

THE GAS GUIDE

Everything you need to know about gas activity, from exploration through to rehabilitation of the site.



About us

Coexistence Queensland is an independent statutory body that was established as the GasFields Commission Queensland on 1 July 2013 to manage and improve the sustainable coexistence of Queensland's landholders, regional communities, and onshore gas industry.

In 2024, the Queensland Parliament passed legislation and renamed the organisation Coexistence Queensland, with an expanded remit addressing Queensland's diverse energy and resources landscape and the emerging challenges and opportunities facing regional and rural communities.

Coexistence Queensland works collaboratively with government, industry, community and landholders to facilitate balanced development outcomes, and support the preparedness of communities where resource and energy developments are occurring.

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This edition of the Gas Guide updated April 2026

We do this by:

- advising and influencing government and other stakeholders on policy and program measures to enhance coexistence outcomes, informed by the views of regional and rural communities
- providing landholders and community independent information about their rights in relation to development and how to approach interactions with resource and energy companies to negotiate mutually acceptable outcomes
- partnering with government, local authorities, peak bodies, and community groups to deliver programs that support communities and foster the development of resources and energy projects in a transparent, balanced, and responsible manner.

We are committed to making our information accessible. This publication can be provided in alternative formats (such as large print, audio, or accessible digital formats). Please contact us to request a format that meets your needs.

Contact details

For any enquiries related to coexistence with the resources and renewable energy industries, please reach out to us via phone, email, or mail using the following contact details:

- Web: www.cqld.org.au
- Email: enquiries@cqld.org.au
- Phone: 1300 548 021
- Mail: PO Box 15266, City East QLD 4002

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About The Gas Guide



With agriculture occupying more than 80% of Queensland's 173 million hectares (ha) of land area, the expansion of onshore petroleum and gas exploration and development increasingly intersects with rural landholders and agricultural businesses.

Queensland's petroleum and gas story began at Roma in 1900, when gas was discovered accidentally during water bore drilling. Commercial production followed in the 1960s, and more than a century after that first discovery, Queensland's black coal seams were commercialised at scale to create the world's first coal seam gas (CSG) export industry.

Supported by new technology, resource companies are now looking at other 'unconventional' petroleum and gas reservoirs in shale and tight geological formations.

Natural gas – primarily methane (CH₄) – plays an important role in Queensland as a fuel for electricity generation, manufacturing and transportation. In addition, natural gas is used as a feedstock for the production of fertilisers, explosives and plastics.

With the benefit of vastly improved scientific knowledge (especially groundwater systems) and

legal frameworks to promote sustainable coexistence between rural producers and resource companies, the Queensland Government is opening new areas for exploration and potential development, including gas marked for domestic use only.

The Gas Guide has been developed by Coexistence Queensland, an independent statutory body, to help landholders understand and navigate what's involved when petroleum and gas development occurs on private land.

The guide is underpinned by the principle of sustainable coexistence – a balanced, empathetic, and forward-looking approach that values people and the environment equally, and supports industry and communities to thrive together. When natural resources and assets are managed responsibly and sustainably, development can deliver lasting, mutually beneficial outcomes that are shared across communities.

From our experience, the best outcomes are achieved when landholders and companies communicate openly, honestly, and respectfully, take the time to understand each other's perspectives, and work towards agreements that are fair and reasonable for all involved.

An approach from a resource company for land access deserves your earnest attention, as a commitment to best practice from day one can transform it into a successful business relationship. The Gas Guide includes a big picture 'Roadmap' to help you become more familiar with the petroleum and gas industry, the regulations governing its operations and, most importantly, the conventions, legal obligations, and protections available to landholders to maintain a level playing field.

Both The Gas Guide and **Roadmap** have been specifically organised to deliver landholders a clear and easy to understand guide of what to expect during each stage of the development cycle with petroleum and gas developments, on private land, in Queensland.

Should a resource company make its presence known in your area, download your free copy of The Gas Guide here: www.cqld.org.au/resource/the-gas-guide/. The Gas Guide is updated as needed to reflect changes to regulation, processes and current research.

If you would like to be notified of any updates to The Gas Guide, register your contact details on the Coexistence Queensland distribution list here: www.cqld.org.au/subscribe, or phone 1300 548 021.



Early engagement and exploration

CHAPTER 2

Early engagement happens before any land access is required. It includes the Queensland Government's land release and tenure process, and the first contact between resource companies, landholders, and communities. These early steps focus on gathering information and assessing whether a project may be viable.

LANDHOLDER TIP:

A schedule of community information sessions (facilitated by resource companies) is commonplace, as project plans often change. As it is better for you to know what's going on, even if you do not expect to be directly affected by any impending gas activities in your local area, try to attend any community information sessions being held.



Land access

CHAPTER 3

With over 90% of Queensland under freehold or leasehold tenure, resource companies need to access private land to explore for and produce gas to help meet our energy needs. Land access is needed to carry out exploration and production activities, as well as to construct the associated infrastructure such as well pads, roads, pipelines and monitoring stations.

LANDHOLDER TIP:

Surveying is more than a 'tyre-kicking' exercise, despite its minimal impact on the land use or business activities. These physical inspections inform the company's project plans so it's important for the landholder to GET INVOLVED – participate, share information and ask questions. Don't miss the boat – early changes are easy changes.



Land access agreements

CHAPTER 4

Some resource company activities are classified as preliminary because they have minor or no impact on land or business use. Higher-impact activities, such as infrastructure construction, are classified as advanced and require resource companies to negotiate a Conduct and Compensation Agreement (CCA) with the landholder.

LANDHOLDER TIP:

If a resource company wants to access private land, they will make contact with the landholder directly. You should be prepared to discuss:

- Property map
- Property business plan (at least 5-10 year plan)
- Property biosecurity plan



Groundwater impacts and management

CHAPTER 5
(PROPERTIES WITH WATER BORES ONLY)

Resource companies are required to enter into a Make Good Agreement (MGA) with the bore owner when a bore assessment has been undertaken, even if the bore is not found to be impaired. Make good measures are required where a bore has been, or is likely to be, impaired. If a make good agreement is required, the appropriate make good measures will be negotiated between the resource company and bore owner.

LANDHOLDER TIP:

Provide alternative make good measures if you believe there is a better solution.



Dispute resolution

CHAPTER 6

Options are available to help you reach agreements if negotiations or relationships with resource companies become challenging. Including, but not limited to:

- Conference
- Alternative Dispute Resolution (ADR)
- Arbitration
- Public hearing by the Land Court of Queensland
- Investigation of potential breaches to existing CCAs or Make Good Agreements by the Land Access Ombudsman.

LANDHOLDER TIP:

Keep talking. Maintain communication, even if negotiations hit roadblocks. This will help both sides better understand each other and find solutions to move forward.



Construction phase

CHAPTER 7

The construction phase is the source of the most disruptive activity associated with petroleum and gas development. As a general rule, it can take 5-7 months from the start of a well pad to operational handover. All the work you did building the relationship pays off again with open communication helping to reduce the 'irritant' factor.

LANDHOLDER TIP:

- Maintain regular and effective communication with your assigned land access/liaison officer
- Attend pre-construction meetings.



Operational phase

CHAPTER 8

Trained field operators will need access to your property to monitor and maintain petroleum and gas infrastructure, including ongoing safety checks, well workovers, vegetation control and general repairs on and around well pads.

LANDHOLDER TIP:

Maintain regular and effective communication with your assigned land access/liaison officer.



Land rehabilitation and asset handover

CHAPTER 9

At the end of a gas fields operation life, aboveground infrastructure is removed and the wells decommissioned in line with the State Government's code of practice. Landholder compensation comes to an end once the land has been rehabilitated and relinquished. Any impacts or ongoing risks that arise after authorities have been relinquished or surrendered are managed through the residual risk framework, which is administered by the Department of the Environment, Tourism, Science and Innovation.

NEW TENURE AREAS ADVERTISED

Queensland Government advertises new tenure areas (duration: 6 months - 1 year). The Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (DNRMMRRD) releases prospective tenure areas to suitable and qualified resource companies via a competitive tender process.

PRE-EXPLORATION PHASE

QUEENSLAND GOVERNMENT:

The DNRMMRRD will:

- Publish information about land released for tender
- Publish information about the outcomes of the tender process.

SUCCESSFUL TENDERER:

Before an **authority to prospect** (ATP) can be granted, the successful tenderer must:

- Obtain an **environmental authority (EA)** – the EA conditions the operation and rehabilitation of an activity in order to manage environmental risks and

environmental nuisance. EAs include conditions to manage the impacts of dust, odour, light, smoke and noise on sensitive places such as dwellings. The public can have a say on ATP EA applications that are not eligible to operate under an environmentally relevant activity (ERA) standard.

- **Address native title** by completing a right to negotiate process or entering into an Indigenous Land Use Agreement. Native title may not need to be addressed prior to the granting of an ATP where native title has been extinguished or covers less than 10% of the area of the ATP
- Fulfill any other approval[s] or condition[s] as described in the tender process.

ATP GRANTED

Queensland Government awards ATP to successful bidder to conduct exploration activities to discover commercially viable gas resources and reserves. (Duration: 12 - 27 years)

EARLY ENGAGEMENT AND EXPLORATION

RESOURCE COMPANY:

Company will bring communities together to explain how the company does business, their project plans and expected impact on properties, local infrastructure, facilities and services.

PL GRANTED

ATP tenure holder applies for a petroleum lease (PL) to start producing petroleum and gas. (Duration: 30+ years)

RESOURCE COMPANY:

- Obtain an environmental authority (EA) – A new EA is required for a PL to be granted. The public can have a say on EA applications or draft environmental impact statements for the PL application.
- Fulfill any other approval[s] required.

LAND ACCESS

RESOURCE COMPANY:

- Contact landholder directly regarding access to their land
- Explain their planned project and what they want to do on the landholder's property
- Understand the landholder's business and property plan
- Explain the difference between preliminary and advanced activities
- **Entry notice required** to carry out preliminary activities such as surveying, walking the area, taking soil samples etc.
- Discuss and agree on time frame for **negotiating a CCA** to allow for the carrying out of the advanced activities

LAND ACCESS AGREEMENTS

THE RESOURCE COMPANY AND LANDHOLDER:

Enter into a CCA before carrying out advanced activities. A CCA is a legally binding document agreed to by both parties. A CCA specifies:

- The activities and behaviours of the company, its employees and contractors
- Obligations and protections for both parties
- How the landholder will be compensated for the impacts of the authorised advanced activities.

CONSTRUCTION PHASE

EXPLORATION:

- Constructing access tracks for seismic survey
- Clearing of vegetation
- Constructing well pads and digging sumps
- Drilling exploration and appraisal wells.

PRODUCTION:

- Constructing access roads
- Constructing well pads and digging sumps
- Drilling production wells
- Installing gathering lines
- Constructing worker camps, sewage/water treatment facility or fuel storage areas
- Constructing major pipelines.

OPERATIONAL PHASE

EXPLORATION:

- Seismic surveys
- Appraisal well testing
- Flaring.

PRODUCTION:

Ongoing maintenance schedules vary depending on the type of infrastructure used. Generally, it could be:

- Weekly routine inspections and maintenance
- Monthly gas testing of surface facilities, weed trimming
- Quarterly servicing of well site components
- Bi-annually change engines/generators, fencing check
- Annually pressure vessel inspections and safety checks, gas leak surveys, water/gas analysis
- Workovers as required well maintenance that could require a rig being brought on site.

ATP/PL REHABILITATED AND RELINQUISHED

The gas produced in Queensland is largely used for electricity generation, aluminium/fertiliser production and household uses (including heating houses/hot water and cooking).

LAND REHABILITATION & ASSET HANDOVER

Rehabilitation of gas production sites and facilities should be in consultation with the landholder and in line with the current Queensland legislation.

At the end of each well's operating life (usually 15 - 30 years) :

- Aboveground infrastructure is removed
- Borehole is filled with cement or other suitable material and decommissioned
- A small dinner-plate sized cap or a stake with an identifier left behind to mark its location.

At the end of the operating life of the ATP or PL (when all wells are at the end of their operating life), the final rehabilitation must meet the conditions specified in the Environmental Authority (EA) before the EA can be surrendered.

As a minimum, final rehabilitation must ensure that:

- Each well is plugged and decommissioned
- All gathering lines are drained and plugged
- All surface infrastructure is removed
- All soils are reinstated and stabilised
- Surface drainage lines are re-established
- Vegetation is regenerated.

Resource companies provide financial assurance to the Queensland Government based on the estimated cost of rehabilitating the land on which the activity is carried out. There are checks when resource activities cease, and if all requirements are met, the financial assurance can be refunded.

Chapter 1

Introduction to Queensland's gas industry

In this chapter we cover:

- [Queensland petroleum and gas overview](#)
- [Key Queensland gas facts](#)
- [The difference between conventional and unconventional gas wells](#)
- [Queensland Government legislation and policy framework](#)

Queensland petroleum and gas overview

The Surat and Bowen basins in southern and central Queensland respectively are a current focus for petroleum and gas exploration and production. Both regions are supported by pipeline and transport infrastructure.

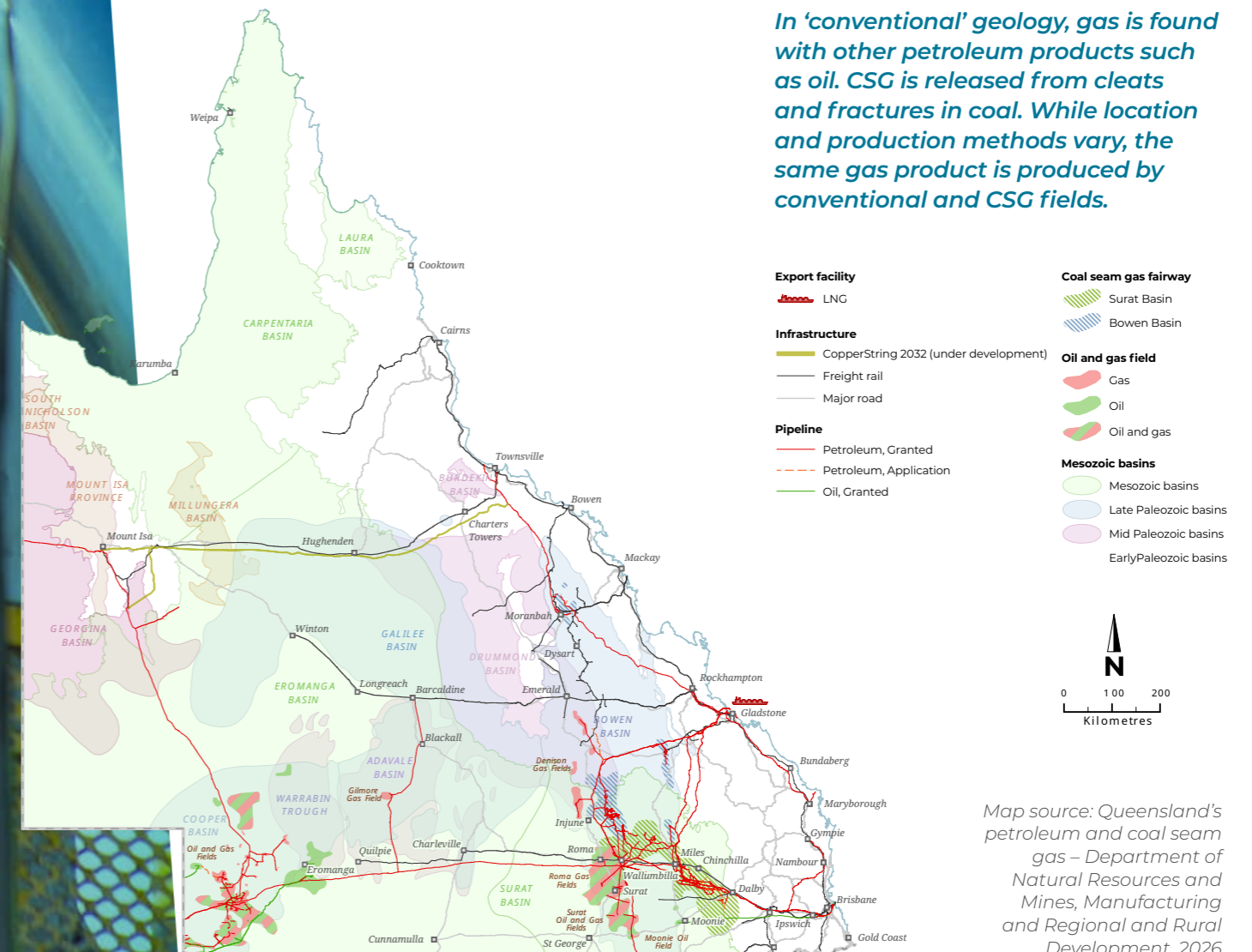
CSG from the Bowen and Surat basins represents 95% of the state's total gas production. Many of Queensland's known petroleum and gas basins also host conventional oil and gas reserves, as well

as potential unconventional gas (natural gas trapped within formations) and tight gas (natural gas reservoirs locked in extraordinarily impermeable rock reserves). These include the Eromanga, Cooper, Galilee, Adavale, Georgina, Millungera, South Nicholson, and the Isa Super basins.

Outside of the known petroleum and gas basins on this map, many areas remain largely under-explored.

DID YOU KNOW?

In 'conventional' geology, gas is found with other petroleum products such as oil. CSG is released from cleats and fractures in coal. While location and production methods vary, the same gas product is produced by conventional and CSG fields.



Key Queensland gas facts

01 The value of liquefied natural gas exports in 2024 was \$22.8b. \$1.7b in petroleum royalties were paid in 2024-25, and on average more than 7000 Queenslanders are employed in oil and gas extraction.

02 Global LNG trade increased in 2024, and during that year, Australia was the second largest exporter of LNG, exporting around 81MT, closely following the US with 88.4MT.

03 Australia's gas supply is growing in response to new technology that allows production from resources that were too difficult to access in the past.

04 Queensland has some of the largest known reserves of CSG in Australia with 29,000 petajoules of proven and probable gas reserves. This is enough to meet demand for more than two decades.

05 Queensland was the first in the world to develop a CSG to LNG export industry. Production of LNG initially began in 2014 on Curtis Island near Gladstone, Queensland.

06 Petroleum and gas industry terms 'conventional' and 'unconventional' define the reservoir structure, not the physical properties of the gas itself.

07 Over the last decade, Queensland's gas production has increased nearly fivefold, reaching 1,583 petajoules (42 billion cubic metres) in 2023-24.

Sources:
 Australian Energy Producers – Statistics and Information
 The Department of Natural Resources and Mines,
 Manufacturing and Regional and Rural Development
 2025 World LNG Report
 Australian Energy Statistics – Update Report 2025

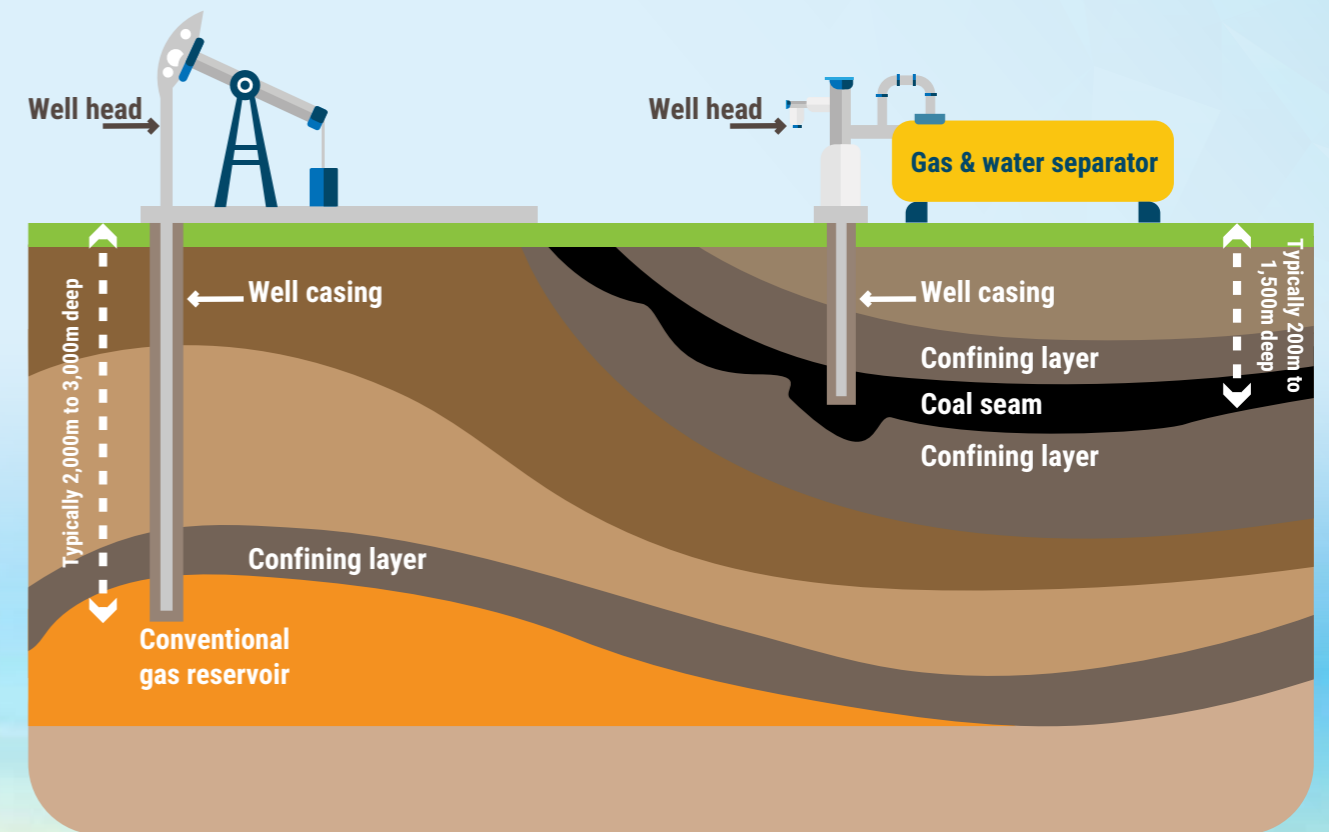
DID YOU KNOW?

Natural gas for long-distance export is chilled to -161 C, where it becomes a liquid. Liquefied Natural Gas (LNG) occupies 1/600 of the space it does as a gas. Large volumes of LNG can be exported in purpose-built tanker ships and then regasified on delivery.

The difference between...

Conventional gas well

Unconventional (CSG) gas well



DID YOU KNOW?

Liquefied petroleum gas (LPG) is a mix of ethane, propane and butane stored and transported in metal canisters as a liquid. LPG is a component of conventional oil and natural gas production. Its most common use is as a fuel for cooking in barbecues and stoves.

Queensland Government legislation and policy framework

Petroleum and gas are important economic contributors to Queensland and are key drivers of economic growth and job creation in regional Queensland. As per Chapter 1, Part 4 of the **Petroleum and Gas (Production and Safety) Act 2004**, all petroleum and gas found in natural underground reservoirs is the property of the state of Queensland and is managed by the State Government for the benefit of all Queenslanders.

A comprehensive regulatory framework guides the development of Queensland's onshore petroleum and gas resources, notably in relation to large-scale CSG extraction and an associated LNG export industry. The laws are designed to protect rural landholders, communities and the environment through:

- Detailed assessments of proposed projects
- Environmental impact assessments
- Groundwater impact assessments
- Protection of the Great Artesian Basin, local water supplies and areas of regional interest
- Provision of fair conditions and compensation for affected landholders
- Ensuring petroleum and gas development is safe
- Establishing a strict compliance and enforcement regime.

The Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (DNRMMRRD) is committed to ensuring Queensland's resources are managed fairly and responsibly, to deliver sustainable benefits for all Queenslanders. They offer a range of engagement, compliance, tenure management, technical and geoscientific services provided by staff located throughout Queensland. Other agencies and organisations contributing to the sustainability and safety of the petroleum and gas industry in Queensland include:

- **Resources Safety & Health Queensland**
- **Land Access Ombudsman**
- **Department of the Environment, Tourism, Science and Innovation (DETSI)**
- **Department of Local Government, Water and Volunteers (DLGWV)**
- **Department of Primary Industries (DPI)**
- **Office of Groundwater Impact Assessment (OGIA)**
- **Commonwealth Scientific and Industrial Research Organisation (CSIRO)**
- **The University of Queensland's Gas & Energy Transition Research Centre**

TIP

A resource company must obtain the appropriate resource authority before any exploration or production activity is conducted. Authorities are issued under the **Petroleum and Gas (Production and Safety) Act 2004** for:

Exploration – an authority to prospect (ATP) is granted to allow a resource company to explore for petroleum and gas. A potential commercial area (PCA) may be declared over all, or part of an ATP to allow for further appraisal to prove up the commerciality of a discovery. The maximum term of a PCA is 15 years.

Production – a petroleum lease (PL) is granted once exploration activities have been completed and a commercial petroleum and gas resource is known to exist.

Infrastructure development – a petroleum facility licence (PFL) is required for any processing, refining, storage or transport facility if the facility is not already covered by your petroleum lease or petroleum pipeline licence (PPL).

Transmission – a Petroleum Pipeline Licence (PPL) is an authority to build and operate a transmission pipeline to transport gas or associated water.

Information gathering without an ATP or PL – information gathering authorities are required when accessing private land if a resource company has not yet been granted an ATP or PL, these authorities include a petroleum survey licence (PSL), water monitoring authority (WMA) and data acquisition authority (DAA).

A regulatory framework covers the full life cycle of the onshore petroleum and gas industry in Queensland from exploration to production and rehabilitation.

Below is an interactive list of key legislation included in the framework. More details on how these contribute to the regulation of the petroleum and gas industry can be found on the respective department websites, or by visiting Coexistence Queensland's website: www.cqld.org.au

Key petroleum and gas industry regulation and legislation

Petroleum and Gas (Production and Safety) Act 2004

Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development

Mineral and Energy Resources (Common Provisions) Act 2014

Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development

Land Access Code 2023

Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development

Environmental Protection Act 1994

Department of the Environment, Tourism, Science and Innovation

Water Act 2000

Department of Local Government, Water and Volunteers / Department of the Environment, Tourism, Science and Innovation

Petroleum Act 1923

Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development

Mineral and Energy Resources (Financial Provisioning) Act 2018

Queensland Treasury

Other relevant regulation and legislation

Biosecurity Act 2014

Department of Primary Industries

Environmental Offsets Act 2014

Department of the Environment, Tourism, Science and Innovation

Forestry Act 1959

Department of the Environment, Tourism, Science and Innovation / Department of Primary Industries

Nature Conservation Act 1992

Department of the Environment, Tourism, Science and Innovation

Regional Planning Interests Act 2014

Department of State Development, Infrastructure and Planning

State Development and Public Works Organisation Act 1971

Department of State Development, Infrastructure and Planning

Waste Reduction and Recycling Act 2011

Department of the Environment, Tourism, Science and Innovation

ADDITIONAL RELEVANT QUEENSLAND LEGISLATION

- **Land Act 1994**
- **Aboriginal Cultural Heritage Act 2003**
- **Queensland Heritage Act 1992**
- **Public Health Act 2005**
- **Transport Operations (Road Use Management) Act 1995**
- **Planning Act 2016**
- **Human Rights Act 2019**

FEDERAL LEGISLATION

- **Environment Protection and Biodiversity Conservation Act 1999**
- **Water Act 2007**
- **Native Title Act 1993**
- **Corporations Act 2001**
- **Australian Securities and Investments Commission Act 2001**
- **Fair Work Act 2009**

Chapter 2

Early engagement and exploration

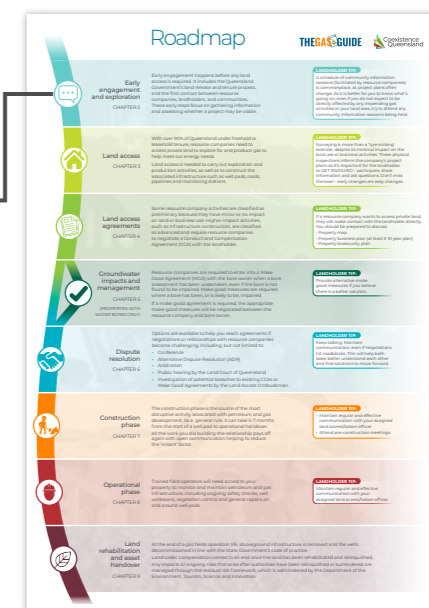
In this chapter we cover:

- **A sequence of events**
- **Queensland Government land release program**
- **Early landholder engagement: Resource company**
- **Early community engagement: Resource company**

Chapter 2

Early engagement and exploration

YOU ARE HERE



Early engagement happens before any land access is required. It includes the Queensland Government's land release process and the first contact between resource companies, landholders, and communities. These early steps focus on gathering information and assessing whether a project may be viable.

A sequence of events

In Queensland, resources beneath the ground are owned by the State and managed for the benefit of all Queenslanders. The Queensland Government allocates rights to explore for, and potentially develop, these resources in areas previously identified by the government.

This process begins with the release of prospective land for exploration. Following a competitive tender, rights such as an Authority to Prospect may be granted to successful companies, which can lead to further approvals if a project progresses.

Exploration permits (known as an Authority to Prospect) often cover large areas and multiple properties. Once granted, a

company will develop an exploration program to explore where the resources are, and to investigate the viability of extracting them. Early exploration activities include geological surveys, on-site investigations, and seismic studies – to understand what resources are present and whether they can be developed.

This early exploration helps shape what development could look like in your region or on your property. You may see information sessions in your area or be contacted directly by a company or the Queensland Government, depending on the project.



What should you do if you find out about a resource company's interest in your land?

1. Get in touch with us (Coexistence Queensland) here: www.cqld.org.au/contact-us
2. Download a free copy of The Gas Guide (you can request a hard copy to be sent by post if you do not have access to a printer). You can download The Gas Guide here: <https://cqld.org/4qzH4aL>
3. Register to receive Gas Guide updates here: www.cqld.org.au/subscribe
4. Feel free to get back to us (via phone, email, post or social media) with any feedback and questions
5. Talk to your neighbours and friends about their knowledge and experience
6. Carefully consider what professional assistance you may need in the event of any future negotiations with resource companies.

Queensland Government land release program

A key role of the Queensland Government is to release new land for exploration and inform communities potentially affected by petroleum and gas development prior to exploration activities occurring.

The Queensland Government releases land for petroleum and gas exploration via a competitive tender process.

A range of notification processes will be used throughout the land release process to make communities and landholders aware of the potential for new resource activities in their area. These may include direct mailouts or broader digital and media notification processes to allow all stakeholders, whether directly impacted or not impacted, to be advised.

Targeted information sessions may also be held to provide details to the wider community.

These engagement efforts focus on the tender process and legal rights and obligations of both stakeholders and explorers.

FURTHER INFORMATION:

Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development Mining Community Infoline: 13 71 07

Email:
resources.info@nrmmrrd.qld.gov.au

www.business.qld.gov.au/industries/mining-energy-water/resources/geoscience-information/exploration-incentives

Early landholder engagement

Early engagement by a resource company with landholders and communities is fundamental to best practice regardless of whether it applies to authorised exploration, production or pipeline development.

Early engagement promotes good two-way communication between the resource company and the communities in which it operates.

FOR EXAMPLE:

- Building community trust in the company and how it operates by embracing an inclusive process
- Understanding community expectations and aspirations
- Leveraging local knowledge to advise on the design, timing and location of construction activities and deliver possible alternative solutions
- Developing advocacy pathways to build and maintain awareness of a project over its lifetime.



A schedule of community information sessions (facilitated by resource companies) is commonplace, as project plans often change. As it is better for you to know what's going on, even if you do not expect to be directly affected by any impending gas activities in your local area, try to attend any community information sessions being held.



Early community engagement

Petroleum and gas projects have an operational life of several decades. Building strong local government, community and landholder relationships early in the project's life is critical to the success of these projects.

Having been granted a resource authority by the Queensland Government, a resource company is expected to connect with local communities to spell out:

- **Who the company is** and how it does business.
- **The project**, their plans and expected impacts on properties, local infrastructure, facilities and services.
- **Their practices, procedures and presence** (who, what, when, where and why).
- **Technical issues** with experts on hand to answer questions.

A program of community information sessions is often necessary, as initial plans can change as the project evolves based on ground truthing and feedback from key stakeholders. It is easier to change plans early on than later.

Landholders should aim to stay informed of developments even if they don't anticipate being involved directly.

Resource company activities could have wider community impacts such as increased demand on community infrastructure and services. It is therefore critical that communities and local government are engaged to be able to effectively manage potential impacts.

Exploration

Exploration is when a resource company comes onto your land to evaluate potential gas production opportunities. This is usually your first interaction with the company.

Early Exploration

The Geological Survey of Queensland collates and distributes geoscience data and information on the state's resource potential. This information can highlight areas in Queensland that are made up of certain geological formations that can potentially contain petroleum and gas reserves.

The government releases potentially viable areas of land and provides authority for companies to further explore these areas and confirm if/how much petroleum and gas can be produced.

Once given the required authority, explorers further examine the local geology and undertake activities such as aerial surveying, geological surveys, site surveys, soil sampling, seismic surveys and drilling.

Seismic Surveys

Trucks emit sound vibrations from the earth's surface and measure the time taken for the sound waves to reflect signals back from geological formations underground.

These measurements produce an image of what's underground, indicating rock density and the likely presence of petroleum and gas reservoirs.

Drilling

Informed by seismic images, exploration and appraisal wells are drilled to further confirm what's underground. Core samples and rock cuttings that are brought to the surface from drilling are examined to determine the physical properties of the underground reservoirs.

Explorers also lower specialised logging equipment into the well for more information. Exploration wells confirm the presence of petroleum and gas. Appraisal wells assess the flow rates to confirm that petroleum and gas can be extracted in commercial quantities.



Chapter 3

Land access

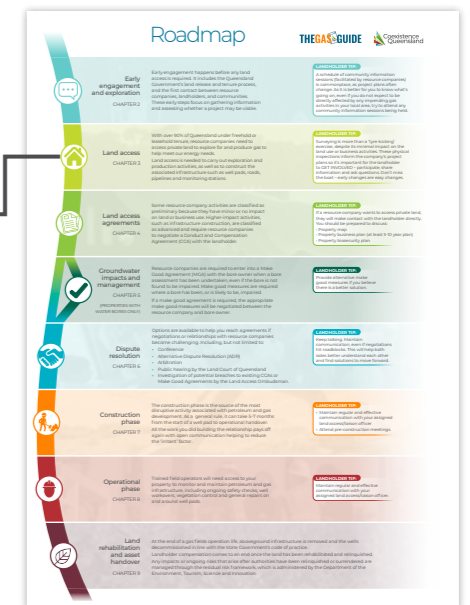
In this chapter we cover:

- [Initial discussions](#)
- [Classification of activities](#)
- [Preliminary activities](#)
- [Advanced activities](#)
- [First steps towards a positive working relationship](#)
- [Preliminary meetings with resource companies](#)
- [The entry notice](#)
- [Rights and obligations to access private land](#)
- [Entry report following entry to private land](#)
- [Restricted land protections](#)
- [Land Access Code](#)

Chapter 3

Land access

YOU ARE HERE



With over 90% of Queensland under freehold or leasehold tenure, resource companies need to access private land to explore for and produce gas to help meet our energy needs.

Land access is needed to carry out exploration and production activities, as well as to construct the associated infrastructure such as well pads, roads, pipelines and monitoring stations.

The main gas field development activities on private land are:

- Exploration
- Production
- Pipelines
- Water monitoring bores.

A property may be subject to just one or any combination of all of the above types depending on the scale of the development.

Initial discussions

If a resource company wants to access private land, they will make contact with the landholder directly.

Best practice by industry involves introductory discussions with a landholder to:

- Explain the planned project and what they want to do on the property – this could be petroleum and gas exploration, production, pipeline construction or installation of groundwater monitoring bores
- Understand the landholder's biosecurity plan, property plan and long-term business plans

- Discuss the way the company intends to access the property and work through necessary constraints that the landholder may have
- Encourage landholder participation in any preliminary scouting activities.

Following initial discussions, the resource company will provide the landholder with a written entry notice at least 10 business days before it can carry out any activities on private land.

TIP

You should be prepared to discuss:

- Property map
- Property business plan (at least 5-10 year plan)
- Property biosecurity plan



Classification of activities

Some resource company activities are classified as preliminary activities because they have either minor impact or no impact on the business or land use. Examples of preliminary activities - sometimes referred to as 'scouting' - include walking the area, taking soil samples, geophysical surveying that doesn't involve site preparation, environmental surveying, or survey pegging.

Activities may not qualify as preliminary if they will affect an organic or bio-organic farming system or if the activities are proposed to be carried out on land that is less than 100ha and is used for intensive farming or broadacre agriculture. Preliminary activities require an entry notice at least 10 business days prior to proposed entry.

Higher impact activities, such as construction of infrastructure, are classified as advanced and require a legal agreement with the landholder – usually a CCA.

Preliminary activities

Preliminary activities are defined on the basis that they have no impact or only a minor impact on the land use or business activities of a landholder.

While classified as low impact, early discussion around these types of activities provide opportunities for building the relationship between a landholder and resource company through its field-based representatives.

Preliminary activities are also sometimes referred to as '**scouting**' or '**surveying**' and are generally associated with exploration. These may include:

- Walking the area of the designated resource authority
- Driving along an existing road or track in the area
- Taking soil or water samples
- Geophysical surveying not involving site preparation
- Aerial (carried out at 1,000ft or more above land), electrical or environmental surveying
- Survey pegging.

However, the above are not preliminary activities if they are:

- Carried out on land less than 100ha that is being used for intensive farming or broadacre agriculture
- Affecting an organic or bio-organic farming system.

The preliminary meeting between the landholder and the resource company may also identify greater impacts of the proposed activities. In these cases, the resource company can work with the landholder to find ways to minimise the impacts of their activities or reclassify them as advanced activities.

Resource companies have a general liability to compensate for impacts arising from an authorised activity, including a preliminary activity, for which no CCA is required.



Advanced activities

Advanced activities are defined as authorised activities other than preliminary activities – that is, greater than a minor impact on a landholder's business and land use activities.

This can occur during exploration, production, laying of pipeline or other gas related activity such as the drilling of water monitoring bores.

Advanced activities that could be undertaken by a resource company include:

- Constructing drilling pads and digging sumps
- Drilling of petroleum and gas wells
- Removal of vegetation
- Construction of temporary camp for workers, concrete pad, sewage/water treatment facility or fuel dump

- Geophysical surveying with physical clearing
- Construction of water treatment facilities or gas compression facilities
- Construction of a track or access road
- Changing a fence line.

A CCA (details of which are outlined in **Chapter 4 – Land access agreements**), is required to be in place before a resource company can undertake advanced activities on the property. Other options are available, including Deferral and Opt-Out agreements (see **Chapter 4** for more information).

A CCA is an important contract and its purpose is to clearly state each party's obligations and provide the protections necessary to support the ongoing business relationship.

First steps towards a positive working relationship

If a resource company wants to access private land – whether for exploration, production or related infrastructure – the first thing to know is that they can't begin without notifying the landholder.

Observing best practice, the resource company should request an introductory preliminary meeting with the landholder, preferably convened on the property and at a time convenient to the landholder (and/or family members).

Contact is likely to be initiated by the company's land access liaison officer – increasingly, someone with strong local knowledge and contacts. This meeting helps to set the tone for subsequent activities, negotiations and the start of a productive working relationship.

Experience tells us that landholders who 'front-load' their involvement are well placed for future negotiations. Every piece of relevant information and feedback delivered early plays a role in shaping subsequent actions, activities and the long-term relationship.

The introductory meeting should focus on learning about each other's interests and potential logistical and 'amenity' challenges. In most cases, a landholder's property is also home and that is a major consideration for new activities and routines.

Never lose sight of the fact that this could be the start of a long-term relationship – it helps to start with a positive attitude.



Preliminary meetings with resource companies

When a resource company is seeking access to private land they will:

- 01** Explain the types of activities to be undertaken and the types of infrastructure to be constructed.
- 02** Seek to understand the landholder's property plan and long term business plans.
- 03** Obtain a copy of the landholder's biosecurity plan.
- 04** Discuss the best way to access the property, as well as any other opportunities and potential constraints.
- 05** Seek to understand any time constraints the landholder may have prior to scheduling any **'scouting' or 'surveying' activities**.



This is your opportunity to:

- Ask about the proposed infrastructure the resource company would like to construct on your land
- Understand how the resource company will approach the construction and what they expect from you
- Discuss your property map
- Discuss your business plan (at least 5-10 year plan) and potential coexistence opportunities
- Discuss your biosecurity plan with the resource company, particularly to identify appropriate points of entry and any other requirements for, or constraints to access
- Discuss potential locations for infrastructure to assist the resource company in identifying possible locations for wells, gathering lines and other infrastructure
- Discuss potential dates for the resource company to conduct preliminary activities to assist them in scheduling the work at an appropriate time.

You know your property and business best. It is important that you proactively engage with a resource company to ensure they understand what is important for you and your business.

The entry notice

Following any preliminary meetings held, land access formally begins with an entry notice detailing the nature of the activities the resource company wishes to conduct on the property.

An entry notice is generally used for preliminary activities – activities that have little or no impact on the landholder's business or land use.

For advanced activities, an entry notice can only be issued if a Conduct and Compensation Agreement (CCA) is already in place, or the matter has been referred to the Land Court. A CCA may waive the need for an entry notice, but this depends on the terms of the agreement.

The entry notice is an important step in allowing – within defined limits – physical access to your land by a resource company.

The impact of the activities covered by the entry notice on your daily routine will be largely determined by the extent and quality of the information offered and exchanged during your preliminary meetings with the resource company.

As a result of those discussions, the entry notice should hold no surprises when it arrives. Remember, this is a procedural step. It does not constitute a formal agreement.

The entry notice must be given to the landholder at least 10 business days before the resource company's nominated date of entry to the property (usually agreed in advance). The entry notice confirms the resource company will undertake prescribed activities within a designated area of land subject to strict conditions.

The entry notice must detail:

- The land proposed to be entered
- The period during which the land is to be occupied
- The activities proposed to be carried out on the land
- When and where the activities will be carried out
- The petroleum resource authority holder's contact details or those of their representative.

Initial entry notice must also include copies of:

- The **petroleum resource authority** (issued by DNRMMRRD)
- The relevant **environmental authority** (EA) (issued by DETSI)
- The **Land Access Code** (DNRMMRRD)
- A **guide to land access in Queensland** (DNRMMRRD)
- Any other supporting code or code of practice applying to activities proposed in the notice.

For enquiries or complaints about land access and entry notices contact the mining community infoline:

Email: resources.info@nrmmrrd.qld.gov.au

Phone: 137 107

ENTRY NOTICE FOR PRIVATE LAND

https://www.resources.qld.gov.au/_data/assets/pdf_file/0018/441711/entry-notice-form-01.pdf

PRELIMINARY ACTIVITY REQUIREMENTS

<https://www.business.qld.gov.au/industries/mining-energy-water/resources/accessing-land/private-land/preliminary-activities>

Rights and obligations to access private land

Resource companies

- Have the right to enter private land only if they have provided a valid entry notice to each landholder and/or lessee
- Can only conduct preliminary activities that are listed on the entry notice
- Have no obligation to enter into a CCA, Deferral Agreement or Opt-Out Agreement for preliminary activities conducted under a valid entry notice (see **Chapter 4** for more information)
- Are obligated to comply with the Land Access Code and other relevant Queensland legislation that may apply such as the *Biosecurity Act 2014*.
- Are obligated to comply when **restricted land framework remains** (meaning the requirement for written consent of the landholder remains despite the giving of a valid entry notice).

Landholders:

- Have the right to receive a valid entry notice at least 10 business days prior to entry
- Have no right to object to the valid entry for the purposes of undertaking activities authorised by the resource authority
- Have the right to consent to entry to areas of restricted land is not limited by the receiving of a valid entry notice.

Case study

Senex Energy: A working partnership

Senex Energy is exploring for natural gas in coal seams north of Roma.

For one of the company's recent programs, detailed planning showed an "appraisal" well would be required on a property located within Senex's tenement to confirm gas could be produced in commercial quantities.

Senex contacted the landholder to explain the initial concept and begin a process of consulting the owner on how exploration could take place with minimal interference to their operations.

The landholder was consulted about the location of the drilling site, including the selection of suitable access tracks and weed control measures.

The parties agreed the design of the plan and negotiated a conduct and compensation agreement (CCA).

Activity began on the ground at the start of 2025. The well was drilled, made secure and work begun to restore the site to its original condition within a month.

Restoration and rehabilitation has successfully been completed and Senex will continue to monitor the area.

Can I allow the company entry before the 10 days have passed?

A landholder can choose to reduce the 10 business day notification period by giving the resource company a written waiver for the entry notice.

To grant a waiver of entry notice, the landholder must sign the entry notice and include updated details for the period of entry. It must also include a statement that the landholder has received confirmation from the resource company that they are not required to give a waiver of entry notice.

A decision to grant a waiver of entry notice rests solely with the landholder and it cannot be withdrawn during the period of entry stated on the waiver.

A waiver of entry notice can also be a provision within a CCA. The waiver will be binding on future owners and occupiers of the land.

Am I required to provide consent for the company to enter my property?

Landholder consent is not required if a resource company issues a valid entry notice. After a 10 business day waiting period, the company can access the identified land and begin preliminary activities authorised by its petroleum resource authority.

Is an entry notice always required?

There are some exemptions from the requirement for a resource company to provide an entry notice. In addition to the landholder's waiver option above, an entry notice is not required when:

- A landholder and resource company have entered into an access agreement (for example a CCA – see **Chapter 4 – Land access agreements**) that provides for alternative obligations
- A landholder and resource company have entered into an Opt-Out Agreement (see **Chapter 4**)
- A resource company has an independent legal right of entry (such as a contractual right of entry)
- Entry is to preserve life or property, or prevent or stop an emergency
- Entry is otherwise authorised under a Resource Act – e.g. where an easement has been agreed, or other written permission has been given in relation to a pipeline licence.

Entry report following entry to private land

After a resource company enters private land to carry out authorised activities, it must provide the landholder an entry report. The report must state whether any activities were carried out on the land, and if they were, the nature and extent of those activities and where they were undertaken.

For more information, see DNRMMRRD's **A guide to land access in Queensland**.

The resource company must give the entry report to each landholder either:

- 3 months after the period stated in the entry notice
- 6 months after the waiver notice was given if the resource authority is an exploration resource authority
- 12 months after the waiver was given for a production resource authority.

Change of owner/occupier of private land

If there is a change in landholder after an entry notice is issued, the entry notice and any waiver notice carry over to each new landholder, providing the resource company gives each new landholder a copy of the entry notice and/or the waiver notice within 15 business days of becoming aware of the new landholder.



Restricted land protections

Queensland maintains a consistent '**restricted land framework**' for resource authorities.

The framework supports landholders when a resource company wants to undertake authorised activities on or below the surface of land near homes, businesses and certain key agricultural infrastructure. A resource company cannot enter land within an area classed as restricted without the written consent of the landholder. There is no obligation for a landholder to allow a resource company to enter restricted land.

Restricted land is the area within 200 metres of:

- A permanent building used for the purpose of a residence, business, childcare centre, hospital, library or place of worship
- A permanent building used for a community, sporting or recreational purpose
- An area used as a school, or for 'environmentally relevant activities' such as aquaculture, intensive animal feedlotting, pig keeping or poultry farming.

Restricted land is also the area within 50 metres of:

- An artesian well, bore, dam or water storage facility
- A principal stockyard
- A cemetery or burial place
- Other resource authority types (e.g. water monitoring authorities, survey licences and data monitoring agencies).

Specific details of restricted land areas, along with resource company exemptions, can be found in DNRMMRRD's **A guide to land access in Queensland**.

Rights and obligations

Resource companies:

- Must not enter areas of restricted land without the written consent of the landholder
- May seek to negotiate access to restricted land as part of CCA negotiations with the landholder.

Landholders:

- Have the right to say "no" to a resource company seeking to enter restricted land
- Have no obligation to negotiate access to restricted land as part of CCA negotiations
- Cannot establish new areas of restricted land following the lodgement of an application for a production authority over the land.

Source: **A guide to land access in Queensland (DNRMMRRD)**

Land Access Code

The **Land Access Code (2023)** is a key component of Queensland's land access laws. The Land Access Code contains mandatory conditions concerning the conduct of resource companies when undertaking authorised activities on private land. The Code also includes best practice guidelines where both parties are encouraged to go above and beyond minimum mandatory requirements to establish and maintain good relations.

Resource companies must comply with the **mandatory provisions** of the Land Access Code when within the area of their resource authority, as well as when using private land to access the area of their resource authority (access land).

The mandatory conditions of conduct for resource companies set out in the **Land Access Code** cover issues such as:

- Induction training of staff and contractors
- Land access points, roads and tracks
- Livestock and property
- Weeds and pests (biosecurity)
- Worker camps (construction and operation)
- Items brought onto land
- Gates, grids and fences.

Land Access Code – General principles of 'good relations'

RESOURCE COMPANIES:

Be proactive and engage early

- Engage early with landholders about potential activities, potential impacts on their land and business activities, land access arrangements and other relevant considerations
- Provide landholders with the information necessary to inform negotiations and decision making
- Provide regular progress updates to landholders and advise of any significant changes to operations or timing, and be forthcoming when issues arise

Interact respectfully and transparently

- Communicate openly, honestly and with empathy
- Be respectful in all dealings with landholders – respect the rights, privacy, property, and business activities of the landholder
- Outline expectations for conduct and compensation arrangements to landholders
- Negotiate in good faith, provide timely responses to requests for information and ensure timely decision-making

Promote understanding

- Listen to landholders' questions and concerns and seek to resolve issues in a timely manner
- Learn about the landholder's current business activities, succession dynamics and future aspirations and consider them in planning activities
- Appreciate the impact of proposed activities on the landholder's property and business and seek to minimise impacts
- Seek mutually beneficial arrangements and be open to alternatives that may be suggested
- Ensure landholders share a common understanding and interpretation of conduct and compensation arrangements prior to finalisation

Act with integrity

- Build reliability and trust by consistently acting and undertaking activities as agreed with landholders
- Comply with relevant legislated frameworks and conduct and compensation obligations
- Promptly pay compensation agreed with the landholder once milestones are reached
- Promptly notify the holder of any damage caused and rectify it without any undue delay
- Be responsible for all authorised activities and actions undertaken by employees and contractors of the holder
- Regard information obtained about the landholder's operations as confidential

LANDHOLDERS:

Be proactive and engage early

- Be open to meeting with resource authority holders and discuss proposed activities
- Ask any questions and raise any potential concerns, or requests for additional information from resource companies
- Interact respectfully and transparently
- Communicate openly and honestly
- Respect the rights of the resource company to carry out their activities
- Outline expectations for conduct and compensation arrangements to resource authority holder
- Negotiate in good faith and provide timely responses to requests or notices

Promote understanding

- Communicate your current and future business and land use activities with the holder and discuss how the impact of the resource authority holder's activities can be mitigated or addressed
- Seek information from the resource authority holder about proposed activities, including when and where they are going to occur and the likely impact on your property or business activities
- Seek mutually beneficial arrangements and be open to alternatives that may be suggested
- Ensure the resource authority holder shares a common understanding and interpretation of conduct and compensation arrangements prior to finalisation

Act with integrity

- Be open with resource authority holders about when significant changes to operations or management programs are likely to occur, so that they can plan to carry out activities in a way that will minimise impacts
- Comply with relevant legislated frameworks and conduct and compensation obligations
- Promptly notify the resource authority holder of any damage to property caused by authorised activities
- Be responsible for all landholder activities, requests and actions undertaken on the property by landholder's employees and contractors
- Treat information obtained about the resource authority holder's operations as confidential

Source: **Land Access Code (2023)**

Chapter 4

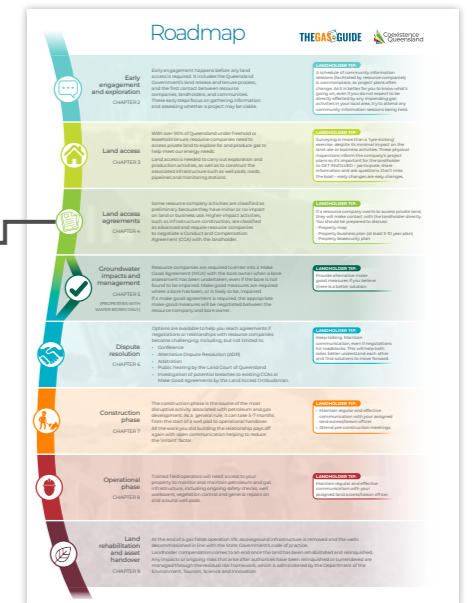
Land access agreements

In this chapter we cover:

- [The negotiation framework](#)
- [Conduct and Compensation Agreement \(CCA\)](#)
- [CCA – Landholder information](#)
- [CCA – Resource company information](#)
- [Protecting agricultural land](#)
- [RPI Act assessment process flowchart](#)
- [CCA – Ongoing disturbance](#)
- [CCA – Vital components](#)
- [Engaging professional services](#)
- [Deferral Agreement](#)
- [Opt-Out Agreement](#)
- [Seven tips for CCA success](#)

Chapter 4 Land access agreements

YOU ARE HERE



If a resource company wishes to undertake advanced activities on private land, it must first negotiate a CCA with the landholder.

This sets out the proposed activities, and conduct to be undertaken by the resource company and the compensation arrangements for impacts their activities will have.

It is important to consider the potential length of the agreement. In some cases, a CCA may shape the relationship between the landholder and resource company for many years – potentially 30 years or more – so landholders should take the time to understand the proposed terms and seek advice before entering negotiations.

Alternatives to a CCA are a **Deferral Agreement**, where the resource company and landholder agree to defer the negotiation of a CCA until a later date, and an **Opt-out Agreement** where, at their discretion, a landholder can elect to 'opt-out' of negotiating a CCA.

TIP

Keep talking. Maintain communication, even if negotiations hit roadblocks. This will help both sides to better understand each other and find solutions to move forward.



The negotiation framework

Before entering private land and starting advanced activities, a resource company must negotiate the terms of access, conduct and compensation with the landholder. A negotiation notice may be issued to commence a formal negotiation period.

01 Conduct and Compensation Agreement

02 Deferral Agreement

03 Opt-Out Agreement

There are three legally binding land access agreement options:

The most common land access agreement is a CCA that sets out the activities and conduct proposed to be undertaken by a resource company along with agreed conduct and compensation arrangements for any impacts arising from those activities.

Landholders also have the options of delaying their endorsement of a CCA until after the land has been accessed (Deferral Agreement) or voluntarily opt-out of negotiating a CCA (Opt-Out Agreement).

In those instances where the terms of a CCA cannot be agreed on, the parties have several options for dispute resolution, without the need for a public court hearing. These options are explained further in **Chapter 6 – Dispute resolution**.

TIP Minimising the impacts of a resource company's advanced activities is a realistic but challenging goal. The Queensland Land Access Code provides advice on best practice communication, consultation and negotiation. Establishing and maintaining an effective working relationship can come down to the simplest thing – like having a 'go-to' contact at the resource company, especially someone experienced with the local region and landholders.

Conduct and Compensation Agreement (CCA)

A CCA is the most widely used agreement in Queensland between a landholder and a resource company seeking access to and conducting authorised activities on private land.

A CCA is a legal requirement – without a CCA a resource company cannot enter private land to conduct advanced activities.

It is a legally binding document that specifies the company's activities and behaviours, respective obligations and protections while ensuring the landholder is properly compensated for the effects and impacts of authorised activities.

Compensation is payable for impacts to a landholder's business or land use that arise as a result of hosting resource activity. These impacts are considered through the compensatable effects set out in legislation. Compensatable effects means all or any of the following relating to the eligible claimant's land:

- Deprivation of possession of its surface
- Diminution of its value
- Diminution of the use made or that may be made of the land or any improvement on it
- Severance of any part of the land from other parts of the land, or from other land that the eligible landholder owns
- Any cost, damage or loss arising from the carrying out of activities under the resource authority on the landholder's land
- Consequential damages the eligible landholder incurs because of a matter mentioned above.

Landholders are also entitled to receive reimbursement for negotiation and preparation costs reasonably incurred for a CCA. The recoverable costs are limited to accounting, legal, agronomy and valuation advice/fees.

It is good practice to discuss and agree early on what both parties consider to be reasonable costs, and at what point in negotiations you will be eligible to have professional costs refunded.

Visit the Coexistence Queensland website for more information on negotiating agreements: <https://bit.ly/4bZBmcE>

NOTE: Negotiation and preparation costs do not include the costs of Alternative Dispute Resolution (ADR) facilitator that may be incurred during the negotiation process (dispute resolution processes are outlined in **Chapter 6 – Dispute resolution**).

TIP Professional advisors bring their own set of skills to the table, but landholders are best qualified knowing their business and taking the lead in CCA negotiations.

- A lawyer can explain the terms of the resource company's proposed draft CCA and suggest alternative provisions which may better meet your needs.
- A registered and accredited valuer experienced in petroleum and gas legislation and the basis for compensation entitlements can provide insights into appropriate compensation levels, assuming a full understanding of 'compensatable effects'
- An accountant can supply important financial documentation to support a landholder's compensation claim and provide taxation and accounting advice specific to your circumstances
- An agronomist is a specialist in soil productivity helping landholders to raise more food on the same amount of soil. They can help advise on business impacts due to changes in yield resulting from construction, operation, decommissioning and rehabilitation of gas activities.

CCA – Landholder information

It is important that a landholder[s] who is preparing for negotiations with a resource company conduct their own preparation in advance. There are three key items a landholder[s] should prepare for discussion.

Property map

A landholder should have a clear map of their property showing the location of key areas and infrastructure, such as:

- Access points, formed roads and tracks
- Gates and fences
- Stockyards
- Homes and other buildings
- Areas or structures of sentimental value (e.g. unused remains of historic homesteads)
- Key agricultural areas and infrastructure (e.g. cattle yards, crops, dams, levees, irrigation channels, shade clumps)
- Water bores and key watering points or other important infrastructure
- Sensitive areas such as waterways, erosion prone areas and overland groundwater flow areas
- Any plans for expansion or improvement the landholder may have underway

It is often in the interests of both parties to attach an agreed property/facility map to the CCA (for more detail see **Chapter 2 - Early engagement and exploration**).

Visit the Coexistence Queensland website for more information relating to 'Farm Biosecurity': <https://cqld.org/3MyCqeY>

TIP Add known infestations of weeds and other biosecurity matters to the property map. Include high-risk areas such as stock yards and watercourses.



Business plan

Business plans can vary from a series of maps illustrating changes over time, to very detailed documents. A plan generally spans 5-10 years.

A landholder should discuss the way the property currently operates and explain any plans for how the land is to be used or operated in the future. This may include future house sites, changed management practices, a transition to organics or new technologies. The plan should also indicate preferred property access timings (e.g. avoiding access during harvesting of cropped land, planting, spraying or irrigating). Gaining a common understanding of these plans will assist in identifying suitable locations for petroleum and gas infrastructure.

A copy of the business plan (or summary of the plan) should be included in the CCA to provide a clear record of your intentions at the time the CCA is negotiated. This information can assist in decreasing the chance of a dispute in the years after signing, particularly in relation to any material changes.

Biosecurity planning

While everyone has a general biosecurity obligation (GBO), the landholder is ultimately accountable for any certifications relating to their property. Property Biosecurity Plans or Biosecurity Management Plans outline the individual biosecurity risks that are unique to a property or place and the processes that are used to manage those risks. These documents should form the basis for discussions and agreement related to biosecurity protocols for gas activities on the property.

Visitors must follow a Biosecurity Management Plan if one is in place, unless they have a legal right to enter under the law. Those with legal access do not need to follow the plan but must meet their GBO under the *Biosecurity Act 2014*. Non-compliance with the GBO is an offence.

Agreed biosecurity protocols should be enshrined in a CCA. An option for achieving this is to negotiate a requirement in your CCA that requires the company to comply with your Biosecurity Plan or Biosecurity Management Plan.



CCA – Resource company information

It is important that the resource company assists the landholder understand the nature, location and duration of activities. There are two key areas for discussion:

General information about activities

The resource company provides the landholder with details of:

- What activities they plan to carry out on the private land including during construction and production phases
- Where the activities will be carried out
- When activities will be carried out (including day/night, time period).

Other information that a landholder might reasonably request from a resource company includes:

- Who will carry out activities on the property and how many workers are likely to be involved
- Work programs for each activity and potential impacts (noise, dust, lights, vibration etc.)
- Any future plans the resource company anticipates it might have for further development on your property in the years to come
- Any safety considerations, proposed emergency plans and important contacts
- What the resource company proposes for the decommissioning of wells, pipelines and related infrastructure.

Other information for discussion

The resource company may discuss additional land access topics with the landholder such as:

- What controls the company has in place for access during or after inclement weather (e.g. high rainfall)

Chemical use:

- The resource company must provide Safety Data Sheets (SDS) for any chemicals they plan to use and discuss any restrictions you may have based on accreditation requirements for your farm business (clearly outline these requirements in your discussions with the resource company)
- It is the landholder's responsibility to check the SDSs and ensure that they understand the withholding periods of any of the chemicals that may be used. It is important to understand if the application of any of these chemicals (which will be stored and applied in line with the same Chemical Accreditations that landholders need to abide by) may cause any implications to your business (i.e. chemical spray drift in weed control)
- Safety training that covers associated infrastructure owned and operated by a resource company.

Protecting agricultural land

In Queensland, agricultural land is protected by environmental and regional planning legislation. These protections do not aim to prevent resource development. They do however seek to manage the impact of resource activities and other regulated activities on areas of regional interest; and support coexistence of resource activities with other activities, including highly productive agricultural activities.

The purpose of the *Regional Planning Interests Act 2014 (RPI Act 2014)* is to identify areas of Queensland that are of regional interest because they contribute, or are likely to contribute, to Queensland's economic, social and environmental prosperity. The *RPI Act 2014* also manages the impacts of resources activities in areas of regional interest to maximise the opportunity for coexistence.

To achieve its purposes, this Act provides for a transparent and accountable process for the impact of proposed resource activities and regulated activities on areas of regional interest to be assessed and managed.

The *RPI Act 2014* manages impacts of resource activities in the following areas:

- Priority agricultural areas (PAAs)
- Priority living areas (PLAs)
- Strategic cropping areas (SCAs)
- Strategic environmental areas (SEAs).

If a resource company wishes to operate in areas defined under the *RPI Act 2014*, it must factor in the priority land use interests when negotiating a CCA with a landholder. Any new resource development seeking to operate in PAAs will need to meet assessment criteria ensuring no material loss of land, no threat to continued agricultural use and no material impact on declared regionally significant irrigation aquifers or overland flow.

Several guidelines have been developed to provide more information about the *RPI Act 2014*. You can access these guidelines and associated maps by visiting the Department of State Development, Infrastructure and Planning website at: www.planning.qld.gov.au

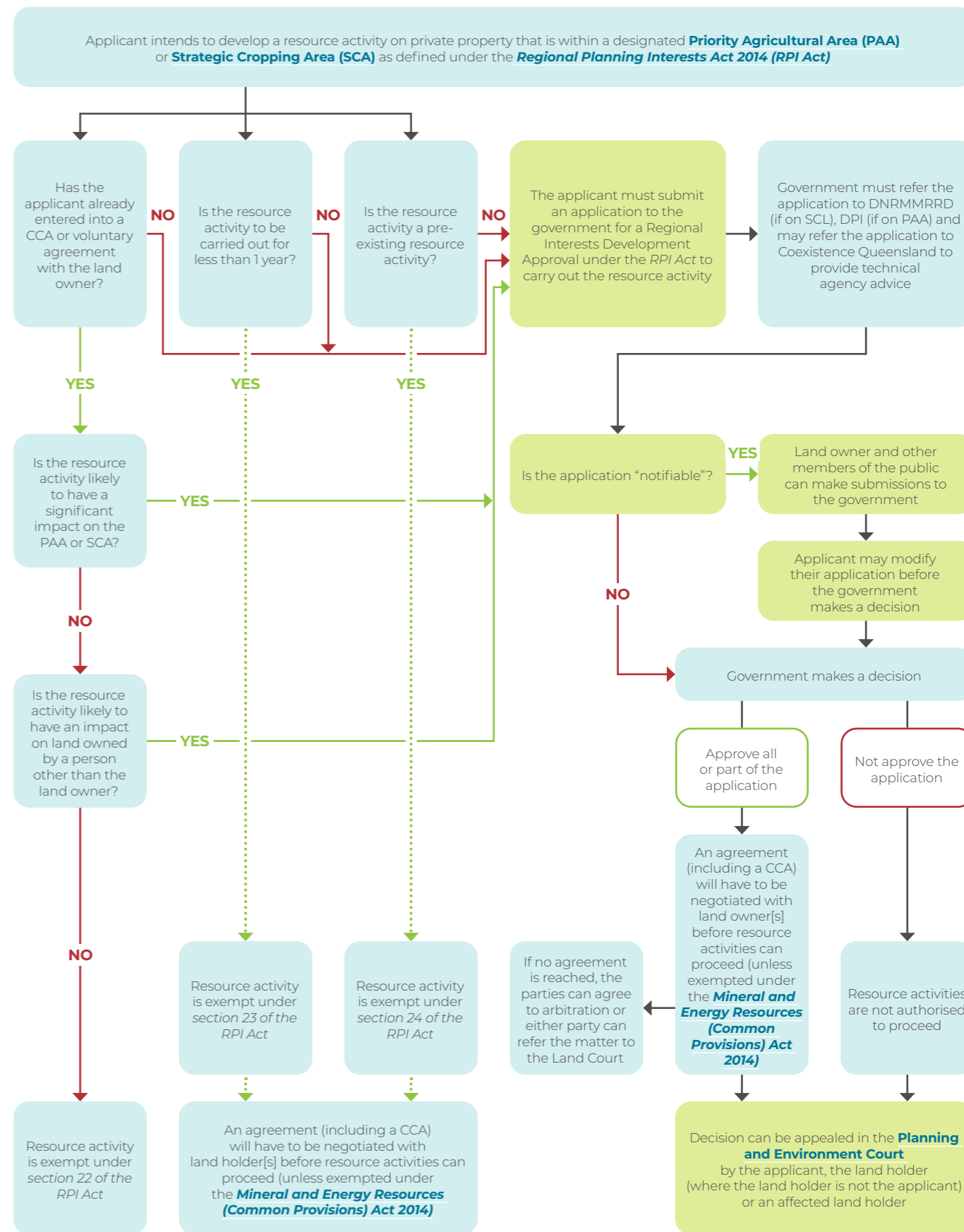


TIP **LANDHOLDER VIDEO:** The former GasFields Commission (now Coexistence Queensland) hosted a public webinar – **Navigating Land Access** – that brought together subject matter experts from the Queensland Government and associated 'land access' organisations to present and discuss the latest relevant information on laws, best practice, environmental management and what support is available to landholders dealing with land access issues.

To watch the 'Navigating Land Access' webinar, scan the QR code or visit: cqld.org/4qKaaUW



RPI Act assessment process flowchart



CCA – Ongoing disturbance

Petroleum and gas infrastructure requires regular maintenance, which means there will be activities carried out on your property for the life of the resource tenure.

Ongoing activities that should be considered when negotiating compensation include:

- Liaising with resource company representatives
- Workover of wells
- Weed monitoring and management
- Security
- Construction and maintenance of firebreaks around resource infrastructure
- Disruptions to other regular activities.

Generally, disturbance levels are lower during production, as opposed to the construction phase when activity peaks. Professional advisors and the resource company can provide further guidance on the relevance of these aspects when estimating any potential costs or losses.

Other considerations for negotiation during periods of resource company activity include loss of quiet enjoyment (disturbance of a previously quiet rural locality) and landholder management time (the time required on additional activities such as mustering, checking fences and weed monitoring). These are explained on [Coexistence Queensland's website](#).

For further detail related to Ongoing Disturbance, scan the QR code or visit: <https://cqld.org/4tG2eGM>



PERMITTED CONDUCT

A CCA can specify property entry times, the conduct of authorised activities by the resource company and where and when they can be carried out. Further information can be found in the [Queensland Land Access Code](#), a copy of which must accompany an entry notice.

REGISTRATION OF AGREEMENT ON LAND TITLE

The existence of a CCA or Opt-Out Agreement (discussed in detail later in this [chapter](#)) has to be registered on the title of the property by the resource company.

A valid CCA is binding on future landholders of the property as well as any new holder of the resource authority.

CCA – Vital components

You should check to make sure the following components are clearly included in the CCA:

- How and when a resource company can enter the land, including notification requirements
- How authorised activities must be carried out, including behaviours and conduct
- The resource company's compensation liability or future compensation liability
- If the agreement is for all or part of the compensation liability
- How long the agreement is for
- The amount of compensation and how and when the liability will be met (if compensation is to be monetary)
- If compensation under the CCA is to be monetary, non-monetary or a combination of both (e.g. construction of a road for the landholder is non-monetary or in-kind)
- The agreement must be signed for/by both parties
- A process by which any disputes can be resolved
- Consider negotiating a clause in your agreement about amendments to the CCA where there is a material change in circumstance. This could include changes the landholder makes to the type of activity they use the land for, or changes made by the gas company to the scope or extent of their operations on the land.

To view the Queensland Land Access Code, scan the QR code or visit: <https://bit.ly/46dRdT3>



Engaging professional services

You know your property and your business best. You should lead and be involved in all conversations. Only you can ensure all your interests and needs are addressed. However, negotiating a land access agreement can be a complex legal and commercial process. It often benefits from the advice of professional experts with specific expertise, such as legal, accounting, valuation and agronomy advice. To ensure landholders can access this type of support, Section 91 (2) of the **Mineral and Energy Resources (Common Provisions) Act 2014** states that: "The resource authority holder is liable to pay to the eligible claimant the negotiation and preparation costs necessarily and reasonably incurred."

Negotiation and preparation costs are defined as accounting costs, legal costs, valuation costs and the costs of an agronomist. However, when you engage these services it is important to engage each one directly, provide clear instructions and manage the work that is done.

It is good practice to discuss and agree early on what both parties consider to be reasonable costs and get written confirmation of what will be reimbursed, and at what point in negotiations that reimbursement will occur. If both parties cannot agree on reasonable costs, the Land Court of Queensland can determine them. Note: You may be personally liable for costs incurred outside the CCA negotiation process.

There are a few considerations to make if you choose to use a professional advisor

All documentation produced by your professional advisors should contain information to support your claim.

It is best practice that you personally engage each professional advisor on your team rather than appoint another person to manage all the necessary experts and the negotiation.

Your professional advisor should clearly document:

- What you want them to do (this can apply to stages of the process or the whole process)
- The date for delivery (or the milestone for each deliverable)
- The cost
- That the professional advisor has professional indemnity insurance.

By engaging an expert, you will receive professional advice but at the end of the day you make the final decisions. A valuer, agronomist, accountant or lawyer are there to provide you with advice. It is up to you whether you take it or not.

When seeking to engage professional experts, do some research, ask questions of friends, family and extended networks for recommendations based on their experience, in particular:

- How streamlined, timely and cost-effective the service was
- Did the professional advisor simplify the process or did they feel it was cumbersome and overwhelming
- Did the professional advisor listen to their needs, provide advice and only act on instructions.

For more information, see the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (DNRMMRRD) publication **A guide to land access in Queensland**.

	How they can help	Tips
Valuer	<ul style="list-style-type: none"> • Provide a valuation on your property to identify diminution of value based on the impact of proposed petroleum and gas infrastructure • Document productivity losses in your business as a result of petroleum and gas construction and operation on your property • Deliver you a valuation report identifying the value of your land and other information that can be used for your compensation negotiations. 	<ul style="list-style-type: none"> • Engage a registered valuer if you would like professional advice on the amount of compensation relating to proposed petroleum and gas activities on your property • Ideally the valuer you choose should be registered and experienced in both agribusiness and the petroleum and gas industries – valuation principles relevant to this sector will be applied • In the agreement, ensure that the valuer produces a signed and dated final valuation report to assist in your negotiation – a draft document cannot be relied upon to assist in a negotiation and may become an issue if the valuation has to be relied upon as evidence in a dispute, if it reaches the Land Court • Valuers with experience in the petroleum and gas industry will talk you through the components of the valuation report and may identify areas for inclusion that you had not previously considered.
Agronomist	<ul style="list-style-type: none"> • Report on the productivity of your land • Advise on business impacts due to changes in yield resulting from construction, operation, decommissioning and rehabilitation. 	<ul style="list-style-type: none"> • Engage an agronomist if you would like professional advice on the productivity of your property and operational impacts to support compensation negotiations • If operational impacts are identified and actions recommended, discuss these items with the company to find solutions. Remember solutions may include changes to the way you operate your land, changes to the company's activities or compensation • You know your business. Make sure you remain focussed on practical solutions and take 'reasonable' steps to mitigate any losses – understand the company's perspective before moving to costs.
Accountant	<ul style="list-style-type: none"> • Provide accounting advice on business income and impacts on financial arrangements • Provide tax advice and implications of compensation. 	<ul style="list-style-type: none"> • Engage an accountant if you would like professional advice on any potential issues for your financial arrangements • Choose an accountant who has experience in agribusiness and the petroleum and gas industries, your business structure and tax implications of compensation. This may not be your usual accountant • Ask your accountant about what compensation payment structure (e.g. upfront, at particular milestones, or annually) aligns with your financial arrangements. You will need to be prepared to agree this with the company • If you have a succession plan, consider any implications.
Lawyer	<ul style="list-style-type: none"> • Provide legal advice on the structure and legality of the draft agreement. 	<ul style="list-style-type: none"> • As with any property transaction it is normal practice to engage a lawyer to review the terms and conditions of an agreement that you have negotiated directly with the company • Engage a lawyer who has experience in the petroleum and gas industry • As you are initially responsible for the costs of engaging a lawyer ask for a "Costs Agreement". This will involve you negotiating with the lawyer how much you will pay for the work they do • A Costs Agreement is a document which details a break down of what you have engaged the lawyer to do in relation to a matter and for what cost • Make sure you understand what you are agreeing to with your lawyer and ask questions if you are not sure about anything • You know your property and your business better than anyone. You should lead and be involved in all conversations with the company. Only you can ensure that all of your interests and needs are addressed.

TIP

All Queenslanders have a 'general biosecurity obligation' under Queensland's *Biosecurity Act 2014*. This means everyone must take reasonable and practical steps to prevent or minimise biosecurity risks. On-farm biosecurity is the responsibility of the property owner and every person who visits or works on the property.

Regardless of resource activity in your local area, it is recommended that landholders have a biosecurity plan to help protect their property and business against the spread of pests and diseases.

Property biosecurity plans are a practical way to set your expectations and provide a foundation for two-way discussions about biosecurity management protocols, including any property-specific arrangements that may need to be agreed with a resource company.

Local governments must have a biosecurity plan in place for their local government area. A property biosecurity plan should consider the invasive species and measures under a local government biosecurity plan.

A property biosecurity plan may include:

- Details of significant property locations (e.g. stock yards, quarantine areas, production areas, weed infested areas)
- Existing biosecurity measures and management controls for each known invasive species, pests, diseases and contaminants, and risk areas
- A biosecurity risk assessment for each known invasive species, pest, disease and contaminant risk area that includes the risk of spread
- Conduct guidelines for visitors to the property
- Biosecurity signage at all property access points
- A gate register for high-risk properties to record who enters the property and their time of entry

- Clean-down procedures for visitors to reduce the risk of vehicles, equipment and clothing spreading invasive species, pests and diseases
- A chemical usage record that documents the location, date and withholding period of any chemicals used to control biosecurity matter on the property
- Waste management procedures that deal with high-risk matter such as meat-derived products
- Checks to ensure incoming materials such as gravel and sand are certified as pest and weed free
- A biosecurity induction and training plan for people who will be visiting or operating on your property

Those who have a legal right to access do not have to comply with a biosecurity management plan, however they must comply with the general biosecurity obligation under the *Biosecurity Act 2014*, the mandatory conditions in the Land Access Code, and the requirements set out in a conduct and compensation agreement. It is therefore strongly recommended that you discuss your biosecurity plan with any resource companies seeking to access your land and ensure the biosecurity risks, concerns and potential management options are mutually understood by both parties and covered in any CCAs.

Many farm biosecurity planning tools and templates are available [online](#).

By sharing your biosecurity plan or Biosecurity Management Plan with resource companies and contractors, you can work together to minimise biosecurity risks on your property.

Deferral Agreement

A Deferral Agreement is when a resource company and landholder agree to defer the creation of a CCA until a later date, as agreed by both parties.

This option allows authorised advanced activities to be undertaken before a CCA is executed. This may provide the landholder with more time and opportunity to collect information and better understand the actual impacts of those activities before finalising a CCA.

What must be included in a deferral agreement

- Signed confirmation the resource company has informed the landholder that endorsing a Deferral Agreement is voluntary
- The period during which the land is to be entered
- The authorised activities proposed to be carried out; when and where the activities are to be carried out
- The period for which the Deferral Agreement has effect
- When a CCA will be entered into.

Opt-Out Agreement

This legal agreement enables a landholder to opt-out of negotiating a CCA, thereby allowing them flexibility to reach an agreement in a way that best suits them.

An Opt-Out Agreement is at the sole discretion of the landholder. Land access laws require a resource company to formally notify a landholder that they are under no obligation to enter into an Opt-Out Agreement.

This agreement does not absolve the resource company of compensation liability. However, because there is no statutory negotiation process or dispute resolution process, the Land Court of Queensland cannot examine the issue of compensation liability.

An Opt-Out Agreement must be made using the approved form provided by DNRMMRRD, available from www.business.qld.gov.au. The resource company must provide a copy of the Opt-Out information sheet to the landholder before the landholder signs the agreement.

More information on the components of an Opt-Out Agreement can be found in DNRMMRRD's [A guide to land access in Queensland](#).

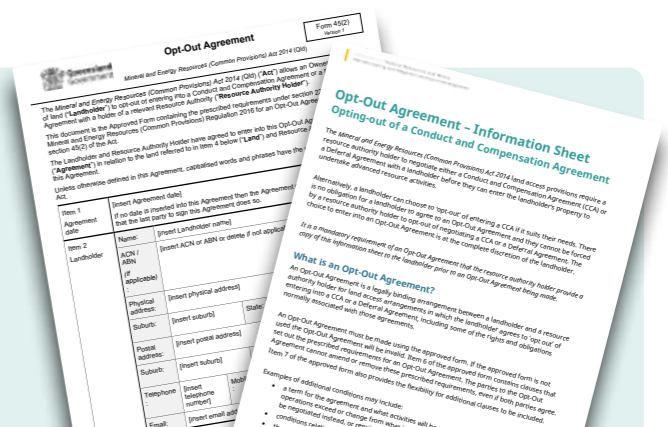
ACCESS OPT-OUT AGREEMENT AND INFORMATION SHEET

- (1) No professional fees are paid for entering into a Deferral or Opt-out agreement.
- (2) A landholder should seek legal advice prior to signing either a Deferral or Opt-out agreement as there are implications for their rights.

To view the Opt-out Agreement Template, scan the QR code or visit: <https://bit.ly/3MNPRIb>



To view the Opt-out Agreement Information Sheet, scan the QR code or visit: <https://bit.ly/3MzG8FI>



Seven tips for CCA success

TIP

Coexistence Queensland's **Landholder guide: Negotiating onshore gas activity** is a useful resource for any landholder preparing for land access negotiations with a gas company.

For more practical information and support, contact Coexistence Queensland on 13 71 07 or email enquiries@cqld.org.au.

LANDHOLDER TIPS FOR SUCCESSFUL CCA NEGOTIATIONS:

1. Do your homework – inspect gas fields, talk to other landholders.
2. Work with your neighbours and support each other.
3. Be firm but reasonable in your negotiations.
4. Communicate your own requirements early on – no surprises.
5. Be careful choosing your own professional advisory team.
6. Know your own role within your negotiating team, but you are still the captain.
7. Manage your lawyer – determine when and how best to use them.
8. Get to know who's who in the resource company – identify the right decision-makers.
9. A good working relationship can create additional opportunities.
10. If you have a dispute, make sure you have evidence to back your claims.
11. Don't take it personally – take a business approach.
12. Suggest negotiating on being paid for your time – all of it at an appropriate rate.
13. Keep good written records via email and diary notes of all communications and impacts e.g. dust, noise, traffic.

01

TAKE TIME

Commit time upfront to understand the resource company you are dealing with, their proposed timeline and program of activities on your property. Take time to work with the resource company to plan the layout and location of infrastructure on your property.

02

GET ADVICE

Put together your own advisory team of experts across a wide range of disciplines and share experiences with your neighbours. Reasonable costs for legal, accounting, valuation and agronomist advice are required to be reimbursed by the resource company.

03

KEEP TALKING

Maintain communication, even if negotiations hit roadblocks or get stressful or frustrating. This will help both sides better understand each other and find solutions to move forward.

04

THINK BUSINESS-TO-BUSINESS

Treat negotiations with resource companies like any other business partnership. Focus on opportunities to diversify your business and positively align resource company activities with your business plans.

05

USE YOUR PROPERTY PLAN

Have on hand a documented plan for the future development of your property and business when undertaking negotiations. Provide maps of your property detailing all infrastructure, no-go zones, production cycles and any biosecurity risks.

06

MEASURE BASELINE IMPACTS

Keep a simple record of the state of your land, soils, pastures, weeds, vegetation, roads and infrastructure before and after a resource company undertakes activities. This will help quantify and measure impacts and disturbance to your business over time.

07

KNOW KEY CONTACTS

The Mining Community Infoline can assist you with land access enquiries or complaints. Phone 13 71 07 or email resources.info@nrmmrd.qld.gov.au.

Landholders can contact Coexistence Queensland for practical information and support to understand land access arrangements, agreement options and the CCA negotiation process. Phone 13 71 07 or email enquiries@cqld.org.au.

Chapter 5

Groundwater impacts and management

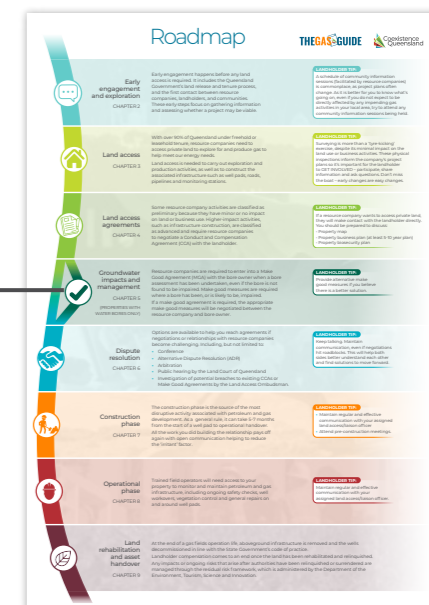
In this chapter we cover:

- [Groundwater](#)
- [Important considerations](#)
- [Underground water impact reports \(UWIR\)](#)
- [Baseline assessments](#)
- [Bore assessments](#)
- [Determining impaired capacity](#)
- [Presence of gas in water bores](#)
- [Impaired capacity due to free gas](#)
- [Make Good Agreements](#)
- [Engaging professional services](#)

Chapter 5

Groundwater impacts and management

YOU ARE HERE



Groundwater is a critical resource for many agricultural businesses, supporting stock, irrigation and day-to-day property operations.

In recognition of its importance, Queensland has a regulatory framework under Chapter 3 of the *Water Act 2000* to monitor, manage and make good impacts to underground water caused by resource activities. This framework includes obligations for resource companies to assess potential impacts to landholder water bores and make good where a bore is, or is likely to be, impaired.

If a **Make Good Agreement (MGA)** is required, the appropriate make good measures will be negotiated between

the resource company and bore owner. A helpful check list is available at: <https://bit.ly/4rWJS2F>

An MGA outlines the planned actions to be undertaken by a resource company to satisfy the agreed make good measures.

TIP

Consider the long-term implications of proposed make good measures, especially if you're considering monetary compensation instead of a new water supply. You can access bore reports through the Business Queensland **Bore Report tool**, or the **Queensland Globe**.

To access the Bore Report Tool, scan the QR code or visit: <https://bit.ly/4bSWcfE>



To access Queensland Globe, scan the QR code or visit: <https://bit.ly/3MAg0Kj>



Groundwater

Groundwater is a critical resource for many Queensland landholders, supporting agricultural production, stock watering and day-to-day property operations.

Under legislation, resource companies have the right to extract groundwater as part of petroleum and gas activities. In the case of coal seam gas (CSG), groundwater is removed from coal seams to reduce pressure within the formation and allow gas to flow.

Groundwater that is unavoidably removed during the gas extraction process is known as produced water. This water is treated and reused for a range of purposes, including irrigation, town water supply, aquifer reinjection, and various industrial applications.

Given its importance to rural businesses and regional communities, the Queensland Government closely manages the impact of CSG activities on groundwater.

In Queensland, groundwater resources are researched, assessed, and managed extensively by:

- **OGIA**
- **DLGWV**
- **DETSI**
- **The University of Queensland**
- **Resource companies**
- Other research organisations, such as **CSIRO**.

Removal of groundwater in the gas extraction process is subject to a range of requirements on resource companies relating to the management

of groundwater impacts – including monitoring of impacts and proactive Make Good Agreements of affected water bores.

Gas companies require access to undertake baseline and bore assessments of nearby water bores and install monitoring bores to understand the impact of gas activities on groundwater.

Bores that are likely to be impacted in the short term are identified as Immediately Affected Area bores or IAA bores in an **underground water impact report (UWIR)** (see page 49). Resource companies are required to undertake a bore assessment and negotiate an MGA for all IAA bores identified in a UWIR. The purpose of the bore assessment is to establish if predicted impacts are likely to cause impairment to the water bore.

Resource companies are required to enter into an MGA with the bore owner after a bore assessment has been undertaken, even if the bore is not found to be impaired. If impairment is established, then the bore qualifies for make good measures which should be included in the MGA.

If a bore owner is concerned their water bore may have been impaired by gas development, they should check the predictions of impacts for that bore via **OGIA's 'Bore Search' webpage**, or contact **DNRMMRRD's Mining Community Infoline** on 137 107 or via resources.info@nrmmrrd.qld.gov.au.

If a bore is not identified as an IAA bore in a UWIR, DETSI may still direct resource companies to carry out bore assessments in exceptional circumstances – where impairment of a water bore is reasonably demonstrated by a landholder.

Important considerations

- All IAA bores require an MGA but not all bores are automatically eligible for make good measures.
- Make good measures are determined on the basis of impaired capacity.
- In the case where a bore is delivering water but not operating at its paper entitlement, an MGA can be measured against its actual capacity.
- A bore should be in working condition in order to determine impairment if it is to be considered for make good measures.
- A bore that is damaged and/or unworkable may hinder the completion of a bore assessment and any entitlement to make good measures.
- A bore assessment will determine the actual capacity of a bore and an MGA will be negotiated on that basis.
- Predictions of impacts to individual water bores within the Surat CMA are available via the **OGIA 'Bore Search' webpage**.

Underground water impact reports

The regulatory framework requires resource companies to prepare an UWIR every 3 years, which includes an assessment of the water level decline in aquifers and impacts to springs in both the long and short-term as a result of gas exploration and development. In cases where there are multiple petroleum tenures with more than one tenure holder adjacent to each other, the government may establish a Cumulative Management Area (CMA). In a CMA, the responsibility to prepare a UWIR rests with OGIA. To date, only one CMA has been declared in Queensland – the Surat Cumulative Management Area (**see adjacent map**). OGIA is the independent statutory body responsible for preparing and updating the Surat CMA UWIR. To date, OGIA has released five UWIRs – **2012, 2016, 2019, 2021** and **2025**.

UWIRs provide an assessment of current and future impacts on groundwater assets (such as water bores and environmental values), as well as strategies for managing these impacts – together with clearly identified responsible tenure holders to carry out the management actions. Management strategies include MGAs, water monitoring strategies, baseline assessment, and actions for minimising and mitigating impacts on springs.

Water bores likely to be affected in the short (IAA) and long term (LAA) are identified in a UWIR based on the bore trigger threshold. The trigger thresholds for different aquifers are:

- A 5 metre decline in water level for a consolidated aquifer; or
- A 2 metre decline in water level for an unconsolidated aquifer.

IAA bores are a subset of LAA bores where predicted impacts exceed the bore trigger thresholds within three years from the release date of the corresponding UWIR.

Bore search tool

You can obtain information about the predicted impacts of water extraction for a specific bore within the Surat CMA, and whether the bore is identified as an IAA bore or LAA bore, by entering the bore's Registration Number (RN) into **OGIA's 'Bore Search' webpage**.

You can use **Queensland Globe** to find a bore's RN, or by contacting **DNRMMRRD** – N.B. you will need the lot number and plan details for your property, which can be found on your rates notice.



BASELINE ASSESSMENTS

A baseline assessment is generally undertaken by the resource company before or soon after production testing or production starts in the vicinity, depending on the likelihood of impacts.

Baseline assessments record the details of authorised bores in the area and provide a reference point for subsequent bore assessments. A baseline assessment of a water bore collects information about the bore, including:

- Water level and quality (including presence of gas)
- Bore construction
- Existing pumping infrastructure.

Further information on 'Baseline Assessment Guidelines' can be found at: <https://environment.qld.gov.au/>.





Bore assessments

Bore assessments are undertaken to assess the capacity of a water bore and to establish whether the bore has, or is likely to have, an impaired capacity due to resource activity.

Resource companies undertake bore assessments to determine if make good measures are required under an MGA with the bore owner.

A bore assessment must be undertaken for all authorised water bores identified in the IAA of an UWIR within 60 business days, unless an extension has been granted.

When undertaking a bore assessment, the resource company will need to collect information on the water bore such as:

- Details of the bore construction (drill date, drilling company etc.)
- Photographs, details, condition and rate of the bore pump
- Repair history
- Purpose and use of the bore
- Bore capacity and status
- Water level and pressure.

Determining impaired capacity

The assessment of impaired capacity of a water bore with respect to water levels is based on whether the bore is:

- An existing bore – the bore existed prior to the first UWIR relating to the area took effect; or
- A new bore – the bore was constructed after the date above (N.B. the first UWIR for the Surat CMA took effect on 18 July 2012).

Existing bores are considered to have an impaired capacity if they can no longer provide reasonable quantity or quality of water for the bores' authorised use or purpose because of resource company activities.

Impaired capacity for new bores is assessed slightly differently. Water levels in new bores must decline by more than the predicted level for the aquifer accessed by the bore in the most recent UWIR (referred to as the 'relevant report' in the **Water Act 2000**) at the time the new bore was drilled. This means that the tenure holder is not required to provide make good measures until the actual drawdown (decline) exceeds the impacts predicted in the relevant report.

Landholders intending to drill a new water bore are strongly advised to refer to information in the current UWIR and consider the extent and location of the LAA impacts within each aquifer prior to drilling (see **OGIA's 'Bore Search' webpage**).

The most recent Surat CMA UWIR took effect on 1 May 2022 (see the **Underground Water Impact Report 2021 for the Surat Cumulative Management Area**). The summary of impacts in key formations can be found on **page 90 of the report**.

Helpful online resources:

Approved underground water impact reports (www.environment.qld.gov.au)

Current and previous Surat CMA UWIRs (www.ogia.water.qld.gov.au)

OGIA's roles and functions (www.ogia.water.qld.gov.au)

Department of the Environment, Tourism, Science and Innovation (DETSI) FAQs on make good obligations: (www.environment.qld.gov.au).

Presence of gas in water bores

The presence of methane, in dissolved and free gas form, has been detected while drilling for water and in existing water bores in the Surat and Bowen basins since the beginning of the twentieth century. Methane is found at higher concentrations in aquifers containing coals seams, above geological features such as faults, and above known gas reservoirs.

The concentrations of gas vary in time according to atmospheric and various other factors.

Under the **Water Act 2000**, resource companies are required to collect and analyse baseline samples for the presence of gas as part of a baseline assessment, and the results are sent to DETSI. During a baseline assessment, bore owners must advise the resource tenure holder if gas is present in the bore and provide further information under what conditions it occurs.

If gas is present in your water bore and you believe it is impairing the bore's capacity and you are within a Petroleum Lease then reach out to the tenure holder to discuss your concerns.

A landholder can contact the **Mining Community Infoline** to raise their concern. The team will liaise with DETSI and OGIA to determine a suggested way forward for the landholder. DNRMMRRD does not determine the cause or responsibility of impacted water bores.

Impaired capacity due to free gas

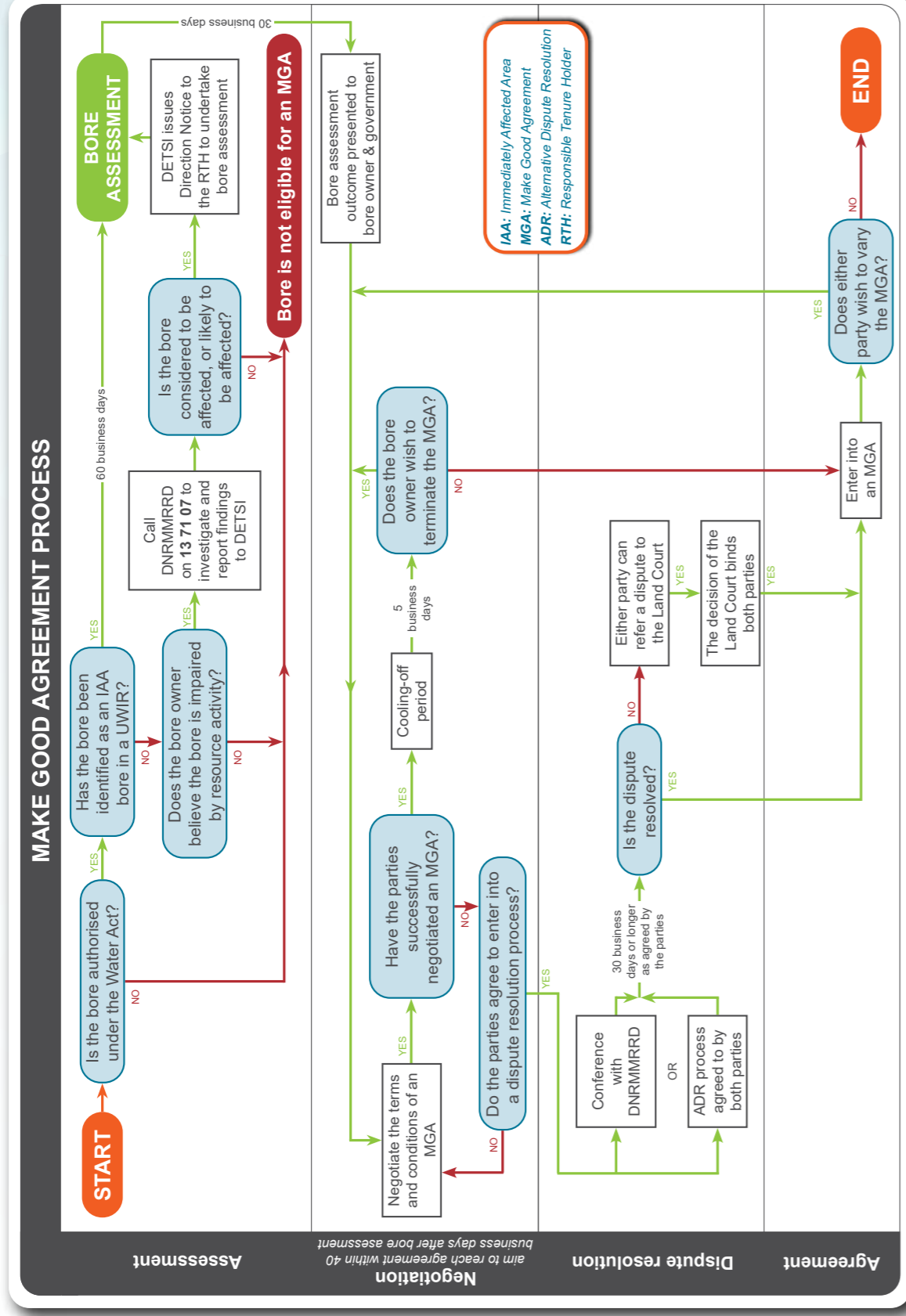
The assessment of impaired capacity of a water bore with respect to free gas is the same for existing and new water bores. Water bores are considered to have an impaired capacity if the presence of free gas resulting from resource company activities cause or materially contributed to any of the following adverse effects:

- Damage to the bore, OR to the bore's pump, OR other infrastructure;
- The bore poses a health or safety risk; and
- The bore can, or is likely to, no longer provide reasonable quantity or quality of water for the bores' authorised use or purpose.

Currently, the minimum requirement for the resource tenure holder to determine impairment due to free gas is to follow best practice industry standards for carrying out work similar in nature to that of undertaking a bore assessment.

The type of make good measure for a bore with impaired capacity due to the presence of free gas will depend on the outcome of a bore assessment – see the **Make Good Agreement decision table**.

Make Good Agreement process



This flow chart outlines the MGA process as per **Subdivision 3 of the Water Act 2000**. Resource companies are required to carry out a bore assessment and enter into an MGA if the bore has been identified as an IAA bore in a UWIR, or DETSI has issued a direction notice for that bore.

For more information visit: <https://cqld.org/4kPS8Pv>, and <https://bit.ly/4rWJS2F>

Make Good Agreement process

MAKE GOOD AGREEMENT TEMPLATE DECISION TABLE

All water bores that have undergone a bore assessment require a Make Good Agreement, even if they are not eligible for Make Good measures. Coexistence Queensland has developed this table to recommend appropriate Make Good Agreement templates that may be used based on the outcomes of a bore assessment.

OUTCOME OF BORE ASSESSMENT	DUE TO PETROLEUM & GAS ACTIVITIES		NOT DUE TO PETROLEUM AND GAS ACTIVITIES	
	Make Good Agreement: NO MAKE GOOD MEASURES	Make Good Agreement: MONITORING <i>Bore is monitored with triggers for future assessment and variation of Make Good Agreement</i>	Make Good Agreement: NO MAKE GOOD MEASURES	Make Good Agreement: NO MAKE GOOD MEASURES
Bore has the capacity to provide a reasonable quantity and/or quality of water for its authorised use or purpose	Not impaired and unlikely to become impaired due to water level decline or free gas*	Due to water level decline	Make Good Agreement: NO MAKE GOOD MEASURES	Make Good Agreement: NO MAKE GOOD MEASURES
	Due to free gas*	Due to water level decline	Make Good Agreement: NO MAKE GOOD MEASURES <i>Action may be taken by the bore owner to P&A***</i>	Make Good Agreement: NO MAKE GOOD MEASURES <i>Action may be taken by the bore owner to P&A***</i>
Bore does not have the capacity to provide a reasonable quantity and/or quality of water for its authorised use or purpose	Due to free gas*	Due to free gas*	Make Good Agreement: NO MAKE GOOD MEASURES	Make Good Agreement: NO MAKE GOOD MEASURES
	Unlikely to become a health or safety risk due to free gas*	Due to free gas*	Make Good Agreement: NO MAKE GOOD MEASURES	Make Good Agreement: NO MAKE GOOD MEASURES
Bore has never had capacity <i>Bore has always been dry</i>	Likely to become a health or safety risk due to free gas*	Due to free gas*	Make Good Agreement: NO MAKE GOOD MEASURES <i>Resource company may P&A*** the bore if the bore owner agrees</i>	Make Good Agreement: NO MAKE GOOD MEASURES <i>Action may be taken by the bore owner to P&A***</i>
	Bore has become a health or safety risk due to free gas*	Due to free gas*	Make Good Agreement: NO MAKE GOOD MEASURES	Make Good Agreement: NO MAKE GOOD MEASURES
BORE ASSESSMENT WAS ATTEMPTED BUT COULD NOT BE UNDERTAKEN:				
Due to the bore having pre-existing damage****	No Make Good obligation triggered.			
Because the bore does not physically exist****	No Make Good obligation triggered.			

* Free gas can impair a water bore by adversely affecting the quantity or quality of water provided, causing damage to the bore infrastructure, or creating a health or safety risk.

** This does not cover other Make Good measures such as reconditioning the bore or providing an alternative water supply, which may be negotiated. For alternative water supplies, there may be a requirement for an authority to take water if one does not already exist with the landholder.

*** P&A (to 'plug and abandon' or decommission a water bore) is not a Make Good measure and it is not a requirement under the *Water Act 2000*. However, it may be negotiated as a special condition in the Make Good Agreement if the parties agree for the bore to be decommissioned.

**** This may provide the tenure holder a reasonable excuse **not to undertake** a bore assessment under *Section 417(2)* or *Section 418(2)(b)* of the *Water Act 2000*.



This **Make Good Agreement Decision Table** can be used to determine what sort of MGA template that may be suitable.

Coexistence Queensland has developed four MGA templates for use by bore owners and the gas industry.

The templates are intended to be used as a starting point for negotiations between a tenure holder and a bore owner and create common ground from which an MGA can be produced.

Download the MGA templates: <https://cqld.org/4kPS8Pv> and <https://bit.ly/4rWJS2F>

Engaging professional services

Make Good Agreements are complex and legally binding documents, and negotiating one may benefit from professional advice, such as accounting, hydrogeology, legal, or valuation advice. To ensure bore owners have access to appropriate support, Chapter 3 (Subdivision 2) of the *Water Act 2000* states that the resource company must:

“reimburse the bore owner for any accounting, hydrogeology, legal or valuation costs the bore owner necessarily and reasonably incurs in negotiating or preparing a make good agreement”.

However, when you engage one of these services you are initially responsible for the costs that will be incurred so it is important to engage each one directly, manage the work that is done and provide clear instructions. It is good practice to discuss and agree early on what both parties consider to be reasonable costs and get written confirmation of what will be reimbursed and at what point in negotiations that reimbursement will occur.

Note: You may be personally liable for costs that are incurred outside the MGA negotiation process.

There are a few considerations if you choose to use a professional advisor. All documentation produced by your professional advisors should contain information to back up your claim including any assumptions applied. It is best practice that you personally engage each professional advisor on your team rather than appoint another person to manage all the necessary experts and the negotiation. When seeking to engage professional experts, do some research, ask friends, family and extended networks for recommendations based on their experience.

Some questions to consider asking are:

- How streamlined, timely and cost-effective were the services they provided?
- Did the professional advisor simplify the process, or did they feel it was cumbersome and overwhelming?
- Did the professional advisor listen to their needs, provide advice and follow instructions?
- Would they use them again?

Your professional advisors should clearly document:

- Their professional qualifications
- The services they will provide you (this can apply to stages of the process or the whole process)
- The date(s) for delivery of their services, including key milestones for deliverables
- The cost of their services
- Their relevant insurance coverage.

By engaging an expert, you will receive professional advice but at the end of the day you make the final decisions. An accountant, hydrogeologist, lawyer or valuer is there to provide you with advice. It is up to you whether you take it or not.

	How they can help	Tips
Accountant	<ul style="list-style-type: none"> • Provide accounting advice on business income and impacts on financial arrangements • Provide tax advice and implications if you're considering monetary compensation as a make good measure. 	<ul style="list-style-type: none"> • Engage an accountant if you would like professional advice on any potential issues for your financial arrangements • Choose an accountant who has experience in agribusiness and the petroleum and gas industries, your business structure and tax implications of compensation (if applicable). This may not be your usual accountant • If you're considering monetary compensation as a make good measure, ask your accountant about what compensation payment structure (upfront or annual) aligns with your financial arrangements. You will need to be prepared to agree to this with the company • If you have a succession plan, consider any implications.
Hydrogeologist	<ul style="list-style-type: none"> • Interpret a bore assessment outcome report and any associated technical data • Provide advice on any proposed groundwater monitoring programs including water level and quality • Provide practical knowledge of groundwater systems, water bore construction, performance and infrastructure. 	<ul style="list-style-type: none"> • Understand the construction and capacity of your bores. Confirm ongoing need for water supply to support your business plan and domestic requirement. (Remember make good measures are based on the bores capacity for its authorised purpose) • Ask about local groundwater resources so you are prepared to discuss practical options for make good measures (e.g. new bore, bore modification, compensation) • If monitoring is proposed, seek advice on an appropriate monitoring program for the bore (e.g. water level, water quality or the presence of gas) with clear triggers for action • For any replacement bore, understand ongoing maintenance and technical requirements including pump size and sustainable pumping rates. <p><i>Note: the resource company is responsible for conducting any required bore assessments and baseline assessments. Companies are not obliged to reimburse you for hydrogeological costs involved in conducting your own bore assessment.</i></p>
Lawyer	<ul style="list-style-type: none"> • Provide legal advice on the structure and legality of the draft MGA. 	<ul style="list-style-type: none"> • As with any property transaction it is normal practice to engage a lawyer to review the terms and conditions of an agreement that you have negotiated directly with the company • Engage a lawyer who has experience in the petroleum and gas industry • As you are initially responsible for the costs of engaging a lawyer, ask for a "Costs Agreement". This will involve you negotiating with the lawyer how much you will pay for the work they do • A Costs Agreement is a document which details what the lawyer is going to do in relation to a matter and for what cost • Make sure you understand what you are agreeing to with your lawyer and ask questions if you are not sure about anything • You know your property and your business better than anyone. You should lead and be involved in all conversations with the company. Only you can ensure that all your interests and needs are addressed.
Valuer	<ul style="list-style-type: none"> • Provide a valuation on your property and identify how petroleum and gas operation may impact this • Document productivity losses in your business as a result of petroleum and gas construction and operation on your property • Deliver a valuation report documenting compensation entitlements and information to substantiate the stated amount. 	<ul style="list-style-type: none"> • Engage a valuer if you are considering compensation as a make good measure and would like professional advice on a fair amount • Ideally the valuer you choose should be experienced in both agribusiness and the petroleum and gas industries – valuation principles relevant to this sector will be applied • Ensure that the valuer produces a final certified valuation report to assist in your negotiation with the resource company – a draft document cannot be relied upon to assist in a negotiation • Valuers with experience in the petroleum and gas industry will talk you through the components of the valuation report and may identify areas for inclusion that you had not previously considered.

Chapter 6

Dispute resolution

In this chapter we cover:

- [Dispute resolution](#)
- [Conference](#)
- [Alternative Dispute Resolution](#)
- [Arbitration](#)
- [Land Court of Queensland hearing](#)
- [Conduct and Compensation Agreement – Negotiation Framework](#)
- [Make Good Agreement – Negotiation Framework](#)
- [Potential breaches of agreements](#)
- [Dispute resolution \(restricted land\)](#)

Chapter 6

Dispute resolution

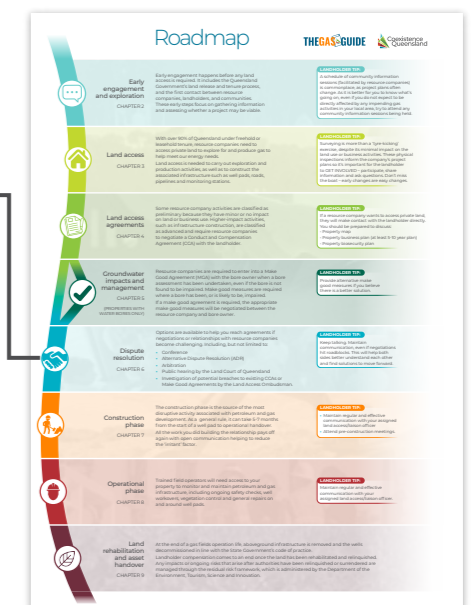
YOU ARE HERE



Options are available to help you reach agreements if negotiations or relationships with resource companies become challenging.

Dispute resolution options:

- Conference by the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (DNRMMRRD)
- Alternative Dispute Resolution (ADR) with assistance from independent third party
 - Mediation
 - Conciliation
 - Case appraisal
- Arbitration
- Public hearing by the Land Court of Queensland
- Investigation of potential breaches to existing CCAs or MGAs by the Land Access Ombudsman.





Dispute resolution

Also see services listed in **Chapter 10 – Helpful resources**.

Various dispute resolution options are available if negotiations with resource companies become challenging or stall completely. Our recommendation, supported by experts in negotiation and issue resolution, is to keep the lines of communication open.

If the parties are unable to reach an agreement on their own, the resource company can issue a negotiation notice, which allows them to proceed through the statutory negotiation processes available.

Slight differences, such as time frames and requirements, exist between the process for negotiating CCAs compared to MGAs.

However, the general resolution options available for the two types of agreements are similar as outlined in the diagrams below (see **Conduct and Compensation Agreement** and **Make Good Agreement** – Negotiation Frameworks).

Either party can seek to enter into a dispute resolution process by providing written notice to the other.

Dispute resolution options include:

- Conference
- Alternative Dispute Resolution
 - Mediation
 - Conciliation
 - Case appraisal
- Arbitration
- Land Court of Queensland hearing.

TIP The Land Access Ombudsman (LAO) provides useful resources for landholders seeking to understand dispute resolution options for **Conduct and Compensation Agreements (CCAs)** and **Make Good Agreements (MGAs)**.

These resources explain the types of disputes the LAO can consider, the steps involved, and where landholders may be able to seek assistance.



Conference

An authorised officer from DNRMMRRD facilitates discussions between the parties with the aim of reaching agreement usually within 20 business days for CCAs or 30 business days for MGAs. This is a low-cost, non-binding option.

Neither party can be represented by a lawyer unless the other party agrees and the authorised officer is satisfied there are no disadvantages. The information shared during a conference is maintained as confidential.

Conferences and ADRs are initiated by completing a form known as an election notice:

For CCAs, complete an election notice form number **'Mines-10 Conference election notice'** available for download via: www.business.qld.gov.au

For MGAs, complete an election notice form number **'ESR/2016/2066'** available for download via: www.environment.qld.gov.au

Once an election notice for an ADR or Arbitration is issued for a CCA, any DNRMMRRD conference underway must cease, and no new conferences can commence.

To enquire about a departmental conference, facilitated by an authorised officer from DNRMMRRD:

Phone: 13 71 07

Email: resources.info@nrmmrrd.qld.gov.au

Web: www.nrmmrrd.qld.gov.au/contact-us#mining-community-infoline
(search for **'Mining Community Infoline'**)

Alternative Dispute Resolution

With ADR, issues are resolved with the aid of a qualified and independent expert. Both parties must agree to the choice of the independent expert.

The resource company is generally responsible for the costs of engaging the independent third party, regardless of who requests the ADR process. There are different types of ADR options that both parties must agree to proceed with:

Facilitative mediation

An independent person facilitates a discussion between the parties. The mediator is impartial and does not advise or make any decisions.

Evaluative mediation

A process which may include an assessment by the mediator of the strengths and weaknesses of the parties' cases and a prediction of the likely outcome of the case.

Conciliation

An independent person who is an expert on the subject provides advice on the strengths and weaknesses of each side of the dispute. While the conciliator provides advice, they do not make any decisions.

Case appraisal

An independent person who is an expert receives evidence from each party. The case appraiser assesses the merits of each case and makes a non-binding decision in writing.

The information shared during an ADR process is maintained as confidential. ADRs are initiated by completing a form known as an **election notice**.

Arbitration

Arbitration involves an independent and suitably qualified third party acting as a judge. Both parties must agree to the choice of the arbitrator.

The arbitrator hears the arguments from both parties and makes a decision that is binding on both parties. The arbitrator must make the binding decision within six months of being appointed.

For disputes over CCAs, the parties may agree to commence arbitration without first going through an ADR process. The resource company is generally responsible for the cost of an arbitrator if no prior ADR process has taken place.

For disputes regarding MGAs, arbitration is only an option if the parties have tried a conference or ADR process first. If the parties participated in a conference or ADR and failed to reach agreement, the cost of engaging an arbitrator is generally paid in equal parts by both parties.

The information shared during arbitration is maintained as confidential.

Land Court of Queensland hearing

Either party can submit an application to the Land Court of Queensland to resolve a dispute if:

- The ADR process was attempted but not concluded within the agreed time period
- An issued election notice was refused
- The other party did not attend the requested ADR
- No agreement was reached at the end of the ADR.

The Land Court of Queensland has the power to:

- Order compensation
- Order the cessation of particular conduct
- Order that the parties attend a departmental conference or engage in further ADR.

These are public hearings and the decision of the Land Court is binding. An application can also be made to the Land Court to decide a dispute in relation to a MGA if a conference or an ADR was held and either not concluded or failed to reach agreement.

If a CCA is referred to the Land Court for determination, the resource company can enter private land to conduct advanced activities using a valid entry notice delivered 10 business days before entry.

FINDING SUPPORT

These organisations can provide assistance in finding the right ADR convenor or arbitrator:

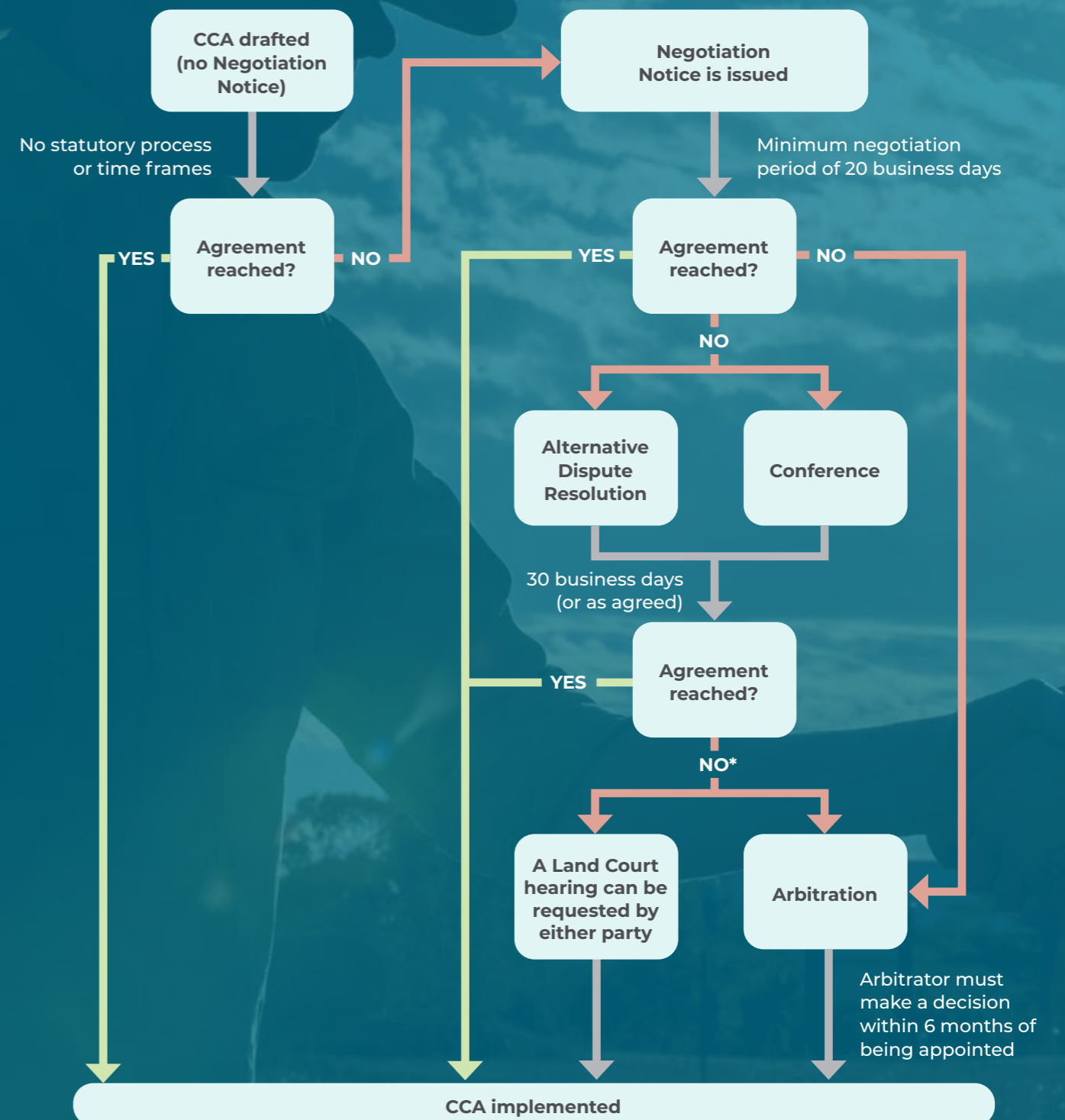
- [Land Court of Queensland](#)
- [Resolution Institute](#)
- [Australian Mediation Association](#)
- [Queensland Law Society](#)

(see contact details in [Chapter 10 – Helpful Resources](#))

Visit the Coexistence Queensland website for more information regarding [dispute resolution options](#).

Conduct and Compensation Agreement – Negotiation Framework

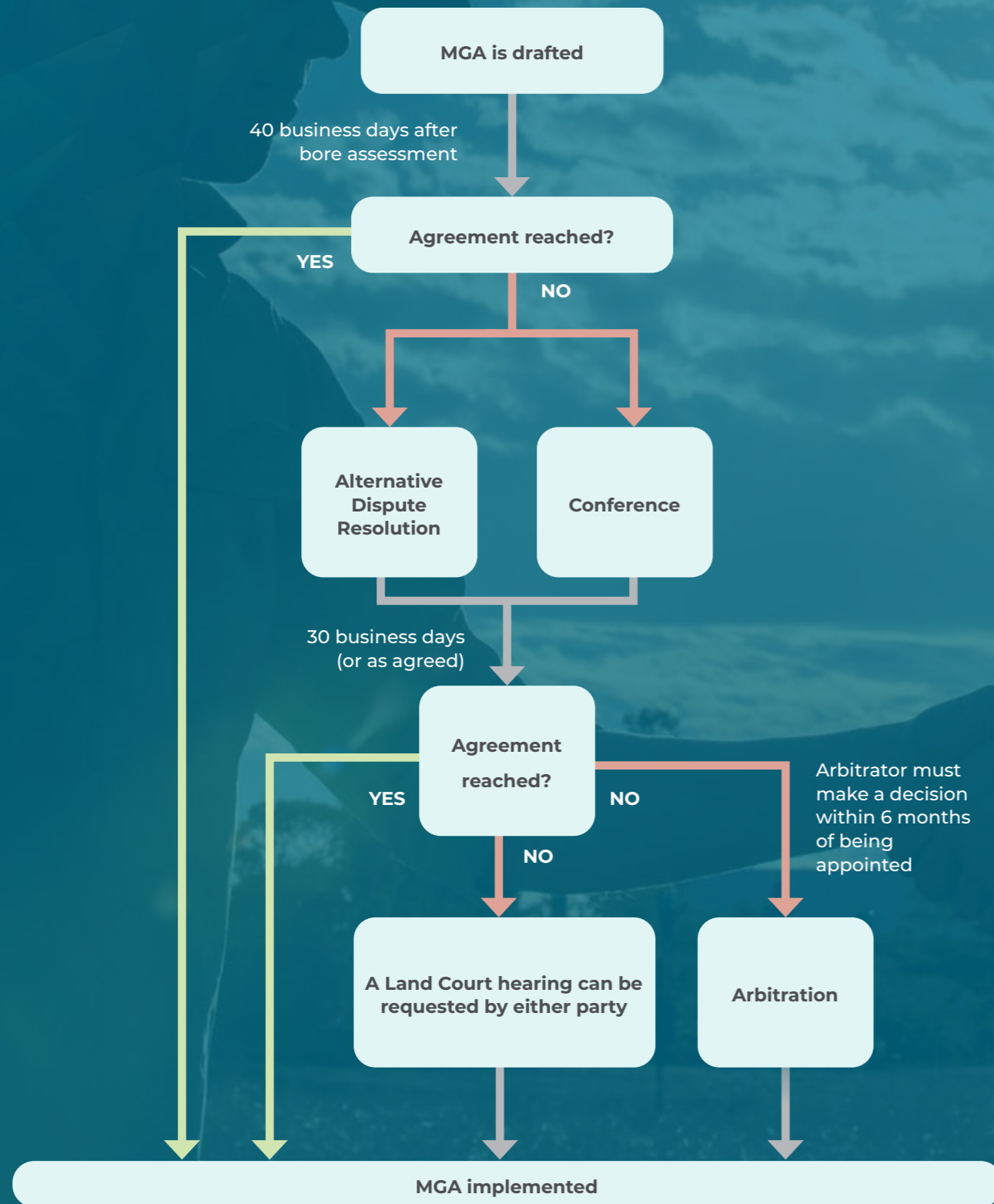
DISPUTE RESOLUTION OPTIONS



*Note: If after ADR/Conference there is no agreement, parties may agree to arbitration or proceed to the Land Court for determination

Make Good Agreement – Negotiation Framework

DISPUTE RESOLUTION OPTIONS



Potential breaches of agreements

Queensland's Land Access Ombudsman offers a faster, free alternative to legal action, with as little formality as possible, for industry and landholders with existing CCAs or MGAs.

The Land Access Ombudsman can investigate disputes about alleged breaches of CCAs and MGAs and assist the dispute by:

- Offering an opinion on the merits of each party's position
- Advising on a way forward
- Making practical recommendations based on the specific facts and circumstances of each dispute.

For more information contact the Land Access Ombudsman via:

Phone (free call): 1800 717 550

Email: enquiries@lao.org.au

Web: www.lao.org.au

Dispute resolution (restricted land)

If parties are unable to reach an agreement on whether a certain building, structure or area is restricted land, either can apply to the Land Court of Queensland for an order declaring whether particular land is restricted land for a resource authority, and whether a particular activity is a prescribed activity for the purpose of applying restricted land protections.

Read more about restricted land access in **A guide to land access in Queensland** by DNRMMRRD.

For further information on restricted land access contact the Land Court of Queensland via:

Phone: (07) 3738 7199

Email: landcourt@justice.qld.gov.au

Web: www.courts.qld.gov.au/courts/land-court/

Chapter 7

Construction phase

In this chapter we cover:

- **Before work begins**
- **Construction phase**
- **Drilling gas wells**
- **Types of gas wells and well pads**
- **Aboveground facilities**
- **Additional infrastructure**
- **Gas gathering**
- **Commissioning and startup**
- **Noise, light and dust**

Chapter 7

Construction phase

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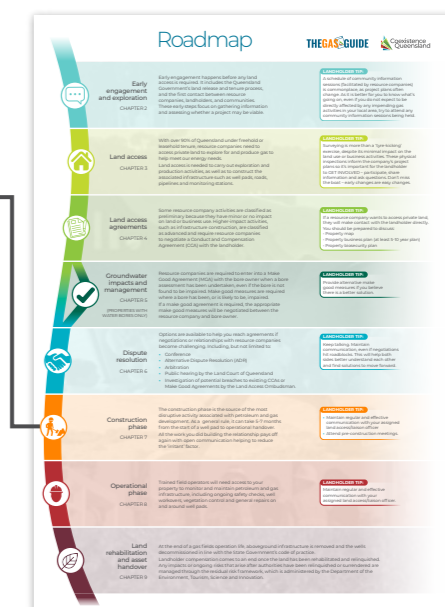


This marks the start of a substantial operational commitment by the resource company. It can include building or upgrading vehicle access tracks, well pad development, drilling, well completion, and installing aboveground infrastructure and pipelines.

The construction phase is generally the most disruptive stage of petroleum and gas development, with increased vehicle movements, machinery, noise and on-ground activity.

The nature and duration of construction will vary depending on the type and scale of infrastructure being developed, site conditions, and the resource company's operational requirements.

At this stage, the work you have done to build a constructive relationship can pay off again, with open communication helping to reduce friction and resolve issues early.



TIP

- Maintain regular and effective communication with your assigned land access/liason officer
- Attend pre-construction meetings.



Before work begins

In many cases the highly focussed nature of a CCA negotiation gives way to a period of relative inactivity as the resource company confirms its work program.

The resource company may arrange a pre-construction meeting on your property to brief workers, not only on the agreed access rules and conditions that you have negotiated, but also the company's proposed scope of works.

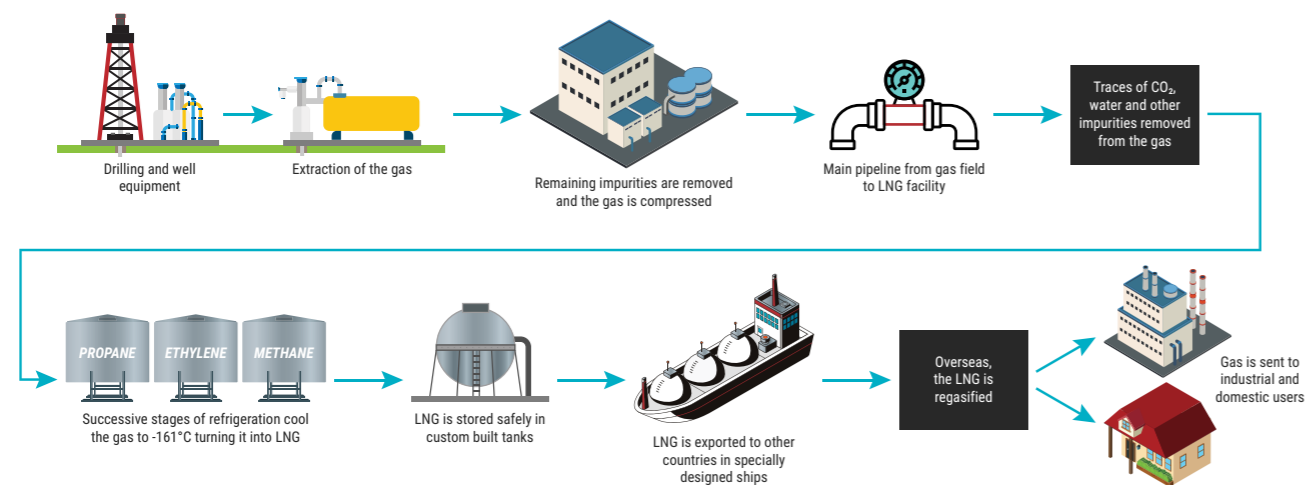
The landholder's attendance at this and other impromptu meetings is a sound investment in reinforcing the rules and expectations surrounding construction on your land.

Sharing your expert knowledge and getting to know the people and their roles helps build a respectful atmosphere.



TIP The construction phase is the most disruptive time; however the industry is continually developing new techniques to reduce time and property impacts.

How LNG is made



Construction phase

The types of activities generally associated with construction might include:

Access tracks

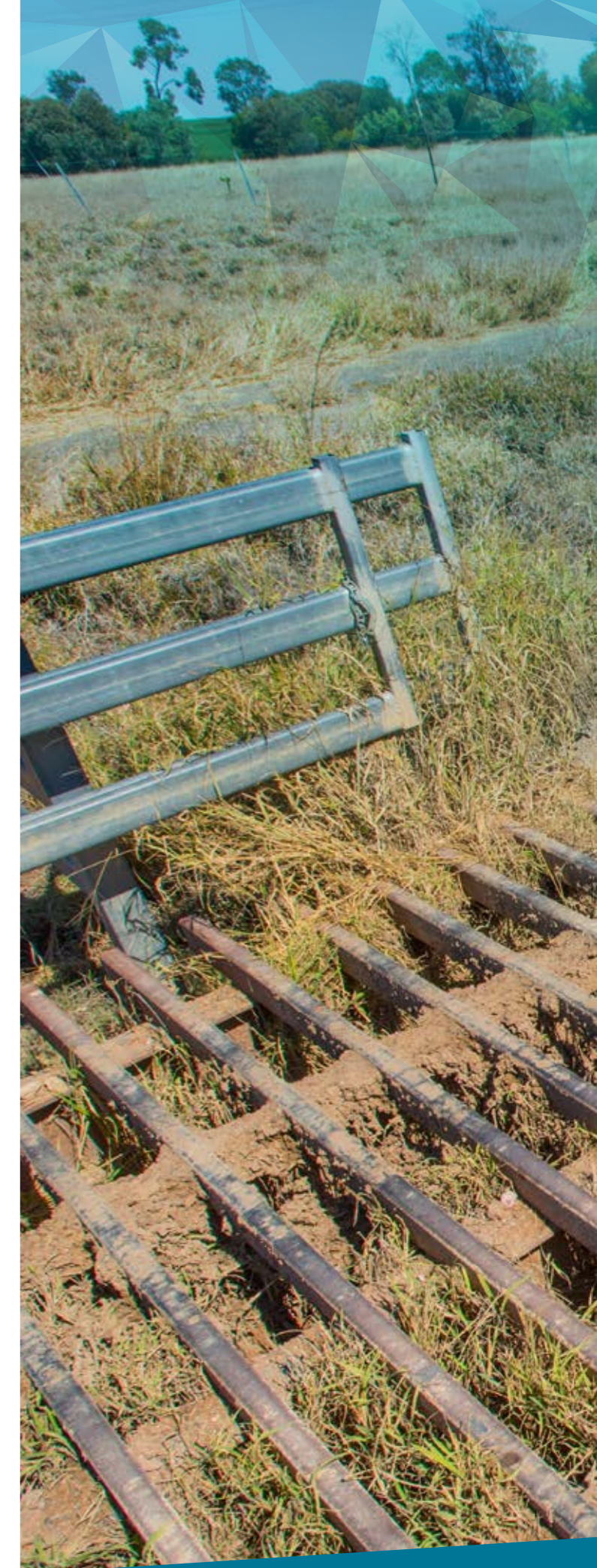
Access tracks give resource company employees and contractors the means of getting to and from work. Where practicable, a resource company will use existing tracks, which in some cases may require upgrading (at their expense) to accommodate large equipment including truck-mounted drilling rigs.

If new access tracks are needed, the resource company will consult the landholder to determine their best location to minimise disturbance. As a general rule, most new access tracks are located along previously cleared markers such as property boundaries and fence lines. Access tracks may need berms (or contours) constructed to reduce roadway and shoulder erosion. These are a project efficiency investment if done properly.

The resource company is required to maintain all tracks necessary for access to their infrastructure during its operational life. In many cases, landholders may see these tracks as a property improvement that they may like to retain as an asset after the gas operations have concluded. It's worth discussing this possibility with the resource company and relevant local authorities at the earliest opportunity.



TIP Resource companies place specific focus on establishing and maintaining good working relationships with landholders. Staff and contractors work to strict guidelines and standards of behaviour, but it is worth noting that best practice is effective and regular communication with your assigned land access/liason officer.





Drilling gas wells

The site chosen for a gas well is generally cleared and levelled (commonly referred to as a well pad). Because of the equipment in play and for the safety of workers initiating construction, the pad area is noticeably larger than that required when the well is commissioned.

Drilling rigs construct the well from which petroleum and gas is extracted. Several rigs may be used as wells are installed in multiple stages.

As each section is drilled, casing is installed and secured before the next stage. There will be a significant amount of activity on the well pad during the drilling phase.

Once the well becomes operational, the well pad is reduced in size to minimise its footprint and previously disturbed land is rehabilitated, however the well pad area needs to remain large enough to accommodate a workover rig for future maintenance.

In 2021, a number of Western Downs landholders raised concerns to the former GasFields Commission (now Coexistence Queensland) about the processes and potential impacts of directional drilling activities under their properties.

In response to these concerns and to clarify the existing regulatory framework, the Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (DNRMMRRD) has released a '**Directional Drilling**' fact sheet that sets out the "regulatory framework for resource authority holders to access private land to carry out directional drilling activities on adjacent land, and the rights of owners and occupiers which apply in that scenario".



Further information on 'Directional Drilling' can be found at: <https://bit.ly/3OveObW>



Types of gas wells and well pads

The purpose of exploration activities is to identify geological conditions or "targets" that may contain a petroleum or gas resource. Drilling exploration wells into targets may lead to making a discovery. Further analysis and appraisal is generally required to determine if the discovery contains commercial quantities of petroleum and gas for future development and production. Appraisal and development wells need to be "completed" before production can commence. The completion of a well includes the installation of above and below ground equipment and facilities.

Well sites are located to maximize the chances of intersecting subsurface target formations and to minimise surface disturbance. Land access will need to be agreed with the landholder prior to a well being drilled. Best practice to minimise surface disturbance includes consultation with the landholder to select an optimal well location.

Gas wells

Queensland's onshore gas industry typically utilises three different well types for gas exploration and production:

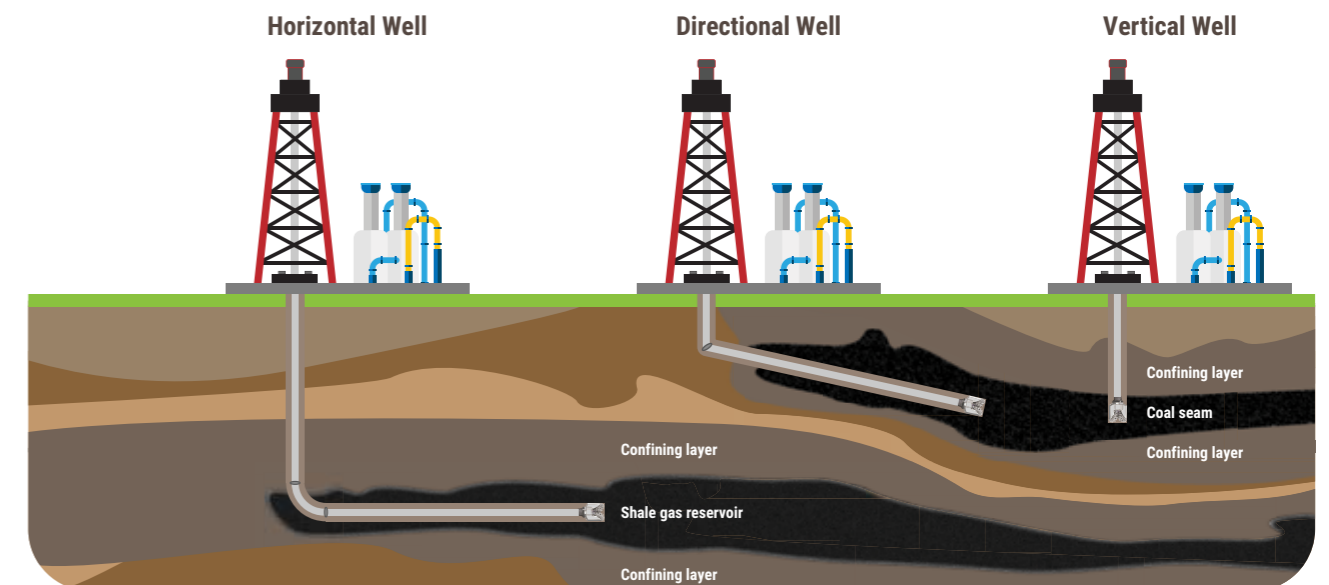
1. **Vertical wells**, as the name suggests are drilled vertically straight down into a target formation. Typically, CSG wells are vertical wells. The primary benefit of a vertical well is its simplicity and the method has been tried and tested to be successful. As a result of the proven technique, a benefit of vertical wells is that they are relatively cost effective to drill and can minimise the disturbance to landholders.

2. **Directional wells** involve drilling a well at non-vertical and non-horizontal angles. Directional drilling allows a resource company to intersect target formations where vertical wells are not possible or practical. Directional wells are also used where multiple wells are drilled from the same well pad location, referred to as a multi-well pad.
3. **Horizontal wells** can be drilled along a target formation. This type of well typically involves drilling a vertical well to the desired depth and then steering the drill bit to travel horizontally along a target formation. The benefit of horizontal wells is that intersection with target formations is maximised, which reduces the overall number of wells required to be drilled.

Well pads

There are two well pad types commonly built in Queensland to accommodate the three different types of gas wells:

1. **Single well pads** house only one well type, with the main benefit being a smaller well pad footprint (usually 100m x 100m in size).
2. **Multi-well pads** allow multiple wells to be drilled on a single pad. The benefits include a smaller over-all footprint per well, fewer well pads on a property, a greater distance between pads (up to 2.4km), less gathering pipelines and access required by the resource company, and the ability to locate pads in paddock corners/less productive areas for a better fit with existing farming practices.



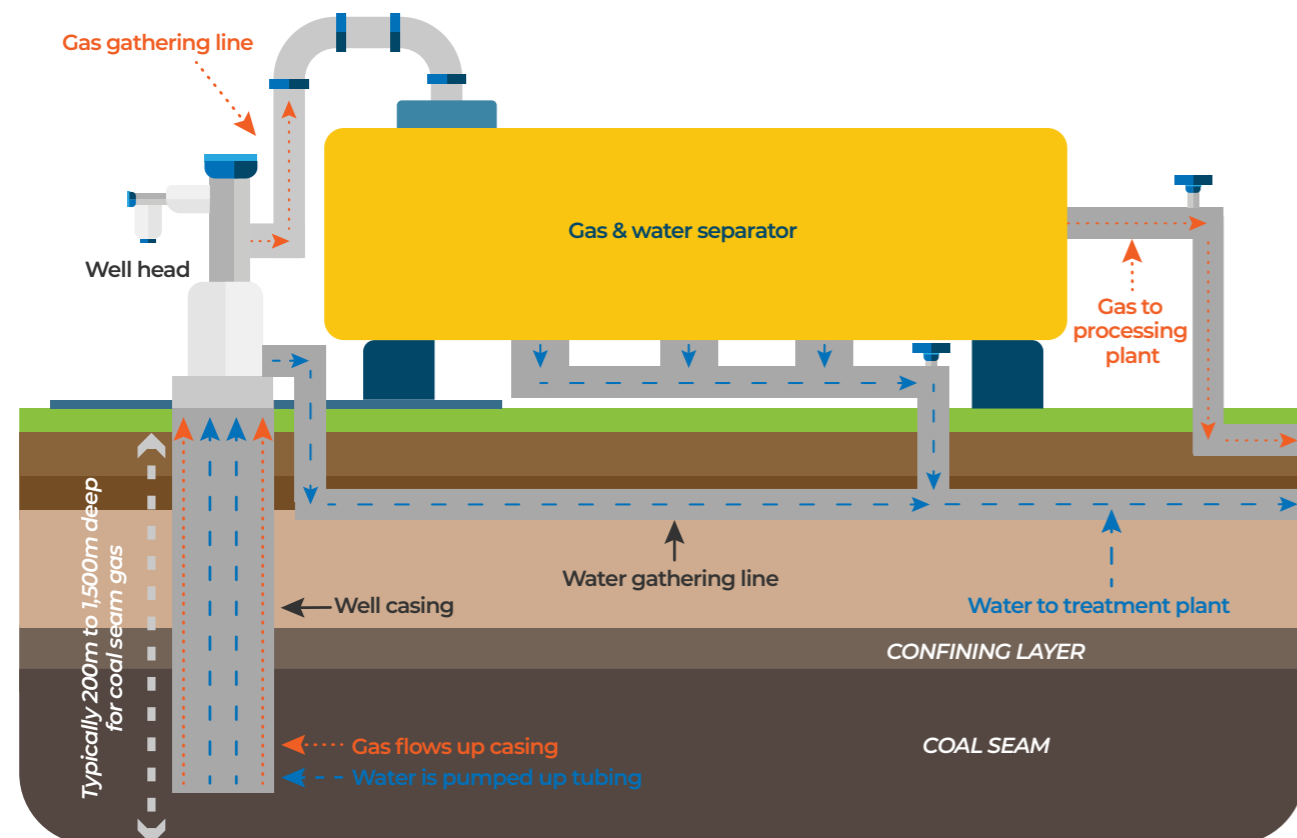
Aboveground facilities

After a well has been drilled it needs to be “completed”. Completing a well involves making it ready for appraisal and/or production and includes the installation of belowground and aboveground equipment/facilities. Well completion includes the installation of production tubing and pumps belowground, plus the installation of the wellhead and associated valves and piping aboveground. Aboveground well facilities are typically required for production and appraisal wells. The aboveground facilities ensure the safe and controlled production of gas and water and typically include:

- Water/gas separator – a mounted unit that safely separates water and gas and controls the flow into the belowground pipe system
- Power unit – powers a pump at the bottom of the well
- Remote terminal unit – links the well to a control system for remote monitoring and operation
- Solids disposal tank – a collection vessel for sediment that collects in the separator.



How it works



Case study

Santos GLNG construction efficiency improvements

Santos has developed a number of ways to reduce the time it spends and the disturbance it causes during the construction phase.

1. Drilling days

Since 2015, the average number of days taken to drill a vertical CSG well has fallen from more than 11 days to around 3 days, a reduction of more than 71%. New drilling technology, well design and well delivery improvements have resulted in a reduction in the time Santos needs to spend on a landholder's property.

2. Well pad construction

Santos has also introduced the concept of 'minimal disturbance' well pads that significantly reduce the physical work and disturbance to ground cover when constructing a well pad.

In most scenarios the well pad no longer needs to be exactly level – previous cut-and-fill activity is now replaced by simply moving the grass or doing a modified 'minimal disturbance'. In some cases, it will just be 'mowing the grass' and in others it will be one step further e.g. topsoil stripping to level undulation.

These changes further reduce the time work crews spend on the property as well as the time needed to rehabilitate the site.

3. Development activity

Standardisation of infrastructure such as fences and grids has improved the efficiency and quality of installation and reduced the amount of rework required.

Improved up-front planning, involving experts from land access, engineering, cultural heritage and environment teams among others, means Santos now makes less visits to the landholder's property before construction and there are less people involved on the ground, minimising disturbance to the landholder's activities.

Co-locating buried infrastructure (running multiple lines in one trench) where possible has also reduced the width of right of ways and minimised disturbance.



Additional infrastructure

This may include but is not limited to:

- Large pipelines that connect field compression stations to central processing plants
- Dams that store water produced from wells to be ultimately transported via pipeline to a water treatment plant for beneficial use
- Temporary camp(s) for resource company staff and contractors
- Gravel pits to supply gravel used to build access tracks and well pads
- Aboveground infrastructure associated with gas gathering such as high point vents (HPVs) or low point drains (LPDs)
- Laydown areas for storing materials associated with activities in the area
- Communication towers.



High point vents



Low point drain

Gas gathering

A production well is connected to an underground pipe system, commonly known as gathering lines that transports gas and associated water to processing and treatment facilities.

A trench is dug for the gathering lines to be lowered into the ground. The trench is filled with excavated material and the area where the gathering lines is buried (i.e. 'right of way') is covered with topsoil and reseeded.

Where possible, gathering lines are located alongside access tracks or cleared areas such as property boundaries to minimise impact and allow for regular property activities on the surface.

In some developments HPVs and LPDs may be necessary to optimise the movement of gas and water through the gathering lines.

HPVs are installed in water lines typically at higher points in the topography to allow any remaining gas dissolved in the water to escape.

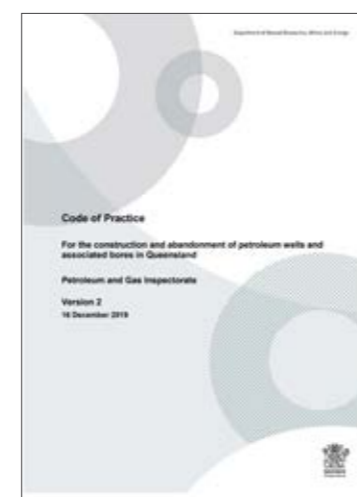
LPDs are typically installed in gas lines at lower lying areas to allow for the removal of any condensed water.

Both HPVs and LPDs occupy relatively small areas of land.

Commissioning and startup

After system compliance checks and strength testing of all aboveground facilities and the gathering network has been completed, the well is ready to be turned on to start producing gas.

Petroleum wells, gathering systems and processing facilities are constructed to Australian or international standards or codes of practices where applicable.



Pressure testing occurs prior to commissioning to verify the integrity of the plant and the operators conduct routine monitoring to ensure ongoing safe operation.

Source: Petroleum and Gas Inspectorate – Code of Practice - For the construction and abandonment of petroleum wells and associated bores in Queensland (RSHQ, 2019)

Access the 'Code of Practice' at:
<https://bit.ly/4b5doNX>



Noise, light and dust

In Queensland, **resource companies are subject to environmental assessment processes**. Before a resource company can commence any on ground activity they must hold a current EA issued under the **Environmental Protection Act 1994** (the Act)(currently administered by DETSI). Under the Act, resource companies are not permitted to cause environmental nuisance from dust, odour, light or smoke at a sensitive place (i.e. a dwelling, library, childcare centre, medical centre or a public park).

Gas activities may have an impact on acoustic values and air quality, such as dust, light, noise and odour. EAs allow gas companies to enter into alternative arrangements to manage a range of environmental nuisances. An alternative arrangement is a written agreement about the way in which a particular nuisance impact will be dealt with at a particular place.

If a gas company expects their activities may result in impacts to your property, regardless of whether the activity is occurring on your property or a neighbouring property, they may negotiate an alternative arrangement with you to remedy these impacts.

An alternative arrangement does not have to be a separate document or a separately negotiated compensation amount. An arrangement can be included in a CCA.

PIPELINES

Pipelines are fundamental to the development of a petroleum and gas project. Pipelines are normally constructed and operated as an authorised activity of an existing petroleum tenure, e.g. an ATP or PL, alternatively, under a PPL.

Gathering lines which are low pressure polyethylene pipe networks that connect individual wells to compression facilities are typically constructed as an authorised activity of a PL. These types of pipelines do not require the resource company to negotiate an easement.

Gas and water pipelines can also be constructed as an authorised activity under a PPL. Once a resource company applies for, and is granted a PPL, the resource company then needs to negotiate with private landholders to secure "pipeline land".

Pipeline land is land that the company has either:

- Purchased and now owns;
- Negotiated and secured an easement over; or
- Obtained a written agreement with the landowner to enter, construct and operate a pipeline.

Where a resource company negotiates access and or establishes an easement over private land, the company will need to compensate the landowner during the period of construction and operation of the pipeline, typically via a CCA.



Chapter 8

Operational phase

In this chapter we cover:

- **Operations, monitoring and maintenance**
- **Maintenance schedules**
- **Well standards**
- **Petroleum and gas flaring**
- **Noise, light and odour**
- **Air quality**

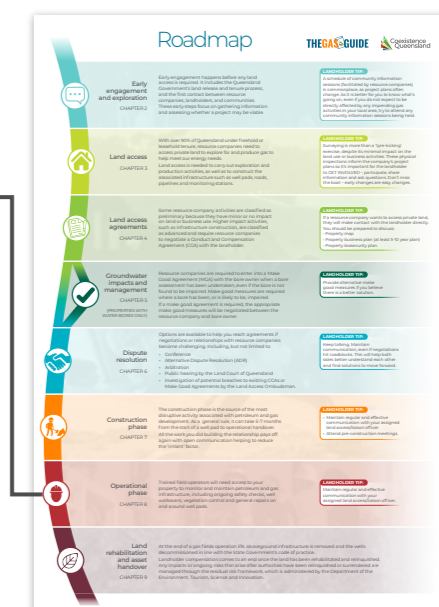
Chapter 8

Operational phase

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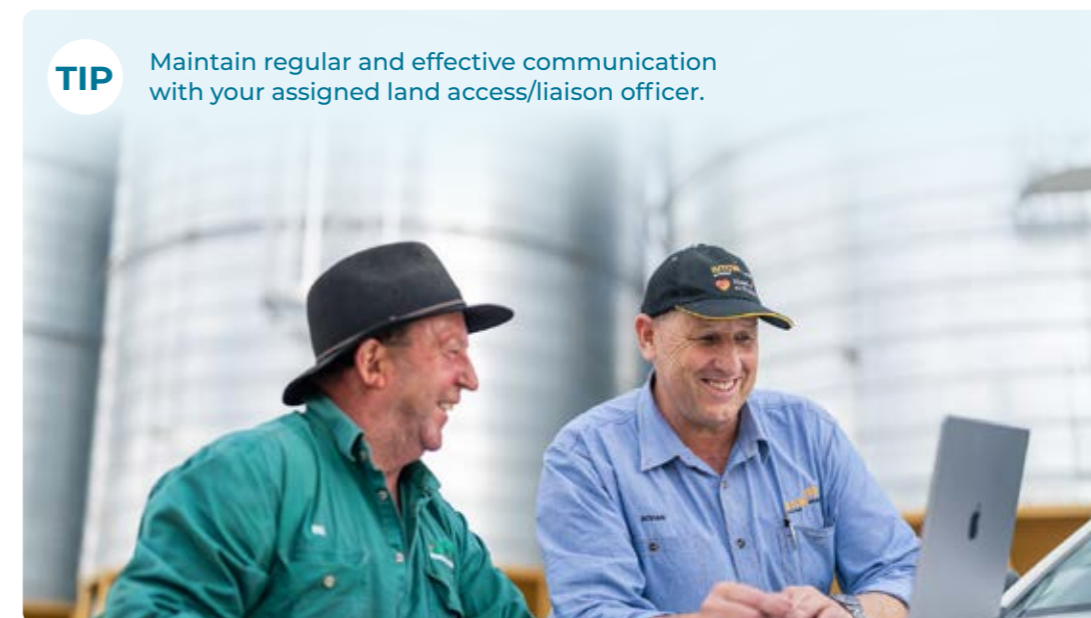


Trained field operators will need access to your property to monitor and maintain petroleum and gas infrastructure, including ongoing safety checks, well workovers, vegetation control and general repairs on and around well pads.



TIP

Maintain regular and effective communication with your assigned land access/liason officer.



Operations, monitoring and maintenance

With commissioning and start-up, the construction phase is now over, and the landholder should look forward to less laborious times.

The operational phase switches the resource company's attention to safely operating and maintaining the infrastructure and equipment situated on your land.

Well production time frames can vary but some have been known to keep producing for upwards of 30 years. That's a potentially lengthy business partnership, so a good working relationship is essential, particularly considering the resource company's responsibility to maintain and monitor their infrastructure for its operational life.

The resource company will need regular access to their assets located on your land for ongoing inspections and monitoring by trained field operators. The resource company is obliged to contact the landholder with reference to the agreed access rules to notify of any upcoming activities, but the relationship between landholders and resource companies may evolve to a point where notifications become unnecessary, as both parties learn to understand, acknowledge and respect each other's business. Exceptions might occur with major events such as mustering, field days or extended equipment workovers.

Ongoing maintenance schedules vary depending on the type of infrastructure used and the operator, but you should reasonably expect a site visit pattern shown on the following page.



Maintenance schedules

Ongoing maintenance schedules vary depending on the type of infrastructure used and the operator, but you should reasonably expect this site visit pattern:

Weekly

Routine inspections and maintenance.

Monthly

Gas testing of surface facilities, weed trimming and control spraying around aboveground infrastructure.

Quarterly

Servicing of well site components (e.g. engines, generator, drive head), calibration of measuring equipment.

Six monthly

Change out engines and generator. Fencing checks.

Annually

Pressure vessel inspections and safety checks, gas leak surveys, water and gas analysis.

Workovers (as required)

Well workovers, typically lasting between 3 - 6 days, involve bringing a rig onsite to clean, check, repair and/or treat the infrastructure inside the well to try to restore or increase the well's production.



Well standards

A Code of Practice overseen by **Resources Safety & Health Queensland** ensures that all petroleum and gas wells and associated bores are constructed, operated and abandoned to a consistent acceptable standard to ensure safety through long-term well integrity and the protection of groundwater resources.

The code identifies industry standards and good gas field practice for well design. It complements the resource company's internal risk assessment processes, operating standards and procedures by outlining a recommended process to ensure that:

- The environment and groundwater resources are protected
- Risk to the public and workers is managed to a level as low as reasonably practicable
- Regulatory and applicable Australian and international standards/requirements, as well as the resource company's standards, are understood and implemented where appropriate
- The life of a well or associated bore is managed effectively through appropriate design and construction techniques and ongoing well integrity monitoring.

Source: Petroleum and Gas Inspectorate – Code of Practice - For the construction and abandonment of petroleum wells and associated bores in Queensland (RSHQ, 2019)

Access the 'Code of Practice' at:
<https://bit.ly/4b5doNX>



DID YOU KNOW...

Increasingly, resource companies are using new technologies including **remotely piloted small-scale aircraft systems, or drones** to inspect gas wells, pipelines and processing facilities in Queensland. The drones are helping to drive improvements in safety and reduce the industry's environmental footprint.

TECHNICAL NOTE: Natural gas

Natural gas is colourless and odourless but, like many fuels, it is highly flammable. It's important that safe work operating practices are established and followed when working near gas infrastructure. Contact your resource company first if you are planning any construction or other significant activities near any gas facilities.

Petroleum and gas flaring

Flaring involves burning off flammable substances that are unusable or which may present a safety hazard if not removed.

Flaring is commonly seen:

- At processing plants to safely remove stored gases in pipes, vessels and tanks during maintenance or emergency shutdowns
- At drilling rigs to safely remove gases encountered when drilling
- On exploration and appraisal wells until a sufficient amount of information is gathered to prove the viability of the reserve.

A flare is characterised by a vertical stack or pipe with a burner at the tip. Other components can be connected to the inlet of a flare and include valves, hoses, pipes regulators and connecting fittings.

Flaring is the one of the safest processes for burning unusable combustible vapours and liquids.

Flaring is covered by production and environmental regulations for Queensland's onshore gas industry. The requirements for flaring activities near homes and communities are built into each permit holder's environmental approval.

Petroleum companies conducting production testing for wells must provide written notice to DNRMMRRD within 20 days of commencement of production or storage testing. Production testing is permitted for a period of 13 months from the day testing first starts, or 6 months from the day the testing first starts for any other type of production and storage testing.

Noise, light and odour

Gas activities may have an impact on acoustic values and air quality, such as dust, light, noise, and odour.

Environmental authorities (EA) allow gas companies to enter into alternative arrangements to manage a range of environmental nuisances. An alternative arrangement is a written agreement about the way in which a particular nuisance impact will be dealt with at a particular place.

If a gas company expects their activities may result in impacts to your property, regardless of whether the activity is occurring on your property or a neighbouring property, they may negotiate arrangements with you to remedy these impacts.

An alternative arrangement does not have to be a separate document or a separately negotiated compensation amount. Alternative arrangements can be included in a CCA if you will have one with the company.

Noise

An EA should identify the acoustic values of the area where the proposed activities are to be carried out. These acoustic values include:

- Health and biodiversity of ecosystems
- Human health and wellbeing, including ensuring a suitable acoustic environment for individuals to sleep, study or learn, and be involved in recreation, including relaxation and conversation
- The amenity of the community.

Assessing the implications of the above, DETSI will usually impose conditions in the EA for the protection of the acoustic environment. Noise management plans can also be required to address how activities will be carried out, according to best practice noise management principles.

Air quality

Environmental authorities may set emissions limits to comply with if considered appropriate or necessary by DETSI.

Resource companies must ensure that the release of dust, light, odour or any other airborne contaminants resulting from the activities do not cause an environmental nuisance to any sensitive receptor. Environmental authorities also include a suite of monitoring requirements for point source contaminant releases to air in order to demonstrate that companies are complying with their requirements.



Case study

Innovation and impact reduction

Focus on community impact is essential early on, when opportunities can be taken to design the field and facilities in a way that reduces impact. Origin, as operator of the APLNG upstream facilities, made the decision to use electric-driven compressors, which drove the extension of the Queensland electricity network further west into the Surat Basin and allowed for the use of more efficient compressors which make materially less noise than gas-driven compressors. Ground flares were also chosen to reduce the noise and visual impact of flaring events.



Case study

Air quality in the Surat Basin

A three year study completed in 2018 by **CSIRO** investigated the influence of CSG activities on air quality.

Since 2016 the data collected from the study has been **streamed live to the DETSI website** and it shows good ambient air quality in and around the towns of Condamine, Miles and Chinchilla.

The air quality monitoring found low concentrations of volatile organic compounds in these areas. These tiny compounds found in the air around Chinchilla were attributed to vehicle exhaust, as well as domestic and commercial sources within the town.

Other activities that typically affect air quality in rural areas include bushfires, dust from cattle movements, wind-blown dust and vehicles driving on unsealed roads.

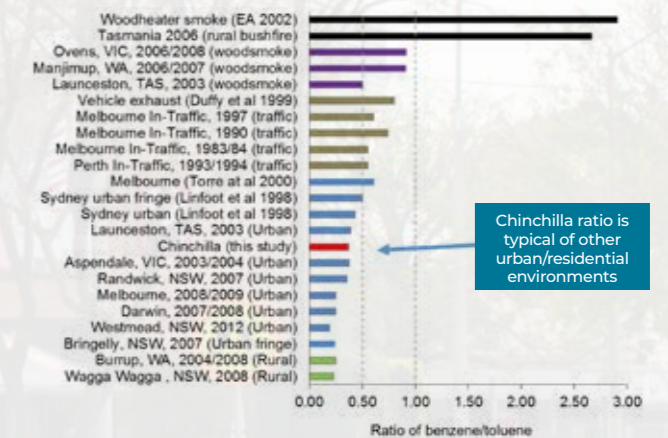
Importantly, the study found that CSG activities did not contribute to elevated concentrations of fine particles which exceeded air quality objectives.

In April 2020 CSIRO published further findings from research that represents Australia's most comprehensive investigations into hydraulic fracturing activities to date. This unique research opportunity monitored the impacts of hydraulic

fracturing at six CSG wells prior to, during, and after hydraulic fracturing operations ([click here](#) to view the report's findings).

The final reports present air, water and soil quality data measured before, during and after well pad development (including hydraulic fracturing) at coal seam gas wells in the Surat Basin.

Ratios of benzene/toluene from woodsmoke/ fire, vehicle exhaust, urban and rural areas



Graph Source: CSIRO 2018

Chapter 9

Land rehabilitation and asset handover

In this chapter we cover:

- [Rehabilitation responsibilities](#)
- [Rules for plugging and abandoning gas wells](#)
- [Transfer of gas infrastructure](#)

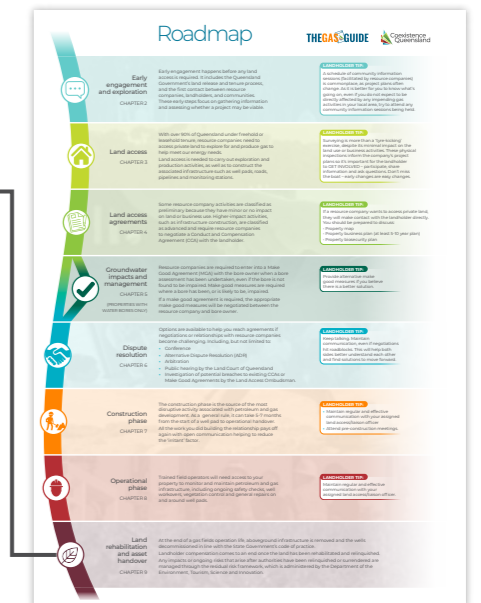
Chapter 9 Land rehabilitation and asset handover

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At the end of a gas field's operating life, aboveground infrastructure is removed the wells decommissioned in line with the Queensland Government's code of practice.

Landholder compensation comes to an end once the land has been rehabilitated and relinquished.



Rehabilitation responsibilities

The rehabilitation of gas field sites and facilities occurs at the end of operations, in consultation with the landholder and in line with current Queensland legislation. Generally, the government requires that rehabilitation be completed within 6-12 months of infrastructure no longer being required.

At the end of a well's operating life (usually 15-30 years) aboveground infrastructure is removed, the borehole is filled with cement or other suitable material, decommissioned, and a small dinner plate-sized cap or a stake with an identifier is left behind to mark its location. Gathering lines are generally drained and plugged then left belowground.

The conditions of the EA state the standard and end use the land must be restored to. At a minimum, final rehabilitation ensures that:

- Affected areas are stable
- Surface drainage lines are re-established
- Topsoil is reinstated
- Vegetation is regenerated.

The effective decommissioning of wells at end-of-life is crucial to avoid potential environmental legacy effects.

The ultimate authority to decide if decommissioning and rehabilitation has been properly completed lies with the Queensland Government.

Resource companies are expected to consult with landholders on rehabilitation. Landholders must declare if they are satisfied with rehabilitation works, and may also negotiate to retain some of the infrastructure (e.g. fences, concrete slabs, dams) if that suits their future objectives. The Queensland Government requires all resource companies to provide upfront financial assurance to cover the estimated costs of final land rehabilitation.

TECHNICAL NOTE: Restoration vs rehabilitation

Restoration can occur during the life of the resource project. For example, handing the site back to the landholder whilst resource company infrastructure is still in place. Rehabilitation is the final phase – when a site is returned to its original condition, pre-resource project.

TECHNICAL NOTE: Removing agreement from land title

Any valid CCAs or opt-out agreements are bound to the property and any future owners of the property, as well as any new holders of the resource authority.

These agreements remain attached to the property title until the resource company applies to remove it (when the agreement ends or no longer applies to land as a result of subdivision).

The resource company must apply to remove a valid agreement from the land title within 28 days of the agreement ending or being no longer applicable.

Case study

Rehabilitation protocol – Shell

During the construction phase, Shell QGC establishes a disturbance footprint that includes well pads, access tracks, workspaces and pipeline corridors.

As part of this process, the company removes and stockpiles material such as subsoil, topsoil and cleared woody vegetation in a nearby location for re-use during rehabilitation.

Shell QGC also installs erosion and sediment control devices such as berms and rock checks to minimise the risk of sediment releases from the project area.

At the time of rehabilitation, the stockpiled material is returned, and seeding is undertaken to encourage the reestablishment of vegetation. The aim is to rehabilitate any disturbance to background condition on completion of petroleum activities.



Rules for plugging and abandoning gas wells

Just as gas wells must be drilled and completed in accordance with safety and other requirements of the **Petroleum and Gas (Safety) Regulation 2018**, wells must be plugged and abandoned in accordance with that same regulation.

A **Code of Practice** that is overseen by **Resources Safety & Health Queensland** ensures all petroleum and gas wells and associated bores are constructed, operated and abandoned to a consistent acceptable standard to ensure safety through long-term well integrity.

The code outlines industry standards and good practice for well design. It is designed to complement the resource company's internal risk assessment processes, operating standards and procedures (in their safety management system) by outlining a recommended process to ensure:

- Risk to the public and workers is managed to a level as low as reasonably practicable
- Regulatory and applicable Australian and international standards/requirements, as well as the resource company's standards, are understood and implemented where appropriate
- The life of a well or associated bore is managed effectively through appropriate design and construction techniques and ongoing well integrity monitoring
- The environment and groundwater resources are protected.

At the end of the rehabilitation process, the Queensland Government resumes its stewardship of any surrendered or relinquished resource tenures, on behalf of all Queensland citizens.

Transfer of gas infrastructure

The Queensland Government recognises the value of certain petroleum and gas infrastructure, particularly for primary industries, and that landholders may benefit from having access to these assets after resource activities have ended.

Infrastructure that may be suitable for transfer can include items commonly constructed on farmland, such as bores, access tracks, hardstand areas, pipes and pumps for irrigation, fences and sheds. Water storage dams may also be considered, but require specific assessment.

As part of any transfer, the petroleum operator must ensure the infrastructure is safe, stable and not at risk of causing environmental harm. The petroleum operator and landholder must also agree to the transfer in writing. Depending on the type of infrastructure being transferred, the operator may need approval from DETSI to amend their environmental authority.

TECHNICAL NOTE: Legacy Infrastructure

The intent of the regulatory framework is that in most circumstances landholders will not be liable for harm caused by or arising from the failure of any legacy infrastructure on their properties, provided the landholder's actions did not cause or contribute to the failure or the resulting harm. In most circumstances the regulatory framework is designed so that the State takes responsibility for dealing with issues arising from legacy infrastructure.



Pipeline during construction



Pipeline six months later

TECHNICAL NOTE: Major Pipelines

High pressure pipelines are buried at least 750mm underground and in some cases deeper.

They are generally constructed in sections with each section usually completed in under 12 months.

Disturbed areas are reinstated to match the existing landforms which often includes re-contouring and installation of permanent erosion control structures.

Topsoil conserved during the construction process is spread over the area.

The area is then rehabilitated in accordance with government requirements and landholder considerations such as cultivation areas, grazing and grass seed combinations.

Signs are erected at regular intervals within line-of-sight of one another to indicate the presence of the buried pipeline.

Chapter 10

Helpful resources

In this chapter we cover:

- [Experts on tap](#)
- [Research institutes](#)
- [Health and wellbeing](#)

Annual Report on Gasfields Communities



Experts on tap

Coexistence Queensland

Originally established in 2013 as the GasFields Commission Queensland, Coexistence Queensland is an independent statutory body that has evolved alongside Queensland's energy and resources sectors, reflecting the increasing importance of sustainable coexistence across gas, renewables, transmission, mining and emerging industries.

The organisation's purpose is to manage and improve sustainable coexistence in Queensland's regional communities by providing independent, practical information and serving as a trusted reference point for landholders, regional communities, local government and industry involved in energy and resource development.

Coexistence Queensland also responds to individual enquiries and requests for information about gas and other energy and resource-related activities, helping people understand processes, responsibilities, and available support.

Coexistence Queensland delivers an extensive program of information sessions, workshops and engagement activities across the state, as well as building and maintaining a comprehensive knowledge base to support informed decision-making and constructive relationships between landholders, communities and industry.

The Coexistence Queensland website hosts a wide range of plain English resources, regularly updated through e-newsletters and social media, to ensure access to timely and relevant information.

Services

- The Gas Guide is one of a number of free publications, guides and fact sheets available to stakeholders
- Independent, expert information delivered in-person and online by staff with strong rural knowledge and on-ground experience
- Responses to individual enquiries and requests for information about gas and other energy and resource-related activities
- Facilitation of connections between stakeholder groups to support respectful dialogue and practical problem-solving

- Best practice guidance to support sustainable coexistence across Queensland's energy and resource sectors
- Regular e-newsletters and industry updates

Phone: 1300 548 021

Email: enquiries@cqld.org.au

Web: <https://cqld.org.au/>

Department of Primary Industries (DPI)

DPI plays a crucial role in protecting Queensland from invasive species, plant and animal pest and disease threats. Changing land uses and the movement of people and equipment can increase biosecurity risks that need to be effectively managed.

Services

- Biosecurity advice and planning relating to all stages of the project lifecycle.

Phone: 13 25 23

Email: info@dpi.qld.gov.au

Web: www.dpi.qld.gov.au

Department of the Environment, Tourism, Science and Innovation (DETSI)

DETSI protects and manages the State's environment and natural resources with a gas industry focus on groundwater, chemical usage and waste disposal. Before resource companies start any work on any operation, they must meet the requirements of a stringent approvals process that may vary according to the nature of activities (e.g. exploration, development or production).

Services

- Advice on 'make good' provisions of the **Water Act 2000**
- EAs, offsets requirements
- Environment Impact Statement (EIS) advice
- CSG water and environmental management

Phone: 13 74 68

Email: info@detsi.qld.gov.au

Web: www.detsi.qld.gov.au



Resources Safety & Health Queensland (RSHQ)

RSHQ is the independent regulator of worker safety and health in Queensland's mining, quarrying, petroleum, gas and explosives industries. RSHQ's focus is on ensuring the protection of the safety and health of workers and community affected by resources operations.

Services

The Petroleum and Gas Inspectorate leads RSHQ's response to petroleum and gas safety by:

- communicating with industry to provide guidance and information necessary to discharge safety requirements
- using risk-based plans to monitor industry compliance with safety requirements
- taking enforcement action where safety requirements are not met.

Web: www.rshq.qld.gov.au/contact/petroleum-gas-inspectorate

Office of Groundwater Impact Assessment (OGIA)

OGIA is an independent statutory entity established to undertake evidence-based independent scientific assessment of cumulative groundwater impacts, setting management arrangements and assigning responsibilities to resource companies for implementation of strategies within CMAs.

OGIA is a department within the Department of Local Government, Water and Volunteers, which provides corporate and administrative support.

Core activities and services

- Preparation of a UWIR every three years for a CMA
- Overseeing implementation of the UWIR and preparing Annual Reports
- Undertake research, hydrogeological investigations and assessments relating to groundwater flow behavior and connectivity
- Cumulative groundwater impact modelling, including identifying impacted water bores for make-good
- Designing and implementing of groundwater monitoring and impact management strategies

- Maintenance and analysis of groundwater monitoring data in a CMA
- Assigning statutory responsibilities to resource companies for the implementation of management strategies within CMAs.

Phone: (07) 3199 7321

Email: ogia@dlgww.qld.gov.au

Web: <https://www.ogia.water.qld.gov.au>

Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development (DNRMMRRD)

DNRMMRRD offers a range of engagement, compliance, tenure management and technical and geoscientific services that support the exploration and development of minerals and energy resources, with staff located throughout Queensland.

Services

- Regular schedule of land releases for petroleum and gas, and coal exploration: <https://bit.ly/QGOV-2021-QEP-EOI>
- Provides a single contact point for the community and landholders via the **Mining Community Infoline**, regarding complaints and enquiries associated with minerals and energy resources in Queensland
- Has the ability to assist parties in negotiations around compensation and make good
- Manages authorities and permits for minerals and energy resources, including petroleum and gas
- Delivers a critical compliance service, ensuring that resource companies comply with statutory obligations associated with resource authorities. This includes audits, inspections and complaint investigations relating to land access and includes water bore investigations.

www.business.qld.gov.au/industries/mining-energy-water/resources/landholders/csg/monitoring-complaints

Phone: 13 71 07

Email: resources.info@nrmmrrd.qld.gov.au

Websites: www.nrmmrrd.qld.gov.au

Land Access Ombudsman (LAO)

The Office of the Land Access Ombudsman operates to improve the land access framework for landholders and the resources sector in Queensland.

It is an independent, impartial body designed to help landholders and resource companies resolve disputes about alleged breaches of CCAs and MGAs.

It does not have legal authority to make rulings on disputes.

Services

- Investigations into disputes over alleged breaches of CCAs and MGAs
- Advice and recommendations* on dispute resolution
- Refer or recommend possible offences and breaches to the relevant government department
- Provide advice to government agencies about systemic issues arising from land access disputes.

**Please note, recommendations are not binding and are provided to parties as information or advice only.*

Phone (free call): 1800 717 550

Email: enquiries@lao.org.au

Web: www.lao.org.au

Land Court of Queensland

Perceived as 'the last resort' for a legal ruling on property disputes, the Land Court of Queensland offers a number of ADR options in the interests of resolving disputes fairly, cost-effectively and efficiently.

Contact the Land Court to discuss your options. You can attend an interview at the Land Court Registry in person, by phone or via Skype.

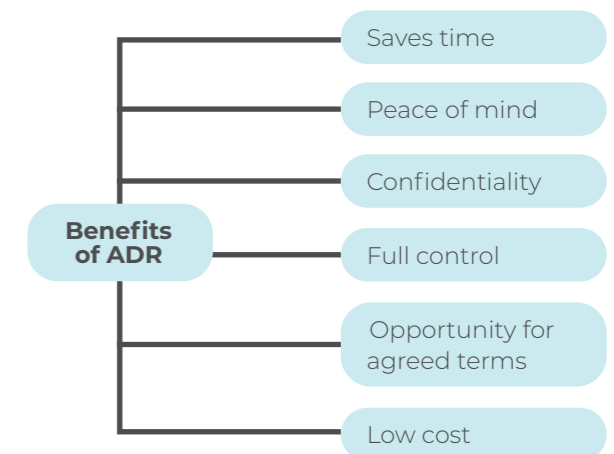
Services

- Procedural Assistance Service
- Facilitated conferencing of parties
- Mediation by court officers or qualified convenors
- Expert ADR panel
- ADR referral opportunities even when a case is being heard in the Land Court.

Phone: (07) 3738 7199

Email: adrpanel.landcourt@justice.qld.gov.au

Web: www.courts.qld.gov.au/courts/land-court/





Queensland Law Society

The Queensland Law Society strongly advises that you get independent legal advice before entering into a Compensation Agreement, Deferral Agreement or Opt-Out Agreement. The importance of getting legal assistance is recognised by the legislation in the area.

The Queensland Government has specifically legislated that the resource company is obliged to pay for the legal fees that are reasonable and necessarily incurred to help you negotiate such agreements.

Services

- Help find a solicitor
- Useful links.

Phone: 1300 367 757

Email: info@qls.com.au

Web: www.qls.com.au

Australian Mediation Association

The Australian Mediation Association is a group of mediators and conflict resolution practitioners who provide private mediation services, consulting services, and education in mediation, communication and negotiation to help businesses and individuals avoid disputes through planning and to resolve disputes through mediation.

Services

- Professional mediators and ADR practitioners
- Getting the appropriate parties to the negotiation table
- Completely independent consultants.

Phone: 1300 633 428

Email: info@ama.asn.au

Web: www.ama.asn.au

Resolution Institute

Resolution Institute is a vibrant community of mediators, arbitrators, adjudicators, restorative justice practitioners and other Dispute Resolution (DR) professionals. DR can help prevent, manage and resolve conflict and disputes in business, workplaces, families and communities. Resolution Institute is a not-for-profit organisation with more than 2,800 members in Australia, New Zealand and the Asia Pacific region.

Services

- When parties need a contractually agreed, independent and unbiased service to appoint a dispute resolver
- When a government, industry or agency scheme requires an independent and unbiased third party to appoint an appropriately qualified dispute resolver.

Phone: 1800 651 650

Email: infoaus@resolution.institute

Web: www.resolution.institute

Research Institutes

Centre for Applied Energy Economics and Policy Research (Griffith University)

CAEEPR aims to maximise the energy sector's potential to achieve emission reductions and contribute to inclusive, sustainable and prosperous businesses and communities while building capacity in the electricity economics. CAEEPR uses a national electricity market model to develop and analyse different scenarios to assess different policy positions for generator dispatch and transmission efficiency.

Email: caeepr@griffith.edu.au

Web: www.griffith.edu.au/griffith-business-school/research/centre-applied-energy-economics-policy-research

Gas & Energy Transition Research Centre (University of Queensland)

The University of Queensland's Gas & Energy Transition Research Centre undertakes independent research to address the complexities and challenges of the energy transition in Australia and the Asia-Pacific. The Centre's research and engagement aims to support the development of knowledge, policies and practices that will ensure an equitable energy transition and the responsible development of energy resource projects.

Phone: (07) 3346 4101

Email: gas-energy@uq.edu.au

Web: www.gas-energy.centre.uq.edu.au



Health and wellbeing

Working on the land can affect your health, both physically and mentally. If you need support, it is always important to talk to your GP or healthcare professional. If you or someone you know are in need of support, there are countless services available across numerous platforms (via phone, online, face-to-face). Browse through the services below to find a support provider that best suits your needs. Community and Neighbourhood Centres can also be a good source of information, as well as your local council's website.

Primary Healthcare Networks (PHN)

PHNs have been established with the key objectives of increasing efficiency and effectiveness of medical services for patients, particularly those at risk of poor health outcomes, and improving coordination of care to ensure patients receive the right care, in the right place, at the right time. See below to find a PHN service in your area:

Darling Downs and West Moreton Region

Phone: (07) 4615 0900
Email: info@ddwmpnh.com.au
Web: www.ddwmpnh.com.au

Western Queensland

Phone: (07) 4573 1900
Email: admin@wqphn.com.au
Web: www.wqphn.com.au

Central Queensland, Wide Bay & Sunshine Coast

Phone: (07) 5456 8100
Email: info@c2coast.org.au
Web: www.c2coast.org.au

Northern Queensland

Phone: (07) 4034 0300
Email: support@nqphn.com.au
Web: www.nqphn.com.au

Government Health Initiatives

Your mental wellbeing is the unique way that you handle your emotions, respond to stress and also your general outlook on life. Having a healthy sense of mental wellbeing has many benefits. Discover ways to strengthen your mental wellbeing utilising these online resources from the Queensland Government:

1. www.mentalwellbeing.initiatives.qld.gov.au
2. www.medicarementalhealth.gov.au
3. www.healthdirect.gov.au

Mental Health Care Centres

Medicare Mental Health services help people navigate mental health, suicide prevention and alcohol and other drug services in the Darling Downs and West Moreton region. The services are free and no bookings are required.

The service is a collaboration between the community, people with lived experience, the mental health sector, and the Australian Government Department of Health and Aged Care.

Phone: 1800 595 212
Web: www.ddwmpnh.com.au/mental-health-support

Access 24 hour support via the numerous helplines listed below. If it is an emergency always call triple zero (000).



Mental Health Access Line (1300 64 22 55)

Confidential mental health telephone triage service that provides Queenslanders first point of contact to public mental health services. A 24/7 service that links callers to the nearest Queensland Public Mental Health service.

1300 MH CALL / 1300 64 22 55:

- Is the main point of access into public mental health services
- Can provide support, information, advice and referral in a mental health emergency or crisis
- Is staffed by trained and experienced professional mental health clinicians
- Will provide a mental health triage and refer to acute care teams where appropriate.



Lifeline is a national charity providing all Australians experiencing emotional distress with access to 24-hour crisis support and suicide prevention services.

Phone: 13 11 44
Text line: 0477 13 11 14 (Text available 24/7)
Web: www.lifeline.org.au



Beyond Blue provides information and support to help everyone in Australia achieve their best possible mental health, whatever their age and wherever they live.

Phone: 1300 224 636
Online chat: beyondblue.org.au/get-support/talk-to-a-counsellor/chat (free 24/7 online service)
Web: www.beyondblue.org.au



Kids Helpline is Australia's only free, private and confidential 24/7 phone and online counselling service for young people aged 5 to 25.

Phone: 1800 55 1800
Online chat: [/webcounselling/live/chat/](http://webcounselling/live/chat/)
Web: www.kidshelpline.com.au



Suicide Call Back Service is a nationwide service that provides professional 24/7 telephone and online counselling to people who are affected by suicide.

Phone: 1300 659 467
Online counselling: [/phone-and-online-counselling/](http://phone-and-online-counselling/)
Video chat: www.suicidecallbackservice.org.au/phone-and-online-counselling/



MensLine Australia is a telephone and online counselling service for men with emotional health and relationship concerns.

Phone: 1300 78 99 78
Online Counselling: mensline.org.au/phone-and-online-counselling/
Video chat: mensline.org.au/phone-and-online-counselling/



MATES provides suicide prevention through community development programs and by supporting workers in need through a 24/7 help line.

Phone: 1300 642 111
Send a message: www.mates.org.au/contact
Web: www.mates.org.au

Chapter 11

Appendix

Glossary

The gas industry and the mechanisms covering its operation in Queensland have spawned a range of terms and acronyms. This is a quick guide to some of the terms a landholder might find themselves using far more often than they thought possible.

Access agreement

A negotiated agreement between a resource company and landholder relating to the rights over designated 'access land' (see below).

Access land

This is land outside a declared resource authority area, over which it is reasonably necessary for a resource company to travel in order to access land subject to their resource authority.

Access right

A resource company's right to cross access land (where reasonably necessary) or carry out activities on the access land that are reasonably necessary to allow the crossing of that land.

ADR

Alternative Dispute Resolution refers to any means of settling disputes outside of the courtroom (resolving disputes without litigation) and typically includes early neutral evaluation, negotiation, conciliation, mediation, and arbitration.

Advanced activity

An authorised activity for the resource authority that is not a preliminary activity.

ATP

To explore for petroleum, oil, coal seam gas and natural gas in Queensland, you must hold a current authority to prospect.

Authorised activity

An activity permitted for the resource authority by the particular Act under which it is granted.

Bcf

Billion cubic feet (of gas).

Barrels of oil equivalent (Boe)

A unit of energy approximating the energy released by burning one barrel (158 litres) of crude oil.

CCA

A Conduct and Compensation Agreement is a legal agreement between a landholder and a resource company relating to proposed activities or conduct and, where there is impact on the landholder, compensation arrangements for those activities.

CMA

Under the *Water Act 2000*, a cumulative management area can be declared if an area contains two or more resource tenures, including tenures on which CSG and mining activities operate, and where there may be cumulative impacts on groundwater resulting from water extraction by the tenure holders.

Coexistence Queensland

Originally established in 2012 as the GasFields Commission Queensland, Coexistence Queensland's purpose is to manage and improve sustainable coexistence in Queensland's regional communities by providing independent, practical information and serving as a trusted reference point for landholders, regional communities, local government and industry involved in energy and resource development.

CSG

Coal seam gas is natural gas that is contained within coal seams.

CSIRO

The Commonwealth Scientific and Industrial Research Organisation is Australia's national science research agency.

DAA

A data acquisition authority authorises you to conduct limited geophysical survey activities and collect data outside the area of your exploration permit or lease.

DPI

The Department of Primary Industries works to ensure that Queensland's primary industries are profitable, productive and sustainable for future generations.

Deferral Agreement

A legal agreement in which a landholder and resource company agrees to defer the negotiation of a CCA until a later date and after the resource company has accessed the land to undertake advanced activities.

DETSI

The Department of the Environment, Tourism, Science and Innovation is responsible for protecting and managing parks, forests and the Great Barrier Reef. They lead the development of science strategy for government whilst fostering a community of the arts and facilitating the growth of the arts and cultural sector in Queensland. They are also responsible for administering Chapter 3 of the [Water Act 2000](#).

DNRMMRRD

The Department of Natural Resources and Mines, Manufacturing and Regional and Rural Development is responsible regulating the exploration and production of coal, minerals, petroleum and gas (including CSG), and land resources in Queensland. The department also provides strategic partnerships for the manufacturing sector and enables industries, stakeholders and customers to build stronger regions.

DLGWV

The Department of Local Government, Water and Volunteer's purpose is to deliver innovative strategies and responsive services enabling: an empowered local government sector; water resource management which drives economic growth; and a reinvigorated volunteering sector.

DSDIP

The Department of State Development, Infrastructure and Planning is responsible for state development, economic development, infrastructure, urban growth, industrial relations and Brisbane Olympic and Paralympic Games infrastructure.

EA

In Queensland, you need to apply for an Environmental Authority to undertake an environmentally relevant activity (ERA).

ERA

Environmentally Relevant Activities are industrial, resource or intensive agricultural activities with the potential to release contaminants into the environment. They include a wide range of activities such as aquaculture, sewage treatment, cattle feedlotting, mining and resource activities such as petroleum (which includes coal seam gas), geothermal and greenhouse gas storage activities.

Fracking/FRACCING

See Hydraulic Fracturing.

Hydraulic fracturing (FRACCING)

Is a safe and established method used by the petroleum and gas industry since the late 1940s to increase the rate and total amount of petroleum and gas extracted from reservoirs. Water, sand (99%) and household chemicals (1%) are pressure pumped into steel-encased wells to stimulate the opening of cracks in gas-bearing formations. In Queensland, the technique is used in approximately 8% of wells.

HPVs

In order to completely fill a gas piping system (gathering lines) you must be able to purge all air from the pipes – air will naturally accumulate in the high points of the system. Thus companies install High Point Vents on gathering lines to get rid of any air.

Hydrocarbons

Are organic compounds comprising hydrogen and carbon. Hydrocarbons are the principal constituents of oil and gas.

IAA

An immediately affected area (a subset of an LAA) is predicted to exceed the bore trigger thresholds within the next three years.

LAA

A UWIR identifies bores in a long-term affected area that are predicted at any time in the future to exceed the bore trigger threshold.

Landholder

The owner and/or occupier (e.g. rental tenant) of private land.

LNG

Liquefied natural gas.

LPDs

See HPV. Once all air has been purged from a gas piping system (gathering lines), companies must be drain out all the water. Water naturally gravitates to low points of the system, so companies install Low Point Drains.

LPG

Liquefied petroleum gas.

Methane

Methane is a chemical compound with the chemical formula CH₄. It is the primary constituent of natural gas.

MGA

A Make Good Agreement is a legally binding agreement entered into by a resource tenure holder and a bore owner about a water bore. An MGA is required for all bores that have had a bore assessment undertaken (not just those with an impaired capacity).

Natural gas

Primarily methane extracted from gas-bearing underground reservoirs.

Negotiation Notice

A resource company wishing to begin formal negotiations with a landholder may give the landholder a Negotiation Notice. This provides a formal window, a minimum of 20 business days, for negotiation of a CCA. The notice will state whether the resource company wishes to negotiate a CCA or a Deferral Agreement.

OGIA

The Office of Groundwater Impact Assessment is an independent entity established under the *Water Act 2000* responsible for assessing and managing the impacts of groundwater extraction from resource operations in CMAs (OGIA also provides advice on related matters outside CMAs).

Opt-Out Agreement

A legal agreement in which the landholder chooses to 'opt-out' of the requirement to enter into a CCA or Deferral Agreement.

PAA

A priority agricultural area (as defined in the *RPI Act 2014*) is an area that includes one or more areas used for a priority agricultural land use, whether it also includes other areas or features, including, for example, a regionally significant water source.

PCA

A potential commercial area is a type of petroleum authority that allows the holder of an ATP to keep rights to a discovery that is not yet commercially viable. The discovery must become commercially viable within 15 years, and a commercial viability report is required.

Petroleum

Liquid, gaseous and solid hydrocarbons including oil, natural gas, gas condensate, ethane, propane, butane and pentane.

Permanent impact

A continuing effect on land, its use, or a permanent or long-term adverse effect on its current use by the land's occupier.

Permeability

The degree to which gas or fluids can move through a porous material, such as rocks.

PFL

You will require a petroleum facility licence for a processing, refining, storage or transport facility if the facility is not already covered by your petroleum lease or pipeline licence.

PL

A petroleum lease gives its holder the right to explore, test for production and produce petroleum within the defined area of the lease.

PLA

A priority living area (as defined in the *RPI Act 2014*) is an area shown on a map in a regional plan as a priority living area; and that includes the existing settled area of a city, town or other community and other areas necessary or desirable for the future growth of the existing settled area; and as a buffer between the existing or a future settled area and resource activities.

PPL

To construct a petroleum pipeline outside the area of your petroleum lease, you need a petroleum pipeline licence.

PSL

A petroleum survey licence gives you the right to enter land to survey the proposed route of a pipeline or the suitability of land for a petroleum facility licence.

Preliminary activity

An activity that will have no impact or only a minor impact on the business or land use activities of a landholder on which the activity is to be carried out. (N.B. These activities are not considered preliminary activities if they are carried out on land that is being used for intensive farming or broadacre agriculture that is less than 100ha in size or if they affect organic or bio-organic farming).

Private land

Is freehold land, or an interest in land less than fee simple held from the State under another Act.

Proven reserves (1P)

Petroleum that can be estimated with reasonable certainty (at least 90%) to be commercially recoverable. Also known as 1P/P90 reserves.

Proven and probable reserves (2P)

Proven petroleum reserves plus reserves deemed probable (at least 50% likely) to be commercially recoverable. Also known as 2P/P50 reserves.

Proven, probable and possible reserves (3P)

Proven and probable reserves plus reserves deemed possible (at least 10%) to be commercially recoverable. Also known as 3P/P10 reserves.

Replacement water bore

Means a water bore that is constructed, installed or erected (i) to replace a water bore (the previous bore) used for the taking of, or interfering with, water – (A) for which a development permit was held or, under section **1048A of the Water Act 2000**, was taken to be held; or (B) for which a development permit was not required; or (C) which, under the repealed **Sustainable Planning Act 2009, section 681(1)**, was taken to be a lawful use of the premises in which the previous bore was constructed, installed or erected; and (ii) within 10m of the location of the previous bore; and (b) taps the same aquifer tapped by the previous bore.

Resource authority

An authorisation from the Queensland Government for a resource company to carry out specified activities over an area of land, including privately owned land.

Resource company

A resource authority holder or their agents or representatives.

Restricted land

Land around particular buildings and areas that a resource company cannot enter without written permission from the landholder.

SCA

A strategic cropping area (as defined in the **RPI Act 2014**) consists of the areas shown on the SCL Trigger Map (see below) as strategic cropping land.

SCL Trigger Map

Means the electronic map called '**Trigger Map for Strategic Cropping Land in Queensland**'.

SDS

Safety Data Sheets are documents that provide critical information about hazardous chemicals.

SEA

A strategic environmental area (as defined in the **RPI Act 2014**) is an area that contains one or more environmental attributes for the area; and is either shown on a map in a regional plan as a strategic environmental area; or prescribed under a regulation.

Shale gas

Natural gas that is contained within shale formations.

Tight gas

A natural gas field that can be made economical with a combination of horizontal wells and fracture stimulation (see hydraulic fracturing).

UWIR

An underground water impact report for the Surat Cumulative Management Area assesses the groundwater impacts from resource operations in the Surat and southern Bowen basins. It also establishes strategies to manage the predicted impacts and responsibilities for implementing various aspects of the strategies.

WMA

Holders of a mining lease or a mining development licence can apply for a water monitoring authority over land outside the area of your lease/licence to comply with their obligations.



Well operation terms

To assist landholders, CSIRO has compiled definitions for a range of industry terms linked to the petroleum and gas well life cycle. Some terms are self-evident, while others have industry-specific meanings.

Cement

Cement is placed in the wellbore, filling the space between the outside of the casing pipe and surrounding rock, and is also used to 'hold' the casing in place. Cement is also used to plug the inside of the well when it is abandoned. The cement used in wells typically consists of Portland cement mixed with water and special additives to achieve desired performance. The cement mix is designed to suit the local geology and well-specific engineering requirements. Laboratory testing checks the cement design and performance against well conditions.

Completion

After a well has been drilled for production purposes it is 'completed'. This involves installing a wellhead at the top of the well and completion hardware inside the well that allows the well to be operated as required. The completion will vary depending on the purpose of the well (production of gas, dewatering, monitoring).

Decommissioning and rehabilitation

Decommissioning involves rehabilitating the surface around the well pad and plugging and abandoning the well. Rehabilitation can begin as soon as drilling is completed and includes removing or burying rock cuttings, and disposing any fluids. A small area around the wellhead is retained for surface infrastructure.

Delamination

Delamination is where pathways are created between the layers of cement, casings, or surrounding rock that could compromise the long-term integrity of a well.

Drilling

Drilling a well involves getting a drilling rig and associated equipment to the site, drilling the well, completion of the well and demobilisation of the drilling equipment. Drilling rigs used for CSG wells are typically smaller than those used for conventional petroleum wells as the target coal seams are at shallow depths compared to conventional petroleum resources. The rigs may be mounted on a single truck, with

support vehicles, or be transported using several semi-trailers. The drilling stage occurs over several days to several weeks, depending on the depth and design of the well.

Drill cuttings

An 800-metre deep CSG well will produce around 50 cubic metres of drill cuttings, which are rocks removed from the hole. Drill cuttings have traditionally been captured in drilling sumps or pits. They are typically disposed of on-site, through the mix-bury-cover method. However, pitless drilling techniques may be used to manage the drilling fluid and cuttings.

Plugged and abandoned

Once a well is no longer required, the well is plugged and abandoned. Abandonment aims to plug the well in perpetuity, preventing any movement of gas or water between rock layers in the subsurface or to the surface. Effective abandonment needs all potential fluid flow to be blocked, and relies on the integrity of the casing-cement-formation system as well as cement plugs placed inside the casing.

Drilling fluids

Drilling fluids are typically made up of water and additives that reduce the friction between the drill rods and the wellbore walls, increase density and thickness of the fluid to help remove rock cuttings, and decrease the reactivity of the drilling fluid with the rock layers being drilled. Additives may include:

- Clays (primarily bentonite) to increase the thickness of the drilling fluid and to reduce loss of drilling fluid into the geological layers being drilled
- Additives such as polymers to increase thickness and provide lubrication
- Salts (typically potassium chloride or potassium sulphate) to limit damage to the geological layers being drilled and increase the density of the drilling fluid.

The amount of drilling fluid required for a well will be around 50,000 litres, although this will vary depending on the diameter and depth of the well and the characteristics of the formations the well intersects.

Suspended well

A well not currently operating (not producing or being used for monitoring), but that has not been plugged and abandoned permanently.

Well/wellbore

Deep vertical holes drilled into the earth to extract oil and gas. They provide a pathway for the flow of gas and water to the surface. Once a well is drilled, steel casing, also known as a casing string, is run into the well hole and cemented into the ground.

Well casing

The well casing provides structural integrity and a channel for the flow of fluid. Casing is made of a series of hollow steel pipes, known as strings, which are connected as they are lowered into the well. Engineers select the casing based on the characteristics of the local geology, the well design and any anticipated treatments, such as hydraulic fracturing. The casing is cemented into the well, sealing the gap between the casing and the rock formations the well is drilled through.

Well integrity

Well integrity prevents the unintended flow of gas or water into or out of a well. This includes at the surface or between rock layers in the subsurface, and is critical to maintain safe operation of the well and to protect the environment. Well integrity establishes barriers to control the flow of gas or water with elements including casing cemented into the well, a wellhead to control the flow of gas and water at the surface, and operational procedures to manage and maintain the well.

Workover

A well workover involves bringing a rig onsite to clean, check, repair and/or treat the infrastructure inside the well. Where necessary, workovers can involve replacing the pump, well tubing or rods, re-perforating the well, removing any loose rock or even changing the downhole configuration of the well. Workovers typically last between 3 - 6 days.

Workover rig

A workover rig is a mobile self-propelled rig used to perform one or more remedial operations on a producing oil or gas well to try to restore or increase the well's production. Workover rigs are very similar to drill rigs in that they are truck-mounted mobile rigs that travel between job sites on public roads.

Understanding resource authorities

Before the Queensland Government considers issuing a resource authority permitting specified activities on private land, it must be satisfied that the applicant (the resource company) has the financial and technical capability to ensure planned activities are sufficiently funded. The applicant must also pay a security deposit and financial assurance (a rehabilitation bond) and may be liable for 12 months' land rent in advance.

Before a resource authority is issued, the resource company must also have:

- An appropriate EA issued by DETSI
- Fulfilled all legal obligations under national Native Title Protection Conditions
- A regional interests development approval if the resource activity is to occur in an area of regional interest (mapped areas of living, high-value agricultural or environmental significance under the **Regional Planning Interests Act 2014**), unless otherwise exempt.

A resource authority holder must comply with the following reporting obligations, as well as with specific conditions attached to the authority.

Reporting obligations

- Water
- Development plans and work programs
- Permit administration and authority renewal
- Rent and royalties
- Collecting and maintaining drill core and drill samples
- Land access requirements
- Native Title Protection Conditions/Native Title Agreement
- Indigenous cultural heritage
- Environmental authorities
- Restricted areas, reserve land
- Overlapping authorities
- Safety and health.



Petroleum and gas resource authorities

Authority to prospect (ATP)

To explore for petroleum and gas in Queensland, a resource company must hold a current authority to prospect (ATP). The Queensland Government provides regular releases of land for potential exploration tenure via a competitive tender process. Resource companies first submit a tender bid for the area – if successful, and subject to meeting other requirements, this may result in the granting of an ATP.

Under an ATP, a resource company commits financial and physical resources to undertake verifiable exploration activities. An ATP lasts 12 years and the resource company must hand back 50% of the ATP after 6 years if they have not applied to convert it to a petroleum lease during that time. The government can also withdraw component 'blocks' if agreed activities are not conducted. A company may apply for relief from 'use it or lose it' provisions because of circumstances beyond their control.

An ATP allows the resource company to:

- Explore for petroleum and gas
- Test for petroleum and gas production
- Evaluate production feasibility
- Evaluate or test natural underground reservoirs for the storage of petroleum and gas.

Under an ATP, preliminary activities are undertaken followed by seismic investigations and the drilling of core samples to investigate whether resource deposits exist, and, if so, their size and depth. An exploration well may be drilled to obtain further data by examining rock cuttings and using specialised 'down hole' logging tools.

If these activities indicate there is a potential resource warranting further investigation, the resource company may drill a small number of appraisal wells to understand whether the resource is technically and financially feasible to develop. This is also known as 'production testing' or a 'pilot test'.

A resource company has an obligation under its EA to rehabilitate the land on completion of the exploration activities.

Exploration is not necessarily a precursor to production. As geology varies over relatively short distances, so do resources and their prospectivity. Adjacent wells can also perform differently, confirming that the earth can play as many tricks as the weather.



TIP

ATPs can cover a maximum of 100 blocks on a linear grid of Queensland and measure up to 75km² (7,500 ha) each, depending on location.



Petroleum and gas resource authorities

Petroleum lease (PL)

With evidence of a commercially viable discovery, a petroleum lease (PL) can be issued over the area of an ATP. If a PL is granted, that area is excised from the ATP. A PL lasts up to 30 years and a resource company can apply to the government to have the tenure renewed.

The resource company has an obligation to rehabilitate the land when production ceases. This is staged for projects where wells cease production at different times.

A PL allows exploration, construction and commercial production. Exploration related activities can continue under a PL, particularly if a resource company is trying to understand how rocks perform in different areas of the tenure.

Types of infrastructure associated with development on a PL include access tracks, production wells, gathering lines and associated above ground infrastructure, temporary camps, compression facilities, dams, water treatment facilities, gravel pits and laydown areas. The larger facilities are small in number and are often located on land owned by the resource company.

Potential commercial area (PCA)

If a resource company with an ATP makes a discovery that is not feasible to develop at that time owing to a lack of market infrastructure or potential to roll into a larger development project, the company can request a potential commercial area (PCA) declaration for evaluation purposes.

This is a means of retaining the area beyond the maximum 12-year ATP term, with a PCA current for up to 15 years. A commercial viability report and an evaluation program confirming how the company would overcome challenges to the project's commercial viability must accompany a PCA application.

Pipeline licences (PPL)

Pipelines are required to transport petroleum, gas and/or water to processing facilities and then into larger pipelines for distribution. It is increasingly common for a number of lines to be co-located including optic fibre and electricity. If a resource company wishes to construct a petroleum pipeline outside the area of their PL, they need a petroleum pipeline licence (PPL). A PPL confirms the right to construct and operate a pipeline on designated 'pipeline land', defined as land that the resource company either owns or over which it has:

- An easement
- A written agreement with the landholder to enter to construct and operate the pipeline
- Part 5 permission.

While it seems logical to run pipelines along the most convenient easement, there is always complexity negotiating with a third party such as a rail or power company, also noting specific separation distances. In most cases, a resource company will approach the landholder first to negotiate an easement before examining other options. Bottom line – the shortest distance between two points is a straight line.

Should easement negotiations fail, a resource company can, as a last resort, apply for what is known as a part 5 permission (see later section).

PIPELINE LICENCE TYPES

- AREA PPL – covering a system of pipes within the licence area rather than individual licences for each pipeline. An area PPL can extend over several adjacent petroleum leases
- POINT-TO-POINT PPL – granted from one point, or points, to another point, or points.

Petroleum facility licence (PFL)

This is required for a processing, refining, storage or transport facility on private land that is not already covered by a PL or PPL. A PFL allows construction of a facility on 'petroleum facility land' – land either owned by the resource company or land over which there is:

- An easement
- A written agreement with a landholder to enter to construct and operate the facility on their land
- Part 5 permission (see below).

A petroleum facility built on private land must follow negotiations with the landholder, usually resulting in the creation of an easement in return for some form of compensation.

Information gathering authorities

These are authorities to conduct authorised activities off tenure. They are not tenures in their own right.

For further information see Chapter 2, parts 3 and 5 of the **Petroleum and Gas (Production and Safety) Act 2004**: www.legislation.qld.gov.au/view/pdf/current/act-2004-025

Information gathering authorities include:

Petroleum survey licence (PSL) – grants a right to enter land to survey the proposed route of a pipeline or the suitability of land for a petroleum facility licence. Can be granted for a maximum of two (2) years, only allowing activities with minimal land impact. There are no area limitations.

Data acquisition authority (DAA) – authorises a resource company to conduct limited geophysical survey activities and collect data from outside their ATP or PL. Only granted over land contiguous to the granted ATP/PL, and for activities directly relevant to authorised activities of the ATP/PL. A DAA can be granted for a maximum term of two (2) years and ends if the ATP/PL with which it is associated ends.

Water monitoring authority (WMA) – an ATP/PL holder has an obligation to monitor potential impacts to groundwater levels on a regional scale and 'make good' if private bores are impaired due to their activities. A water monitoring authority (WMA) over land outside the area of an ATP/PL is available to comply with those obligations. The WMA ends if the ATP/PL with which it is associated ends.

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