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Winds of change — regulation of wind farms in Victoria and South Australia

Meg Lee and Will Duffy ALLENS

Wind energy facilities, or wind farms, are the first large-scale source of clean energy to be brought online in Australia, although their road through the planning regime has been neither consistent nor easy in the varying state-based systems. There are currently 59 wind farms operating in Australia, with a total of 1345 operating turbines.¹ The total operating wind capacity in Australia, as at April 2012, was 2480 megawatts.²

Wind farm opponents often raise concerns that wind farms are damaging to local flora and fauna and have a number of adverse effects on individuals and communities living in close proximity to the turbines — in particular, concerns about the noise generated by the turbines.

This article will outline some of the recent litigation surrounding the development of wind farms, as well as covering recent changes to wind farm approval processes in the states with the greatest number of wind farms, being Victoria and South Australia.

Clean energy versus amenity: the tension of wind farms

On 1 April 2001, the federal government introduced the Renewable Energy (Electricity) Act 2000 (Cth) (RE Act), which set a target of 2% of all energy in Australia to be obtained from renewable sources by 2010. The RE Act was amended in January 2010 to increase the renewable energy target to 20% of Australia's energy production by 2020. Energy retailers are required to source energy from renewable sources to comply with the RE Act. The renewable energy target has provided support for the emerging clean energy market, a market increasingly supplied by a growing number of wind farms.

As a comparatively cheap and clean source of renewable energy, the environmental benefits of wind farms are patent. Australian wind farms supply over 6800 gigawatt hours of electricity annually — amounting to approximately 2.4% of Australia's overall electricity needs.³ In 2012, estimated wind energy generation saved Australia 7,386,400 tonnes of carbon dioxide, equivalent to the

removal of 1,641,000 cars from our roads.⁴ Wind farm developments can also result in economic benefits through attracting investment (often to struggling regional areas), providing employment and boosting local economies. The Clean Energy Council predicts that wind farm development will attract more than \$20 billion in investment over the next decade.⁵

Although wind energy can provide economic and environmental benefits, the installation of a wind farm might also involve some localised adverse effects, which may translate to opposition to new developments at a community and/or individual level.

In June 2011, a Senate Community Affairs Reference Committee released a report titled *The Social and Economic Impact of Rural Wind Farms*. Over 1000 submissions were made to the Committee, 535 being pro-wind farm and 468 being anti-wind farm. Principally, the anti-wind farm submissions related to the noise and low-level vibrations created by the turbines, resulting in loss of local amenity and quality of life, health problems (although the Committee did not find these claims to be substantiated),⁶ and devaluation of land. There has also been a steady stream of cases in which proposed wind farms have been challenged on these and other grounds. Some of the key cases are discussed further below.

Overview of approval processes for wind farm developments in South Australia and Victoria

It is worth briefly setting out the current framework for seeking approval to develop a wind farm before turning to some of the recent changes to those processes and the policy setting in both South Australia and Victoria, where the majority of wind development has occurred to date.

Victoria

The Planning and Environment Act 1987 (Vic) (P&E Act) regulates development in Victoria. Where a permit is required to develop or use land under the applicable planning scheme, a permit application must be made to the responsible authority.

Responsible authority

Until recently, cl 61 of all planning schemes designated the Minister for Planning as the responsible authority for wind farms with a capacity of over 30 megawatts.

This provision was revoked by Amendment VC78 and responsibility for all new wind farms was returned to local councils. However, existing wind farms holding permits issued by the Minister under Div 6 of the P&E Act are still regulated by the Minister as the responsible authority for implementation and compliance issues arising under those issued permits.

Consultation

A responsible authority must provide a copy of an application to every person or body that the planning scheme specifies as a referral authority. The referral authority may object or not object to the grant of the permit. It may also decide not to object provided certain conditions are imposed.

Public notification

Under the P&E Act, every application for a permit must be made available to the public, and notice must be given to owners and occupiers of lots adjoining the land to which the application applies (unless the authority is satisfied that the grant of the permit would not cause material detriment to any person) and to any other person to whom the grant of the permit may cause material detriment. Wind farms do not have any “special” notification requirements.

Anyone who may be affected by the grant of a permit may object to the grant of that permit. The responsible authority may decide either to refuse to grant the permit, to grant the permit, or to grant the permit subject to conditions.

It is also possible that the development of a wind farm in Victoria will fall within the scope of the Environment Effects Act 1978 (Vic) if the development is commissioned by or on behalf of a public statutory body, or if the Minister for Planning considers that the development may have a significant effect on the environment. It may also fall within the scope of the Environment Protection and Biodiversity Conservation Act 1994 (Cth) if the development is one that will or may have a significant impact on aspects of national environmental significance.

South Australia

Development in South Australia is regulated by the Development Act 1993 (SA). Section 32 of that Act states that development must not be undertaken unless approved in accordance with the terms of the Act. The approval process is set out in Pt 4 of the Act.

Responsible authority

Responsibility for approval of developments within a council area usually rests with the relevant council. If the development is to take place in an area where a regional development assessment panel has been constituted, that panel will be the authority responsible for approval. The Minister may also declare that a Development Assessment Commission is to act as the responsible authority in certain circumstances. Approval may only be given where the proposed development meets the requirements of the development plan applicable to the area.

Consultation

The Development Regulations 2008 (SA) provide that where an application has been made for approval of a wind farm, the matter must be referred to the Environment Protection Authority (EPA) for comment.

The relevant authority cannot consent to or approve the development without having regard to the response of the EPA.

Public notification

Each development may be assigned a public notification category by a development plan or by the Development Regulations. Category 1 developments do not require public notification, whereas Category 2 developments require notification to the owner and occupier of each piece of adjacent land.

Category 3 developments require notification to:

- the owner and occupier of each piece of adjoining land;
- any other owner or occupier that would be directly affected to a significant degree; and
- the public generally.

Persons may make representations with respect to proposed Category 2 and 3 developments, and may have a right to appear in person before the approval authority prior to approval being granted. Where a Category 3 development is approved, a person may appeal the decision within 15 business days.

Determining the relevant category for any particular development is dependent on the particular development plan. However, in the case of wind farms, a statewide development plan applies (the South Australian State-wide Windfarm Development Plan 2011) and it assigns wind farms a Category 2 status where located in low population zones, and Category 3 status where located within 2 km of a residential zone.⁷

Recent changes to wind farm planning regimes

Victoria

In 2011, the newly elected Baillieu government introduced a number of amendments (VC78 in March 2011 and subsequently VC82 in August 2011) to the wind farm provision (cl 52.32) in the Victorian Planning Provisions (VPPs) and all Victorian planning schemes. This significantly altered the process for wind farm development and the locations at which wind farms could be developed.

Key changes have been:

- prohibition on the placement of turbines within 2 km of the nearest home unless a contract between the resident and wind farm developer is agreed to (whereas previously wind farms were permissible in all zones subject to permit);⁸
- removal of the Minister's decision-making power regarding 30-plus megawatt wind energy facilities, with local councils re-established as the planning authority for wind farm applications;⁹
- the establishment of "no-go zones" for wind farms at places of particular environmental significance, such as Wilson's Promontory, the Mornington and Bellarine peninsulas, Surf Coast and Great Ocean Road regions, and sections of the Bass Coast — wind farms are also prohibited in locations identified for future urban growth, such as metropolitan growth areas (the Urban Growth Zone) and designated regional growth corridors (for example, Ballarat, Colac, Echuca, Geelong and Wodonga);¹⁰
- the introduction and incorporation into the VPPs of updated guidelines — the *Policy and Planning Guidelines for Development of Wind Energy Facilities in Victoria* (August 2011) — which set out the detailed application requirements for wind farm permit applications; and
- the replacement of references in cl 52.32 to the New Zealand Standard NZ6808:1998 *Acoustics — The Assessment and Measurement of Sound from Wind Turbine Generators* (the 1998 Standard) with references to the NZS6808:2010 *Acoustics: Wind Farm Noise* (the 2010 Standard) — in particular, cl 52.32 now requires an assessment of whether a "high amenity noise limit" is applicable under s 5.3 of the 2010 Standard.

It is telling that, since the changes have been introduced, there have been few applications for new wind farms in Victoria. Infigen Energy's Cherry Tree wind farm is the first wind farm to have made an application following the Baillieu amendments and to have come

before the Tribunal for review. The case commenced a two-week hearing on 29 January 2013.¹¹

It is also interesting to note that no other energy facility has a mandated buffer distance or prohibited no-go zones enshrined in the planning schemes. Indeed, many other energy facilities have provisions ensuring that the land uses are not prohibited in any zones. For example, cl 52.08 of all schemes provides that it is a purpose of the provision to ensure that mineral extraction, geothermal energy extraction, greenhouse gas sequestration and petroleum extraction are not prohibited land uses. Indeed, out of all the earth and energy land use types, only stone extraction is a prohibited use in the Residential 1 and Township Zones. All other mineral and energy land uses are permitted, even in these sensitive zones, subject to permit.

While other wind farms that were already in the pipeline and were approved prior to the VC78 and VC82 changes are continuing to be progressed, some proponents have resorted to taking proceedings in the Tribunal to seek approval of the development plans required pursuant to the planning approvals due to delays in approval of the plans by the Minister.¹²

Naroghid Wind Farm Pty Ltd recently lodged an application at the Tribunal to seek review of the Minister's refusal to endorse development plans for the wind farm, as well as the decision to refuse to extend the date for commencement of works for the wind farm beyond 15 March 2012. Clause 52.32 was amended by Amendments VC78 and VC82 to provide that the former planning scheme provisions continue to apply to wind farm permits issued prior to those amendments, but that those permits cannot be extended beyond 15 March 2012. The Naroghid permit had already been extended from a 10 August 2011 expiry to the maximum allowable under the new rules, but it applied to the Minister for a further extension beyond this time. It is that refusal that is the subject of the current Tribunal proceedings. The case therefore squarely raises the validity of the new planning scheme provisions.

South Australia

In contrast to the approach taken by the Victorian government in amending its wind farm regime, the South Australian government has adopted a more liberal approach.¹³

On 18 October 2012, following a period of public consultation, the SA Minister for Planning approved the Statewide Wind Farm Development Plan Amendment (Wind Farm DPA). The Wind Farm DPA explicitly envisages wind farms in all rural type zones in the state. In these zones, wind farms will be classed as Category 2

developments and not subject to third party appeal rights unless a turbine falls within 2 km of a non-associated dwelling or township type zone. If a turbine falls within 2 km, then the wind farm will be classed as Category 3 and subject to third party appeal rights, but there is no right of veto for such residents as there is in Victoria.

Wind monitoring masts are designated as Category 2 developments and are not subject to third party appeal rights. The visual amenity of wind farms is required by the Wind Farm DPA to be managed as follows:

- turbines need to be set back at least 1 km from non-associated dwellings and tourist accommodation;
- turbines need to be set back at least 2 km from defined urban and township zones;
- turbines must be regularly spaced, uniform in colour, and mounted on tubular towers as opposed to lattice towers; and
- vegetated buffers need to be provided around substations, maintenance sheds and other ancillary structures.¹⁴

Wind farms are also required to avoid or minimise the following impacts on nearby property owners and occupiers, road users and wildlife:

- shadowing, flickering, reflection or glint;
- excessive noise;
- interference with television and radio signals and geographic positioning systems;
- interference with low-altitude aircraft movements associated with agriculture;
- modification of vegetation, soils and habitats; and
- striking of birds and bats.¹⁵

Other states

In other states, a shift in wind farm planning policy is less evident. While Queensland and Western Australia have witnessed some local protests over proposed wind farms,¹⁶ this has not yet led to a change in wind farm planning laws.¹⁷ In Tasmania, there has been less of a public outcry about wind farms, possibly due to the remote locations of most wind farms in that state.¹⁸

The exception to this is New South Wales, where changes to planning laws along similar lines to the changes in Victoria are also being considered. In December 2011, the NSW government released a draft set of planning guidelines for wind farm approvals.¹⁹ These were lauded as “some of the toughest wind-farm guidelines in the country, possibly the world” by the NSW planning minister.²⁰ The draft guidelines include veto powers for any resident living within 2 km of the turbines (similar to in Victoria) and noise limits of

35 decibels — 5 decibels lower than the standards adopted in Victoria.²¹ A year after their release, these guidelines have not yet been finalised or adopted.²² New South Wales has also recently proposed regulations requiring wind farms to pay a licence fee — although, again, these have not been taken any further.²³

Case law

What is apparent from a review of the evolving case law involving the approval of wind farms is that there is a balancing exercise to be carried out by decision makers, in light of the prevailing policy framework, to weigh up the objections of communities living in close proximity to the proposed development and broad policy support for developments that provide clean renewable energy. The nature of the objections raised varies from case to case, but there are two key issues that arise in every instance, being visual impact and noise.

Other common grounds of objection include “blade glint”,²⁴ adverse impacts on human health; ecological impacts including bird and bat strike, as well as adverse impacts on livestock; electromagnetic interference; shadow flicker caused by blades passing between the observer and the sun; and devaluation of land.

Both the Victorian Policy and Planning Guidelines for the Development of Wind Energy Facilities (Planning Guidelines) and the South Australian Wind Farm DPA deal with most of these issues. Consequently, objections are usually dealt with in a fairly uniform and therefore predictable manner by decision makers in both jurisdictions through the imposition of what have become relatively standard conditions requiring baseline studies, setting limits and requirements for the ongoing monitoring of impacts.

Some recent cases involving the more controversial areas of visual impact and noise impacts are discussed briefly below.

Visual impact

The tension between preserving the natural qualities of the local landscape and the broader goal of increasing renewable energy output was noted by the Victorian Civil and Administrative Tribunal (Tribunal) in the case of *Acciona Energy Oceania Pty Ltd v Corangamite SC*,²⁵ where the Tribunal, in setting aside the decision of the Corangamite Shire Council to refuse a permit, noted that the Planning Guidelines state that the “consideration of the visual impact of the proposal should be weighted having regard to the Government’s Policy in support of renewable energy development”. Consequently, the Tribunal is required to view wind energy facilities favourably when assessing visual impact, and, as was noted by the Tribunal, “mere visibility alone does not equate to a negative visual impact”.²⁶ It is questionable whether this

case would be decided in the same manner given the significant shift in the Victorian government's policy regarding wind farms since it was decided.

The case of *Perry v Hepburn Shire Council*²⁷ is a relatively early Victorian case dealing with the issues associated with wind farm development. The proposal was to construct two 2-megawatt wind turbines of roughly 68 metres in height and 4–5 metres in diameter. While most of the grounds of objection noted above were raised in this case, the Tribunal upheld the responsible authority's decision to grant the permit and made some helpful observations, particularly with respect to the assessment of visual impact.

The Tribunal noted that the perception of landscape quality and individual impact can be highly subjective. While environmental qualities such as noise, blade glint, shadow flicker and electromagnetic interference are to be assessed according to specified standards or policy guidelines, there is "no prescribed test in relation to visual impacts on private dwellings". Rather, the assessment must be made through a consideration of a range of factors, including:

- existing landscape features and values;
- the extent or proportion of view that would be affected and the importance and value of that view;
- the function of the relevant planning scheme in ensuring appropriate landscape amenity and visual character;
- the distance between the turbines and the viewing point;
- intervening physical elements, such as topography and vegetation; and
- the scope for ameliorating the visual impact through landscaping.

The Tribunal made the point that mere visibility of a development does not equate to an unreasonable visual impact, particularly when considered in light of broader policy encouragement of wind-generated energy. In this case, due to the nature of the landscape, the distance of the turbines from the relevant viewpoints, and the masking effects of land form and vegetation, the proposed development was not deemed to create an unreasonable visual impact.

The decision in *Perry* is not an uncommon result. In fact, in most recent cases, both Victorian and South Australian, the issue of visual impact is usually decided in favour of the wind farm proponent (ie, in light of prevailing policy, the development is not seen to be unreasonably obtrusive). However, the decision of the South Australian Environment Resources and Development Court (ERD Court) in *Paltridge v District Council of Grant*²⁸ has shown that the issue is still live.

In *Paltridge*, the decision of the local council to grant development plan consent to construct a wind farm was overturned by the court. The ERD Court emphasised that, because the location of each development will vary, the assessment of visual impact must be made on a case-by-case basis.²⁹ This particular proposal was for 46 turbines of 80 metres in height and 82 metres in total blade diameter over an area of 26 square kilometres. The ERD Court found that "the height, scale, number, siting and overall appearance of the 46 wind turbines will introduce into a generally flat, pleasant, rural landscape (within which existing development is overwhelmingly low in scale) a foreign, prominent and discordant element".³⁰

In making this decision, the EDR Court made specific reference to the objectives set out in the Council of Grant Development Plan, which it felt were not observed by the proposal — specifically, Objective 1, aimed at the retention of the "existing pleasant rural landscape",³¹ and Objectives 44 and 45, that renewable energy facilities are to be located in "appropriate locations" and are to be "sited and designed to avoid or minimise adverse impacts ... on the environment, local community and the State".³²

In Victoria, by contrast, much of the previous controversy as to the location and visual impact of wind farms in tourist and coastal areas has been taken out of the hands of the decision makers due to the blanket prohibitions³³ on wind farms in certain areas deemed to be too sensitive.

Noise impacts

The standard approach to the assessment of noise impacts in Australia has been through reference to the applicable New Zealand Standard.³⁴ If the anticipated noise levels fall within the acceptable range determined by the Standard, decision makers generally find that the wind farm development will not be prohibited on this ground. The Tribunal in *Perry* noted that the noise criteria established by the New Zealand Standard 1998 is not designed to achieve inaudibility, so objections on this ground will be unsuccessful if the evidence is that noise levels are predicted to fall within the acceptable range.

However, the recent case of the Hallett 3 (Mt Bryan) wind farm in South Australia has shown that the "noise argument" has become more sophisticated and complicated, now that operational wind farms are facing the issue of how to deal with so-called "special audible characteristics" (SACs).

Late last year, the \$180 million development of AGL's Hallett 3 wind farm was challenged in the Supreme Court³⁵ by local residents on the grounds of noise impacts. The residents had appealed the local

council decision³⁶ to allow the wind farm and sought to amend their grounds of appeal on the basis that new evidence had been found since that decision in relation to tonal noises found to have been emitted by turbines at the Hallett 2 wind farm.³⁷ Tonal noises are one aspect of SACs.

At first instance, the ERD Court³⁸ accepted the evidence put on behalf of AGL that the wind farm would sufficiently comply with the relevant standards. While the objectors' expert had criticised the standards and claimed that more rigorous methods for prediction and compliance testing should be applied, the ERD Court held that these matters were for the bodies that generate the policies and standards and not for the court to review.

On review, the Supreme Court allowed the appeal and remitted the case to the ERD Court for reconsideration regarding the relevance of the new evidence about SACs, on the basis that it was clearly an important factual issue to be determined and the ERD Court was best placed to effectively evaluate the matter.

Following this decision to remit the matter, AGL advised³⁹ the ERD Court that it no longer wished to proceed with the development of the third stage of the Hallett wind farm as proposed, and that it would look to make a future application using new technology. In doing so, AGL avoided a hearing that could have involved detailed discussion on the problems it was experiencing with SACs at the Hallett 2 wind farm. On the basis of AGL's notification of its intentions, the ERD Court (by consent of the parties)⁴⁰ ordered a reversal of the decision by council to issue the planning approval.

By way of comparison, in the case of the Victorian Bald Hills Wind Farm, an application⁴¹ brought before the Tribunal to obtain approval of its development plan in the absence of a timely decision on the plan by the Minister for Planning, the proponent, and ultimately the Tribunal (constituted by Deputy President Gibson and Member Ian Potts), dealt with the SACs concerns of objectors in a different manner to the SA ERD Court. In this case, the Tribunal effectively concluded that SACs emissions were a matter for future compliance.

In the *Bald Hills* case, the Tribunal had the benefit of acoustic evidence from Mr Reutersward of SLR Consulting Australia Pty Ltd, who was called on behalf of the Minister at the hearing. The evidence in relation to the relevance of noise emissions with SACs is summarised in the decision as follows:

Special audible characteristics and low frequency character have not been taken into account, but nor can they be readily predicted by modelling. He acknowledges that these particular audible characteristics may be a source of intrusive noise ... It is his evidence that the source of special audible characteristics is very complex and not well under-

stood. The best approach to address such special audible characteristics is through a post construction/commissioning assessment with subsequent modification of operations by either operating individual turbines in low noise mode or in some circumstances stopping their operation when conditions might be favourable to generating such noise.⁴²

Based on this, the Tribunal concluded⁴³ that it was satisfied from such evidence, when read in conjunction with the evidence tendered on behalf of the proponent by Mr Delaire of Marshall Day Acoustics, that the wind farm could achieve compliance with the noise criteria set under the permit and that there was a mechanism in the permit to deal with SACs should they occur in the future.

The Tribunal went on to state, however, that for the purposes of the decision it was required to make as to whether or not to approve the development plans, the only "pre-condition" relating to noise was that background noise studies needed to be completed. The Tribunal also responded to objector arguments about future compliance concerns by commenting that, having been through a thorough permit and impact assessment process (and a subsequent second assessment process to amend the development), it did not accept that the discretion to be satisfied about the development plans conferred a discretion to re-ventilate matters already dealt with under those processes.

The Tribunal stated that a:

... permit should only be granted if it is considered such matters as noise can be dealt with appropriately. A permit should embody appropriate conditions to ensure this, which may require further detail to be provided by way of development plans to be approved under the permit. But once granted, it is fundamental to the integrity of the planning system that a permit can be relied upon to provide certainty to the permit holder that they can proceed with the development authorised by the permit, subject to complying with conditions. Considering and endorsing development plans under the permit is not an opportunity to have "second thoughts".⁴⁴

The *Bald Hills* decision⁴⁵ provides strong encouragement to existing wind farm permit holders that these issued permits can be relied upon and that, in spite of changes to the planning policy setting and new concerns about SACs, these wind farms can be developed in reliance on the existing approvals.

Looking to the future

The planning landscape for the development of new wind farms in Victoria has certainly changed significantly in the last 18 months. It will be important to follow the outcome of the Cherry Tree wind farm case at the Tribunal to ascertain how the new rules will be interpreted and whether it is worth pursuing any more wind proposals in that state.

While there is still policy support and the application stage hurdles are “easier” to overcome for wind farms in South Australia, the recent experience of the Hallett 3 wind farm has shown that proponents need to be able to comprehensively satisfy noise concerns relating to the presence of SACs before proposals will be able to overcome objector concerns raised at the approval stage. This is particularly so in the face of operational experience of the presence of SACs at adjacent wind farms run by the same operator.

In the absence of such operational experience, the argument put and endorsed by the Tribunal in the *Bald Hills* case that future noise compliance is not a matter that should prevent endorsement of development plans for existing permitted wind farms provides some encouragement to the remaining holders of permits for wind farms in Victoria that, all other things being equal, it is worth pursuing their proposals.

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Footnotes

1. See the “Wind energy” page at www.cleanenergycouncil.org.au.
2. Above, n 1.
3. Above, n 1.
4. Above, n 1.
5. Above, n 1.
6. Senate Community Affairs Reference Committee, *The Social and Economic Impact of Rural Wind Farms*, Canberra, June 2011, p 27.
7. See “Statewide Wind Farm Development Plan Amendment — Public Consultation”, Circular 42.10, available at www.lga.sa.gov.au.
8. Amendment VC82, gazetted 29 August 2011.
9. Amendment VC78, gazetted 15 March 2011.
10. Above, n 8.
11. See the “Current major applications” page of the Mitchell Shire Council website at www.mitchellshire.vic.gov.au.
12. See *Bald Hill Windfarm Pty Ltd v Minister for Planning* [2012] VCAT 1092.
13. See the “Wind Farm Planning Policy” page at www.renewables.sa.gov.au.
14. Statewide Wind Farm Development Plan Amendment, Attachment 1.
15. Above, n 14.
16. J McCarthy, “Protest blows for wind farm”, *Sunday Mail*, 6 January 2013, available at www.abc.net.au; B Hinkley, “Wind farm divides rural community”, *Farm Weekly*, 29 August 2012, available at www.farmweekly.com.au; B Oliver and K Matthews, “Winds of change at Kojonup”, *Yahoo! News New Zealand*, available at <http://nz.news.yahoo.com>.
17. See C Corke and T Latife, “Gone with the wind: planning laws blow away investment”, *Climate Spectator*, 6 July 2012, available at www.climatespectator.com.au.
18. See the “Wind farms” page at <http://epa.tas.gov.au>.
19. See NSW Department of Planning and Infrastructure, *Draft NSW Planning Guidelines: Wind Farms*, December 2011, available at www.planning.nsw.gov.au.
20. See J Pearlman, “Australian state launches world’s toughest wind turbine laws”, *The Telegraph* (UK), 23 December 2011, available at www.telegraph.co.uk.
21. See L Foschia et al, “NSW landowners to get veto on wind farms”, 23 December 2011, *ABC News*, available at www.abc.net.au; Pearlman, above, n 20. See also the “Renewable energy” page at www.planning.nsw.gov.au.
22. See ABC News, “Guidelines wait blows against NSW wind farms”, 14 December 2012, available at www.abc.net.au.
23. See S Nicholls and B Cubby, “Wind farms to pay fee and will be regulated for noise”, *The Age*, 1 December 2012, available at www.theage.com.au. See also the “Wind farm regulation” page at www.environment.nsw.gov.au.
24. “Blade glint” refers to the process whereby sunlight reflects off turbine blades and into an individual’s eyes.
25. *Acciona Energy Oceania Pty Ltd v Corangamite SC* [2008] VCAT 1617.
26. Above, n 25, at [15].
27. *Perry v Hepburn Shire Council* (2007) 154 LGERA 182; [2007] VCAT 1309.
28. *Paltridge v District Council of Grant* [2011] SAERDC 23 (17 June 2011).
29. Above, n 28, at [97].
30. Above, n 28, at [108].
31. Above, n 28, at [22].
32. Above, n 28, at [23].
33. Introduced into cl 52.32 of all schemes by Amendment VC78.
34. NZ60808:1998 *Acoustics — The Assessment and Measurement of Sound from Wind Turbine Generators*; and the NZS6808:2010 *Acoustics: Wind Farm Noise*.
35. *Quinn v Regional Council of Goyder* [2011] SASFC 126; BC201108465.
36. *Quinn v Regional Council of Goyder* [2010] SAERDC 63.
37. It has been reported in the media that certain turbines at AGL’s Hallett 2 wind farm have been selectively shut down at night from December 2010 in order to prevent tonal noise characteristics from disturbing the sleep of local residents. See V Changarathil, “AGL withdraws proposed Hallett 3 wind farm plan, ends community-led litigation”, *Adelaide Now*, 23 August 2012, available at <http://adelaidenow.com.au>.
38. Above, n 36.

39. See AGL, “AGL to incorporate more economic turbine technology in wind farm proposal”, media release, 20 August 2012, available at www.agl.com.au.
40. See Court Order dated 11 September 2012.
41. Above, n 12.
42. Above, n 41, at [82].
43. Above, n 41, at [85].
44. Above, n 41, at [87].
45. The Bald Hills Wind Farm was also the subject of earlier Federal Court proceedings in different political times in 2006 in relation to the protection of the orange-bellied parrot under federal law. The then Howard government federal Minister initially refused to grant environmental approval for the project due to the impacts on the orange-bellied parrot. However, this was later reversed on the basis of new information. The then Bracks state government criticised the federal Minister’s actions as being blatantly political.

Energy White Paper 2012 — what does it mean for the environment?

Graeme Dennis CLAYTON UTZ

In October 2012, the Australian government published its Energy White Paper,¹ setting out the government's intended policy framework to guide the transformation of Australia's energy and energy resource sectors. In many respects, the Energy White Paper is concerned with pricing, competition and market regulation. But to what extent are its policies concerned with achieving environmental objectives?

Objectives of the Energy White Paper

The key objectives of the Energy White Paper are:

- energy security and reliability, particularly in the face of a growing population and economy;
- competitive pricing of energy, as regards both the domestic cost of living and the industrial and commercial use of energy;
- aiding the Australian economy by developing energy exports to Asia and other growth markets; and
- the transformation to a “clean energy” economy.

Clean energy and the environment

In the Energy White Paper, the transformation to clean energy encompasses three principal components:

- low emissions from energy production, combustion and use;
- sustainability, using renewable energy sources rather than diminishing energy sources; and
- energy efficiency, so that the consumption of energy is sustainable and its impact on the environment minimised.

But clean energy is only one of the issues concerning the environment. There are two other issues, which are only addressed in small part by the Energy White Paper:

- ensuring that energy production occurs in a manner that minimises impacts on the environment, importantly avoiding risks to water sources, minimising the impact on flora and fauna, and minimising the impact on residential communities. Coal seam gas (CSG) and wind farm developments are identified as examples of energy production practices where further policy development is required; and

- conflicts inherent in Australia's principal energy exports of coal, uranium and natural gas. For example, the tension between Australia's coal export industry and domestic clean energy policies; the use of natural gas, which is a non-renewable fossil fuel but has the potential to play a large role in reducing emissions if used to substitute for existing coal-fired generation; and the conflict between the government's policy to increase uranium mining and overseas exports and restrictions on the use of uranium for clean energy production domestically.

The government's methodology

The Energy White Paper outlines four principal measures to assist the transformation to a clean energy economy:

- the Carbon Pricing Mechanism, implemented by the Clean Energy Act 2012 (Cth), which commenced on 1 July 2012;
- the mandatory renewable energy target imposed under the Renewable Energy (Electricity) Act 2000 (Cth), which commenced in 2001;
- direct government funding of clean energy initiatives, such as the Australian Renewable Energy Agency, the Clean Energy Finance Corporation, and the Clean Technology Innovation Program; and
- regulatory reform to promote efficiency in energy market operations, to promote energy productivity, and to overcome issues relating to market entry of renewable energy and new clean energy technologies.

The Clean Energy Act

The Clean Energy Act imposes a carbon price on most greenhouse gas emissions occurring in Australia associated with the production or consumption of energy. Passenger vehicle transport fuels are not expressly the subject of the Clean Energy Act, but already carry an excise significantly higher than the carbon price.

The carbon price is fixed by legislation for the period July 2012–June 2015, and varies post-June 2015 in line with the auction price for carbon units sold by the

government. Domestic offsets and international emissions units will also be eligible for surrender in lieu of Australian carbon units (subject to certain quantitative and qualitative limits).

The Energy White Paper relies on the Clean Energy Act as the principal measure to support Australia's transformation to a clean energy economy. The White Paper does not propose any change to the Act, save for assessments and reviews to be conducted periodically by the Climate Change Authority. The Energy White Paper also recommends monitoring the long-term progress of technologies such as carbon capture and storage (CCS) and large-scale renewables.

Renewable Energy Target

The second key regulatory instrument underpinning the government's desired transformation to a clean energy economy is the Renewable Energy (Electricity) Act, which established the Renewable Energy Target scheme in 2001.

With an initial target of 45,000 GWh per annum of new renewable energy generation by 2020, in 2011 the Renewable Energy Target was split into separate large-scale and small-scale technology targets, with 41,000 GWh per annum allocated to large-scale generation (wind farms, solar photovoltaic farms and hydro) and the balance to small-scale generation (such as rooftop solar panels).

In addition to the Renewable Energy Target, there have been other state and federal schemes to promote the development of renewable energy and renewable energy technology. The Energy White Paper criticises the premium feed-in tariffs that various state governments introduced to support the installation of rooftop solar panels, citing them as an example of a measure that imposed unsustainable costs across the community, generating undesirable boom–bust cycles and advantaging one sector of consumers (those with a separate dwelling house who could afford the initial capital cost) over others. New South Wales and Queensland, particularly, have terminated further access to such schemes.

The Energy White Paper predicts that the Renewable Energy Target will provide an estimated subsidy of about \$20 billion for renewable energy in the period from 2012–20.

However, the Energy White Paper does not mention the key issue that faces the government in respect of the Renewable Energy Target, that is, whether the existing target of 41,000 GWh per annum of large-scale renewable energy continues to be appropriate, or whether it should be re-cast having regard to the reduced energy demand and reduced rate of increase in energy demand.

When the original policy setting was announced, the 2020 Renewable Energy Target of 45,000 GWhpa of

additional renewable energy (encompassing both large-scale and small-scale generation) represented 20% of the demand for electricity forecast for 2020.

However, in recent years, the total grid electricity demand has increased at a lower rate than originally assumed, and has actually decreased in more recent years.

This reduction in actual demand means that the renewable power percentage prescribed for 2013 comprises over 30% of power purchases (the 2013 prescribed percentage for compliance is 19.7% for small-scale technology certificates and 10.65% for large-scale generation certificates, together totalling a renewable energy percentage of 30.35% for 2013).

The target renewable energy trajectory for 2012 was set in 2001, based on two important assumptions:

- that the required renewable energy percentage could be fully met from additional generation stock that was going to be required anyway to meet increases in energy demand over time; and
- that existing non-renewable generation stock could still be fully utilised to meet the original demand for which it was built.

However, with the renewable energy target trajectory now well in excess of the rate of growth of electricity demand, the renewable energy target is likely to cause the introduction of additional generation stock that is not otherwise required to meet the electricity demand. Ultimately, not only will consumers pay for the premium cost of renewable energy over non-renewable sources (which was an intended consequence of the Renewable Energy Target), but in 2013 consumers may also be required to pay for investment in additional generation capacity that is not yet required to meet energy demand (which was not a forecast consequence of the scheme in 2001).

One alternative would be to re-cast the Renewable Energy Target as a percentage target rather than a GWhpa target, with the legislated percentage escalating over the next seven years to the original policy setting of 20% in 2020.

Opponents of this approach say that a percentage target would give less certainty to developers of projects, because it would introduce energy demand fluctuations into the target. This would give rise to greater risks for projects and make them unbankable or expensive.

However, in the 12 years of operation of the Renewable Energy Target, it has been clear that large-scale renewable energy developers in Australia have taken little or no market risk on renewable energy certificate demand anyway, even while it has been fixed as a

GWhpa target rather than a percentage. Instead, developers have insisted on contracting an off-take commitment with energy retailers to ensure the sale of the project's renewable energy certificates. If this trend continues, a fixed GWhpa target cannot be said to provide greater certainty to developers. Nor will greater certainty be provided for retailers of new renewable energy sources because retailers have no assurance that their market share of energy demand will remain constant over time.

Further supporting a move to a target prescribed in percentage terms, it might be argued that the current uncertainty about the GWhpa target trajectory and whether it is sustainable through to 2020 and beyond is actually inhibiting retailers from contracting for renewable energy certificates at the present time. If the targets were legislated in percentage terms, and not subject to annual ministerial discretion, there may actually be greater certainty against which to contract for new renewable energy generation sources.

Although the Energy White Paper does not address these issues with the Renewable Energy Target, the Target has since been the subject of review by the Australian Climate Change Authority. In December 2012, the Authority concluded that a change to the large-scale Renewable Energy Target in quantity terms (from the current 2020 target of 41,000 GWhpa) risks damaging investor confidence in the scheme, and that a change to a percentage-based target posed possibly greater risks of such damage. The Authority recommended that the Renewable Energy Target remain unchanged.

On 21 March 2013, Greg Combet, Minister for Climate Change, Industry and Innovation, announced that the Australian government agreed with the Climate Change Authority's recommendation² to leave the large-scale generation Renewable Energy Target unchanged as a fixed GWhpa target, on the basis of regulatory certainty and also because it was considered that changing the target would not result in a material reduction to household energy bills.

This leaves the Renewable Energy Target more certain while the current government remains in power, but its future is less certain if the government were to change. As the Shadow Minister for Climate Action, Greg Hunt, has stated: "the Coalition supports a 20% Renewable Energy Target ... We approach the findings of the recent RET review with an open mind, but reaffirm our commitment to the 20% target".³ This suggests that the Coalition would be disposed to an approach that defined the target in percentage terms rather than in GWhpa terms.

The structure of the Renewable Energy (Electricity) Act, giving the Minister the last say by allowing for the annual percentage target to be prescribed by regulation,⁴

and providing that the prescribed percentage is valid notwithstanding that the Minister may have failed to consider all of the relevant considerations in s 39(3), increases this uncertainty and means that having legislated GWhpa targets is of only some assistance in creating a certain investment environment.

There is a default formula in the legislation if a regulation prescribing the annual percentage is not made, or is made but disallowed.⁵ If all future regulations of the prescribed percentage for large-scale generation were disallowed by Parliament, the current percentage prescribed for 2013 (10.65%) would survive and increase annually by the formula in s 39(2), leading to an annual percentage for large-scale generation of 31% in 2020.

As another hypothetical example of the operation of the formula in s 39(2), if the regulations prescribing the renewable energy percentages for 2012 and 2013 were repealed, leaving the regulated percentage of 5.62% for 2011 in place, and no further regulations were made, the regulated percentage for 2011 would survive and the formula in s 39(2) would increase the annual percentage for large-scale generation to only 22.16% in 2020.

Direct government funding of clean energy

The Energy White Paper confirms the Australian government's policy of direct government funding to assist a transition to a clean energy economy, including:

- the Clean Energy Finance Corporation, to which \$10 billion of funding has been provided to support the commercialisation and deployment of renewable energy, energy efficiency and low-emissions technologies, including supply chain businesses that provide inputs in such projects;
- the Australian Renewable Energy Agency (ARENA), which is managing \$3.2 billion in funding to support renewable energy research and development, demonstration, commercialisation and deployment;
- \$1.2 billion in the Clean Technology Program to support the development and early stage commercialisation of clean technologies across industry; and
- \$2 billion in support for the research, development and demonstration of carbon capture and storage technology, including the CCS Flagships program.

Of these, the support of early stage technologies, research and development is much more understandable than commercialisation assistance to mature renewable energy and low-emissions technologies, which are likely to already have the economic benefits of the Carbon Price Mechanism and the Renewable Energy Target.

Other regulatory issues

The Energy White Paper acknowledges that current electricity pricing (where most consumers are subject to a flat tariff that does not vary by time of use) does not reflect the true cost of generating and supplying electricity at various times of the day, and so fails to provide a financial incentive for more efficient behaviour by consumers. As a result, some consumers are likely to be paying more than they otherwise should for electricity and are effectively cross-subsidising those who are driving the growth in peak demand.

There is an economic case for giving discounts for off-peak use of the network, similarly to how long-distance telephone charges have been calculated in Australia for many years. At present, off-peak charges for power usage are only available for separately metered and switched supplies, such as some hot water services. There is a case for metering all power supplies (not just hot water services) by time of use and discounting charges for off-peak usage.

The Energy White Paper omits to refer to a related issue, namely, the appropriate network pricing for consumers who use the grid as a standby for their distributed generation, or to consume energy only during the night while exporting energy throughout the day from their rooftop solar panels. Current network consumer tariffs are largely usage based (payment per quantity), whereas the majority of network costs are actually fixed (the cost of building and maintaining the infrastructure to support those few peak hours). A customer who consumes from the grid for only for a few hours of evening peak per day, with the balance from his or her distributed generation, pays much less in energy charges than a customer who draws all of his or her energy from the grid all day and night, yet both impose similar capacity costs on the system. It may be necessary for network charges to more closely match the fixed nature of network costs and be less based on flat quantities consumed.

Both of these energy pricing issues would be at least partly addressed by the roll-out of so-called “smart meters” — meters that record usage by time of use rather than solely by quantity, and by network and energy pricing that affords discounts for off-peak use. The Energy White Paper’s recommendation on smart meters is a single line comment: “Finding the right deployment model — with appropriate consumer protections — is essential”, and the White Paper later notes that the Council of Australian Governments (COAG) Standing Council on Energy and Resources (SCER) (effectively, a committee of state and federal ministers) is developing a framework to guide the deployment and use of smart meters for electric power networks.

Other regulatory issues that will have an environmental impact which the Energy White Paper notes require addressing include:

- harmonised or consistent regulatory regimes for CCS, and geothermal technologies (currently being considered by the SCER);
- the scheduled reviews of the Renewable Energy Target, its structure and regulation (subsequently recommended by the Climate Change Authority to be four-yearly rather than two-yearly);
- the Climate Change Authority’s advice on pollution caps and targets under the Clean Energy Act;
- standards, processes and investments for the connection of renewable energy generation technologies into the power grid, which are the subject of various reviews by the Australian Energy Market Commission;
- integrating energy and environmental policies to deliver efficient investment decisions, including the integrated mapping of water and energy resources and ensuring that water access for generation purposes is consistent with National Water Initiatives that promote access and water trading;
- improving the effectiveness and efficiency of project approvals and resource development planning. In this respect, the Energy White Paper refers to current review processes relating to the Environment Protection and Biodiversity Conservation Act 1999 (Cth), reducing regulatory burdens and integrated climate change planning without introducing further initiatives; and
- effectively managing resource use and co-development pressures. The Energy White Paper simply notes in this regard that there is room for improvement by some energy and resources projects (particularly CSG and wind farm developments) in operational frameworks, information flows and community engagement, and that the federal government has a role in the provision of data to support the management of multiple resource use.

How will we know whether the policy has been successful?

In assessing whether the Energy White Paper’s policies have been successful in transforming Australia to a clean energy economy, the principal focus will be on the existing policies of the Carbon Pricing Mechanism and the Renewable Energy Target, and whether their goals are met at an acceptable cost.

It will be necessary to look at the changes to the generation mix, energy consumption, emissions intensity, and energy prices paid by industry and consumers as a result of the implementation of these policies.

It is also important to consider the following factors:

- the role that domestic energy exports play in a global transition to a clean economy;
- whether energy pricing is equitable for Australian consumers and whether it reflects the costs and demands that consumers put on the system;
- whether water usage for energy purposes is sustainable, equitable and priced appropriately;
- whether the 'right winners' are chosen to benefit from the direct funding of technologies, and whether value for money is derived from these projects; and

- whether an appropriate balance between energy production and the impact on the surrounding environment, including communities, flora and fauna, is achieved.

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Footnotes

1. Department of Resources, Energy and Tourism, *Energy White Paper 2012: Australia's Energy Transformation*, 2012, available at www.ret.gov.au.
2. This recommendation was based on the results of modelling conducted as part of the Climate Change Authority's review.
3. Speech to the Urban Development Institute of Australia, 7 March 2013, available at www.greghunt.com.au.
4. Renewable Energy (Electricity) Act 2000 (Cth), s 39.
5. Renewable Energy (Electricity) Act, s 39(2). This formula calculates the renewable power percentage for the year by multiplying the renewable power percentage for the previous year by the required GWh of renewable source electricity for the year, and dividing this by the required GWh of renewable source electricity for the previous year.

Protective costs orders in Australian environmental law: an update

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The purpose of this article is to briefly review developments in the area of protective costs orders in Australian environmental law. In particular, the article focuses on the development of the law around maximum costs orders in New South Wales, the federal jurisdiction and Victoria. The article also deals briefly with changes to the costs rules in the Queensland Planning and Environment Court and applications for security for costs.

How does it affect you?

- Protective costs orders, and in particular maximum costs orders, are an emerging feature of public law litigation in Australia. An understanding of the applicable law will assist those seeking, and opposing, such orders.
- In *Delta Electricity v Blue Mountains Conservation Society Inc*,¹ the NSW Court of Appeal established a number of principles relevant to the award of costs in public interest proceedings, particularly in relation to maximum costs orders.
- The principles in *Delta Electricity* have also been taken into consideration by the Federal Court in public interest cases.
- The entry into force of Pt 4.5 of the Civil Procedure Act 2010 (Vic) means that it is now open to Victorian courts to make maximum costs orders. It remains to be seen, however, whether such orders can be made on the basis that litigation was in the public interest.
- In Queensland, the Sustainable Planning and Other Legislation Amendment Act 2012 (Qld) has removed the presumption that no costs will be awarded in the Queensland Planning and Environment Court. This is regrettable, because it increases the uncertainty associated with proceedings in that court, but it does not exclude the possibility of protective costs orders being made in appropriate cases.
- The law relating to protective costs orders has obvious implications for security for costs applications. In particular, the making of a maximum costs order may effectively determine the amount of security that can be obtained.

Background

The usual rule in Australian civil proceedings is that costs follow the event.² It has long been recognised, however, that this rule has the potential to deter litigation regardless of the merits of that litigation.³ This is particularly the case in environmental litigation, as potential plaintiffs will usually have no financial or proprietary interest in the subject matter of the litigation that would offset the risk of an adverse costs order.

This deterrent effect is problematic because, as the English courts have recognised, “the true nature of the court’s role in public law cases is not to determine the rights of individual applicants, but to ensure that public bodies do not exceed or abuse their powers”.⁴ Where unlawful decisions by public bodies go unchallenged, they have the potential to lead to “distorted positions”, a result that the High Court has said “is to be avoided”.⁵

Partially in response to this issue, courts in Australia, the United Kingdom and elsewhere in the common law world have begun to make “protective costs orders”, which aim to facilitate public interest litigation by sparing an applicant from some or all of the costs consequences of unsuccessful litigation. In the remainder of this article, I consider some recent developments around costs in environmental litigation.

Maximum costs orders in NSW and the Federal Courts

In Australia, the maximum costs order appears to be emerging as the preferred form of protective costs order.⁶ Maximum costs orders are specifically provided for in the Uniform Civil Procedure Rules 2005 (NSW), the Federal Court Rules 2011 (Cth) and, subject to the discussion below, the Civil Procedure Act 2010 (Vic).

A significant development in the area of maximum costs orders is the decision of the NSW Court of Appeal in *Delta Electricity v Blue Mountains Conservation Society Inc*.⁷ The decision is significant because it represents the first time an Australian intermediate appellate court has expressly considered the principles applicable to the making of maximum costs orders.

In *Delta Electricity*, the Blue Mountains Conservation Society Inc (BMCS) commenced proceeding alleging that Delta Electricity, the operator of the Wallerawang

Power Station, had polluted a nearby river. As part of its initial application, BMCS sought a maximum costs order under r 42.4 of the Uniform Civil Procedure Rules 2005 (NSW), capping its potential costs liability at \$20,000. Not surprisingly, Delta opposed this application, arguing that it would incur somewhere in the region of \$250,000 in costs defending the application.

At first instance, Pain J granted BMCS's application.⁸ Delta then appealed to the Court of Appeal, which, by majority, dismissed the appeal. In doing so, it made a number of important observations about how public interest proceedings may be identified and the scope of the discretion to make public interest costs orders:

- all three of the appellate judges held that it was open to the court to find that the proceedings were in the public interest at the early stage at which the application was made;⁹
- in relation to the relevant consideration argument, the majority of the court (Basten and MacFarlane JJA) held that the trial judge had not erred:
 - the majority held that r 4.2 of the Land and Environment Court Rules 2007 (NSW), which specifically permitted the court to make a “no costs” order in public interest proceedings, operated to qualify any assumption on the part of an applicant that they might recover their costs;¹⁰ and
 - in relation to proportionality, the majority appeared to accept that there was an element of disproportion between the costs Delta was likely to incur and the costs that it might recover if successful, but that the fact of disproportionality was not as significant as Delta contended — in reaching this conclusion, Basten JA emphasised that the effectiveness of the “open standing” provisions of the Protection of the Environment Operations Act 1997 (NSW) would be “seriously undermined” if no protection was available against large costs orders;¹¹ and
- more broadly, the majority also referred with approval to the three-stage approach to the identification of public interest costs adopted by Preston in *Caroona Coal Action Group Inc v Coal Mines Australia Pty Ltd (No 3)*.¹²

In addition to the principles set out above, *Delta Electricity* is a significant decision because the majority plainly considered that access to justice was the fundamental rationale underlying the making of protective costs orders, at least in the environmental arena. The adoption of this rationale is significant for two reasons:

- it suggests that maximum costs orders may be appropriate in any proceedings brought under

open standing provisions — this might include, for example, judicial review proceedings brought under s 487 of the Environment Protection and Biodiversity Conservation Act 1999 (Vic);¹³ and

- it represents a departure for the more limited rationale of ensuring proportionality in costs seemingly endorsed in some earlier cases, such as *Hanisch v Strive Pty Ltd*.¹⁴

Overall, the decision of the Court of Appeal in *Delta Electricity* represents a significant step in establishing a principled jurisprudence in relation to the making of protective costs orders in public interest litigation and maximum costs orders in particular.

Maximum costs orders in Victoria?

While maximum costs orders have been a feature of the NSW and Federal Court rules for some time, recent amendments to the Civil Procedure Act 2010 (Vic) (CPA) mean that they may become a part of the legal landscape in Victoria.

The Civil Procedure Amendment Act 2012 (Vic) introduced into the CPA Pt 4.5, which came into force on 24 December 2012. As the Explanatory Memorandum states, Pt 4.5:

... clarifies and strengthens the courts' discretionary power to make other costs orders aside from the usual order that the losing party pay the winning party's costs. The Bill provides that the court may make any costs order that it considers appropriate to further the overarching purpose [of the Civil Procedure Act].

Section 65C(2)(d) of the CPA provides that a court may “fix or cap recoverable costs in advance”. While this section plainly contemplates the making of what is, literally, a maximum costs orders, it is not clear that s 65C permits the making of a protective costs order. The power of the courts to make “other” costs orders is specifically tied to the furtherance of the overarching purpose of the CPA, which is “the just, efficient, timely and cost-effective resolution of the real issues in dispute”.¹⁵

This uncertainty is underlined by the submissions of the Victorian government in *Aitken v Victoria*.¹⁶ *Aitken* was an application for leave to appeal against the decision of the Victorian Civil and Administrative Tribunal in a discrimination matter. The applicant sought a maximum costs order in the amount of \$10,000 for both the application and the proposed appeal and relied upon s 65C. The state opposed the making of such an order, arguing that “the making of a protective costs order would not facilitate the overarching purposes of the Civil Procedure Act and it was doubtful whether the general costs power permitted the making of a protective costs order”. In making this latter submission, the state

emphasised the absence of any provision in the court rules for the making of such a maximum costs order.

Ultimately, the court refused leave to appeal and, on that basis, held that it was unnecessary to consider the operation of s 65C. As such, it remains to be seen precisely how that section will operate and, in particular, whether it does extend to the making of protective costs orders.

Costs in environmental proceedings in Queensland

Two recent developments in Queensland are also worth noting. The first of these is the passage of the Sustainable Planning and Other Legislation Amendment Act (No 2) 2012 (Qld) (SPOLAA). Relevantly, SPOLAA amends s 457 of the Sustainable Planning Act 2009 (Qld) to remove the presumption that costs will not be awarded in ordinary proceedings in the Queensland Planning and Environment Court. Instead, subject to some limited exceptions, the Planning and Environment Court will now have an unfettered discretion to make the costs order it considers appropriate.

While the final form of s 457 is less draconian than the earlier proposal to implement the “costs follow the event” rule in the Planning and Environment Court, the amendment is nonetheless a step backwards in terms of ensuring access to justice in environmental matters. Even in the absence of a strict rule that costs follow the event, the uncertainty associated with discretionary awards of costs has the potential to deter litigants from bringing public interest cases.¹⁷ By removing the presumption in s 457, the SPOLAA increases uncertainty for participants in the planning system and, by extension, the risk of deterring meritorious litigation.

In light of the changes to the Sustainable Planning Act, the decision of the Land Court in *Xstrata Coal Queensland Pty Ltd v Friends of the Earth — Brisbane Co-Op Ltd (No 2)*¹⁸ is worth noting. Like the Planning and Environment Court under the newly amended s 457, the Land Court has an unfettered discretion to award costs under s 34 of the Land Court Act 2000 (Qld).

Xstrata concerned an unsuccessful challenge by Friends of the Earth — Brisbane Co-op Ltd (FoEBC) to a decision to grant a mining lease under the Mineral Resources Act 1989 (Qld) and an environmental authority under the Environment Protection Act 1994 (Qld). Following the challenge, Xstrata sought costs against FoEBC. The court declined to make such an order, finding that the proceedings had been brought in the public interest and that FoEBC had been exercising statutory rights to object conferred by both the Mineral Resources Act and the Environment Protection Act.¹⁹

The *Xstrata* decision is relevant to the position under the Sustainable Planning Act because the Land Court

effectively applied the decision of the Full Court of the Queensland Supreme Court in *Wyatt v Albert Shire Council*, which dealt with a costs provision similar to the new s 457.²⁰ Accordingly, it is clear that the amendments to s 457 do not prevent the making of protective costs orders in appropriate cases; they simply make it harder to predict when such orders will be made.

Security for costs in public interest litigation

The development of protective costs orders has obvious implications for security for costs applications, as recognised by the Victorian Court of Appeal in the unreported decision of *MyEnvironment Inc v VicForests*.²¹ In that case, MyEnvironment Inc had unsuccessfully challenged the legality of certain logging conducted by VicForests. It then sought to appeal that decision. VicForests sought security for costs in the amount of \$80,000–\$100,000.

Although the court ultimately made an order for security in the amount of \$30,000, it appeared to accept that public interest considerations were relevant to the power to order security for costs. Justice Nettle, with whom Buchanan JA agreed, observed that:

... the considerations which inform the grant of security for costs in proceedings between private self interested litigants are not necessarily or at least as much applicable to litigation between a bona fide not-for profit public interest group and a government business enterprise of which the function is the exploitation of the State’s native forest resources.

The issue of security for costs was also briefly canvassed in *Delta Electricity*. In that case, Pain J had, consistently with her maximum costs order, ordered security in the amount of \$20,000. In addition to its appeal against the maximum costs order, Delta sought to appeal the order for security on the basis that the amount was insufficient. In a separate judgment, the Court of Appeal unanimously refused to grant leave to appeal, noting that it would have undermined the maximum costs order for security to be fixed at an amount that was inconsistent with that order.²²

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Footnotes

1. *Delta Electricity v Blue Mountains Conservation Society Inc* (2010) 176 LGERA 424; [2010] NSWCA 263; BC201007625.
2. See, for example, *Latoudis v Casey* (1990) 170 CLR 534; 97 ALR 45; 65 ALJR 151; BC9002896.
3. See, for example, Australian Law Reform Commission (ALRC), *Who Should Pay? A Review of the Litigation Costs Rules*, Issues Paper 13, 1994, at [5.10].

4. *Lord Chancellors Department; Ex parte Child Poverty Action Group* [1998] EWHC Admin 151 at [29]. This decision was followed by the English Court of Appeal in *R (Corner House Research) v Secretary of State for Trade and Industry* [2005] All ER (D) 07 (Mar); [2005] 4 All ER 1; [2005] 1 WLR 2600; [2005] EWCA Civ 192.
5. *Kirk v Industrial Relations Commission (NSW)* (2010) 239 CLR 531; 113 ALD 1; [2010] HCA 1; BC201000230 at [64].
6. A distinction is sometimes drawn between “protective costs orders”, which totally insulate a party from liability, and “costs capping orders” or “maximum costs orders”, which limit a party’s liability. See, for example, *Eweida v British Airways* [2009] All ER (D) 161 (Oct); [2009] EWCA Civ 1025 at [7]–[8]. This article treats maximum costs orders simply as a form of protective costs order.
7. Above, n 1.
8. *Blue Mountains Conservation Society Inc v Delta Electricity* (2009) 170 LGERA 1; [2009] NSWLEC 150; BC200908354.
9. Above, n 1, at [209] per Basten JA (MacFarlane JA agreeing) and [120] per Beazley JA (in dissent).
10. Above, n 1, at [203].
11. Above, n 1, at [220].
12. *Caroona Coal Action Group Inc v Coal Mines Australia Pty Ltd (No 3)* (2010) 173 LGERA 280; [2010] NSWLEC 59; BC201002532 at [21]–[61], referred to with approval in above, n 1, at [202] per Basten JA.
13. At the time of writing, it appears that no applications have been made for maximum costs orders under the Environment Protection and Biodiversity Conservation Act. *Delta* has, however, been applied in other Federal Court proceedings: see *Haraksin v Murrays Australia Ltd* (2010) 275 ALR 520; [2010] FCA 1133; BC201007735 and *King v Jetstar Airways Pty Ltd* [2012] FCA 413; BC201202370.
14. *Hanisch v Strive Pty Ltd* (1997) 74 FCR 384 at 387; 143 ALR 641; BC9701520.
15. Section 7, Civil Procedure Act 2010 (Vic).
16. *Aitken v Victoria* [2013] VSCA 28; BC201300703 at [75].
17. ALRC, above, n 3, at [5.5].
18. *Xstrata Coal Queensland Pty Ltd v Friends of the Earth — Brisbane Co-Op Ltd (No 2)* [2012] QLC 67.
19. Above, n 18, at [25]–[30].
20. Above, n 18, at [10]. *Wyatt v Albert Shire Council* [1987] 1 Qd R 486; (1986) 61 LGERA 116; [1986] QPLR 409 was applied by the Land Appeals Court in *BHP Queensland Coal Investments Pty Ltd v Cherwell Creek Coal Pty Ltd (No 2)* [2009] QLAC 8, and the Land Court in *Xstrata* applied *BHP*.
21. *MyEnvironment Inc v VicForests* (unreported, Victorian Court of Appeal, Nettle and Buchanan JJA, 8 June 2012).
22. *Delta Electricity v Blue Mountain Conservation Society Inc (Security for Costs)* [2010] NSWCA 264; BC201007624. Justice Beazley also dealt with the question of security in the maximum costs order appeal, observing that the trial judge had not erred by deciding the question of maximum costs before the question of security. In fact, her Honour said, “it was the only sensible approach to the two applications: Above, n 1, at [113].

Opinion piece

Strategic environmental assessment: a solution to the problems associated with project-based environmental impact assessment?

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The problem with project-based EIA

Traditionally, the dominant form of environmental impact assessment (EIA) has been “project-based” and involved the identification, prediction, evaluation and mitigation of the environmental and other impacts associated with development proposals.¹ This form of EIA was first used in the United States under the National Environmental Policy Act of 1969 (US), which was signed into law by President Richard Nixon on 1 January 1970. Since then, it has been deployed in over 100 countries and is arguably now the most widely used environmental policy instrument in the world.²

Despite its popularity, project-based EIA has faced persistent criticism from various sources. Business groups have often claimed that it causes unnecessary delays in approval processes and they have called for changes to “cut green tape”. Although receiving less popular attention, many academics and conservationists have also questioned whether project-based EIA is achieving its intended aims and/or whether the outcomes could be achieved at less cost.³

A difficulty associated with debates about the cost-effectiveness of EIA is that it has multiple objectives. These can be placed into four broad groups:

- improving the breadth and depth of the information available to proponents and decision makers, and ensuring that this information is considered in government decision-making processes;
- democratising government decision-making processes (ie, promoting participatory, or discursive, decision making);
- providing a forum for interest group bargaining; and
- protecting the environment.⁴

Minimal empirical work has been done on the extent to which EIA is advancing the first three of these objectives. However, of the three, information improvement has attracted the most attention. Here, researchers

have focused on the quality and accuracy of information contained in environmental impact statements (EISs). Generally, they have found that a large proportion of predictions made in EISs are incapable of being tested against actual outcomes (for example, due to imprecision) and, where they are, a substantial proportion are inaccurate. For example, in 1987, Paul Culhane examined 29 EISs in the United States, containing 1105 forecasts.⁵ Of these, Culhane found that less than 25% were quantified, most were verbal and did not use recognised units of measurement, only 25% contained an explicit statement of significance of the impact, and the likelihood of occurrence was “almost never expressed as a quantified probability”.⁶ From the original 1105 predictions, Culhane was able to obtain adequate quantified data on 239. When the accuracy of these was tested, he found that just under 30% (70 out of 239) were “unqualifiedly close to their forecasts”.⁷ Ralf Buckley did a similar environmental impact audit on Australian EISs in the late 1980s, where he examined 181 quantified and testable predictions.⁸ His findings were comparable to Culhane’s. The mean accuracy of predictions was 44% and, where predictions underestimated impacts, they were significantly less accurate than forecasts that overestimated impacts.

The weaknesses in EIS information are most likely due to the circumstances in which they are prepared. EISs are typically written by consultants paid by proponents. They are also often prepared on tight budgets and timeframes, where limited resources are available for detailed modelling and empirical work. The qualifications and skills of those preparing EISs can also vary considerably.

Apart from the environmental impact audit literature, most of the relevant research, particularly in the last decade, has focused on whether the assessment of impacts through EIA processes materially affects decision making and improves environmental outcomes (EIA typically has an assessment phase and a regulatory

approval phase, and it is the impact of the first of these on regulatory decision making and project design and management that has been the subject of most research).⁹ The findings from these studies have generally been that the direct influence of EIA on decisions and environmental outcomes is modest. It is common for EIA to produce small changes in project design and conditions, but it rarely results in substantially different outcomes from those that would have occurred in its absence (ie, if there had merely been a standard regulatory process that did not require formal EIA).

Although this is a consistent finding from the literature, it comes with caveats. Evaluating the impact of EIA requires the assessment of the counterfactual: what would have occurred in the absence of the process? Due to this, research on the environmental effectiveness of EIA always involves a degree of subjectivity. The nature of EIA regimes — the large number of projects involved, the different contexts in which they operate, and differences in design and practice between jurisdictions — can also create practical problems for researchers and hinder the transferability of results. A further challenge for researchers trying to evaluate the environmental impact of EIA processes concerns the measurement of indirect benefits. EIA regimes can generate positive environmental benefits that extend beyond the projects that are directly subject to it. For example, the very presence of an EIA regime can deter projects, leading to improved environmental outcomes. As these projects often never arise for regulatory consideration, they can be almost impossible to identify. Similarly, EIA processes can trigger cultural change within proponent and regulatory organisations, leading to improvements in practices and outcomes.¹⁰ These benefits are not fully captured in studies that only look at projects that have gone through EIA processes.

While noting the limitations of the empirical research on EIA effectiveness, of at least equal significance is the fact that there is no compelling causal theory to explain how it could lead to substantial and sustained improvements in environmental outcomes. The four dominant causal theories that have been put forward are as follows:

- **Information processing model:** This suggests that, by improving the information available to decision-makers, EIA improves outcomes (ie, poor outcomes are simply a result of poor information).
- **Institutionalist model:** This suggests that EIA transforms the values and rules that govern institutions, which, in turn, leads to improved environmental outcomes.

- **Deliberative democracy model:** This suggests that EIA provides a forum for deliberative decision making, which promotes ecologically rational outcomes.
- **Interest group bargaining model:** This suggests that EIA provides a forum for interest group bargaining, which leads to better outcomes.¹¹

None of these theories is overly persuasive. The information processing model faces the empirical challenge from the environmental impact audit literature (ie, the information is not overly comprehensive or accurate). It is also based on a naive view of decision-making processes. Resource allocation and regulatory decisions are a product of a range of factors, particularly values, power and incentives. Improved information alone is unlikely to consistently produce significantly better outcomes because it does not materially alter these factors.¹² In addition, even if information alone could shift decision-making preferences, the timing and scope of project-based EIA impedes its capacity to drive change. More specifically, project-based EIA tends to deal with projects in isolation, after strategic policy and planning decisions have been made. Due to this, its capacity to improve outcomes is often constrained by “higher order” policy and planning decisions and it struggles to adequately deal with the cumulative impacts of multiple actions and developments.

The institutionalist model sits on firmer theoretical ground, in that it is conceivable that the exposure of proponents and regulators to environmental information, and the requirements that they produce and/or consider it, could help change institutional values. EIA processes may also give internal “environmental advocates” an opportunity to influence those with power within an organisation. However, this model faces two challenges. First, there are constraints on the extent to which organisations, particularly corporations, can absorb environmental sensibilities. Second, if this model is accepted, it is logical that there should be diminishing marginal environmental returns from EIA. Initially, EIA may prompt cultural change, but its capacity to do so is likely to diminish over time as organisations approach the limits of their capacity or desire to adjust.

The models that see EIA as a vehicle for promoting deliberative (ie, discursive or participatory) decision making and/or interest group bargaining have a certain theoretical appeal, but they clash with the realities of EIA practice. It is important to stress here that there is a need for more empirical work on the extent to which EIA advances deliberative decision making and interest group bargaining and whether this, in turn, changes environmental outcomes. However, the experience of the author, and anecdotal evidence from practitioners

and regulators, is that third parties generally have little substantive influence in EIA processes. Their input is typically confined to making written (and occasionally oral) submissions on screening, scoping and/or draft assessment documentation, and these submissions are given marginal weight by proponents and regulators. In a workshop conducted in relation to the Hawke Review of the Environment Protection and Biodiversity Conservation

Act 1999 (Cth) in August 2009,¹³ a senior bureaucrat from the then Commonwealth Department of the Environment, Water, Heritage and the Arts was asked about the weight given to third-party submissions. His response, given partially tongue-in-cheek, was that “we shred them”. While not wanting to attach great weight to his comment, it reflects a widely held opinion within professional and academic circles. Another notable aspect of EIA practice is that third parties generally have no formal access to post-approval processes. This has become increasingly significant in light of the trend, both in Australia and elsewhere, for regulators to place greater emphasis on post-approval requirements and environmental management systems at the expense of pre-approval EIA processes (for example, rather than requiring extensive evaluation of impacts during the assessment phase, regulators will insist on more stringent monitoring and adjust regulatory conditions in light of the monitoring results).¹⁴

To summarise, what can be said at present about project-based EIA is that:

- there is a lack of evidence to support the contention that it consistently generates significant improvements in environmental outcomes;
- there is no compelling causal theory to explain how it could significantly improve environmental outcomes;
- it does not seem to produce high quality information on impacts, and the benefits of insisting on improved science are questionable — particularly when compared to the associated costs;
- it is incapable of adequately dealing with cumulative impacts, and its capacity to improve environmental outcomes is often constrained by “higher order” policy and planning decisions; and
- it is unclear to what extent EIA advances deliberative decision making and interest group bargaining, but there is plenty of anecdotal evidence that suggests that these democratic functions of EIA are often given little weight by regulators and proponents.

The search for solutions

Discontent with project-based EIA, based on one or more of the above points, has led to a 20-year search for ways of improving the cost-effectiveness of EIA. One

way is to truncate and compress project-based EIA in order to reduce costs. This could involve greater use of assessments on referral information or preliminary project documentation rather than insisting on a full EIS. The scope of assessments could also be restricted or information requirements could be lessened in all levels of assessment, in acknowledgment of the practical limits of the information generally contained in EIA documents. Similarly, regulators could make greater use of standardised assessment guidelines, reporting guidelines and regulatory conditions where appropriate. These types of approaches could simultaneously reduce costs and regulatory uncertainty, while improving the accessibility of EIA to third parties. Another way of improving the cost-effectiveness of project-based EIA is to use it more sparingly. For example, high-level, project-based EIA could be reserved exclusively for highly contentious proposals, and those involving novel technologies or practices where assessment information could help regulators devise conditions and other regulatory responses. This could be coupled with a greater emphasis on post-approval processes, including oversight of the design and implementation of environmental management systems. To varying degrees, all of these ideas have been, or are being, incorporated into EIA practice in Australia and elsewhere. The other major trend is towards greater reliance on strategic environmental assessment (SEA).

Strategic environmental assessment

At its broadest, SEA can be defined simply as the environmental assessment of policies, plans and programs (PPPs).¹⁵ In this form, SEA is effectively the application of project-based EIA principles to higher order decision making. The benefit of doing this is that it can capture the cumulative impacts of multiple actions and ensure that there is an alignment of objectives at all levels of government decision making (ie, policy, planning, program and project).

The problem with this broad framing of SEA is that the concept can become indistinguishable from other policy and planning processes that have regard to environmental issues. For example, is strategic land use planning a form of SEA? Within the literature, there is no consensus on exactly where the boundaries of SEA should be drawn.¹⁶ However, there is agreement, of sorts, on the notion that SEA should have the following elements:¹⁷

- There should be a screening process (for determining which PPPs require assessment) that is based on the magnitude of the threats and ensures that assessment occurs as early as possible.

- There should be a scoping process that ensures that the breadth and depth of the assessment are commensurate with the environmental threats associated with the PPP.
- The process should identify and consider alternatives (or options).
- The assessment of environmental impacts, and the viability of alternatives, should be conducted against publicly adopted criteria or standards.
- There should be an adjustment stage where the PPP is changed to account for the outcome of the assessment (ie, steps to avoid, mitigate or offset impacts).
- Provision should be made for public participation at multiple points in the process (example, screening, scoping, prediction and draft assessment).
- There should be a reporting stage, where the outcomes of the assessment are released in written form to the public.
- Decision making on the acceptability of a PPP should be based on publicly adopted criteria or standards.
- There should be post-approval monitoring and evaluation (ie, reviewing impacts and ensuring compliance with conditions).
- There should be “tiering”, meaning that there should be a sequence of linked assessments that flow through from the policy to the planning, then to the program, and finally onto the project level.

Beyond these elements, there are sharp differences of opinion on what constitutes SEA and what it should contain. Two of the most significant points of divergence concern the function of SEA and the significance of the term “strategic”. Many theorists contend that SEA is, or should be, a tool for promoting sustainable development — that is, its aims should not be confined to ensuring that decision makers have better information or that PPPs are better integrated, but rather it should be directed towards the improvement of environmental outcomes.¹⁸ The same is now widely said of project-based EIA — where once its objectives were confined to information improvement, many theorists and practitioners now see it as a means of protecting the environment. This view of SEA is not universally shared. Some argue that it is only intended to ensure improved access to, and consideration of, information, better alignment and integration of PPPs, and/or greater accountability and public participation in the formulation and implementation of PPPs.¹⁹

Theorists and practitioners also disagree on how much importance should be placed on the term “strategic” when determining the boundaries of SEA. Bram

Noble, for example, contends that, in order for an assessment to be an SEA, it must have an emphasis on strategy. This requires that it include “the determination of objectives and means, and the adoption of courses of action to achieve specified ends”.²⁰ Relevant questions that might arise within this version of SEA include the following:

- What are the objectives of a PPP, and are there more appropriate alternatives?
- What means (ie, what type of PPP) could be employed to achieve the desired objective?
- What are the likely impacts of the alternatives?
- Which strategy is likely to minimise environmental impacts?

As this list suggests, for Noble, the focus of SEAs is on *strategic* alternatives. If an assessment process precludes the strategic element, it is not an SEA. Under this approach, processes that merely assess the impacts of a PPP (example, policy impact assessment or programmatic environmental impact assessment) without inquiring into the suitability of the goals and alternative means of achieving them fall outside the bounds of SEA. Other theorists, and many practitioners, have a more malleable approach to where the boundaries of SEA lie, and generally include policy impact assessments and programmatic environmental impact assessments as a form of SEA.²¹ Within Australia, it is even reasonably common to apply the SEA label to what are, in essence, large project-based EIAs (example, the Commonwealth’s strategic assessment of the Molonglo Valley Plan).

Irrespective of what definition is adopted, the fundamental idea behind SEA is to shift the focus of assessment upstream to higher levels of decision making.²² The supposed environmental benefits of this are that it ensures that:

- environmental issues, and less environmentally damaging alternatives, are considered throughout the decision-making chain; and
- the cumulative impacts of actions taken under PPPs are appropriately considered and managed.

If conducted effectively, SEAs should also reduce regulatory uncertainty by aligning the objectives of PPPs and providing clear signals to proponents about the acceptability of projects and required environmental standards. Moreover, improved SEA can reduce the need for project-based EIA, the costs of undertaking project-based EIA, and/or the stringency of project-based EIA.

Australia has used strategic assessments for several decades, even though they have not always been called SEAs. This history suggests that SEA will be no panacea for the environmental challenges Australia faces. The

failings of the Regional Forest Agreement process, which is arguably the largest and most comprehensive SEA ever conducted in Australia, clearly demonstrate this. More recently, Andrew Kelly, Tony Jackson and Peter Williams reviewed the use of SEA in the NSW land use planning system and found that it “is in a quagmire” and that its application has been tokenistic.²³ Notwithstanding this, SEA has many advantages over standard project-based EIA and, if nothing else, greater reliance on SEA could help reduce the uncertainties, inconsistencies and delay that plague Australian environmental policy and regulatory regimes.

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Footnotes

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A new national Environmental Offsets Policy

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In October 2012, the Department of Sustainability, Environment, Water, Population and Communities (DSEWPAC) released its new Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (Policy).¹ The Policy places greater emphasis on direct offsets, which are generally required to comprise a minimum of 90% of the offset requirements.

The purpose of the Policy is to outline the Australian government's approach to the use of environmental offsets under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act). For all future assessments, the suitability of a proposed offset will be considered as part of the decision as to whether or not to approve a proposed action under the EPBC Act.

The Policy is accompanied by the *Offsets Assessment Guide* (Guide), which has been developed to give effect to the requirements of the Policy through the utilisation of a balance sheet approach. This approach is designed to estimate impacts and offsets for threatened species and ecological communities.

The overarching test of the Policy and the Guide is that suitable offsets must deliver an overall conservation outcome that improves or maintains the viability of the matter of national environmental significance (MNES) affected by the proposed action — that is:

Impact + Offset = Improvement or maintenance of the MNES

This article outlines the key aspects of the Policy, its interaction with state policies in respect of offsets, and the implications of the Policy.

Background

In August 2007, to ensure the consistent, transparent and equitable use of environmental offsets under the EPBC Act, the Australian government released the following documents:

- *Use of Environmental Offsets under the Environment Protection and Biodiversity Conservation Act 1999: Discussion Paper*; and

- *Draft Policy Statement: Use of Environmental Offsets under the Environment Protection and Biodiversity Conservation Act 1999*,

(collectively, the 2007 Policy).²

Under the 2007 Policy, offsets could be used under the EPBC Act to “maintain or enhance” the health, diversity and productivity of the environment in appropriate circumstances. To assess the appropriateness of proposed environmental offsets, eight principles were identified for the use of such offsets, including:

- offsets should target the MNES impacted and deliver a real conservation outcome in a timely manner;
- a flexible approach should be taken to the design and use of offsets and should include both direct and indirect offsets;
- offsets should be commensurate with the magnitude of the impacts, and ideally deliver “like-for-like” outcomes within the same general area as the proposed action; and
- offsets should be enforceable, monitored and audited.

In August 2011, DSEWPAC released the Consultation Draft Environmental Offsets Policy (Draft Policy) for public comment as part of the Australian government's national environmental law agenda.³ The Draft Policy confirmed the Australian government's commitment to moving to a more strategic approach to environmental assessment and acknowledged the important role that offsets play in achieving strong environmental outcomes. During the public consultation period, DSEWPAC received 54 submissions in relation to the Draft Policy.

Following consideration of these submissions, the Policy was finalised on 20 September 2012 and replaced the 2007 Policy. From 2 October 2013, the Policy applies to:

- project assessments and approvals under Pts 8 and 9 of the EPBC Act; and
- strategic assessments under Pt 10 of the EPBC Act.

Aims of the Policy

The five key aims of the Policy are to:

- (1) ensure the efficient, effective, timely, transparent, proportionate, scientifically robust and reasonable use of offsets under the EPBC Act;
- (2) provide proponents, the community and other stakeholders with greater certainty and guidance on how offsets are determined and when they may be considered under the EPBC Act;
- (3) deliver improved environmental outcomes by consistent application of the Policy;
- (4) outline the appropriate nature and scale of offsets and how they are determined; and
- (5) provide guidance on acceptable delivery mechanisms for offsets.

In addition, the Policy is intended to provide transparency around how the suitability of an offsets proposal is determined and greater certainty for businesses and others considering actions that may potentially be subject to an offset requirement.

The Policy notes that the term “environmental offsets” refers to measures that compensate for the residual adverse impacts of an action on the environment. The purpose of these offsets is to provide environmental benefits to counterbalance the impacts of a proposed action that remain after avoidance and mitigation measures are implemented (termed “residual impacts”). Offsets will only be required in circumstances where the residual impacts of a proposed action are “significant” and will only be appropriate if all reasonable avoidance and mitigation measures have been considered.⁴ The point of the assessment process at which offsets will be considered is neatly identified in Fig 1 of the Policy, as reproduced at the end of this article.

Under the EPBC Act, beneficial impacts such as offsets may not be considered at the referral stage. Therefore, the Policy will only be considered if the decision maker determines that a proposed action is likely to have a significant impact on an MNES (being a controlled action). Where this determination is made, a full assessment under Pt 9 of the EPBC Act is undertaken. During the assessment stage, the decision maker will consider whether offsets are suitable.

Determining the suitability of offsets

Where it has been determined that offsets are appropriate and feasible, DSEWPAC must assess the proposed offsets against the following overarching principles.

Suitable offsets must:

- deliver an overall conservation outcome that improves or maintains the viability of the MNES affected by the proposed action;

- be built around direct offsets, but may include other compensatory measures;
- be in proportion to the level of statutory protection that applies to the MNES;
- be of a size and scale proportionate to the residual impacts of the proposed action on the MNES;
- effectively account for and manage the risks of the offset not succeeding;
- be additional to what is already required, determined by law or planning regulations, or agreed to under other schemes or programs;
- be efficient, effective, timely, transparent, scientifically robust and reasonable; and
- have transparent governance arrangements, including being able to be readily measured, monitored, audited and enforced.

The government decision maker must:

- be informed by scientifically robust information and incorporate the precautionary principle in the absence of scientific certainty; and
- conduct the assessment in a consistent and transparent manner.

Types of offsets

If offsets are appropriate, the proponent, in consultation with DSEWPAC, is responsible for developing an offset proposal. This proposal should describe the suite of actions to compensate the residual significant impact of the proposed action, including the following.

Direct offsets

Direct offsets are those actions that provide a measurable conservation gain by:

- improving existing habitat for the MNES;
- creating new habitat for the MNES;
- reducing threats to the MNES;
- increasing the values of a heritage place; or
- averting the loss of the MNES or its habitat that is under threat.

A “conservation gain” is a benefit that maintains or increases the viability of the MNES or reduces any threats of damage, destruction or extinction of the MNES.

Generally, a minimum of 90% of the offset requirements must be met through direct offsets, except in limited circumstances.

Further, as a minimum, the tenure of the offset should be secured for the same duration as the impact on the MNES affected by the proposed action. Suitable mechanisms to enable the protection of land that is set aside for environmental purposes must be built around the principles set out in the Policy,⁵ which distinguish between offsets on public lands, private lands, Indigenous-owned lands and the marine environment.

Other compensatory measures

Other compensatory measures are those actions that are anticipated to lead to benefits for the MNES, such as funding research or educational programs, provided that specified criteria are satisfied.

Advanced offsets

Advanced offsets are actions that deliver an outcome prior to the impact commencing and/or that may be used, transferred or sold in the future. If practical, these offsets are encouraged because they deliver a conservation gain in a shorter time period. As a result, the Guide places higher value on advanced offsets, which may reduce the overall offset requirements.

Considerations in the assessment of offsets

Under the Policy, proponents are encouraged to ensure the following:

- Offsets should align with conservation priorities for the MNES impacted by the proposed action and should specifically address the attribute of the MNES. For example, if the residual impacts of a proposed action are likely to have a significant impact on a foraging habitat of an MNES, then the offset must create, improve, protect and/or manage foraging habitat. Offsets will not be considered in circumstances where the offset does not relate to the MNES impacted by the proposed action.
- Offsets should deliver social, economic and/or environmental co-benefits — for example, an offset contributing to an area recognised as important to increasing landscape connectivity, above and beyond what is required by the MNES.

If the proposal is not considered to be suitable having regard to the Policy and Guide, DSEWPAC will discuss the findings with the proponent and allow the proponent to submit a revised proposal.

Following the assessment of the offset proposal by DSEWPAC, the decision maker will consider the proposal in deciding whether the proposed action should be

approved. However, the offset is just one of many considerations that are weighed at the decision stage under ss 136–140A of the EPBC Act in determining the overall acceptability of the proposed action. It is worth noting that the Policy makes it clear that proposed actions with unacceptable impacts will not be approved because of offset requirements.

In circumstances where the proposed action is approved, the offset requirements are included as a condition of approval under s 134 of the EPBC Act. To ensure that conditions of approval are implemented, DSEWPAC has an active monitoring and audit program, and breaches of such conditions may result in significant penalties.⁶ In addition, under Pt 14 of the EPBC Act, it is possible for the Minister for the Environment to enter into a conservation agreement with a third party for the conservation of the MNES to ensure that the offset is protected.

Risks posed by the Policy

The Policy identifies two levels of risk associated with the use of offsets:

- that the impact on the MNES will be too great and an offset will not be able to compensate the impact — this risk should be addressed through the assessment process; and
- whether the individual offsets are likely to be successful in compensating for the residual impacts of the proposed action over a period of time — this risk should be considered and addressed in the decision stage.

The Australian government has also attempted to reduce these risks by:

- placing the focus of offset proposals on direct offsets, which are seen as having a lower risk than other compensatory measures and as being more likely to result in a conservation gain;
- incorporating the precautionary principle in determining whether offsets are suitable and adequately compensate for the residual impacts of the proposed action; and
- committing to undertaking a technical review of the Policy and Guide after the first year of operation and every five years thereafter.

Interaction with state and territory environmental and biodiversity offset policies

A number of states and territories have implemented their own mechanisms for the use of environmental or biodiversity offsets. Due to the fact that the Policy focuses on protecting the MNES, it does not derogate from the existing offset requirements of a state or territory. Consequently, proponents may now be faced with the requirement to provide offsets under state or territory laws and the EPBC Act for the same proposed action.

To address this issue, the Policy acknowledges that a state or territory offset will count towards an offset under the EPBC Act if the offset suitably compensates the residual impact to the MNES affected by the proposed action.

To maximise the opportunity to align the impact assessment processes of the state or territory and the Commonwealth, as well as the assessment of offset requirements, proponents should make referrals to DSEWPAC under the EPBC Act and the responsible state or territory authority as early as practicable. By so doing, proponents will have the best opportunity to develop an offsets proposal that adequately compensates for the residual impacts on the MNES and that counts towards, or potentially removes the requirement for, the provision of offsets under state or territory laws.

Implications

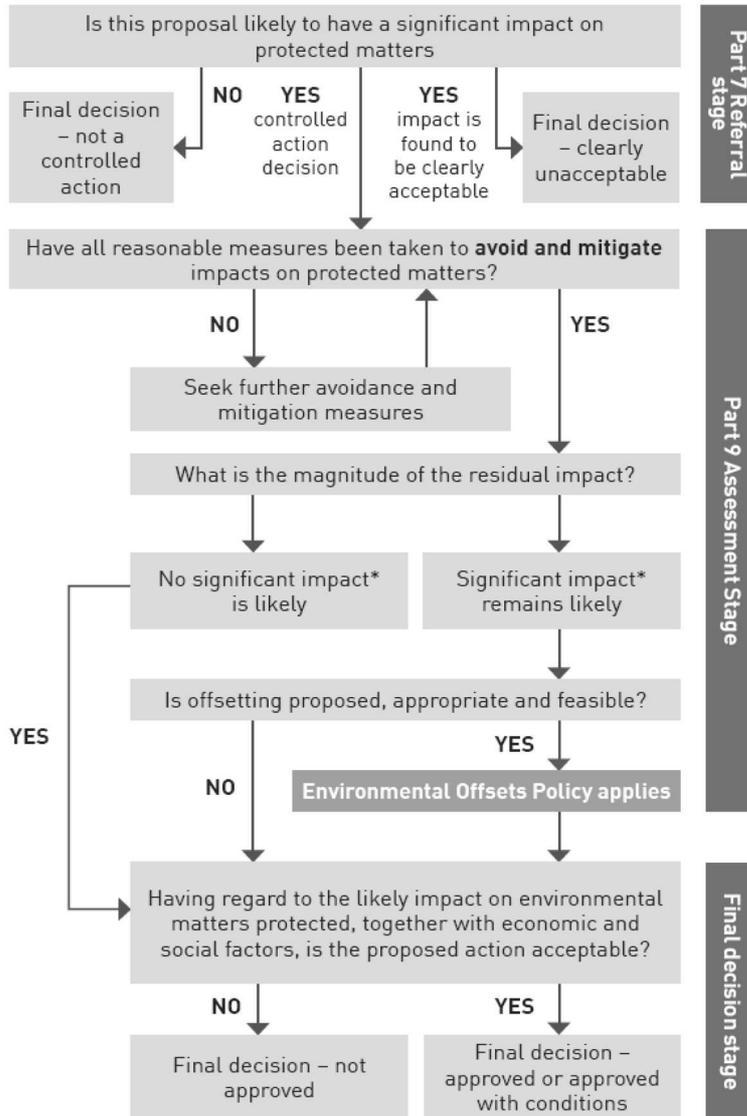
Although avoidance and mitigation measures remain the primary strategies for managing the potential significant impacts of a proposed action, the Policy allows

proponents of actions likely to have significant residual impacts to reduce such impacts through the development of a suitable offsets proposal. Any such proposal will then be considered by the decision maker in determining whether to approve the proposed action. Importantly, offsets can only be proposed at the assessment stage and not at the referral stage and do not apply to any action the Minister has decided is not a “controlled action” under the EPBC Act.

To ensure that offset requirements under state or territory laws and the EPBC Act are aligned, proponents will need to ensure that early referrals are made to DSEWPAC and the responsible state or territory authority, and that dialogue is open early with DSEWPAC in relation to the suitability of an offsets proposal. If such steps are not taken, proponents may be faced with the prospect of the cost and delay associated with adopting and implementing two sets of offset requirements for a single project.

Finally, different considerations will apply to the assessment of the suitability of proposed offset mechanisms, depending on the nature of the lands to which the proposed action relates (example, public lands, private lands, Indigenous-owned land, the marine environment, and so on). For example, offsets on Indigenous-owned lands should include a commitment from traditional owners to accept and manage the offset, and offsets in the marine environment should be developed in consultation with governing jurisdiction(s). Accordingly, it is necessary to carefully consider the Policy in proposing any offsets to avoid the delays associated with a determination that a proposed offset is not suitable.

Figure 1 – The role of offsets within the broader environmental impact assessment process



The above diagram is a copy of Figure 1, page 13 of the Policy

* As defined in *Significant Impact Guidelines 1.1: Matters of National Environmental Significance*; and *Significant Impact Guidelines 1.2: Actions on, or impacting upon, Commonwealth land and actions by Commonwealth Agencies*.

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Footnotes

1. Available at www.environment.gov.au.
2. Above, n 1.
3. Above, n 1.
4. For the definition of “significant”, see DSEWPAC, *Significant Impact Guidelines 1.1 — Matters of National Environmental Significance*, available at www.environment.gov.au.
5. See box 3 (at p 19) of the Policy.
6. See DSEWPAC, *EPBC Act Compliance and Enforcement Policy*, available at www.environment.gov.au.

Environmental offsets: a reform of the Western Australian approach

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The Western Australian Environmental Offsets Policy (WA Offsets Policy) was released on 27 September 2011 and was described by the Environment Minister at the time, Bill Marmion, as “a cross-government initiative” forming part of the state government’s attempt to reform and improve the environmental approvals process under the Environment Protection Act 1986 (WA) (EP Act).¹

Prior to the introduction of the WA Offsets Policy, environmental offsets had been informally and inconsistently incorporated into the assessment of environmental impact and approvals under the EP Act. The aim of the WA Offsets Policy is to consolidate that approach. It will be supported by the preparation of assessment guidelines and the development of a publicly accessible offsets register.

The purpose of this article is to examine the WA Offsets Policy and comment upon the manner in which it is to be implemented, including the interaction between the WA Offsets Policy and its federal counterpart.

Environmental offsets

The WA Offsets Policy describes environmental offsets as:

An offsite action or actions to address significant residual environmental impacts of a development or activity.²

The key function of environmental offsets, also referred to as biodiversity offsets, is to compensate for losses of biodiversity or environmental value at the site of environmental impact through the creation of ecologically equivalent gains or “credits”. Simply put, the goal of an environmental offsets program is to achieve “no net loss” or a net environmental gain as a consequence of a development or activity.³

The history of the application of environmental offsets extends back several decades.⁴ Research performed by Ecosystem Marketplace in 2011 suggests that 45 “compensatory mitigation programmes” exist around the world. Within Australia, there are unconnected state-level offset programs in most jurisdictions — as well as the Commonwealth Environmental Offsets Policy (Commonwealth Offsets Policy), which applies under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act).⁵

Each of those programs will operate in a manner appropriate for its jurisdiction, and as a consequence no two will be identical. Fundamentally, however, they are premised on the same core principle: net environmental gain.

Features of the WA Offsets Policy

The WA Offsets Policy is no different and explains that environmental offsets will most often be applied to proposals subject to environmental impact assessment or through conditions of permits required for the clearing of native vegetation under the EP Act.⁶ Additionally, within the WA context, relevant offsets may also be considered in relation to other legislation, including the Planning and Development Act 2005 (WA) and the Mining Act 1978 (WA).

As a consequence, no single government agency in Western Australia will assume sole responsibility for oversight of the WA Offsets Policy. The policy itself indicates that “nominated agencies” will have responsibility under the EP Act for monitoring, auditing and compliance in relation to offset conditions.⁷ Although it has yet to do so, it is anticipated that the WA Offsets Policy will eventually consolidate and replace the policy advices released in 2006⁸ and 2008⁹ respectively by the WA Environmental Protection Authority (EPA).¹⁰

The WA Offsets Policy proposes the following two categories of environmental offsets:

- **direct offsets:** These actions are designed to provide on-ground improvement, rehabilitation and conservation of habitat. They include acquisition, restoration, revegetation and rehabilitation of natural areas outside of a project area; and
- **indirect offsets:** These actions are aimed at improving scientific or community understanding and awareness of environmental values that are affected by a development or activity. They may include research to improve the management and protection of existing conservation estate or contributions to state government initiatives, policies or strategic funds.

The guiding principles underpinning the WA Offsets Policy are that environmental offsets:

- 1 will only be considered after avoidance mitigation options have been pursued;
- 2 are not appropriate for all projects;
- 3 will be cost-effective, as well as relevant and proportionate to the significance of the environmental value being impacted;
- 4 will be based on sound environmental information and knowledge;
- 5 will be applied within a framework of adaptive management; and
- 6 will be focused on longer-term strategic outcomes.

While it is acknowledged that environmental offsets will be used as a last resort after due consideration of avoidance and mitigation measures, this mechanism will allow offsets to be utilised in a more transparent manner for the benefit of proponents and regulators alike.

The WA Offsets Policy also proposes the preparation of Environmental Offset Guidelines to outline the roles of nominated agencies, assessment and decision-making processes, and requirements for auditing and monitoring in due course. Further, the WA Offsets Policy also envisages the preparation of an Environmental Offsets Register to provide a public record of all offset arrangements in Western Australia in a centralised system. Both of these documents have now been prepared in draft form and are currently in the course of assessment following public consultation.

Draft Environmental Assessment Guideline for Environmental Offsets

The Draft Environmental Assessment Guideline for Environmental Offsets dated October 2012 (Draft Guideline) has been prepared by the EPA. The Draft Guideline was released for public consultation, expiring on 21 December 2012. The EPA is currently reviewing those comments and it is anticipated that the Draft Guideline will be finalised and released later in 2013. Until that occurs, the earlier EPA policy advices¹¹ still apply.

The objective of the Draft Guideline is to outline the EPA's expectations for environmental offsets related to development proposals subject to assessment under Pt IV of the EP Act. The Draft Guideline states the EPA's overarching objective related to environmental offsets as:

To counterbalance any significant residual environmental impact and risks through the application of offset.¹²

The scope of the Draft Guideline is intended to outline the principles that underpin the requirement for offsets and to help proponents identify when those offsets may be required and how to design them.

The Draft Guideline aims to assist proponents in putting together an assessment package and advises on

the effective implementation of offsets into the future. Considerations in that regard include:

- the assessment of significance in order to determine whether or not the proposal needs an offset;
- what an appropriate offset is;
- what detail should be included in the environmental review document;
- who should be consulted regarding the offset; and
- overlap with the Commonwealth Offsets Policy.

Draft Environmental Offsets Register

The WA Offsets Policy proposed the creation of an Environmental Offsets Register (Register) to provide a public record of all offset agreements in Western Australia in a centralised form. The policy sets out the aims of that Register as being to:

- facilitate transparency and accountability of offsets;
- provide a single-cost government record for environmental offsets;
- monitor offset implementation and outcome;
- improve auditing and quality control of offsets; and
- provide for efficient retrieval of offset information in flexible ways to meet government, industry and community needs.

The information proposed to be recorded in the Register will include:

- the spatial location of the offset;
- the type of offset and values being offset;
- the compensatory value of the offset;
- the timelines for implementation; and
- the agency that is responsible for monitoring the environmental offset.

At the time of writing, the scope and planning of the Register have been finalised, with the design and build of the Register believed to be underway. It is anticipated that the project will be finalised and implemented in July 2013.¹³

Overlap with the Commonwealth Offsets Policy

While many environmental issues will remain exclusively within state jurisdiction, there is undoubtedly significant potential for overlap between the Commonwealth and WA policies.

The Commonwealth Offsets Policy, released in October 2012, applies to "matters of national environmental significance" (MNES) protected under the EPBC Act.¹⁴

Commonwealth offset requirements may either be complementary or additional to WA government offsets for the same proposal. This will occur because both governments have different responsibilities in relation to the environment. Sometimes these overlap and sometimes they are distinct. As an example, some conservation-significant species are important for both the state and the Commonwealth, while others may only be considered significant within a particular state.

The Draft Guideline recommends that a proponent refer proposals to the Commonwealth government as early as possible to provide the best opportunity for complementary offset principles. It indicates that in assessing proposals under the EP Act, it will endeavour to rely on offset packages to meet the requirements of both policies as far as possible.

The potential for overlap will be significantly minimised where a proposal is able to be assessed in accordance with the bilateral agreement relating to environmental impact assessment made between WA and the Commonwealth under s 45 of the EPBC Act. Relevantly, the current iteration of the bilateral agreement is limited to the forms of assessment accredited by the Commonwealth (including Public Environmental Review) and will not apply in every circumstance.

From this perspective, a particularly challenging issue arises from the manner in which proposed development is assessed by the respective regimes. While assessment of environmental impacts under WA legislation can commence early in the structure planning¹⁵ or rezoning phase (requiring a scheme amendment)¹⁶ common for large development projects, it may not be possible to refer at the same time under the Commonwealth regime because these processes are not contemplated within the definition of “action” under s 523 of the EPBC Act.¹⁷

Comment

With the introduction in recent years of these broad state and national offset policies and the interaction with accompanying sophisticated approvals processes, it is interesting to consider the idea that the concept of “offsetting” has in fact been applied throughout Australian cities in a town planning context for some time. The experience in Western Australia reflects that also noted by Sarah Persijn in Queensland, where offsetting of new towns and suburbs has traditionally been “achieved by the government designating particular areas as national park or some other type of publicly-owned land”.¹⁸

As an example, in metropolitan Western Australia this principle is expressed through State Planning Policy 2.8 — Bushland Policy for the Perth Metropolitan Region (Bush Forever), which seeks to “protect and manage significant bushland ... through a range of implementa-

tion mechanisms”.¹⁹ In practice, the Bush Forever policy has set a bushland retention target of 30% for new urban and industrial development.²⁰

It remains to be seen if these offsets, required for the rezoning of large tracts of land in metropolitan Perth for the purpose of urban development, will be acknowledged in the assessment of development proposals (under the EP Act or the EPBC Act), or included in the Register for that matter.

It has been the case historically that, despite the introduction of the EPA’s initial policy advice on offsets in 2006 and an overall endorsement of the principle of offsets by the development industry, underlying concerns remain about their effectiveness over time and regarding their implementation.²¹

The Commonwealth Offsets Policy is complemented by an Offsets Assessment Guide, which includes tools such as an MNES assessment box, an impact calculator and an offset calculator. While there is some criticism that such quantitative assessment tools lack sufficient detail and rigour and provide only indicative information in their current developmental stage, on balance, proponents appear to welcome this as a step towards providing some level of clarity and certainty in relation to anticipated offsets for projects. Within the WA development industry, some similar guidance to accompany the WA Offsets Policy would be helpful.

As we see it, the Register will address concerns about accountability and duplication of offsets required by different state agencies. Whether or not the Register, in conjunction with the WA Offsets Policy and the Draft Guideline, will address the historical concerns, remains to be seen. Nevertheless, from the perspective of practitioners in the development industry, the recent reforms to the assessment of offsets represent a huge step forward.

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Footnotes

1. B Marmion (Minister for the Environment; Water), “Environmental offsets policy released”, 27 September 2011, available at www-dev.dec.wa.gov.au.
2. Government of Western Australia, *WA Environmental Offsets Policy*, September 2011, p 2, available at www.epa.wa.gov.au.

3. M Maron et al, "Faustian bargains? Restoration realities in the context of biodiversity offset policies" (2012) 155 *Biological Conservation* 141, pp 141–2.
4. Government of New South Wales, Department of Environment and Conservation, *Biodiversity Banking: An Investigation of Market-based Instruments to Secure Long-term Biodiversity Objectives*, background paper, 2006, pp 23–6. Listed examples from the 1960s to the present day include the Brazilian Forest Code established in 1965, the international Ramsar Convention on Wetlands signed in 1971, and the enactment of relevant provisions in the Clean Water Act and Endangered Species Act in the United States in the early 1970s.
5. Ecosystem Marketplace, *2011 Update: State of Biodiversity Markets — Offset and Compensation Programs Worldwide*, 2011, pp 2 and 21.
6. For example, offsets could be required following the assessment of referred planning schemes under Pt IV Div 3, or as a condition of a clearing permit imposed through ss 51H–51I.
7. WA Offsets Policy, p 4. It is noted that a presentation for stakeholders given by the Department of Environment and Conservation (DEC) on 18 January 2013 indicated that the agencies involved in developing the Environmental Offsets Register included the Office of the Environmental Protection Agency, the Department of Premier and Cabinet, the Department of Mines and Petroleum, the Department of Planning, the Department of State Development, and Landgate.
8. Environmental Protection Authority (EPA), *Position Statement 9: Environmental Offsets*, January 2006.
9. EPA, *Environmental Protection Bulletin 1: Biodiversity Offsets*, 2008; and EPA, *Guidance for the Assessment of Environmental Factor: Environmental Offsets — Biodiversity*, Statement No 19, September 2008.
10. EPA, *Draft Environmental Assessment Guideline for Environmental Offsets*, October 2012 (Draft Guideline). The Draft Guideline foreshadows that it will replace the earlier EPA policy advice (Above, n 8 and 9), p 4.
11. Above, n 8 and 9.
12. Above, n 10, p 4.
13. Above, n 7.
14. MNES including, for example, world and national heritage areas, threatened species and Commonwealth marine areas.
15. Relevantly, s 3 of the EP Act defines "proposal" to include a "project, plan, programme, policy, operation, undertaking or development or change in land use".
16. Part IV Div 3 of the EP Act outlines requirements and mechanisms for the environmental assessment of schemes.
17. Section 523 of the EPBC Act defines "action" as including a project, development, undertaking, activity or series of activities, or an alteration to any of these things. Change in land use or preparation or amendment to a scheme is not considered an action on this basis.
18. S Persijn, "Environmental offsets and intergenerational equity", HopgoodGanim Planning and Environment publication, September 2012, p 3, available at www.hopgoodganim.com.au.
19. Western Australian Planning Commission, *State Planning Policy 2.8 — Bushland Policy for the Perth Metropolitan Region (SPP 2.8)*, Pt 4 — Policy Objectives.
20. SPP 2.8, cl 5.1.2.2(ii).
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Groundwater, rivers and ecosystems: comparative insights into law and policy for making the links

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Amid the raging debates about environmental water during the Millennium Drought, and the prelude to new management arrangements for the Murray-Darling Basin (MDB), a general silence fell on the subject of groundwater — eloquently communicating its perceived irrelevance to these debates. Yet groundwater can, and often does, feed rivers,¹ lakes, wetlands, springs, floodplains, estuaries, aquifer-dwelling fauna and even terrestrial vegetation (all groundwater-dependent ecosystems, or GDEs).² Some GDEs are iconic — take river red gums along the Murray, millennia-old mound springs in the Great Artesian Basin, and Coorong wetlands³ — others are less well known, but can support astounding biodiversity.⁴ Pumping groundwater can “pull” water away from connected rivers, and inadvertently damage or destroy GDEs (adverse pumping impacts). As groundwater demand increases, and coal-seam gas and shale gas industries increase the incidental extraction of groundwater,⁵ laws and policies need to recognise the potential for these adverse pumping impacts. While they should not needlessly discourage groundwater use (indeed, sometimes using groundwater is environmentally preferable to using surface water), they must be alert to threats to hard-fought environmental flows and valuable GDEs — not to mention consumptive surface water entitlements.

This article briefly reviews the state of Australian water law and policy mechanisms for preventing and remedying adverse pumping impacts (linking mechanisms), with a focus on groundwater-dependent surface waters and their associated ecosystems. Using legal analysis and interviews with water agency staff across 22 states in Australia and the western United States (US), it investigates key gaps and challenges that affect these mechanisms and their implementation, and suggests ways to overcome those challenges based on experiences across these states. These regions have much in common: water scarcity, over-allocation, generally similar legal systems, levels of development, and acknowledgement of the ecological value of water. However, groundwater demand is higher in the western

US, adverse pumping impacts have manifested themselves earlier and more severely, and underlying state water allocation laws are more numerous and varied.⁶ The similarities are sufficient to make law and policy experiences mutually relevant, but different enough to produce a “living laboratory” of useful approaches to similar problems.

Approaches to protecting rivers and ecosystems from groundwater pumping

Focus on the level of an individual groundwater entitlement

Rather than the water planning focus of very useful previous work,⁷ this article focuses at the level of individual water entitlements or other statutory rights to extract groundwater, while acknowledging the influence and value of water plans and other higher-level arrangements relating to monitoring and water accounting. There are four reasons for this alternative focus. First, an individual bore can have very localised pumping impacts on river reaches (particularly pools in unregulated river systems) and other GDEs. Accordingly, it is important to consider decision-making tools at that local level, in light of specific local conditions (which may not appear distinctly at the water plan level) and a specific predicted impact. Second, this emphasis uncovers statutory linking mechanisms not previously discussed in the literature, and largely overlooked by national-level policy work, which has focused on plans.⁸ Third, water plans typically only take effect “on the ground” through constraints or considerations that they apply to licensing processes, alongside other statutory provisions.⁹ Fourth, significant areas of Australia, in which groundwater use is less intensive, lack water plans (or water plans that cover groundwater), although extraction there can have significant localised adverse impacts managed through licences or other arrangements.¹⁰

Picture law and policy mechanisms for controlling adverse pumping impacts as being grouped into two toolboxes. Tools in the *preventive* toolbox can apply

before pumping itself commences, when an agency receives the application and considers its predicted impacts against acceptable thresholds of impact. Tools in the *remedial* toolbox can apply after pumping commences, when an agency can deal with any unacceptable impacts that have manifested in practice, and that were unanticipated earlier or were permitted before the introduction of a preventive licensing policy. A single jurisdiction may use multiple tools in these toolboxes, and most do.

Each toolbox has compartments structured by the method used to set a threshold of acceptable impact: regulatory (mandatory), economic or voluntary. These distinctions, along with comparisons with the western US, serve to expose gaps in these toolboxes and potential for future development.

The preventive toolbox

Regulatory mechanisms for preventing unacceptable impacts involve using water plans or statutory provisions to set either *numerical* or *principle-based* thresholds, beyond which groundwater pumping will not be permitted.

Simple numerical thresholds are one option. They can:

- prohibit or restrict new groundwater uses or bore permits:
 - completely, or for most types of uses, within a water plan area, based on impacts on rivers;¹¹
 - within a set distance of a stream or other GDE (for example, a spring);¹² or
 - above a certain prospective total volume of groundwater extraction (cap), which is set considering adverse pumping impacts — for example, reserving a proportion of recharge for environmental purposes;¹³ or
- much more rarely, apply a cap or allocate water to surface water and groundwater users in a joint or linked way.¹⁴

Once they are set, simple thresholds are easy to administer: an agency simply compares a pumping application to a cap figure, or a geographical “no-go zone”, to determine whether the pumping may proceed. However, they are relatively imprecise. A large-scale cap can translate into very different levels of impact at a point, depending on the location of bores, particularly in heterogeneous hydrogeological environments. In addition, a simple “no-go zone” that does not follow hydrogeological conditions can allow bores just outside its boundary, which have much the same effect as bores just inside its boundary.¹⁵

More **complex numerical thresholds**, which are rare in Australia, set impacts more precisely by requiring a

modelled calculation of the pumping impacts of an individual groundwater licence application. The trade-off is that they are more expensive and time-consuming to administer, and raise questions about the accuracy of the technical models used to predict impacts. An example is refusing a new licence that would result in exceeding a maximum allowable decrease in water table level, or pressure, at a set distance from a river or spring.¹⁶ A related, but less onerous, approach is to set thresholds that require calculating individual pumping impacts using average local values of hydrogeological parameters.¹⁷ Western US states commonly use complex thresholds, typically requiring an agency to refuse an application for a well that would draw more than a certain proportion of its water from a river within a certain period of time.

Numerical thresholds in Australia tend to allow comparatively large adverse pumping impacts. New South Wales (NSW) has banned new groundwater licences in certain areas where 70% of the water pumped from bores is drawn from connected surface waters within a single irrigation season (a “70% in 9 months policy”).¹⁸ In formulating sustainable diversion limits for the MDB, the MDB Authority used a “50% in 50 years policy” as a key threshold of risk related to setting groundwater extraction caps.¹⁹

By contrast, numerical thresholds in western US states are much stricter in areas with fully allocated surface water, even in areas that would be considered to have low connectivity between surface water and groundwater in Australia.²⁰ Colorado adopts a 0.1% in 100 years policy; Washington and Montana prohibit groundwater pumping having *any* impact over the long term.²¹ Groundwater offset programs — conceptually similar to carbon or habitat offsets — make these thresholds politically possible. Pumping above these levels of impact is not banned outright; rather, a groundwater permit applicant can offset adverse pumping impacts to ensure that there is no *net* exceedance of the threshold. Methods of offsetting include replacing the water that the bore would capture from the river, by buying and retiring, or leasing and not using, a surface water right or groundwater right that affects the same river;²² using replacement water from another source;²³ or, sometimes, paying financial compensation²⁴ or undertaking environmental projects to benefit the affected areas.²⁵

Rather than being quantified, **principle-based thresholds** are expressed as:

- qualitative standards — for example, requiring that granting a licence be in “the public interest”;²⁶ or

- a set of specific environmental issues to be considered — for example, the effects of extracting water on ecosystems²⁷ and the integrity of water-courses, lakes, springs or aquifers;²⁸ ecological sustainability;²⁹ and similar matters.³⁰

In practice, agencies frequently seem unable to specify exactly how they consider these standards and issues, though they appreciate the flexibility that they offer. In addition, courts view the requirements as very broad³¹ and are unlikely to offer particularly specific guidance. Policy guidelines setting out detailed deliberative criteria that clearly correspond to these statutory licensing provisions seem very rare. The resulting high degree of discretion afforded to decision makers considering principle-based thresholds means that they are unlikely to be used consistently or systematically to protect rivers or other GDEs. Sometimes these thresholds are assumed to be satisfied if the applicable water plan has not identified the potential for adverse impacts, or the pumping comes within an applicable cap, and no public protest ensues,³² even though caps, for example, are not necessarily set with regard to the same kinds of statutory considerations as apply to the grant of individual licences.³³ One solution is to set out explicit locally tailored criteria that define principle-based standards, like the public interest, using water plans (as has occurred in New Mexico and Idaho),³⁴ regulations that are triggered if public comment raises the issue (as in Oregon),³⁵ or formal implementation guidelines.

The economic and voluntary compartments of the Australian preventive toolbox are almost empty. Some statutes explicitly allow for economic approaches,³⁶ which could regulate effects on GDEs by, for example, charging a pumping fee to constrain groundwater pumping to acceptable levels. These provisions are rarely used for this purpose in practice.³⁷ Voluntary tools are theoretically possible — for example, to allow groundwater users to purchase voluntary groundwater offsets before pumping commences, mirroring voluntary carbon offsets and voluntary surface water offsets that have emerged in the Pacific Northwest.³⁸ These types of formal arrangements to control groundwater pumping impacts have appeared in practice in neither Australia nor the western US in relation to groundwater.

The remedial toolbox

After pumping begins, and when it becomes obvious that groundwater pumping impacts have become unacceptable, the remedial phase commences. Policy statements about entrenched overallocation suggest that remedial tools are more necessary than one might hope.

The regulatory compartment of the remedial toolbox bristles with possibility, but is rarely used. A water minister often has wide discretion to curtail pumping to

protect ecosystems.³⁹ This rarely occurs in practice, however, other than in fairly uncontroversial or emergency situations — for example, where there has been illegal overuse, or dramatic increases in salinity caused by pumping.⁴⁰ Water plans can, and sometimes do, reduce groundwater entitlements⁴¹ or allocations.⁴² Bitter experience and ongoing litigation over cutting groundwater entitlements suggest the political wisdom of reducing groundwater allocations, which is perceived as less threatening.⁴³ Buying back water entitlements or offering “structural adjustment” payments often soothes the sting of regulatory reductions.

Economically determined thresholds of impact are almost unknown. However, one could imagine at least two possibilities that would serve as both preventive and remedial tools. A simple approach could impose fees in areas where GDEs are more “valuable” than average. A more complex approach could impose location-dependent pumping fees that reflect the monetised adverse impacts of groundwater pumping. One approach to valuing these impacts would be to use ecosystem services, which has assisted setting surface water diversion limits in the MDB.⁴⁴ Either would encourage groundwater pumpers to locate — or relocate — to areas in which pumping is cheaper and has fewer adverse impacts. Though this would doubtless strike challenges in reflecting environmental costs that vary (probably non-linearly) in time and space,⁴⁵ the underlying concepts are very similar to voluntary trading zone tools, discussed below, and recent NSW policy that requires a large-scale project involving “aquifer interference” to provide a security deposit that reflects “the level of risk to the aquifer or its dependent ecosystems from the proposed activity”.⁴⁶

Voluntary tools (as defined here, which neither rely on mandatory thresholds of acceptable impact nor compel a groundwater pumper to act in a particular way) are rare. Existing voluntary tools include one-way water trading rules, which ensure that groundwater entitlements may only be transferred out of a sensitive area, or away from a river-side zone, or from one water source to another, such that adverse pumping impacts diminish over time;⁴⁷ and engineering solutions — for example, pumping water into high-value wetlands, caves or river pools affected by groundwater use.⁴⁸ Individuals may also elect to reduce their groundwater pumping voluntarily, on a more informal basis.

In summary, then, Australia’s preventive toolbox favours imprecise, relatively high-threshold, macro-scale protections that are easy to administer; and little else is widely used in practice. Our remedial toolbox contains regulatory tools that are used even more rarely, and are politically and (in practice) financially burdensome for governments.

Implementation challenges and potential solutions

Many cross-cutting challenges face laws and policies for controlling adverse groundwater pumping impacts, regardless of the particular tool used.

Groundwater information and burdens of proof:

The general paucity of information on the stream-connectedness of aquifers and other information required to predict adverse pumping impacts⁴⁹ poses a profound challenge to decision makers. They can respond by taking one or more of the following actions, most of which are emerging slowly in Australia, but are more common in the western US:⁵⁰

- assume that groundwater and surface water are connected, in the absence of evidence to the contrary, at least in high-risk areas — a recommended approach that has largely not been adopted in practice in Australia, though various statutory and policy options are available to do this;⁵¹
- require applicants to prove that they will have minimal impacts,⁵² which would require some agencies to confront sensitivities about requiring applicants to undertake potentially expensive investigations;⁵³
- grant a licence, conditional on the holder collecting additional data during an initial pumping term;⁵⁴ and/or
- invest in studying groundwater-surface water interaction⁵⁵ in a pragmatic way by systematically prioritising investigations based on groundwater demand, the ecological value of groundwater, and hydrological complexity.⁵⁶

Prioritising protections: There is often little existing scientific knowledge about the locations or water needs of GDEs, and determining their water requirements is an emerging and time-consuming science.⁵⁷ A slew of new scientific tools and maps, released after a period of substantial government investment into GDE research, will help identify GDEs,⁵⁸ but prioritising them for protection is an ongoing challenge. A number of bases for prioritising GDEs have emerged:

- community values, usually in conjunction with another basis;⁵⁹
- advice from special-purpose technical committees⁶⁰ or regional natural resources agencies;⁶¹
- pre-existing lists of valuable species or ecosystems — for example, endangered species or Ramsar wetlands, or GDEs within protected areas;⁶²
- basic threat assessment (such as the surrounding level of consumptive demand for groundwater); or
- sophisticated multi-criteria or multiple-input risk assessment.⁶³

Impacts distributed in time: Long time lags can separate pumping groundwater and impacting streamflow or other GDEs — both because groundwater often moves slowly, and because ecosystems take time to respond to reduced water availability.⁶⁴ Australian laws and policies are frequently silent on the time horizons within which impacts must be felt to be considered material. Commonly adopted short-term views⁶⁵ can inadvertently “lock in” cumulatively significant future impacts that are considered too distant (or too politically difficult) to worry about. One groundwater expert has suggested that in the MDB, groundwater pumping that commenced in 1993 will deplete streamflow by at least 711 GL/yr by 2050.⁶⁶ By comparison, this is over a quarter of the volume of water required to be recovered for the environment under the MDB plan. Failing to consider a long enough time horizon could also mean investing in expensive remedial measures that could prove futile in changed future climatic conditions — a current policy issue in Western Australia’s drying climate.⁶⁷

Cumulative impacts of licence-exempt groundwater uses: Groundwater uses that do not require a licence — typically domestic or stock bores, and sometimes wells⁶⁸ used by extractive industries, such as unconventional gas⁶⁹ — fall outside the scope of many of the tools discussed here, which generally operate only on licensed uses. Several solutions to controlling their individually small, but sometimes cumulatively significant, impacts present themselves. Many are very recent:⁷⁰

- provide for special regulatory controls that apply to licence-exempt uses — for example, plan provisions, ministerial orders, or conditions on the siting of bores,⁷¹ or monitoring and mitigation requirements for coal-seam gas activities;⁷²
- apply a cap⁷³ or other threshold⁷⁴ to all licensable and licence-exempt extraction; or
- remove licence exemptions in areas of intensive groundwater use;⁷⁵ or require a special licence for incidental extraction.⁷⁶

Involving third parties: Water planning processes generally provide for community comment and participation on committees formulating management plans, and some water licensing processes (arguably not enough) also provide for public comment.⁷⁷ Western US states almost universally require public comment processes in licensing.⁷⁸ Third-party input is particularly valuable in the context of adverse pumping impacts because many GDEs are highly localised and are therefore unlikely to be described in water plans, and scientific data about them are often scarce. However, gaining meaningful third-party input in this context is a significant challenge: public awareness is low; time lags obscure

connections between groundwater pumping and environmental change; Australian environmental non-government organisations (NGOs) are not generally highly engaged with groundwater matters; and environmental water holders and managers seem generally unengaged with groundwater licensing decision makers. On the other hand, new accessible tools such as the Australian National GDE Atlas⁷⁹ could help inform agencies and the public about the presence of GDEs near proposed or existing bores. In addition, endangered species issues, which have driven strong concerns for certain GDEs in the western US,⁸⁰ are emerging in Australia,⁸¹ building on older movements to protect wilderness caves.⁸²

Opportunities for Australia

Australian jurisdictions can improve both the range of mechanisms available to control the adverse impacts of pumping groundwater on rivers and other GDEs, and the implementation of existing mechanisms. With an eye to current economic concerns, and water reform fatigue, the most pragmatic way to pursue these improvements is by working within existing law and policy structures, as far as possible. Based on the analysis above, I offer the following seven recommendations for water agencies and stakeholders:

1. Re-emphasise the importance of licence-level considerations, in addition to water plan-level mechanisms (such as caps), in controlling adverse pumping impacts. The former can be more tailored to the local situation than the latter.
2. Consider lowering numerical thresholds of pumping impacts deemed to be worth preventing, using a long (or at least explicit) time horizon, and encompassing all groundwater use, whether licensable or not. Focusing on prevention accords with Australia's forward-looking planning philosophy, and will avoid locking in undesirable future impacts that are politically and financially difficult to remedy.
3. Consider developing formal groundwater offset programs, building on western US experience and existing mentions in Australian groundwater policy,⁸³ and current ad hoc and emerging use of them in various groundwater contexts.⁸⁴ Offset programs can reduce the political risks of more robustly protecting surface waters in fully allocated catchments, particularly in the context of large, economically significant extractive projects.
4. Increase the effectiveness of flexible, principle-based thresholds (such as the "public interest" test, and statutory environmental considerations) by detailing locally specific, compulsory deliberative criteria in water plans or formal implementation guidelines.
5. Encourage community and NGO involvement in groundwater licensing and planning by emphasising places, benefits and species that people can relate to — for example, use the freely available National GDE Atlas, ecosystem services concepts, and connections between groundwater and endangered species to raise awareness.
6. Consider developing economic tools using existing powers to impose environment-related pumping fees,⁸⁵ and national policy support.⁸⁶
7. Invest in methods and policies for prioritising the protection of GDEs. They are vital to systematically implementing all of the tools discussed here. Consider imposing a burden of proof on groundwater applicants to demonstrate that pumping will not result in unacceptable adverse impacts in high-priority areas.

Together, these measures would help to enhance the Australian toolbox of mechanisms for preventing and remedying the adverse impacts of pumping groundwater on rivers and other GDEs, and increase the effectiveness of our existing tools.

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Footnotes

1. Note that in some cases, diverting surface water impacts groundwater supplies and ecosystems by reducing recharge to aquifers in "losing" streams, and laws and policies must deal with this reverse situation — for example, Natural Resources Management Act 2004 (SA), ss 132(1)(a)(iii), 132(1)(c). For reasons of brevity, this article focuses solely on the impacts of pumping groundwater on surface waters and ecosystems.

2. For a formal definition, see C Clifton, B Cossens and C McAuley, *A Framework for Assessing the Environmental Water Requirements of Groundwater Dependent Ecosystems: Report 1 Assessment Toolbox*, 2007, p 1.
3. Sinclair Knight Merz Pty Ltd, *Environmental Water Requirements to Maintain Groundwater Dependent Ecosystems*, National River Health Program Environmental Flows Initiative Technical Report Number 2, 2001, pp 4, 8.
4. MT Guzik et al, "Is the Australian subterranean fauna uniquely diverse?" (2010) 24 *Invertebrate Systematics* 407, p 411.
5. R Nelson, "Unconventional gas and produced water" in *Australia's Unconventional Energy Options*, ed Committee for Economic Development of Australia, 2012, p 27.
6. The dominant system for allocating water in the western US is prior appropriation, under which a right to extract water that developed earlier in time is "senior" to, and more reliable than, a "junior" right that developed later. An administrative permit system generally applies. If there is insufficient water to satisfy all users, the right of the most junior will not be fulfilled, in order, to ensure supply to seniors. See J L Sax et al, *Legal Control of Water Resources: Cases and Materials* (4th ed), 2006, pp 124–6.
7. Sinclair Knight Merz, *National Framework for Integrated Management of Connected Groundwater and Surface Water Systems*, 2011; M Tomlinson, *Ecological Water Requirements of Groundwater Systems: A Knowledge and Policy Review*, 2011; National Water Commission, Australia, *National Water Planning Report Card 2011*, 2011.
8. For example, principle-based thresholds: below, nn 26–30 and accompanying text.
9. Water plans do very occasionally contain "self-executing" provisions that control pumping that does not need to be licensed: see below, n 71.
10. For example, declared subartesian areas in Queensland: Water Act 2000 (Qld), s 1046; Water Regulation 2002 (Qld), Sch 11.
11. For example, Water Sharing Plan for the Bega and Brogo Rivers Area Regulated, Unregulated and Alluvial Water Sources 2011 (NSW), cl 54.
12. Tomlinson, *Ecological Water Requirements*, above, n 7, p 127.
13. Tomlinson, *Ecological Water Requirements*, above, n 7, p 17.
14. For example, the Peel Valley in New South Wales: Sinclair Knight Merz, *National Framework*, above, n 7, p 61.
15. Interview with Jennifer Fraser, Director, Groundwater and Licensing, Victorian Department of Sustainability and Environment, and Patrick O'Halloran, Manager, Policy and Licensing, Victorian Department of Sustainability and Environment, Melbourne, 24 May 2012. Alternatives to simple no-go zones have been proposed, which would involve a multiple zone approach: R Evans, *The Effects of Groundwater Pumping on Stream Flow in Australia: Technical Report*, 2007, pp 71–6.
16. Tomlinson, *Ecological Water Requirements*, above, n 7, pp 52, 127.
17. For example, "cumulative spring factors": Department of Natural Resources and Mines, Queensland, Great Artesian Basin Resource Operations Plan, 2007, as amended, 2012, cl 39.
18. Interview with Michael Williams, Manager, Groundwater, NSW Office of Water, Sydney, 24 July 2012.
19. This threshold was used as part of the Recharge Risk Assessment Method process, the results of which were later modified in some cases in the formulation of sustainable diversion limits. Murray-Darling Basin Authority, *The Proposed Groundwater Baseline and Sustainable Diversion Limits: Methods Report*, 2012, pp 19–20.
20. I propose several hypotheses to explain this difference: adverse effects have been less severe in Australia, leading to a correspondingly reduced will to prevent impacts; remedial tools are theoretically easier to administer in Australia, since governments have commonly reserved to themselves the power to reduce entitlements (an act that would attract legal challenge in the western United States, based on being an unconstitutional "taking" of private property without just compensation); and the prior appropriation system brings home the impacts of relatively small adverse impacts to individual surface water right users, as opposed to being diluted among a consumptive pool, which excites correspondingly louder calls to restrain these impacts.
21. *Postema v Pollution Control Hearings Board* (2000) 142 Wn2d 68, p 94; telephone interview with Tim Davis, Water Resources Division Administrator, Montana Department of Natural Resources and Conservation, 2 August 2012.
22. For example, Revised Statutes of Nebraska, § 46-715(3)(e); Oregon Administrative Rules, rr 690-505-0610(3)(b), 690-505-0610(8); telephone interview with Tim Davis, above, n 21 (referring to buying "contract water" from federal government storage projects, for release to a stream).
23. For example, discharging water stored using managed aquifer recharge into the river: W Blomquist, T Heikkila and E Schlager, "Institutions and conjunctive water management among three western states" (2001) 41 *Natural Resources Journal* 653, pp 678–9; Idaho Administrative Code, r 37.03.11.043 (03)(d); telephone interview with Tim Davis, above, n 21.
24. Interview with Brian Patton, Planning Bureau Chief, Idaho Water Resource Board, Boise, 31 October 2011; interview with Kent Jones, State Engineer, Utah Division of Water Rights, Salt Lake City, 2 November 2011 (describing an early practice of accepting monetary compensation, which occurs less often now).
25. Department of Ecology, Washington (state), *Focus on Mitigation in the Yakima Basin*, 2012, p 2, available at <https://fortress.wa.gov>; interview with Brian Walsh, Policy and Planning Section Manager, Water Resources Program, Washington Department of Ecology, Lacey, 27 October 2011; interview with Kevin Rein, Deputy State Engineer, Colorado Division of Water Resources, Denver, 7 November 2011 (in relation to the Colorado Water Conservation Board allowing injury to an

- instream flow right in return for another measure of environmental value if, for example, replacement water cannot be found). Note that some states specifically exclude certain types of offsetting measures by statute — for example, Colorado Revised Statutes, § 37-92-103(9) (prohibiting offsetting by removing vegetation that uses groundwater).
26. Natural Resources Management Act 2004 (SA), ss 147(6)(a), 149(3)(b), 150(8)(b), 156(3)(b), 157(5)(b); Water Act 2000 (Qld), s 210(1)(i); Rights in Water and Irrigation Act 1914 (WA), Sch 1 cl 7(2)(a).
 27. Water Act 2000 (Qld), s 210(e).
 28. Water Act 2000 (Qld), s 210(f); Water Act 1989 (Vic), s 40(1)(d)(ii).
 29. Rights in Water and Irrigation Act 1914 (WA), Sch 1 cl 7(2)(b), (c); Water Act 1989 (Vic), s 40(1)(g); Water Management Act 1999 (Tas), s 63(1)(c).
 30. Water Act 1989 (Vic), s 40(1)(c); Water Act 1992 (NT), ss 71C(3)(b), 90(1)(e); Water Management Act 2000 (NSW), 63(2)(b).
 31. For example, *Minister for Environment and Conservation v Simes* (2007) 98 SASR 481; 153 LGERA 225; [2007] SASC 248; BC200705228 at [48]; *Harvey v Minister Administering the Water Management Act 2000* (2008) 160 LGERA 50; [2008] NSWLEC 165; BC200804598 at [74]–[75].
 32. Telephone interview with Saji Joseph, Director, National and State Water Policy Water Resources Strategy, Water and Catchments Division, Department of Natural Resources and Mines, Queensland, 19 July 2012; interview with Jennifer Fraser and Patrick O’Halloran, above, n 15.
 33. For example, in Victoria, groundwater caps, which are termed “permissible consumptive volumes”, are not required to be set after technical assessments of resource sustainability or the requirements of GDEs, but statutory licensing requirements refer to a range of very specific environmental issues: interview with Jennifer Fraser and Patrick O’Halloran, above, n 15; Water Act 1989 (Vic), s 53(b).
 34. New Mexico Statutes, § 72-14-3.1(C)(11); A Weeks, “Defining the public interest: administrative narrowing and broadening of the public interest in response to the statutory silence of water codes” (2010) 50 *Natural Resources Journal* 255, pp 283–5; *Taos Regional Water Planning Steering Committee, Taos Regional Water Plan: Volume 1 — Water Plan*, 2008, pp 2-5–2-10, available at www.ose.state.nm.us; *In the Matter of Application for Permit No 37-20742 in the Name of Robert G Friedman*, Idaho Department of Water Resources, 25 August 2003, Idaho Department of Water Resources Decisions 21, ¶ 19 (describing the Blaine County Local Public Interest Water Policy).
 35. Oregon Revised Statutes, §§ 537.153(2), 537.170(8) (setting out detailed criteria that must be considered if a public protest against a groundwater application is made, which overcomes a presumption that granting an application would be in the public interest).
 36. For example, Natural Resources Management Act 2004 (SA), s 103.
 37. Telephone interview with Michael Fuller, Acting Director, Water Planning and Management, Department of Environment, Water and Natural Resources, South Australia, 11 September 2012 (in relation to the use of a natural resources management levy for a variety of activities, none of which directly related to environmental impacts).
 38. T Reeve, “Harnessing a voluntary market to restore flow to dewatered rivers and streams”, Global Water Forum, 2012, available at www.globalwaterforum.org.
 39. For example, Natural Resources Management Act 2004 (SA), ss 132(1)(a)(i), 132(1)(d), 132(1)(e), 132(2), 132(5).
 40. Telephone interview with Susan Worley, Branch Manager, Water Allocation Planning, Department of Water, Western Australia, 6 September 2012; telephone interview with Ingrid Franssen, Manager Policy, Department of Environment, Water and Natural Resources, South Australia, 11 September 2012 (referring to a Notice of Prohibition on Water Use in the Poldia Basin in the Musgrave Prescribed Wells Area).
 41. National Water Commission, *National Water Planning Report Card*, above, n 7, p 385 (in relation to the Lower Gascoyne River Groundwater and Surface Water Allocation Plan 2010); interview with Ingrid Franssen, above, n 40 (referring to the Clare Valley, McLaren Vale, and Tatiara Prescribed Wells areas).
 42. Interview with Simon Cowan, Manager, Groundwater and Unregulated Systems, Goulburn-Murray Water, Tatura, Victoria, 30 July 2012 (describing seasonal allocations based on groundwater trigger levels that are set to maintain the direction of groundwater flow to avoid undesirable movement of saline groundwater); Natural Resource Management Standing Committee, *Case Examples of Managing Overallocated Groundwater Systems*, 2002, p 4.
 43. NSW Office of Water, “Achieving Sustainable Groundwater Entitlements Program”, 2011, available at www.water.nsw.gov.au; *ICM Agriculture Pty Ltd v Commonwealth* (2009) 240 CLR 140; 170 LGERA 373; [2009] HCA 51; BC200911041; interview with Michael Williams, above, n 18.
 44. CSIRO, *Assessment of the Ecological and Economic Benefits of Environmental Water in the Murray-Darling Basin: The Final Report to the Murray-Darling Basin Authority from the CSIRO Multiple Benefits of the Basin Plan Project*, 2012, p 23.
 45. Productivity Commission, Australian Government, *Water Rights Arrangements in Australia and Overseas*, 2003; Agriculture and Resource Management Council of Australia and New Zealand and Standing Committee on Agriculture and Resource Management, *Allocation and Use of Groundwater: A National Framework for Improved Groundwater Management in Australia — Policy Position Paper for Advice to States and Territories*, 1996, p 12, available at www.environment.gov.au.
 46. NSW Office of Water, *NSW Aquifer Interference Policy: NSW Government Policy for the Licensing and Assessment of Aquifer Interference Activities*, 2012, p 30.

47. Interview with Robert Knowles, Water Resources Officer, Goulburn-Murray Water, Tatura, Victoria, 30 July 2012 (referring to the Lower Ovens River water plan encouraging the movement of water extraction from shallower, highly stream-connected aquifers to deeper, less connected aquifers); Sinclair Knight Merz, *National Framework*, above, n 7, pp 55, 70–1; Goulburn-Murray Water, *Upper Ovens River Water Supply Protection Area Water Management Plan*, 2012, pp 44–7.
48. Interview with Susan Worley, above, n 40; Tomlinson, *Ecological Water Requirements*, above, n 7, pp 131–2.
49. For a general overview of the reasons behind this paucity of information in relation to GDEs, and the information required to make decisions about protecting GDEs, see B H Thompson Jr, “Beyond connections: pursuing multidimensional conjunctive management” (2011) 47 *Idaho Law Review* 273, pp 298–301.
50. For examples of western US positions on these matters, see *Simpson v Bijou Irrigation Co* 69 P3d 50, 59 n 7 (Colorado 2003), pp 26–7 (in relation to presuming that groundwater and surface water are connected); interview with Tim Davis, above, n 21 (requiring an applicant for a groundwater permit in a closed basin to submit a formal hydrogeological assessment for the application even to be considered); P Barroll, “Regulation of water versus hydrologic reality in New Mexico” (2003) 2 *Southwest Hydrology* 20, p 21 (granting a temporary permit with a requirement to acquire more information); Revised Code of Washington, § 90.03.290 (providing for a preliminary permit, with the holder to provide further information required by the water agency within the period of the permit). In relation to scientific investigations, see below, n 56 for Montana’s approach.
51. P Cullen, “Flying blind: the disconnect between groundwater and policy”, *10th Murray-Darling Basin Groundwater Workshop*, 19 September 2006, p 4; C J Nevill, “Managing cumulative impacts: groundwater reform in the Murray-Darling Basin, Australia” (2009) 23 *Water Resources Management* 2605, p 2618; National Water Commission, *The National Water Initiative — Securing Australia’s Water Future: 2011 Assessment*, 2011, p 100; I Fullagar, *Rivers & Aquifers: Towards Conjunctive Water Management (Workshop Proceedings)*, 2004, p 2; telephone interview with Ludovic Schmidt, Manager, Water Management Branch, Department of Primary Industries, Parks, Water and Environment, Tasmania, 13 July 2012 (does presume a high level of connectivity in the context of water plans, in the absence of data on the matter, but only one water plan includes groundwater so far, being the Sassafras Wesley Vale Water Management Plan 2012); Water Act 2000 (Qld), s 1006.
52. For example, Natural Resources Management Act 2004 (SA), s 147(1)(c).
53. For example, interviews with Simon Cowan, above, n 42, and Robert Knowles, above, n 47.
54. Department of Sustainability and Environment, Victoria, *Policies for Managing Take and Use Licences*, 21 September 2010, cl 15.
55. Such investigations have become very widespread in Australia. A recent wide-ranging example is Sinclair Knight Merz, *Impacts of Groundwater Extraction on Streamflow in Selected Catchments throughout Australia*, Waterlines Report 84, 2012.
56. For example, R Sheldon, *Groundwater and Surface Water Connectivity in Tasmania: Preliminary Assessment and Risk Analysis*, 2011, pp 52–77, available at www.stors.tas.gov.au; Clark Fork River Basin Task Force, Department of Geography, University of Montana and Montana Department of Natural Resources and Conservation, *Proceedings of the Montana Conjunctive Water Management Conference*, 8–9 June 2009, pp 2–3, 10, available at <http://dnrc.mt.gov>.
57. Tomlinson, *Ecological Water Requirements*, above, n 7, p 28; telephone interview with Moya Tomlinson, Principal Policy Officer, Groundwater Policy Unit, National and State Water Policy, Water Resource Strategy, Department of Natural Resources and Mines, Queensland, 16 July 2012.
58. For example, Australian Government, Bureau of Meteorology, *Atlas of Groundwater Dependent Ecosystems*, available at www.bom.gov.au; D Eamus, *Identifying Groundwater Dependent Ecosystems: A Guide for Land and Water Managers*, 2009; S Richardson et al, *Australian Groundwater-Dependent Ecosystems Toolbox: Part 1: Assessment Framework*, Waterlines Report Series No 69, 2011; P Howe and J Pritchard, *A Framework for Assessing the Environmental Water Requirements of Groundwater Dependent Ecosystems: Report 3 — Implementation*, 2007; interview with Ingrid Franssen, above, n 40 (describing a project to list, map and analyse the probability that wetlands around the state are connected to groundwater, to inform water planning processes); P E Dressel et al, *Mapping Terrestrial Groundwater Dependent Ecosystems: Method Development and Example Output*, 2010; for an overview of National Water Commission-funded projects, see <http://archive.nwc.gov.au>.
59. Interview with Moya Tomlinson, above, n 57 (referring to the Environmental Flows Assessment Program process); interview with Ingrid Franssen, above, n 40 (in relation to identifying GDEs in the Clare Valley).
60. Queensland’s water planning framework involves setting up a special-purpose technical reference panel to assist in the preparation of each water plan. In a few cases, this process has included identifying and assessing the water requirements of “high priority” GDEs: interview with Saji Joseph, above, n 32; interview with Moya Tomlinson, above, n 57; SKM, *Callide Groundwater Dependent Ecosystem Assessment: Fitzroy Basin Water Resource Plan*, 2008, available at www.mackay.qld.gov.au.
61. Interview with Jennifer Fraser and Patrick O’Halloran, above, n 15.
62. In New South Wales, regional plans set out a list of “high priority GDEs” — typically those that are present on an external register. The comprehensiveness of these lists varies

- greatly, with some being entirely empty. Compare, for example, Water Sharing Plan for the Dorrigo Plateau Surface Water Source and the Dorrigo Basalt Groundwater Source (2003), Sch 8, with Water Sharing Plan for the Lower Gwydir Groundwater Source (2003), Sch 5 (stating “To be inserted by the Minister ...”). Tasmania’s Conservation of Freshwater Ecosystems Values database (available at <http://wrt.tas.gov.au>) and the Atlas of Tasmanian Karst both contain GDEs.
63. NSW has completed a project to more comprehensively identify and value GDEs based on an ecologically driven classification system, rather than relying on pre-established lists: interview with Michael Williams, above, n 18; P Serov, L Kuginis and J P Williams, *Risk Assessment Guidelines for Groundwater Dependent Ecosystems: Volume 1 — The Conceptual Framework*, 2012. Further reports associated with these guidelines are available from the NSW Office of Water at www.water.nsw.gov.au. See also Sheldon, above, n 56.
 64. Sinclair Knight Merz, National Framework, above, n 7, pp 9–11.
 65. Nevill, above, n 51, p 2608.
 66. Evans, above, n 15, p 53.
 67. Interview with Susan Worley, above, n 40 (in relation to selecting groundwater-dependent wetlands to be protected in light of the effects of reduced precipitation).
 68. In addition to wells proper, mine voids that intercept groundwater and cause significant “use” through evaporation are another such incidental use of groundwater, with the potential to affect streams and ecosystems. Sinclair Knight Merz, CSIRO and Bureau of Rural Sciences, *Surface and/or Groundwater Interception Activities: Initial Estimates*, 2010, p 95.
 69. For example, Petroleum and Gas (Production and Safety) Act 2004 (Qld), s 185(3).
 70. The NSW policy was only promulgated in late 2012; the provision in Queensland was introduced in 2010 (Water and Other Legislation Amendment Act 2010 (Qld), s 195), and as at the date of writing only one underground water impact report for a cumulative management area has been produced: Queensland Water Commission, *Underground Water Impact Report for the Surat Cumulative Management Area*, 2012.
 71. For example, Natural Resources Management Act 2004 (SA), s 127(2); Water Act 1989 (Vic), ss 33AAA, 33AAB; Water Act 2000 (Qld), ss 22, 26.
 72. Water Act 2000 (Qld), ss 361–454.
 73. Water Act 2007 (Cth), ss 4(1) (take), 23 (long-term average sustainable diversion limits). Presumably under this approach, Basin states will either need to find ways to restrict exempt uses, or restrict licensed uses so that exempt uses can continue (and continue to grow) unimpeded; Sinclair Knight Merz, *National Framework*, above, n 7, p 53.
 74. For example, Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources (Sydney Basin Blue Mountains Groundwater Source) 2011 (NSW) (banning the granting or amending of bore approvals within 100m of high priority GDEs in the case of “bores used solely for extracting basic landholder rights”).
 75. For example, Natural Resources Management Act 2004 (SA), s 124(7); although Victorian statute does not require that public comment be invited in relation to a licensing process, it makes provision for it (Water Act 1989 (Vic), s 49(1)(a)) and, in practice, licensing processes usually include this step: interview with Jennifer Fraser and Patrick O’Halloran, above, n 15.
 76. Water Management Act 2000 (NSW), s 91; NSW Office of Water, *Aquifer Interference Policy*, above, n 46.
 77. For example, Water Act 2000 (Qld), s 210.
 78. For example, Colorado Revised Statutes, § 37-90-107; Revised Code of Washington, §§ 90.03.280, 90.44.060; North Dakota Administrative Code 89-03-01-04.
 79. Bureau of Meteorology, above, n 58.
 80. Concerns focus particularly on endangered anadromous fish and spring-dependent species: interview with Ivan Gall, Groundwater Manager, Department of Water Resources, Oregon, Salem, 25 October 2011; telephone interview with Robert Mace, Deputy Executive Administrator, Water Science and Conservation, Water Development Board, Texas, 1 June 2012.
 81. Interview with Moya Tomlinson, above, n 57 (referring to Great Artesian Basin mound springs).
 82. For example, Colong Caves in NSW and Exit Caves in Tasmania: “Invaders’ fight a quarry”, Sun (Melbourne), 24 April 1971; N Clark, “Quarry lobby re-opens the war”, Hobart Mercury, 10 March 1993.
 83. Sinclair Knight Merz, National Framework, above, n 7, pp 69–70; NSW Office of Water, *Aquifer Interference Policy*, above, n 46, pp 5, 6; Natural Resources Management Act 2004 (SA), s 160(2)(b)(i) (department to require a water user to contribute to an “environmental improvement program” to offset environmentally detrimental effects of water use). Its main use so far has been to require irrigators in the Angas Bremer area to plant deep-rooted vegetation to offset the salinising effect of applying irrigation water: interview with Ingrid Franssen, above, n 40; Department of Sustainability and Environment, Victoria, Western Region Sustainable Water Strategy, 2011, p 125; Murray-Darling Basin Authority, above, n 19, p 20.
 84. For example, interview with Simon Cowan, above, n 42 (referring to a requirement of a Tylden quarry to pump groundwater intercepted by a quarry into a stream); interview with Susan Worley, above, n 40 (referring to the potential requirements to support GDEs affected by mine dewatering in the Pilbara until the water table recovers); Water Act 2000 (Qld), s 408 and following; Victorian Ombudsman, *Investigation into the Foodbowl Modernisation Project and Related Matters*, 2011, p 27 (offsetting impacts of Food Bowl Modernisation Project in reducing seepage to environmentally important wetlands).
 85. Above, nn 37 and 83.
 86. Productivity Commission, above, n 45.

Exemptions from cease-to-pump rules in the Hunter coal field: mines 1, aquifers 0

Emma Carmody EDO NSW

The Hunter coal field is the largest of five major coal fields in New South Wales.¹ It is home to 20 of the largest coal mines in the world.² Major mining operators in the region include BHP Billiton, Xstrata, Rio Tinto, Yancoal and Peabody Energy. Between them, these five companies operate 19 open-cut and underground mines.³ These include Ashton Coal Mine,⁴ Wambo Mine,⁵ Ravensworth (open-cut), Ravensworth (underground),⁶ Mount Thorley Warkworth, Hunter Valley Operations,⁷ and the region's largest open-cut operation, Mount Arthur, which produces some 20 million tonnes of coal per annum.⁸

These mines are located within a catchment characterised by a high degree of connectivity between up-river alluvial aquifers and surface water resources, as well as numerous groundwater-dependent ecosystems (GDEs).⁹ By way of background, alluvial aquifers are in most instances shallower than sedimentary and fractured rock aquifers and therefore vulnerable to contamination,¹⁰ while changes to the quality and quantity of groundwater will have the greatest impact on highly dependent ecosystems.¹¹

The Hunter Unregulated Alluvial Water Sharing Plan (Hunter WSP), which covers 39 water sources, is described in the official background document as including "water sharing rules for the highly connected alluvial aquifers".¹² This document goes on to indicate that "water sharing rules have been developed to protect significant groundwater-dependent ecosystems (GDEs) where they are known to occur in alluvial aquifers". These include highly dependent subterranean cave ecosystems rich in biodiversity and highly dependent coastal wetlands, as well as a number of "potentially dependent" endangered ecological communities (EECs) located on alluvial floodplains, which "may be further investigated during the term of the Plan".¹³

Report cards for each water source within the Hunter WSP also detail their respective "instream value" (based on biodiversity, threatened species and so on), as well as risks to those values. Report cards tend to highlight the impact of extractions on the hydrological functioning of groundwater and surface water in the catchment. For example, cards for the Glennies water source and the

Upper Wollombi Brook water source both indicate that they are under a "high" level of hydrological stress due to demand for water exceeding availability during peak periods.¹⁴

Emphasis has been placed on Glennies and Wollombi Brook due to their proximity to a significant number of coal mines. These include Ashton Coal Mine, Hunter Valley Operations, Ravensworth (open-cut and underground), Mount Owen and Mount Thorley Warkworth. Rules in the Hunter WSP should ideally seek to protect and restore the hydrological functioning of these and other highly stressed water sources, as well as maintain connectivity between alluvial aquifers and surface water. This necessarily involves imposing rules that regulate where, when and how much water can be extracted from aquifers by mining companies.

Amendments to the Hunter WSP — exemptions for mining companies

On 22 February 2012, the Minister for Primary Industries exercised her power under s 45(1)(a) of the Water Management Act 2000 (NSW) (WM Act) and made an order amending the Hunter WSP (Order),¹⁵ which came into effect on 8 March 2013.

While it is beyond the scope of this article to analyse each amendment, of particular concern are changes to rules originally intended to protect alluvial aquifers during periods of low flow. Specifically, all water taken under an aquifer access licence for the purposes of a development approved under Pt 3A, Pt 4 (if it is State Significant Development) or Pt 5.1 of the Environmental Planning and Assessment Act 1979 (NSW) (EPA Act) is now exempt from cease-to-pump rules.¹⁶ To clarify, these three parts of the EPA Act cover almost all forms of mining exploration and production. Consequently, all large coal mining developments will be permitted to continue extracting water from alluvial aquifers during periods of "very low flow", which necessarily includes periods of drought.

As previously indicated, it is known that alluvial aquifers in the Hunter are highly connected to one another, as well as to rivers and their tributaries. Thus, interfering with the hydrological functioning of one

aquifer will in turn impact on other connected water sources. It will also potentially undermine the health of GDEs, such as wetlands and caves — both of which support a range of flora and fauna.

In addition to compromising the environment, these exemptions introduce a hierarchy among holders of aquifer access licences. While it is not the intent of this article to suggest that the exemptions should apply more broadly (on the contrary, they should be repealed), it is important to note that they have been made to the detriment of other users — in particular, irrigators.

Lack of parliamentary and community scrutiny

The Order included some 121 amendments to what is a particularly labyrinthine set of rules governing water use in the Hunter catchment. Despite the scale, complexity, and environmental and social impacts of these amendments, the Minister was not required under the WM Act to consult with the community before making the Order.

Analysis of the Interpretation Act 1987 (NSW) also revealed that the Minister did not have to table the Order in Parliament. Specifically, the Interpretation Act only provides for statutory rules (the definition of which excludes orders of this nature) to be subject to disallowance.¹⁷ Indeed, it appears that WSPs do not satisfy the definition of a statutory rule, which in turn means that they are non-disallowable instruments.¹⁸

It is clearly undesirable for every piece of delegated legislation — however minor — to be subject to disallowance. However, instruments vested with significant regulatory power should be subject to parliamentary oversight and potential disallowance. WSPs fall squarely within this category insofar as they govern how water is allocated between users across an entire catchment. Consequently, they are one of the most important components of natural resource law in New South Wales.

The aforementioned analysis highlights the need for reform in this area. Ideally, this would include amendments to the WM Act compelling the Minister to consult with the community before making orders amending certain categories of rules in WSPs — in particular, cease-to-pump rules and rules designed to protect connectivity between water sources. The WM Act should also be amended to ensure that WSPs meet the definition of a statutory rule, and are therefore disallowable. This would be as simple as requiring the Minister to obtain the Governor's approval before making a Plan.¹⁹

Activation of s 61I of the Water Management Act

The Order amending the Hunter WSP cannot be considered in isolation from another significant amendment to the WM Act that came into force one week prior.

In short, s 61I of the WM Act was activated on 1 March 2013, thereby requiring mining companies to hold water access licences for all extractions, including incidental take. Incidental take, which occurs when a mine is excavated beneath the water table, can result in significant quantities of water being diverted from aquifers. Prior to the activation of s 61I, incidental take did not need to be accounted for with an access licence, and so on paper was “invisible”.

However, as incidental take is continuous, it will be difficult for mining companies to comply with cease-to-pump rules. Thus, it is plausible that the aforementioned amendments to the Hunter WSP were made to protect mining companies from breaching rules limiting or prohibiting take during periods of low flow. This being the case, these amendments essentially cement in law a special “right” to extract water in all circumstances, including during periods of drought — as long as the company is in possession of the requisite licence(s). This is arguably tantamount to conceding that mining activities that excavate beneath the water table are incapable — whether licensed or not — of maintaining a sustainable level of take. Put differently, it suggests that mines in this category are more likely than not to compromise the hydrological functioning of alluvial aquifers and interconnected water sources.

Conclusion

Reform is needed to ensure that WSPs are disallowable instruments, and therefore subject to parliamentary scrutiny. Similarly, orders amending certain rules in WSPs should be exhibited for public comment. While both of these recommendations will no doubt meet with vigorous opposition from certain quarters, they are the sorts of measures that build community confidence in law making and political processes.

Developing legislation capable of effectively managing the ongoing impacts of large-scale mining activities on water resources is considerably more complex. However, for a regulatory framework to have teeth, it must fulfil two basic requirements. First, it must strive to implement ecologically sustainable development (ESD). If we concede that many mines in the Hunter cannot help but continuously extract water from aquifers, this necessarily involves assessing cumulative impacts of mining and other activities at a *catchment* level, and ensuring that overall development does not exceed the capacity of ecosystems within the catchment.²⁰ Second (and in order to translate ESD into outcomes), it must be

based on best-available science, which requires governments to fund specialised research units over the long term.

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Footnotes

1. See the “Mining in NSW” section of the New South Wales Minerals Council Ltd website at www.nswmin.com.au (accessed 17 April 2013).
2. See the “Hunter River Catchment” page at www.environment.nsw.gov.au.
3. See www.riotintocoalaustralia.com.au; www.yancoal.com.au; www.peabodyenergy.com (accessed 18 April 2013).
4. Yancoal Australia owns 90% of the Ashton Coal Mine: www.ashtoncoal.com.au (accessed 18 April 2013).
5. Peabody Energy owns 75% of the Wambo Mine Complex: www.peabodyenergy.com (accessed 18 April 2013).
6. Xstrata owns 100% and 90% of these mines, respectively: www.xstratacoal.com (accessed 18 April 2013).
7. Coal and Allied Industries Ltd owns 80% and 100% of these mines, respectively; they are operated by Rio Tinto Coal Australia: www.riotintocoalaustralia.com.au (accessed 18 April 2013).
8. Mount Arthur is a wholly owned subsidiary of BHP Billiton: www.bhpbilliton.com (accessed 18 April 2013).
9. NSW Government, Department of Water and Energy, *Water Sharing Plan: Hunter Unregulated and Alluvial Water Sources — Background Document*, August 2009, pp 18–21.
10. Geoscience Australia, “Alluvial aquifers”, at www.ga.gov.au (accessed 18 April 2013).
11. Geoscience Australia, “Groundwater dependent ecosystems”, at www.ga.gov.au (accessed 18 April 2013).
12. NSW Government, Department of Water and Energy, above, n 9, pp 18–21.
13. NSW Government, Department of Water and Energy, above, n 9, p 21.
14. See the “Hunter Unregulated and Alluvial” section of the NSW Office of Water website at www.water.nsw.gov.au.
15. Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources Amendment Order, 22 February 2013.
16. Above, n 15, item 96 (cl 68(6)); item 50 (cl 19). Note that these rules will apply from year six of the Plan, which is 2015.
17. Interpretation Act, s 21 (definition of “statutory rule”), s 41.
18. Interpretation Act, s 41; Water Management Act, ss 41, 50.
19. Above, n 17.
20. See, for example, J Williams, Scientific Services Pty Ltd, *An Analysis of Coal Seam Gas Production and Natural Resource Management in Australia — Issues and Ways Forward (A Report Prepared for the Australian Council of Environmental Deans and Directors)*, October 2012.

Case note: Secretary, Department of Sustainability and Environment (Vic) v Minister for Sustainability, Environment, Water, Population and Communities (Cth)

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In *Secretary, Dept of Sustainability and Environment (Vic) v Minister for Sustainability, Environment, Water, Population and Communities (Cth)*,¹ the Federal Court of Australia dismissed an application by the Victorian Secretary to the Department of Sustainability and Environment (Victorian Secretary) against the refusal by the Minister for Sustainability, Environment, Water, Population and Communities (Minister) of its proposed strategic cattle grazing trial in Alpine National Park.

The decision is important as it provides an insight into the information and matters that can be considered by the Minister when a referral is made under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act). The decision is also interesting in the context of the recent debate regarding the federal government's proposed devolution of federal powers for environmental assessments and approvals to state and territory governments.

Background

In December 2011, the Victorian Secretary made a referral to the Minister under the EPBC Act for its proposal to conduct a research trial in Alpine National Park to determine whether strategic cattle grazing was an effective tool for fuel and bushfire risk management (the Referral). The research trial was intended to be conducted over a period of five years and would involve 400 cattle across six research sites. Alpine National Park is included in the National Heritage List and therefore protected under the EPBC Act. In the Victorian Secretary's view, the proposed action was a controlled action under the EPBC Act requiring referral to the Minister, as it was likely to have an impact on the national heritage values and listed threatened species and communities of Alpine National Park, both of which are matters of national environmental significance (NES) under the EPBC Act.² The taking of action that will or is likely to have a significant impact on any of these matters without approval is prohibited under the EPBC Act.

In January 2012, the Minister made a decision under s 74B(1) of the EPBC Act that the proposed action would have clearly unacceptable impacts on the national heritage values of Alpine National Park. Relevantly, in making his decision, the Minister had regard to information and material that was not submitted with the Referral. The Victorian Secretary subsequently challenged the decision of the Minister by way of judicial review.

Judgment

The Victorian Secretary raised four grounds of review. First, it was alleged that in making the decision the Minister had exceeded his power under the EPBC Act by considering information that was not provided in the Referral. A decision made under s 74B(1) of the EPBC Act is done "on the basis of the information in the referral". When making his decision, the Minister had regard to reports and material that were not submitted with the Referral. However, and importantly, that material was already within his department's possession and knowledge. It was because of this that the Victorian Secretary failed on this ground.

Justice Kenny noted that nothing in the text of s 74B of the EPBC Act precluded the Minister from utilising his own knowledge and his department's knowledge. His Honour identified that the fact that the Minister must make his consideration "on the basis of the information in the referral" does not mean that the Minister must accept that information.

If the Minister was not permitted to draw on his own knowledge and the knowledge of his departmental officers, it would be difficult to imagine that there could be any effective scrutiny or assessment of the information in a referral.

Second, it was submitted by the Victorian Secretary that, in considering the recreational and aesthetic characteristic national heritage values of Alpine National Park, the Minister had relied on matters that were not protected under the EPBC Act, and thereby had exceeded

his power under s 74B(1) of the EPBC Act. The Victorian Secretary contended that the protection of these national heritage values was not appropriate to give effect to Australia's obligations under Art 8 of the Biodiversity Convention. In a lengthy discussion, Kenny J also rejected this argument. When the Minister makes a decision under s 74B(1) of the EPBC Act, he has to consider whether it is clear that the action would have unacceptable impacts on a matter protected by a provision of Pt 3 of the EPBC Act. The matters protected in Pt 3 of the EPBC Act include, among other things, the matters of NES. The national heritage values of a national heritage place are a matter of NES under the EPBC Act. Justice Kenny held that the Minister was only required to consider whether it was clear that the cattle grazing trial would have unacceptable impacts on the matters protected by Pt 3 of the EPBC Act. Until and unless an action is taken in contravention of Pt 3 of the EPBC Act, the Minister did not have to consider whether prohibiting the cattle grazing trial would be appropriate to give effect to the Biodiversity Convention obligations.

Third, it was alleged that the Minister breached the rules of natural justice by failing to give the Victorian Secretary an opportunity to comment on the material that the Minister considered, but that was not included in the Referral. At common law, procedural fairness requires that a person likely to be affected by a decision is given an opportunity to comment on adverse information that is credible, relevant and significant to the decision being made.³ The Victorian Secretary contended that, even if the Minister was entitled to consider information that was not submitted in the Referral, the Victorian Secretary was entitled to an opportunity to comment on that material.

This argument was also rejected. In the court's view, procedural fairness is afforded to anyone aggrieved by a decision under s 74B(1) of the EPBC Act through the rights to withdraw the referral and make a new referral, or to request a reconsideration of the referral under s 74C(3) of the EPBC Act. If the Victorian Secretary sought reconsideration of the decision under ss 74C(3) and 74D of the EPBC Act, he would have an opportunity to comment on the material and the Minister would be obliged to give the Victorian Secretary an opportunity to address any new material that he had not previously had an opportunity to address.

Finally, the Victorian Secretary also argued that the Minister, in making his decision under s 74B(1) of the EPBC Act, should have also separately considered whether Div 1A of Pt 7 of the EPBC Act should have applied. Essentially, the Victorian Secretary alleged that where the Minister considered that it was clear that the proposed action would have unacceptable impacts, he then had to separately consider whether Div 1A (dec-

sion that an action is clearly unacceptable) of Pt 7 of the EPBC Act applied. The argument is novel and was rejected by the court. Justice Kenny relevantly pointed out that if the Minister considers that it is clear that a proposed action would have unacceptable impacts on a matter of NES, there is no choice that the Minister can make other than to decide that Div 1A of Pt 7 of the EPBC Act applies.

The court ultimately rejected the Victorian Secretary's application for judicial review.

Practical implications

The decision is important for anyone making a referral under the EPBC Act, as the information provided in the referral will not be the only information that the Minister will consider when deciding whether or not a proposed action will have unacceptable impacts on a matter of NES. The Minister is able to have regard to his own knowledge and the knowledge of his departmental officers, which would include any information, reports or other materials that are already within the possession of the department. In this context, it would be difficult to "hide" or "soften" any publicly available information that may be damaging to a proposed action that is likely to have a significant impact on a matter of NES.

The decision also clarifies that the legislative framework in the EPBC Act affords procedural fairness to those who are aggrieved by a decision under Div 1A of Pt 7 of the EPBC Act. A person aggrieved by a decision made under s 74B(1) of the EPBC Act has a right to withdraw the referral and make a new referral to take a modified action, or request reconsideration of the referral by the Minister. Where a reconsideration of the decision is sought, the EPBC Act affords any member of the public the opportunity to comment (within 10 business days of receiving a request for reconsideration of a decision) on the impacts that the proposed action would have on a matter protected by Pt 3 of the EPBC Act and the Minister's proposal to refuse to approve the taking of the action.⁴

Proposed environmental reforms in Australia

The decision is also interesting in the context of the federal government's proposed reforms of the EPBC Act. Following the release of the government's response to the Hawke Review, in April 2012 the Council of Australian Governments (COAG) reaffirmed its commitment to fast-track the development of bilateral arrangements for accreditation of state assessment and approval processes and minimise duplication of the environmental processes of the states and territories.⁵ The proposed reforms are aimed at facilitating a cooperative national approach to the environment, including a reduction in

the number of disputes between the Commonwealth and the states and territories on environmental issues.

Under the proposed reforms, the states and territories would be accredited with environmental approval and related assessment arrangements. More specifically, a bilateral agreement may declare that actions assessed in a specified manner by a state or territory need not be assessed under the EPBC Act, or that actions taken under accredited state or territory management arrangements or authorisation processes do not need further Commonwealth approval under the EPBC Act.⁶ In November 2012, the Commonwealth put forward a Draft Framework of Standards for Accreditation, which forms the basis for the Commonwealth's approach to bilateral negotiations.

Critics of the proposal to devolve federal government approval powers to the states and territories would contend, in cases such as this one, that if the proposed reforms are implemented, the same level of rigour and scrutiny may not be applied to assessing the impacts of a proposed action given that a state or territory government would effectively be assessing and approving its own action without federal oversight.

Despite the early enthusiasm for fast-tracking the development of bilateral agreements, reporting on the most recent COAG meeting in December 2012 suggests a "cooling of the heels", with broad statements being

made reaffirming a commitment to environmental reform without any timeframes specified.⁷ Federal oversight of state and territory actions therefore remains in place for now.

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Footnotes

1. *Secretary, Dept of Sustainability and Environment (Vic) v Minister for Sustainability, Environment, Water, Population and Communities (Cth)* [2013] FCA 1; BC201300001.
2. EPBC Act, ss 15B, 15C, 18 and 18A.
3. See *Kioa v West* (1985) 159 CLR 550 at 628–9; 9 ALN N28; 62 ALR 321; BC8501054 per Brennan J.
4. EPBC Act, s 74D(2)(c).
5. See the Australian Statement of Environmental and Assurance Outcomes, available at www.environment.gov.au.
6. See the Draft Framework of Standards for Accreditation released November 2012, available at www.environment.gov.au.
7. Council of Australian Governments Meeting — Communiqué, Canberra, 7 December 2012, available at www.coag.gov.au.

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