



Submission to Senate Standing Committee  
on Environment and Communications

Inquiry into  
Environmental Offsets

PO Box 193 Surrey Hills VIC

Australia 3127

T: (03) 9895 4493

F: (03) 9898 0249

[secretariat@nela.org.au](mailto:secretariat@nela.org.au)

[www.nela.org.au](http://www.nela.org.au)

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# **NATIONAL ENVIRONMENTAL LAW ASSOCIATION**

## **Submission to Senate Standing Committee on Environment and Communications, Inquiry into Environmental Offsets**

### **1. INTRODUCTION – ABOUT NELA**

The National Environmental Law Association (NELA) is Australia’s leading environmental law organisation with a membership base of professionals in environment and resources law and related disciplines.

NELA’s vision is that ecological sustainability is a guiding principle in regulating energy and resources, utilities, pollution control, protecting biodiversity and cultural values, and land use planning and infrastructure.

We seek to protect the environment by shaping the law through information sharing, analysis and debate.

### **2. ABOUT THIS SUBMISSION**

NELA notes that the Terms of Reference for the inquiry are to examine the history, appropriateness and effectiveness of the use of environmental offsets in federal environmental approvals including:

- a) the principles that underpin the use of offsets;
- b) the processes used to develop and assess proposed offsets;
- c) the adequacy of monitoring and evaluation of approved offsets arrangements to determine whether promised environmental outcomes are achieved over the short and long term; and
- d) any other related matters

Offsets can be used in a variety of contexts, but this submission focuses on the use of biodiversity offsets.

This submission first addresses the need for a national environmental offset standard and the principles that would underpin the proposed standard. It goes on to cover (b), (c) and (d) of the Terms of Reference, giving examples from the case study projects identified in the Terms of Reference to illustrate key points.

### **Summary of recommendations**

#### **General**

1. NELA supports the Australian Government taking a leadership role in coordinating the development of a national biodiversity offsets standard that affords high levels of protection for Australia’s biodiversity.
2. NELA supports the Australian Government commissioning an independent national, public review of environmental offsets policies and practices.

### **Processes used to develop and assess proposed offsets**

3. NELA recommends that the Australian Government prepare clear guidance about the application of the mitigation hierarchy.
4. NELA recommends that the adequacy of offsets be secured prior to commencement of the activity, preferably before the grant of approval that permits the activity to commence.
5. NELA recommends that assessment methodology ensures that:
  - offset requirements are specific;
  - account be taken of indirect impacts of a proposed development;
  - the time lag between the destruction of biodiversity and the establishment of offset sites is taken into account; and
  - multipliers and offset ratios are based on sound science about the size of the offset that would be required.
6. NELA recommends that all offsets meet the additionality requirement, and that offset sites be legally protected from further offset proposals and recorded in a national offsets register.
7. NELA recommends that the Australian government develop strategic conservation and heritage plans that identify no-go areas, and those important for long-term protection.
8. NELA recommends that any wider use of indirect offsets should be implemented extremely cautiously.

### **Adequacy of monitoring and evaluation of approved offsets**

9. NELA supports project approvals incorporating reporting mechanisms to support long term monitoring and evaluation of offset sites and activities.

### **Other related matters**

10. NELA recommends that the EPBC Act Offsets Policy be revised to include separate requirements for marine habitats.

## **3. A NATIONAL ENVIRONMENTAL OFFSET STANDARD**

The Commonwealth and each state and territory have different approaches to biodiversity offsets. Differences in approach and scope, the complexity of many arrangements, and the lack of reported outcomes make comparisons between the schemes very difficult.

The Australian Government's 'one stop shop' policy, under which it proposes to delegate approvals under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) to the states and territories provides an opportunity to address this problem.

NELA believes that a national standard would facilitate alignment between schemes in the Commonwealth, states and territories, promote transparency and certainty, and enhance biodiversity conservation outcomes across the country.

NELA understands that the Commonwealth, states and territories are cooperating through COAG to develop national approaches to environmental offsets and biodiversity banking. This work commenced some years ago under the former government's proposal for streamlining environmental approvals.

NELA understands that the EPBC Act Environmental Offsets Policy (EPBC Act Offsets Policy) is the benchmark for those discussions.

NELA's proposed national standard would be more comprehensive, addressing the underlying principles that guide good practice in biodiversity offset policy. The first principle is that approved actions will not have unacceptable impacts on protected matters and that project approval conditions, including offsets will result in biodiversity being improved, or at least maintained.

Another key element of the standard would be the mitigation hierarchy, which obliges proponents to demonstrate that they have taken steps to avoid and minimise impacts on biodiversity before offsets are available.

The standard would also cover matters such as:

- 'like-for-like' rules and methods used to measure biodiversity losses and gains;
- setting aside designated high value conservation areas where offsets are not permitted;
- setting aside areas where offset delivery is prioritized to provide strategic landscape scale benefits;
- making information available to the public on offset trades;
- specifying what offset types are allowed (direct and indirect) and how they address the relevant impact on biodiversity;
- providing greater legal security for offsets and how they are managed – only some jurisdictions require a management plan and legally binding agreement with land holders;
- providing adequate resources for monitoring and enforcement of offset agreements.

NELA believes it is crucial that the proposed offset standard is incorporated into the environmental assessment and approval framework under the EPBC Act so that it has a regulatory basis.

Recent amendments to environmental offset policies in at least three states – Victoria, NSW and Queensland are not consistent with the key principles outlined above. The *Environmental Offsets Bill 2014* (Qld), for example, has no underlying principle of 'no net loss' or 'improve or maintain', and indirect offsets through financial payments are not directly linked to addressing the particular impact on an aspect of the environment. In Victoria the *Permitted clearing of native vegetation – Biodiversity assessment guidelines* (incorporated into the

Victorian Planning Scheme in December 2013) does not include a legal obligation on proponents to demonstrate that they have 'avoided and minimized' impacts on native vegetation before offsets can be considered. It also no longer requires an ecological survey to assess the quality of vegetation on each site.

In NSW the *Draft NSW Biodiversity Offsets Policy for Major Projects* appears to provide weaker protection for high-value conservation areas designated as 'red flag areas under the NSW biobanking scheme. The 'red flag' system is used to prevent development in "certain, specifically defined areas of land that have high conservation values ... except in certain circumstances when a 'red flag variation' is obtained".<sup>1</sup> The policy will not use the red flag system for 'major projects'.

NELA acknowledges that the reforms in these states include some improvements, for example, taking a more risk-based approach, improving certainty in some areas and, in some cases, facilitating a strategic, landscape scale approach to reversing the ongoing loss of Australia's biodiversity.

NELA strongly supports the Commonwealth taking a leadership role in coordinating the development of a national biodiversity offsets standard that affords high levels of protection for Australia's biodiversity.

The Productivity Commission has recently expressed concern about inconsistent use of offset policies across jurisdictions. It recommended that COAG initiate an independent national review of offset policies and practices to assess: whether their objectives are clear and workable; the methodologies for identifying suitable offsets; the merits of a single, national offsets framework; and the role of market-based offset approaches. It recommended that the review should report back to COAG by the end of 2014.<sup>2</sup>

In order to progress the development of a national biodiversity offset standard, NELA supports the government commissioning an independent national, public review of environmental offsets policies and practices.

#### **RECOMMENDATION:**

NELA supports the Australian Government taking a leadership role in coordinating the development of a national biodiversity offset standard that affords high levels of protection for Australia's biodiversity.

NELA supports the Australian Government commissioning an independent national, public review of environmental offsets policies and practices.

## **4. THE PROCESSES USED TO DEVELOP AND ASSESS OFFSETS**

### *1. The mitigation hierarchy*

The EPBC Act Offsets Policy applies a mitigation hierarchy in deciding whether offsets are appropriate: offsets are only available for impacts that cannot be

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<sup>1</sup>Fact Sheet <http://www.environment.nsw.gov.au/resources/biodiversity/14101polbb.pdf>

<sup>2</sup> Productivity Commission 2013, *Major Project Development Assessment Processes*, Research Report, Canberra, at page 213, available here: [http://www.pc.gov.au/\\_data/assets/pdf\\_file/0015/130353/major-projects.pdf](http://www.pc.gov.au/_data/assets/pdf_file/0015/130353/major-projects.pdf)

avoided or mitigated. Proponents must demonstrate that they have taken steps to avoid and minimise impacts on 'matters of national environmental significance' before offsets are available.

In practice the system is under intense pressure from proponents to lower standards and hasten approvals, leading to a relaxation of standards.<sup>3</sup> There is concern that the mitigation hierarchy is not rigorously applied and involves subjective judgments that serve the interests of proponents. The EPBC Act Offsets Policy does not contain guidance about the application of the mitigation hierarchy.

NELA believes that the Australian government should prepare clear guidance about the application of the mitigation hierarchy. This should be linked with provision for limits on the use of offsets, and include, for example, scientific criteria underpinning the presumption that high value environmental assets or values will not be destroyed. Key indicators would be irreplaceability and vulnerability.

### **RECOMMENDATION:**

NELA recommends that the Australian government prepare clear guidance about the application of the mitigation hierarchy.

#### *2. Timing of the assessment of offsets*

The Whitehaven Coal's Maules Creek Project in North West NSW highlights the importance of ensuring the adequacy of offsets prior to commencement of the activity, preferably *before the grant of approval* that permits the activity to commence.

In response to the independent evidence of the inadequacy of proposed offset sites for the Maules Creek mine, the Minister added a condition to the approval requiring the quality of the proposed offset sites to undergo independent verification, but this was not a precondition to the commencement of the action. If the independent verification found that the proposed sites were inadequate, the proponent was simply required to acquire additional sites to meet the total (condition 11). This condition assumes, without supporting evidence, that such additional remnant exist and are available to be used as additional offsets. The independent report has not been made publicly available, and clearing for the mine site is proceeding.

The Maules Creek case study highlights the importance of clear evidence, *prior to approval* of a proposal, that offset arrangements are adequate. A comprehensive and accurate vegetation mapping exercise prior to approval would have highlighted the deficiencies and militated against approval.

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<sup>3</sup>Farrier D, Kelly A, and Langdon A, "Biodiversity offsets and native vegetation clearance in New South Wales: The rural/urban divide in the pursuit of ecologically sustainable development" (2007) 24 EPLJ 427

Approval for clearing for the Galilee Coal project was conditional upon completion of the Offsets Management Plan, but not on securing the offsets themselves, which could be done up to two years after the area was destroyed.<sup>4</sup>

Similarly, the Curtis LNG project imposes no deadline for actually securing offsets.

### **RECOMMENDATION:**

NELA recommends that adequacy of offsets be secured prior to commencement of the activity, preferably *before the grant of approval* that permits the activity to commence.

### *3. Assessment methodologies*

Offsets must, by definition, involve measurable, comparable biodiversity losses and gains, and demonstrably achieve, at least, no net loss of biodiversity.<sup>5</sup> In practice, however, very little evidence supports the feasibility of these goals.<sup>6</sup> Indeed, most available assessments suggest that conservation outcomes are not realised in the majority of cases.

The following criteria have been identified as essential elements of an assessment methodology for offsets in order to satisfy a “no net loss” standard:

- The affected biodiversity and values can be defined and measured
- Restoration of the values lost from clearing is ecologically feasible
- Clearing does not present an immediate risk of a species, population or process
- Loss-gain calculations take adequate account of time lags and uncertainties.<sup>7</sup>

The assessment methodologies and tools currently used under Commonwealth state, and territory offset schemes assume that it is possible to objectively measure biodiversity values, effectively compare losses and gains, and demonstrate the “ecological equivalence” of offset sites and lost values. They attempt to make offset calculations as objective and scientifically defensible as possible, but in doing so they risk underplaying the ultimately subjective value judgments involved.<sup>8</sup>

For example, direct offsets should target habitat that is in equivalent or better condition than the area to be lost.<sup>9</sup> In practice, however, such sites are often not available, or located in sufficiently close proximity to the proposal site. Vegetation mapping is typically used as the basis for calculating the standard and quantum of offset required, yet there is considerable debate about accuracy,

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<sup>4</sup> Waratah – Galilee Coal Project approval, EPBC 2009/4737, condition 14.

<sup>5</sup> Bull J et al, “Biodiversity offsets in theory and practice” (2013) 47 *Oryx*, 369–380.

<sup>6</sup> Maron et al, “Can Offsets Really Compensate for Habitat Removal? The Case of the Endangered Red-Tailed Black Cockatoo” (2010) 47 *Journal of Applied Ecology* 348, at 348.

<sup>7</sup> Gibbons & Lindenmayer, “Offsets for Land Clearing: No Net Loss or the Tail Wagging the Dog” (2007) 8(1) *Ecological Management and Restoration* 26; Maron et al, above n6, at 348; Fallding M, “Biodiversity Offsets: Practice and Promise” (2014) 31 *EPLJ*, 11, at 27.

<sup>8</sup> Maron et al, above n12; Quetier F & Lavorel S, “Assessing Ecological Equivalence in Biodiversity Offset Schemes: Key Issues and Solutions” (2011) 144 *Biological Conservation* 2991.

<sup>9</sup> Peta Norris, “Seeking Balance: The promise and reality of biodiversity offsetting” (2014) 31 *EPLJ* 136, at 138.

scale and quality of vegetation maps. Inadequate mapping means that areas identified for offsets may not in fact meet the attributes or condition of the area being destroyed.

The offset for Whitehaven Coal's Maules Creek Project in North West NSW highlights this point.<sup>10</sup> The offset requirement included protection through conservation covenant of 9334ha of forest habitat for the regent honeyeater, swift parrot and greater long-eared bat to offset 1665 hectares to be destroyed, and 5532ha of "an equivalent or better quality of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community" (to offset the 544ha of state forest to be destroyed). Members of the community submitted an independent report prior to ministerial approval showing that the quality of the areas proposed for the offset were in a poorer condition than those to be lost.

In some cases, such as the Curtis LNG project, the offset requirements lack specificity, requiring only that sites be secured that have characteristics "corresponding with" characteristics of the project site.<sup>11</sup>

The capacity to account for indirect impacts, such as fragmentation, is also limited - methods for quantifying offsets do not work well for linear infrastructure, such as roads and pipelines.<sup>12</sup>

The adequacy of assessment methodologies must also be evaluated by reference to an evaluation of the time lag between the destruction of biodiversity and the establishment of offset sites. Rarely is adequate allowance made for the time lag between the destruction of habitat and the accrual of offset benefits, particularly where the offset involves restoration rather than retention.<sup>13</sup> Offsets that involve restoration are particularly problematic because of the time lag between the loss of values at the development site and the establishment of those values at the restoration site. Depending on the biodiversity value being protected, it may not be possible to guarantee maintenance of populations if any existing habitat is cleared.

Multipliers/offset ratios are the key tool by which to build in stronger protections. In practice, current allowances for uncertainty remain untested by long-term monitoring and evaluation. Multipliers are considered by some to be too low, and if set at an appropriate level would make most offsets economically infeasible. The proposed Queensland Offsets Policy contains a limit on offsetting liability for proponents. It sets a 1:4 maximum offset ratio for freehold land, and a maximum of 1:10 for offsets in protected areas. The maximums are arbitrarily set and are not based on sound science about the size of the offset that may be required.

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<sup>10</sup>Fallding, above n7, at 31.

<sup>11</sup> Curtis LNG Project approval, EPBC 2008/4402, condition 15(a)(i).

<sup>12</sup>Fallding, above n7, at 24.

<sup>13</sup>Norris, above n9, at 138; Bekessy et al "The Biodiversity Bank Cannot be a Lending Bank" (2010) 3 *Conservation Letters* 151.

## **RECOMMENDATION:**

NELA recommends that assessment methodology ensures that:

- offset requirements are specific;
- account be taken of indirect impacts of a proposed development;
- the time lag between the destruction of biodiversity and the establishment of offset sites is taken into account;
- multipliers and offset ratios are based on sound science about the size of the offset that would be required.

### *4. Additionality requirements*

The requirement for additionality means that offset sites should be located outside of areas that already enjoy legal protection. The conditions for the QGC Curtis Island LNG project require offsets to be located within the Great Barrier Reef World Heritage area, but this area already enjoys Commonwealth and State protection, so an offset within this area would not meet the additionality requirement.

The current method for assessing the additionality standard for offsets under the Commonwealth Policy also considers the likelihood that the offset area would be damaged in the future. This criterion creates the potential for a circular or self-fulfilling inquiry. The likelihood of an area of high biodiversity value being damaged in the future depends in part on the Commonwealth's willingness to allow future damage in exchange for other offsets.

If the Commonwealth does not regard offset sites as protected from future offsets, then the likelihood that they may be damaged in the future is higher. This in turn would support a conclusion that offsets should be permissible.

## **RECOMMENDATION:**

NELA recommends that all offsets meet the additionality requirement and that offset sites be recorded on a national offsets register as immune from further offset proposals.

### *5. Direct vs indirect offsets*

The Commonwealth Offsets Policy contemplates that most offsets will be "like-for-like". While it may be hard theoretically to argue for the equivalence of offsets of different vegetation types or biodiversity components, there may also be circumstances in which significant conservation outcomes can be achieved if offsetting contributes to strategic landscape-scale conservation planning.<sup>14</sup> It may be that in some (albeit limited) contexts, protection of "unlike" sites can deliver a better long term conservation outcome than those predicted to be lost to a development. It must be emphasised, however, that this could only be determined if offsets formed part of a national strategic conservation planning exercise involving all levels of government.<sup>15</sup>

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<sup>14</sup>Fallding, above n7, at 24.

<sup>15</sup>Fallding, above n7, at 29

NELA believes that the Australian government should develop a strategic conservation plan that identifies no-go areas, and those important for long-term conservation and heritage protection.

The current policy provides that indirect offsets, such as funding for research or threat abatement activities, may only constitute 10% of the total offset, unless it can be demonstrated that a greater benefit to the protected matter is likely to be achieved through increasing the proportion of other compensatory measures in an offsets package or where scientific uncertainty is so high that it isn't possible to determine a direct offset that is likely to benefit the protected matter. In New South Wales, proposed reforms contemplate wider use of indirect offsets where a suitable offset site is not available.

The effectiveness of indirect offsets remains theoretically dubious and unproven in practice, so wider use of such tools should be implemented extremely cautiously. Where indirect offsets are made available because of a lack of available offset sites, there should be a specific link between the funds and the impact on the environment. Funding to support research for example, is not appropriate because the link to conservation outcomes depends on the quality of the research, the findings of the research, and the political will and resources of the responsible agency to implement management changes. Instead, funds should be applied to the acquisition of, or actions to improve the condition of strategic areas identified in collaboration with states and territories.

## **RECOMMENDATION**

NELA recommends that the Australian government develop strategic conservation and heritage plan that identify no-go areas, and those important for long-term protection.

NELA recommends that any wider use of indirect offsets should be implemented extremely cautiously.

## **5. ADEQUACY OF MONITORING AND EVALUATION OF APPROVED OFFSET ARRANGEMENTS**

Offset schemes raise issues regarding both compliance and effectiveness.

Issues relating to compliance arise at several stages of the offset process. There is evidence from both Australia and experience in the United States that the mitigation hierarchy is not complied with, and that offsets are being proposed as a first not last resort.<sup>16</sup> There is also evidence that offsets are either not implemented or only implemented in part, and that the project imposes

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<sup>16</sup>Environmental Defender's Office, *A Framework for Action? Implementation and Enforcement of Victoria's Native Vegetation Clearing Controls* (2012) available at [http://www.edovic.org.au/downloads/files/law\\_reform/edo\\_vic\\_monitoring\\_report\\_4-native\\_vegetation.pdf](http://www.edovic.org.au/downloads/files/law_reform/edo_vic_monitoring_report_4-native_vegetation.pdf); Clare S et al, "Where is the avoidance in the implementation of wetland law and policy?" (2011) 19 *Wetlands Ecol Manage* (2011) 165-182.

additional impacts that are not accounted for by any increase in or alteration to the offset area.<sup>17</sup>

Even when they are fully implemented, Australia's short history of offsets means that there is inadequate evidence of the long-term effectiveness of any offsets to date. In particular, there is very limited data on the environmental outcomes of offset projects, nor is there a coordinated program of evaluation that would inform future offsetting arrangements. Accordingly, in addition to monitoring of compliance, there is also a clear need for more comprehensive and rigorous evaluations of the actual conservation outcomes from offset projects.

Project approvals must contain mechanisms to support long term monitoring, administration, and evaluation of offset sites and activities. The EPBC Act approval for the Galilee Coal project in Queensland contained requirements for research relating to listed threatened species and communities and the development of an offset management plan.<sup>18</sup> The plan was only required to comply with the proponents own "Offsets Assessment Guide: Results and Assumptions", which limits the independence and credibility of the resulting monitoring data.

The Curtis LNG project approval contained no conditions relating to offset monitoring requirements.

**RECOMMENDATION:**

NELA supports project approvals incorporating mechanisms to support long term monitoring and evaluation of offset sites and activities.

**6. RELATED MATTERS**

NELA is particularly concerned about the challenges of applying the current Offsets Policy to impacts on marine ecosystems. The characteristics of marine ecosystems make them fundamentally different from terrestrial ecosystems. In particular, marine ecosystems:

- exhibit faster rates of response and higher sensitivity to environmental variability;
- have significantly larger spatial scales of ecological connectivity;
- may be further compromised if development causes 'alternate stable states': as seagrass is lost, water can become more turbid, which in turn makes revegetation more difficult. As a result, the effort it takes to rehabilitate a habitat may be significantly greater than the effort it took to destroy it; and

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<sup>17</sup>Bull et al, above n5; Burgin S, "Mitigation banks' for wetland conservation: a major success or an unmitigated disaster?" (2010) 18 Wetlands Ecol Manage 49-55; Salzman J and Ruhl J.B., "Currencies and the Commodification of Environmental Law" (2002) 53 Stanford Law Review 607.

- can be affected by direct removal and by indirect or diffuse actions (actions occurring offsite can have deleterious impacts on marine environments).<sup>19</sup>

Bell et al suggest that the current “one size fits all” approach to EPBC Act offsets does not adequately protect vulnerable marine ecosystems, and amendments are required to ensure that iconic habitats such as coral reefs, seagrass and mangroves are adequately protected.<sup>20</sup> In the case of seagrass, the policy should maintain its use of offsets only as a last resort, and also include:

- Clear guidelines for selecting offset project sites;
- Consideration of diffuse impacts as threats to seagrass, as many threats to seagrass come from offsite (eg agricultural run-off);
- Allowing proponents to remedy diffuse impacts as an offset activity, as traditional replanting or protection strategies used to offset terrestrial habitats are not always appropriate;
- An adaptive management approach to allow governments to assess a small number of projects before allowing offsets to be widely used; and
- Enhanced coordination between federal and state policies.

The North Queensland Bulk Ports – Abbot Point Capital Dredging project contained requirements aimed at reducing fine sediments from other sources, to offset the disposal of dredge spoil.<sup>21</sup> The offsets plan is required to ‘address’ both the direct loss of seagrass (from dredging) and indirect losses as a consequence of the dredge plume,<sup>22</sup> but no offset ratio is nominated and nor is any other quantifiable offset metric specified. Like other approvals, while the Offsets Plan must be submitted before dredging can commence, no timeframe is specified for approval of the plan or implementation of offset activities.

### **RECOMMENDATION:**

NELA recommends that the EPBC Act Offsets Policy be revised to include separate requirements for marine habitats.

### **FURTHER INFORMATION**

NELA acknowledges the contribution of Professor Jan McDonald of the University of Tasmania and Amanda Cornwall, legal and policy consultant, in preparing this submission.

For any inquiries about matters raised in the submission please contact Amanda Cornwall, President, NELA on 0432 134 936 or c/o [secretariat@nela.org.au](mailto:secretariat@nela.org.au).

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<sup>19</sup>Bell J, MI Saunders, CE Lovelock & HP Possingham (2014), *Legal frameworks for unique ecosystems – how can the EPBC Act Offsets Policy address the impact of development on seagrass?*, Environmental and Planning Law Journal, 31: 34-46; and Decision Point #77 - March 2014 pages 4-5 available at [http://www.decision-point.com.au/Bell et al](http://www.decision-point.com.au/Bell%20et%20al)

<sup>20</sup>Bell et al, above note 20.

<sup>21</sup>NQBP – Abbot Point Project approval, EPBC 2011/6213, condition 31(d).

<sup>22</sup>NQBP – Abbot Point Project approval, EPBC 2011/6213, condition 31(a).