's Natural Heritage Section (**Attachment F**) in relation to potential impacts on world heritage and National Heritage.

Listed Migratory Species

11. The advice from the Migratory Species Section raised concerns about the potential impacts of the proposal on listed migratory birds, in particular concerning the potential for listed migratory birds to collide with the turbine blades. The Department considers that impacts on listed migratory birds could potentially be mitigated, for example through development and implementation of the adaptive management approach proposed in the referral.

World and National Heritage Values

12. The Lord Howe Island Group was inscribed on the World Heritage List in December 1982 and listed as a National Heritage Place on 21 May 2007. : The Lord Howe Island Group is included on the World Heritage list under criteria (vii) and (x). It is included in the National Heritage list under criteria (a), (b), (c) and (e). The Department considers that if the proposed action has a significant or unacceptable impact on the world heritage values of the property, it will also have a significant or unacceptable impact on its National Heritage values.

13. The Lord Howe Island Group is considered to be an outstanding example of oceanic islands of volcanic origin and an area of spectacular and scenic landscapes. It meets the World Heritage criterion relating to superlative natural phenomena and areas of exceptional natural beauty and aesthetic importance. It also meets the criterion relating to significant natural habitats and for in-situ conservation of biological diversity. A full description of the statement of outstanding universal value for the Island Group as a World Heritage property is provided at **Attachment G**.

Consideration of the World and National Heritage impacts

14. An action is likely to have a significant impact on a property's world and National Heritage values if there is a real chance or possibility that it will cause one of more of the values to be lost, degraded, damaged, notably altered, modified, obscured or diminished. The Natural Heritage Section's 23 November 2016 advice was that the proposed action is unlikely to significantly impact the Island Group's world heritage values. It may be open to you to reach a different conclusion about this.

15. The Board included a *landscape and visual impact assessment* as part of the referral information for the wind turbine project, however the Department considers that this did not include a detailed assessment of the impact of the proposal on the aesthetic values of the property for which it was inscribed on the World Heritage List.

16. On 17 May 2017, you wrote to the Lord Howe Island Board advising of your concern that the proposed placement of the two wind turbines may introduce an intrusive element with a substantial and long term impact on the Island Group's world and National Heritage values and that you would consider this outcome to be unacceptable. A copy of your letter is at **Attachment H**.

17. On 30 May 2017, s47F on behalf of the Lord Howe Island Board, replied to your letter. s47F reply (at **Attachment I**) provides information about the proposed action, its impacts and alternatives that were considered in developing their project, but does not propose varying this referral. The information includes that:

    a. The renewable energy proposal, in planning since the 1980s has involved community consultation in the selection of the turbine locations taking into account access to a good wind resource, distance from residences and limiting noise and visual impact.

    b. Lord Howe Island is not a pristine environment. The 177 years of human occupation on the Island have resulted in a range of impacts through land clearing and built infrastructure including buildings, roads, electricity facilities, an airport, aviation towers, a wharf and coastal erosion protection works. The island achieved world heritage status in 1982 even with the presence and impact of the existing infrastructure.

    c. The wind turbines will reduce the Island's reliance on diesel fuel for electricity generation and are likely to be seen as symbolising a modern solution to sustainable living in a remote island location.

    d. The continued importation of large quantities of diesel for electricity generation is not considered to be economically or ecologically sustainable and reducing the Island's reliance on imported diesel fuel will reduce the risks to the marine and land

environments from fuel management. The Board claims that under the UNESCO (2008) Operational Guidelines for World Heritage properties, human activities may be 'consistent with the Outstanding Universal Value of the area where they are ecologically sustainable'.

e. An energy alternative of building a larger solar farm instead of the wind turbines is suboptimal in the amount of diesel fuel it displaces, and would encounter land suitability constraints.

f. Alternative turbine designs have been considered but either lack sufficient capacity (and would therefore require a greater number of turbines) or are still developmental (and suffer reliability issues).

g. A detailed process has been undertaken for selecting the turbine site selection, including community consultation and consideration of the wind resource, visual impacts, construction challenges and potential impacts on aircraft operations.

h. The proposed turbine site was selected because it is in close proximity to the existing powerhouse and electricity network and is one of the least visible cleared pieces of elevated land on the Island. Practical access and operation considerations limit the turbines physical size. The turbines are not permanently fixed but can be lowered for maintenance and other purposes. The proposed turbines are a similar scale to the existing aviation towers near the project site.

i. The visual, noise and social assessments were conducted by specialist consultants and are based on established methodology, empirical surveys and extensive community and visitor consultation. The turbines will not be able to be seen from most locations in the settlement area and will be distant structures in the landscape from key vantage points around the Island.

18. You should consider the above information from the Board in deciding whether the proposed action is clearly unacceptable.

The Lord Howe Island Strategic Plan

19. The Strategic Plan for Lord Howe Island Group World Heritage Property (at **Attachment J**) is a document that provides an overarching framework for consistent and coordinated management of the Lord Howe Island Group World Heritage Property by the Lord Howe Island Board and the various NSW and Commonwealth government agencies with responsibilities in the area.

    a. The objective of the Plan is to ensure that the management of the world heritage property complies with Australia's obligations under the World Heritage Convention.

20. The Plan states that scenic values on Lord Howe Island are vulnerable to visual impacts from inappropriate development and that the establishment of alternative technologies has the potential to create intrusive visual impacts. The Plan acknowledges that to the extent feasible, efficient and non-polluting energy systems that are compatible with the protection of World Heritage values will be provided.

Will the proposed action have clearly unacceptable impacts?

21. Taking the information in the referral and in this brief into account, it would be open to you to be satisfied the proposed action will have the following impacts on the world and National Heritage values of the Lord Howe Island Group:

    a. The turbines will be intrusive and highly visible in the landscape, including from popular vantage points, and will have a negative impact on the spectacular and scenic landscapes for which the Island Group is listed.

    b. Although the proposed turbine models can be lowered manually for maintenance and protection during storms, it can be expected that the turbines will be in place most of their proposed 20-year lifetime, given the intention to use the wind resource for electricity generation. This means the negative impacts will persist for decades.

22. If you are satisfied that these impacts will occur, it would be open to you to conclude that the proposed action would cause one of the Lord Howe Island Group's world heritage and National Heritage values to be degraded, damaged, notably altered, modified, obscured or diminished.

23. Further, if you are satisfied that such impacts to the world heritage and National Heritage values of the Lord Howe Island Group could not be avoided and mitigated, and, having regard to the nature of those impacts, that the proposed action is an inappropriate development for Lord Howe Island, it would be open to you to conclude that the impacts of the proposed action on the Island's world heritage and National Heritage values are clearly unacceptable.

24. However, it is also open to you to conclude that further inquiry into the impacts of the proposed action under Parts 8 and 9 of the EPBC Act may affect your view as to the ultimate acceptability of the project's impacts on the world and Natural Heritage values of Lord Howe Island and that, as a result, you are not satisfied that that the proposed action is clearly unacceptable.

25. The interpretation of the impact on world and National Heritage values is contested and likely to be the area of close scrutiny. Should you make a decision that the proposed action is clearly unacceptable, you will need to notify the Board and provide reasons (paragraph 28 refers).

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Next steps

28. If you consider the proposed action is clearly unacceptable, you must give written notice of the decision to the Board and set out the reasons for your decision. A draft notice and statement of reasons for your decision have been prepared for your consideration at **Attachments B** and **C**.

29. The Lord Howe Island Board can seek reconsideration of a clearly unacceptable decision. The reconsideration process is described at paragraph 5 above. If the Board were to request reconsideration, the Department would brief you separately on that matter.

30. If you decide that the proposed action is not clearly unacceptable, a referral decision brief would be provided to enable you to decide whether the proposed action is a controlled action under section 75 of the EPBC Act.

Sensitivities

31. The Board is a statutory authority established under the provisions of the *Lord Howe Island Act 1953 (NSW)*. The Board is responsible to the NSW Minister for the Environment and is charged with the care, control and management of the Island including its heritage values. The Development Application for the proposal was approved with conditions by the Board (as the consent authority) in November 2016. The NSW Government has provided a $5.9m loan for the Renewable Energy Project.

32. On 19 June 2014, the Australian Renewable Energy Agency Board approved grant funding of $4.5m for the Lord Howe Island Renewable Energy Project comprising solar and wind power. The Project was approved under the ARENA Industry – Regional Australia's Renewables Program due to its ability to demonstrate the viability of hybrid renewable energy solutions in a remote island community with high energy cost and improve uptake of renewable energy in similar communities in Australia.

Consultation

33. General Counsel Branch, Energy Innovation Branch, Wildlife, Heritage and Marine Division and ARENA were consulted in preparation of this brief.

ATTACHMENTS

Online: Referral of proposed action: Lord Howe Island Hybrid Renewable Energy Project Stage 2 Wind Turbines – the referral comprises 18 documents viewable online at http://epbcnotices.environment.gov.au/_portal/modal-form-template-path/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?id=cf650c01-a6a4-e611-a2f2-005056ba00a8&entityformid=bd49f92c-14e8-431d-bd40-e6fdc206cddb&languagecode=1033

B: Decision Notice: Clearly Unacceptable [FOR SIGNATURE]

C: Statement of reasons for Clearly Unacceptable decision [FOR SIGNATURE

D: Letter to Lord Howe Island Board advising of Clearly Unacceptable decision [FOR SIGNATURE]

E: Referral Advice from Migratory Species Section

F: Referral Advice from Natural Heritage Section

G: Lord Howe Island Group: Statement of Outstanding Universal Value

H: Letter of 17 May 2017 from Minister Frydenberg to s47F Lord Howe Island Board

I: Reply of 30 May 2017 from s47F, Lord Howe Island Board to Minister Frydenberg

J: Strategic Plan for the Lord Howe Island Group World Heritage Property

Australian Government
Department of the Environment and Energy

Notification of
DECISION THAT THE ACTION IS CLEARLY UNACCEPTABLE

Lord Howe Island Renewable Energy Project – Stage 2 Wind Turbines (EPBC 2016/7790)

This decision is made under Section 74B of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

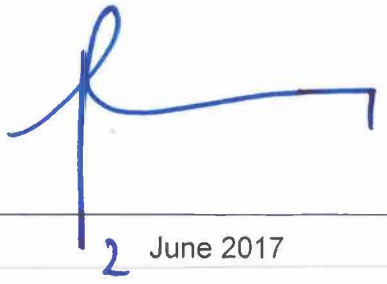
Proposed action

proposed action	To construct and operate two wind turbines on Lord Howe Island [See EPBC Act referral 2016/7790]

Decision: Action is clearly unacceptable

status of proposed action	The proposed action will have clearly unacceptable impacts on a matter protected by Part 3 of the EPBC Act. Division 1A of Part 7 of the EPBC Act applies to this referral.
relevant protected matter	• World Heritage properties (sections 12 & 15A) • National Heritage places (sections 15B & 15C)
person proposing to take the action	The Lord Howe Island Board ABN: 33 280 968 043

Person authorised to make decision

Name and position	The Hon Josh Frydenberg MP Minister for the Environment and Energy
signature	
date of decision	2 June 2017

THE HON JOSH FRYDENBERG MP

MINISTER FOR THE ENVIRONMENT AND ENERGY

Statement of Reasons for a decision that the action is Clearly Unacceptable under the *Environment Protection and Biodiversity Conservation Act 1999*

I, Josh Frydenberg MP, Minister for the Environment and Energy, provide the following statement of reasons for my decision of 2 June 2017, under section 74B of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), that the proposed action by the Lord Howe Island Board to construct and operate two wind turbines on Lord Howe Island as described in the referral received by the Department of the Environment and Energy (the **Department**) on 4 November 2016 (EPBC 2017/7730), would have clearly unacceptable impacts on a matter protected by a provision of Part 3 of the EPBC Act, and that Division 1A of Part 7 of the EPBC Act should apply to the referral of the proposed action.

Legislation

1. Relevant legislation is at Annexure A.

Background

2. On 4 November 2016, the Lord Howe Island Board (the **Board**) referred to the Department, a proposal to construct and operate two wind turbines for public electricity generation on Lord Howe Island (LHI), NSW.

3. The Board is a statutory authority established under the provisions of the *Lord Howe Island Act 1953 (NSW)*. The Board is responsible to the NSW Minister for the Environment and is charged with the care, control and management of the Island.

4. The proposed action is the second stage of the LHI Hybrid Renewable Energy Project. The first stage being the LHI Solar Photovoltaic Project (EPBC 2015/7544) which was found to be not a controlled action on 15 September 2015.

5. In its referral, the proponent stated its belief that the proposal was not a controlled action for the purposes of the EPBC Act.

6. The Lord Howe Island Group comprises a number of small islands, remnants of a volcano in the Tasman Sea, situated 779 km North-East of Sydney. Lord Howe Island is the main island of the group and has an area of 1,455 hectares. It is 11 km long and 2.8 km wide at its widest point. The island group supports a high level of endemic and significant species and communities including a variety of vegetation types.

7. The Lord Howe Island Group was inscribed on the World Heritage List in December 1982. The criteria for listing are outlined on the United Nations Educational, Scientific and Cultural Organization website at http://whc.unesco.org/en/list/186/ and mentioned in paragraphs 11, 12 and 14.

8. The Lord Howe Island Group is included on the world heritage list under criteria (vii) and (x). It is included in the National Heritage list under criteria (a), (b), (c) and (e).

9. On 2 June 2017, I decided that the proposed action would have clearly unacceptable impacts on the world heritage and National Heritage values of the Lord Howe Island Group, being matters protected by the provisions of Part 3 of the EPBC Act, and that Division 1A of Part 7 of the EPBC Act should apply to the referral of the proposed action.

Evidence or other material on which my findings were based

10. My decision to apply Division 1A of Part 7 of the EPBC Act to the referral of the proposed action, was informed by the following documents:

    A: Referral documentation for the proposed action received by the Department on 4 November 2016

    B: Advice from the Department regarding impacts of the proposal

    C: Lord Howe Island Group Statement of Outstanding Universal Value

    D: Strategic Plan for Lord Howe Island Group World Heritage Property

    E: My letter to the proponent provided on 17 May 2017

    F: A response from the proponent to my 17 May 2017 letter, received on 30 May 2017.

Findings on material questions of fact

World Heritage Listing

11. The Lord Howe Island Group was included in the World Heritage List in December 1982 for reasons including that it is an outstanding example of an oceanic island of volcanic origin, having a unique biota of plants and animals, providing unique breeding grounds for colonies of sea birds, containing features, formations and areas of exceptional natural beauty, and providing the habitat for rare and endangered species.

12. I found that in 2012, a decision was made by UNESCO to retrospectively adopt a Statement of Outstanding Universal Values for the Lord Howe Island Group for its listing under Criterion (vii) and Criterion (x) specified in UNESCOs 2012 *Operational Guidelines for the Implementation of the World Heritage Convention*.

Lord Howe Island Group's world heritage and National Heritage values

13. The Lord Howe Island Group is a 'declared world heritage property' and a 'National Heritage place' for the purposes of the EPBC Act.

14. The Lord Howe Island Group has a number of world and National Heritage values including that it is grandiose in its topographic relief and has an exceptional diversity of spectacular and scenic landscapes within a small area, including sheer mountain slopes, a broad arc of hills

enclosing the lagoon and Balls Pyramid rising abruptly from the ocean (from Criterion (vii) of the Statement of Outstanding Universal Value).

Strategic Plan for Lord Howe Island Group World Heritage Property

15. The Strategic Plan for Lord Howe Island Group World Heritage Property provides an overarching framework for consistent and coordinated management of the Lord Howe Island Group World Heritage Property by the Lord Howe Island Board and the various NSW and Commonwealth government agencies with responsibilities in the area.

    a. The objective of the Plan is to ensure that the management of the world heritage property complies with Australia's obligations under the World Heritage Convention.

16. The Plan states that scenic values on Lord Howe Island are vulnerable to visual impacts from inappropriate development and that the establishment of alternative technologies also have the potential to create intrusive visual impacts. The Plan also states that, to the extent feasible, efficient and non-polluting energy systems that are compatible with the protection of world heritage values are to be provided.

Likely impacts to the world heritage and National Heritage Values of the LHIG

17. Based on the information in the referral and supporting information, I found that the proposed action will have the following impacts on the world and National Heritage values of the Lord Howe Island Group:

    a. The turbines will be intrusive and highly visible in the landscape, including from popular vantage points, and will have a negative impact on the spectacular and scenic landscapes for which the Island Group is listed. As such, I considered that the turbines would create an intrusive visual impact.

    b. Although the proposed turbine models can be lowered manually for maintenance and protection during storms, it can be expected that the turbines will be in place most of their proposed 20-year lifetime, given the intention to use the wind resource for electricity generation. Given the lifetime of the turbines, the negative impacts will persist for decades.

18. I considered information provided by the Lord Howe Island Board in its referral and supporting information, including a letter I received on 30 May 2017 from the Board. This information included arguments that the proposed action would be consistent with other elements of the built environment on the island, would be a clean and sustainable energy solution that would reduce the Island's reliance on diesel, and that the proposed wind turbines would generally not be visible in the settlement area and would appear as distant structures in the landscape from key vantage points around the Island.

The proposed action will have clearly unacceptable impacts on the world heritage and National Heritage values of the LHIG

19. Based on the information in the referral and supporting information, I concluded that the proposed action would significantly damage or degrade the spectacular and scenic landscapes as described in the Lord Howe Island Group's Statement of Outstanding Universal Value. This would constitute a significant adverse impact to the Island Group's world and National Heritage values, which I considered could not be avoided or mitigated.

20. I concluded, given the nature of the project's impacts, that it would be an inappropriate development for Lord Howe Island.

21. In light of the matters discussed in paragraphs 17-20, I concluded that the proposed action would have clearly unacceptable impacts on the world heritage and National Heritage values of the Lord Howe Island Group, being matters protected by the provisions of Part 3 of the EPBC Act.

Reasons for decision

22. In light of my findings above, I was satisfied that the proposed action would have clearly unacceptable impacts on the Lord Howe Island Group's World and National Heritage values that are protected by the provisions of Part 3 of the EPBC Act.

23. I therefore concluded that Division 1A of Part 7 of the EPBC Act should apply to the referral of the proposed action.

Signed

.....

JOSH FRYDENBERG

2 June 2017

Annexure A – EPBC Act extracts

Section 68 of the EPBC Act relevantly provides:

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

(2) 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.

...

Section 74B of the EPBC Act provides:

(1) This Division applies to the referral of a proposal to take an action if, within 20 business days after the Minister receives the referral:

(a) the Minister considers, on the basis of the information in the referral, that it is clear that the action would have unacceptable impacts on a matter protected by a provision of Part 3; and

(b) the Minister decides that this Division should apply to the referral.

(2) If this Division applies to a referral, any other provisions of this Chapter that would, apart from this subsection, have applied to the referral cease to apply to the referral.

(3) Subsection (2) has effect subject to paragraph 74D(6)(a).

Section 74C of the EPBC Act provides:

(1) As soon as practicable after making the decision under paragraph 74B(1)(b) in relation to a referral, the Minister must give written notice of the decision to:

(a) the person proposing to take the action that is the subject of the referral; and

(b) the person who referred the proposal to the Minister (if that person is not the person proposing to take the action that is the subject of the referral).

(2) The notice must:

(a) state that the Minister considers that the action would have unacceptable impacts on a matter protected by a provision of Part 3; and

(b) set out the reasons for the Minister's decision.

(3) After receiving the notice under subsection (1), the person proposing to take the action may:

(a) withdraw the referral and take no further action in relation to the proposed action; or

(b) withdraw the referral and refer a new proposal to take a modified action to the Minister in accordance with Division 1; or

(c) request the Minister, in writing, to reconsider the referral.

Note 1: Section 170C sets out the procedure for withdrawing a referral

Note 2: A referral of a proposal to take a modified action will be a new referral for the purposes of this Chapter

s22

From: s22
Sent: Monday, 21 November 2016 6:23 PM
To: s22
Cc: s22
Subject: FW: ACTION: Request for Line Area Advice on Referral EPBC: 2016/7790 Lord Howe Island Renewable Energy Project - Stage 2 Wind Turbines [SEC=UNCLASSIFIED] [SEC=UNOFFICIAL]

Hi s22,

Please see the Species Conservation Advice for this referral below. Apologies for the delay.

Migratory Species Section Advice - EPBC: 2016/7790 Lord Howe Island Renewable Energy Project - Stage 2 Wind Turbines

A number of listed migratory seabirds inhabit Lord Howe Island (LHI) which is one Australia's most important seabird breeding islands, specifically for Flesh-footed Shearwater, Providence Petrel and Red-tailed Tropicbird. Migratory Species Section has concerns regarding the location of the wind turbines and the potential impact on Flesh-footed Shearwaters, Red-tailed Tropicbird and Wedge-tailed Shearwater. The location of the wind turbines is located close to a main breeding colony of Flesh-footed Shearwater (7,800 breeding pairs in 2003). Flesh-footed Shearwater from this colony are known to use the airspace above the paddock, particularly to access the breeding colony. Mortalities due to blade strike are considered likely without appropriate mitigation measures in place.

To reduce impacts to flesh-footed shearwater the proponent proposes to:

- **Curtail** turbine operation during the peak daily return period of Flesh-footed Shearwaters to the nesting and roosting colony i.e. from 15 minutes before dusk to 2 hours after dusk during the Flesh-footed Shearwater breeding season (15 September to 15 May).
- Develop an Adaptive Management Plan (AMP) that incorporate threshold numbers of mortalities for bird species which triggers an interim shutdown of the turbines.
- If the operation results in high mortalities of migratory bird species, turbine operation **curtailed** each night of the Flesh-footed Shearwater breeding season (15 September to 15 May), from 30 minutes before dusk until at least 60 minutes after dawn.

The Migratory Species Section has a number of concerns including:

- The term **curtailed** is not defined and as such it is unclear what a turbine actually looks like when it is **curtailed**? We are pretty sure it does not refer to being shut down.
- The referral talks about the development of a AMP. This plan is important as it will include mortality thresholds that will trigger an interim shut down. It is critical that the department is involved with and approves the mortality trigger.
- There is inconsistent use of terminology. The referral states that AMP thresholds will trigger an interim **shutdown**, but it later states that high mortality will trigger the turbines being **curtailed** each night.

In its present form, the it is considered possible that the proposed action will *'seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species'*.

The Migratory Species Section considers that the proposed action is likely to result in adverse impacts to listed migratory birds.

Regards
s22

From: s22
Sent: Monday, 7 November 2016 5:03 PM
To: Species Conservation Referrals s22
Cc: s22
Subject: EPBC: 2016/7790 Lord Howe Island Renewable Energy Project -Stage 2 Wind Turbines [SEC=UNCLASSIFIED]

Hello

I am writing to request comments on the following EPBC project:

EPBC Number: 2016/7790

Referral Title: Lord Howe Island Renewable Energy Project -Stage 2 Wind Turbines

Project stage: Referral

Project Documentation:
s22

Potential Issues:
With regards the Lord Howe Island Renewable Energy Project -Stage 2 Wind Turbines:

- Listed Threatened Species; and
- Listed Migratory Species.

Note: I am primarily concerned with birds and will follow up with specific questions.

Timeframe for providing advice:

Please email your advice to the primary EAB contact officer by **18 November 2016**.

If you are missing information to conclude your decision making/assessment, please let us know what further information you require **as soon as possible** so that we may stop the assessment clock and request this information from the proponent.

Name of primary EAB contact officer:
s22

Name of secondary EAB contact officer:
s22

s22 | **Assessment Officer**
Assessments NSW North | Assessments and Fuel Branch
Environment Standards Division | Department of the Environment and Energy
s22
GPO Box 787 Canberra ACT 2601 | www.environment.gov.au

Heritage Advice

Referral EPBC 2016-7790 - Lord Howe Island Renewable Energy Project NSW

Action

The proponent, the Lord Howe Island Board (LHIB) is a statutory body established under the provisions of the *Lord Howe Island Act 1953*. The LHIB is charged with the care, control and management of Lord Howe Island and its affairs and trade.

The LHIB is proposing to construct and operate two wind turbines for the provision of electricity on a paddock of introduced pasture grasses surrounded by native vegetation, close to a power station and next to site proposed for an array of solar panels. The turbines would be 71 metres high (base to blade tip at highest point) or 55 metres base to hub. An access road 3.5 metres wide, in a nine metre wide cleared corridor, would require the clearance of 200 square metres of native vegetation, proposed to be offset by vegetation restoration works close to the subject site.

World Heritage property ✓ **National Heritage place** ✓ **Commonwealth marine area** ☐

Commonwealth land ☐ **Commonwealth action** ☐

World Heritage property and National Heritage place and relevant listed values

The Lord Howe Island Group was inscribed on the World Heritage List in December 1982 and is an outstanding example of oceanic islands of volcanic origin containing a unique biota of plants and animals, as well as the world's most southerly true coral reef. It is an area of spectacular and scenic landscapes encapsulated within a small land area, and provides important breeding grounds for colonies of seabirds as well as significant natural habitat for the conservation of threatened species.

The property meets two World Heritage natural criteria[1]:

(vii) - to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

(x) - to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

The Statement of Outstanding Universal Value for the Lord Howe Island Group includes the following descriptions of values under each criteria:

> **Criterion (vii):** The Lord Howe Island Group is grandiose in its topographic relief and has an exceptional diversity of spectacular and scenic landscapes within a small area, including sheer mountain slopes, a broad arc of hills enclosing the lagoon and Balls Pyramid rising abruptly from the ocean. It is considered to be an outstanding example of an island system developed from submarine volcanic activity and demonstrates the nearly complete stage in the destruction of a large shield volcano. Having the most southerly coral reef in the world, it demonstrates a rare example of a zone of transition between algal

[1] World Heritage criteria referencing has changed over time. At the time of listing the property was inscribed under the following two criteria:
(iii) Contain unique, rare or superlative natural phenomena, formations or features or areas of exceptional natural beauty, such as superlative examples of the most important ecosystems to man, natural features (for instance, rivers mountains, waterfalls), spectacles presented by great concentrations of animals, sweeping vistas covered by natural vegetation and exceptional combinations of natural and cultural elements.
(iv)Be habitats where populations of rare or endangered species of plants and animals still survive. This category would include those ecosystems in which concentrations of plants and animals of universal interest and significance are found.

and coral reefs. Many species are at their ecological limits, endemism is high, and unique assemblages of temperate and tropical forms cohabit.

The islands support extensive colonies of nesting seabirds, making them significant over a wide oceanic region. They are the only major breeding locality for the Providence Petrel (*Pterodroma solandri*), and contain one of the world's largest breeding concentrations of Red-tailed Tropicbird (*Phaethon rubricauda*).

Criterion (x): The Lord Howe Island Group is an outstanding example of the development of a characteristic insular biota that has adapted to the island environment through speciation. A significant number of endemic species or subspecies of plants and animals have evolved in a very limited area. The diversity of landscapes and biota and the high number of threatened and endemic species make these islands an outstanding example of independent evolutionary processes.

Lord Howe Island supports a number of endangered endemic species or subspecies of plants and animals, for example the Lord Howe Woodhen, which at time of inscription was considered one of the world's rarest birds. While sadly a number of endemic species disappeared with the arrival of people and their accompanying species, the Lord Howe Island Phasmid, the largest stick insect in the world, still exists on Balls Pyramid. The islands are an outstanding example of an oceanic island group with a diverse range of ecosystems and species that have been subject to human influences for a relatively limited period.

The full SOUV is at:

http://www.environment.gov.au/heritage/places/world/lord-howe/values

The Lord Howe Island Group was included in the National Heritage List on 21 May 2007 for values similar to its Outstanding Universal Value. For the purpose of this assessment World Heritage values are used as a surrogate for the property's National Heritage Values. Potential impacts are therefore discussed in terms of the property's Outstanding Universal Value rather than its National Heritage values.

Nature and extent of impacts on the World Heritage and National Heritage values

The nature and extent of impacts on World Heritage values under **criterion (vii) – the property contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance**:

The proposed action is unlikely to have major adverse impacts on the Lord Howe Island Group's spectacular and scenic landscapes. The proposed location is at relatively low altitude and the relatively narrow profile of the turbines means that although they would be visible in the landscape, they would not dominate the landscape in an unacceptable visually intrusive way. The Landscape and Visual Impact Assessment report concludes that they would be visible from key vantage points at the north and south of the island, that visual sensitivity was high for all the assessed viewpoints around the site, and that they would have a moderate visual impact within the local context (Referral page 16).

The nature and extent of impacts on World Heritage values under **Criterion (x) - contains the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation:**

The main potential impacts would be on avian fauna and a species of bat, specifically 7 seabird species, 7 terrestrial bird species, 2 migratory bird species and one microbat species. Only 2% of bird flights have been recorded above 24 metres above ground level (Biodiversity Assessment Report page 22), compared to the lowest point of the turbine blade tips being 39 metres above ground level, and 'the turbines pose a low probability of blade strike to the Large Forest Bat from random interactions' (Bat Impact Report page 12). The proposed site of the turbines is a paddock supporting 'exotic pasture of little or no conservation value' (Biodiversity Assessment Report page 28). The main impact of the proposal on flora would be the loss of 200 square metres of native vegetation (Greybark-Blackbutt Closed Forest) for the access road easement. There is no reason given for the nine metre wide cleared corridor for the 3.5 metre wide access road. This width of

clearing seems greater than necessary for a minor access road, and should be reduced as much as practicable.

Tables 6.1 and 6.2 specify safeguards to avoid and mitigate impacts on fauna, flora and ecological communities and it is considered that if these measures are implemented, it is unlikely that there would be a major impact on fauna, flora and ecological community values.

Summary of Advice

The proposed action is unlikely to cause one or more of the World Heritage values to be lost, degraded or damaged, or notably altered, modified, obscured or diminished, particularly if the impact mitigation measures presented in the documents accompanying the referral are implemented and if the width of the cleared road easement is reduced as much as practicable.

Cleared By

s22

Director
Natural Heritage Section

November 2016

Sources

1. Nomination of the Lord Howe Island Group by the Commonwealth of Australia for inclusion on the World Heritage List (1981)
2. Statement of Outstanding Universal Value
3. Referral Documentation

Australian Government
Department of the Environment and Energy

World Heritage Places - Lord Howe Island Group - Outstanding Universal Value

New South Wales

Statement of Outstanding Universal Value

World Heritage Committee information for Lord Howe Island Group

Brief synthesis

The Lord Howe Island Group is an outstanding example of oceanic islands of volcanic origin containing a unique biota of plants and animals, as well as the world's most southerly true coral reef. It is an area of spectacular and scenic landscapes encapsulated within a small land area, and provides important breeding grounds for colonies of seabirds as well as significant natural habitat for the conservation of threatened species. Iconic species include endemics such as the flightless Lord Howe Woodhen (*Gallirallis sylvestris*), once regarded as one of the rarest birds in the world, and the Lord Howe Island Phasmid (*Dryococelus australis*), the world's largest stick insect that was feared extinct until its rediscovery on Balls Pyramid.

About 75% of the terrestrial part of the property is managed as a Permanent Park Preserve, consisting of the northern and southern mountains of Lord Howe Island itself, plus the Admiralty Islands, Mutton Bird Islands, Balls Pyramid and surrounding islets. The property is located in the Tasman Sea, approximately 570 kilometres east of Port Macquarie. The entire property including the marine area and associated coral reefs covers 146,300 hectares, with the terrestrial area covering approximately 1,540 hectares.

Criterion (vii): The Lord Howe Island Group is grandiose in its topographic relief and has an exceptional diversity of spectacular and scenic landscapes within a small area, including sheer mountain slopes, a broad arc of hills enclosing the lagoon and Balls Pyramid rising abruptly from the ocean. It is considered to be an outstanding example of an island system developed from submarine volcanic activity and demonstrates the nearly complete stage in the destruction of a large shield volcano. Having the most southerly coral reef in the world, it demonstrates a rare example of a zone of transition between algal and coral reefs. Many species are at their ecological limits, endemism is high, and unique assemblages of temperate and tropical forms cohabit.

The islands support extensive colonies of nesting seabirds, making them significant over a wide oceanic region. They are the only major breeding locality for the Providence Petrel (*Pterodroma solandri*), and contain one of the world's largest breeding concentrations of Red-tailed Tropicbird (*Phaethon rubricauda*).

Criterion (x): The Lord Howe Island Group is an outstanding example of the development of a characteristic insular biota that has adapted to the island environment through speciation. A significant number of endemic species or subspecies of plants and animals have evolved in a very limited area. The diversity of landscapes and biota and the high number of threatened and endemic species make these islands an outstanding example of independent evolutionary processes.

Lord Howe Island supports a number of endangered endemic species or subspecies of plants and animals, for example the Lord Howe Woodhen, which at time of inscription was considered one of the world's rarest birds. While sadly a number of endemic species disappeared with the arrival of people and their accompanying species, the Lord Howe Island Phasmid, the largest stick insect in the world, still exists on Balls Pyramid. The islands are an outstanding example of an oceanic island group with a diverse range of ecosystems and species that have been subject to human influences for a relatively limited period.

Integrity

The boundary of the property includes all areas that are essential for maintaining the ecosystems and beauty of the property. It includes all of the above water remains of the ancient shield volcano and surrounding reefs and a substantial proportion of the Lord Howe Island and Balls Pyramid seamounts. The island component of the property is largely Permanent Park Preserve (PPP) and the surrounding waters are Marine Parks. The land area not included in the PPP is managed to ensure that the property's values are maintained. The inscribed property would be strengthened by the inclusion of the entire Commonwealth Marine Park.

At time of inscription concern was raised with respect to a proposal to construct four telecommunications masts without thorough assessment by way of an Environmental Impact Statement. These were then built, although today no longer exist. Other potential threats to the integrity of the property include development pressures, introduced plants and animals and visitor / tourism pressures. Since inscription, a programme improving the conservation status of the Lord Howe Woodhen, and the successful eradication of feral pigs, cats and almost eradication of goats has contributed significantly to the enhancement of World Heritage values beyond their status at listing.

Protection and management requirements

The property is subject to a comprehensive protection, management and monitoring regime which is supported by adequate human and financial resources.

All World Heritage properties in Australia are 'matters of national environmental significance' protected and managed under national legislation, the *Environment Protection and Biodiversity Conservation Act 1999*. This Act is the statutory instrument for implementing Australia's obligations under a number of multilateral environmental agreements including the World Heritage Convention. By law, any action that has, will have or is likely to have a significant impact on the World Heritage values of a World Heritage property must be referred to the responsible Minister for consideration. Substantial penalties apply for taking such an action without approval. Once a heritage place is listed, the Act provides for the preparation of management plans which set out the significant heritage aspects of the place and how the values of the site will be managed.

Importantly, this Act also aims to protect matters of national environmental significance, such as World Heritage properties, from impacts even if they originate outside the property or if the values of the property are mobile (as in fauna). It thus forms an additional layer of protection designed to protect values of World Heritage properties from external impacts.

In 2007 the Lord Howe Island Group was added to the National Heritage List in recognition of its national heritage significance.

On-ground management of the terrestrial component of the property is by the Lord Howe Island Board under the statutory framework of the Lord Howe Island Local Environment Plan (2010), which emphasises World Heritage values. Planning for the Permanent Park Preserve is the responsibility of the New South Wales Department of Environment, Climate Change and Water. Management of the marine areas (both State and Commonwealth waters) is the responsibility of the New South Wales Marine Park Authority.

Key threats requiring ongoing attention include fishing, tourism, invasive animals, plants and pathogens, and anthropogenic climate change. Visitor numbers are limited to control impacts and new Marine Park management and zoning plans are being developed for state and Commonwealth waters. Measures are being taken to prevent the introduction of new invasive plant species while significant resources are being directed towards the management and eradication of weeds. A proposal to eradicate introduced rodents is being developed.

THE HON JOSH FRYDENBERG MP
MINISTER FOR THE ENVIRONMENT AND ENERGY

s47F

EPBC Ref: 2016/7790

Dear s47F

I am writing to advise you that I am currently considering the Lord Howe Island Renewable Energy Project – Stage 2 Wind Turbines (EPBC 2016/7790), Lord Howe Island, New South Wales proposed by the Lord Howe Island Board, which was referred for consideration under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The proposed development is on the World and National Heritage listed Lord Howe Island Group which, among other attributes, is considered to be an outstanding example of oceanic islands of volcanic origin and an area of spectacular and scenic landscapes encapsulated within a small island area. The Island meets two World Heritage natural criteria, including that it contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance, and similar National Heritage values.

I am concerned that the proposed placement of the two wind turbines may introduce an intrusive element with a substantial and long term impact on the Island's World and National Heritage values. There is a real chance or possibility that this may cause one or more of the World and National Heritage values to be lost, degraded, obscured or diminished, an outcome I would consider to be unacceptable.

I expect to make a decision about the referral in the coming weeks including whether it is a not a controlled action, not a controlled action if carried out in a particular manner, a controlled action or clearly unacceptable. Should I decide the action is clearly unacceptable, you will have the following options under the EPBC Act:

- withdraw the referral and take no further action in relation to the proposed action; or
- withdraw the referral and refer a new proposal to take a modified action; or
- request that the referral decision be reconsidered.

Additional options available to you are to withdraw or vary the proposal at any time ahead of the referral decision being made having regard to the World and National Heritage values of the Island and other nationally protected matters. I would encourage you to discuss options for this proposal with the Australian Renewable Energy Agency.

The Department is also available to discuss the matter further with the Board. If you have any questions about the referral process or this letter, please contact Ms Kim Farrant, Assistant Secretary, Assessments (NSW, ACT) and Fuel Branch by email at kim.farrant@environment.gov.au or telephone s22 and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

JOSH FRYDENBERG

s22

Lord Howe
ISLAND BOARD

Administrative Office
PO Box 5
Lord Howe Island 2898

Phone 02 6563 2066
Facsimile 02 6563 2127
Email administration@lhib.nsw.gov.au

30 May 2017

The Hon Josh Frydenberg MP
Minister for the Environment and Energy
Parliament House
CANBERRA ACT 2600
BY EMAIL: josh.frydenberg.mp@aph.gov.au

Dear Minister,

I am writing in reference to your letter received on 17 May 2017 regarding the Lord Howe Island Renewable Energy Project – Stage 2 Wind Turbines (EPBC 2016/7790).

In response to the concerns raised in your letter, and following discussions with your Department representatives and ARENA, I would like to provide further information about the project to be considered as part of the referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The attached paper provides details addressing the following key areas:

1. **Community support for the project**
   Lord Howe Island is a long-established and enduring community settled in the mid-1800s. Since that time, and prior to World Heritage listing, infrastructure has been developed on the Island to meet the community's needs including buildings, roads, electricity facilities, an airport and wharf. Over the last thirty years, the Lord Howe Island community has worked on an alternative to the diesel powered electricity generators, concluding in 2010 in the design of a hybrid renewable energy system consisting of solar, wind turbines, battery storage and back-up diesel generator. The hybrid system will provide an affordable, secure, reliable and sustainable energy supply for the Island. Since funding was achieved from ARENA in 2014, the introduction of a renewable energy system on the Island has been the subject of an extensive community engagement process and there is generally good community support for the system.

2. **Impact of wind turbines**
   The two wind turbines proposed for the Island are relatively small and designed for remote locations with low demand for electricity. The proposed location of the wind turbines was selected through a community process considering a number of alternative locations around the Island and taking into account access to a good wind resource, distance from residences and limiting noise and visual impact. The wind turbines will not be able to be seen from most locations in the settlement area, and as distant structures in the landscape from key vantage points around the Island. Specialist assessment has concluded that the proposal will not result in significant aesthetic impacts to World Heritage and National Heritage values.

3. **Alternatives to wind turbines**
   The proposed hybrid renewable energy system includes both solar and wind turbines to enable a diversity of supply over day and night, to maximise the reduction in diesel consumption, and reduce the risks to marine and land environments from fuel management. The solar only option, delivering the same diesel savings of the hybrid solution (67%), has been considered and evaluated. The constraints associated with the solar only option are limits on the space available on the Island with good solar orientation, the visual impact of some solar array location options, the size of the battery required to store power overnight, the limited diesel savings achieved and the considerably higher cost. The cost of the solar only option has been assessed as being 50% above the budget of the current hybrid system project, and far beyond the funding available for the renewable energy project.

I urge you to take into account this additional information in assessing the Lord Howe Island wind turbine referral because of the importance of the hybrid renewable energy system for the sustainability of Lord Howe Island.

Yours sincerely

s47F

Enclosed:
Attachment - Response to Minister Frydenberg's Letter of 17 May 2017

CC:
Matt Cahill, First Assistant Secretary, Environment Standards Division
Kim Farrant, Assistant Secretary, Assessments (NSW, ACT) & Fuel, Environment Standards Division

Attachment - Response to Minister Frydenberg's Letter of 17 May 2017

1. Background

Lord Howe Island is a long established and enduring settled community within a World Heritage setting. Infrastructure to support the community has been developed since the first settlement in the mid-1800s, including buildings, roads, electricity assets, the airport, wharf, recreation and tourism facilities, amongst others.

The Lord Howe Island Hybrid Renewable Energy project is the result of more than three decades of investigations and discussions on the Island to secure its energy future. Wind turbines have been recurring elements of this discussion since the CSIRO proposed them in the 1980s and the Sustainable Energy Development Authority (SEDA) again in the 2000s.

The most recent efforts to secure the Island's energy supply commenced in earnest in 2010. Through the community led Sustainable Energy Working Group (SEWG), the Island's Energy Supply Road Map (Road Map) was adopted in 2012 by the Lord Howe Island Board (Board) to highlight the steps to finally achieve the Island's goals of having an affordable, secure, reliable and sustainable energy system.

The hybrid system, designed in close consultation with community, consists of a 450 kilowatt (kW) Solar Photovoltaic farm (Solar PV), 400kW from up to two small wind turbines and a 400kW battery, all integrated with the existing diesel generators.

The momentum continued in 2014 when the Board was successful in obtaining $4 million in funding from ARENA. ARENA recognised the value of the project in demonstrating the benefits and challenges of designing, building and operating a high penetration, hybrid renewable energy system on a remote Island.

The Board has also secured a $5.9 million loan from the NSW Treasury to fund the remainder of the $10.3 million project.

Since 2014, the Board has committed almost $2 million to the development of the project, and will soon commence on-ground construction of the solar PV component, with an access road due to commence in June 2017.

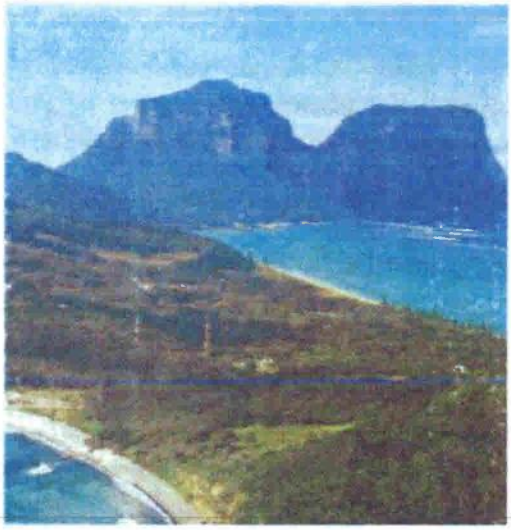
The proposed wind turbines are a contemporary technological solution to the problems of energy costs, fuel transport risks and climate change. The continued importation of large quantities of diesel for electricity generation is not considered to be economically or ecologically sustainable. It is noted that, under the UNESCO (2008) Operational Guidelines for World Heritage properties, human activities may be 'consistent with the outstanding universal value of the area where they are ecologically sustainable'.

We consider the hybrid power system to be an ecologically sustainable response to the energy needs of the island at this time. Specialist assessments and social survey results both suggest that the aesthetic impacts of the proposal would be minor, and interpreted positively within a sustainable management context. This underpins our conclusion that the proposal will not result in significant aesthetic impacts to World Heritage and National Heritage values.

2. Quick Facts

- The combined Solar PV, wind turbines and battery solution aims to reduce diesel consumption by 67% from 540,000 litres per year to 180,000 litres per year.
- A 450kW Solar PV and battery only solution would only deliver a 36% reduction in annual diesel consumption.
- The hybrid solution is the only affordable solution to achieve the ambitious diesel savings.
- The hybrid solution provides a diversity of supply, which naturally smooths the renewable energy supply by providing energy through the night, on cloudy days and during winter when solar production is low or non-existent. This means the size and cost of the battery can be reduced.
- The higher the diesel savings, the greater the protection for the Island community from future diesel price rises, which will affect the future price of electricity.
- The higher the diesel savings the lower the risk to the Island's marine and land environment through reduced potential for spills.
- The Island is at the end of the diesel fuel supply chain, so the security of that fuel supply is improved under a hybrid solution.
- Wind turbines and Solar PV are entirely reversible, and at the end of their 20 year life may be replaced with new technology.
- More private Solar PV is not effective. Most of the 104kW of private Solar PV already installed in the Island is affected by shading and poor orientation, which has resulted in their output over the last 4 or 5 years being an average of 20-30% lower than expected.
- The whole Island is not a pristine environment. 177 years of human occupation have resulted in impacts on the Island through land clearing and built infrastructure, such as buildings, an airport, aviation towers, a wharf and coastal erosion protection works.
- The Island achieved World Heritage Status in 1982 even with the presence and impact of the existing infrastructure.

The image here is from a book published in 1974, showing the aviation towers as viewed from Malabar at the northern end of the Island.



3. Wind Turbines

3.1 Proposed Project Site

The Board's project nominates a parcel of land adjacent to the existing Powerhouse near Transit Hill and Middle Beach for the infrastructure. The site already accommodates a range of infrastructure including the Airservices Australia navigation towers. The area contains relatively poor soils and is not prime agricultural land, and is used for a small herd (< 10) of dairy cattle. Importantly, the lessee has provided agreement to the resumption of part of the lease for the project.

The proposed site was selected because:

- it is in close proximity to the existing powerhouse and electricity network; and
- it is one of the least visible cleared pieces of elevated land on the Island.

3.2 Proposed Wind Turbines

The two small wind turbines proposed for Lord Howe Island are the result of significant research and assessment. The Island poses some challenges for the delivery, installation and operation of wind turbines, which narrows the field of potential turbine manufacturers and models.

The key factors in the selection of the wind turbines have included:

Power output	The Island's low electricity demand only requires small turbines in the range of 100 – 200kW.
Access and Construction	Narrow roads for site access limit the size of turbines and blades. The Island's crane has a small lifting capacity, so turbines which require a crane to install the nacelle and blades are not possible. Based on this, a tilt-up and down wind turbine with guy wires and slender pole is required.
Commercially proven	The isolation and remoteness of the Island requires that a turbine has a proven track record of reliable operation, so that the Island's reliable and secure electricity supply is not affected.

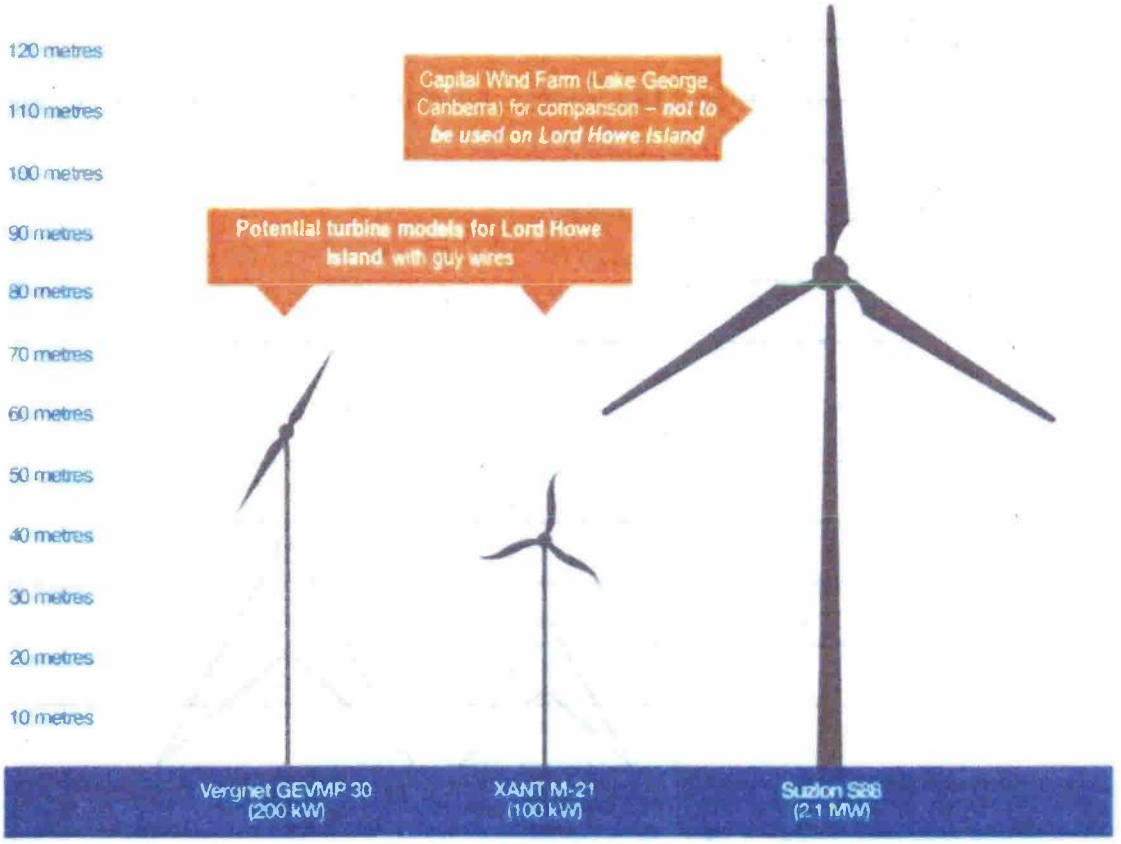
The assessment of the impact of the proposed turbines on visual and aesthetic values, community and social values, the acoustic environment and World Heritage and National Heritage values have been assessed in detail in supporting information within the project's Environmental Report attached to the Referral. The visual, noise and social assessments conducted by specialist consultants are based on established methodology, empirical surveys and extensive community and visitor consultation.

The assessments of significance in the project's Environmental Report address the listing criteria and the Commonwealth Significant Impact Guidelines. The assessments conclude that the proposal would not be likely to significantly affect the visual and

aesthetic values of the island, and we believe these conclusions are justified and defendable.

The following image details the dimensions and scale of two of the turbine options for the Island in comparison to a turbine near Lake George, NSW.

Turbine	Vergnet	XANT	Suzlon
Hub height	55 metres	38 metres	80 metres
Blade length	15 metres	10.5 metres	44 metres
Maximum blade tip height	70 metres	48.5 metres	124 metres
Number of blades	2 blades	3 blades	3 blades



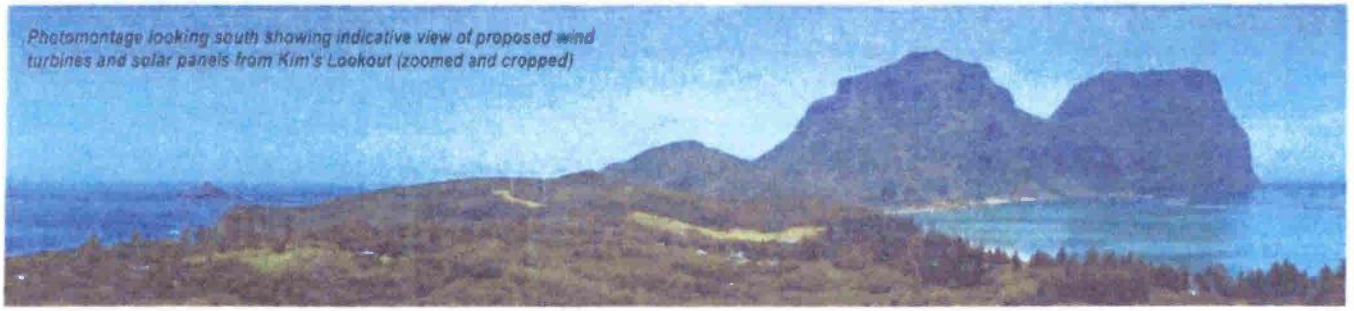
3.3 Close range views

The proposed turbines would be sited on a low ridge in the central lowlands of the island, in a cleared paddock between the settlement and the airport. The Visual Impact Assessment (attached to the Referral) found views to the turbines will be limited on the island because of the dense tree growth in the settlement area, although close range views will be available from some areas. The turbines may become a dominant element viewed from some points in the northern settlement area. Screen planting is an available option to mitigate local close range impacts.

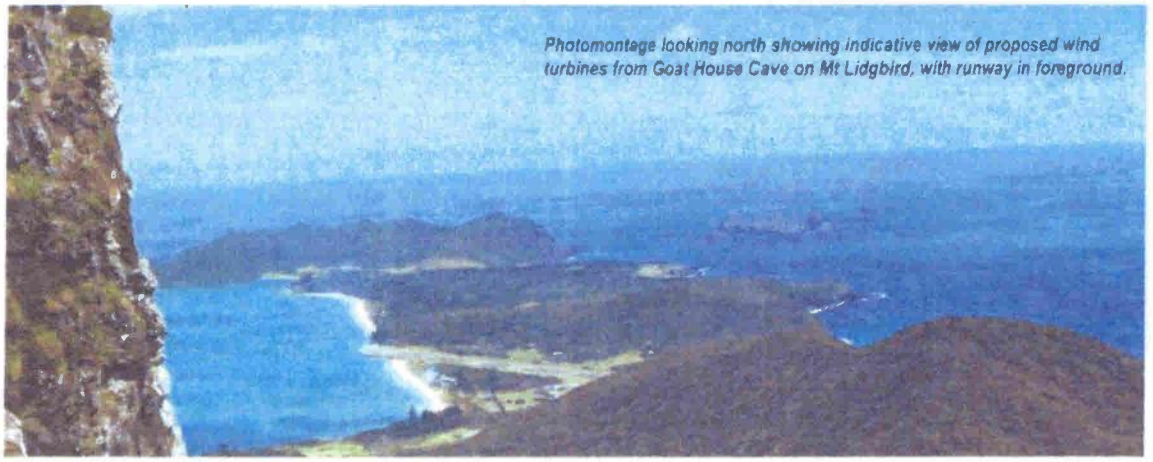
3.4 Long range views

Elevated views from walking tracks in the southern and northern hills, and from an aerial approach, would show the turbines to be small and distant features set in a wider context of native vegetation interspersed with existing settlement infrastructure. The proposed turbines are a similar scale to the existing Airservices Australia towers near the project

site. The existing airstrip the south of Transit Hill is a major modification to the landscape and would dwarf the turbines. While the wind turbines would affect localised visual character, the unique visual features which characterise Lord Howe Island would remain the dominant elements in the landscape. The viewpoint images in the Visual Assessment Report, some of which are shown below, clearly show the relative scale and impact of the turbine from these viewpoints.



Photomontage looking south showing indicative view of proposed wind turbines and solar panels from Kim's Lookout (zoomed and cropped)



Photomontage looking north showing indicative view of proposed wind turbines from Goat House Cave on Mt Lidgbird, with runway in foreground.

3.5 Aesthetic Responses

Lord Howe Island is not total wilderness. Evidence of human settlement is readily apparent from the air and over the central settled section of the island. Human structures have physical presence, but they also carry intangible meaning for viewers. Aesthetic responses to developments hinge on knowledge, values and interpretation. While the proposed wind turbines would be visible from some viewpoints, we contend that the turbines are likely to be seen as symbolising a modern solution to sustainable living in a remote island location.

3.6 Wind Turbine Noise Assessment

3.6.1 Background noise

Background noise is the ambient noise environment, made up of sounds from the ocean, wind, traffic and devices like refrigerators. Intermittent noise events such as planes or dogs barking are not considered part of the background noise unless they are present for at least 90% of the time. Generally speaking, noise from wind turbines increases as the wind speed increases, but so does the background noise. As part of the extensive

technical noise assessments undertaken for the project, background noise measurements and meteorological monitoring was carried out at four locations on the Island, on two occasions in 2015, to account for seasonal variations in insect activity and prevailing winds. Measurements show that existing background noise on the Island is high due to natural noise sources; including wind in palm trees, surf on the reef and beaches, and insects in summer months. This means that noise from the turbines would be effectively masked.

Noise levels for the proposed wind turbines are predicted to be below criteria in the NSW Planning and Environment's *Wind Energy: Noise Assessment Bulletin (Dec 2016)* (Guidelines), for all areas of the Island at all times. While the turbines may be heard at some locations, the most stringent criteria (e.g. the night period) would be met and the risk of adverse impacts to the community and amenity of the Island is low.

3.6.2 Audible noise

Wind moving across the blade is the dominant noise source for most modern turbines. In May 2016, predicted noise levels were modelled for the two 200 kW turbines and the alternative of two 100 kW turbines. The following observations were made from the modelling:

- South of the site, the turbines are likely to be inaudible under all wind speed conditions.
- Towards the centre of the Island, where the majority of the resident population is located, predicted noise levels for wind speeds above 6 m/s (11.5 knots) indicate that the turbines may be audible around 50% of the time in winter and 25% of the time in summer.
- To the north of the site, predicted noise levels for wind speeds greater than 6 m/s (11.5 knots) indicate that the turbines may be audible around 10% of the time during summer months and 50% of the time in the winter.
- To the west of the site, , predicted noise levels for wind speeds greater than 6 m/s (11.5 knots) indicate that the turbines may be audible around 50% of the time during the winter and 25% of the time in summer months.

3.6.3 Infrasound

Measurements of similar turbines at Coral Bay, Western Australia were used to analyse infrasound. The Coral Bay assessment found that while the operating turbines generated a small amount of infrasound, it was negligible in comparison with infrasound generated by natural sources such as wind and ocean waves. All measured infrasound was less than the most stringent thresholds of human perception, meaning that infrasound was neither audible nor physiologically perceptible.

3.6.4 Management of impacts

Once commissioned, operational noise monitoring would confirm actual turbine noise levels and compliance with the criteria. Noise management options in the Adaptive Management Plan to be prepared by the Board would include:

- identifying conditions and times that lead to undue impacts

- sector management (turning off one or both turbines during specific wind directions/strengths or times)
- consulting with the manufacturer to identify noise control options.

3.7 Wind Turbine Alternatives

3.7.1 Wind Turbine Sites

Suitable sites for wind turbines on the Island have been the subject of many investigations over the last three decades. In the 1980s, site selection and environmental impact studies were conducted for a number of sites in the northern half of the Island including Malabar in the north, Middle Beach Common (the site for the current proposal), Transit Hill and south of the airport.

In the 2000s, the same site south of the airport was chosen for a wind turbine under a SEDA program, but never built as the proposal from a contractor was not commercially satisfactory for the Island.

In early 2011, through the efforts of the Sustainable Energy Working Group (SEWG), a community survey was conducted to understand the Island community's site preference for a hybrid renewable energy solution.

The sites that were chosen for the survey were based on the SEWG's preferred sites for wind turbine placement from a visual perspective and ignored all of the other technical, logistical and land tenure issues that may exist.

The survey results showed that of the 33 responses:

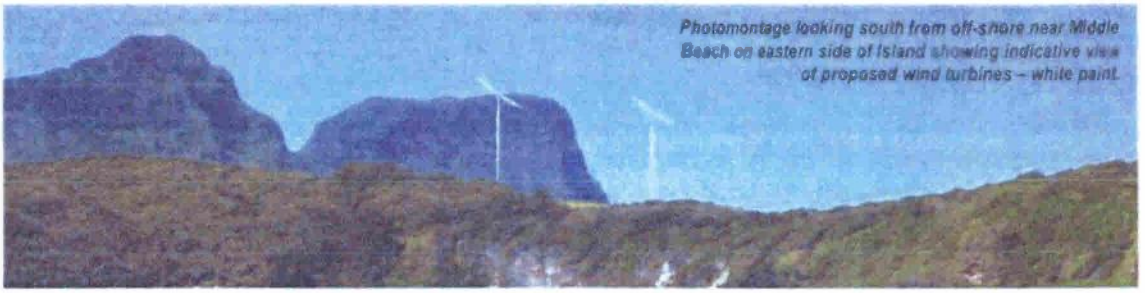
- 5 selected sites in the Lagoon
- 6 selected the eventually proposed site north of Transit Hill
- 7 selected the site south of the airport previously considered in the 1980s and 2000s
- 10 selected a site beneath Intermediate Hill to the east of the airport
- the remainder selected other unsuitable sites

The selection of the site north of Transit Hill as the preferred one, and the discounting of the other sites was based on:

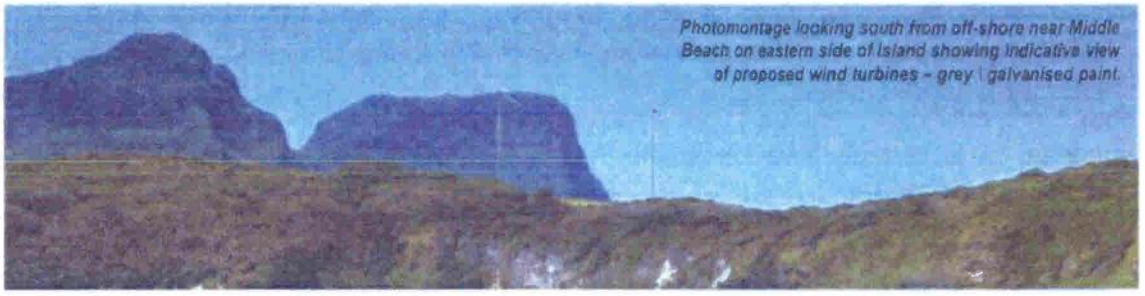
- The Lagoon site was highly visible, had construction challenges and was likely to be expensive.
- For both of the airport sites:
    - They posed difficulties with regard to aircraft operations, as any structure greater than 25m high in these locations would have represented an infringement on the aerodrome's Obstacle Limitation Surface (OLS) and would not have been approved by the Civil Aviation Safety Authority.
    - The higher than desirable turbulence and blocking of prevailing wind caused by the mountains to the south and east would mean higher wear and tear on the wind turbines and lower outputs.
    - The sites were highly visible to all visitors and residents on their journeys to and from the airport, on the only north-south link on the Island.

3.7.2 Wind Turbine Colours

The following images show how the two wind turbines (Vergnet) will look like with different coloured poles and blades.



Photomontage looking south from off-shore near Middle Beach on eastern side of Island showing indicative view of proposed wind turbines – white paint.



Photomontage looking south from off-shore near Middle Beach on eastern side of Island showing indicative view of proposed wind turbines – grey \ galvanised paint.

3.7.3 Alternative Wind Turbine Models and Numbers

The optimum wind turbine output for the project is around 400kW. The project proposes using a maximum of two turbines to achieve as close as possible to this optimum.

There are many types of wind turbines available, many of which have been assessed in developing the project to the current solution. The alternatives assessed and their disadvantages are shown below.

TYPE	REASONS FOR NOT USING	
Vertical Axis	1. Not made at the kW output required or the height required to access the more efficient wind. 2. More turbines would be required. 3. Blades are thicker and more visible. 4. History of unreliable performance to date.	
Bladeless	1. Still in prototype phase. 2. Large number required to generate at required output of 200-400kW. 3. Inefficient performance due to surrounding vegetation impacts.	
Lower kW Output	1. More turbines required to generate at required output. 2. Greater visual impact. 3. Higher maintenance costs.	
Shorter in Height	1. Will operate in dirty or disturbed areas below top of vegetation. 2. Higher maintenance costs and potential for failure due to disturbed air flow. 3. Less efficient operation due to disturbed air flow, potentially required more turbines to match required output.	

4. Alternatives to Wind Turbines

4.1 Land Availability

The Island's renewable energy program has been deliberately designed as a hybrid system, combining existing diesel with Solar PV, batteries, and two small wind turbines,

so that the highest penetration of renewable energy is achieved in balance with the Island's limited land resources.

Lord Howe Island is very small, being only 11 km long and between 2.0 km and 0.3 km wide. The Island has an area of 14.55 km^2 (1,455 Hectares) of which 398 Ha is in the central settlement area. The northern and southern hills of the Island and a central section form the Permanent Park Preserve (equivalent to a National Park) and occupy up to three quarters of the available land on the Island. Significant Native Vegetation is protected on the Island, not allowing removal or development, so the focus of available land is on that already cleared.

4.2 Solar Only Solution – 36% Diesel Savings

A solar only solution, delivering 36% annual diesel savings, is considered a fall-back option should approvals not be obtained for the hybrid solution involving wind turbines. This solution is feasible, but is not considered optimal as it does not provide the level of fuel reduction to adequately meet the objectives of the project.

Under this option, 350,000 litres of diesel per annum would continue to be delivered to the Island, double that of the hybrid solution. The continued reliance on diesel for the majority of the Island's electricity needs does not:

- Provide the highest level of the protection to the Island community from future diesel price rises, which will affect the future price of electricity.
- Deliver the lowest risk to the Island's marine and land environment through reduced potential for spills.
- Deliver the highest level of fuel supply security.
- Adequately address the need to respond to climate change threats to the Island.

4.3 Solar Only Solution – 67% Diesel Savings

Extending on the previous section, a solar only solution, delivering 67% annual diesel savings (matching the hybrid solution) was considered in the development of the renewable energy solution for Lord Howe Island.

The cleared areas of the Island have been assessed for their suitability for placement of Solar PV. The assessment of suitability considers the following matters:

1. Flooding and known wet areas where construction will be difficult and access for maintenance will not be guaranteed.
2. Land tenure arrangements – Perpetual Leases where residences or businesses are established are not appropriate, but Special Leases where agricultural activities are underway are most appropriate.
3. Site access for construction including running buried cables back to the electricity network.
4. Steepness of land.
5. Solar orientation
6. Known future uses such as wastewater irrigation.
7. Much of the Foreshore Zone on the western edge of the Island, and adjacent to the Lagoon, is unavailable due to its high value as a recreational and visitor asset, and the high visual impact from the placement of structures in these areas.

Of the available 48 Ha of cleared land on the Island, 43 Ha of which is used for grazing, 12 Ha has been considered potentially suitable for Solar PV, following the above suitability assessment. A selection of sites from these 12 Ha were then prioritised for further detailed analysis, based on their superior solar access and ease of construction.

Working with these sites, consultants Jacobs have modelled and analysed the capacity and output of Solar PV on these areas. The results of this analysis are shown in Table 1 below.

Table 1 – Solar PV Only Solution to Reduce Diesel Consumption by 67%

(All costs excluding GST and contingency)

Solar PV	1,386kW (say 1.4MW)
Battery Energy Storage System (BESS)	954 kW / 3780 kWh
No. of Solar Panels	4,400
Annual Output	2,143 MWh pa
Diesel Savings	365,717 L per annum
Solar PV, BESS and Control System Capital Cost	$10.5M
Sunk Costs to 21 Apr 2017	$1.8M
Future Project Costs (eg. Network Upgrade, Road Construction, Design & Documentation, Project Management, Site Supervision)	$3.2M
TOTAL SOLAR ONLY	**$15.5M**
Future battery replacement cost at year 10	$2.2M

The total area occupied by a 1.4MW solar farm(s) is 3 Ha, all of which is agricultural land and represents 7% of the available agricultural land for grazing. The independence and self-sufficiency that stems from Island residents being able to raise and slaughter their own beef cattle for consumption is important, as are the links to the cultural history of the Island.

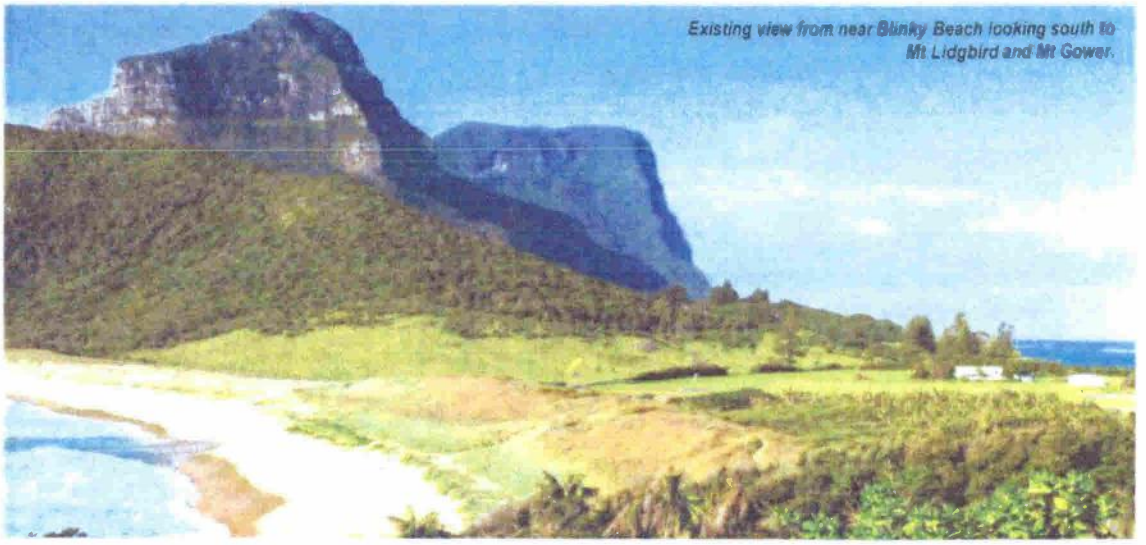
The capital cost of the Solar only (67%) solution described above is estimated to be $15.5 million (excl GST and contingency). This includes costs to date on the project. The budget for the hybrid solution is $10.3 million (excl GST), so the Solar only (67%) solution would be 50% higher than the project's budget, and therefore not considered affordable. In addition, the battery would need to be replaced 10 years after installation, which under the hybrid solution would cost approximately $656,000 (excl GST), and for

the Solar only (67%) solution, this cost would increase to $2.2 million (excl GST), which is not included in the budget for the project, and would need to be sought from NSW Treasury by the Board.

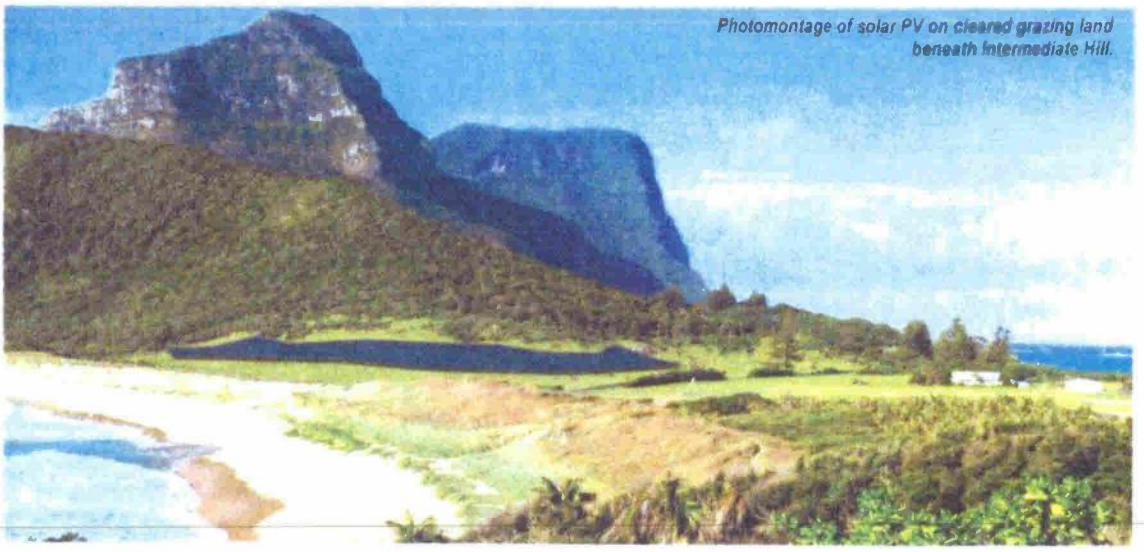
4.3.1 Visual Impact

The images below show a preliminary layout of the Solar PV on the preferred site to achieve a Solar only (67%) solution. The 1.1 Ha area of Solar PV represents the only feasible site on the Island which could be used to achieve the 67% target.

The site beneath Intermediate Hill to the east of the airport is highly visible to residents and tourists riding, walking and driving along Lagoon Road, on their way to the airport, the waste management facility and to access the southern part of the Island.

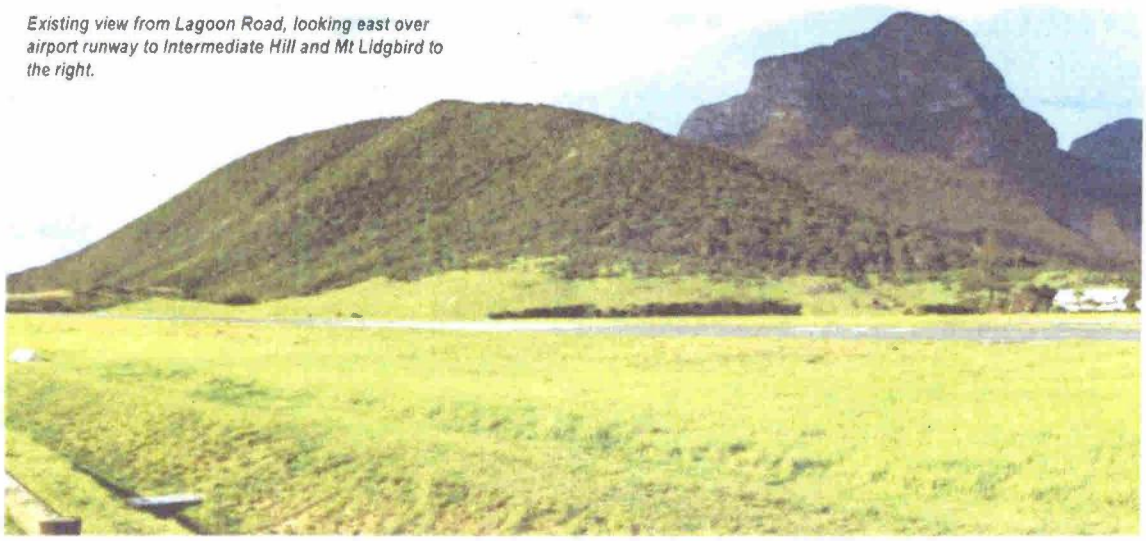


Existing view from near Blinky Beach looking south to Mt Lidgbird and Mt Gower.

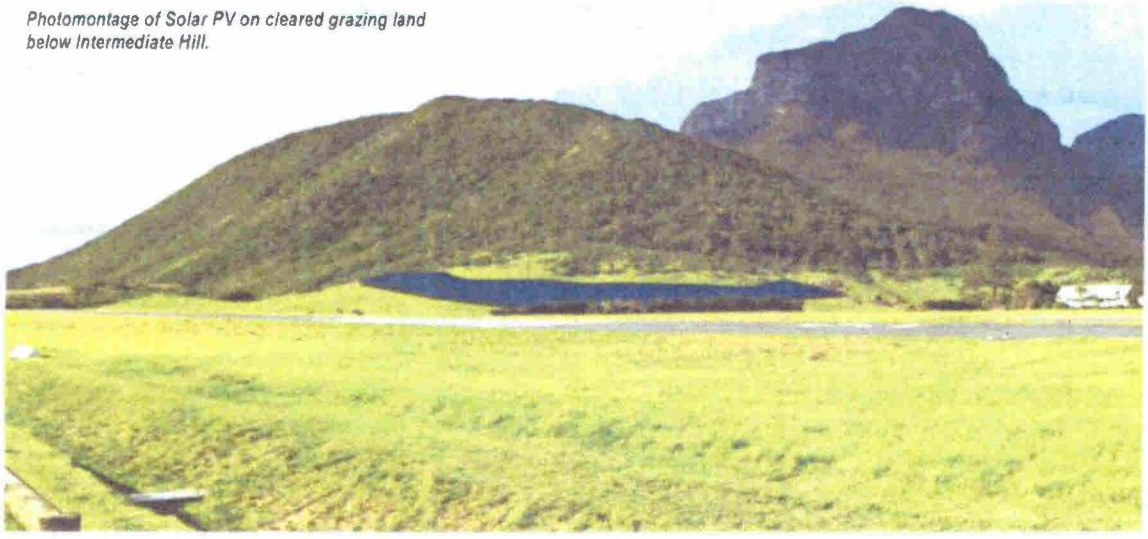


Photomontage of solar PV on cleared grazing land beneath Intermediate Hill.

Existing view from Lagoon Road, looking east over airport runway to Intermediate Hill and Mt Lidgbird to the right.



Photomontage of Solar PV on cleared grazing land below Intermediate Hill.



5. Community Engagement Process

The Lord Howe Island community has been involved in the development of the renewable energy solution for the Island for over thirty years.

Building on the great work of the SEWG in developing the project, an extensive community consultation program commenced in late 2014, to involve people who live and work on, and visit the Island, in the development of the hybrid renewable energy project.

A Community Engagement Plan was developed to guide the communications and engagement process, taking into account the community profile and community concerns, and setting out key messages and engagement tools, methods and

timeframes. The development of the plan was informed by community surveys undertaken in 2011 and 2014.

A 'Quick Poll' survey undertaken in December 2014, showed high levels of support from residents and visitors for the installation of wind turbines and a solar farm on the island and for renewable energy in general.

Support for wind turbines specifically was high (89% support based on 90 respondents). The survey showed that residents and visitors were both highly informed and knowledgeable about renewable energy and thought the island should not continue to rely on imported diesel.

A visitor survey conducted in September-October 2015 (202 respondents) found that there is a high level of support for renewable energy on the island amongst those visitors who value island's natural beauty. 91% of respondents were either very supportive or supportive of solar panels, and 68% were very supportive or supportive of wind turbines.

The most popular reason for visiting the island is 'Natural beauty (World Heritage site)'. 88% of respondents said that the presence of the hybrid renewable energy system on Lord Howe Island would make it more attractive to visit (76 people), that they would be more likely to return due to ecotourism benefits (50 people) or that it would not make any difference to their decision to visit the Island (67 people).

Attachment 1 presents a snapshot of the community engagement process stretching back to 2010.

5.1 Wind Turbine Consultation and Exhibition

The wind turbine proposal was displayed for community feedback for six weeks between 16 September and 28 October 2016. Due to significant community interest in the proposal, the original 28 day exhibition period was extended by two weeks to give people a total of 6 weeks to prepare their submissions. The normal public exhibition period for proposals on the Island is two weeks. The community was actively encouraged to provide feedback and to make submissions.

During the exhibition, submissions were received from 213 people, including residents on and off the Island, local businesses, members of the community-led Sustainable Energy Working Group (SEWG) and tourists. The high level of submissions is reflective of the importance of the proposal to the community and the extensive consultation activities that actively encouraged people to make submissions.

A total of 1,094 issues were raised in submissions received. In order, the most commonly raised issues and topics include:

- Infrasound and potential health impacts
- Visual impacts
- Audible noise
- Financial considerations of loan repayments
- Impact on birds and bats.

Of the 213 people who provided a submission, 100 people (47%) support the wind turbines and 113 people (53%) opposed the wind turbines.

The majority of submissions opposing the wind turbines were received as form letters signed by multiple people.

Of the 213 people who provided a submission:

- 171 were from Lord Howe Island
- 15 people were from elsewhere in New South Wales
- 12 from Queensland
- 2 from South Australia
- 3 from New Zealand
- 1 from the UK
- 9 people did not provide a postcode with their submission.

Of the 171 people from the Island, 62 people made positive submissions and 109 people raised issues with regards to the wind turbines.

The Board approved the wind turbine development in November 2016, noting a number of deferred commencement conditions that were required to be satisfied before the project could proceed to construction. One of the conditions is the preparation of an Adaptive Management Plan. This Plan will be prepared by a Committee, consisting of technical experts in birds and noise, and members of the community.

The Board is currently preparing an Expression of Interest for the community to nominate representatives for the committee so that the Adaptive Management Plan can be prepared before the end of the year. The Plan is expected to provide operational rules to manage the potential impact of the turbines on birds, and potential noise impacts on the community and visitors.

ATTACHMENTS

Attachment 1 – Snapshot of Community Engagement Process

Lord Howe Island

Hybrid renewable energy project

Community Engagement Snapshot

30 years

of community involvement in Island's renewable energy journey

Sustainable Energy Working Group (SEWG)

Community-led group advocating for renewable energy solution on the Island from 2010 to 2017

93%

of 160 respondents supported wind turbines in April 2014 survey

December 2014

Consultation visit 1: Community research exercise to understand community concerns, produce Community Issues Report and inform development of Community Engagement Plan.

- **Infographic postcard**
- **Q&A booklet**
- **Community market stall**

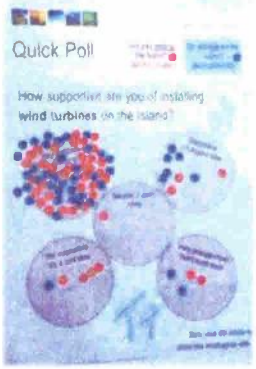
$250,000

invested in comprehensive community engagement program since late 2014

May 2015

Consultation visit 2: Ongoing engagement to present noise assessment results and continue to gather community feedback.

- **Postcard**
- **Q&A booklet**
- **Community market stall**
- **Noise factsheet**
- **Individual resident meetings**



89%

of 90 participants supported wind turbines in December 2014 quick poll

December 2015

68%

of 202 respondents supported wind turbines in December 2015 visitor survey

88%

said a hybrid renewable energy system would make the Island more attractive to visit

Consultation visit 3: Ongoing engagement to provide project update, launch visitor survey, advise of second noise assessment (undertaken at request of community) and continue to gather community feedback.

- **Postcard**
- **Visitor survey**
- **Community market stall**
- **Tour guide information sheet**
- **Community investment discussion paper**
- **Museum display poster**

February 2016

Consultation visit 4: Ongoing engagement about solar approval, to present updated noise results and visual impact assessment, feedback results of visitor survey and continue to gather community feedback.

- **Postcard**
- **Q&A booklet (updated)**
- **Community market stall**
- **Noise factsheet (updated)**
- **Visual factsheet**
- **Individual resident meetings**
- **Museum drop-in sessions**

May 2016

Consultation visit 5: Ongoing engagement to hold community meeting (as requested by community) to allow discussion with project team and noise expert about key issues, and continue to gather community feedback.

- **Postcard**
- **Q&A booklet (updated)**
- **Samoan Circle community meeting**

September 2016

Consultation visit 6: Ongoing engagement to launch public exhibition period and encourage submissions on wind turbine development application.

- **Postcards**
- **Posters**
- **Environmental Report summary booklet**
- **Q&A booklet (updated)**
- **Community market stall**
- **Submission forms**
- **Individual resident meetings**
- **Noise talks at museum**
- **Social media (Facebook)**

Submissions summary

6 week

public display period, extended from Island's normal 2 week period. Community was actively encouraged to make submissions

213 people

made submissions including residents on and off the Island, local businesses, SEWG members and tourists

171 people

of the 213 were from the Island

100 people

(47%) support the wind turbines

113 people

(53%) are opposed to the wind turbines

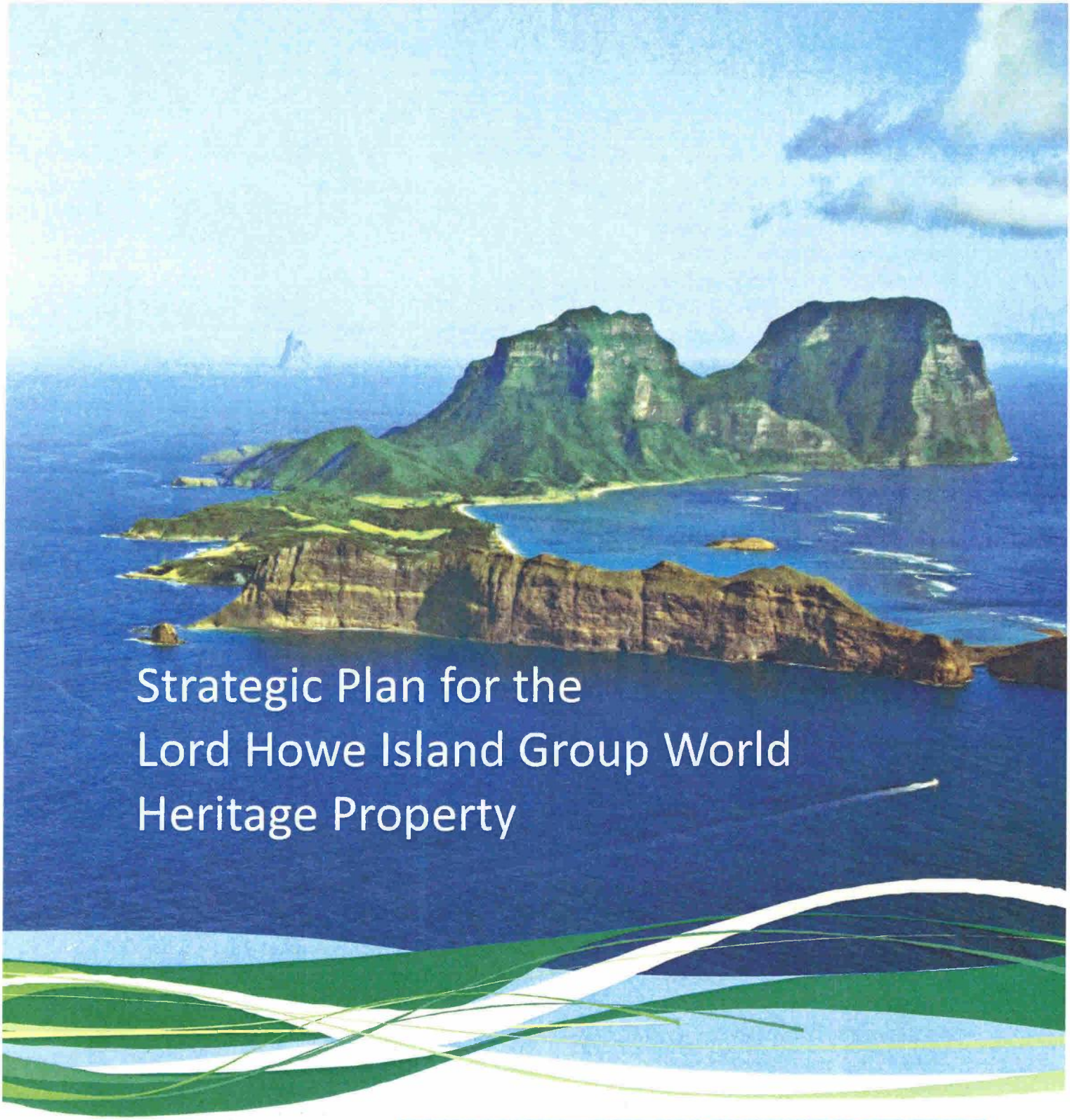
38 people

in Residents Against Wind Turbines (RAWT) group, 9% of Island's population

1,094 issues

raised, in order:

1. Infrasound and potential health impacts
2. Visual impacts
3. Audible noise
4. Financial considerations of loan repayments
5. Impact on birds and bats



Strategic Plan for the Lord Howe Island Group World Heritage Property

Lord Howe
ISLAND BOARD

CARING FOR OUR COUNTRY

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Abbreviations

AFMA	Australian Fisheries Management Authority
AQIS	Australian Quarantine Inspection Service
DECCW	NSW Department of Climate Change, Environment and Water
DEWHA	Department of Environment, Water, Heritage and the Arts (Commonwealth)
LHI	Lord Howe Island
LHIB	Lord Howe Island Board
LHIG	Lord Howe Island Group
LHIMP	Lord Howe Island Marine Park
MPA	NSW Marine Parks Authority
NRCMA	Northern Rivers Catchment Management Authority

EXECUTIVE SUMMARY

The Lord Howe Island Group (LHIG) was inscribed on the World Heritage List in 1982 in recognition of its superlative natural landscapes and scenery and its rich terrestrial and marine biodiversity as an outstanding example of an island ecosystem developed from submarine volcanic activity.

This Strategic Plan provides a ten year overarching framework for consistent and coordinated management of the LHIG World Heritage Property by the Lord Howe Island Board and the various NSW and Commonwealth government agencies with responsibilities in the area. It is intended to ensure that day-to-day management of the Property complies with Australia's obligations under the World Heritage Convention to protect, conserve, rehabilitate, present and transmit World Heritage values. The Plan is also based on the Australian World Heritage Management Principles agreed to by the Commonwealth, State and Territory Governments.

The Strategic Plan replaces a previous Strategic Plan which was adopted in 2000. It builds upon the approaches developed in the previous Plan and includes strategies to address new knowledge and changed situations.

Maintaining the integrity of the World Heritage values of the LHIG, which have been largely untouched by human influences, faces major challenges. These include:

- achieving consistent and coordinated management approaches between several management agencies operating in a remote location;
- protecting biodiversity values vulnerable to threats from introduced plants, animals and organisms and degradation from pollution;
- minimising the intrusion of essential human development on the spectacular scenic beauty of Lord Howe Island;
- achieving sustainable settlement of the limited areas available on Lord Howe Island while protecting World Heritage values, maintaining the quality of life of the Island community, and offering a range of opportunities for visitors to experience and appreciate World Heritage values;
- obtaining and utilising the resources necessary to protect World Heritage values in an isolated location.

Key actions in this Strategic Plan are:

- updating of legislation, regulations, statutory instruments and management plans so they remain current and take account of new knowledge and changed situations;
- development of interagency, integrated plans for marine biodiversity and fisheries management (there is already an integrated plan for terrestrial biodiversity management);
- development of a coastal management plan to address ecological interactions at the land-sea interface and climate change, including impacts on the Lord Howe Island lagoon and coral reef;

- continued improvement in quarantine planning, education, enforcement and resources;
- providing opportunities for community involvement in implementation and ongoing management of the islands World Heritage values;
- continued progress towards sustainable land, energy and water systems on Lord Howe Island;
- planning for enhancements to interpretation for visitors on World Heritage values;
- introduction of an accreditation scheme for commercial tour operators;
- improved opportunities for research and monitoring of the integrity of World Heritage values, threatening processes and visitor use;
- a strategy to improve the resources available for management of World Heritage values.

The Strategic Plan provides for development of a plan to address the potential impacts of climate change in the light of emerging knowledge of climate trends which are likely to result in rising air and sea surface temperatures, drier winter and spring conditions, and sea level rises in the LHIG.

Part A. Context

1. Introduction

The Lord Howe Island Group (LHIG) is an area of spectacular island landscapes and rich terrestrial and marine ecosystems located 700 kilometres north east of Sydney. In 1982, the LHIG was inscribed on the World Heritage List under the United Nations' World Heritage Convention in recognition of its superlative natural phenomena and its rich terrestrial and marine biodiversity as an outstanding example of an island ecosystem developed from submarine volcanic activity.

The LHIG World Heritage Property covers an area of 146,300 hectares comprised of Lord Howe Island, the Admiralty Islands (North Rocks, Tenth of June, South Island and Roach Island), Mutton Bird Island, Blackburn Island, Gower Island, Balls Pyramid and offshore islets) and 145,000 hectares of marine environment (see Figure 1).

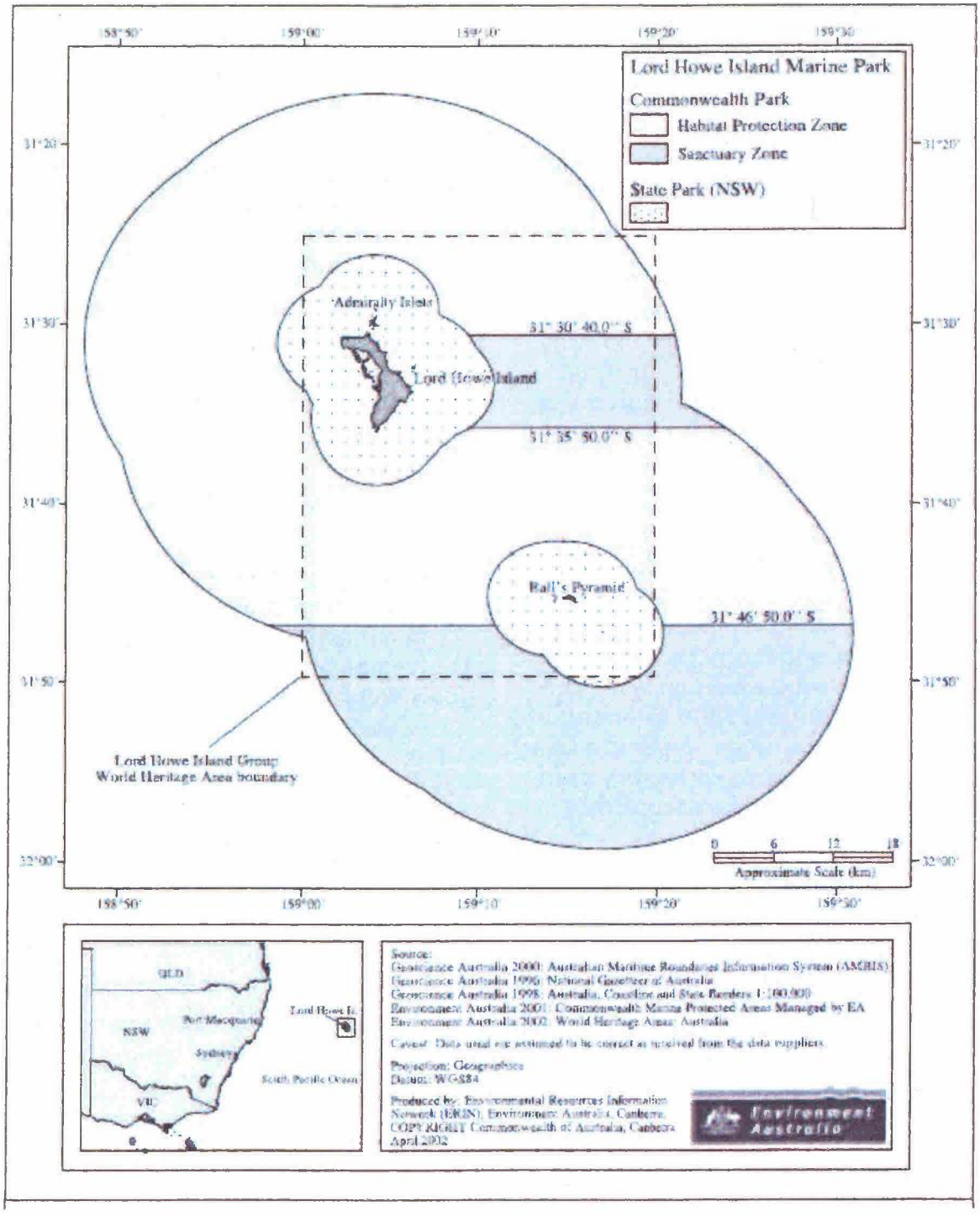
Lord Howe Island, the largest island in the LHIG, has an area of 1,455 hectares and is 11 km long and 2.8 km wide at its widest point. Prior to its discovery in 1788 and subsequent settlement in 1833, Lord Howe Island and the other islands in the Group remained isolated from human influences.

Lord Howe Island is the only settled island in the Group, with a resident population of about 350 people. The Island community plays a vital role in continued protection of the island's outstanding natural values.

Tourism provides the major income for the Island community, with up to 16,000 people visiting the Island annually. Palm seed export is also important for the island economy. Agricultural activities and fishing provide some food, but most of the island's food and materials are imported by air or by sea freight from Port Macquarie in New South Wales.

The islands in the Group are part of the State of New South Wales. Seventy-five percent of the main island and all of the outlying islands are protected for conservation purposes as a Permanent Park Preserve.

The majority of the marine areas on the World Heritage Property are protected by the Lord Howe Island Marine Park (LHIMP) which covers both NSW State Coastal Waters (within 3 nautical miles of land) and Commonwealth Waters outside the 3 mile limit.



Source: Environment Australia, 2002

Figure 1: Lord Howe Island Group World Heritage Property and Marine Park boundaries

2. Purpose of the Strategic Plan

This Strategic Plan provides a ten year overarching framework for consistent and coordinated management of the LHIG World Heritage Property by the various NSW and Commonwealth agencies with responsibilities in the area. It is intended to ensure that day-to-day management of the Property complies with Australia's obligations under the World Heritage Convention (see section 4) and that appropriate consideration is given to protection, conservation, presentation and transmission of World Heritage values.

The Strategic Plan is not a statutory document. It will be implemented by the Commonwealth and NSW Governments and agencies through the Environment Protection and Heritage Council (which includes the Commonwealth and NSW Environment Ministers), government legislation and planning instruments, statutory plans of management, and various other plans and policies.

This Strategic Plan replaces the 2000 Strategic Plan for Management for the LHIG World Heritage Property (Manidis Roberts, 2000). Many of the management structures and controls, which were a major focus of that previous Strategic Plan, have been put in place. Significant achievements include:

- establishment of the LHI Marine Park and development of related Commonwealth and NSW management and zoning plans;
- a range of plans and measures for biodiversity management and control of pest species and other threats, quarantine and rehabilitation;
- updating of land use and development controls in the Local Environment Plan and Development Control Plan;
- protection of shipping impacts through management and zoning plans, pollution and quarantine legislation and contingency planning for pollution incidents;
- planning for scientific research and monitoring, and establishment of a research facility and accommodation on Lord Howe Island; and
- advances in planning for and implementing sustainable resource use on Lord Howe Island.

Development of this new Strategic Plan included a review of implementation of the 2000 Strategic Plan and consultation with management agencies. The consultation process comprised:

- interviews and workshops with representatives and staff of the Lord Howe Island Board (LHIB), the NSW Marine Park Authority (MPA), the Department of Environment, Water, Heritage and the Arts (DEWHA);
- circulation of a Discussion Paper for comment from agencies and key stakeholder groups on LHI;
- discussion on draft with LHI Board;
- exhibition of a Draft Strategic Plan for comment from agencies, stakeholders and the community.

The approaches in this Strategic Plan build on the 2000 Plan and address ongoing and new knowledge, threats, management needs, and issues. The Plan also addresses the potential impacts of climate change in the light of emerging knowledge of climate trends.

3. World Heritage Values

The LHIG was inscribed on the World Heritage List under two of the criteria for natural values of outstanding universal significance:

(vii) containing superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;

(x) containing the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

3.1 Superlative natural phenomena

The LHIG is an outstanding example of an oceanic island of volcanic origin containing features, formations and areas of exceptional natural beauty and aesthetic importance. The World Heritage values include:

- the exceptional diversity of spectacular and scenic landscapes within a small land area; and
- outstanding underwater vistas, including reefs considered to be among the most beautiful in the world.

On Lord Howe Island, the towering volcanic mountains of Mount Gower (875 metres) and Mount Lidgbird (777 metres) provide a spectacular backdrop to the low-lying centre of the island and the clear lagoon and its fringing reef. The coast of the island is a constantly changing vista of the reef and lagoon, sandy beaches, boulder beaches, sea caves, scree slopes and massive cliffs. Tall sea cliffs and stacks provide spectacular vistas on the offshore islands, especially the tall narrow Bas Pyramid, which rises vertically from the ocean to 551 metres in height.

3.2 Biodiversity values

The LHIG is an outstanding example of an oceanic island of volcanic origin with a unique biota of plants and animals and important and significant natural habitats for in-situ conservation of biological diversity. Its World Heritage values include:

- its high diversity of vegetation communities;
- the diversity of indigenous vascular plants, comprising at least 241 species, including many species of conservation significance, many of which are endemic to the island group;
- the diversity of birds, comprising 164 bird species, including species of conservation significance and many endemic species (such as the well known Lord Howe Island Woodhen, which is one of the few examples of successful in situ recovery of a species from the brink of extinction);
- seabird breeding habitats which together comprise one of the major breeding sites in the southwest Pacific, including four species of conservation significance;
- a rich diversity and high levels of endemism of terrestrial invertebrates, including spiders, snails and the large and spectacular Lord Howe Island Phasmid which survives on Balls Pyramid;
- the unusual combination of tropical and temperate marine flora and fauna, including many species at their distributional limits, reflecting

the extreme latitude of the coral reef ecosystems which are the southern-most true coral reefs in the world;

- the diversity of marine benthic algae species, which include many endemic species;
- the diversity of marine fish species including at least 500 species of which 400 are inshore species and 15 are endemic; and
- the diversity of marine invertebrate species, including more than 83 species of corals and 65 species of echinoderms of which 70% are tropical, 24% are temperate and 6% are endemic.

3.3 Other significant features

The LHIG contains other significant features which are integral to the protection of its World Heritage values. These include:

- its geodiversity and the geological and geomorphologic processes underpinning its spectacular scenic values;
- the ecological and biological processes and the ecosystems which support its high terrestrial and marine biodiversity; and
- its significance for scientific research and education, including as an isolated island group which was one of the last to experience human settlement.

The Lord Howe Island residents, many of whom are descended from the early settlers, form a unique community with a strong sense of identity and community based on their history and isolation. The unique Island lifestyle and its safe, quiet, unpolluted and beautiful surroundings are highly valued by the community. Retention and recognition of the Island community's values and lifestyle will be important in maintaining their contribution and support to protection of World Heritage values.

As the major contributor to the Island's economy, tourism is a significant aspect of Island life and a major way in which the LHIG's World Heritage values are presented to the wider public. Sustainable management of tourism is vital to the protection of World Heritage values

4. Management Background

4.1 World Heritage Management Obligations

World Heritage Convention

The World Heritage Convention, which was adopted in 1972 by the United Nations Educational, Scientific and Cultural Organization (UNESCO), provides for the declaration of heritage of outstanding universal cultural and natural value as part of the World Heritage List. The Convention and the associated Operational Guidelines (UNESCO, 2008) provide guidance for the protection and conservation of World Heritage properties.

As a signatory to the World Heritage Convention, Australia has obligations under Article 5, including:

- to protect, conserve and present the World Heritage values of the property;
- to integrate the protection of the area into a comprehensive planning program;
- to give the property a function in the life of the Australian community;
- to conduct scientific and technical research and develop operating methods to counteract threats to World Heritage values; and
- to take appropriate scientific, technical, legal, administrative and financial measures necessary for achieving the foregoing objectives.

Convention signatories are also required to submit regular reports to UNESCO on the actions taken in applying the Convention. Ongoing monitoring and evaluation of management actions and the condition of a World Heritage Property is required to fulfil the reporting requirements.

Integrity (defined by the Operational Guidelines as the wholeness and intactness of the heritage values) is an essential attribute for a World Heritage property. For properties (such as the LHIG) listed for their outstanding natural values, biophysical processes and landform, features should be relatively intact and human activities (including those of local communities) should be 'consistent with the outstanding universal value of the area where they are ecologically sustainable' (UNESCO, 2008, section 90).

EPBC Act requirements

The Australian Government has enacted measures for implementation of its World Heritage obligations under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Under section 12 of that Act, an action likely to have a significant impact on World Heritage values may only be taken if it is:

- approved in accordance with an Australian Government environmental impact assessment process or an accredited State environmental impact assessment process (the NSW process under the Environmental Protection and Assessment Act 1979 in the case of LHIG);
- approved under a management plan accredited by the Australian Government Environment Minister.

Substantial penalties are provided for breaches of these provisions.

For World Heritage properties within States, section 321 of the EPBC Act

requires the Australian Government and its agencies to use its best endeavours to ensure that plans for managing the property are not inconsistent with Australia's obligations under the World Heritage Convention and the Australian World Heritage Management Principles.

Australian World Heritage Management Principles

The Australian World Heritage Management Principles, in Schedule 5 of the *Environment Protection and Biodiversity Conservation Regulations 2000*, provide guidelines for management of Australia's World Heritage Properties. The Management Principles require a World Heritage Property to be managed in accordance with Australia's obligations under the World Heritage Convention. They also require one or more management plans to be prepared for each Property which include:

- statement of the World Heritage values of the Property;
- provision for public consultation;
- mechanisms and actions for protection of World Heritage values and dealing with impacts and threats on those values;
- integration of Commonwealth, State and local government responsibilities for the Property;
- continuing monitoring and reporting.

The Commonwealth, State and Territory Governments have recently agreed to new World Heritage Management Principles as part of the Australian World Heritage Intergovernmental Agreement. At the time this Strategic Plan was being prepared, the inclusion of the new Principles in the EPBC Regulations was being considered as part of the review of the EPBC Act.

This Strategic Plan takes account of the new Australian World Heritage Management Principles, reproduced below.

Australian World Heritage Management Principles

(as incorporated in the Australian World Heritage Intergovernmental Agreement)

1. The objectives of management arrangements for Australia's World Heritage properties are to identify, protect, conserve, present, and transmit to future generations Australia's cultural and natural heritage of outstanding universal value, in accordance with Australia's obligations under the World Heritage Convention.
2. Jurisdictions with responsibility for managing a World Heritage property must have a World Heritage management system or management plan in place. This system or plan must ensure that the integrity and authenticity of the property at the time of inscription are maintained or enhanced.
3. The World Heritage management system or management plan may vary according to cultural and other jurisdictional and cross-jurisdictional factors. An effective World Heritage management system or management plan will:
   a) identify the outstanding universal value and potential threats to the property;
   b) document the legal, scientific, technical, administrative, and financial and visitor strategies which will be adopted and implemented to protect, conserve, and present the property for current and future generations;
   c) be developed in the context of legislative and policy instruments and the social and economic value of the property;
   d) identify the community, stakeholders and other partners, including Traditional Custodians, and how they will participate in property management and decision-making;
   e) document what research is required to better understand the values and threats to the property and the effectiveness of management actions;
   f) use a risk management approach to prioritise strategies within the management system or management plan;
   g) develop an implementation plan and allocate resources in accordance with the identified strategic priorities;
   h) assist in building knowledge and capacity within both staff and community members to implement the management system or plan;
   i) document a cycle of planning, review, monitoring, evaluation and reporting of the management system or plan;
   j) in the case of a cross-jurisdictional or serial nomination, provide details of any mechanisms for co-ordinated management; and
   k) assess the impact of proposed strategies on the outstanding universal value to ensure the strategies are acceptable and sustainable.

4.2 Ownership, control and administration

The LHIG World Heritage Property comes within the jurisdiction of the NSW and Australian Governments.

The islands and the marine areas within three nautical miles of land are part of the State of NSW and subject to NSW laws and administrative arrangements. The islands are all NSW Crown Land. There is no freehold title, and members of the Island community hold land under leasehold tenure. Seventy-five percent of the main island and all of the outlying islands are part of the Permanent Park Preserve established under the *Lord Howe Island Act 1953*.

Care, control and management of the islands and coral reefs within one marine league from the low-water mark come within the jurisdiction of a statutory body, the Lord Howe Island Board (LHIB), established under the *Lord Howe Island Act 1953*. The LHIB reports directly to the NSW Minister for Climate Change, Environment and Water.

The Lord Howe Island Marine Park (LHIMP) covers both NSW and Commonwealth Waters and is managed by both jurisdictions. The LHIMP (State Waters) covers NSW State Coastal Waters, which comprise the seabed and waters from the three nautical mile limit to the mean high water mark along island shores and the limit of tidal influence in creeks (see Figure 1). The LHIMP (State Waters) is managed by the NSW Marine Park Authority.

The part of the LHIG World Heritage Property outside the three nautical mile limit is within the jurisdiction of the Commonwealth Government. The majority of this area is within Australia's Territorial Waters (within twelve nautical miles of land) and is contained within the LHIMP (Commonwealth Waters), managed by Department of Water, Heritage and Environment (DEHWA). Two small sections which extend beyond the 12 nautical mile line into Australia's Exclusive Economic Zone (see Figure 1).

The Australian Government also has policy and legislative roles and responsibilities related to implementation of the World Heritage provisions of the EPBC Act, fisheries management and custom and quarantine requirements (as Lord Howe Island is a 'port of first entry' for arrivals from outside Australia).

Table 1 provides a summary of the main NSW and Commonwealth government agencies regularly involved in management of the LHIG World Heritage Property. Several other agencies are involved in management of the Property as required.

Table 1: LHIG World Heritage Property management agencies

Agency/Body	Roles and Responsibilities
NSW Government	
Lord Howe Island Board	Established under the *Lord Howe Island Act 1953*, with responsibility for care, control and management of the islands, including: • protection of World Heritage values; • protection of cultural heritage values; • administration of all Crown Land, including the Permanent Park Preserve; • development control; • provision of community services and infrastructure; • delivery of sustainable tourism. Consist of 7 members, of whom 4 are elected Islander community members and 3 members appointed by the Minister. LHIB undertakes quarantine inspections and provides information and education regarding quarantine issues (NSW Police undertake customs inspections on behalf of the Australian Customs and Border Protection Service).
NSW Department of Climate Change, Environment and Water (DECCW)	Biodiversity and threatened species conservation on the islands under the NSW *Threatened Species Conservation Act 1995.* Marine reptiles and mammals under the NSW *National Parks and Wildlife Act 1974.* Provides advice and assistance to the LHIB on management of the Permanent Park Preserve.
NSW Marine Parks Authority	Manages LHIMP (State Waters) in accordance with the NSW *Marine Parks Act 1997.*
NSW Maritime	Marine safety, regulation of commercial and recreational boating, marine pollution and oversight of port operations. Conducts checks of boats, sets up marker buoys.
NSW Industry & Investment	Regulation of commercial and recreational fisheries and marine threatened species (except for marine mammals and reptiles) under NSW *Fisheries Management Act 1994.*
Northern Rivers Catchment Management Authority (NRCMA)	Coordination of natural resource management in north east NSW under *Catchment Management Authorities Act 2003.* LHI included within its boundaries.
Australian Museum	Long term association with Lord Howe Island scientific research. Processes and identifies samples for the LHIB.
Commonwealth Government	
Department of the Environment, Water, Heritage and the Arts	Management of LHIMP (Commonwealth Waters) under the provisions of the EPBC Act. Protection of threatened species under the EPBC Act.. Protection of migratory species and their habit under international agreements. Implementation of World Heritage provisions of EPBC Act.
Australian Fisheries Management Authority	Management of fisheries in Commonwealth waters under the Commonwealth *Fisheries Management Act 1991.*
Australian Quarantine Inspection Service (AQIS)	Responsible for quarantine controls at international borders. Lord Howe Island is a 'port of first entry' proclaimed under the *Quarantine Proclamations Act 1998.*Inspections of boats and aircraft conducted by LHIB and local Police.

Planning for day-to-day management is governed by several statutory instruments and plans and a number of non-statutory plans (see Tables 2 and 3).

Table 2: Statutory instruments and plans applying to LHIG World heritage property

Statutory Instrument/Plan	Description and status
Lord Howe Island Local Environment Plan, 2010	Prepared under the NSW *Environmental Planning and Assessment Act 1979* for the area administered by the LHIB, it regulates and provides strategies for: • conservation of World Heritage values; • environmental and biodiversity management; • sustainable resource use; • conservation of local heritage values; • sustainable island development, including tourism; • land use planning.
LHI Development Control Plan	Provides detailed prescriptions for development approvals in accordance with the LEP.
Lord Howe Island Biodiversity Management Plan, 2007	Constitutes a formal National and NSW Recovery Plan for endangered and vulnerable species under the EPBC Act and the NSW *Threatened Species Conservation Act 1995*. Both statutory and non-statutory components - see Table 3 for non-statutory aspects.
Lord Howe Island Permanent Park Preserve, Draft Plan of Management (January 2009)	Required under the *Lord Howe Island Act 1953* (to be prepared in accordance with national park requirements under NSW *National Parks and Wildlife Act 1974*). Draft Plan awaiting formal adoption.
Operational Plan for LHIMP (NSW Waters), 2004	Prepared by NSW Marine Parks Authority under NSW *Marine Parks Act 1997*. General strategies for conservation and sustainable use of the Marine Park area, coordination with other relevant authorities, and community information. Under review in 2010.
Zoning Plan for LHIMP (NSW Waters), 2004	Prepared by NSW Marine Parks Authority under NSW *Marine Parks Act 1997*. Zoning plan for biodiversity protection and sustainable use, specifying Sanctuary, Special Use and Habitat Protection Zones. Under review in 2010.
LHIMP (Commonwealth Waters) Management Plan, 2002	Required under EPBC Act. Provides for protection of World Heritage values, a zoning scheme that aligns with the zones in the NSW sector of the Marine Park, and liaison and coordination with other agencies and stakeholders. Expired in 2009. Under review by DEHWA in 2010.

Table 3: Non statutory plans and strategies applying to LHIG World Heritage Property

Plan/Strategy	Description/Responsible agency
Biodiversity and threat management - general	
Lord Howe Island Quarantine Strategy, 2003	LHIB Covers importation of animal, plant and other material. Provides quarantine inspection arrangements.
Biodiversity and threat management - terrestrial	
Lord Howe Island Biodiversity Management Plan 2007 (both statutory and non-statutory components)	Prepared by NSW DECCW in association with LHIB, Australian Museum and DEWHA. Covers threats and management actions for protection of overall biodiversity and rare and significant species.
Weed Management Strategy	LHIB Outlines methods and resources to deliver eradication of priority weeds.
Draft Rodent Eradication Plan, 2009	LHIB Awaiting finalisation and funds for implementation.
Draft Revegetation Strategy 2010	LHIB Outlines methods and priorities for rehabilitation works. Largely focuses on revegetation. 2010 plan updates previous draft..
Draft Bush Fire Risk Management Plan, 2010	NSW Rural Fire Service Prepared in accordance with the Rural Fires Act and identifies community assets at risk of fire and sets out a 5 year program to reduce those risks.
Biodiversity and threat management - marine	
LHIMP (NSW Waters) Invasive Marine Pest Management Plan, 2009	NSW Marine Park Authority. Relates only to State Waters.
Pollution control	
Lord Howe Island Marine Oil and Chemical Spill Contingency Plan, 2003	Prepared by NSW Waterways Authority. Provides for coordinated responses to incidents by the relevant management agencies, including LHIB, Marine Parks Authority, DECCW.
Waste Minimisation Strategy	LHIB Covers recycling and establishment of a bio-waste facility.
Research and monitoring	
Research Policy 2010	LHIB Outlines research priorities that are consistent with the LHIBMP and LHIMP plans
LHIMP Research and Monitoring Plan 2010-2015	NSW Marine Park Authority Applies to State Waters section of the Marine Park.

4.3 Coordination and consultation arrangements

At the inter-governmental level, coordination and policy making related to LHIG World Heritage Properties is made by the Environment Protection and Heritage Council (EPHC), which includes the Australian and NSW Environment Ministers. The EPHC performs this role for all World Heritage Properties in Australia.

The LHIB is tasked as the 'responsible administration' for the World Heritage Property and acts as the coordinator for planning and management of the Property. A Memorandum of Understanding between the LHIB and NSW Marine Parks Authority provides for coordinated management of the islands and State Waters component of the Marine Park.

Planning for, and implementation of, sustainable tourism is assisted by the Lord Howe Island Tourism Association, which is comprised of representatives of the LHIB and tourism operators.

A Biodiversity Management Plan Implementation Group, chaired by DECCW and including the LHIB and 2 LHI community reps oversees implementation of the Biodiversity Management Plan.

Community and stakeholder consultation is undertaken by the LHIB in relation to its planning and management activities. Four of the Board members are elected from the local community.

Stakeholder advice and a consultation mechanism for the Marine Park is provided by the Lord Howe Island Marine Parks Advisory Committee, established by the NSW Marine Parks Authority. The Committee is comprised of representatives of the Commonwealth Government (DEWHA), conservation, science, tourism industry, charter fishers, scuba divers, recreational fishers, LHIB and the community.

Part B Strategies for the Future

5.1 Vision

The following Vision and Guiding Principles have been adopted for the LHIG World Heritage Property. This is the same Vision adopted in the 2000 Strategic Plan, divided into its key points to improve its readability.

Vision

The Lord Howe Island Group World Heritage Property will retain its outstanding universal natural values in perpetuity. Its ecosystems, biota and exceptional natural beauty will be respected, protected and conserved by government agencies, the Island's residents, visitors to the area, and the industries which use the resources of the area.

Guiding Principles

1. The Property will be transmitted to future generations unimpaired, with its values restored where there has been damage or deterioration caused by human activity.
2. The best available scientific evidence will contribute to sustainable ecosystem management.
3. Residents and visitors alike will appreciate and enjoy its landscapes and ecosystems.
4. Commonwealth and State government institutions and laws will protect the area, and these governments will provide the most secure future possible for this World Heritage Property through funding and other resources to support management.
5. The unique living community of people who live on Lord Howe Island and manage its resources will incorporate the ethos of an ecologically sustainable lifestyle within the World Heritage Property as an example to other communities.

5.2 Strategic Approach

The 2000 Strategic Plan divided strategies according to five goals based on the World Heritage obligations of protection, conservation, rehabilitation, presentation and transmission of World Heritage values; and a sixth goal seeking to integrate the Island community in management of World Heritage values.

This new Plan organises strategies and actions according to eight related issue areas and goals for ease of reference by managers and other readers.

A. Protection and Management – to ensure ongoing protection of World Heritage values through appropriate tenure, statutory, management and planning arrangements and consistent approaches by management agencies.

B. Biodiversity Conservation and Ecological Integrity – to ensure that the integrity of the LHIG's outstanding biodiversity, natural marine and terrestrial habitats (one of the criterion for World Heritage listing of the LHIG) and associated ecological processes is maintained.

C. **Scenic Protection** – to maintain the spectacular natural beauty of the LHIG World Heritage Property (the second criterion for World Heritage listing).

D. **Sustainable Use of Natural Resources** – to ensure that terrestrial and marine natural resources are used in a sustainable manner which does not degrade World Heritage values.

E. **Sustainable Living** – to ensure that Island development, population and environmental impacts are kept at a sustainable level that protects World Heritage values.

F. **Visitor Management and Presentation** – to achieve sustainable tourism and recreational use which contributes to the protection of World Heritage values and provides visitors with quality opportunities to appreciate those outstanding values.

G. **Information and Resources for Management** – to ensure that management of World Heritage values is supported by the best available scientific research and information and adequate resources.

H. **Community Engagement** – to provide for the ongoing engagement of the Island community, and recognition of the community's values, in protection and presentation of World Heritage values.

This Strategic Plan builds upon the approach in the 2000 Strategic Plan, taking account of experience in implementation of the previous Plan and actions that have been completed. Many core strategies and actions in the previous Plan are continued and new strategies and actions are included to addresses new and changed situations. The Plan incorporates strategies and actions to fulfil Australia's World Heritage obligations in relation to the LHIG World Heritage Property, and includes measures to implement the new Australian World Heritage Management Principles.

The Plan is intended to be implemented over ten years, after which time it will be reviewed and a new Strategic Plan developed. The priority for actions in the Plan are classified as:

- High (H) – actions which are critical for management arrangements (e.g. plans or actions which provide a framework for other actions, funding) or to address significant present threats;
- Moderate (M) – actions to address identified potential or future threats or which are dependent of other prior actions;
- Low (L) – actions which do not need to be completed immediately;
- Ongoing – continuing actions which are important for protection of World heritage values (e.g. implementation and review of legislation and plans)

5.3 Management Strategies

A. Protection and Management

Key Issues

Boundary

The Lord Howe Island Marine Park was established by the NSW and Australian Governments after the LHIG was inscribed on the World Heritage List. The boundaries of the World Heritage Property do not align with the boundaries of the Commonwealth Waters section of the Marine Park (see Figure 1). This has implications for administrative and management practicality and consistency. Nor does the Property boundary cover all of the marine areas relevant to the values, particularly the undersea geological structure known as the 'Lord Howe Rise' and the associated relatively shallow marine ecosystem.

Ways to improve the alignment of the Property boundary with the Marine Park should be investigated. The Commonwealth's Marine Biodiversity Planning process may offer an opportunity for this investigation.

Regulatory arrangements

To provide ongoing and effective protection of the World Heritage Property, statutory and regulatory arrangements for the area need to provide for the protection of World Heritage values and for consistent cross-tenure and cross-agency approaches. Legislation and statutory instruments and plans should remain current and reflect changed conditions and new knowledge. The relevant statutory management, zoning and operational plans for the Permanent Park Preserve and the Marine Park were all at various stages of review at the time of preparation of this Strategic Plan and replacement plans need to adopted as a high priority.

The *Lord Howe Island Act 1953* is under review, which may result in changes relevant to the World Heritage Property. Any amendments to that Act may need to be reflected in the Lord Howe Island Regulations and the Lord Howe Island Local Environment Plan (LEP). The statutory plans for the terrestrial and marine parks are all under review, and replacement plans need to be adopted.

Continued enforcement of the provisions of the *Marine Pollution Act 1987* and contingency planning for oil and chemical spills are important to protect the environment of the World Heritage Property from pollution.

Coordination

Clear and agreed coordination arrangements between agencies with responsibilities in the area are also desirable to ensure consistent and cooperative management across the World Heritage Property. While operational coordination mechanisms are provided in plans such as the Biodiversity Management Plan, greater clarity on overall agency roles and management consistency is needed at the agency level. The 2000 Strategic Plan provided for development of Memoranda of Understanding (MOUs) between management agencies. One MOU has been developed between the LHIB and NSW Marine Parks Authority.

Goal

Ongoing protection of World Heritage values is ensured through appropriate tenure, statutory, management and planning arrangements and consistent approaches by management agencies.

Strategies

1. Ensure all World Heritage values are incorporated within the World Heritage Property boundary.
2. Ensure that World Heritage values are protected through a current and consistent regulatory and planning framework.
3. Develop interagency coordination arrangements to clarify responsibilities and ensure consistent and coordinated management of World Heritage values.

Desired Outcomes

- All World Heritage values are incorporated within the World Heritage Property boundary and a consistent administrative regime is in place.
- World Heritage values are managed in a collaborative and consistent manner by all responsible agencies.

Actions

No.	Actions	Priority	Agency
A1	Investigate adjustment of the Property boundary to better incorporate values and, as far as possible, align with the LHI Marine Park boundaries.	L	DEWHA LHIB
A2	Review and amend legislation, regulations, statutory instruments and statutory plans as necessary and according to legislative requirements to ensure consistent protection of World Heritage values.	Ongoing	All
A3	Review *Lord Howe Island Regulations 2004* to reflect anticipate amendments to the *Lord Howe Island Act 1953*.	M	LHIB DECCW
A4	Review the Lord Howe Island Local Environment Plan & Development Control Plan.	H	LHIB NSW Dept Planning
A5	Finalise and adopt the revised Plan of Management for the LHI Permanent Park Preserve.	H	LHIB DECCW
A6	Complete review of Operation Plan and Zoning Plan for LHIMP (State Waters) and adopt new plans.	H	MPA
A7	Complete review of the Management Plan for LHIMP (Commonwealth Waters) and adopt new plan.	H	DEWHA
A8	Prior to adoption of the new statutory plans for the LHI Permanent Park Preserve and LHIMP, consider the need to amend the plans to: • reflect this Strategic Plan, where relevant; • provide for protection of the LHIG's World Heritage values in accordance with Australia's World	H	LHIB DECCW MPA DEWHA

No.	Actions	Priority	Agency
	Heritage obligations; • incorporate the new Australian World Heritage Management Principles for an effective management plan; • facilitate consistent and cooperative management of the LHIG World Heritage Property at the strategic and operational levels.		
A9	Review the NSW Marine Park Regulations if necessary to incorporate any changes related to the new LHIMP zoning and management plans.	M	MPA
A10	Prepare a management plan for Stevens Reserve on Lord Howe Island.	L	LHIB
A11	Continue to enforce the *Marine Pollution Act 1987* in relation to shipping.	Ongoing	NSW Maritime
A12	Maintain a contingency plan for marine oil/chemical spills and appropriate equipment and trained personnel.	Ongoing	LHIB MPA DECCW
A13	Develop MOUs confirming responsibilities and providing for consistent and coordinated management of the World Heritage Property, including with: • DEWHA and LHIB on WH management • DEWHA (MOU with NSW MPA)on management of LHIMP (Commonwealth Waters); • DECCW/LHIB on biodiversity management; • Northern Rivers Catchment Management Authority and LHIB on terrestrial natural resource management.	H	LHIB DEWHA DECCW NRCMA
A14	Consider the need for an overarching committee representing key agencies to guide implementation of this Strategic Plan and consistent management of the LHIG World Heritage Property.	H	LHIB MPA DEWHA DECCW

B. Biodiversity Conservation and Ecosystem Integrity

Key Issues

The isolation of the LHIG at the junction of tropical and temperate latitudes has led to the exceptional biodiversity which is one of the bases of the area's World Heritage listing. However, the isolation under which species and ecosystems evolved means the area's biodiversity is vulnerable to disturbance by human activities, habitat loss and the spread of introduced plants, animals and organisms – as demonstrated by the rate of species loss that followed human settlement and the introduction of weeds and feral animals.

Integrated biodiversity management

The Lord Howe Island *Biodiversity Management Plan 2007* (BMP) provides an integrated cross-agency approach to management of the terrestrial biodiversity of the LHIG, in particular the significant and threatened species and communities of the islands. The holistic ecosystem approach in the BMP enables common threatening processes, significant ecological areas, biodiversity 'hot spots', threatened areas and priority management sites to be identified and management actions and research to be prioritised accordingly. It assists an efficient use of resources through management of common threats and prioritisation of actions.

Biodiversity conservation in the marine areas of the LHIG is achieved through the provisions of the EPBC Act, the *Marine Parks Act 1997*, the *Fisheries Management Act 1994*, and individual threatened species recovery plans and the LHIMP zoning schemes. Terrestrial processes and impacts (such as runoff waters, the condition of estuaries and coastal erosion) also have implications for lagoon and reef ecosystems.

Development of an interagency, integrated marine biodiversity management plan (similar to the BMP) would assist in achieving a consistent and coordinated approach to marine biodiversity conservation.

Existing threats

In addition to the BMP, several operational plans address the impacts of threatening processes and restoration of degraded areas – the Weed Eradication Strategy, Revegetation Strategy and a draft Rodent Eradication Plan for Lord Howe Island; and an Invasive Pest Management Plan for the LHIMP.

Progress has been made in management of threats to biodiversity, including the elimination of feral pigs and cats and rehabilitation of disturbed areas. Intensive efforts and ongoing funding over several years are now required to eradicate the Ship Rat and House Mouse (which threatens bird, plant and insect populations) and control invasive weeds which pose a serious threat to native plant communities and animal habitat.

Potential introduction of new organisms

The potential introduction of new exotic animals, plants and other organisms (such as pathogens and diseases) from boats (e.g. on hulls and in ballast water), aircraft, cargo and passengers is a major ongoing threat to the terrestrial and marine biodiversity of the LHIG. Shipping impacts and the importation of plants, animals and materials are regulated through maritime and quarantine legislation, the Lord Howe Island Regulations and quarantine inspections. Improved resourcing for

quarantine enforcement and education and improved coordination between the responsible agencies is desirable to ensure effective enforcement of quarantine procedures.

Further action is needed to minimise the introduction and spread of the damaging root fungus *Phytophthora cinnamomi*, and other species on Lord Howe Island, which may be transported to the Island from spores attached to soil or root material on footwear and hiking poles.

Coastline and lagoon

A gap exists in planning for the interface between coastal areas and the Lord Howe Island lagoon and associated coral reefs. The environmental condition of the coastal areas and estuaries of Lord Howe Island is critical to protect the biodiversity and environmental quality of the lagoon and reefs. The lagoon area is vulnerable to pollution and nutrients in runoff and groundwater, impacts from intermittently closed estuaries, erosion and impacts from visitor use.

Climate change

The LHIG is expected to experience rising air and sea surface temperatures, drier winter and spring conditions, and sea level rises as a consequence of climate change (Australian National University, 2009). Specific research is required on climate change impacts on the World Heritage Property. Potential impacts extend across the terrestrial and marine environments and include:

- a rising cloud layer which may affect the viability of cloud forest on the mountains and associated endemic species, and reduce water flows to vegetation at lower levels;
- rising sea levels affecting coastal habitat, erosion and island infrastructure;
- decline in some seabird populations (e.g. Flesh-footed Shearwater) due to changes in marine population dynamics and food availability;
- impacts of warmer ocean temperatures and increased ocean acidity on cold-water reef systems, shallow water and marine shelf fish population and marine invertebrates;
- increased threats from invasive species (e.g. introduced Ship Rat, Crown of Thorns Starfish which is natural to the area, many weed species) and possible new risks from organisms in ballast water and on vessel hulls previously killed by cold water;
- coral bleaching.

Monitoring

Ongoing monitoring of plant and animal populations and communities is required to assess the integrity of the LHIG's biodiversity and alert managers to new threats and impacts. While biodiversity monitoring is addressed in the Biodiversity Management Plan 2007 and the LHIMP Research and Monitoring Plan, additional resources are required to extend the range of monitoring programs and review priorities.

Goal

The integrity of the LHIG's outstanding biodiversity, natural marine and terrestrial habitats and associated ecological processes is maintained.

Strategies

1. Develop and implement consistent and coordinated approaches to biodiversity conservation across the LHIG World Heritage Property.
2. Minimise and manage the impacts of threatening processes to

maintain the integrity of World Heritage values and natural ecosystems.

3. Obtain necessary resources to implement priority actions detailed in management plans.
4. Prevent the introduction of new species and organisms which have the potential to degrade World Heritage values.
5. Ensure that measures are developed to manage potential new threatening processes, including climate change.
6. Encourage and provide adequate resources for research and monitoring of biodiversity condition and threatening processes.

Desired Outcomes

- Native plant and animal populations and communities are maintained at levels to ensure their ongoing viability in the wild.
- No new species and organisms with the potential to degrade World Heritage values have been introduced.
- Degraded values are restored or reinstated.
- Responses are developed to manage potential threats to World heritage values.
- Pest species are eradicated where possible

Actions

No.	Actions	Priority	Agency
B1	Continue to conserve the integrity of ecosystems in the LHIG World Heritage property through implementation of all relevant plans and strategies.	Ongoing	LHIB MPA DEWHA DECCW
B2	Continue to implement the *LHI Biodiversity Management Plan 2007*.	Ongoing	LHIB DECCW DEWHA
B3	Develop an interagency, integrated biodiversity management plan for marine biodiversity within the LHIG World Heritage Property.	H	MPA DEWHA DECCW LHIB
B4	Review and implement the LHI Weed Eradication Strategy	H	LHIB
B5	Finalise and implement the LHI Rodent Eradication Plan.	H	LHIB
B6	Seek secure ongoing funding and resources over several years for intensive rodent and weed eradication programs.	H	LHIB
B7	Implement the LHIMP Invasive Pest Management Plan.	Ongoing	MPA
B8	Review and update the LHI Quarantine Strategy, including: • mechanisms for coordination between relevant agencies; • rapid response protocols;	H	LHIB AQIS MPA NSW Maritime

No.	Actions	Priority	Agency
	• resource needs for effective implementation.		
B9	Engage with AQIS to obtain resources necessary for quarantine implementation.	H	LHIB AQIS
B10	Develop and deliver targeted education material and training to suppliers, stevedores, arriving passengers and the community (as appropriate).	H	LHIB
B11	Develop guidelines and education material on Phytophthora control. Implement a strategy to control spread of Phythopthora spp	H	LHIB
B12	Develop a Lord Howe Island coastal management plan that addresses runoff, erosion, estuary management, biodiversity conservation and habitat protection along the coast and in the lagoon and reef. Link the coastal management plan with relevant terrestrial and marine plans and strategies and climate change management plan.	H	LHIB DECCW MPA
B13	Develop a climate change management plan that includes research on potential impacts; monitoring requirements; risk assessment; and actions to reduce potential threats or cope with potential change (e.g. seed banks).	M	LHIB DECCW MPA DEWHA
B14	Continue and extend biodiversity research and monitoring to cover priority populations and communities and current and potential threatening processes.	H	LHIB DECCW MPA DEWHA
B15	Encourage and seek funding and resources for priority biodiversity and threatening process monitoring (see also Actions G1 – G3).	H	LHIB DECCW MPA DEWHA
B16	Finalise and implement the draft LHI Revegetation Strategy 2010.	Ongoing	LHIB
B17	Continue wetland restoration work and develop environmental and flood triggers for mechanical openings.	Ongoing	LHIB
B18	Complete and implement the LHI Bushfire Risk Management Plan.	H	LHIB NSW Rural Fire Service

C. Scenic Protection

Key Issues

The spectacular natural beauty of the island landscapes and underwater vistas is one of the values for which the LHIG was inscribed on the World Heritage List.

The scenic attraction of the LHIG is a major element in its tourism appeal, underpinning tourism's major contribution to the island economy.

Protection and conservation of terrestrial and marine scenic values has been provided by the management and operational plans for the Permanent Park Preserve and the Marine Park (under review at the time of preparation of this Strategic Plan). Rehabilitation of degraded vegetation is also assisting to restore scenic values within and on the edge of the settled areas.

Scenic values on Lord Howe Island are vulnerable to visual impacts from inappropriate development and introduced exotic tree species that out compete native vegetation. Minimisation of scenic impacts is addressed in the LHI LEP, Development Control Plan, application of the Building Code of Australia and the LHI Building Code. The possible need for an extended airport runway to cope with new aircraft is a potential future threat to scenic values (see Action F10). Establishment of alternative technologies also have the potential to create intrusive visual impacts.

Goal

Maintain the spectacular natural beauty of the LHIG World Heritage Property.

Strategies

1. Ensure that conservation of scenic values is considered and addressed in all planning, management and development processes.

Desired Outcomes

- New developments including road upgrading do not degrade scenic values

Actions

No.	Actions	Priority	Agency
C1	Provide for protection of scenic values in new management and operational plans being developed for the Permanent Park Preserve and LHIMP.	H	LHIB DECCW MPA DEWHA
C2	Continue to implement Revegetation Strategy and Weed Management Strategy to rehabilitate degraded areas as necessary.	Ongoing	LHIB
C3	Review the LHI Local Environment Plan and Development Control Plan to ensure there is appropriate provision for protection of scenic values in relation to potential developments.	H	LHIB

D. Sustainable Use of Natural Resources

Key Issues

Agriculture and extractive industries

Agricultural and natural resource activities on Lord Howe Island include food production for local consumption, the economically important palm seed export industry (utilising plantations and harvesting from the Permanent Park Preserve) and extractive industries for local construction. In the limited area available on the island, sustainable practices and levels of use are critical to prevent adverse impacts on the biodiversity and scenic aspects of the Island's World Heritage values. Adverse impacts can include weed and animal pest introduction, vegetation clearance and vegetation windsheer and canopy dieback adjacent to cleared areas. Impacts associated with agricultural production are addressed in the BMP and LHI Revegetation Strategy.

The extent of agricultural land is governed by the zoning plan under the LHI LEP. Constraint mapping identifying prime agricultural land is required. Further action is required to address sustainable usage of non-productive agricultural land.

There is no current mineral or petroleum exploration or mining within or near the World Heritage Property. In the LHI Marine Park, exploration and mining are regulated under the EPBC Act and NSW *Marine Parks Act 1997* and, at the time of preparation of this Plan, were prohibited unless allowed under an approved management plan (for Commonwealth Waters) or an Act of Parliament (in NSW Waters). Part 5 Division 1 79 of LHI Regs Removal or destruction of substances forming part of the island – require approval of board to remove any stone, rock, shell, earth, sand, clay or gravel on the island.

Should exploration proposals within or near the World Heritage Property be made in the future, action is needed to alert Australian and NSW agencies responsible for mineral and petroleum exploration of the need to protect World Heritage values.

Fishing

Commercial and recreational fishing occurs in both Commonwealth and NSW Waters within the World Heritage Property. Sustainable fishing practices are important to maintain viable fish populations and ensure conservation of fish habitat and food species.

The LHIMP zoning scheme prohibits fishing in sanctuary zones and limits fishing activities in habitat protection zones and establishes bag and size limits for recreational fishing. Commercial fishing is governed by regulations under the NSW *Fisheries Management (General) Regulation 2002*.

However, licensing of commercial fishing (including charter operators who sell their catch) and active enforcement of fishing regulations is required to ensure fishing remains sustainable.

Development of an interagency, integrated fisheries management plan for both Commonwealth and State waters within the World Heritage Property is desirable to achieve a consistent approach to sustainable fishing, enforcement and protection of World Heritage values.

Tourism

Tourism largely relies on the island's natural resources which provide significant economic benefits to the island's community and environment.

An environmental levy on tourists provides funds for on-ground management of environmental impacts.

Goal

Natural resources are used and managed in a sustainable manner which does not degrade World Heritage values.

Strategies

1. Implement ecologically sustainable management of, and control of threatening processes on, agricultural land.
2. Ensure use of island natural resources is sustainable and consistent with the protection of World Heritage values.
3. Ensure fisheries management is sustainable, consistent with the protection of World Heritage values and coordinated across management agencies.
4. Enforce fisheries regulations and requirements.

Desired Outcomes

- Natural resources are sustainably managed and resource use does not degrade World Heritage values.

Actions

No.	Actions	Priority	Agency
D1	Implement actions in the Biodiversity Management Plan and Revegetation Strategy to control threatening processes related to agricultural land and rehabilitate degraded areas.	Ongoing	LHIB Community
D2	Undertake a review of lands suitable for sustainable agriculture as part of a comprehensive review of the LHI LEP 2010.	H	LHIB
D3	Work with NSW Agriculture to develop and provide advice to landholders on ecologically sustainable agricultural practices.	Ongoing	LHIB NSW Agriculture
D4	Assess new technology in the palm seed industry for potential ecological impacts.	Ongoing	LHIB NSW Industry & Investment
D5	Continue regulation of the island extractive industry to minimise impacts on World Heritage values.	Ongoing	LHIB
D6	Develop a voluntary agreement with Commonwealth and NSW government agencies responsible for mineral and petroleum exploration recognising the World Heritage values of the LHIG.	L	LHIB MPA DEWHA
D7	Liaise with NSW Industry & Investment to establish LHI as a Class 1 Fishery, licensing of commercial fishing operators and a system and resources for enforcement of fishing regulations.	H	LHIB MPA DEWHA
D8	Develop an interagency, integrated fisheries management plan for sustainable fisheries management in Commonwealth and State waters relevant to the LHIG. The plan should include measures for consistent management and enforcement between agencies, consider population biology and habitat requirements and identify research and monitoring needs.	H	LHIB MPA NSW Industry & Investment DEWHA AFMA
D9	Undertake a review of the current permit/licensing system for commercial fishing on Lord Howe Island.	H	LHIB NSW Food Authority

E. Sustainable Living

Key Issues

On Lord Howe Island, there is limited land suitable for settlement and limited water and energy resources. Fuel for electricity production and for vehicles and boats and most food and construction material has to be imported. The potential for uncontrolled development to degrade the island's scenic values and terrestrial, lagoon and reef ecosystems is high. Therefore, limitation of the number of residents and the development footprint is critical to protect World Heritage values on and near the island. Efficient, low impact energy and waste management systems are also important to reduce environmental impacts, reduce costs (such as fuel imports) and protect the future quality of life for island residents.

The LHI LEP addresses population levels by placing limits on the total number of new dwellings that can be approved. The LEP also controls the type and location of island infrastructure and facilities. Implementation of housing controls while ensuring there is adequate provision for island residents and staff needed to operate facilities and services is an ongoing issue.

Progress towards sustainable living has been made with the development of a Waste Management Plan and installation of a bio-waste facility. Fuel efficient diesel generators and solar hot water and some solar power systems have reduced reliance on costly and potentially polluting diesel generation, while an investigation into renewable power options has been conducted.

With limited surface water, groundwater is an important source of potable water. Groundwater extraction is currently unregulated. There is a risk of groundwater pollution and faecal contamination from runoff and wastewater disposal. Groundwater drawdown may also result in vegetation degradation due to lower water tables and saltwater intrusion. Pollutants in runoff and groundwater may also adversely affect lagoon and coral reef ecosystems.

Vehicle numbers and use are managed according to the Lord Howe Island Vehicle Policy. Applications to import or transfer and use a vehicle must demonstrate a genuine need for the import or transfer, and use of a vehicle and the type of vehicle selected. Vehicle applications must show they are in the public interest and minimise environmental impact on both the natural and built environments. Increases in vehicle numbers have the potential to impact the islands scenic amenity and sustainability. Investigation into alternative transport options need to be developed.

Goal

Island development, population and environmental impacts are kept at a sustainable level that protects World Heritage values.

Strategies

1. Ensure that the resident LHI population remains at a level that can be sustainably supported on the limited area available while protecting World Heritage values and maintaining quality of life.
2. To the extent feasible, provide efficient and non-polluting energy systems that are compatible with the protection of World Heritage values.

3. Manage water supplies and wastewater in a way that minimises ecological impacts and protects World Heritage values.
4. Ensure that the number of motor vehicles on the island is strictly limited by demonstrated need and that priority is given to the most energy efficient vehicles, including, where practicable, those powered by alternative, environmentally-sustainable technologies.

Desired Outcomes

- The LHI population is maintained at a sustainable level.
- There is an increase in the sustainability of energy production and use.
- Groundwater quality and quantity is monitored and protected.
- No adverse impacts occur on terrestrial, lagoon and reef ecosystems due to runoff and groundwater changes
- The LHI vehicle population is limited to a sustainable level with emphasis on clean, green technology

Actions

No.	Actions	Priority	Agency
E1	Continue limitations on residential housing in the reviewed LHI LEP.	H	LHIB
E2	Conduct an investigation into the population numbers that can be sustainably supported on Lord Howe Island while protecting World Heritage values and maintaining quality of life.	M	LHIB DoP
E3	Review and update the LHI Waste Management Plan.	H	LHIB
E4	Continue to pursue energy efficient systems and alternative power sources that are compatible with protection the range of World Heritage biodiversity and scenic values.	Ongoing	LHIB
E5	Complete and implement a sustainable wastewater strategy for Lord Howe Island which is compatible with protection of World Heritage values.	H	LHIB
E6	Develop and implement a 'total water cycle' management approach and monitoring plan.	H	LHIB
E7	Continue research on sustainable water management needs.	Ongoing	LHIB
E8	Undertake planning to minimise growth in the number and use of motor vehicles.	M	LHIB
E9	Investigate strategies for greater use of environmentally sustainable vehicles.	M	LHIB

F. Visitor Management and Presentation

Key Issues

Tourism is vital for the island economy and contributes to the World Heritage obligation of presentation of the Property's values, in ways that enhance visitor appreciation of and support for those values."

Tourism impacts

Careful management of tourism is essential to protect the values on which it is based, continue to provide experiences appropriate to a pristine natural environment, and protect the islander way of life. Impacts on sensitive ecosystems and habitats can include browsing, predation and trampling, spread of invasive plants and pathogens, litter, taking of marine species, pollution from boats, pollution from solid waste and wastewater and disturbance of seabird rookeries. Given the small size of Lord Howe Island, tourism infrastructure and facilities also have the potential to detract from its scenic beauty and add to the pressure on the island's ecosystems and limited natural resources.

Visitor numbers

The LHI LEP restricts development of tourist accommodation on Lord Howe Island to accommodate a maximum of 400 visitors at any time. Control of visitor impacts and activities in specific areas is addressed in the draft plan of management for the Permanent Park Preserve and zoning, operational and management plans for the LHI Marine Park (under review at the time of preparation of this Strategic Plan). However, ongoing monitoring and research is required to improve knowledge of the environmental and social impacts of tourism. The recent introduction of cruise ships to the island has the potential to impact on the island experience as well as increase numbers of visitors.

A corridor system for monitoring actual visitor numbers including persons staying in tourist accommodation to ensure there will be no more than 400 persons at any one time.

Communication and interpretation

Improved communication of World Heritage values to visitors and residents and the need for conservation and minimal impact behaviour are important ways to fulfil World Heritage obligations, enhance visitor experiences and minimise impacts. A consistent approach to communication and interpretation and an enhanced range of quality interpretation products needs to be developed. An accreditation scheme for commercial tour operators will also ensure that high quality and consistent messages are delivered by tour guides and that guided activities are conducted with the appropriate environmental controls. The NSW Parks Eco Pass scheme provides a possible model for an accreditation scheme.

Promotion

The World Heritage status of the LHIG is a significant attraction for many visitors and could be used more effectively to develop and promote tourism outcomes which contribute to the environmental and economic sustainability of the LHIG. A coordinated approach to tourism promotion between tourism organisations and operators is needed, as well as greater use of the internet (a major and increasing source of information for prospective tourists) for information and promotion.

Air transport

The vast majority of visitors and residents travel to Lord Howe Island by air. The length of the airport runway is a potential issue, as the aircraft currently operating on the route are being phased out. Extension of the runway, if required to accommodate replacement aircraft, is a potential threat to scenic values and environmental conditions. The future plans for aircraft operations on the Island need to be determined and options investigated that minimise impacts on World Heritage values.

Goal

Tourism and recreation in the LHIG is sustainable, contributes to protection of World Heritage values and provides visitors with quality opportunities to understand and appreciate its outstanding values

Strategies

1. Ensure that measures are in place to monitor and manage visitor impacts on World Heritage values.
2. Ensure there is consistent and accurate communication and interpretation of World Heritage values across the spectrum of visitor activities.
3. Develop a coordinated approach to promotion of the LHIG as a World Heritage destination.

Desired Outcomes

- Any adverse impacts from tourist activities or tourism infrastructure are prevented or minimised.
- Visitors to the LHIG understand, appreciate and protect its World Heritage values.
- Tourism in the LHIG is environmentally and economically sustainable.

Actions

No.	Actions	Priority	Agency
F1	Continue limiting visitor numbers to a maximum of 400 people at a time.	Ongoing	LHIB
F2	Introduce a system for visitor number monitoring on Lord Howe Island.	M	LHIB
F3	Develop a strategy for visitor impact management across the LHIG, including research and monitoring of visitor impacts.	M	LHIB MPA DEWHA DECCW
F4	Develop and implement a Communications and an Interpretation Plan for the LHIG based on current best practice to ensure that World Heritage values are communicated to visitors and residents in ways that are accurate, entertaining and which encourage further enquiry."	H	LHIB MPA DEWHA DECCW
F5	Develop an accreditation scheme for commercial tour operators.	H	LHIB DECCW MPA
F6	Implement interpretation activities (such as seasonal Discovery tours) that present World Heritage values and showcase work on the protection of values.	M	LHIB MPA
F7	Develop an appropriate visitor website for the LHIG, incorporating interpretation of, World Heritage values and information on visitor experiences, quarantine and management requirements.	H	LHIB MPA DEWHA LHI

No.	Actions	Priority	Agency
			Tourism Association
F8	Develop a coordinated approach to tourism promotion and planning between the LHIB, marine park managers, tourism organisations and tourism operators. Introduce an environmental sustainability rating system for accommodation providers.	H	LHIB MPA DEWHA LHI Tourism Association Tourism NSW
F9	Continue to work with tourism organisations and operators on inclusion of information on World Heritage values and their conservation on tourism websites and brochures.	Ongoing	LHIB LHI Tourism Association Tourism NSW
F10	Liaise with the Lord Howe Island airline operator to investigate future proposals and runway requirements for aircraft on the Lord Howe Island route. Investigate future air and sea transport options that minimise impacts on World Heritage values.	M	LHIB
F11	Review existing LHIB cruise ship policy and effectiveness to protect WH values and experience	H	LHIB

G. Information and Resources for Management

Key Issues

Research and monitoring

Scientific research and information about threats, impacts and system dynamics is essential for conservation of World Heritage values and is one of the obligations for management of World Heritage properties under the World Heritage Convention. Monitoring of the condition of the Property is required as a basis for periodic reports to the World Heritage Committee.

There are provisions for research and monitoring in several plans and strategies related to the LHIG. The Biodiversity Management Plan addresses terrestrial research priorities and forms a basis for seeking and responding to approaches with universities and other research institutions. The Biodiversity Management Plan Implementation Group also provides advice on terrestrial research needs and priorities. A Research and Monitoring Plan 2010-15 is in place for the LHIMP (State Waters). All research and monitoring in the NSW section of the Marine Park is approved by the MPA's Research and Monitoring Committee.

The LHI Board has developed a research priorities policy, which defaults to the BMP and the Marine Parks Authority to establish research directives. A research and accommodation facility has also been established on LHI to provide for visiting researchers.

However, the above mechanisms could be enhanced through the development of an interagency, integrated biodiversity management plan covering marine ecosystems within the World Heritage property and establishing a reporting procedure to the commonwealth.

Resources

Additional resources are needed by the LHIB and management agencies to maximise protection of World Heritage values through research, monitoring and management actions. The small size of the Island community means that the resources available to it are small in comparison to the task of managing the World Heritage Property. Secure ongoing funding (rather than short term grants) is also required to ensure the continuity of research, monitoring and management programs (e.g. weed eradication).

A range of measures should be investigated to improve the availability of resources for management of the World Heritage Property. Potentially, these might include improved base resourcing for the key management agencies; establishment of a LHIG foundation or trust for fund raising; and improvements in the financial efficiency and cost returns of LHIB operations.

Goal

Management of the LHIG's World Heritage values is supported by the best available scientific research and information and adequate resources.

Strategies

1. Ensure adequate planning and resourcing of natural and social science research and monitoring required to assist management of World Heritage values.
2. Ensure adequate long term funding is provided to the LHIB and other management agencies to fulfil obligations to protect the LHIG's World Heritage values.
3. Investigate alternative funding arrangements, partnerships and financial efficiencies to improve resources available for research, monitoring and management of World heritage values.

Desired Outcomes

- Adequate long term resources and funding are available for protection of World Heritage values.

Actions

No.	Actions	Priority	Agency
G1	Review the effectiveness of current planning, coordination and resourcing of natural and social science research and monitoring within the LHIG World Heritage Property. Develop an integrated strategy for research and monitoring that addresses prioritisation, coordination, encouragement of research and provision of resources.	H	LHIB DECCW MPA DEWHA
G2	Investigate partnership arrangements with research institutions to improve the level and continuity of research activities and assist in the provision of management advice.	H	LHIB DECCW MPA DEWHA Australian Museum & other institutions
G3	Seek Commonwealth and NSW Government commitments to ongoing funding for management of the Permanent Park Preserve and LHI Marine Park and for priority research, monitoring and management programs aimed at protection of World Heritage values.	H	LHIB DECCW MPA DEWHA

No.	Actions	Priority	Agency
G4	Prepare a long term LHIB financial strategy aimed at improving the Board's resources, including consideration of strategies for improving income, cost recovery and operational efficiency.	H	LHIB
G5	Investigate establishment of a Foundation or Trust for raising/accepting funds and resources for protection of the LHIG World Heritage Property.	H	LHIB DECCW MPA DEWHA
G6	Investigate a partnership with the Foundation for National Parks & Wildlife directed at resourcing conservation projects in the LHIG.	H	LHIB DECCW MPA DEWHA

H. Community Engagement

Key Issues

The Island community plays a vital role in protecting and presenting the LHIG's World Heritage values. This was acknowledged by the 2000 Strategic Plan for Management for the LHIG World Heritage Property, which sought to ensure compatibility between the Island community's lifestyle and values and the actions taken to protect World Heritage values.

This approach is continued in this Strategic Plan. The Island community should continue to be informed, consulted and engaged in decision making and management actions related to the World Heritage Property. The values and lifestyle of the Island community should also continue to make a significant contribution to the Island visitor experience and be integrated into the presentation of World Heritage values and planning for their protection.

Community based monitoring and land restoration programs are potential opportunities to involve and educate the community on World Heritage values. Several community based monitoring programs have been implemented.

Goal

The Lord Howe Island community is actively engaged and its values are recognised in protection and presentation of World Heritage values.

Strategies

1. Ensure that the unique local community values are included in presentation of the LHIG's values.
2. Ensure that impacts on local community values and lifestyle are considered in decision making and planning related to World Heritage values.
3. Consult and inform the LHI community in relation to key decisions affecting World heritage values and community values and lifestyle.
4. Assist the local community to participate in management of World Heritage values.
5. Liaise with the Lord Howe Island Central School and other relevant educational institutions to include study of LHIG World Heritage Property values in relevant key learning areas of the NSW Schools syllabus.

Desired Outcomes

- Active engagement and support by the Lord Howe Island community in protection and presentation of World Heritage values.
- Active engagement and support by the Lord Howe Island community at all age levels in the protection and presentation of World Heritage values

Actions

No.	Actions	Priority	Agency
H1	Include local community values in on-island interpretation and presentation of values and in development of an LHIG communication and interpretation plan (see Action F4).	Ongoing	LHIB
H2	Include an assessment of the impacts on the local community and its values in decisions related to World Heritage.	Ongoing	LHIB DECCW MPA DEWHA
H3	Consult the local community in relevant World Heritage decision making and planning processes including, as appropriate, community forums on specific issues.	Ongoing	LHIB DECCW MPA DEWHA
H4	Regularly inform the Island community about the condition of the World Heritage Property and implementation of this Strategic Plan, and provide opportunities for comments on performance.	Ongoing	LHIB
H5	Provide opportunities and training (e.g. in bush regeneration) for the local community to participate in monitoring and other programs for protection of World Heritage values.	Ongoing	LHIB DECCW MPA DEWHA
H6	Encourage teaching of LHIG World Heritage values in relevant key learning areas of the NSW schools syllabus at the Lord Howe Island Central School and other relevant educational institutions	Ongoing	LHIB DECCW, MPA DEWHA DET

5.4 Review and Evaluation

This Strategic Plan for the LHIG World Heritage Property will be reviewed in 10 years from the date of approval or as required and a new Plan will be prepared by the LHIB, in conjunction with NSW and Commonwealth agencies with management responsibilities within the area of the Property.

The review of this Plan will include an evaluation of:

- success in protecting World Heritage values and maintaining the integrity of the LHIG World Heritage Property;
- implementation of actions, including reasons for non-implementation;
- success in developing consistent and coordinated approaches between management agencies;
- adequacy of resources;
- perceived usefulness of the Strategic Plan.

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