IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Landholder benchmark compensation rates

Gas exploration and production in NSW

Energy — Final Report
November 2015

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ISBN 978-1-925340-35-8

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1 Executive summary

The Independent Pricing and Regulatory Tribunal of NSW (IPART) has completed a review of compensation arrangements for landholders who host coal seam gas (CSG) exploration and production activities on their land. The review's purpose was to recommend a framework for estimating benchmark compensation rates to guide NSW landholders in negotiating land access agreements with gas companies.

The benchmark compensation framework is to be one element of the NSW Gas Plan – the NSW Government's overarching framework for regulating gas exploration and production and securing gas supplies for the state. Other parts of the Gas Plan address how the Government will decide where gas exploration can occur, what environmental standards and safeguards are in place, and how the impacts of gas development on local communities will be considered and managed. We were not asked to address these issues as part of our review.

This report explains our final recommendations on a benchmark compensation framework and other measures to assist landholders in negotiating appropriate compensation as part of a land access agreement with a gas company. In making these recommendations, we considered submissions to the Issues Paper and Draft Report we released earlier this year. We also considered input from our direct consultations with landholders, gas companies, industry bodies and government departments in NSW and Queensland.

1.1 Our recommended benchmark compensation framework

We are recommending landholders use a spreadsheet model we have developed to estimate benchmark compensation rates based on information specific to their own circumstances. As the appropriate level of compensation for hosting CSG exploration and production depends on these circumstances, quantitative benchmarks rates would not be useful.

To use the model, landholders need to provide information about how the proposed activities of the gas company will affect their property, land area to be used and the estimated value of this land. They are likely to have a view on some of these inputs, and require professional advice on others.

The model estimates compensation for four 'heads of compensation', which cover a wide range of potential impacts on landholders. For example, they include rental payments for the land occupied by the activities; payments for disruption, disturbance, loss of production and loss of amenity on the residual land;[1] the costs of the landholder's time; and the costs of professional advice. The model also estimates compensation for the rehabilitation period, when infrastructure is removed and land is remediated to its original standard.

We recognise that gas companies approach and structure their compensation arrangements in ways that differ from our model. We do not intend that this change in the future, as there are many ways to provide fair compensation to landholders. The model is intended as a guide for landholders, to help them assess the reasonableness of an offer of compensation, regardless of how it is structured. It can also be used to assess how compensation would change over time, for example if the scope of the gas project changes.

1.2 Other recommendations to support landholders

We are also recommending additional measures to support landholders in negotiating appropriate land access and compensation agreements and facilitate good outcomes. These include that:

- gas companies provide payments and/or in-kind benefits to landholders to share the benefits of gas development
- gas companies pay compensation to neighbours if the impacts on them exceed reasonable levels set out in licences or approvals
- legislative provisions for compensation in NSW be amended to cover all relevant impacts on landholders
- independent workshops be run to help landholders understand land access for coal seam gas and negotiate land access and compensation agreements, and
- a voluntary and non-identifying public register of CSG compensation payments be established.

1.2.1 Sharing the benefits of gas development with landholders

We have been asked to make recommendations so that landholders share the benefits of gas development Given landholders have no broad right to refuse access to their land for CSG development, it is reasonable for gas companies to share the benefits with landholders. We are recommending gas companies provide a specific benefit payment to landholders, and/or provide in-kind benefits. This benefit-sharing should be **in addition** to appropriate compensation for land access. When considered together, the compensation and benefits-

[1] Residual land or balance land means the total area of a landholder's property less the area directly used for gas activities.

sharing payments landholders receive should make them relatively better off than if the gas exploration and production on their land had not occurred.

Our model for estimating benchmark compensation includes benefit payments that are consistent with those currently offered by gas companies. The model refers to but does not specifically estimate a value for in-kind benefits.

1.2.2 Compensation for neighbours

Our review focused primarily on compensation for landholders who host CSG wells and infrastructure on their property, as impacts on neighbouring landholders are managed through environmental and planning approvals. However, we consider it is industry best practice for gas companies to identify neighbours who may be directly affected by a CSG project, work with them to find ways to minimise any impacts on them, and provide compensation where the direct impacts exceed reasonable levels.

Therefore, we are recommending that gas companies pay compensation to neighbours in the event the direct impacts on them (such as noise levels or bright light) exceed the reasonable levels set out in licences or approvals. In these instances, gas companies should enter into a written agreement to pay compensation that is at least equivalent to an allowance to relocate the neighbours for the period that impacts exceed reasonable levels.

1.2.3 Amendments to legislation

The NSW Government has indicated that it intends landholders in NSW receive fair compensation for hosting CSG exploration and production that is at least as good as in other parts of Australia. However, the provisions for compensation in the *Petroleum (Onshore) Act 1991* (NSW) (the Act) do not address all the relevant impacts of CSG activities on landholders, and are narrower than provisions in other jurisdictions in Australia. To address this, we are recommending the provisions in the Act be amended to reflect those in the Queensland *Petroleum and Gas (Production and Safety) Act 2004.*

1.2.4 Workshops to provide information and negotiation skills

In addition to our benchmark compensation model, we consider landholders need independent information and certain skills to help them negotiate land access agreements and compensation arrangements and achieve good outcomes.

In Queensland, AgForce[2] runs workshops designed to meet this need that are well-regarded by landholders, government, and industry. It provides the opportunity for landholders to get independent information, ask questions, and share experiences with other landholders.

We are recommending that the NSW Government and gas industry fund similar workshops in NSW, which would be run on an as-needs basis in relevant locations. While we considered the NSW Farmers Association would be an appropriate body to provide these workshops, given stakeholder comments on balance our final recommendation is that the NSW Department of Industry be responsible for these workshops.

1.2.5 Voluntary public register of compensation

It would also be useful for landholders to have access to information on the compensation that other landholders are receiving. At present, very little information is publicly available, and some stakeholders commented that the lack of transparency around compensation arrangements is not helpful.

We are recommending a voluntary public register of compensation payments be established. The register would allow landholders to anonymously provide information about their compensation, as well as other relevant information such as as their property's general location, size and type (eg, dairy farm, cotton farm, broadacre cropping, lifestyle block etc).

Given stakeholder comments on the suitability of NSW Farmers hosting the register, on balance we recommend that the NSW Department of Industry host and encourage landholders to use the public register. Over time, as more landholders post their details on the register, we expect it will become a valuable source of information for landholders.

1.3 How these recommendations differ from those in our Draft Report

Our final recommendations are broadly consistent with those we proposed in our Draft Report. One difference is that in our Draft Report we proposed recommending that gas companies pay for landholders' reasonable costs of time spent negotiating and arbitrating an access agreement and for legal and other professional fees, as opposed to capping these costs. However, in October 2015 the NSW Parliament passed legislation that requires gas explorers to pay reasonable costs up to capped amounts for these costs. The NSW Government is

[2] AgForce is a peak organisation representing Queensland's rural producers. The AgForce Projects division offers producers access to independent information and tools to ensure fair conduct and compensation agreements (CCA) are made with CSG companies. These include provision of free CSG negotiation workshops for landholders. http://www.agforceqld.org.au/ accessed 18 November 2015.

determining the dollar value of the caps, however they have not been finalised yet. We recommend that in setting the dollar value for the cap, the NSW Government consult with landholders who have negotiated land access arrangements, and consider a broad range of landholder circumstances to ensure the cap captures the landholders' reasonable costs.

Another difference is that we broadened our recommendation in relation to landholders sharing the benefits of gas development, to recognise that in addition to payments these benefits may also be made 'in-kind'. In addition, in response to stakeholder comments we changed our recommendation on who should be responsible for providing the workshops for landholders and establishing and maintaining a voluntary public register of compensation payments.

1.4 Why we haven't addressed all stakeholder concerns

Throughout our consultations, some landholders and other stakeholders expressed concerns about CSG exploration and production in NSW, and the compensation framework we are recommending. For example, some stakeholders commented that:

- compensation arrangements are an attempt to gain support for an industry that is not wanted or needed in NSW
- compensation for CSG divides communities and affects tourism
- no amount of compensation can adequately address the risks posed by the gas industry (including risks to air and water supply, human health, impacts on flora and fauna, and land contamination) and landholders cannot insure themselves against these risks
- it is too early to discuss compensation before the appropriate regulatory and legislative frameworks are in place, including the NSW Chief Scientist and Engineer's recommendations for CSG, and
- our compensation framework fails to account for all the risks and impacts from CSG, including sub-surface impacts, impacts on broader communities and compensation for when things go wrong (eg, there is an environmental incident).

When we visited the Narrabri and Liverpool Plains area, we heard some landholders' concerns firsthand. These landholders consider the risks CSG poses to their soil and water supplies prevent the possibility that CSG can co-exist with agriculture.

These issues fall outside the scope of our terms of reference. The NSW Gas Plan is designed to address many of these concerns, particularly through a Strategic Release Framework for deciding where new gas exploration can take place. This framework includes community consultation, and takes into account upfront

assessments of social, environmental and economic considerations. In addition, for a CSG project to proceed to the production stage it would require development consent under the *Environmental Planning and Assessment Act 1979*. This includes a comprehensive Environmental Impact Statement addressing the potential impacts of the proposal on soil quality, water resources, biodiversity, air quality and local communities.[3]

The Government has committed in its Gas Plan to implementing all of the Chief Scientist and Engineer's recommendations on CSG. One recommendation is that the Government draw on appropriate expertise in designating where CSG exploration can and cannot take place. The Chief Scientist and Engineer concluded that:

> …provided that drilling is allowed only in areas where the geology and hydrogeology can be characterised adequately, and provided that adequate engineering and scientific solutions are in place to manage the storage, transport, reuse or disposal of produced water and salts – the risks associated with CSG exploration and production can be managed. That said, current risk management needs improvement to reach best practice.

Our recommendations on compensation for landholders complement other measures in the Gas Plan.

1.5 What the rest of this report covers

The rest of this report explains our review and final recommendations in more detail. It is structured as follows:

- Chapter 2 provides some context for our review, including the legislation and policy that relate to land access for CSG development in NSW and the terms of reference for this review.
- Chapter 3 discusses the key themes that have emerged from our consultations.
- Chapter 4 explains the approach that our model uses to estimate compensation benchmarks.
- Chapter 5 describes the model itself.
- Chapter 6 discusses our recommendations on compensation for neighbours and recommendations on additional measures to support stakeholders.
- Appendices A to J provide the terms of reference and supporting information.

[3] NSW Department of Industry, Resource & Energy website: http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/applications-and-approvals/environmental-assessment/petroleum-exploration-and-production

1.6 List of recommendations

Our final recommendations are set out in the following chapters. For convenience, they are also listed below.

1 When negotiating land access agreements with gas companies, landholders use IPART's spreadsheet model to estimate compensation benchmarks that take into account their individual circumstances. 27

2 That gas companies provide payments and/or in-kind benefits to landholders to share the benefits of gas development. 30

3 That gas companies pay compensation to neighbours if the impacts on them exceed reasonable levels as set out in licences or approvals. 46

4 That the provisions for landholder compensation in the *Petroleum (Onshore) Act 1991* be amended prospectively to align with the Queensland *Petroleum and Gas (Production and Safety) Act 2004* and recognise special value of land. 50

5 That in setting the cap on the costs of landholder time, legal and other professional advice, the NSW Government consult with landholders who have negotiated land access arrangements and consider a wide range of landholder circumstances to ensure the caps capture landholders' reasonable costs. 50

6 That the NSW Department of Industry provide independent workshops, co-funded by the gas industry, to assist landholders in understanding land access for coal seam gas, and negotiating land access and compensation agreements. 53

7 That the NSW Department of Industry develop and maintain a voluntary and non-identifying public register of CSG compensation payments. 55

2 Context for our review

CSG is a naturally occurring gas found in coal seams hundreds of metres below the earth's surface. In NSW, this resource is owned by the Crown. To develop it, gas companies need the appropriate licences as well as access to the surface of the land.

There are a number of legislative provisions in place to regulate land access and establish landholders' right to receive compensation for loss that arises from a gas company's activities on their land. The NSW Gas Plan also provides the Government's strategic framework for regulating the CSG exploration and production industry. In addition, since our Draft Report was released, the NSW Parliament passed a package of legislation relevant to the NSW Gas Plan and our review.

Our terms of reference for this review require us to have regard to these legislative and policy provisions. The sections below outline the provisions and explain our terms of reference.

2.1 Legislative provisions for land access for CSG development in NSW

As noted above, CSG is owned by the Crown. Section 6(1) of the *Petroleum (Onshore) Act 1991* (NSW) (the Act) states that:

> All petroleum, helium and carbon dioxide existing in a natural state on or below the surface of any land in the State is the property of the Crown, and is taken to have been so always.

Gas companies can extract CSG from beneath the ground in return for contributing royalties to the people of NSW. However, to do this, the Act requires them to:

- hold a petroleum title, such as a Petroleum Exploration Licence (PEL), and
- gain access to the surface of the ground by entering into a written access arrangement with the landholder(s).[4]

[4] http://www.resourcesandenergy.nsw.gov.au/landholders-and-community/coal-seam-gas/the-facts/land-access accessed 23 November 2015.

2.1.1 Petroleum titles

Gas companies are required to hold different petroleum titles (or licences) at different stages of the CSG exploration and production process. Under the Act, these licences are approved and administered by the NSW Department of Industry, Resources and Energy.[5]

In the initial stages of a project, the company must hold a PEL which gives the holder the exclusive right to explore for petroleum within the exploration licence area during the term of licence. The NSW Government has not issued any of these licences since April 2011.[6] It has extended the freeze on new PELs until 31 December 2015 in order to establish the Strategic Release Framework for coal and petroleum under the NSW Gas Plan.[7] (See section 2.3.2 for more information on this framework.) The Government is also buying back PELs from titleholders under this Plan. Between December 2014 and early November 2015, the Government has bought back a total of 17 licences.[8] Under the Gas Plan, the footprint of CSG has reduced from more than 60 per cent of the state to less than 8%.[9]

Currently, the main CSG projects in NSW include:

- Santos' Narrabri Gas Project
- AGL's Camden Gas Project, and
- AGL's Gloucester Gas Project.

More information on the titles relevant to CSG exploration and production is provided in Appendix E.

2.1.2 Land access agreements

As gas companies normally do not need large areas of land for CSG exploration and production, they do not usually purchase land outright. Instead, they enter into access agreements to occupy part of a landholder's land. These agreements cover matters such as:

- the periods during which access to the land may be permitted
- the parts of the land on which prospecting may be undertaken
- the kinds of prospecting that may be undertaken, and
- the compensation to be paid to the landholder.

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5 http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/applications-and-approvals/mining-and-exploration-in-nsw/about-petroleum-titles accessed 23 November 2015.

6 NSW Government, *NSW Gas Plan*: *Protecting what's valuable, Securing our future*, p 4, November 2014.

7 NSW Government, *Implementing the Final Report of the Chief Scientist and Engineer's Independent Review of Coal Seam Gas Activities in NSW,* October 2015, p 6.

8 http://www.resourcesandenergy.nsw.gov.au/landholders-and-community/coal-seam-gas/community/information-on-petroleum-titles/buy-back accessed 23 November 2015.

9 NSW Government, *NSW Gas Plan: Implementation Progress Report*, October 2015, p 3.

In general terms, the Act does not provide landholders with a broad right to refuse land access (see Box 2.1). However, it provides that if an access arrangement cannot be agreed within 28 days, an arbitrator will be appointed to make a determination.[10] If either party is not satisfied with the arbitrator's determination, it can apply to the Land and Environment Court which will issue an order.[11] Such an order will be binding on all parties to the dispute, but there is a right of appeal.[12]

Box 2.1 Clarification in relation to the right of refusal

In our Issues Paper we stated that landholders do not have a legal right to deny a petroleum title holder access to their land for the purpose of mineral exploration and extraction in NSW.[a]

In a submission in response to that paper, Ms Marylou Potts pointed out that this statement is inaccurate. She noted that under the Act, if an access agreement is not agreed, the title holder will generally seek an arbitrator to determine the access agreement. The arbitrator has the power to decide 'whether or not' to grant access to the land. In addition, section 72 of the Act also refers to 'no go' zones, where the written consent of the landholder is needed to carry out prospecting within 200 metres of the landholder's principal residence or within 50 metres of their garden, vineyard or orchard, or on any improvement. In addition, as noted in our Issues Paper, the NSW Government has introduced CSG exclusion zones within 2 kilometres of residential areas and within critical industry clusters.[b]

We note that there may be some circumstances in which access may not be granted to a property, and that access cannot be granted to limited parts of a property without the consent of the landholder. However, it remains the case that, in general terms, a right to refuse access to land is subject to a determination of an arbitrator to permit access under sections 69L(1)(a) and 69N(2)(a) of the Act.

a IPART, *Landholder benchmark compensation rates – Gas exploration and production in NSW – Issues Paper*, April 2015, p 10.
b Submission from M. Potts, June 2015, pp 1-2.

AGL and Santos have publicly stated that they will not enter a landholder's property to conduct drilling operations where that landholder has clearly expressed the view that operations on their property would be unwelcome (Box 2.2).[13]

10 Section 69F of the *Petroleum (Onshore) Act 1991* (NSW).
11 Section 69R of the *Petroleum (Onshore) Act 1991* (NSW).
12 Section 112 states that an appeal may be brought against an assessment made by the Land and Environment Court under this Act.
13 http://www.resourcesandenergy.nsw.gov.au/landholders-and-community/coal-seam-gas/the-facts/land-access accessed 23 November 2015.

The NSW Government recently released a Petroleum Land Access Exploration Guideline which seeks to assist landholders and explorers with petroleum exploration land access negotiations. The Guideline was prepared in consultation with the Land and Water Commissioner and agricultural and petroleum industry stakeholders. It has been developed on the premise that all parties will act in a spirit of co-operation and good faith when negotiating access arrangement. It sets out provisions which gas explorers and landholders should consider including in all land access arrangements. It is intended that the Guideline will eventually be reissued as a Land Access Code having legal effect.[14]

Box 2.2 Agreed principles of land access

In March 2014, the 'Agreed Principles of Land Access' was signed by gas companies, Santos and AGL, and landholder representatives NSW Farmers, Cotton Australia and the NSW Irrigators Council.

All parties have agreed to the following principles:

- Any landholder must be allowed to freely express their views on the type of drilling operations that should or should not take place on their land without criticism, pressure, harassment or intimidation. Any landholder is at liberty to say "yes" or "no" to the conduct of operations on their land.
- Gas companies confirm that they will respect the landholder's wishes and not enter onto a landholder's property to conduct drilling operations where that landholder has clearly expressed the view that operations on their property would be unwelcome.
- The parties will uphold the landholder's decision to allow access for drilling operations and do not support attempts by third party groups to interfere with any agreed operations. The parties condemn bullying, harassment and intimidation in relation to agreed drilling operations.

Recently the Country Women's Association (NSW) and dairy industry group Dairy Connect also became signatories to the Agreed Principles of Land Access.

Source: http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0009/577440/Two-new-signatories-to-the-agreed-principles-of-land-access.pdf accessed 25 November 2015.

[14] The Petroleum Land Access Guideline is available on the NSW Resources & Energy website, http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/codes-and-guidelines/guidelines/petroleum-land-access, accessed 23 November 2015.

2.2 Legislative provisions for landholder compensation

Landholders in NSW are entitled to compensation for loss suffered or likely to be suffered as a result of the exploration activities on their land. Landholders' right to compensation is protected under section 107 (1) of the Act, which states:

> The holder of a petroleum title, or a person to whom an easement or right of way has been granted under this Act, is liable to compensate every person having any estate or interest in any land injuriously affected, or likely to be so affected, by reason of any operations conducted or other action taken in pursuance of this Act or the regulations or the title, easement or right of way concerned.

Compensation is negotiated between the landholder and the gas company. Section 109 of the Act provides a list of factors that the Land and Environment Court will take into account when assessing the value of loss suffered or likely to be suffered by a landholder (see Chapter 6 for more information). These factors may guide negotiations between landholders and gas companies. However, they only apply prescriptively if agreement on compensation cannot be reached and the Land and Environment Court is called on to make a decision.

2.3 The NSW Gas Plan

The NSW Gas Plan sets out the Government's strategic framework for regulating the onshore gas industry in NSW and securing gas supplies for the state.[15] With the exception of this review, IPART has had no role in developing the measures under the Gas Plan. However, in making our recommendations on landholder compensation we were required to consider these other measures. Some of the more relevant measures are outlined below.

2.3.1 NSW Chief Scientist and Engineer's recommendations on CSG

The NSW Government accepted all the recommendations of the NSW Chief Scientist and Engineer's review of CSG activities in NSW. This review examined the CSG industry, the potential environmental, human health and social impacts of CSG extraction, and the legislative and regulatory framework within which CSG operations occur in NSW.

Overall, it found many of the technical challenges and risks posed by the CSG industry can in general be managed through:

- careful designation of areas appropriate for CSG extraction
- high standards of engineering and professionalism in CSG companies
- creation of a State Whole-of Environment Data Repository

[15] http://www.resourcesandenergy.nsw.gov.au/energy-supply-industry/legislation-and-policy/nsw-gas-plan accessed 23 November 2015.

- comprehensive monitoring of CSG operations with ongoing scrutiny of collected data
- a well-trained and certified workforce, and
- the application of new technologies as they become available.[16]

The final report made 16 recommendations to the NSW Government.[17] The Government recently released a report to update its progress on implementing these recommendations.[18]

2.3.2 Strategic Release Framework

The NSW Government recently announced a draft policy framework for the release of new coal and petroleum exploration licences and assessment leases in NSW, which seeks to balance competing interests for land. Under the framework, new licences and leases will only be granted after environmental, social and economic factors have been considered and the community has been consulted.

An independently chaired advisory body will oversee the Strategic Release Framework, and make recommendations to the Minister for Industry, Resources and Energy on potential areas to be released for exploration. The recommendations of the advisory body will be based on a preliminary assessment with two components:

- a geological resource assessment, and
- a preliminary regional issues assessment, which covers the environmental, social and economic factors relevant to the potential release area.

The Strategic Release Framework will not replace the need for a development application if a project seeks to progress to production.[19] More information about the draft Strategic Release Framework and the development application process is provided in Appendix I.

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16 NSW Government, Chief Scientist & Engineer, *Final Report of the Independent Review of Coal Seam Gas Activities in NSW*, September 2014, p iv.

17 Ibid, pp 12-15.

18 NSW Government, *Implementing the Final Report of the Chief Scientist and Engineer's Independent Review of Coal Seam Gas Activities in NSW*, October 2015.

19 Strategic Release Framework for Coal and Petroleum exploration, available at http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/programs-and-initiatives/strategic-release-framework-for-coal-and-petroleum-exploration accessed 25 November 2015.

2.3.3 Community Benefits Fund

In May 2015, the NSW Government released a discussion paper on the design of a Community Benefits Fund.[20] The discussion paper noted that communities can be affected by gas activities, and there can be social and economic impacts. The Fund will be supported by industry and government to ensure that communities in which the gas industry operates benefit from those activities through the funding of local projects in those communities.

Gas explorers and producers will be able to elect to contribute to the fund and the Government will reduce $1 from a company's gas royalty liability for every $2 paid into the fund, capped at 10% of the royalty take for each gas project in each production year. Gas companies can still make contributions to the fund in the exploration phase (ie, before royalties are made). They can claim credit for the contributions when it begins to pay royalties during the production phase. If the project does not proceed to production, contributions to the fund cannot be claimed back.

2.4 Legislative reform package

Since our Draft Report was released, the NSW Parliament has passed a package of legislation relevant to the NSW Gas Plan and our review. Key reforms in this legislation include:

- A Strategic Release Framework for coal and gas exploration (discussed above).
- Amendments to the land access arbitration framework, including that landholders' reasonable costs incurred in the negotiation, mediation and arbitration of access agreements will be met by the gas company. These costs include time and professional fees and will be capped, although the NSW Government is yet to finalise the dollar value of the caps.
- Harmonising the *Mining Act 1992* and the *Petroleum (Onshore) Act 1991* with respect to titles administration, compliance and enforcement.
- Establishing the Environment Protection Authority as the lead regulator for compliance and enforcement of all non-work, health and safety consent conditions for gas exploration and production.
- Establishing a consistent legislative framework for work health and safety (WHS) in the petroleum and mining sectors.

[20] http://www.resourcesandenergy.nsw.gov.au/landholders-and-community/coal-seam-gas/community/community-benefits-fund accessed 23 November 2015.

The amendments to land access arbitration were in response to a report by Bret Walker, SC. This report included a recommendation that the NSW Government amend the *Petroleum (Onshore) Act 1991* to provide for a landholder to have the following costs paid by the (gas) explorer:

- their time spent negotiating and arbitrating the access arrangement up to a capped amount
- their legal costs up to a capped amount, and
- costs of any experts that landholders engage as part of the negotiation and arbitration process up to a capped amount.[21]

As discussed later in this report, our compensation model includes costs for the above items. However, at the time of writing, the NSW Government has not yet finalised the dollar value of the caps.

2.5 Our terms of reference

Our terms of reference for this review ask us to recommend compensation benchmarks to support landholders in negotiating appropriate compensation with gas companies for hosting gas exploration and production. In particular, they ask us to develop an analytical framework for setting compensation benchmarks that can be updated annually.

The terms of reference indicate that the NSW Government intends for NSW landholders to receive compensation that is at least as good as that received by other landholders in Australia who host gas development. It also indicates that in conducting our review, we should have regard to:

- the economic benefits over the lifecycle stages of a project, considering the associated risks and probabilities of a project progressing
- the structure of compensation arrangements (eg, fixed, rental or other methodologies) taking into account the different phases of a project, the varying value of production systems in agricultural enterprises, and the implications for encouraging exploration
- the landholder compensation arrangements currently applied by industry in NSW, other Australian states and territories and internationally, including identifying industry best practice
- similar arrangements in other industries (eg, wind farms) across other Australian and international jurisdictions
- relevant legislation on gas/petroleum exploration and production, as well as measures announced as part of the NSW Gas Plan, and
- any other matters we consider relevant.

The terms of reference is provided in Appendix A.

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21 Walker, B., *Examination of the Land Access Arbitration Framework Mining Act 1992 and Petroleum (Onshore) Act 1991*, 20 June 2014, p 29.

3 Themes from our consultations

As part of our consultation process, we released an Issues Paper in April 2015 outlining how we proposed to approach this review and our preliminary views on a number of issues. We received 28 submissions in response to this paper from a diverse range of stakeholders. These include landholders with experience in negotiating land access and compensation agreements, farming industry bodies, gas companies, the NSW Government, and groups who are concerned about or oppose CSG development. These submissions are all available on our website.

We also released a Draft Report in September 2015 and held public forums in Narrabri and Gloucester in October to provide stakeholders with an opportunity to comment or ask questions on our draft recommendations. We received 19 submissions on our draft recommendations.

In addition, throughout our review we consulted directly with a range of agencies and industry bodies including Namoi Water, the Gasfields Commission Queensland, AgForce Queensland, the Queensland Department of Natural Resources and Mines and the NSW Land and Water Commissioner. We were taken on site tours of Santos, AGL and Origin Energy CSG projects. In addition, we held discussions with various landholders in NSW and Queensland and were taken on a tour by landholders around the Narrbri and Liverpool Plains area to explain firsthand their concerns on the risks that CSG poses to their soil and water resources. A list of the parties we consulted is provided in Appendix D.

While stakeholder perspectives varied, a number of themes emerged from these consultations, including that:

- a 'one-size-fits-all' approach to compensation will not work
- landholders are likely to need professional advice
- the conduct arrangements in a land access agreement are as important as compensation, and
- concerns about CSG in general and the need to consider compensation for a broader range of impacts.

Some of these themes have been important in shaping our recommendations in this report. The sections below discuss each of these themes and outline our response.

3.1 A one-size-fits-all approach to compensation won't work

In our Issues Paper, we indicated that we would estimate quantitative (dollar) benchmarks for landholder compensation, and outlined some preliminary views on the inputs we could use for this estimation. In submissions responding to this paper, stakeholders advised us that providing quantitative benchmarks or formulas would not provide useful guidance for landholders. This is because each landholder has different circumstances that are relevant for determining the appropriate level of compensation.

For example, Cotton Australia submitted that it "would want clear reassurance that guidelines developed as part of the review process clearly cater for individual landholder circumstances". It suggested that "landholders might be more comfortable with a framework which outlines in general terms what is compensable or not, but does not seek to set a rate on compensation".[22]

The Australian Petroleum and Exploration Association (APPEA) submitted that:

> ...the extent and nature of activities by both landholders and gas companies are highly variable and site specific. Therefore seeking to provide ex ante quantitative advice or to specify a formulaic approach in these areas is unlikely to provide useful guidance to landholders.[23]

Similarly, AGL submitted that:

> Each agreement made with a landholder is unique, reflecting the characteristics of the particular property and the proposed CSG activities and infrastructure to be hosted. … [There] are different types of landholders, including private landholders, governments and mining companies, which have different requirements, and compensation agreements are negotiated accordingly. There is certainly no "one size fits all".[24]

In discussions, the Queensland Department of Natural Resources and Mines advised us that attempts to develop formulaic approaches to compensation in Queensland had not been successful. Similarly, the Gasfields Commission Queensland noted that such approaches are not practical due to the wide variation and diversity of the rural businesses negotiating compensation agreements.

After considering stakeholder comments, we agree that estimating dollar ranges for compensation benchmarks would not provide useful guidance for landholders. The range would need to be very wide to capture the variations in the factors relevant to compensation, such as:

- the market value of the land used by the gas company

22 Cotton Australia submission, June 2015, p 2.
23 APPEA submission, June 2015, p 2.
24 AGL submission, May 2015, p 2.

- the impact that the gas infrastructure and operations have on landholders (eg, any loss of agricultural production, loss of productivity, nuisance from noise, dust, light etc), and
- the complexity, time and cost of professional advice needed to negotiate land access.

Therefore, we decided that the most useful guidance we can provide is a spreadsheet model that landholders can use to estimate their own compensation benchmarks. For example, they can use the model to get an indication of the appropriate level of compensation in the early stages of a negotiation, or to assess a compensation offer they receive from a gas company in the later stages. While the model contains formulas to calculate benchmark compensation payments, it requires inputs that are specific to the landholder. In some cases, the landholder may require specialist advice to determine these inputs. The compensation model is discussed further in Chapters 4 and 5.

3.2 Landholders should get professional advice

Negotiating land access and compensation can be complex and stakeholders pointed out that it is important that landholders get advice. This includes professional advice, and advice from other landholders who have been or are going through similar negotiations.

The type of professional advice needed will depend on the landholder's individual circumstances. It may include land valuation, legal, accounting and tax, surveys and other farm business advisers. Independent valuation advice is particularly relevant to compensation. During our consultation with Queensland stakeholders we found it is commonplace for landholders and gas companies to obtain independent valuation advice to inform compensation.

Our compensation model outlined later in this report recognises that landholders should get independent valuation advice. As indicated in Chapter 2 since releasing our draft report the NSW Parliament has passed legislation that requires gas companies to pay reasonable costs of any experts that landholders engage as part of the negotiation process, up to a capped amount.

3.3 Conduct is as important as compensation

The focus of our review is recommending benchmark compensation to support fair outcomes for landholders. A number of stakeholders, including landholders who already have CSG activities on their land, advised us that achieving a good outcome is about more than just compensation. In particular, the 'conduct' arrangements in a land access agreement are as important as compensation.

Conduct arrangements in a land access agreement include matters like determining the location for gas infrastructure and access roads, defining notice periods and times of access, plans to prevent weeds, pests and diseases, rehabilitation and insurance. These arrangements are unique to each landholder and will depend on the nature of landholder's property, any farming operations and the needs of the gas company. Several submissions also noted that the conduct arrangements should include a baseline assessment of land conditions and groundwater supply.[25] This would provide an important reference in the future – for example, to assess whether site rehabilitation undertaken by the gas company is in line with the conduct arrangements.

We were advised that if conduct arrangements in land access agreements are done well, then it is often easier to reach agreement on compensation. To do this, the landholder and gas company need to take time to understand each other's business and lifestyle requirements, now and into the future. It is often possible to locate gas infrastructure and conduct gas activities to minimise the impacts on a landholder. Landholders who have achieved good outcomes from their land access agreement also looked for opportunities that gas development could provide to them. We spoke to landholders who had benefited from 'win-win' situations over and above their compensation, including through ongoing water supply and the use of dams, access roads and new fences. For example, one landholder we met explained the benefits that a consistent supply of treated CSG water provided under pressure through an irrigation pipeline had provided to his farming business.[26] Box 3.1 summarises an article about a Queensland farmer, including his insights and tips on how to approach land access negotiations.

In response to our Draft Report, Cotton Australia suggested that instead of using the term 'conduct arrangements' we should refer to 'land access arrangements'. This is because conduct may imply behavioural considerations instead of the development of mutual business understanding needed for a land access agreement.[27] However, in our view, the behaviour of the gas company and landholder is also important.

Some landholders told us about their negative experiences dealing with gas companies that relate to behaviour. This included instances where gas companies turned up unannounced and asked for access agreements to be signed with minimal compensation. This behaviour caused landholders considerable emotional stress and grief. Gas companies that we spoke to acknowledged that such behaviour had damaged the industry, and that the key to the success of the industry is through long-term partnerships with landholders.

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25 For example, see submission from C Robertson (W15/5046), October 2015, p 1; C Robertson (W15/5022), October 2015, p 5; C Robertson (W15/5018), October 2015, p 1.

26 For more information see the article available in the Spirit of Regional Australia Summer 2014/15, p 122, http://spirit.flipme.com.au/edition22/index.html#122, accessed 23 November 2015.

27 Cotton Australia submission, October 2015, p 2.

There are various resources available for landholders to make sure they consider relevant conduct issues in their land access agreement. Appendix J provides a list of these resources. This list has been updated since our Draft Report to include resources suggested by Cotton Australia.[28]

Box 3.1 Yuleba grazier shares insights on gas negotiation

Brett and Di Griffin run cattle on their 16,000 acre forest grazing block in the Yuleba district, north-west of Miles in Queensland's Surat Basin. Over the past few years they have negotiated with a gas company for 128 wells, 150 kilometres of gathering lines and 3 kilometres of major pipeline.

In a recent article for the Gasfields Commission Queensland, Mr Griffin said it takes a lot of homework, hard negotiating and the right attitude to develop a beneficial and workable relationship with the onshore gas industry. His top tips for negotiating a conduct and compensation agreement include:

- Do your homework – inspect gas fields and talk to other landholders.
- Work with a neighbour – one you get along with so you can support each other.
- Be firm but reasonable in your negotiations – don't ever state your price first.
- Be careful choosing your own professional advisory team.
- Get to know who's who in the gas company – identify the right decision makers.
- Develop a good working relationship with the gas company – this can create additional opportunities.
- If you have a dispute, make sure you have proper evidence to back your claims.

The complete article is available on the Gasfields Commission Queensland website, http://www.gasfieldscommissionqld.org.au/news-and-media/yuleba-grazier-shares-insights-on-gas-negotiation.html.

3.4 Concerns about compensation for CSG

Throughout our consultations, some landholders and other stakeholders expressed concerns about CSG exploration and production in NSW, and the compensation framework we are recommending. For example, some stakeholders commented that:

- compensation arrangements are an attempt to gain support for an industry that is not wanted or needed in NSW
- compensation for CSG divides communities and affects tourism

[28] Cotton Australia submission, October 2015, p 2.

- no amount of compensation can adequately address the risks posed by the gas industry (including risks to air and water supply, human health, impacts on flora and fauna, and land contamination) and landholders cannot insure themselves against these risks
- it is too early to discuss compensation until the appropriate regulatory and legislative frameworks are in place, including the NSW Chief Scientist and Engineer's recommendations for CSG, and
- our compensation framework fails to account for all the risks and impacts from CSG, including sub-surface impacts, impacts on broader communities and compensation for when things go wrong (eg, there is an environmental incident).[29]

When we visited the Narrabri and Liverpool Plains area, we heard some landholders' concerns firsthand. These landholders consider the risks CSG poses to their soil and water supplies prevent the possibility that CSG can co-exist with agriculture.

These concerns fall outside the scope of our terms of reference. However, other measures in the NSW Gas Plan are designed to address many of these issues. These measures are outlined below.

3.4.1 Risks from CSG can be managed

As Chapter 2 discussed, last year the NSW Chief Scientist and Engineer completed a review of the CSG industry, including the potential environmental, human health and social impacts of CSG extraction, and the legislative and regulatory framework within which CSG operations occur in NSW. The review concluded that:

> …provided drilling is allowed only in areas where the geology and hydrogeology can be characterised adequately, and provided that appropriate engineering and scientific solutions are in place to manage the storage, transport, reuse or disposal of produced water and salts – the risks associated with CSG exploration and production can be managed. That said, current risk management needs improvement to reach best practice.[30]

The NSW Government has committed to implementing all of the Chief Scientist and Engineer's recommendations on CSG.

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29 For example see submissions from Bellata Gurley Action Group Against Gas, June 2015, pp 2-4; S. Ciesiolka, May 2015, p 2; S. Ciesiolka, October 2015, p 5; A. Donaldson, May 2015, p 2; Lock the Gate Alliance, May 2015, pp 1-2; G. McCalden, June 2015, p 2; Mullaley Gas and Pipeline Accord, May 2015, pp 1-2; People for the Plains, October 2015, pp 5-6; A, Pickard, October 2015, p 1; C. Robertson (W15/5018), October 2015, p 1; C. Robertson (W15/5022), October 2015, p 1; C. Robertson (W15/5046), October 2015, p 1; G. Smith submission, June 2015, p 3.

30 NSW Government, Chief Scientist & Engineer, *Final Report of the Independent Review of Coal Seam Gas Activities in NSW*, September 2014, p 10.

More information on existing environmental controls for CSG, including Environmental Protection Licences, is provided in Appendix F.

3.4.2 Where CSG activities can take place

A common concern for some stakeholders is CSG activity taking place on agricultural land. There are strong views that CSG cannot co-exist with agriculture and poses significant risks to our water and food supply.

The NSW Government recently released details of its draft Strategic Release Framework for deciding where new gas exploration can take place. This framework includes community consultation, and takes into account upfront assessments of social, environmental and economic considerations.

The Strategic Release Framework does not apply to existing exploration licences. However, for a CSG exploration project to proceed to the production stage, it will require development consent under the *Environmental Planning and Assessment Act 1979*. This includes a comprehensive Environmental Impact Statement (EIS) addressing the potential impacts of the proposal on water resources, biodiversity, air quality and local communities. The community can provide input into this process, with public submissions sought on the development application and EIS. This process considers a broad range of environmental issues, alternative uses of the land and whether the proposed development is in the best interest of the State.[31]

More information on these measures is provided in Appendix I.

3.4.3 Impacts on broader communities

Some stakeholders are concerned about the impact of CSG projects on local communities. For example, this includes the effect CSG projects have on their property values, the attractiveness of local areas for tourism, availability of local infrastructure and disruptions due to gas industry workers and activities.

Local communities have an opportunity to voice their concerns as part of consultation for the Strategic Release Framework and planning process outlined above. In addition, the NSW Government is designing a Community Benefits Fund to ensure that communities in which the gas industry operates benefit from those activities through the funding of local projects.[32] It is expected to be operational by mid-2016.[33]

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31 http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/applications-and-approvals/environmental-assessment/petroleum-exploration-and-production/petroleum-production-including-csg accessed 25 November 2015.

32 http://www.resourcesandenergy.nsw.gov.au/landholders-and-community/coal-seam-gas/community/community-benefits-fund accessed 23 November 2015.

33 NSW Government, *NSW Gas Plan: Implementation Progress Report*, October 2015, p 5.

3.4.4 What happens when something goes wrong?

Some stakeholders would like us to determine compensation for land, air and water contamination or from other impacts if controls in place for CSG are ineffective.

It is outside the scope of our review to estimate compensation for such occurrences. In the event there is an environmental incident, there are other processes and frameworks in place to manage compensation for loss suffered by landholders. For example, landholders may have a common law right to claim for loss or damage arising from a gas company's CSG activities. In these instances, compensation will depend on the individual circumstances of the case and it would be a court that would decide a landholder's loss, not IPART's benchmarks. During our consultations some stakeholders expressed concern that legal processes are difficult, lengthy and expensive for landholders.[34]

The recent legistative reforms establish the Environment Protection Authority (EPA) as the lead regulator for compliance and enforcement of gas exploration and production activities in NSW.[35] All gas activities are currently subject to environmental protection licences issues by the EPA, which impose strict site-specific controls that are legally enforceable. The new legislation provides the EPA with additional statutory powers to undertake compliance and enforcement.

34 Bellata Gurley Action Group Against Gas, p 3; Lock the Gate Allianc,e p 2; Mullaley Gas and Pipeline Accord, p 1; People for the Plains, p 2; Mr C Robertson, p 35; Ms S. Ciesiolka, pp 2-3; Mr T Pickard, p6.

35 http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0010/566488/EPA-leads-regulation-of-the-CSG-industry.pdf accessed 25 November 2015.

4 Our approach to the review

In our Issues Paper, we proposed a four-step approach for this review. The aim of this approach was to estimate benchmark compensation rates by identifying the relevant impacts on landholders from CSG exploration and production and estimating a payment to compensate for these impacts. Our approach also included a step to estimate a benefit payment to landholders.

Based on discussions with stakeholders and submissions to our Issues Paper,[36] we reached the view that this approach was unlikely to produce compensation benchmarks that were useful for landholders. Given the wide variation in landholders' individual circumstances, it would likely produce a very wide payment range, and it would be difficult for landholders to identify where they might fall within this range. Instead, we decided to develop a spreadsheet model that landholders can use to estimate their own compensation benchmarks.

To develop the model we need to make decisions on three key issues:

- what impacts landholders hosting CSG exploration and production should be compensated for (ie, the heads of compensation)
- how the benchmark compensation model should value those heads of compensation, and
- how benefits payments to landholders should be included in the model.

The sections below discuss our final decisions on each of these issues. Chapter 5 provides a more detailed explanation of the model itself and an example to illustrate how it works. It also highlights the changes we have made to the model in response to stakeholder comments on our Draft Report.

[36] For an overview of stakeholder comments on our initial proposed approach, see Appendix B.

4.1 What heads of compensation should be included in the model

Our final decision is that the relevant heads of compensation for landholders hosting CSG exploration and production include:

- **the value of the land occupied** by CSG activities and infrastructure
- **loss due to severance,** which is the reduction in the value of the landholder's residual land caused by its division or reduction in area due to the CSG activities and infrastructure
- **loss due to injurious affection**, which includes all other impacts on the landholder's residual land value, such as nuisance from noise and dust, or the loss of visual amenity due to CSG infrastructure and activities, and
- **loss due to disturbance**, including for example, the landholder's time in engaging with the gas company on the access agreement, any legal and professional fees incurred in negotiating the agreement, and any physical damage to landholder's property caused by CSG activities.

These heads of compensation are recognised in relation to a compulsory partial acquisition of land (eg, if the State compulsorily acquires part of a landholder's property for a public purpose). In these instances, compensation is assessed in accordance with the NSW *Land Acquisition (Just Terms Compensation) Act 1991* with the aim that landholders are justly compensated for the acquisition.

A compulsory partial acquisition is similar to a CSG project on a landholder's property. The main differences are that a CSG project has a limited time period and the impacts on a landholder can vary over this period. In our view, these differences can be managed (discussed further below). Therefore, we consider these heads of compensation are relevant to our review.

During our consultations, most stakeholders agreed that these heads of compensation covered the relevant impacts of hosting CSG activities. See Appendix B and C for more information.

4.2 How the heads of compensation should be valued

We considered several methods that could be used to value the heads of compensation – for example, gross margins and non-market valuation methods. Most stakeholders did not support these methods. For example, they considered that they are inappropriate for determining compensation, would produce estimates that vary considerably, and may not produce estimates that reflect individual circumstances.[37]

[37] See Appendix B for further discussion on submissions to the Issues Paper.

A submission from Mr M Fibbens noted that there is already a well-established valuation theory for partial acquisitions of land, including for roads, sewers and water and electricity infrastructure. He advised us that qualified valuers usually carry out valuations for compensation purposes, and that two valuation methods are suited for partial acquisitions:

- the 'before and after' method, which involves a judgement of the value of a property before and after the acquisition, and
- the 'piecemeal' method, which involves adding up each element of compensation payable under the heads of compensation.

He noted that these methods can be adapted to compensation for hosting CSG activities by converting capital land values into a rent value using a percentage return applicable to the particular property.[38]

After considering stakeholder submissions, and investigating the above valuation methods, our final decision is that the piecemeal valuation method is the most appropriate basis for our model. In our view, this method provides a useful framework for estimating benchmark compensation, particularly as it has the flexibility to reflect different landholder circumstances. Table 4.1 provides an overview of this method.

Table 4.1 Overview of the piecemeal valuation method

Step	Description	Notes
1	Valuation of land occupied	Evidence of land values from sales data
2	Find loss in value of 'residual land' (due to severance and injurious affection)	Evidence of diminution from sales data
3	Calculate loss for the residual land	
4	Disturbance costs (professional fees etc)	Allow at cost
5	Value of land occupied is added to loss in value to residual land	
6	For CSG projects, calculate a rental value from the capital value using a percentage return for the property	

Source: Based on submission from M. Fibbens, May 2015, section 1.7.

As Mr Fibbens indicated, the piecemeal valuation method would normally be applied by a qualified valuer, who would:

- consider the view of a hypothetical purchaser as to the change in the market value of land due to CSG operations, including where relevant, loss from severance and injurious affection, and
- take into account many factors specific to the landholder (such as those in Box 4.1) and have regard to evidence from market sales data.

[38] M. Fibbens submission, May 2015, Section 1.7.

During our consultations, we found it was common in Queensland to have a valuer provide advice to landholders and gas companies on compensation for the relevant heads of compensation in the Queensland legislation

The compensation model we are recommending includes the four heads of compensation discussed above, and is based on the piecemeal valuation method.

In Chapter 5, we discuss our consideration of stakeholder submissions on our compensation model and explain the amendments we have made to it in response to these submissions.

Recommendation

1 When negotiating land access agreements with gas companies, landholders use IPART's spreadsheet model to estimate compensation benchmarks that take into account their individual circumstances.

Box 4.1 Examples of factors considered in valuation surveys

Property and location

- Property size
- Location/distance to closest town
- Type of farming on the property (cattle grazing, sheep grazing, cropping etc)
- Carrying capacity
- Rainfall/water supply.

CSG impacts on the landholder

- Number of wells proposed and area occupied by wells
- Length of pipelines, access roads and other infrastructure on the property
- Proximity of infrastructure to house
- Time taken to install infrastructure and nuisance/disturbance during construction
- Estimated reduction to production capacity/grazing capacity
- Production loss due to dust
- Restrictions on operating farming machinery / requirements to provide access to wells
- Severance impacts (if any)
- Impact on farm certification schemes
- Water salinity concerns.

4.3 Benefit payments in the model

We have been asked to make recommendations so that landholders share the benefits of gas development. Given landholders have no broad right to refuse access to their land for CSG development, we consider it is reasonable for gas companies to share the benefits with landholders.

In our Issues Paper, we proposed to recommend benefit payments to landholders that apply during the production phase of a CSG project. We put the view that such payments were consistent with the requirement in our terms of reference that landholders in NSW share the benefits of gas exploration and production. We outlined one option for a benefit payment that was funded half from the NSW Government's royalty revenue and the other half from the gas company.

Our view was that in the short term, this benefit payment option would result in less royalty revenue to the NSW Government as a portion is diverted to landholders. However, over the longer term, it could be expected to provide an incentive for more land access agreements to be signed, more gas developed in NSW and additional royalty revenue and broader economic benefits for the NSW economy.

However, our draft recommendation was that gas companies should fund benefit payments to landholders as part of their compensation. We did not recommend that benefit payments be funded from royalties but rather gas companies continue to provide them. In reaching this decision, we took account of the fact gas companies are already voluntarily sharing the benefits of gas development with NSW landholders, by giving them access to production bonuses and incentive funds and through in-kind benefits. For example:

- Santos' Narrabri Gas Project includes a Landholder Incentive Fund. The Fund is equivalent to 5% of Santos' annual statutory royalty payment and is made instead of land-based payments. Landholders will receive a share of the Fund proportionate to the amount of their land being utilised by Santos in the production phase of a project.
- AGL provides landholders with an annual production bonus. For wells which exceed production targets, AGL contributes $10,000 per well to its Production Bonus Fund. The Fund is then equally shared by eligible landholders within the well field.
- We saw many examples of in-kind benefits received by landholders, including new fences, gates, access roads and dams.

We also took account of AGL's view that there are more important barriers to gas development in NSW – including public perceptions of CSG – and the benefit payments we proposed would not address these barriers.[39]

[39] See Appendix B for more discussion.

4.3.1 Submissions to our draft recommendation

In response to our draft recommendation, AGL agreed that landholders should be able to share in the upside benefits from CSG projects, as they do as part of its Gloucester Gas Project. AGL considers that benefit payments should be specific to each project and provided at the discretion of the gas company.[40]

Origin Energy submitted that a strict benefit payment regime would remove flexibility from negotiations with landholders.[41] Similarly, the submissions from APPEA and Santos did not support a mandated or legislated benefit payment, and that such a payment should be at the discretion of the gas company and the specifics of each project.[42] APPEA added that landholders often receive benefits from gas projects through upgrades to their property.[43]

4.3.2 Our final recommendation

Our final recommendation is that gas companies provide a benefit payment to landholders, and/or provide in-kind benefits.

We have not mandated an amount that the benefit payment or in-kind benefit should be. We agree with stakeholder comments that the amount of benefits to be shared with landholders will depend on the economics of individual projects. To set a specific requirement on sharing benefits would put at risk the competitiveness of NSW as a destination for gas exploration and production. In our view, our recommendation provides the appropriate flexibility for the gas industry to continue to share benefits with landholders (either through payments and/or improvements to their property) without imposing unnecessary 'red tape'.

This benefit-sharing is **in addition** to appropriate compensation for land access. When considered together, the compensation and benefits-sharing landholders receive should make them relatively better off than if the gas exploration and production on their land had not occurred.

Our model for estimating benchmark compensation includes benefit payments that are consistent with those currently being offered by gas companies. These payments commence during the production stage of a project, as this is when a gas company will start to benefit from a project. The model refers to, but does not specifically estimate a value for in-kind benefits. We consider landholders should look for opportunities for in-kind benefits when negotiating a land access and compensation agreement.

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40 AGL submission, October 2015, p 3.
41 Origin Energy submission, November 2015, p 3.
42 APPEA submission, November 2015, pp 2-3; Santos submission, October 2015, p 4.
43 APPEA submission, November 2015, pp 2-3.

Recommendation

2 That gas companies provide payments and/or in-kind benefits to landholders to share the benefits of gas development.

5 Benchmark compensation model

As previous chapters have discussed, we are recommending that landholders use a spreadsheet model to estimate benchmark compensation that takes account of their individual circumstances. This model includes the four heads of compensation and is based on the piecemeal valuation method discussed in Chapter 4. It also includes the benefit-sharing payments from gas companies discussed in Chapter 4.

To use the model, landholders will need to enter information about their property and the proposed land access agreement. We expect they will also need professional advice on how a CSG project may affect the market value of their property.

While gas companies approach and structure their compensation offers in different ways, we consider the compensation estimated by the model will provide landholders with a reasonable benchmark to help them assess an offer from a gas company. Landholders can also use the model to see how the benchmark compensation changes under different scenarios (for example, under different assumptions on the value or area of the land used by the gas company).

In addition, landholders can update the model to see how the benchmark compensation changes when their circumstances change. For example, this could be when a CSG project moves from the exploration to the production phase and a new access agreement is required, or when the scale or the scope of the project changes and an amendment to an agreement is required. It could also include when land values or rental rates change over time. To explicitly account for these situations, the model allows different land values, rental rates, areas of land used by a gas company, and estimated impacts on the residual land to be entered for different years of the access agreement. The model also allows different inputs for the benefits payments in each year of the production stage, to account for changes in well productivity over time.

We do not intend that the benchmark compensation model replace the negotiation between a landholder and a gas company. Landholders are in the best position to determine what compensation is appropriate for them. The model only provides a benchmark of an appropriate level of compensation for their circumstances.

The sections below outline the key features of the model, provide an example to illustrate how the model works, and identify the impacts that are not included in the model.

5.1 Key features of the model

The key features of the compensation model are that it:

- Incorporates the four heads of compensation and is based on the 'piecemeal' valuation method discussed in Chapter 4.
- Includes compensation in the form of a rent payment for land occupied, severance and injurious affection; payments for landholder time; estimated costs of professional advice; and payments for benefit-sharing.
- Allows different land values, rental rates, areas of land used by a gas company, and estimated impacts of CSG activities on the residual land in each year of the access agreement. This enables landholders to reflect changes in circumstances over time when estimating compensation.
  - The default option is that the model applies a single rate of inflation (cell E25 in the INPUT worksheet) to all monetary values (ie, land values and benefit payments). Alternatively, landholders can enter their own land values and benefit payments in nominal terms in rows 9 and 32 in the INPUT worksheet.
  - Unless specified by the user, the model uses the same rental rate, estimated impacts on the residual land and other inputs for benefit payment as those in the previous year. Landholders can enter their own values in rows 10, 13, 15, 16, 33 and 34 in the INPUT worksheet.
- Calculates compensation for the rehabilitation period (that is, the period at the end of an access agreement period when the gas company is removing its infrastructure and rehabilitating the land it occupied to its original condition). Unless specified by the user, the model uses land value, rental rate, land area, impacts on the residual land from the last year of the access agreement (ie, the year immediately preceding the rehabilitation period).
- Can calculate compensation as a single upfront amount or ongoing annual payments, depending on the preference of the landholder.
- Allows different inputs for calculating benefit-sharing payments in each year of the production stage. This recognises that well productivity could change over time during the access agreement period.
- Is expressed in nominal terms. This means payments over time include inflation.

The benchmark compensation model is available on our website (in Microsoft Excel format).[44] Detailed instructions for using the model are provided in the 'User Guide' worksheet of the model.

Stakeholders had mixed views about the compensation model. In Appendix C we summarise the comments made on the model and our response. Later in this chapter we describe the changes we have made to the model in response to submissions.

5.2 An example of how the model works

The best way to explain how the model works is through an example. We have developed a hypothetical example based on a landholder with the following characteristics:

- The landholder has a mixed farming business on a property of 200 hectares.
- They have been offered an access agreement with an estimated duration of 20 years. The offer includes an incentive fund when the project reaches the production phase. For simplicity, we assume there is only one access agreement that covers exploration and production phases.
- The gas company will need 10 hectares for well pads, hardstand and other infrastructure in the first year of the project, and 5.25 hectares from the second year onwards.[45]
- The estimated market value of the land is currently $15,000 per hectare, and the estimated rental rate is 8% of the land value. A valuer has estimated that the market value of the land is likely to increase to $18,000, and the rental rate is likely to increase to 9% in five years.
- An inflation rate of 2.5% per annum is assumed.[46]
- CSG infrastructure is located around the edges of the property and does not physically interfere with the rest of the landholder's business (ie, the CSG infrastructure is not located so that it splits paddocks or that some of the residual land cannot be used by the landholder).
- A valuer has estimated that for the period that the CSG infrastructure is located on the property, impacts including loss of visual amenity, noise, dust and light would affect the value of the residual land by 20% in the first year and 10% in the second year onwards.

44 http://www.ipart.nsw.gov.au/Home/Industries/Gas/Reviews/Landholder_compensation/Landholder_compensation_for_gas_exploration_and_production

45 The model includes a tool to convert other land measures into hectares.

46 2.5% is the midpoint of the Reserve Bank Australia's inflation target. http://www.rba.gov.au/inflation/inflation-target.html accessed 19 November 2015.

- The landholder estimates they will spend 150 hours during the negotiation of the access agreement, and around 50 hours a year on an ongoing basis on work related to the access agreement. They estimate the value of their time at $50 per hour.
- The landholder estimates they would incur $40,000 for legal and professional fees to establish the access agreement.
- The gas company expects to progress to the production stage in the fourth year after signing the access agreement. During the production stage, the company has agreed to contribute 5% of its annual royalty payment to its "incentive fund". The fund will be used to make benefit-sharing payments to landholders in proportion to the area of land used. The company's estimated annual royalty payment is $1,500,000 in the first year of the production. The total land area utilised by the gas company during the production stage is 22 hectares.
- The landholder has a preference to receive compensation in a series of periodic payments, and plans to deposit them in a savings account earning 3.5% annual interest.[47]
- In the rehabilitation period, the gas company will remove surface infrastructure and remediate the land. A valuer has estimated that for the period that the infrastructure is removed and land rehabilitated, impacts including loss of visual amenity, noise, dust and light would affect the value of the residual land by 10%. We have assumed that the land value and rental rate in the rehabilitation period are equal to those at the end of the access agreement period (ie, Year 20) and the rehabilitation period will take one year, although the model allows for different periods.

Some stakeholders commented on the appropriateness of these inputs. AGL supported compensation for the costs of landholders' time and expert advice, but considered 150 hours used in the example is too high as it takes around 60 hours to reach a land access agreement based on its experience. It also commented that the costs of expert advice (ie, $40,000) should not be included in the first year of compensation as these costs are typically funded by gas companies. In its view, the $40,000 fee for expert advice is excessive.[48] In contrast, Cotton Australia commented that legal and expert valuation advice is very expensive, and valuation alone could cost $15,000.[49] It submitted that the $40,000 fee represents a reasonable lower end estimate of professional fees.[50]

47 The interest rate is not used to calculate compensation payments in this example as the landholder has a preference to receive annual compensation payments. The interest rate is specified for completeness.

48 AGL submission to the Draft Report, p 4; S. Galway from AGL, Gloucester public hearing Transcript, 20 October 2015, p 30.

49 F. Muller from Cotton Australia, Gloucester public hearing Transcript, 20 October 2015, pp 30-31.

50 Cotton Australia submission to the Draft Report, 30 October 2015, p 3.

The above characteristics are intended only to illustrate the model. While we have attempted to make the example realistic, we are not suggesting these characteristics are typical or representative in any way. Since we released our Draft Report, the NSW Parliament has passed legislation that requires gas companies to pay landholders for their time and the reasonable legal and professional fees for negotiation and access arrangement up to a cap. The NSW Government is determining the dollar value of the caps, however they have not been finalised yet.

Appendix H provides further illustrative examples to show how the model can generate different ranges of compensation by varying input values.

5.2.1 The INPUT worksheet

Figure 5.1 shows the INPUT worksheet which captures the landholder's individual circumstances. Since our draft model, we have made several changes to the INPUT sheet based on stakeholder feedback we received throughout our consultations.

Changes in land values and impacts

We have amended the model to explicitly accommodate changes in circumstances that determine some input parameters. Specifically, landholders can input different market land values and market rental rates in different years of an access agreement. They can also input different land areas occupied and impacts on the value of the residual land (ie, severance and injurious affection) in different years of the access agreement, to reflect changes in the scale and scope of a CSG project that occur over time.

The model requires nominal values (ie, including inflation) for land values and other inputs relating to the benefit-sharing payment each year. Therefore, in contrast to the model proposed in the Draft Report, the final spreadsheet model uses a single rate of inflation applied each year as the default option (cell E25). Alternatively, landholders can enter their own land values and benefit payments in nominal terms in cells in row 9 and row 32.

Compensation at the end of a CSG project

At the Narrabri public forum, Ms Fleck commented that the model proposed in the Draft Report assumed CSG impacts such as injurious affection would cease to exist and the land would be recovered to its original condition as soon as the CSG production ceases. She argued that this is not the case.[51] We agree with Ms Fleck that it will take some time before the land is rehabilitated and restored to its original condition, and consider the relevant compensation should continue to be

[51] M. Fleck, Mullaley Gas and Pipeline Accord, Narrabri public hearing, 13 October 2015, pp 52-53.

paid until the gas project is terminated and the land is rehabilitated to its original condition. Accordingly, we have modified the model to include a rehabilitation payment at the end of an agreement. The model recognises that the scale and scope of rehabilitation work would vary depending on the project by allowing landholders to enter the duration of the rehabilitation period. The model also accommodates different impacts on the landholder during the rehabilitation period.

Costs of expert advice

As mentioned above, AGL commented that including professional fees in the first year compensation could be misleading. The costs of expert advice could be directly funded by the gas company, or it could be first incurred by landholders and later reimbursed by the gas company. Where the costs of expert advice are directly funded by the gas company, the cost of expert advice should be set to $0. We have included a comment to this effect in the INPUT worksheet.

Other changes to the model

Following Cotton Australia's suggestions, we have provided examples of severance and injurious affection in the INPUT worksheet for clarity.[52] Several submissions commented a benchmark compensation model should be treated as guidance only.[53] We have included a disclaimer in the INPUT worksheet stating that model was developed as a guide for landholders only.

5.2.2 The RESULTS worksheet

The RESULTS worksheet for the landholder in our example is shown in Figure 5.2. The worksheet consists of three parts.

- **PART A** shows the landholder's benchmark compensation payment. In our example, the landholder receives compensation in a series of annual payments over 20 years (ie, the access agreement period). They could also elect to see the equivalent up-front payment, where compensation is calculated as the present value of the annual payments, made at the beginning of each year. The compensation in the first year is higher than the remaining years because the land area directly occupied by the gas company is larger and estimated impacts on the residual land are higher in the first year, and it includes the costs of expert advice. The compensation payment in the fifth year is higher than the previous three years due to an increase in market value of land. After 20 years, the landholder receives compensation while the gas company undertakes rehabilitation work.

[52] Cotton Australia submission to the Draft Report, 30 October 2015, p 3; F. Muller, Cotton Australia, Gloucester public hearing Transcript, 20 October 2015, p 34.

[53] AGL submission to the Draft Report, October 2015, pp 2-3; K. Anderson MP submission to the Draft Report, p 2, September 2015; Origin Energy submission to the Draft Report, November 2015, pp 2-3.

- **PART B** shows the landholder's benchmark benefit-sharing payments. The landholder receives the first benefit payment at the end of the fourth year (ie, beginning of the fifth year) after signing the access agreement, since this is the year the gas company expects to start producing commercial quantity of gas and making royalty payments to the Government. The benefit payments are calculated assuming the gas company's royalty payment would remain constant in nominal terms at $1,500,000 per annum.
- **PART C** shows graphically a schedule of the landholder's benchmark compensation and benefit payments over the period of the access agreement and rehabilitation.

5.2.3 The CALC worksheet

The CALC worksheet provides detailed calculations of compensation and incentive payments.

Compensation payments

Compensation payments in our model include the rent for land occupied, compensation for severance and injurious affection, and the costs of landholder's time and professional advice, which are calculated as follows:

- Rent for land occupied = Value of land ($/ha) × Area of land used (ha) × Rental rate (%)
- Compensation for severance = Value of land ($/ha) × Area of residual land (ha) × Estimated reduction in land value due to severance (%) × Rental rate (%)
- Compensation for injurious affection = Value of land ($/ha) × Area of residual land (ha) × Estimated reduction in land value due to injurious affections (%) × Rental rate (%)
- Landholder time and expert advice = Total number of hours spent negotiating access agreement × Landholder's value of time ($/hour) + Total cost of professional advice ($)
- Rehabilitation payment = (Rent for land occupied + Compensation for severance + Compensation for injurious affection) x (Duration of rehabilitation work (in weeks) ÷ 52).

Benefit payments

The model includes payments to share the benefits of gas development. It assumes that a gas company creates an "incentive fund" where it contributes certain amounts each year. The total fund is then shared by all affected landholders within the licence area. The model includes three different calculation methods for benefit payments. In all cases, the benefit payment is funded by the gas company:

- If benefit payments are based on royalty payments:
  - Total incentive fund = Annual royalty payment × % of royalty a gas company contributes to the incentive fund.
  - Benefit payment to a landholder = Total incentive fund × (Landholder's land area utilised by gas company ÷ Total licensed land area for production).
- If benefits payments are based on meeting a production target:
  - Total incentive fund = Total number of producing wells in licence area that exceed production targets × Amount of money per well a gas company contributes to the incentive fund when a well production exceeds its target level.
  - Benefit payment to a landholder = Total incentive fund ÷ Total number of eligible landholders in licensed area.

If a landholder is provided with an estimate of annual benefit payments or does not have sufficient information to use the previous two options, annual benefit payments can be calculated based on an estimate of annual benefit payments the landholder would reasonably expect to receive in the first year of production. Landholders may also share the benefits of gas development through benefits in-kind (eg, new fences, gates, access roads and dams).

The model allows different inputs required to calculate benefit payments in each year of the production stage. This takes into account that well productivity could change over time during the access agreement period.

Figure 5.1 Compensation model INPUT worksheet ($nominal)

INPUTS RESET

PART A. Inputs for Compensation Payments

PLEASE ENTER VALUES ONLY IN COLOURED CELLS	Unit	Fixed input	Access Agreement Year 1	2	3	4	5	•••	20 Rehabilitation
1. Land access agreement details									
How long is your access agreement for? (Maximum is 30 years)	Year	20							
2. Landholding details									
What is the total area of your land in hectares? If you have land area in a different unit, use the "CONVERSION" worksheet to convert into hectares.	Hectare	200							
What is the estimated value of your land per hectare in nominal terms (ie, including inflation)? If you have land value in a different unit, use the "CONVERSION" worksheet to convert into $/hectare.	Per hectare		$15,000				$18,000	•••	
What is the rental value of land as a percentage of land value?	Percent		8%				9%	•••	
3. Estimated impacts									
(a) Directly impacted land									
What is the total area of land used by gas company?	Hectare		10.00	5.25				•••	
(b) Residual land (your total land area excluding directly impacted land)									
What is an estimated reduction in the value of residual land due to severance?	Percent		0%	0%				•••	0%
What is an estimated reduction in the value of residual land due to injurious affection?	Percent		20%	10%				•••	10%
(c) How long it the rehabilitation period?	Weeks	52							

Figure 5.1 Compensation model INPUT worksheet - continued

4. Cost of landholder time and expert advice

How many hours did you spend negotiating your access agreement?	Hours in total	150
How many hours do you expect to spend each year on matters related to you access agreement?	Hours per annum	50
Enter an estimate of the value of your time	Per hour	$50
How much did you spend on fees for professional advice including GST?	Per agreement	$40,000

5. Other assumption

What rate of return would you expect to earn on financial investments per year in nominal terms? You need this input only if you wish to calculate a lump-sum upfront payment.	Percent per annum	3.5%
Inflation rate	Percent	2.5%

PART B. Inputs for Benefit Payments

PLEASE ENTER VALUES ONLY IN COLOURED CELLS	Unit	Fixed input	Access Agreement Year 1	2	3	4	5		20
What is your benefit payment based on?	Statutory annual royalty payment								
In which year from Year 2 to Year 10 is the gas project expected to enter the production stage?	Year	4							
Provide inputs below from Year 4									
Gas company's statutory annual royalty payment in nominal terms (ie, including inflation)	Dollar per annum					$1,500,000		...	
% of royalty gas company contributes to incentive fund	Percent					5%		...	
Total licence area for production	Hectares					22		...	

Figure 5.2 Compensation model SUMMARY worksheet ($nominal)

RESULTS

PART A. Compensation Payments

Please select an option to get an estimate of your compensation. Select "Lump-sum Upfront Payment" to get a single upfront payment. Select "Annual Payments" for a series of annual payments.

Payment Structure: LUMP-SUM UPFRONT | ANNUAL PAYMENT

Note: Where the costs of expert advice have been incurred by landholders, the first year compensation is higher due to the inclusion of the reimbursment of the costs of expert advice.

Beginning of Year	Annual Payment
1	$105,100
2	$32,974
3	$33,799
4	$34,644
5	$42,814
6	$43,884
7	$44,981
8	$46,106
9	$47,259
10	$48,440
11	$49,651
12	$50,892
13	$52,165
14	$53,469
15	$54,806
16	$56,176
17	$57,580
18	$59,020
19	$60,495
20	$62,007
Rehabilitation	$58,011

PART B. Benefit Payments

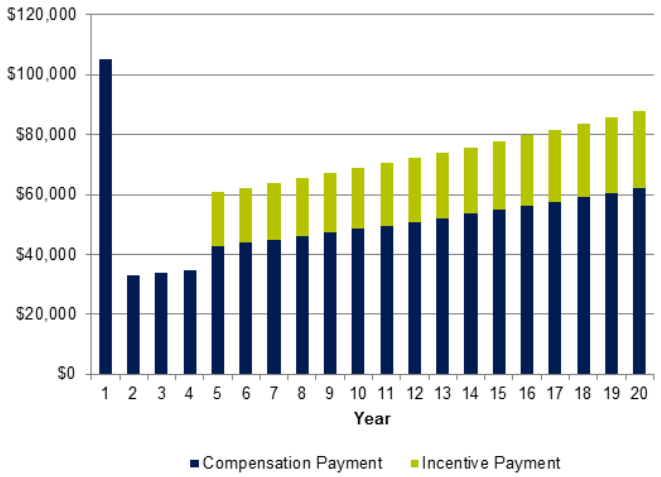
A schedule of your benefit payments is provided below.

Note: This model assumes the provision of benefit payments during the production stage of a CSG project. Benefit payments are not mandatory and gas companies may choose to provide other in-kind benefits.

Beginning of Year	Annual Payment
1	
2	
3	
4	
5	$17,898
6	$18,345
7	$18,804
8	$19,274
9	$19,756
10	$20,250
11	$20,756
12	$21,275
13	$21,807
14	$22,352
15	$22,911
16	$23,483
17	$24,070
18	$24,672
19	$25,289
20	$25,921

PART C. Payment Schedule

The graph below shows compensation payment schedule over your access agreement period.



Data source: IPART.

5.3 Some impacts are not included in the model

The model does not include compensation for all possible impacts on landholders that fall within the four heads of compensation. For example, there is no compensation calculated for:

- any damage that is caused by the gas company to a landholder's crops, property, land and buildings etc
- the cost of land rehabilitation, and
- 'making good' on any impact on quality/quantity of water stored on the land.

These impacts fit within the heads of compensation, and our view is that landholders should receive compensation for these impacts or have them rectified to an appropriate standard. However, this is generally provided for in access agreements – for example, by specifying that in the event that there is damage to a landholder property it will be rectified or paid for by the gas company.[54]

[54] AGL's standard access agreement states that AGL will pay for damage to land, gardens, improvements or stock caused by AGL or its subcontractor's activities. It also includes undertakings in relation to rehabilitation of land and make good provisions in relation to water supply. AGL, *Access principles and land access and compensation agreement*, 21 March 2014, p 2.

6 Other recommendations to support landholders

In addition to developing a benchmark compensation model for landholders hosting CSG exploration and production, we considered whether additional measures were required to support landholders in negotiating land access and compensation agreements, and to ensure they receive compensation that is at least as good as those in other states. After considering stakeholder comments on our draft decisions and recommendations, we are recommending that:

- gas companies pay compensation to neighbours if the impacts on them exceed reasonable levels set out in licences or approvals
- legislative provisions for compensation in NSW be amended to cover all relevant impacts on landholders
- independent workshops be run to help landholders understand land access for coal seam gas and negotiate land access and compensation agreements, and
- a voluntary and non-identifying public register of CSG compensation payments be established.

The sections below discuss each of our final recommendations, including stakeholder responses to our draft recommendations.

6.1 Compensation for neighbours

In our Issues Paper, we expressed a preliminary view that our recommendations on compensation would also be relevant to neighbours of landholders hosting CSG who are directly affected by noise, light and dust. Stakeholder responses to this view were mixed. For example, while some agreed that compensation should be paid to neighbours who are directly affected by noise, light and dust,[55] others argued that existing mechanisms already address impacts on neighbours and the broader community.[56]

[55] Cotton Australia submission, 30 October 2015, p 5; People for the Plains submission, 27 October 2015, pp 4-5; C Robertson submission (W15/5022), October 2015, p 13.

[56] Santos submission, October 2015, pp 8-9; APPEA submission, October 2015, p 5; AGL submission, October 2015, p 6.

After considering these responses, our draft recommendation was that compensation should be paid to neighbours where noise, light or other impacts **exceed** reasonable levels. This recognised that impacts on neighbours are already managed to reasonable levels through environmental and planning approval processes. However, these arrangements may also provide for impacts to exceed reasonable levels if the gas company enters into a written agreement with the affected landholder(s).[57]

6.1.1 Submissions to our draft recommendation

In response to our draft recommendation, AGL submitted that where impacts on neighbouring properties are demonstrated to exceed planning or licence conditions, the gas company should mitigate those impacts to an acceptable level by paying for those affected to relocate for that time period or other mutually agreeable compensation.[58] Cotton Australia was also in broad agreement with our draft recommendation and supported the distributions through the Community Benefits Fund.[59]

However, APPEA submitted that impacts on neighbours should not be compensated through the land access framework as they are already regulated through under other instruments. Requiring additional compensation under the land access regime would result in double-counting and would establish an inconsistent approach between gas activities and other activities that have similar impacts, such as farming. Santos made similar comments, and suggested that consultation with other industries should be undertaken prior to adopting a final standard.[60]

The submission from Ms Ciesiolka noted that it was unfair to put the onus on neighbours to prove that gas companies had breached their licence conditions, and that payment of a relocation allowance is sub-standard. She put the view that previous environmental incidents including spills and leakages show that impacts on neighbours are not being managed appropriately, and is concerned that relevant approvals can be set aside if the gas company enters into a written agreement. She also considered it inappropriate to tie compensation for neighbours to the Community Benefits Fund which has not been finalised.[61]

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57 For example, AGL's Environment Protection Licence for the Gloucester CSG Project (Licence No. 20358 clause L7.3) allows for work to be done outside standard construction hours if written agreements are made with relevant parties. The ability to negotiate agreements in relation to 'unacceptable' noise levels are also included in the NSW Environment Protection Authority's NSW Industrial Noise Policy, p 44. See, http://www.environment.nsw.gov.au/resources/noise/ind_noise.pdf, accessed 23 November 2015.

58 AGL submission, October 2015, p 3.

59 Cotton Australia submission, October 2015, p 4.

60 APPEA submission, October 2015, p 3; Santos submission, October 2015, p 5.

61 S Ciesiolka submission, October 2015, p 6.

The submission from Mr Pickard also referred to previous environmental incidents that have affected neighbours of CSG projects. He submitted that it is unfair to place the burden of proof on neighbours, and that they should have agreements in place that protect them.[62]

Mr Robertson put the view that gas companies will not monitor or manage impacts on neighbours properly. He submitted that there should be a community-wide approach to compensation to account for the impact on property values across the community.[63]

6.1.2 Our final recommendation

Our final recommendation is that gas companies pay compensation to neighbours if the impacts on them exceed reasonable levels set out in licences or approvals. These neighbours should receive compensation that is at least equivalent to an allowance to relocate for the period that impacts exceed reasonable levels. The Australian Taxation Office publishes allowances for accommodation, meals and incidentals for different parts of Australia including country areas.[64] While we understand it is often not possible for neighbours to relocate, in our view a relocation allowance forms a minimum benchmark for compensation. This recommendation is essentially unchanged from our Draft Report.

The terms of reference for this review ask us to recommend compensation benchmarks to support landholders who are negotiating with gas companies for hosting gas exploration and production. We have also been asked to recommend industry best practice. During our consultations, we held discussions with a gas company in Queensland which will relocate, or pay compensation to neighbours if the impacts on them exceed reasonable levels set out in licences or approvals.

In making this recommendation we have considered the view from APPEA that it would result in 'double-counting', given impacts on neighbours are managed by existing planning and licence conditions. However, in our view this recommendation is complementary, as it applies only when these impacts exceed reasonable levels as defined by planning and licence conditions, and neighbours would be not be compensated twice.

62 T Pickard submission, October 2015, p 1.

63 C Robertson submission (W15/5022), October 2015, pp 1-2.

64 http://law.ato.gov.au/atolaw/view.htm?docid=TXD/TD201419/NAT/ATO/00001, accessed 18 November 2015.

Our recommendation does not put the onus on neighbours to identify if impacts exceed reasonable levels. Gas companies are already required to undertake modelling to identify surrounding neighbours who may be affected by a project as part of their licences and approvals. If an impact on a neighbour cannot be managed to a reasonable level (for example, the project exceeds a decibel noise limit), then an agreement will need to be negotiated with that neighbour.

Our recommendation on compensation for neighbours is not tied to the Community Benefits Fund, and is in not influenced by the fund's final design.

Recommendation

3 That gas companies pay compensation to neighbours if the impacts on them exceed reasonable levels as set out in licences or approvals.

6.2 Amendments to NSW legislative provisions for compensation

The legislative provisions for compensation to landholders hosting CSG exploration and production are set out in Section 109(1) of the Act (Box 6.1). Our review found that these provisions do not address all the relevant impacts of gas exploration and production on landholders, and are narrower than provisions in other jurisdictions in Australia. As others have previously noted,[65] the NSW legislation:

- identifies **severanc**e in section 109(1)(c), but contains no definition of severance
- mentions **injurious affection** in section 107(1), but does not list this as a compensation item in section 109(1) of the Act. Loss of amenity (including recreation and conservation values) is included in legislation in Victoria and Tasmania
- does not address **special value**[66] of land
- does not specifically include **disturbance** in section 109(1), but mentions some disturbance items, including damage to stock, crops, buildings and land
- does not include any **loss in market value of the land** (included in the legislation in Queensland, Victoria and Tasmania), and
- does not include **loss of opportunity to make planned improvements on the land** (mentioned in the legislation in Queensland, Victoria and Tasmania).

65 Fibbens, M., Mak, M., and Williams, A., 2013, *Coal seam gas extraction: Does landholder compensation match the mischief?*, 19th Pacific Rim Real Estate Society Conference, January 2013, Melbourne, p 11.

66 Special value of the land is the financial value of any advantage, in addition to market value which is incidental to the person's actual use of the land. The advantage must be specific to the claimant only (otherwise it would be reflected in the market value).

Box 6.1 Compensation under Section 109(1) of the *Petroleum (Onshore) Act 1991* (NSW)

If compensation is assessed under this Act by the Land and Environment Court, the assessment is to be of the loss caused or likely to be caused:

a) by damage to the surface of land, and damage to the crops, trees, grasses or other vegetation on land, or damage to buildings and improvements on land, being damage which has been caused by or which may arise from prospecting or petroleum mining operations, and

b) by deprivation of the possession or of the use of the surface of land or any part of the surface, and

c) by severance of land from other land of the landholder, and

d) by surface rights of way and easements, and

e) by destruction or loss of, or injury to, or disturbance of, or interference with, stock on land,

f) by damage consequential on any matter referred to in paragraphs (a)-(e).

In our Draft Report, we made a draft recommendation that the provisions for compensation in the *Petroleum (Onshore) Act 1991* (NSW) (the Act) be amended prospectively to align with those in the Queensland *Petroleum and Gas (Production and Safety) Act 2004.* We also recommended that amendments to the Act also recognise special value of land. We considered that these amendments will ensure legislation supports fair compensation for landholders and meets the NSW Government's intent that landholders in NSW receive compensation that is at least as good as in other parts of Australia. We also consider there would be synergies from adopting the same provisions as Queensland, as gas companies will likely operate in both jurisdictions.

Box 6.2 Compensation under section 532 Queensland *Petroleum and Gas (Production and Safety) Act 2004*

The holder of each petroleum authority is liable to compensate each owner or occupier of private land or public land in the area of, or access land for, the authority (an eligible claimant) for any compensatable effect the eligible claimant suffers that is caused by relevant authorised activities.

a) Compensatable effect in relation to the claimant's land means all or any of the following:
   i. deprivation of possession of land surface;
   ii. diminution of land value;
   iii. diminution of the use made or that may be made of the land or any improvement on it;
   iv. severance of any part of the land from other parts of the land or from other land that the eligible claimant owns;
   v. any cost, damage or loss arising from the carrying out of activities under the petroleum authority on the land;
b) Accounting, legal or valuation costs reasonably incurred by the landholder to negotiate or prepare a Conduct and Compensation Agreement, other than costs involved to resolve disputes via independent alternative dispute resolution (ADR).
c) Consequential damages the eligible claimant incurs because of a matter mentioned in paragraph a) or b).

Our Draft Report also noted that the NSW Government was in the process of amending legislation in response to a recommendation by Bret Walker, SC as part of his recent review of the land access arbitration framework. Mr Walker recommended that the NSW Government amend the *Petroleum (Onshore) Act 1991* to provide for a landholder to have the following costs paid by the (gas) explorer:

- their time spent negotiating and arbitrating the access arrangement up to a capped amount
- their legal costs up to a capped amount, and
- costs of any experts that landholders engage as part of the negotiation and arbitration process up to a capped amount.[67]

In response to this report, the NSW Government committed to establish appropriate cost and time caps.[68] While we supported the NSW Government's commitment to allow landholders to receive compensation for their time and

[67] Walker, B, *Examination of the Land Access Arbitration Framework Mining Act 1992 and Petroleum (Onshore) Act 1991*, 20 June 2014, p 29.

[68] NSW Government, *Government response to the review of the arbitration framework under the Mining Act 1992 and the Petroleum (Onshore) Act 1991*, August 2014, pp 10-11.

professional fees, we considered that the legislation should refer to 'reasonable costs' rather than setting caps to provide more flexibility to account for different landholder circumstances.

6.2.1 Submissions to our draft recommendations

Cotton Australia, AGL and Origin Energy supported aligning the NSW legislative provisions for compensation with those in Queensland. Origin Energy considered that this is a sound, established policy position that is well understood by the industry and professional adviser supporting landholders. In addition, AGL and Origin Energy both considered that professional fees should be capped at reasonable levels. However, Cotton Australia opposed specifying caps on the grounds that there is no one-size-fits-all. It also supported including special value of land and future limitations on land value and use.[69]

APPEA supported alignment with Queensland heads of compensation, but noted that these do not explicitly include special value of land. It considered that special value does not explicitly need to be legislated as it is part of standard negotiations.[70] However, People for the Plains not only supported including special value of land but argued that loss of amenity including recreation and conservation values should also be legislated.[71]

In contrast, Santos did not support our draft recommendation as it considers there is no legislative or market failure to justify such amendments. It submitted that if IPART recommends any amendments, it should be to make the NSW legislation exactly the same as the Queensland legislation. Santos also expressed support for placing caps on reasonable legal costs.[72]

6.2.2 Our final recommendation

Our final recommendation is that the provisions for landholder compensation in the *Petroleum (Onshore) Act 1991* be amended prospectively to align with the Queensland *Petroleum and Gas (Production and Safety) Act 2004* and recognise special value of land. This is consistent with our Draft Report.

The NSW Government wants to ensure that NSW landholders receive compensation that is at least as good as that in other parts of Australia. We consider that having appropriate legislative provisions for compensation are fundamental to achieving this. By recommending that the Queensland legislative provisions are adopted, we consider that we are minimising the costs for industry.

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69 AGL submission, October 2015, pp 3-4; Origin Energy submission, October 2015, pp 2-3; Cotton Australia submission, October 2015, p 4.

70 APPEA submission, October 2015, p 3.

71 People for the Plains submission, October 2015, p 2.

72 Santos submission, October 2015, p 5.

The Queensland legislation refers to 'diminution of the use made or that may be made of the land or any improvement to it' and 'diminution in land value'.[73] We consider that these terms address the concerns expressed by Cotton Australia and People for the Plains that the legislation should address future limitations on land value and use and loss of amenity including recreation and conservation values.[74]

We are not specifying exactly how these amendments should be made. Since our Draft Report, legislation was passed that provides for landholders reasonable costs in negotiating an access arrangement to be paid by the gas company.[75] The NSW Government is yet to determine the maximum amount (cap) on these costs, but it will be set out by the Minister by order published in the Gazette. In making the order, the Minister must have regard to:

- time spent participating in negotiating the access arrangement
- legal costs of negotiating the access arrangement, and
- costs of engaging experts as part of the negotiation process.

As the NSW Government is yet to finalise the dollar amount of the caps for landholder time and professional fees, we have not referred to them in our compensation model. Notwithstanding these caps, landholders may be able to negotiate above them.

In setting the caps, we recommend that the NSW Government consult with landholders who have been through land access negotiations and consider a wide range of landholder circumstances to ensure that the caps cover landholders' reasonable costs.

Recommendation

4 That the provisions for landholder compensation in the *Petroleum (Onshore) Act 1991* be amended prospectively to align with the Queensland *Petroleum and Gas (Production and Safety) Act 2004* and recognise special value of land.

5 That in setting the cap on the costs of landholder time, legal and other professional advice, the NSW Government consult with landholders who have negotiated land access arrangements and consider a wide range of landholder circumstances to ensure the caps capture landholders' reasonable costs.

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73 *Petroleum and Gas (Production and Safety) Act 2004 (QLD)*: Sections 532 (4)(a)(ii),(iii) General liability to compensate.

74 The submission from Mr Fibbens, June 2015, (section 2.6) refers to a paper where this terminology and its application to 'injurious affection' is discussed. See Scarr P, *Sullivan v Oil Company of Australia Limited and Santos Petroleum Operations Pty Ltd and its Relevance Throughout Australia*, AMPLA Yearbook 2004.

75 *Mining and Petroleum Legislation Amendment (Land Access Arbitration) Act 2015,* No 41, section 8.

6.3 Land access and negotiation workshops

As part of our consultation we met with AgForce Queensland, the peak organisation representing Queensland's rural producers. This organisation runs a CSG Project which gives landholders access to independent information and tools to support them in reaching fair conduct and compensation agreements with gas companies. Financial support for the CSG Project is provided by the Queensland Government, APPEA, Queensland Resources Council and the GasFields Commission Queensland.

In particular, the CSG Project provides free workshops for landholders on land access agreements and negotiating conduct and compensation arrangements. The topics covered in the workshops include, for example:

- an overview of land access and CSG
- the respective rights and responsibilities of landholders and gas companies
- the areas where CSG activities are taking place in the state
- CSG company updates/future plans
- access to information on licenses/tenures
- government/legislative changes and updates
- groundwater impacts and water management
- baseline assessments of groundwater, surface water, land and land productivity etc
- developing property management plans and compliance provisions
- compensable effects (heads of compensation)
- make good provisions in relation to water
- stages of negotiation, what research to do, where to get useful advice
- compare proposed activities with your farming activities – identify potential impacts and risks (land segregation, weeds etc), and
- biosecurity/weed management considerations including gas company obligations.[76]

The CSG project also provides one-on-one assistance to landholders throughout all stages of the process, from negotiation to remediation including managing activities on the property.

[76] Based on unpublished AgForce Projects Landholder CSG Project, *Advanced CSG Negotiation Support Workbook*, 2015.

Workshops are popular among landholders and well-regarded by government and industry. We consider that similar workshops would be useful for landholders in NSW to enable them to more confidently negotiate with a gas company. While various land access guidelines and checklists for landholders are publicly available, workshops will enable landholders to discuss their circumstances and get up-to-date independent information and advice.

Our draft recommendation was that the NSW Farmers Association facilitate these workshops. NSW Farmers is the equivalent organisation to AgForce in NSW and has previously provided CSG workshops for landholders as part of its Mining and CSG Communications Project.

6.3.1 Submissions to our draft recommendation

AGL and Cotton Australia agreed with our recommendation that NSW Farmers facilitate workshops for landholders. AGL considered that they should be funded by the NSW Government and limited to genuine landholders affected by CSG exploration and production.[77] Origin Energy supported the provision of independent workshops for landholders to build a better understanding of land access for CSG and negotiations.[78]

Santos and APPEA supported the concept of independent workshops, but not that NSW Farmers facilitates them. Santos submitted that NSW Farmers is not perceived by the gas industry as an independent party in the CSG debate. APPEA recommended that this function be allocated to the NSW Land and Water Commissioner.[79]

People for the Plains submitted that workshops should incorporate a section on considering the impacts of agreements on your neighbours, your community and the planet, as well as the latest information to help farmers understand the risks.[80] Mr C Robertson considered that it is important to ensure that workshops are accessible to all those affected by CSG, not just by farmers.[81]

6.3.2 Our final recommendation

We are recommending that the NSW Department of Industry be responsible for providing independent workshops for landholders, with funding also provided by the gas industry.

77 AGL submission, October 2015, p 4; Cotton Australia submission, October 2015, p 5.
78 Origin Energy submission, October 2015, p 3.
79 Santos submission, October 2015, p 6; APPEA submission, October 2015, p 5.
80 People for the Plains submission, October 2016, p 6.
81 C Robertson submission (W15/5022), October 2015, p 2.

Stakeholders generally supported the provision of workshops for landholders, although there were different views as to who should facilitate them. In addition to submissions noted above, some landholders advised us in our direct consultations that they did not support NSW Farmers providing workshops for landholders.

Given these stakeholder views, on balance we considered that the NSW Department of Industry is the appropriate body to take responsibility for providing the landholder workshops. The Department already provides information to landholders, including in relation to CSG (see Appendix J).

Recommendation

6 That the NSW Department of Industry provide independent workshops, co-funded by the gas industry, to assist landholders in understanding land access for coal seam gas, and negotiating land access and compensation agreements.

6.4 Public register of compensation payments

Our review found that there is little information publicly available on what CSG compensation payments are being paid to landholders.[82] This is because land access and compensation agreements may contain confidentiality clauses, with the landholder often being the party that prefers to keep arrangements confidential. This lack of transparency is not helpful to other landholders.

To address this, in our Draft Report we recommended that a public register of compensation payments in NSW be established, similar to one operating in Canada (see Box 6.3). The register would allow landholders to voluntarily and anonymously provide information about their compensation, as well as other relevant information such as as their property's general location, size and type (eg, dairy farm, cotton farm, broadacre cropping, lifestyle block etc).

The regsiter would need to be developed, hosted on a website, and promoted to landholders.[83] We considered there would be advantages in having the same organisation provide workshops for landholders and host the register.

[82] An exception to this is Santos' compensation arrangements for the Narrabri Gas Project.

[83] The design of the compensation register could be based on the FAO website. See http://www.farmersadvocate.ca/leases_sales/submit_lease_or_review.php, accessed 23 November 2015.

Box 6.3 Canadian example of a public register of compensation

In British Columbia, Canada, the Farmer Advocacy Office (FAO) maintains a register of compensation for oil and gas. The FAO has the primary goal of equipping land owners to deal in their own best interests in the negotiation of surface leases and rights of way associated with the oil and gas industry. The FAO provides an online form for landholders to submit/upload information about their compensation (area of land covered, duration of the lease, amount of initial and annual rental compensation, in-kind extras etc). It is a voluntary system.

More information about the FAO and their register of lease values can be found here, http://www.farmersadvocate.ca/leases_sales/surface_leases/.

6.4.1 Submissions to our draft recommendation

Most stakeholders who commented on this issue supported a public register, but had differing views on who should maintain it, and what form it should take. For example:

- Cotton Australia recommended the register be maintained by an independent government agency such as IPART, rather than a representative body or interest group. It also suggested that provided that there are sufficient data points in the register, a brief annual factsheet should be published.[84]
- AGL and APPEA recommended the NSW Land and Water Commissioner maintain the register.[85] APPEA also submitted that the public register would need to provide sufficient information about the specific circumstances of the landholder and CSG activities associated with each compensation payment to ensure it is not misleading.[86]
- Origin Energy argued that the anonymity provided to landholders should be extended to the gas companies paying compensation.[87]
- Santos recommended that the NSW Division of Resources and Energy undertake the role of establishing and managing a public register as it already maintains databases which were established to provide information about petroleum activities. It also submitted that confidentiality is a matter for each landholder to decide, and that information sources should be easily accessible and grouped for ease of access.[88]

84 Cotton Australia submission, October 2015, p 5.
85 AGL submission, October 2015, p 5. APPEA submission, October 2015, p 5.
86 APPEA submission, October 2015, p 5.
87 Origin Energy submission, October 2015, p 3.
88 Santos submission, October 2015, p 6.

- Ms Ciesiolka submitted a public register should be mandatory, and it should be mandated that no confidentiality clauses are included in any land access agreement. Similarly, Mr Robertson submitted that a public register should allow identification based on the landholder's consent, and People for the Plains submitted that confidentiality clauses should be removed in access agreements.[89]

6.4.2 Our final recommendation

Our final recommendation is that NSW Department of Industry develop and maintain the public register. This department already provides information to the community on exploration and mining titles and activity across NSW through the Common Ground website.[90] This website also provides information for landholders on access arrangements and land access negotiations. On balance, given stakeholder comments on the suitability of NSW Farmers hosting the register, we consider that the NSW Department of Industry would be a suitable source of information on compensation arrangements. Use of the register would need to be promoted to landholders.

We maintain the view that it should be voluntary for landholders to provide information on the register. The register should not be published until there is sufficient information so as not to identify individual landholders. However, individual landholders and gas companies may agree to be identified.

We agree with APPEA that there needs to be enough information in the register to put the compensation into context. As outlined above, this would likely include the area of land covered, duration of the agreement, general location, type of property (eg, dairy farm, cotton farm, broadacre cropping, lifestyle block etc) and the amount of initial and annual compensation and in-kind extras.

Recommendation

7 That the NSW Department of Industry develop and maintain a voluntary and non-identifying public register of CSG compensation payments.

89 S Ciesiolka submission, October 2015, p 7; People for the Plains submission, October 2015, p 4; C Robertson submission (W15/5022), October2015, p 3.

90 http://commonground.nsw.gov.au accessed 23 November 2015.

Appendices

A Terms of reference

Reference: A1582697

Dr Peter Boxall AO
Chairman
Independent Pricing and Regulatory Tribunal
PO Box K35
HAYMARKET POST SHOP NSW 1240

- 9 FEB 2015

Dear Dr Boxall Peter

Pursuant to section 9 of the *Independent Pricing and Regulatory Tribunal Act 1992*, I am referring the following matter to the Tribunal for investigation and report: Landholder benchmark compensation rates for gas exploration and production.

Under the NSW Gas Plan, the government has committed to ensuring landholders and communities share in the benefits of gas exploration and development.

To give landholders the support they need to negotiate appropriate compensation, the government will commission the Tribunal to benchmark compensation rates. Further detail is provided in the attached terms of reference to the Tribunal.

The terms of reference ask the Tribunal to develop an analytical framework for setting compensation benchmarks that can be updated annually.

The Tribunal is requested to conduct a public consultation process and provide a final report to the Minister for Resources and Energy by 30 November 2015.

Yours sincerely

MIKE BAIRD MP
Premier

End.

GPO Box 5341, Sydney NSW 2001 ■ P: (02) 9228 5239 ■ F: (02) 9228 3935 ■ www.premier.nsw.gov.au

LANDHOLDER BENCHMARK COMPENSATION RATES FOR GAS EXPLORATION AND PRODUCTION

Under the NSW Gas Plan, the NSW Government has committed to landholders receiving independent expert advice on benchmark compensation rates for gas exploration and production from the Independent Pricing and Regulatory Tribunal (IPART).

These benchmarks are to guide landholders in their compensation agreements with industry.

To support landholders negotiating agreements with industry, IPART is to recommend appropriate compensation benchmarks for landholders. The NSW Government intends that landholders receive compensation that is at least as good as that received by other landholders in Australia who host gas development. The benchmark arrangements will influence the competitiveness of NSW as an investment destination for petroleum exploration and production projects. Agreements will be negotiated on a commercial basis.

IPART is requested to develop an analytical framework for setting compensation benchmarks that can be updated annually.

Conduct of review

In conducting this review IPART should have regard to:

- The economic benefits over the lifecycle stages of a project, considering the associated risks and probabilities of a project progressing.
- The structure of compensation arrangements (e.g. fixed, rental or other methodologies) taking into account the different phases of a project, the varying value of production systems in agricultural enterprises and the implications for encouraging exploration.
- Landholder compensation arrangements currently applied by industry in NSW and in other Australian states and territories and internationally, including identifying industry best practice.
- Similar arrangements in other industries (e.g. wind farms) across other Australian and international jurisdictions.
- Relevant legislation on gas/petroleum exploration and production, as well as measures announced as part of the NSW Gas Plan.
- Any other matters it considers relevant.

Consultation

IPART's review will include a public consultation process through which IPART will invite submissions from stakeholders on an issues paper and a draft report. Public hearing(s) will also be held as part of this process.

Timing

IPART is to publish a draft report by September 2015. A final report is to be provided to the Minister for Resources and Energy by 30 November 2015.

Table A.1 How we have met the requirements in our Terms of Reference

Issue/requirement	Response
Recommend appropriate compensation benchmarks for landholders.	This is the basis of our compensation model discussed in Chapters 4 and 5. Landholders can estimate compensation benchmarks specific to their circumstances.
IPART is to develop an analytical framework for setting compensation benchmarks that can be updated annually.	Our framework is set out in the compensation model. It can be updated or adapted as needed.
That landholders in NSW receive compensation that is at least as good as that received by other landholders in Australia who host gas development.	Our recommendation in Chapter 6 on reforms to the legislation provisions for landholder compensation for CSG is designed to underpin NSW landholders receiving fair compensation that is at least as good as elsewhere in Australia.
IPART should have regard to the economic benefits over the lifecycle stages of a project, considering the associated risks and probabilities of a project progressing.	We have considered this as part of our recommendation on benefit payments. Our recommendation allows gas companies flexibility in structuring incentive/benefit payments. These can be made in the production phase to account for the risks and probabilities of a project progressing.
The structure of compensation arrangements (eg, fixed, rental or other methodologies) taking into account the different phases of a project, the varying value of production systems in agricultural enterprises, and the implications for encouraging exploration.	Our compensation model incorporates landholders with different land values and an estimate either upfront or annual compensation payments depending on the preferences and negotiation between the landholder and gas company.
The landholder compensation arrangements currently applied by industry in NSW, other Australian states and territories and internationally, including identifying industry best practice.	We have reviewed the legislative provisions for compensation in NSW and other jurisdictions and taken this into account in recommending legislative reform. We have also discussed with gas companies their approach to compensation and identified best practice for example with respect to arrangements for neighbours.
Similar arrangements in other industries (eg, wind farms) across other Australian and international jurisdictions.	In designing the compensation model we have considered compensation arrangements for windfarms and telecommunications. However, the design of the model is specifically designed for CSG projects.
Relevant legislation on gas/petroleum exploration and production, as well as measures announced as part of the NSW Gas Plan.	In our report we have outlined how our decisions relate to other measures and initiatives including the Community Benefits Fund and the Walker Review of Land Access Arbitration.

B Submissions to our Issues Paper

We received 28 submissions to our Issues Paper released in April 2015 (Table B.1). In Table B.2 below, we summarise the comments that stakeholders made in these submissions, both to our targeted questions and other issues that were raised. We also provide our response to these comments in the context of the Final Report.

Table B.1 Submissions received to our Issues Paper

Name/Organisation	Name/Organisation
AGL Limited	Lock the Gate Alliance
Australian Petroleum Production & Exploration Association	Mr Gerald McCalden
Australian Property Institute / Spatial Industries Business Association Australia	Mullaley Gas and Pipeline Accord Inc
Bellata Gurley Action Group Against Gas	NSW Famers Association
Ms S Ciesiolka	NSW Government
Cotton Australia	Mr Anthony (Tony) Pickard
Mr Douglas Cush	Ms Marylou Potts
Mr Alistair Donaldson	People for the Plains
Envirosure Organisation	Northern Rivers Guardians Incorporated
Mr Michael Fibbens	Ms Kim Revell
Groundswell Gloucester Inc	Ms Janet Robertson
Hunter Valley Protection Alliance	Mr Christopher Robertson
Mr John Kelley	Santos Limited
Ms Kirsty Kelly	Mr Garry Smith

Table B.2 Summary of stakeholder submissions to our Issues Paper

Question/issue and stakeholder comments	IPART response
1. Do you agree with our proposed principles of transparency, adaptability and practicability to guide our recommendations for this review? Are there other principles that we should apply in making our recommendations? Most stakeholders who commented on this question broadly supported these principles (for example, see submissions from the NSW Government (p 1), the Australian Petroleum Production and Exploration Association (APPEA) (p 2) and AGL (p 8)). The submission from the Australian Property Institute and the Spatial Industries Business Association Australia (API/SIBA) supported these principles and noted that these can be achieved through utilisation of the methodology at section 55 *NSW Land Acquisition (Just Terms Compensation) Act 1991*. Santos recommended that the principles should be simplicity, predictability, and commercially realistic (p 1).	We consider that the compensation model that we have developed meets these principles. We have provided instructions to make the model easy to use.
2. Do you agree with the four key steps in our proposed approach for this review (identify impacts, estimate compensation for these impacts, estimate benefit payments and make recommendations)? If not, what are your concerns? While many stakeholders did not specifically comment on our overall approach, of those that did there was a general view that this approach would not work well and/or there were issues or disagreement with specific steps. The submission from AGL noted that it would be very difficult to follow these steps to develop benchmark compensation to apply to the whole CSG industry given the large number of site-specific variables. It noted that AGL provides a production bonus to landholders to share the benefits of gas production (pp 2,4,8). The submission from M. Fibbens also noted that because of the variations in land values and CSG schemes, it will not be possible to estimate impacts for compensation that would apply to all properties in all localities (section 2.2). In its submission Santos noted that compensation should be a commercial arangement negotiated by the landholder and gas company (p 3). Similarly, APPEA submitted that the first two steps of our approach describe an appropriate process for a landholder and gas company to follow. It also submitted that as the extent and nature of activities by both landholders and gas companies are highly variable and site-specific, ex ante quantitiative advice or formulaic approaches are unlikely to provide useful guidance for landholders (pp 2, 6-7).	After considering the information and advice we received through our consultations, we have developed: ▾ nd number of freight trains or trucks permitted to imate compensation benchmarks using input information that is specific to their circumstances, and ▾ recommendations on additional measures to support landholders in negotiating appropriate land access and compensation agreements. As discussed in Chapter 5, the model can be updated if circumstances change including moving from the exploration to production phase. Benefit payments are discussed in Chapter 4.

Question/issue and stakeholder comments	IPART response
NSW Farmers submitted that impacts (ie, step 1) are different in the exploration and production phases and that our compensation benchmarks should reflect this. It submitted it would be worth uncovering the specific changes between exploration and production (p 5). The submission from Ms. K Kelly noted that compensation framework should be adjusted to reflect new impacts that arise over time (p 1). Groundswell Gloucester noted there is no perfect solution to modelling of losses of a landholder, however a framework for computation by an independent body will assist in achieving fairness (p 2).	
3. Do you agree with our preliminary view on the relevant heads of compensation (value of land occupied, loss due to injurious affection and disturbance)? Are there other temporary impacts of CSG exploration and production that we should consider? Most stakeholders supported these heads of compensation. APPEA submitted that in broad terms these heads of compensation should be sufficient to ensure landholders receive appropriate compensation, however not all are easily quantifiable (p 2). Groundswell Gloucester also supported these heads of compensation (p 2). Mr M. Fibbens supported these heads of compensation and suggested an additional solatium type payment (eg, 10%) to be added due to the complusory nature of action taken – as allowed for in s.85(8)(c) of the Queensland *Mineral Resource Act 1989* (section 2.3). Solatium was also considered relevant in the submissions from K Kelly, as people may feel they need to relocate their home due to health concerns (p 1). Similarly, Mr C. Robertson submitted that solatium should be included (p 27). The API/SIBA submission considered that the relevant heads of compensation should be those set out at section 55 NSW *Land Acquisition (Just Terms Compensation) Act 1991.* The same comment was made by the Hunter Valley Protection Alliance. It also suggested landholders should be given the option of having their property acquired where appropriate and that independent valuers be appointed to provide advice (p 5). In contrast, AGL considered that the heads of compensation that relate to the Just Terms Compensation Act are not necessarily appropriate for CSG projects. For example, it considered costs of relocation, solatium and severance are not relevant. It suggested that any recommendations used by IPART should be made in plain English as legalistic terms like severance are not understood in the community (p 6). The submission from Mr C Robertson referred to compensation for sleepless nights, family arguments and emotional stress (p 13).	As discussed in Chapter 4, we have used these heads of compensation in our compensation model. This includes instructions that explain what the heads of compensation mean. **Solatium** is compensation for non-financial disadvantage resulting from the necessity to relocate the principal residence (home). We have not included a specific payment for solatium in our model as this would normally not be required for CSG projects (as is the case in compulsory partial acquisitions). Landholders can negotiate for such a payment if they consider it relevant to their circumstances. While landholders may try to negotiate to have their **property purchased**, providing a legal option of having a property purchased is outside the scope of our review. During our review we heard from landholders who told us that negotiating a land access and compensation agreement was a stressful and time consuming process. Good conduct by the gas company can reduce these concerns for landholders. Our compensation model allows landholders to value the time they spend negotiating an agreement.

Question/issue and stakeholder comments	IPART response
4. Should we consider any 'special value' of land and loss of opportunity to make planned improvements on the land? Submissions provided broad support for these considerations, for example, Cotton Australia (p 4) NSW Farmers (p 7) and C Robertson (p 13). Santos noted that these issues are normally covered in commercial negotiations (p 8). Similarly, APPEA agreed these should be considered, but will depend on individual circumstances and cannot be predetermined. These issues are normally covered in negotiations (p 3). AGL considered that it is reasonable to compensate landholders for these impacts but they can typically be avoided through flexibility in where to locate infrastructure (p 5). The submissions from Mr Fibbens (section 2.4) and the Hunter Valley Protection Alliance (p 5) noted that adoption of the NSW *Land Acquisition (Just Terms Compensation) Act 1991* would safeguard inclusion of these items.	As discussed in Chapter 6 we are recommending that the provisions for compensation in the *Petroleum (Onshore) Act 1991* (NSW) (the Act) be amended to align with those in the Queensland *Petroleum and Gas (Production and Safety) Act 2004* including recognising special value of land. While we consider it is important that legislation includes these items, we agree with AGL that often they can be avoided through the location of CSG infrastructure.
5. Are there any permanent impacts on the market value of land arising from hosting gas exploration and production that we should consider? Stakeholders had divided views on this issue. Mr C Robertson submitted that public perception of health issues and environmental risks of CSG means that there is a reluctance to purchase properties located near CSG (p 13). He also submitted that many impacts that IPART considers to be temporary are in fact permanent. For example, only surface infrastructure will be removed and wells and fracked underground rock strata are impossible to restore to their original condition (p 29). Cotton Australia noted that there is uncertainty surrounding the impact of CSG on groundwater and therefore land values (pp 4-5). Similarly, NSW Farmers submitted that IPART should assume there is some negative impact in the absence of clear evidence (p 8). The submission from Mr G Smith noted that land values are negatively affected through impacts on scenic heritage significance (p 2). Santos submitted that there is no evidence of negative impacts on property values in Australia (p 8). APPEA provided several example studies that found no impact on market values due to CSG (p 3). AGL also considered that there is no evidence that CSG impacts land values (p 8). The API/SIBA submission noted that in some circumstances gas exploration and production could have a positive impact on market value where wells are located away from arable land. This is because the income from the compensation payments adds to overall farm income (p 10).	We acknowledge the comment from Mr Robertson that CSG wells left underground after they are decommissioned are there permanently (not temporarily). Well decommissioning standards are set in the NSW Government's Code of Practice for Coal Seam Gas (Well Integrity). The purpose of the code is to ensure that well operations are carried out safely, without risk to health and without detriment to the environment. The issue for our review is whether the presence of decommissioned wells or other aspects of CSG activity permanently affects the value of land (eg, due to market stigma). In our view any permanent impacts on the market value of land is complex and site-specific. We consider that a qualified independent valuer is best placed to provide advice on market values. In providing this advice a valuer would take into account market sales evidence. This would be classified as 'injurious affection' in our compensation model.

Question/issue and stakeholder comments	IPART response
6. Do you agree with our preliminary view that NSW legislative provisions for landholder compensation for gas exploration and production should be broadened? If so, how? Most stakeholders supported legislative reform, for example. ▾ The API/SIBA submission considered that the relevant heads of compensation are those set out at section 55 NSW *Land Acquisition (Just Terms Compensation) Act 1991.* The submission from Mr Fibbens agreed and noted that NSW could either adopt the compensation provisions in the Queensland *Petroleum and Gas (Production and Safety) Act 2004*, or amend the Petroleum Onshore Act to stipulate that compensation should be payable under the compensation provisions of the NSW *Land Acquisition (Just Terms Compensation) Act 1991.* He noted that both acts would need to make it clear that compensation may take the form of upfront or annual payments, and that further compensation for variations to the project would have to be incorporated (section 2.6). The two options descried by Mr Fibbens were also outlined by the submission from Hunter Valley Protection Aliance (p 7). ▾ APPEA supported alignment between Queensland and NSW on the heads of compensation (Queensland is most comprehensive). If the heads are expanded, consideration should be given to how this would be given effect and should be prospective only (pp 4-5). Santos submitted that legislative reform is unnecessary and may create further uncertainty for investors and stakeholders (p 8). Santos noted that the current legislation in NSW is broadly consistent with other states. It suggested there is no market failure that requires legislative change. AGL considered that the heads of compensation that relate to the Just Terms Compensation Act are not necessarily appropriate for CSG projects. For example, it considered costs of relocation, solatium and serverance are not relevant.	We are recommending that the provisions for compensation in the *Petroleum (Onshore) Act 1991* (NSW) (the Act) be amended to align with those in the Queensland *Petroleum and Gas (Production and Safety) Act 2004* including recognising special value of land. This is discussed further in Chapter 6.
7. Do you agree with our preliminary view that recommendations on compensation should be limited to landholders who host CSG activities and their neighbours who are directly affected? If not why? Stakeholders had different views on this issue. Cotton Australia agreed and submitted that landholders who are affected through reduced yields arising from dust, through noise and amenity impacts should receive compensation. It also submitted that compensation should be paid to farm workers residing on the property, share farmers and other parties holding agistment rights over the land (p 5). It raised issues of how to define surrounding landholders/ the impact radius. People for the Plains submitted that compensation should be availble to neighbours within a certain distance of a project (eg, 2,000m). This would be best achieved through a written agreement (p 2).	Our recommendation is that compensation should be paid to neighbours where noise, light or other impacts **exceed** reasonable levels. Impacts on neighbours are already managed to reasonable levels through environmental and planning approval processes. However, these arrangements may also provide for impacts to exceed reasonable levels if the gas company enters into a written agreement with the affected landholder(s). We consider that best practice involves gas companies identifying neighbours who may be directly affected by a CSG project and working to find ways to minimise any impacts on them. In the event

Question/issue and stakeholder comments	IPART response
NSW Farmers supported neighbours receiving compensation for noise, dust and loss of visual amenity (p 6). T Pickard submitted that there shoud be a separate agreement with neighbours that sets out compensation arangements (pp 1-2). The submission from Ms K Kelly noted that compensation should not be restricted to landholders and directly affected neighbours (p 2). The submision from Mr C Robertson noted that the whole community is impacted and compensation should be available to those affected (p 13). The Hunter Valley Protection Alliance submitted that neighours affected should receive compensation and that 'neighbour' should be interpreted broadly (p 8). The NSW Government submission questioned how IPART would calculate and distribute compensation for neighbours, and how it would relate to other mechanisms including the Community Benefits Fund. It considered there was a risk that this could discourage companies from investing in development (p 2). Santos did not support widening compensation beyond landholders who directly host gas exploration and production. It suggested doing so would be administratively complex and the Community Benefits Fund should adequately compensate the broader community including neighbours. It also noted that compensating neighbours is unnecessary as there is a common law right to claim for damages caused by a project. Noise, dust, light and other impacts are covered under environmental license conditions. If a gas company were to breach these conditions then it would be liable under the relevant legislation and damages would be awarded by a court (pp 8-9). APPEA considered that neighbours should not be compensated under the land access regime as issues of noise and dust etc are already regulated by government (p 5). AGL considered that it is appropriate for impacts on neighbouring landholders to be managed though the Planning Approval process, rather than the land access regime. All projects that have been granted Planning Approval must adhere to the strict conditions that ensure these impacts are limited to a reasonable level (including restrictions on noise, dust and operating hours) (p 6). The API/SIBA submission stated that compensation should be limited to parties having an interest in a parcel of land impacted by gas exploration and production. Any extension of this principle would represent a novel approach to compensation (p 10). Mr Fibbens submitted that ordinarily compensation is payable only where the landholder's rights are interfered with. He suggested that sharing royalty payments may address issues with loss of amenity in local areas (section2.7).	that gas companies negotiate written agreements with neighbours for impacts that exceed reasonable levels, we consider that minimum compensation should be paid equivalent to an allowance to relocate neighbours for the period that impacts exceed reasonable levels. The NSW Government is also introducing a Community Benefit Fund which is designed to provide benefits to communities in which the gas industry operates. This is discussed further in Chapter 3.

Question/issue and stakeholder comments	IPART response
8. Are gross margin and market rental approaches appropriate for estimating compensation for the value of land occupied? Are there other approaches we should consider? Most stakeholders were unsupportive of these approaches. ▾ Cotton Australia was unsupportive as it considers gross margins are highly conservative (p 6). Mr Fibbens submitted that these approaches are not appropriate for estimating compensation for the value of land occupied. He noted that land use classifications (related to proposed approach for gross margin estimates) are a planning tool and land values might fluctuate significantly across different localities. He provided evidence of sales transactions that show the per hectare value of land in local areas can vary significantly (Table 1 of submission). He submitted that gross margins are a planning tool for farmers and inappropriate for compensation for CSG as they (undervalue) hobby farms and lifestyle properties, ignore the residential function of properties, are highly sensitive to assumptions including income which change frequently, and produce values which are well below market values in more closely settled areas (section 2.8). ▾ The Hunter Valley Protection Alliance submitted that gross margins are a farm management tool and have no application in property valuation. This approach does not account for lifestyle properties. The only appropriate approaches are 'piecemeal' and 'before and after' approaches (p 9). ▾ The submission from Ms K Kelly noted that one size does not fit all and that an independent valuer should be appointed and a second opinion available (p 2). NSW Farmers proposed a variation to our issues paper. It submits that the value of land occupied should include market value (rent) plus loss of productive value (p 6). APPEA and AGL provide some support for these approaches. APPEA submits that these approaches may be appropriate in some cases but should not be used across the board (p 5). AGL considers gross margin and market rental approaches may be used depending on the type of property (p 4).	We note stakeholder comments that these methods are inappropriate for determining compensation, would produce estimates that vary considerably, and may not produce estimates that reflect individual circumstances. In Chapter 4 we describe the approach we have taken in this draft report which is based on the 'piecemeal' valuation method.
9. Do you agree with our preliminary view that because severance is site-specific and highly variable, providing benchmark compensation would be of limited use to landholders? If not, how should we estimate and structure compensation for severance? Stakeholders mostly supported this view and many recommended that specialist advice be obtained. ▾ Cotton Australia submitted that specialist advice should be obtained and that benchmark figures may not be the most suitable approach (p 6). ▾ Santos agreed with this statement, further illustrating the overall principle that each access agreement is commercially specific to the circumstance of both the proponent and the landholder (p 10). A similar comment was made by APPEA (p 6).	We consider that loss due to severance is a relevant issue for landholders. Like other potential impacts on landholders, it will be case-specific and we have included this in our compensation model. Landholders should seek professional advice from an independent valuer.

Question/issue and stakeholder comments	IPART response
▾ M Fibbens agreed that severance is highly variable and can be valued using the 'before and after' or 'piecemeal' method of valuation (section 2.9). ▾ The Hunter Valley Protection Alliance agreed with our view on severance (p 10). AGL considered that severance is not particularly relevant to CSG projects as properties are rarely severed for extended periods by CSG activities (p 9).	
10. Do you agree with non-market valuation and relocation cost approaches for estimating compensation for injurious affection? Are there other approaches that we should consider? Stakeholders generally did not support these approaches and stated that specialist valuation advice is required. ▾ Cotton Australia submitted that specialist advice should be obtained and that benchmark figures may not be the most suitable approach (p 6). ▾ Mr Fibbens did not agree with using these approaches as he considers that it is possible to assess the value of these impacts through multi-variate techniques and a 'paired sales analysis' using property sales information. The results of this analysis can be used in 'before and after' or 'piecemeal' methods of valuation. A similar comment was made by the Hunter Valley Protection Alliance (p 10). ▾ Mr C Robertson submitted that independent valuation advice should be obtained on matters related to injurious affection (p 28). APPEA submitted that these approaches may be appropriate in some cases but should not be used across the board (p 6).	As discussed in Chapter 4 we have not used these approaches in our report. Based on the piecemeal valuation method, the compensation model requires an estimate of the percentage reduction in the value of the residual land that arises due to severance and injurious affection. The model calculates the notional reduction in capital value of the land and provides an annual rental payment based on this value. This approach was suggested by Mr Fibbens in his submission. Landholders can use different land value assumptions in the model and compare the outcomes to a compensation offer from a gas company. This could provide a sense check to any offer. We consider that landholders should seek professional advice from an independent valuer on loss due to injurious affection.
11. Do you agree with our proposed approaches for estimating compensation, or passing through costs, for disturbance? Are there other approaches that we should consider? APPEA supported this approach as it represents current industry practice (p 6). NSW Farmers supported compensation for disturbance but commented that an overall compensation benchmark would be inappropriate. Disturbance should be broken into distinct elements (p 8). Mr Fibbens submitted that disturbance costs should include legal fees, valuation fees, survey costs, accounting costs, fees to farming advisers and landholder's time (section 2.11). Santos did not support upfront payments to landholders as this may create tax implications for the landholder and may create equity issues with future landholders. The timing of compensation payments needs to be a commercial decision. It also noted problems in Queensland with creating a generic rate for landholder time (p 10).	Our compensation model allows landholders to enter the time they spend engaging with an access agreement and the value of their time (per hour). It also includes passing through other disturbance items (like professional fees) at cost. We consider that the timing of compensation payments (upfront or periodic) is a matter between the gas company and landholder. The landholder may need to seek taxation advice.

Question/issue and stakeholder comments	IPART response
12. Do you agree with our preliminary view that benefit payments should apply during the production phase for those landholders hosting gas development on their land? If not, why? Stakeholders had different views on benefit payments in terms of whether any benefit payment is appropriate and who should fund it. Cotton Australia supported benefit payments through a share of royalties but these should be paid when the gas company makes a financial return, which may be in exploration (p 7). Similaly, NSW Farmers supported benefit payments, and considered it should be paid to landholders at the outset of exploration (p 9). Mr C Roberton submitted that benefit payments should also apply in exploration (p 13). People for the Plains submitted that benefit payments should not be covered by royalties – taxpayers should not be footing the bill (p 3). The API/SIBA did not agree with the concept of benefit payments from royalties. It noted that benefit payments sourced from royalities would require a recasting of the historic property right milieu, a task which would be enormously difficult (p 6). The Hunter Valley Protection Alliance did not agree with benefit payments as compensation payments should be fair and reasonable (p 11). The NSW Government suggested that IPART's benchmarks should only incorporate compensation, not a share of benefits. Benefit payments would likely be a commercial matter between parties and IPART should consider arrangements in other jurisdictions (p 3). Groundswell Glouceter questioned why landholders should receive a benefit payment above compensation. It noted that resources are owned by the Crown and CSG should be no different to other resource industries (p 2). It also noted that benefit payments conflict with IPART's goals of impartial advice, and promoting environmental sustainaility (p 5). AGL noted that it already has production bonus payments for its landholders (p 9). It noted that the current barriers to producing more natural gas in NSW are not related to the ability to sign mutually beneficial land access and compensation agreements, but rather concerns about CSG in the wider community. Therefore, AGL did not consider that diverting royalties to landholders through benefit paymets would result in more gas prodution in NSW (p 6). Santos submitted it is unnecessary to legislate benefit payments but rather this should be a commercial decision negotiated between the landholder and gas compay. Legislating payments from royalties may compromise the legal principle that the Crown owns mineral resources on behalf of all citizens. The model proposed by IPART increases the cost to a gas company and may affect the attractiveness of NSW as an investment destination. Santos noted that it already has a framework that shares the benefits with landholders (p 11).	Our recommendation is that gas companies fund benefit payments or provide benefits in-kind. We are not recommending benefit payments be funded from royalty payments as outlined in our Issues Paper. This is discussed in Chapter 4. Our compensation model includes benefit payments.

Question/issue and stakeholder comments	IPART response
APPEA opposed the approach outlined in the issues paper and maintained that royalty payments should go to the community. Such an approach has not been used in other jurisdictions. It noted that landholders already receive benefit payments through fences, gates etc as well as production bonuses (pp 6-7). Mr T Pickard submitted that, as Santos already has a landholder incentive fund, why not ensure that other companies do the same and save the NSW Goventment and taxpayers some money (p 3). He also submitted that affected neighbours should get a share of the fund (p 4).	
13. Do you agree that the costs of benefit payments should be shared between the gas company and the NSW Government? If so how? If not, why? Some stakeholders considered that the NSW Government should not fund benefit payments. ▾ The NSW Government submitted that our proposed model based on royalty payments does not assist landholders in negotiating compensation. It also submitted that the government should not fund benefit payments – this is a matter for commercial negotiation (p 3). ▾ Groundswell Gloucester submitted that if such payments are to be made they should not compound the inequity by reducing royalties available to the State, but should be paid by the miner (p 4). ▾ Ms K Kelly submitted that benefit payment should not be covered by the government, but paid to landhodlers and neighbours by gas companies. Government funds should not be used to promote the industry (p 3). However, Mr C Robertson agreed that the government should share some of the cost of benefit payments because it issues the licence (p 13). APPEA submitted that if the government wants to provide benefit payments this should be made out of its royalty income (p 7). NSW Farmers recommended that in general royalty information should be made more transparent (p 5).	As discussed above we are not recommending that benefit payments be funded by the NSW Government out of royalty payments.
14. Should funds for benefit payments be pooled and divided among a group of landholders that have signed access agreements? If so, how? Santos submitted that agreeing on a method of distributing benefit payments would be administatively complex (p 12). APPEA considered that this approach would be impractical as royalites are not calculated based on individual wells, but instead over a licence area. There will inevitably be inequities between landholders (p 7). The submission from Ms K Kelly suggested that fund should be shared based on fixed percentages based on the impact on each landholder (p 3).	We are not proposing a specific model of benefit payments and therefore the issue of how to divide incentive payments to landholders is a matter for individual gas companies.

Question/issue and stakeholder comments	IPART response
15. Who will be liable in the event of contamination arising from CSG if a landholder is in receipt of compensation? Ms S Ciesiolka referred to advice from Meat and Livestock Australia which states landholders receiving compensation may be liable in the event of contamination (p 3). A similar comment was made in the submission from Mr A Saunders (p 1).	Section 107(1) of the Petroleum (Onshore) Act 1991 relevantly provides that the holder of the petroleum title (ie. the mining company) is liable to compensate any landholder injuriously affected, or likely to be so affected, by relevant mining operations. Further, land access agreements generally contain standard clauses which indemnify the landholder against any claims or direct loss arising from the work carried out by the gas company on the landholder's property. Landholders should always seek independent legal advice in relation to the terms of any agreement with a gas company.
16. Retrospective arrangements for compensation The submission from Mr T Pickard suggested that existing access agreements should be revisited and renegotiated to remove any inequality and disadvantage that a landholder received in the past (p 3). People for the Plains (p 2) and Ms K Revell (p 2) made similar comments. The submission from Mr J Kelley noted a one-off payment of less than $2,000 for an easement on his property. He feels that this amount is well below what other landholders have received for similar projects and there should be an entitlement to ongoing payments (p 1).	In this review we have outlined a framework for estimating benchmark compensation to assist landholders. We have also recommended changes to legislative provisions for compensation but are not recommending that these changes be made retrospectively.
17. Compensation for other parties on the property In the submission from Cotton Australia (p 3) and during our consultation with stakeholders, an issue was raised about arrangements for compensation where a landholder has farm workers living on the property, share farmers or other parties holding agistment rights on the land. For example, a landholder may allow another person's horse to be kept, or agisted on the property for a fee.	We acknowledge that there may be complex issues surrounding payments to different parties using a property. We expect there would often be written agreements that govern these relationships. In principle, we consider that this issue could be negotiated between the relevant parties. It is outside the scope of our review to determine how this should be done and will depend on the individual circumstances.

Question/issue and stakeholder comments	IPART response
18. Compensation for when things go wrong Several stakeholders considered that the scope of our review was limited because we have not considered compensation for when there is water contamination or other environmental incidents. Stakeholders also referred to subsurface impacts (eg, caused by fracking) that were not considered. For example: ▾ Mr C Robertson submitted that compensation should include the risk that something goes wrong, eg, the well casing fails or stored water leaks and causes contamination (p 15). ▾ IPART does not include compensation for subsurface impacts and 'black swan' events (Bellata Gurley Action Group Against Gas p 3). ▾ Subsurface impacts were raised in the Mullaley Gas and Pipeline Accord submission. It submitted that IPART is not in a position to consider compensation for long term implications of CSG (p 1). ▾ Lock the Gate Alliance noted the limited scope of the Issues Paper as it does not refer to subsurface impacts or impacts on neighbours and the wider community (p 2). ▾ Failure to recognise subsurface impacts was raised by S. Ciesiolka (p 2) and C Robertson (p 35). ▾ The submission from Ms K Kelly noted that compensation should include gas leaks, spills, acid rain contaminated dust etc (p 2). ▾ People for the Plains noted that more consideration should be given to when things go wrong, for example, accidents, future scientific findings etc. There should be ongoing/indefinite monitoring of decommissioned wells (p 2).	Please refer to Chapter 3.
19. Some stakeholders do not want CSG Lock the Gate Alliance considered that the risks of the CSG industry are far-reaching and have not been properly assessed, and that the industry is unsafe, unnecessary and unwelcome. Most of the recommendations of the Chief Scientist have not yet been implemented by the NSW Government and the government does not seem to plan to implement some recommendations properly. For example, there is no legislative mechanism to retrain the areas where CSG can occur, and the NSW Government has not implemented recommendations on an insurance and rehabilitation mechanism. Lock the Gate Alliance considered that compensation benchmarks should be set once the legislative, regulatory frameworks are in place. Compensation benchmarks will be extremely divisive in the community (pp 1-2). The submission from Ms S Ciesiolka noted that no amount of money is worth the risks of CSG. She relied on uncontaminated water to irrigate crops (p 1). There is widespread community rejection of CSG in north-west NSW (p 2).	Please refer to Chapter 3.

Question/issue and stakeholder comments	IPART response
The submission from Mr D Cush outlined the risks that CSG would pose to land that is subject to erosion. They are not interested in compensation (p 1). The submission from Mr J Robertson also noted that money cannot compensate for CSG (p 1). The submission from Mr B McQueen from the Northern Rivers Guardians says that no amount of compensation is appropriate for the unsafe CSG industry; CSG causes destruction of land, poisoning of water and ruination of human health (p 1).	
20. Comments that the Chief Scientist's recommendations should be fully implemented / the appropriate regulatory and legislative frameworks are not in place Some stakeholders considered that a discussion on compensation benchmarks should come after the appropriate regulatory framework is in place. The submission from Ms S Ciesiolka noted that it is nonsensical to establish compensation benchmarks without first having regulatory frameworks and protections in place for landholders. She noted the NSW Government is yet to fully consider and implement the Chief Scientist's recommendations including the insurance and rehabilitation mechanism (p 2). Similar comments were made by the Bellata Gurley Action Group Against Gas (p 2), the Mullaley Gas and Pipeline Accord (p 2) and Mr A Donaldson (p 2).	Please refer to Chapter 3.
21. Importance of insurance and indemnities for landholders Hunter Valley Protection Alliance noted the risks after decommissioning and that CSG companies should be accountable to a fund/insurance policy (p 5). Groundswell Gloucester noted the importance of indemnities for farmers from future loss or prosecution over National Vendor Declaration (NVD)(p 2). Mr T Pickard also noted the importance of indemnities for landholders against contamination events. He questioned what recourse a neighbouring landholder has should a contamination event eventually affect his land (p 6).	Issues related to insurance and landholder indemnities are generally included in land access agreements. We recommend that landholders get professional advice about these aspects of their agreement.

C Submissions to our Draft Report

We received 19 submissions to our Draft Report released in September 2015 (Table C.1). In Table C.2 below, we summarise the comments that stakeholders made in these submissions, both to our draft recommendations and other issues that were raised. We also provide our response to these comments.

Table C.1 Submissions received to our Draft Report

Name/Organisation	Name/Organisation
AGL Energy Limited	Mullaley Gas and Pipeline Accord Inc.
Mr K Anderson MP	Origin Energy
Australian Petroleum Production and Exploration Association (APPEA)	People for the Plains
Mr R Campey	Mr A Pickard
Ms S Ciesiolka	Mr C Robertson
Cotton Australia	Mr A Saunders
Gloucester Shire Council	Santos Limited
I Jackson (Confidential)	Anonymous
Mr I Lowrey	

Table C.2 Summary of stakeholder submissions to our Draft Report

Recommendation/issue	IPART response
Recommendation 1: **When negotiating land access agreements with gas companies, landholders use IPART's spreadsheet model to estimate compensation benchmarks that take into account their individual circumstances.**	
Cotton Australia agrees the heads of compensation proposed by IPART and included in the compensation spreadsheet model. However, it suggests: ▾ providing more case study examples of the model in the final report using different ranges for land values and fees for professional advice ▾ making references from the model to the report to allow landholders to make direct comparisons ▾ providing examples of severance and injurious affections in the "Input" tab of the model, ▾ including a footnote in the model that expert advice can be sought to obtain the estimated reduction in the value of land ▾ splitting the estimated impacts on land between the "exploration" and "production" phases, and ▾ providing a footnote in the first year compensation payment in the "Result" tab that the higher payment is due to the inclusion of expert advice costs. In relation to a comment made at the Gloucester public hearing, Cotton Australia does not consider $40,000 used in the example model overestimates professional fees. It comments that this represents a reasonable lower end estimate of professional fees (p 3). Mr Anderson MP welcomes the spreadsheet model, but noted that this should be used as a guide. He submitted that one size does not fit all and that landholders are in the best position to negotiate on their unique conditions (p 2). The submission from Gloucester Shire Council strongly supported this recommendation as a framework for the Gloucester Gas Project (p 1).	We have amended the compensation model to address the suggestions made by Cotton Australia. This is discussed in detail in section 5.5.2. We have not explicitly separated the model into exploration and production phases as these timeframes are uncertain, however our model has flexibility to incorporate changes in the scope of a CSG project over time.
Origin Energy supports providing a spreadsheet model, while having some concerns that the model example may be setting incorrect expectations about compensation. It notes that based on its calculation, the overall compensation in the example (including incentive payments) is substantially	We consider that the assumptions and benchmark compensation in our examples are reasonable. However, we have included a disclaimer in the model as we agree that the benchmark results are a guide for landholders only.

Recommendation/issue	IPART response
higher than what would be statutorily required and may not be economically sound. It recommends providing a disclaimer that the model provides an estimate only and that compensation must be negotiated and agreed based on individual circumstances (pp 2-3).	
AGL submits that a benchmark compensation model should be treated as guidance only and should not replace existing compensation principles. AGL submits that valuations under the Land Acquisition Act will not necessarily be fair as the values determined for severance and injurious affection are highly subjective and in many cases are not particularly relevant for CSG activities. It also comments that some inputs in IPART's spreadsheet model require valuation advice, but it is important to ensure the calculation of compensation payments does not become too onerous or administratively complex as impacts such as severance are usually short-term or not significant. Any valuation assessments for the inputs to IPART's spreadsheet model should be done independently of CSG companies. AGL does not support a lump-sum compensation payment (pp 2-3).	As indicated above, we have included a disclaimer in the model. In our view, compensation for land access is often complex and we recommend landholders obtain professional advice, including independent land valuation advice. The compensation model brings together the relevant components of compensation into a single framework. Because some CSG-related impacts (eg severance) may not be significant for some landholders does not mean it may not be relevant for others. There is no one-size-fits-all. We do not agree with AGL that the model will make negotiations more complicated. The model is a guide for landholders to assist them in assessing an offer of compensation from a gas company. As noted previously in this report, gas companies can continue to structure their compensation arrangements in a manner appropriate for individual landholders/projects. See our comments on lump sum payments below.
Santos submits that IPART's spreadsheet model is another one-size-fits-all approach and could make landholders form unrealistic expectations. Santos recommends a simpler model which is based on the heads of compensation under s.109 of the Act without benefit payments, market values or timing of payments. Santos considers that the NSW Valuer General's (VG's) estimates of land value is a more appropriate basis for determining land-based compensation, and that the land valuation should also reflect that land will not yield a higher financial return during the period of a land access agreement than that already paid by Santos. Also, Santos suggests undertaking a broader consultation with other utility business, as they may have similar experience with gas companies in terms of negotiating a land access agreement. This consultation should take place before adopting our spreadsheet model, as it would likely set a precedent (p 4).	We do not agree with Santos that the model is a one-size-fits-all approach, or that it creates unrealistic expectations. We consider that it takes into account individual circumstances of landholders. It is based on the heads of compensation not currently outlined in section 109, but those recognised in relation to a compulsory partial acquisition of land where legislation ensures landholders are justly compensated for the acquisition (see Chapter 4). Also, we do not agree that the VG's land value estimates are preferred to a market value. VG estimates relate to unimproved land value, which may vary substantially from market value.
Santos does not support upfront compensation payments and argued that (i) compensation should be linked to impacts at the time, (ii) upfront payments would penalise future buyers of the property and create perceived inequalities between neighbours due to different payment timings, and (iii) present value calculations are not well understood and could create mistrust between gas companies and landholders (pp 6-7).	Both AGL and Santos have stated that they do not provide lump-sum compensation payments to landholders. This reflects their respective company positions and the emphasis they place on providing ongoing payments to support ongoing relationships with landholders. However, other gas companies may be willing to make lump-sum payments and we are aware of other situations where lump-sum payments have been made. We do not recommend that the NSW Government undertake further consultation on the model, as all interested parties were invited to make a submission to our review.

Recommendation/issue	IPART response
Mr. Campey suggests that the names, "Compensation payments" and "incentive payments", need to be changed to "Land access agreement payments", "Progress payments for CSG production on landholders properties" and "Compensation for damages from CSG exploration and production" (p 1).	In our view there is no need to change the existing terminology. We do not consider the revised terminology makes it any clearer or easier for landholders.
APPEA submits that the proposed spreadsheet model should not be adopted as they misrepresent compensation any individual landholder could expect to receive. It states that the industry has entered into more than 5,000 land access agreements in Queensland and NSW without recourse to a compensation spreadsheet model, so the government should focus on ensuring landholders are equipped with information and enabling landholders to undertake effective negotiations. If a spreadsheet model is to be used, the model should only include heads of compensation that can be objectively quantified. For example, loss due to injurious affections is highly subjective. APPEA notes that a review conducted by Queensland's Department of Natural Resources and Mines (DNRM) concluded that social amenity issues impacting landholders can be addressed by resource companies and landholders working together (pp 1-2).	In our view, the model is the most appropriate and effective means for individual landholders to obtain a benchmark guide as to the appropriate level of compensation for their unique circumstances. It is based on all the relevant impacts of CSG on landholders. We do not agree that the model misrepresents compensation for individual landholders. There is established valuation literature that quantifies the impacts of injurious affection (eg, noise and loss of amenity) there is an established valuation literature where these impacts have been quantified. We are recommending landholders get independent valuation advice.
Ms Ciesiolka comments that IPART's spreadsheet model is very limited and too simplistic. The model implies compensation is limited in time, does not incorporate impacts that could be increasing over time and estimates compensation in the "best case scenario" (pp 4-5). Ms Ciesiolka and Mr Campey (p 1) submit that the model assumes all impacts can be identified and quantified monetarily ahead of time. Certain impacts cannot be classified as "injurious affection" and addressed by compensation (eg, land and air contamination, ground and surface water contamination/ depressurisation, health impacts, damage to crops, lifestyle impacts etc.) (Ms Ciesiolka, p 5; People for the Plains, pp 2-3; Mr Campey, p 1), and the model does not include compensation for impacts on health, production profitability and land and water resources (Ms Ciesiolka, p 5).	The heads of compensation in our model are based on the Just Terms Act. This Act is designed to provide fair compensation to landholders when their property, or part of their property, is being acquired by the government. Many individual impacts on landholders fall within these heads of compensation including use of land, lifestyle impacts, loss of amenity, reduced agricultural productivity, noise and other disturbance and damage to crops, fences etc caused by the gas company. We recommend that landholders get advice from an independent valuer who can assist in quantifying these impacts, having regard to market sales evidence. An independent valuer would undertake a survey to identify the impacts on a landholder across these heads of compensation (see discussion on valuation surveys in Chapter 4). We have emphasised the importance of good conduct to limit stress and mental health impacts from CSG negotiations on landholders. Our model also allows landholders to build in appropriate time to properly conduct negotiations. AGL and Santos have agreed that they will not come on to a landholder's property for CSG drilling if the landholder doesn't want them there.

Recommendation/issue	IPART response
People for the Plain submits that IPART's spreadsheet model is not binding and hence does not have any real power (p 2).	Our model can be updated and adapted as the nature and scope of a gas project changes. As discussed in Chapter 3, compensation for 'when things go wrong' is not included in the model. The model is designed to support landholders, and is one component of the regulatory framework for CSG set out in the NSW Gas Plan (see Chapter 2 and 3 for more information). For this review we have been asked to make recommendations only.
Mr Robertson submits that IPART's benchmark compensation guidelines do not cover stress, mental issues, time, and suicides (Submission to the Narrabri public hearing (S2); p 2). He submits that compensation should cover permanent impacts (Submission to the Gloucester public hearing (W15/5018); p 4) and include visual amenity (W15/5018, p 5), and loss in property value (W15/5018, p 2). Compensation for loss in property value should reflect the fact that there is bigger reduction in property value as CSG operation proceeds. Upfront compensation payment should be made for the initial reduction in property value (W15/5018, p 2). His preferred option is for CSG operators to be required to purchase all the land they require for their operation instead of compensation, similar to how coal mining companies operate (Submission to the Draft Report (W15/5046), p 1; W15/5018, pp 2-3). Mr Robertson considers that compensation should continue to be paid until wells and other infrastructure are completely removed (S2 pp4-5). Regarding the model, he considers that for lifestyle properties, loss in property value may be greater than 30% and 20% (used in the example in the Draft Report) (S2, p 4; W15/5018, p 2), especially when special value is accounted for (S2, p 4), and the rate of return is irrelevant (W15/5018, p 4). Mr. Robertson considers in some cases gas companies should be required to pay compensation upfront and acquire properties. In relation to Santos' comment at the Narrabri public hearing that compensation should be linked to impacts at the time, Mr Robertson considers that this ignores ongoing impacts that remain once production has ceased (eg, reduced property value, reduced market interest in the property, well leakage, gas omissions, water contamination, reduced access to water, aquifer contamination) (S2, p 5). Regarding Santos' methodology for estimating land-based compensation, he comments that using the Valuer General's land valuation is not appropriate and is just a way to reduce compensation (W15/5018, p 5).	The heads of compensation in our model are based on the Just Terms Act. This Act is designed to provide fair compensation to landholders when their property, or part of their property, is being acquired by the government. As discussed above, we have emphasised the importance of good conduct to limit stress and mental health impacts from CSG negotiations on landholders. Our model also allows landholders to build in appropriate time to properly conduct their negotiations. It also includes compensation for loss of visual amenity and can be updated as the scope of a gas project changes. In our view any permanent impacts on the market value of land is complex and site-specific. We consider that a qualified independent valuer is best placed to provide advice on market values. In providing this advice a valuer would take into account market sales evidence. It is outside the scope of our review to recommend compensation for any reduction in land values across broader communities (see Chapter 3). In some cases a gas company may purchase land outright for gas development where it is needed for infrastructure (eg, a water processing plant). However, there is no requirement under the *Petroleum Onshore Act 1991* for land to be purchased. In our model, landholders receive compensation until the gas project is finished and the land is rehabilitated to the satisfaction of the landholder. There are environmental controls and standards in place for decommissioned wells. Such controls are outside the scope of our review. Regarding the appropriate basis for land valuation, we have based our model on market value (rather than the VG's land value) as this more closely reflects the opportunity cost to a landholder, and the VG's estimated land values are for unimproved land value which may be below market value.

Recommendation/issue	IPART response
Recommendation 2: **That gas companies fund benefit or incentive payments to landholders as part of their compensation arrangements.**	
AGL agrees that landholders should be able to share benefits from CSG projects, but considered benefit payments should be specific to each project and be voluntary. AGL supports the NSW Government's proposed Community Benefit Fund (CBF) (p 3). Cotton Australia supports landholders receiving incentive payments and the proposed CBF (pp 3-4). Origin notes that a strict benefit payment regime removes flexibility from negotiations with landholders. In Queensland, benefits can be shared through other initiatives, but a strict regulatory regime would remove such flexibility (p 3). APPEA does not support a mandatory benefit or incentive payment as part of a compensation agreement. Landholders may receive other forms of incentive payments other than monetary ones, for example, upgrades to a landholder's property. If the Government wants to compensate landholders during the production stage, payments should be sourced from its royalty revenue (pp 2-3). Santos does not support mandatory benefit payments, and such payments should remain a commercial decision for individual projects. Santos' current incentive payment scheme is specific to its Narrabri project only (p 4). Mr Robertson submits that an incentive payment to landholders hosting CSG is inadequate as the community impact is greater (W15/5022, p 3).	We are recommending that gas companies provide payments and or in-kind benefits to landholders to share the benefits of gas development. We have not mandated an amount that the benefit payment or in-kind benefit should be. Please see Section 4.3 for more discussion.
Recommendation 3: **That gas companies pay compensation to neighbours in the event that impacts on them (eg, noise levels or hours of operation) exceed reasonable levels set out in licences or approvals. Written agreements should be in place in these instances, and minimum compensation should be paid equivalent to an allowance to relocate neighbours for the period that impacts exceed reasonable levels.**	
APPEA supports that compensation should be limited to landholders who host gas activities on their land. There are separate regulations (eg, exploration title conditions) in place that require gas companies to mitigate impacts such as noise and dust to a satisfactory level. Mitigating steps can include providing financial or in-kind compensation to affected landholders and APPEA support this. In this case, requiring gas companies to provide compensation to neighbours under a land access agreement would result in	Our review is about compensation for landholders hosting gas exploration and production. The reason we have decided to recommend compensation for neighbours directly affected by a CSG project is that in conducting our review we have been asked to identify industry best practice. During our consultations, we held discussions with a gas company in Queensland which will relocate, or pay compensation to neighbours if the impacts on them exceed reasonable levels set out in licences or approvals.

Recommendation/issue	IPART response
double-counting (p 3). AGL does not consider neighbours should receive compensation payments where gas companies' operations meet planning/licence conditions. If not, AGL agrees that gas companies should mitigate the impacts to an acceptable level as per planning/licence conditions, for example through relocation or by providing compensation (p 3). Similarly, Cotton Australia supports that compensation is paid to neighbouring landholders where impacts exceed reasonable levels (p 4). People for the Plains submits that neighbours should be compensated for heavy traffic caused by CSG operations (p 4). Gloucester Shire Council submits that neighbours should be compensated for loss of value for being located close to a CSG project (p 1). Santos supports IPART's view that impacts on neighbours are already managed to a reasonable level through separate regulations, and the proposed Community Benefit Fund would provide compensation to overall communities affected by CSG. It also adds that IPART should consult with other utilities that may have similar land use impacts before deciding any compensation for neighbours (p 5). Ms Ciesiolka does not agree that impacts on neighbours are being managed subject to other regulations as there is evidence of spills, leakages and environmental incidents caused by CSG operations. She is concerned that IPART's recommendation could be understood that impacts could exceed reasonable levels as long as there is a written agreement with the affected landholders (p 6). Mr Pickard states that there is evidence of spill/discharge incidents as a result of CSG operations by Eastern Star Gas and Santos. Mr Pickard submits that IPART should recommend compensation be paid not only to hosting landholders but to all those adversely affected by CSG (pp 1-2). He comments that IPART seems to have the opinion that anyone who is not a hosting landowner is not affected in some way by the CSG industry (p 1). He questions what IPART will do if a local council seeks a rate rise citing damage to its infrastructure due to CSG, and suggests that IPART should recommend an access agreement be made between a gas company and local councils (p 2). Regarding "*some stakeholders also argued that other mechanisms already address impacts on neighbours and the broader community. For*	In making this recommendation we have considered the view from APPEA that it would result in 'double-counting', given impacts on neighbours are managed by existing planning and licence conditions. However, in our view this recommendation is complementary, as it applies only when these impacts exceed reasonable levels as defined by planning and licence conditions. Our recommendation does not suggest that neighbours would be compensated twice. Our recommendation does not put the onus on neighbours to identify if impacts exceed reasonable levels. Gas companies are already required to undertake modelling to identify surrounding neighbours who may be affected by a project as part of their licences and approvals. If an impact on a neighbour cannot be managed to a reasonable level (for example, the project exceeds a decibel noise limit), then an agreement will need to be negotiated with that neighbour. Our recommendation does not imply that gas projects do not affect broader communities. However, it is outside the scope of our review to recommend compensation to neighbours for environmental incidents, or to broader communities arising from changes in property values. As discussed in Chapter 3, there are other processes and mechanisms to address these issues. In Appendix I there examples of where community consultation has resulted in special conditions on mining and gas developments that are over and above the standard conditions. In making our recommendations we have been asked to have regard to measures under the NSW Gas Plan. As part of this Plan, the NSW Government is introducing a Community Benefits Fund designed to provide benefits to the communities in which the gas industry operates. However, our recommendation on compensation for neighbours is not tied to this fund, and is in no way influenced by the fund's final design. The NSW Government has undertaken separate consultation on the fund.

Recommendation/issue	IPART response
example……Voluntary Planning Agreements (p 37, Draft Report), Ms Ciesiolka (p 6) and People for the Plains (p 4) submit that there is no VPA in place between the Narrabri Shire Council and Santos. People for the Plains (p 4) states Santos currently operates without a formal agreement with local government to compensate for negative impacts on roads and other community infrastructure. Ms Ciesiolka (p 6) and Mr Campey (p 1) submit that it is inappropriate to tie compensation for neighbours to the CBF as the Government has not yet made a final decision and it is still unclear how this fund would benefit neighbours. People for the Plains (p 3) states that in IPART's process, the CBF cannot be used as an excuse not to properly compensate neighbours. As such, there should not be any reference to the CBF (Ms Ciesiolka, p 6; People for the Plains, p 3). Ms Ciesiolka (p 6), People for the Plains (p 4) and Mr Pickard (p 1) submit that IPART's recommendation implies that neighbours will receive compensation where they can prove that gas companies' have breached certain rules. It is unfair that neighbours will be responsible for monitoring and proving breaches at their own expense in terms of both time and money. Mr Robertson does not support IPART's recommendation. He does not believe that gas companies themselves (or the EPA) would properly manage or monitor impacts. He submits that CSG impacts on the whole community at all stages and beyond (W15/5018, pp 1, 3, 4), not just landholders having CSG infrastructure on their properties and their neighbours (W15/5018, p 1). He considers that professional advice on the impacts of CSG should be provided for the whole community (W15/5018, p 4) and that compensation should be determined for whole community and then allocated proportionally to all properties in the community (W15/5022, p 2; W15/5018, pp 2-4). In relation to the CBF, He considers that this will not be enough to compensate community for various impacts (W15/5022, p 2) and it will not make himself no better or worse off (W15/5018, p 2). He agrees with Mr Donaldson's comment at the Narrabri public hearing that throwing cash at the issue (through the CBF) will not solve the problem (W15/5022, p 3). Lastly, he considers that it is too early for IPART to make decisions as the NSW Government is yet to finalise its review of the CBF (W15/5046, p 1; W15/5018, pp 1 and 4).	

Recommendation/issue	IPART response
Recommendation 4: **That the provisions for landholder compensation in the *Petroleum (Onshore) Act 1991* be amended prospectively to align with the *Queensland Petroleum and Gas (Production and Safety) Act 2004* and recognise special value of land.**	
AGL (p 3), Origin Energy (p 2) and Mr Anderson (p 2) support this recommendation. APPEA supports this recommendation but notes that the Queensland heads of compensation do not explicitly include special value of land (p 3).	As discussed in Chapter 6, we consider that having appropriate legislative provisions for compensation are fundamental to ensuring that landholders receive compensation that is at least as good as other part of Australia. By recommending that the Queensland legislative provisions are adopted, we consider that we are minimising compliance costs for industry.
Cotton Australia supports the amendment of the NSW legislations to align with the Queensland legislations, and the inclusion of special value of land. It suggests that compensation should also reflect limited future land use due to the physical interference of CSG infrastructure (p 4).	The Queensland legislation refers to 'diminution of the use made or that may be made of the land or any improvement to it' and 'diminution in land value'. These terms address comments submissions from Cotton Australia and People for the Plains.
People for the Plains argues that loss of amenity including recreation and conservation values should be also legislated (p 2).	Since our Draft Report, legislation was passed by that provides landholders reasonable costs in negotiating an access arrangement to be paid by the gas company. Since the maximum amount (cap) on these costs is yet to be determined, we have not incorporated them in our compensation model.
Santos does not support as there has been insufficient legislative or market failure to justify such amendments, and amendments would create uncertainty. If IPART wishes to recommend any amendments, it should be to make the NSW legislation exactly the same as the Queensland legislation without adding additional compensable items such as landholder time and impacts on neighbours. If landholder time is to be compensated in legislation, the amount should be capped and be paid only if the negotiation is successful and the time spent is reasonable (p 5).	
Recommendation 5: **That, in amending the *Petroleum (Onshore) Act 1991* to require gas explorers to pay for landholders' time spent negotiating and arbitrating an access agreement and for legal and other professional fees, the NSW Government provide for landholders' reasonable costs to be paid rather than set caps for these costs.**	
Cotton Australia agrees with IPART's recommendation. Cotton Australia recommends IPART take a clearer and stronger stance on the importance of seeking legal advice at a minimum, and have a stronger wording than "*landholders will likely need professional advice*" (p 2).	We recommend that landholders seek professional advice as part of their land access negotiations and we consider the reasonable costs of this advice and the landholder's time should be funded by the gas company.

Recommendation/issue	IPART response
People for the Plains submit that landholders should be compensated for their time spent during the entire land access agreement period (p 6). There should be compensation for legal fees and landholder time spent on ensuring maintenance beyond the land access agreement period (p 6). APPEA supports amending the NSW legislations to align with the Queensland heads of compensation, but notes that the Queensland heads of compensation do not include landholder time. It also notes that the Queensland Government has recently decided not to expand the heads of compensation to include landholder time. It supports the payment of reasonable costs associated with land access negotiation, but considers the payment should be capped to avoid any substantial increase in or uncertainty about these costs (p 4). AGL supports compensating for the costs of landholders' time and expert advice, but considers these should be capped at a reasonable level. AGL considers 150 hours used in the spreadsheet model is unreasonable as it takes around 60 hours to reach a land access agreement based on its experience. It considers that the costs of expert advice should not be included in the first year compensation payment in the spreadsheet model as they are typically funded by gas companies. Instead, it recommends the benchmark model refer to the fact that companies are responsible for the reasonable fees for expert advice (p 4). Santos supports paying reasonable legal costs. Should this be legislated, it considers the amount should be capped and providers should be regulated unless mutually agreed (p 5). Origin agrees that landholders should seek professional advice. In Queensland, Origin currently compensates for reasonable legal, accounting and valuation costs. However, it considers legal and other professional fees should be capped as it is often very difficult to reach an agreement on these fees and this causes prolonging negotiations without any obvious benefits to landholders. Capped fees would ensure landholders receive timely and cost-effective advice (p 3). Ms Ciesiolka questions what constitute "reasonable costs" and who determines what is reasonable (p 7). Mr Robertson questions whether the compensation for time includes the time spent fighting CSG, writing submissions, doing research etc (W15/5022, p 3).	In October 2015, the NSW Government amended the land access arbitration framework, including that landholders' reasonable costs incurred in the negotiation, mediation and arbitration of access agreements will be met by the titleholder. These costs include time and professional fees and will be capped, although the NSW Government is yet to finalise the dollar value of the caps. For this reason we have not included caps in our compensation model. Based on our consultations, we consider that the example time and professional fees included in our examples are reasonable.

Recommendation/issue	IPART response
Recommendation 6: **That the NSW Farmers Association provide independent workshops funded by the NSW Government and the gas industry that assist landholders in understanding land access for coal seam gas and negotiating land access and compensation agreements.**	In response to stakeholder comments, we are recommending that the NSW Department of Industry provide independent workshops for landholders, with funding also provided by the gas industry. As discussed in Section 6.3.2, this department already provides information to landholders, including in relation to CSG (see Appendix J).
AGL agrees that the NSW Farmers Association (or any other peak agricultural body) provides workshops to landholders, and agrees that this should be funded by the NSW Government. Attendance at these workshops should be limited to landholders who are affected by CSG activities (p 4).	
Cotton Australia supports the NSW Farmers Association taking on the role of providing workshops to landholders (p 5).	
People for the Plains submit that workshops should include a section on considering the impacts of the access agreement on neighbours, community and the planet, and have the latest news on information to help landholders understand the true risks of the industry (p 6). Mr Robertson It is important to ensure that these workshops should be accessible by all those impacted, not just by farmers (W15/5022, p 2).	
Origin Energy supports this recommendation. It considers that it is important to present to landholders clear and correct information about CSG. Workshops would be further enhanced if industry could hear perspectives on impacts to the agricultural sector (p 3).	
APPEA supports providing workshops to landholders but recommends the NSW Land and Water Commissioner host them. Also, it recommends workshop programs including funding be reviewed annually (p 5). Santos supports workshops, but does not support the NSW Farmers Association providing such workshops. The gas industry generally does not consider the NSW Farmers is an independent and disinterested party in relation to CSG. It recommends Land and Water Commissioner undertake this role to ensure workshops are accessible to all landholders, not just to a limited group of landholders who are members of NSW Farmers (p 6).	

Recommendation/issue	IPART response
Recommendation 7: **That the NSW Farmers Association develop and maintain a voluntary and non-identifying public register of CSG compensation payments.** Cotton Australia supports establishing a public register, but recommends this be maintained by an independent government agency such as IPART, rather than a representative body or interest group. Provided that there are sufficient data points in the public register, Cotton Australia suggests publishing a brief annual factsheet (p 5). Origin supports a voluntary, non-identifying public register - property and parties involved in negotiations should not be identifiable. It considers confidentiality should be extended to the gas companies paying compensation (p 3). Mr Robertson submits that a public register should allow identification based on the landholder's consent, and confidentiality clauses should be removed in access agreements (S 2, p 3). APPEA submits that a public register would be useful, but considers that if it does not provide information and other circumstances which specifically relate to specific compensation payments, compensation figures in the public register could be misunderstood (p 5). AGL supports a voluntary public register, but recommends the NSW Land and Water Commissioner maintain the register (pp 4-5). Santos recommends that the Division of Resources and Energy undertake the role of establishing and managing a public register as it already maintains databases which were established to provide information about petroleum activities. Santos considers that confidentiality is a matter for each landholder to decide, and that information sources should be easily accessible and grouped for ease of access (p 6). Ms Ciesiolka considers a public register should be mandatory, and it should be mandated that no confidentiality clauses are included in any land access agreement (p 7). People for the Plains submit that access agreements must be open and transparent, all data must be provided for the database and there should be no confidentiality clauses in access agreements (p 4). Mr Pickard submits that NSW Farmers may not be able to obtain and release useful and reliable information. There is at least one incident where Santos offered money for unsolicited conditions to ensure silence and other restrictions on personal freedoms. People who have received monetary offers from gas companies for their silence would hardly say anything (p 2).	As discussed in Section 6.4.2, we maintain the view that a public register should be voluntary and should not be published until there is sufficient information so as not to identify individual landholders. However, individual landholders and gas companies may agree to be identified. We are recommending that the NSW Department of Industry develop and maintain a voluntary and non-identifying public register of CSG compensation payments.

Recommendation/issue	IPART response
8. No amount of compensation addresses the health and environmental risks from CSG/ the appropriate regulatory controls are not yet in place. Mr Robertson and Ms Ciesiolka (pp 5-7) submit that compensation cannot address all the risks of CSG. People for the Plains (p 2) noted that money can't compensate for all CSG impacts (mental health, loss of property control and peaceful lifestyle). Mr Robertson submits that it is too early for IPART to make decisions as the NSW Government has not yet implemented the NSW Chief Scientist's recommendations (S1, p 1; W15/5022, p 4; W15/5018, p 1). Ms Ciesiolka submits that the community cannot have confidence that the NSW Government has in place comprehensive and transparent regulatory framework for CSG development, (pp 1-2). Ms Ciesiolka also comments that IPART appears to have too limited understanding of costs and risks of the CSG industry (p 2), and that there are no examples of successful co-existence between agriculture and CSG. Further, she comments that landholders in North West NSW are not seeking monetary compensation but vigorous protections against the impacts of CSG (p 3). Cotton Australia considers a rigorous monitoring framework should be established as it provides communities with information and certainty that their land and water rights are being protected (p 4). People for the Plains submit that IPART's recommendations do not recognise the value of water to landholders and their communities (p 6). Mr Campey submits that it is wrong to develop a compensation framework before regulatory controls are put in place. He comments that damages caused by CSG should be compensated, however these should be prevented in the first place and in the absence of strong government regulation to prevent health issues and water contamination, compensation won't address the communities' fears about the CSG industry (p 1).	As discussed in Chapter 3 and throughout this report, there are other processes, frameworks and controls in place to address issues such as where CSG activity can take place, the requirements to access land for CSG development and what the appropriate environmental controls need to be. These are outlined in the NSW Gas Plan and fall outside the scope of our review. Recently the NSW Government provided an update on implementing measures in the NSW Gas Plan and implementing the NSW Chief Scientist's recommendations on CSG.

Recommendation/issue	IPART response
9. Minimum dollar benchmarks At the Narrabri public hearing, Mr Pickard suggested that a minimum benchmark compensation amount should apply, based on a $30,000 annual payment based on the Santos model for the Narrabri Gas Project and a land-based payment. However, Mr Pickard considers that the annual payment should not require the landholder to undertake any maintenance work. He also considers that a land-based payment should be based on the average unimproved land value across the project area (Narrabri public hearing transcript, pp 47-50).	A key theme from our consultations was that a one-size-fits-all approach to compensation won't work. For this reason, we decided not to determine generic dollar ranges for compensation benchmarks including minimum benchmarks. Instead, our compensation model allows landholders to establish their own benchmarks given their particular circumstances. In our view there is no economic justification to impose a minimum benchmark (for example, a $30,000 annual payment), However, gas companies can continue to offer standard compensation arrangements such as those under the Narrabri Gas Project. Our model will assist landholders to determine if such an offer is fair and reasonable.
10. Natural gas is not needed in NSW Some submissions commented that recent forecasts show there is no shortage of gas in NSW, and therefore new gas projects are not needed. (Mullaley Gas and Pipeline Accord p 1; Ms Ciesiolka p 1.)	The NSW Government determined the NSW Gas Plan which aims to balance the economic, social and environmental aspect of gas development. A safe and sustainable gas industry can bring economic benefits to households and business in NSW.
11. Risk management/rehabilitation/insurance Mr Robertson questions how landholders can be compensated if an aquifer is damaged or contaminated as there is no technology to rectify these issues (p 3). Mr Campey comments gas companies do not have enough financial resources to cover compensation for major environmental damage if it affects many people (p 2). Mr Saunders submits that insurance companies won't cover the risks associated with CSG, so landholder compensation can't be calculated. People for the Plains submit that insurance companies will not cover the risks associated with CSG, so landholders will be responsible for land/water contaminations (pp 5-6). The MGPA submits that no insurance companies will insure agricultural landholders against the risks associated with CSG activities and this will cause them to lose certain status (eg, organic) or be liable in the event of contamination of the food chain due to contamination of soil, water, plant or animals (p 1). Ms Ciesiolka (p 4) and Mr Saunders (p 1) also noted that landholders can't insure themselves against the risk of CSG contamination.	It is outside the scope of our review to estimate compensation in the event there is an environmental incident. If such an event occurred, there are other processes and frameworks in place to manage compensation for loss suffered by landholders. For example, landholders have a common law right to claim for loss or damage arising from a gas company's CSG activities. In these instances, compensation will depend on the individual circumstances of the case and it would be a court that would decide a landholder's loss, not IPART's benchmarks. However, some stakeholders have expressed concern that legal processes are difficult, lengthy and expensive for landholders. The recent legislative reforms establish the Environment Protection Authority (EPA) as the lead regulator for compliance and enforcement of gas exploration and production activities in NSW. All gas activities are currently subject to environmental protection licences issues by the EPA, which impose strict site-specific controls that are legally enforceable. The new legislation provides the EPA with additional statutory powers to undertake compliance and enforcement. In its recent progress report on implementing the NSW Chief Scientist and Engineer's recommendations on CSG, the NSW Government noted that it is considering a three-layered policy of security deposits, enhanced insurance

Recommendation/issue	IPART response
	coverage and an environmental rehabilitation fund. The EPA has commenced a project to create a framework for environmental liabilities based on the polluter-pays principle. It will require industry to internalise remediation and clean-up costs instead of those costs potentially being borne by the community.
12. Rights of landholders/negotiating compensation	
Mr Robertson (W15/5046, p1), Ms Ciesiolka (p 3) and People for the Plains note that landholders do not have right to say 'no' to CSG companies' access to their land, and that this implies landholders are not in a position to negotiate fair and equitable compensation. Mr Robertson comments that landholders are at a disadvantage as they do not have financial resources and expertise compared to gas companies (W15/5022, p 1). Mr Campey submits that there is no level playing field for an individual to negotiate with a gas company (p 1). Ms Ciesiolka submits that a landholder reaching a compensation agreement does not imply the overall system is fair and just. She submits that according to the Hopeland Community Sustainability Group, landholders in Queensland received on average $18,000 per annum as compensation - this is not fair compensation given CSG impacts (p 3). Regarding "*Landholders and gas companies need to take time to understand each other's business and work together to make the arrangements work for both sides*", Mr Robertson questions why landholders need to do this when more than 95% of landholders do not want CSG at all (W15/5022, pp 1 and 4). An anonymous submission commented that compensation amounts vary substantially depending on whether projects are regulated or how difficult landholders are. For example, some landholders received compensation up to 200% to 500% more than similarly impacted landholders on regulated projects. A "difficult landholder" received 100% more (than similarly impacted landholders).	We have made recommendations that we consider will assist a landholder in their negotiations with a gas company and will help to achieve fair compensation for landholders. We also recommend that landholders seek professional advice as part of their land access negotiations and we consider the reasonable costs of this advice and the landholder's time should be funded by the gas company. We consider that our recommendations will help to level the playing field. In NSW, Santos and AGL have agreed not to conduct CSG drilling operations on a landholder's property if the landholder doesn't want it there. Providing landholders with a broad right to refuse CSG on their property is a matter for the NSW Government.
13. Retrospective application of IPART's compensation framework	
People for the Plains (p 6) and Mr Robertson (W15/5022, p 3) submit that compensation should be renegotiated and paid retrospectively to those who already have agreements.	In this review we have outlined a framework for estimating benchmark compensation to assist landholders. We have also recommended changes to legislative provisions for compensation but are not recommending that these changes be made retrospectively.

Recommendation/issue	IPART response
14. Coal titles and CSG	
Mr Lowrey submits that he holds a coal title to a lot earmarked for CSG production in AGL stage 1. The coal title was obtained under coal ownership restitution 1990. He considers that he would be entitled to royalties from CSG extracted from the coal title, and that these wells would interfere with the future Stratford coal expansion nearby.	The issue of compensation for coal titles is a matter for the NSW Government. We have referred the submission from Mr Lowrey to the NSW Department of Industry, Division of Resources and Energy.
15. Report on Great Artesian Basin Recharge Systems and Extent of Petroleum and Gas Leases	
The submission from the Mullaley Gas and Pipeline Accord (MGPA) noted that the NSW Government would instruct the NSW Chief Scientist to review the abovenamed report. The MGPA submit that this report is important in the context of any decisions in relation to the Narrabri Gas Project.	We have referred this comment to the NSW Department of Industry, Division of Resources and Energy.

D Stakeholder consultation

In addition to the submissions we received to our Issues Paper and Draft Report, we consulted with a number of stakeholders during the process of our review. Stakeholders we consulted with are listed in the table below.

Table D.1 Stakeholders consulted during our review

Stakeholder
AgForce Projects (Queensland rural producers industry body)
AGL Limited (gas company)
APPEA (oil and gas industry body)
Sean Boland (cotton farming)
Anthony Brennan (mixed farmer)
Sarah Ciesiolka (potato and peanut farmer)
Simon Drury (feedlot owner, cropping)
Margaret Fleck (beef cattle producer)
Gasfields Commission Queensland
Ash Geldard (mixed farmer)
Michael Guest (Real Estate, Stock Agent)
Origin Energy (gas company)
Namoi Water (irrigated agriculture industry body)
NSW Department of Premier & Cabinet
NSW Department of Industry Resources and Energy
NSW Land & Water Commissioner Stakeholder Group
Queensland Department of Natural Resources and Mines
David Quince (mixed farmer, Gunnedah Shire Councillor)
Santos (gas company)
Angie Smith (cotton farming)

E NSW Petroleum Titles

There are four types of petroleum titles in NSW:

- *Petroleum special prospecting authority* gives the holder the exclusive right to explore for petroleum using low-impact methods over the designated area.
- *Petroleum exploration licence (PEL)* gives the holder the exclusive right to explore for petroleum within the exploration licence area during the term of licence.
- *Petroleum assessment lease (PAL)* allows the holder to maintain a title over a potential project area without having to commit to further exploration (ie, between exploration and production phases).
- *Petroleum production lease (PPL)* gives the holder the exclusive right to extract petroleum within the production lease area during the term of the lease.[91]

A facility to search title maps in NSW is available at http://www.commonground.nsw.gov.au.

E.1 Petroleum special prospecting authority

A petroleum special prospecting authority gives the holder the exclusive right to conduct desktop surveys using existing research or other low-impact scientific investigations to determine the occurrence of petroleum over the designated area.

E.2 Petroleum exploration licence (PEL)

A petroleum exploration licence gives the holder the exclusive right to explore for petroleum (including conventional gas and CSG) within the exploration licence area, during the term of the licence. The purpose of exploration is to locate areas where resources may be present and establish the quality and quantity of those resources. Next comes establishing the viability of extracting the resource. Granting an exploration licence does not carry entitlement for production, nor does it guarantee a production lease will be granted within the exploration licence area.

[91] http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/applications-and-approvals/about-petroleum-titles accessed 23 November 2015.

Local communities have the opportunity to comment on exploration licences through a public consultation process. Local communities have 28 days from the publication of the notice of application to comment on the granting of petroleum exploration licences.

E.3 Petroleum assessment lease (PAL)

A petroleum assessment lease caters for situations between exploration and production. The lease allows the holder to maintain a title over a potential project area, without having to commit to further exploration. The holder can, however, continue exploration to further assess the viability of commercial production.

E.4 Petroleum production lease (PPL)

A petroleum production lease gives the holder the exclusive right to extract petroleum within the production lease area during the term of the lease. Before a CSG company can begin production, it must obtain Development Consent from the Department of Planning and Environment. This process is discussed further in Appendix I.

F Environmental protections

In this appendix we outline some environmental protections for CSG.

F.1 Environment protection licence

The Environment Protection Authority (EPA) is the lead environmental regulator for CSG. All exploration, assessment and production titles and activities, once approved, are required to hold an environment protection licence issued by the EPA. An environment protection licence contains legally enforceable conditions, which holders must comply with in order to prevent pollution, and safeguard the environment. This includes air, water, waste and noise requirements.

A licence may also include requirements to undertake monitoring for pollution. All pollution monitoring data that is required to be collected under a licence condition must be made available to the community on the licensees' website.

Licence holders are required to notify the EPA if there is an environmental incident or a breach of licence conditions. The EPA investigates and takes appropriate compliance action for all incidents and breaches. Significant penalties exist for companies that fail to provide notification of breaches.

The EPA regularly inspects industry sites to assess environmental performance, check compliance with licence conditions and legislative obligations, respond to environmental incidents and undertake detailed compliance audits if needed. This may require access across private lands.[92]

F.2 Environmental assessment

Most exploration activities and all mining and petroleum projects require environmental assessment under the *Environmental Planning and Assessment Act 1979* (EP&A Act) before they can start.

[92] http://www.epa.nsw.gov.au/licensing/gas-industry-nsw.htm accessed 23 November 2015.

For most exploration activities, the proponent must submit an application for approval to NSW Trade & Investment and prepare a Review of Environmental Factors (REF). A REF sets out how an exploration activity is likely to impact the environment, water resources and the community. Approval will not be given if the relevant approval agency considers that the environmental impacts of the project are unacceptable.

For most large petroleum production projects, the proponent must submit an application for development consent with the Department of Planning & Environment and prepare an Environmental Impact Statement (EIS). The EIS is a comprehensive document that covers issues such as air quality, noise, transport, flora and fauna, surface and ground water management, methods of petroleum production, landscape management and rehabilitation. Extensive public consultation is also required, with community members encouraged to make submissions on the application.[93]

F.3 Protections related to water

To address the impact of CSG development on water, the NSW Government:

- Banned the use of BTEX chemicals (Benzene, Toluene, Ethylbenzene and Xylene compounds) in CSG fracking fluids and banned the use of evaporation basins for the disposal of CSG produced water – this condition is included in environmental protection licenses.
- Introduced the NSW Aquifer Interference Policy whereby:
  - water licences are required for the water taken from water sources through CSG and other mining activities. This is to ensure that the amount of water taken from each water source does not exceed the extraction limit set in a water sharing plan.
- Introduced Codes of Practice regulating well integrity and hydraulic fracturing.

The NSW Office of Water assesses CSG and other mining projects to determine their potential impacts on water resources in terms of the potential risk of ground water movement between aquifers, impacts on the water table, water pressure levels and water quality changes in different types of ground water systems.[94]

93 http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/applications-and-approvals/environmental-assessment/conditions-on-titles, accessed 23 November 2015.

94 http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/Aquifer-interference accessed 23 November 2015.

F.4 Strategic Regional Land Use Policy

In 2012, the NSW Government introduced the Strategic Regional Land Use Policy to better manage the potential conflicts arising from the proximity of mining and CSG activity to high quality agricultural land in some parts of the State.

Under the Policy, the NSW Government has introduced safeguards which will protect five million hectares of residential and strategic agricultural land across the State from the impacts of mining and CSG activity.

F.5 Biophysical Strategic Agricultural Land Mapping (BSAL)

BSAL is land with high quality soil and water resources capable of sustaining high levels of productivity.[95] Across NSW, a total of 2.8 million hectares of BSAL has been identified and mapped. Around 10% of the 2.8 million hectares of BSAL covers a known mining or CSG resource.

Any State significant mining or CSG proposal on BSAL is subject to the Gateway process, where an independent panel of scientific experts conduct scientific assessment of the land and water impacts of the proposal (see glossary of terms).[96]

F.6 Insurance

In general, insurance provides cover for the payment of costs for clean-up action, and for claims for compensation and damages resulting from pollution in connection with the activity or work authorised or controlled by the license. Under NSW legislation, the holding of insurance is not mandatory, although conditions of a licence may require the licence holder to take out and maintain an insurance policy.

- Part 9.4 of the *Protection of the Environment Operations Act 1997* relates to financial assurance which is used to secure or guarantee funding for, or towards the carrying out of, works or programs such as remediation work or pollution reduction programs. However, financial assurance is not a mandatory condition. The conditions of a licence may require the licence holder to provide financial assurances.
- Under the *Petroleum (Onshore) Act 1991* (NSW), an application for a petroleum title must be accompanied by evidence of the applicant's financial standing. This can often simply constitute a letter of an endorsement from a chartered accountant.

95 BSAL plays a critical role sustaining the State's $12 billion agricultural industry.

96 http://www.planning.nsw.gov.au/en/Policy-and-Legislation/Mining-and-Resources/~/media/A78D43D0C0C64AAE97B518FFC69CFF9A.ashx accessed 23 November 2015.

F.7 Security deposits

Under the *Petroleum (Onshore) Act 1991* (NSW) the current process in NSW includes the requirement that all titleholders, engaged in mineral and petroleum exploration, assessment and production activities, lodge a security deposit with the Government on issue of title. The security deposit is to cover the Government's full costs of rehabilitation of the land subject to the title and includes any dams or roads under the title.

In CSG activities, the rehabilitation work undertaken by titleholders during and at the end of activities is usually limited to plugging and abandonment of wells, and maintenance and removal of surface infrastructure associated with the extraction operations. The rehabilitation security deposit process does not apply to pollution events.

G Legislative provisions for compensation

We have compared legislative provisions for landholder compensation in Australia. Table G.1 sets out relevant sections of legislation. Some key differences are that, contrary to NSW:

- The legislation in Queensland, Victoria and Tasmania provides for a reduction in market value of land and loss of opportunity to make planned improvements on the land.
- The legislation in Victoria and Tasmania provides for loss of amenity including recreation and conservation values. In Victoria, the maximum amount of compensation that a Court or Tribunal may order to be paid for loss of amenity is $10,000.

Table G.1 Summary of legislative provisions for compensation

Jurisdiction	Relevant sections of legislation
New South Wales ***Petroleum (Onshore) Act 1991*** Section 109 Measure of compensation	The Land and Environment Court is to assess the loss caused or likely to be caused: a) by damage to the surface of land, and damage to the crops, trees, grasses or other vegetation on land, or damage to buildings and improvements on land, being damage which has been caused by or which may arise from prospecting or petroleum mining operations, and b) by deprivation of the possession or of the use of the surface of land, and c) by severance of land from other land of the landholder, and d) by surface rights of way and easements, and e) by destruction or loss of, or injury to, or disturbance of, or interference with, stock on land. Section 69D (2A) An access arrangement must (if the landholder so requests) specify that the holder of the prospecting title is required to pay the reasonable legal costs of the landholder in obtaining initial advice about the making of the arrangement.

Jurisdiction	Relevant sections of legislation
Queensland ***Petroleum and Gas (Production and Safety) Act 2004*** *Section 532 General liability to compensate*	The holder of each petroleum authority is liable to compensate each owner or occupier of private land or public land in the area of, or access land for, the authority (an eligible claimant) for any compensatable effect the eligible claimant suffers that is caused by relevant authorised activities. a) Compensatable effect means all or any of the following: i. deprivation of possession of land surface; ii. diminution of land value; iii. diminution of the use made or that may be made of the land or any improvement on it; iv. severance of any part of the land from other parts of the land or from other land that the eligible claimant owns; v. any cost, damage or loss arising from the carrying out of activities under the petroleum authority on the land; b) Accounting, legal or valuation costs reasonably incurred by the landholder to negotiate or prepare a Conduct and Compensation Agreement, other than costs involved to resolve disputes via independent alternative dispute resolution (ADR). c) Consequential damages the eligible claimant incurs because of a matter mentioned in paragraph a) or b).
Victoria ***Mineral Resources (Sustainable Development) Act 1990*** *Section 85 What compensation is payable for*	Compensation is payable by the licensee to the owner or occupier of private land that is land affected for any loss or damage that has been or will be sustained as a direct, natural and reasonable consequence of the approval of the work plan or the doing of work under the licence including: a) deprivation of possession of the whole or any part of the surface of the land; b) damage to the surface of the land; c) damage to any improvements on the land; d) severance of the land from other land of the owner or occupier; e) loss of amenity, including recreation and conservation values; f) loss of opportunity to make any planned improvement on the land; g) any decrease in the market value of the owner or occupier's interest in the land; and h) loss of opportunity to use tailings disposed of with the consent of the Minister under section 14(2).
South Australia[a] ***Petroleum and Geothermal Energy Act 2000*** ***Section 63 Right to compensation***	1. The owner of land is entitled to compensation from a licensee who enters the land and carries out regulated activities under this Act. 2. The compensation payable to an owner of land must be directly related to the owner and will be to cover: a) deprivation or impairment of the use and enjoyment of the land; and b) damage to the land (not including damage that has been made good by the licensee); and c) damage to, or disturbance of, any business or other activity lawfully conducted on the land; and d) consequential loss suffered or incurred by the owner on account of the licensee entering the land and carrying out regulated activities under this Act. 3. The compensation is not to be related to the value or possible value of regulated resources contained in the land.

Jurisdiction	Relevant sections of legislation
	(3a) The compensation may include an additional component to cover reasonable costs reasonably incurred by an owner of land in connection with any negotiation or dispute related to: a) the licensee gaining access to the land; and b) the activities to be carried out on the land; and c) the compensation to be paid under subsection 2.
Western Australia[b] ***Petroleum and Geothermal Energy Resources Act 1967***[c] *Section 17 Compensation for owners and occupiers of private land*	1. A permittee, holder of a drilling reservation, lessee or licensee may agree with the owner and occupier respectively of any private land comprised in the permit, drilling reservation, lease or licence as to the amount of compensation to be paid for the right to occupy the land. … the compensation to be made to the owner and occupier shall be compensation for being deprived of the possession of the surface or any part of the surface of the private land, and for damage to the surface of the whole or any part thereof, and to any improvements thereon, which may arise from the carrying on of operations thereon or thereunder, and for the severance of such land from other land of the owner or occupier, and for rights-of-way and for all consequential damages.
Tasmania[d] ***Mineral Resources Development Act 1995 (No. 116 of 1995)*** ***Section 3 Interpretation***	Compensable loss means: a) damage to the surface of the land; or b) damage to crops, trees, grasses, fruit, vegetables or other vegetation on the land; or c) damage to buildings, structures or works on the land; or d) damage to any improvement on the land; or e) loss of opportunity to make any planned improvement on the land; or f) deprivation of possession or use of the whole or part of the surface of the land; or g) severance of the land from other land of the owner or occupier of that land; or h) destruction or loss of, or injury to, disturbance of, or interference with, stock; or i) loss of amenity, including recreation and conservation values; or j) any decrease in the market values of the owner's or occupier's interest in the land; or k) surface rights of way and easements.

a CSG exploration is in its infancy in South Australia. (200–300 scf/t in Scott, 2002).

b Western Australia currently has no known, economically significant, coal seam gas resources due to the State's geology and character of its coals. Source: Government of Western Australia, Department of Mines and Petroleum Response to Report: *Regulation of Shale, Coal Seam and Tight Gas Activities in Western Australia,* 31 October 2011.

c The Act did not refer specifically to CSG, questionable that they apply to CSG activities.

d At the time of writing, Tasmania has no known active coal seam gas operations. The last exploration licence granted to explore Tasmania's potential - to Pure Energy - expired in 2009. The exploration was unsuccessful.

H Another example of the compensation model

In this appendix, we provide another example of the compensation model and then show how the model can generate different ranges of compensation by varying input values.

This example is based on a hypothetic landholder with the following characteristics:

- The landholder has a property of 50 hectares.
- They have been offered an access agreement with an estimated duration of 20 years. The offer includes an incentive fund when the project reaches the production phase (for simplicity, we assume there is only one access agreement that covers exploration and production phases).
- The gas company will need 7 hectares for well pads, hardstand and other infrastructure in the first year of the project, and 2.25 hectares from the second year onwards.
- The estimated value of the land is $1,500 per hectare, and is assumed to increase at an inflation rate of 2.5%. The estimated rental is 7% of the land value. It is assumed that the value of land will remain constant in nominal terms for the duration of 20 years.
- A valuer has estimated that for the period that the CSG infrastructure is located on the property, impacts including loss of visual amenity, noise, dust and light would affect the value of the balance land by 30% in the first year and 20% in the second year onwards. The valuer estimates that a loss in the value of land due to severance is 10% each year.
- The landholder estimates they will spend 150 hours during the negotiation of the access agreement, and around 50 hours a year on an ongoing basis on work related to the access agreement. They estimate the value of their time at $50 per hour, which is assumed to increase at an inflation rate of 2.5%.
- The landholder estimates that legal and professional fees will cost $40,000 to establish the access agreement.
- The gas company estimates in the fifth year the landholder will be entitled to an incentive payment of $10,000 each year in the production stage. The incentive payment is assumed to increase at an inflation rate of 2.5%.

- The gas company will rehabilitate the land following gas production. A valuer has estimated that for the period that the land is rehabilitated and restored, impacts including loss of visual amenity, noise, dust and light would affect the value of the balance land by 10%. Also, the valuer estimates that a loss in the value of land due to severance is 10% during rehabilitation. The rehabilitation work is estimated to take 24 weeks.
- The landholder plans to deposit them in a savings account earning 3.5% annual interest.

H.1 INPUT worksheet

The above information is entered into the INPUT worksheet. See Figure G.1.

H.2 RESULTS worksheet

Figure G.2 and Figure G.3 show the lump-sum and annual compensation payments and incentive payments resulting from the assumptions in this example. Relative to the example in Chapter 5, the value of land in this example is lower.

Figure H.1 Compensation model INPUT worksheet ($nominal)

INPUTS RESET

PART A. Inputs for Compensation Payments

PLEASE ENTER VALUES ONLY IN COLOURED CELLS	Unit	Fixed input	Access Agreement Year 1	2	3	4	5	•••	20 Rehabilitation
1. Land access agreement details									
How long is your access agreement for? (Maximum is 30 years)	Year	20							
2. Landholding details									
What is the total area of your land in hectares? If you have land area in a different unit, use the "CONVERSION" worksheet to convert into hectares.	Hectare	50							
What is the estimated value of your land per hectare in nominal terms (ie, including inflation)? If you have land value in a different unit, use the "CONVERSION" worksheet to convert into $/hectare.	Per hectare		$1,500					•••	
What is the rental value of land as a percentage of land value?	Percent		7%					•••	
3. Estimated impacts									
(a) Directly impacted land									
What is the total area of land used by gas company?	Hectare		7.00	2.25				•••	
(b) Residual land (your total land area excluding directly impacted land)									
What is an estimated reduction in the value of residual land due to severance?	Percent		10%	10%				•••	10%
What is an estimated reduction in the value of residual land due to injurious affection?	Percent		30%	20%				•••	10%
(c) How long it the rehabilitation period?	Weeks	24							

Figure H.2 Compensation model INPUT worksheet – continued

4. Cost of landholder time and expert advice

How many hours did you spend negotiating your access agreement?	Hours in total	150
How many hours do you expect to spend each year on matters related to you access agreement?	Hours per annum	50
Enter an estimate of the value of your time	Per hour	$50
How much did you spend on fees for professional advice including GST?	Per agreement	$40,000

5. Other assumption

What rate of return would you expect to earn on financial investments per year in nominal terms? You need this input only if you wish to calculate a lump-sum upfront payment.	Percent per annum	3.5%
Inflation rate	Percent	2.5%

PART B. Inputs for Benefit Payments

PLEASE ENTER VALUES ONLY IN COLOURED CELLS	Unit	Fixed input	Access Agreement Year 1	2	3	4	5	...	20
What is your benefit payment based on?	Estimated annual benefit payment								
In which year from Year 2 to Year 10 is the gas project expected to enter the production stage?	Year	5							
Provide inputs below from Year 5									
An estimate of annual benefit payments in the first year of production in nominal terms (ie, including inflation)	Dollar per annum						$10,000	...	

Figure H.3 Compensation model SUMMARY worksheet with lump-sum upfront payment ($nominal)

RESULTS

PART A. Compensation Payments

Please select an option to get an estimate of your compensation. Select "Lump-sum Upfront Payment" to get a single upfront payment. Select "Annual Payments" for a series of annual payments.

Payment Structure: LUMP-SUM UPFRONT | ANNUAL PAYMENT

Note: Where the costs of expert advice have been incurred by landholders, the first year compensation is higher due to the inclusion of the reimbursment of the costs of expert advice.

Beginning of Year	Lump-Sum Upfront Payment
1	$123,257
Rehabilitation	$914

PART B. Benefit Payments

A schedule of your benefit payments is provided below.

Note: This model assumes the provision of benefit payments during the production stage of a CSG project. Benefit payments are not mandatory and gas companies may choose to provide other in-kind benefits.

Beginning of Year	Annual Payment
1	
2	
3	
4	
5	
6	$10,000
7	$10,250
8	$10,506
9	$10,769
10	$11,038
11	$11,314
12	$11,597
13	$11,887
14	$12,184
15	$12,489
16	$12,801
17	$13,121
18	$13,449
19	$13,785
20	$14,130

PART C. Payment Schedule

The graph below shows compensation payment schedule over your access agreement period.

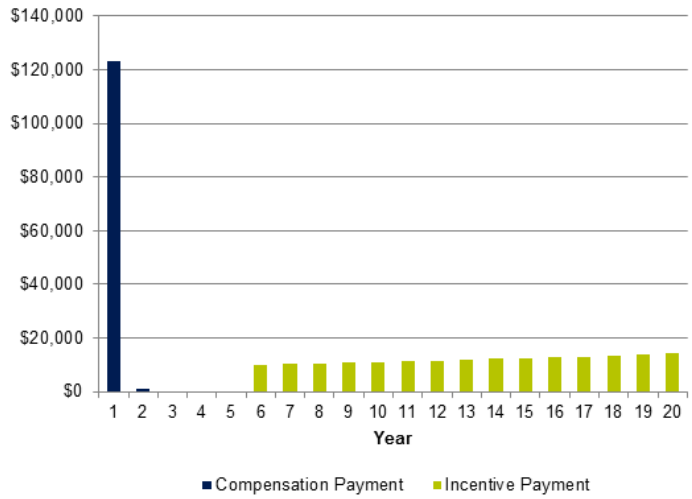


Figure H.4 Compensation model worksheet with annual payments ($nominal)

RESULTS

PART A. Compensation Payments

Please select an option to get an estimate of your compensation. Select "Lump-sum Upfront Payment" to get a single upfront payment. Select "Annual Payments" for a series of annual payments.

Payment Structure: LUMP-SUM UPFRONT | ANNUAL PAYMENT

Note: Where the costs of expert advice have been incurred by landholders, the first year compensation is higher due to the inclusion of the reimbursment of the costs of expert advice.

Beginning of Year	Annual Payment
1	$50,041
2	$4,346
3	$4,455
4	$4,566
5	$4,681
6	$4,798
7	$4,918
8	$5,040
9	$5,166
10	$5,296
11	$5,428
12	$5,564
13	$5,703
14	$5,845
15	$5,992
16	$6,141
17	$6,295
18	$6,452
19	$6,614
20	$6,779
Rehabilitation	$914

PART B. Benefit Payments

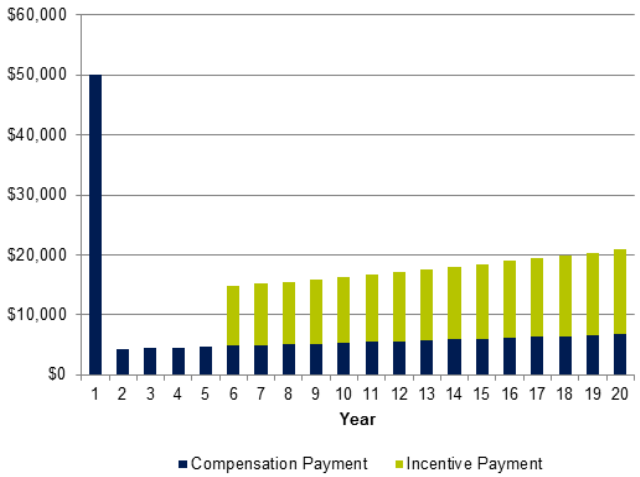
A schedule of your benefit payments is provided below.

Note: This model assumes the provision of benefit payments during the production stage of a CSG project. Benefit payments are not mandatory and gas companies may choose to provide other in-kind benefits.

Beginning of Year	Annual Payment
1	
2	
3	
4	
5	
6	$10,000
7	$10,250
8	$10,506
9	$10,769
10	$11,038
11	$11,314
12	$11,597
13	$11,887
14	$12,184
15	$12,489
16	$12,801
17	$13,121
18	$13,449
19	$13,785
20	$14,130

PART C. Payment Schedule

The graph below shows compensation payment schedule over your access agreement period.



Data source: IPART.

H.3 Generating compensation ranges

In this section, we demonstrate two examples of how the model can generate different ranges of compensation by varying input values. In both examples, we assume:

- The landholder has a mixed farming business on a property of 200 hectares.
- They have been offered an access agreement with an estimated duration of 20 years. For simplicity, we assume there is only one access agreement that covers exploration and production phases, and the offer does not include incentive payments.
- The estimated rental rate is 8% of the land value.
- The gas company will need 10 hectares for well pads, hardstand and other infrastructure in the first year of the project, and 5.25 hectares from the second year onwards.
- The landholder estimates they will spend 150 hours during the negotiation of the access agreement, and around 50 hours a year on an ongoing basis on work related to the access agreement. They estimate the value of their time at $50 per hour, which increases at an inflation rate of 2.5%.
- The landholder did not incur any out-of-pocket expense for expert advice as these costs were directly paid by the gas company.
- The landholder has a preference to receive compensation in a series of periodic payments.
- The gas company will rehabilitate the land following gas production. A valuer has estimated that for the period that the land is rehabilitated and restored, impacts including loss of visual amenity, noise, dust and light would affect the value of the balance land by 10%. The rehabilitation work will take 24 weeks.

Table H.1 and Table H.2 show compensation payments estimated for different land values and impacts on the residual land. For simplicity, compensation payments are estimated assuming the estimated impacts on the residual land are the same (ie, severance = injurious affection), and an inflation rate of 2.5%.

Table H.1 Compensation payment in the first year ($ nominal)

Land value ($ nominal)	0%	10%	20%	30%	40%	50%
$1,000	$8,300	$11,340	$14,380	$17,420	$20,460	$23,500
$2,000	$9,100	$15,180	$21,260	$27,340	$33,420	$39,500
$3,000	$9,900	$19,020	$28,140	$37,260	$46,380	$55,500
$4,000	$10,700	$22,860	$35,020	$47,180	$59,340	$71,500
$5,000	$11,500	**$26,700**	**$41,900**	$57,100	$72,300	$87,500
$6,000	$12,300	$30,540	$48,780	$67,020	$85,260	$103,500
$7,000	$13,100	$34,380	$55,660	$76,940	$98,220	$119,500
$8,000	$13,900	$38,220	$62,540	$86,860	$111,180	$135,500
$9,000	$14,700	$42,060	$69,420	$96,780	$124,140	$151,500
$10,000	$15,500	$45,900	**$76,300**	$106,700	$137,100	$167,500
$11,000	$16,300	$49,740	$83,180	$116,620	$150,060	$183,500
$12,000	$17,100	$53,580	$90,060	$126,540	$163,020	$199,500
$13,000	$17,900	$57,420	$96,940	$136,460	$175,980	$215,500
$14,000	$18,700	$61,260	$103,820	$146,380	$188,940	$231,500
$15,000	$19,500	$65,100	**$110,700**	$156,300	$201,900	$247,500

Source: IPART calculations.

Table H.2 Annual Compensation payment from the second year ($ nominal)

Land value ($ nominal)	0%	10%	20%	30%	40%	50%
$1,025	$2,993	$6,187	$9,381	$12,575	$15,769	$18,963
$2,050	$3,424	$9,811	$16,199	$22,587	$28,975	$35,363
$3,075	$3,854	$13,436	$23,017	$32,599	$42,181	$51,763
$4,100	$4,285	$17,060	$29,836	$42,611	$55,387	$68,163
$5,125	**$4,715**	**$20,685**	$36,654	$52,624	$68,593	$84,563
$6,150	$5,146	$24,309	$43,472	$62,636	$81,799	$100,963
$7,175	$5,576	$27,933	$50,291	$72,648	$95,005	$117,363
$8,200	$6,007	$31,558	$57,109	$82,660	$108,211	$133,763
$9,225	$6,437	$35,182	$63,927	$92,672	$121,417	$150,163
$10,250	$6,868	**$38,807**	$70,746	$102,685	$134,624	$166,563
$11,275	$7,298	$42,431	$77,564	$112,697	$147,830	$182,963
$12,300	$7,729	$46,055	$84,382	$122,709	$161,036	$199,363
$13,325	$8,159	$49,680	$91,200	$132,721	$174,242	$215,763
$14,350	$8,590	$53,304	$98,019	$142,733	$187,448	$232,163
$15,375	$9,020	**$56,929**	$104,837	$152,746	$200,654	$248,563

Note: Land values are assumed to have increased from the first year by an inflation rate of 2.5%.

Source: IPART calculations.

Example 1 Estimating compensation based on a range of land values

The landholder's estimated market value of the land is in a range of $10,000 to $15,000 per hectare. It is assumed that:

- the market value of the land increase at an inflation rate of 2.5%
- for the period that the CSG infrastructure is located on the property, impacts including loss of visual amenity, noise, dust and light would affect the value of the balance land by 20% in the first year and 10% in the second year onwards
- a loss in the value of land due to severance is 20% in the first year and 10% from the second year onwards.

Based on this information, the estimated compensation payments are in a range of $76,300 to $110,700 in the first year and $38,807 to $56,929 from the second year onwards (highlighted in grey in Table H.1 and Table H.2).

Example 2 Estimating compensation based on a range of impacts on the residual land

The landholder's estimated market value of the land is $5,000. It is assumed that:

- the market value of the land increase at an inflation rate of 2.5%,
- for the period that the CSG infrastructure is located on the property, impacts including loss of visual amenity, noise, dust and light would affect the value of the balance land by a range of 10% to 20% in the first year and 0% to 10% in the second year onwards
- a loss in the value of land due to severance is also 10% to 20% in the first year and 0% to 10% from the second year onwards.

Based on this information, the estimated compensation payments are in a range of $26,700 to $41,900 in the first year and $4,715 to $20,685 from the second year onwards (highlighted in blue in Table H.1 and Table H.2).

I Licence application processes

The NSW Government recently announced a draft Strategic Release Framework to release new areas for gas exploration. Under this framework, new exploration licences will only be issued in areas released by the Minister for Resources and Energy after an assessment of economic, environmental and social factors. The framework will not replace the need for a development application if a project seeks to progress to production.

In this appendix we provide an overview of the Strategic Release Framework for granting new exploration licences in NSW. We also provide an overview of the planning process for gaining a petroleum production licence.

I.1 Strategic Release Framework for granting an exploration licence

The Strategic Release Framework is designed to improve transparency in decision making in relation to where exploration activities may take place and introduces a competitive process for determining who may undertake these activities. It consists of three key stages:

- assessing suitability of an area for release and appropriate allocation process
- releasing an area for exploration and inviting competitive applications for a prospecting title, and
- granting a prospecting title.

The Strategic Release Framework will not replace the need for a development application if a project seeks to progress to production.

I.1.1 Assessing the suitability of an area for release and appropriate allocation process

An independently chaired advisory body (the Advisory Body) will oversee the Strategic Release Framework, and make recommendations to the Minister for Industry, Resources and Energy on potential areas to be released for exploration. The recommendations will be based on a preliminary assessment with two components:

- a geological resource assessment (ie, the Resource Assessment), and
- an assessment of the social, environmental and economic factors relevant to the potential release area (ie, the Preliminary Regional Issues Assessment (PRIA)).

The Resource Assessment will utilise technical geological expertise to identify areas where there is resource potential. It will analyse data availability, resource body and market characteristics, and other geological factors.

The PRIA will provide an initial analysis of relevant environmental, economic and social matters relating to the potential release area. One part of this assessment will be community consultation to identify relevant matters and concerns. This may include significant environmental concerns or potential land use conflicts, potential immediate and cumulative impacts on local communities of potential development following release for exploration, impacts on existing infrastructure and growth zones.

The Advisory Body will consider the findings of the Resource Assessment and the PRIA. If an area is considered suitable to be released for exploration, it will also assess the most appropriate competitive allocation process. It will then make a recommendation to the Minister regarding the release of the area.

I.1.2 Release of areas for exploration and competitive allocation of licences

The Minister will then invite applications to be part of the competitive process. Applications for a prospecting title may only be submitted when an area is released by the Minister.[97]

There are minimum standards that all applications for prospecting titles must meet, in relation to work programs, technical, financial and community consultation capability, environmental track record, and any other requirement as set out in legislation or the issued invitation.

[97] There are two exceptions. An existing titleholder may submit an application for an operational allocation of an exploration licence at any time, and the Government may apply for a prospecting title to undertake information gathering activities.

Applications will bid for prospecting titles and their bids will be assessed based on the value of the bid, capability and commitment to exploration demonstrated through the scope, timing and expenditure in the proposed work program.

I.2 Development application process for a production licence

Before a CSG company can begin production, it must obtain Development Consent from the Department of Planning and Environment. The process involves the following steps:

- Where the project is located on Strategic Agricultural Land, the applicant will be required to go through the Gateway Process; an independent, scientific and upfront assessment of the potential impacts of a mining or CSG production proposal on strategic agricultural land (see section I.3).
- Where the project is not located on Strategic Agricultural Land, or has obtained a Gateway Certificate, the applicant will apply to the Director-General of Planning and Environment to issue Director-General requirements for the preparation of an Environmental Impact Statement (EIS).
- The Development Application and EIS are lodged and publicly exhibited for at least 30 days to allow the local community and other key stakeholders to lodge submissions (see discussion in Section I.4 regarding conditions that have been imposed on CSG developments following community consultation).
- The Department of Planning & Environment will consult with the local council and relevant agencies to discuss possible conditions on the application.

The Minister for Planning, or the Planning Assessment Commission under delegation from the Minister, determines whether or not to grant consent. Once development approval is granted, the Minister for Industry, Resources and Energy grants a Petroleum Production Lease.[98]

I.3 Gateway process

The NSW Government introduced the Gateway Process to add an additional layer of scientific scrutiny to new coal mining and coal seam gas proposals on important agricultural land – biophysical strategic agricultural land (BSAL). The Gateway pathway process currently applies to the 2.8 million hectares of BSAL and water resources that have been mapped across NSW, including the equine and viticulture 'critical industry clusters' in the Upper Hunter and New England North West Regions. Further BSAL mapping is in progress for the remainder of

[98] NSW Trade & Investment – Resources & Energy, Coal Seam Gas Fact Sheet 7, *Land Access*, http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0003/516144/Land-Access-CSG-Fact-Sheet-7.pdf, accessed 23 November 2015.

the state and once this mapping is finalised the Gateway process will also apply to this land.[99]

All new State Significant Development (SSD), which captures most mining leases and CSG exploration licences issued after 11 September 2012,[100] must be independently assessed by a Mining and Petroleum Gateway Panel before a development application can be lodged.

The Panel comprises independent scientific experts with expertise in the fields of agricultural science, hydrogeology and mining and petroleum development. Where a proposal could have a significant impact on a water resource, the Panel will seek advice from the Commonwealth's Independent Expert Scientific Committee (IESC).

The Gateway Panel's advice on the proposal, as well as any advice from the Minister for Primary Industries and the Commonwealth Independent Expert Scientific Committee on a CSG proposal will be available for the public to view on the Mining and Petroleum Gateway Panel website. Approval from the Panel and the issue of a consent certificate are prerequisites for a proposal to proceed to development application.[101]

I.4 Development application and public consultation process

All the environmental impacts identified in the Gateway assessment must be addressed in the development application (DA) which will then be subject to the established development assessment process.

At the development application stage, all mining and CSG proposals is required to undergo comprehensive public consultation. The application must be publicly exhibited for a minimum of 30 days on the DPE's website. The general public is given 28 days to provide feedback about proposed exploration activities. The public comment process aims to minimise, or where possible avoid, potential impacts on a community.[102] The community may take this opportunity to suggest additional conditions for best practice over the minimum standards for the consent authority to consider.

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99 NSW Department of Planning & Environment website, FAQ Introduction of Gateway Process & Gateway Panel. http://www.planning.nsw.gov.au/en/Policy-and-Legislation/Mining-and-Resources/~/media/A78D43D0C0C64AAE97B518FFC69CFF9A.ashx

100 NSW Government, *Strategic Regional Land Use Policy Fact sheet*, September 2012. http://www.planning.nsw.gov.au/en/Policy-and-Legislation/Mining-and-Resources/~/media/A78D43D0C0C64AAE97B518FFC69CFF9A.ashx

101 NSW Department of Planning & Environment website, http://www.planning.nsw.gov.au/en-us/planningyourregion/strategicregionallanduse/gatewayassessmentandsiteverification.aspx accessed 23 November 2015.

102 NSW Department of Industry, Resources & Energy, Public Comment Process For the exploration of coal and petroleum, including coal seam gas, http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0009/426582/Public-Comment-Process-Document.pdf, accessed 23 November 2015.

Conditions are designed prevent, minimise, and offset any adverse impacts of the project, including environmental, economic and social impacts. Conditions are also intended to set standards and performance measures for acceptable environmental performance, and to require regular monitoring and reporting. Standard and Model Conditions for coal seam gas exploration and production generally include requirements for[103]:

- Developing a site plan in consultation with the landholder to the DPE as part of the Environmental Impact Statement. The plan must detail the location of well sites, the route of access roads, and initial rehabilitation works following construction;
- Requirements for the protection of public infrastructure, including the requirement for the company to cover the cost of any repair or relocation;
- Construction and operation hours;
- Noise management plan;
- Noise impact assessment criteria limiting noise levels at any residence on privately owned land, requiring continuous improvement;
- Safety standards to ensure gas wells are constructed, operated and decommissioned to avoid and minimise gas migration risks and adverse impacts to beneficial aquifers including associated groundwater users, surface waters and groundwater dependent ecosystems;
- A ban on the use of fracking fluids containing BTEX chemicals;
- Water management plans detailing measures to minimise impacts on surface water and groundwater quality;
- Discharge limits on the concentration of pollutants listed in the conditions;
- Air quality and greenhouse gas plan, including a ban on the emission of offensive odours;
- Biodiversity management and offset strategies, and heritage management plans;
- Erosion and sediment control plan;
- Waste minimisation plan;
- Protection of public infrastructure, including the requirement for the company to cover the cost of any repair or relocation;
- The implementation of a safety management system;
- Requirements to report on compliance;

[103] NSW Department of Planning & Environment website, State Significant Development (SSD) Standard and Model Conditions: http://www.planning.nsw.gov.au/Assess-and-Regulate/Development-Assessment/Systems/State-Significant-Development.

- Requirement to establish and operate a Community Consultative Committee. The Committee is an advisory committee that should be have community and Council representatives, an independent chair and appropriate representation from the company.

Where appropriate, additional conditions may be imposed on proposed CSG developments. There have been specific cases where communities have successfully applied to the DPE and the Land and Environment Court to impose conditions on mining and gas developments that are over and above the standard conditions. For example:

- Specific bans on mine water being discharged into certain creeks and rivers, and specific methods of irrigation paired with trigger levels for controlling discharge, eco-toxicity testing, and water monitoring plans to ensure that these bans are complied with;[104]
- Specific rehabilitation conditions, such as long term requirements to ensure that no water pollution occurs after mining is completed;[105]
- Specific air quality assessments to monitor dust levels and risks to human health posed by contaminants. Limits on air quality levels, including criteria for particulate matter with a diameter of less than 10 micrometres and defined actions to avoid and mitigate these risks, including that the mining company stop or relocate any activities to avoid exceeding these limits;[106]
- Restrictions on operating hours and number of freight trains or trucks permitted to leave between sites, including times of day, frequency, number, and routes of traffic to mitigate and minimise the impact of noise on the community.[107]

The community consultation process gives landholders and residents the opportunity to have input in the decision-making process. The Department of Planning and Environment, as well as the Land and Environment Court will consider community concerns when imposing conditions that should be placed on a development if it is approved.

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[104] Ironstone Community Action Group Inc. v Minister for Planning & Duralie Coal Pty Ltd [2011] NSWLEC 195. https://www.caselaw.nsw.gov.au/decision/54a6364c3004de94513d9090

[105] 27 Coastwatchers Association Inc & South East Region Conservation Alliance (SERCA) v Minister for Planning & Anor NSWLEC, 7 February 2012, unreported. Condition 51. https://www.caselaw.nsw.gov.au/decision/54a6364c3004de94513d9090

[106] Ironstone Community Action Group Inc v Minister for Planning & Duralie Coal Pty Ltd [2011] NSWLEC 195. https://www.caselaw.nsw.gov.au/decision/54a6364c3004de94513d9090

[107] Ibid.

J Other resources for landholders

- **NSW Government, Petroleum Land Access Guideline**, available at http://www.resourcesandenergy.nsw.gov.au/miners-and-explorers/codes-and-guidelines/guidelines/petroleum-land-access
- **NSW Department of Primary Industries, Tips for negotiating coal seam gas access agreements – Landholder guidelines, December 2012,** available at http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0019/450703/Negotiating-coal-seam-gas-agreements-formatted-guidelines-with-photos.pdf
- **NSW Department of Primary Industries, Agricultural Impact Statement technical notes, April 2013**, available at http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0010/463789/Agricultural-Impact-Statement-technical-notes.pdf
- **NSW Government, Strategic Regional Land Use Policy - Guideline for Agricultural Impact Statements at the Exploration Stage, August 2015**, available at http://www.resourcesandenergy.nsw.gov.au/__data/assets/pdf_file/0007/448315/Strategic-Regional-Land-Use-Policy-Guideline-for-Agricultural-Impact-Statements-at-the-Exploration-Stage.pdf
- **NSW Government Community Liaison Officers**, provide factual information to the public about the exploration and production of natural gas from coal seams, and the regulations that govern the industry. Community Liaison Officers (CLOs) from NSW Department of Industry's Division of Resources and Energy are actively meeting interested groups and individuals who wish to better understand the issues relating to the industry. Officers are providing information on the strict regulatory framework now in place to protect the environment, water resources and the health & safety of communities. The topics also include landholder rights, industry compliance, well integrity standards and the Aquifer Interference Policy. To arrange a meeting, briefing or seek further information, email clo@industry.nsw.gov.au
- **Gasfields Commission Queensland, Land Access Checklist for Landholders**, available http://www.gasfieldscommissionqld.org.au/resources/gasfields/landholder-land-access-checklist.pdf
- **NSW Farmers Association, Land Access Guide and Checklist,** available http://www.nswfarmers.org.au/our-services/mining-and-coal-seam-gas-communications-project/resources-for-landholders