

*Tabled. DNRM.  
15/2/16.  
Mr. Saji Joseph.*

### **Benefits of the WROLA reforms to groundwater management**

1. Landholders and the resources industries will benefit from the changes to the way in which groundwater is managed.
2. A more robust framework to manage impacts of mining activities on groundwater.
3. Landholders' right to water will be protected. They will have statutory certainty from the day a tenure is granted. They will be entitled to make good agreements if their water supply bores are expected to be impaired.
4. Resource companies will know their obligations upfront.
5. All parties will benefit from a statutory dispute resolution process.
6. There will be a comprehensive framework for managing cumulative impacts where two or more mining operations may affect a water bore.
7. All water users including the petroleum and gas industry will need to obtain licences and permits for the water they take for consumptive use. This means there will be a level playing field across all sectors.

## Why the Bill does not amend the groundwater management framework in WROLA

1. The former Government introduced a number of changes to the water laws under the Water Reform and *Other Legislation Amendment Act 2014* (WROLA Act), which were not supported by the current Government when in opposition.
2. On taking office, the Queensland Government acted immediately to prevent the commencement of the provisions of WROLA. The government then undertook a review of the provisions of WROLA to determine whether it is consistent with government policy.
3. The Government consequentially introduced the *Water Legislation Amendment Bill 2015* (the Bill) on 10 November 2015. The Bill amends WROLA in order to bring it into alignment with government policy.
4. WROLA Part 4, Part 5 and Part 8 (s 69-140) contain a groundwater management framework for the mining and the petroleum sectors, and this framework was considered as part of the review. The review was informed by stakeholder consultation and scientific investigations. The review concluded that the framework provides strengthened arrangements for managing the groundwater impacts of the mining sector compared to the arrangements in place today.
5. Additionally, the proposed framework would have no practical impact on the volume of underground water taken incidentally as a result of extracting a mineral resource, so it would not change an already negligible impact on the Great Barrier Reef.
6. The Government has decided that the groundwater management framework contained in WROLA is consistent with government policy. Accordingly, the Bill does not amend Part 4 or Part 5 of the WROLA and makes one minor amendment to Part 8 of the WROLA.

## What the WROLA reforms to groundwater management do.

1. WROLA includes reforms to the management of the take of groundwater by resources companies, including both mining operations and petroleum and gas operations.
2. The reforms ensure that resource companies have essentially the same processes, rights and obligations as other users when taking underground water to use in their operations, such as taking water to use in hydraulic fracturing.
3. They also ensure that landholders' underground water rights are protected if a resource activity causes impacts on water supply bores as a result of its operations.
4. **Mining:**
  - a. On commencement, WROLA will amend the *Mineral Resources Act 1984* to provide mining companies with a limited statutory right to take 'associated water'.
  - b. 'Associated water' is water taken incidentally in extracting the resource, such as dewatering a mine to provide for safe operating conditions.
  - c. This right applies only to companies that have already received their mining tenure and environmental authority, which are granted on the basis of environmental impact assessment under the *Environmental Protection Act 1994*.
  - d. The right is made subject to compliance with the underground water obligations, set out in Chapter 3 of the *Water Act 2000*.
  - e. Where a mine conducts dewatering, WROLA will protect the water rights for bore owners by requiring the mining company to 'make good' impacts on water supply bores, using the same statutory framework that presently applies to petroleum and gas operations.
  - f. The reforms provide up-front statutory certainty and clarity for all water users, and provide the ability to introduce a cumulative management regime to deal with overlapping impacts from multiple mining operations.
  - g. Additionally, the new framework would have no practical impact on the volume of ground water taken incidentally as a result of extracting a mineral resource.
  - h. Mining tenure holders will continue to need to obtain a licence or permit to take underground water to use in their activities, such as for dust suppression in areas where groundwater is regulated, consistent with other water users.
5. **Petroleum and gas production:**
  - a. The WROLA reforms will amend the *Petroleum and Gas (Production and Safety) Act 2004* to make petroleum tenure holders subject to the water planning and allocation framework for the take of 'non-associated' water.
  - b. 'Non-associated water' refers to water that is not taken incidentally in extracting the resource, but is taken to use consumptively in a process, such as hydraulic fracturing.
  - c. On commencement, petroleum tenure holders will need a licence or permit for take of 'non-associated' groundwater in those areas where groundwater is regulated.
  - d. A transition period of two years would apply for petroleum tenure holders to come into compliance with the requirement for an authorisation for non-associated water under the *Water Act 2000*. This is extended to five years in the Surat Cumulative Management Area.
6. **Chapter 3 of the *Water Act 2000*:**
  - a. Chapter 3 establishes the framework for managing the impacts resulting from the exercise of statutory underground water rights.
  - b. Currently this applies only for the petroleum and gas industry but WROLA amends it to also apply to the mining industry.

- c. The framework:
- requires tenure holders to monitor and assess the impact of the exercise of underground water rights on water bores
  - requires tenure holders to enter into make good agreements with the owners of the bores that have been identified as being likely to be affected
  - requires the preparation of underground water impact reports that establish further underground water obligations, including obligations to monitor and manage impacts on aquifers and springs
  - manages the cumulative impacts of the exercise of 2 or more tenure holders' limited statutory rights to underground water.
- d. Applying Chapter 3 to the mining sector strengthens the arrangements for managing the groundwater impacts of the sector compared to the arrangements in place today.



## Chapter 3: what it does and how it works

### Underground water

The extraction of underground water by petroleum tenure holders (including coal seam gas (CSG) operators) can result in a lowering of water levels in adjacent aquifers. This may impact upon water bores and natural springs in the surrounding area. The level of impact will vary depending on the:

- aquifer that each water bore is tapping
- degree of interconnection between the aquifers, the target petroleum and gas formation and springs
- distance from the petroleum and gas field
- time since the start of petroleum and gas extraction.

Petroleum and gas tenure holders have the right to take associated water under the *Petroleum and Gas (Production and Safety) Act 2004*, subject to an obligation to comply with the underground water management framework under Chapter 3 of the *Water Act 2000*.

On commencement of WROLA, mining tenure holders will also have the right to take associated water, subject to compliance with Chapter 3.

### Underground water management framework

The Water Act underground water management framework:

- requires tenure holders to undertake baseline assessments of water bores
- requires the preparation of baseline assessment plans (BAP)
- requires the preparation of underground water impact reports (UWIR) that identify the Immediately Affected Area (an area in which bore levels are predicted to fall by more than a trigger level within 3 years). UWIRs must be revised every 3 years
- provides for the declaration of cumulative management areas (CMA)
- establishes make good obligations for tenure holders—including the requirement for bore assessments and make good agreements,
- establishes the Office of Groundwater Impact Assessment (OGIA) to oversee the groundwater impacts of the petroleum and gas industry.

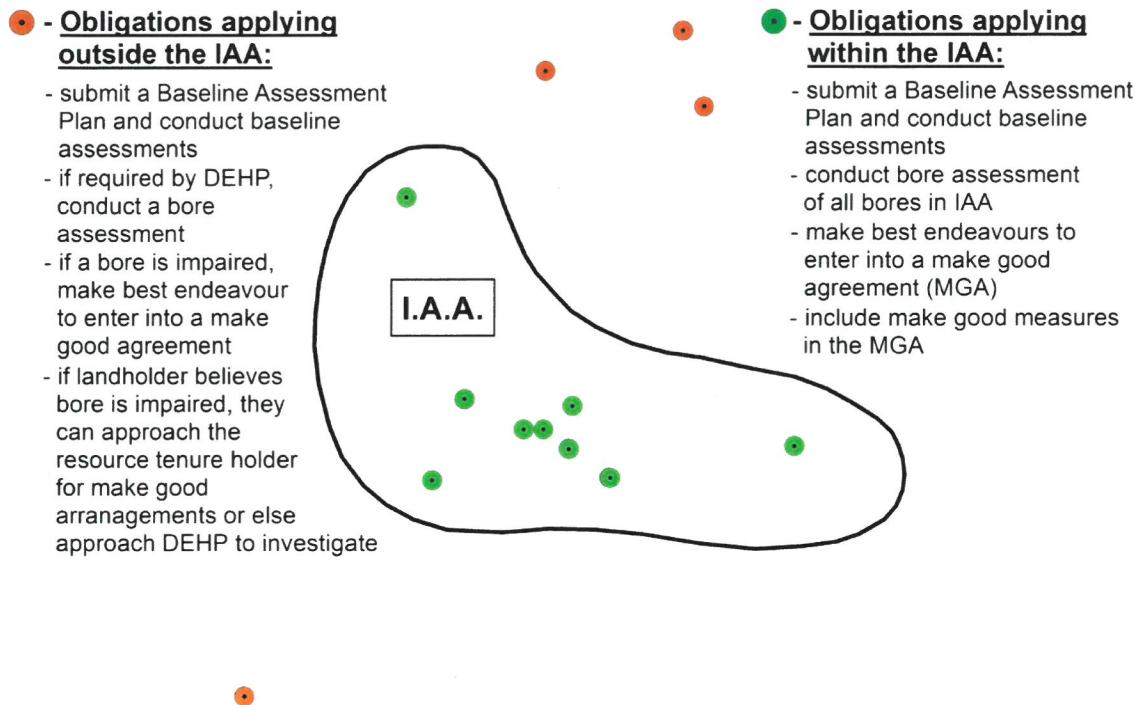
The obligations of the tenure holder inside and outside the Immediately Affected Area are summarised in figure 1.

### Baseline assessments

A baseline assessment is an assessment of a water bore undertaken by a tenure holder (including CSG operators) to obtain information about the bore, including:

- the level and quality of water in the bore
- historical water use
- how the bore is constructed
- the type of infrastructure used to pump water from the bore.

Baseline assessments of water bores are required in areas where production testing or production has started. They help with any potential make good agreements and are a key step in managing the underground water impacts of the operations.



**Figure 1:** The obligations of a tenure holder apply inside and outside of an Immediately Affected Area (IAA)

### Baseline assessment plans

A baseline assessment plan (BAP) is prepared by tenure holders to plan the undertaking of baseline assessments. A BAP must be submitted before production testing or production first starts. A BAP must include a baseline assessment timetable which outlines dates for completing all baseline assessments.

### Underground Water Impact Report

An Underground Water Impact Report (UWIR) is prepared to model, make predictions and manage the impacts of extraction of underground water by tenure holders.

An UWIR establishes responsibilities for tenure holders and ensures measures and programs are in place to respond to impacts on underground water. The key elements of an UWIR are:

- a comprehensive water monitoring strategy
- projections of potential future water level impacts
- a spring impact management strategy
- in a CMA, identifies a single tenure holder responsible for all make good measures for the water bores in a stated area.

Before submitting an UWIR to the Department of Environment and Heritage Protection for assessment and approval, public consultation must be undertaken on the draft UWIR. This involves publishing a notice about the proposed UWIR, giving a copy to each bore owner to which the UWIR relates, and responding to any submissions. To date, twenty UWIRs have been approved by the chief executive of the Department of Environment and Heritage Protection.

### **Cumulative management areas (CMAs)**

A cumulative management area (CMA) may be declared in an area that is likely to experience an impact on underground water, due to the exercise of underground water rights by 2 or more Tenure holders.

Declaring a CMA enables the assessment of future impacts to use a regional modelling approach and the development of management responses that are relevant to the potential cumulative impacts.

Under Chapter 3 of the *Water Act* the chief executive declared a cumulative management area (CMA) for the Surat and Southern Bowen Basin areas, including the alluvium of the Condamine River, in March 2011.

### **Bore assessments**

A bore assessment is undertaken by a petroleum tenure holder to establish whether the bore is, or is likely to be, impacted (impaired capacity) by the extraction of underground water associated with petroleum and gas operations.

Bore assessments can be required by the chief executive or through an UWIR. The Department of Environment and Heritage Protection has issued a guideline which provides responsible tenure holders and landholders details about the minimum requirements for undertaking bore assessments. Responsible tenure holders must comply with this guideline.

### **Make good agreements**

A make good agreement is an arrangement between a petroleum tenure holder and water bore owner. If a bore has, or is likely to have, an 'impaired capacity' the make good agreement must provide details on the make good measures to be undertaken by the petroleum tenure holder to 'make good' the impact.

If there is a disagreement about a make good agreement, either party may seek a conference or independent alternative dispute resolution (ADR) to negotiate a resolution of the dispute. If a party has taken part in the ADR process and is still unsatisfied, they may seek a direction from the Land Court.

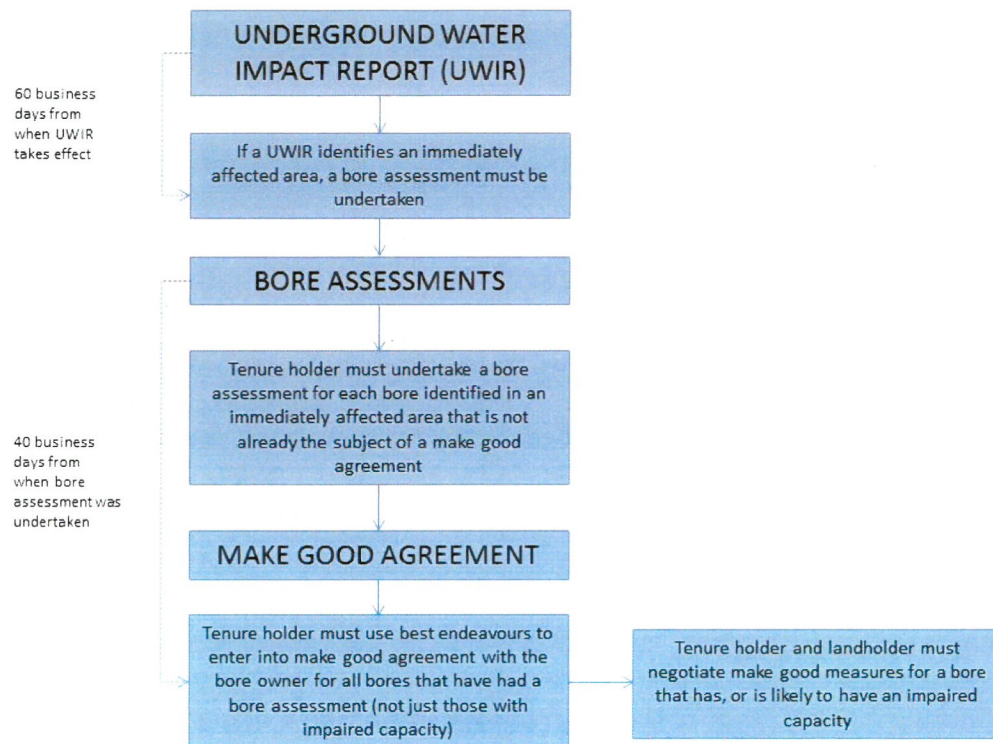
The framework for monitoring, modelling and make good impacts is shown in Figure 2.

### **Office of Groundwater Impact Assessment**

The Office of Groundwater Impact Assessment (OGIA) is an independent entity responsible for managing groundwater impacts in CMAs.

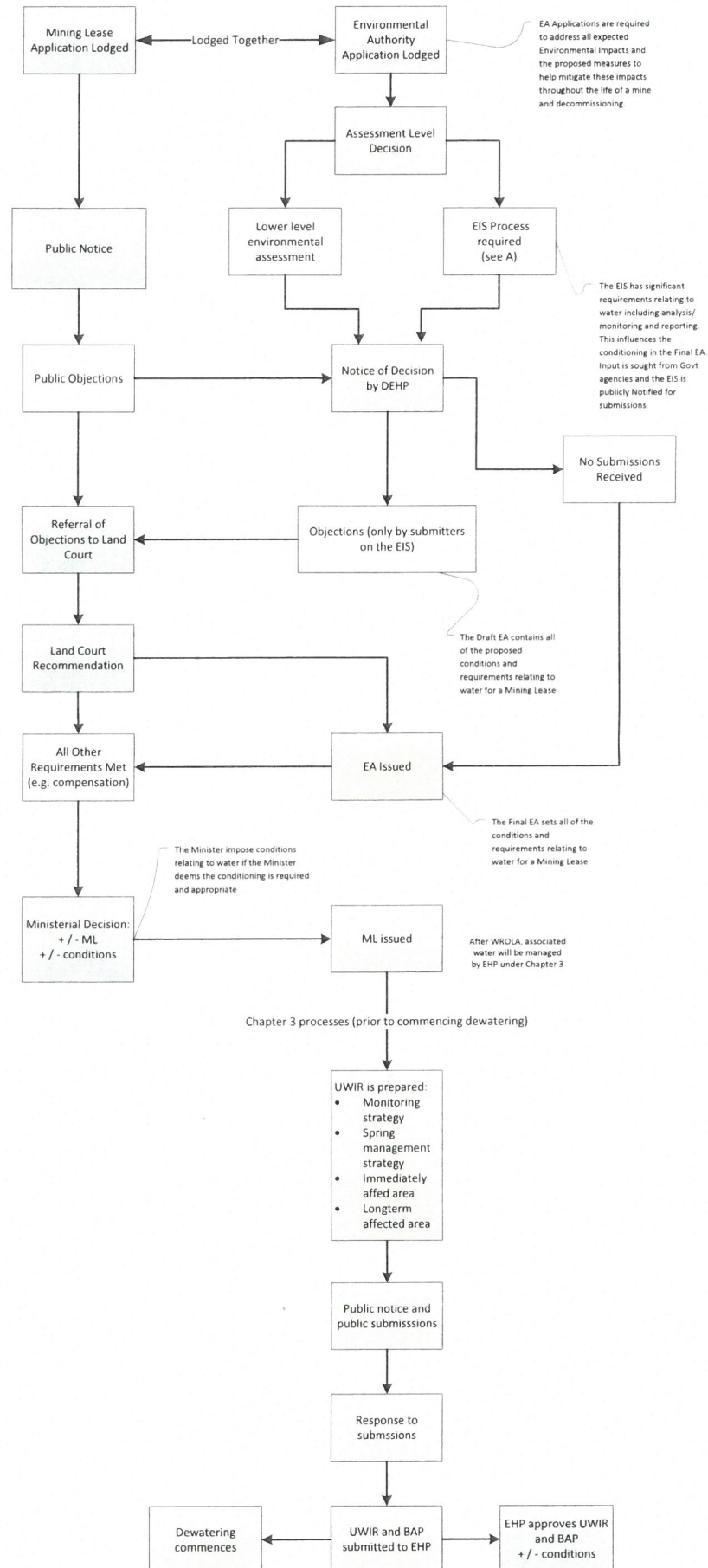
When a CMA has been declared, the OGIA becomes responsible for preparing an UWIR for the CMA. The UWIR for the CMA will assign responsibilities to relevant petroleum and gas operators.

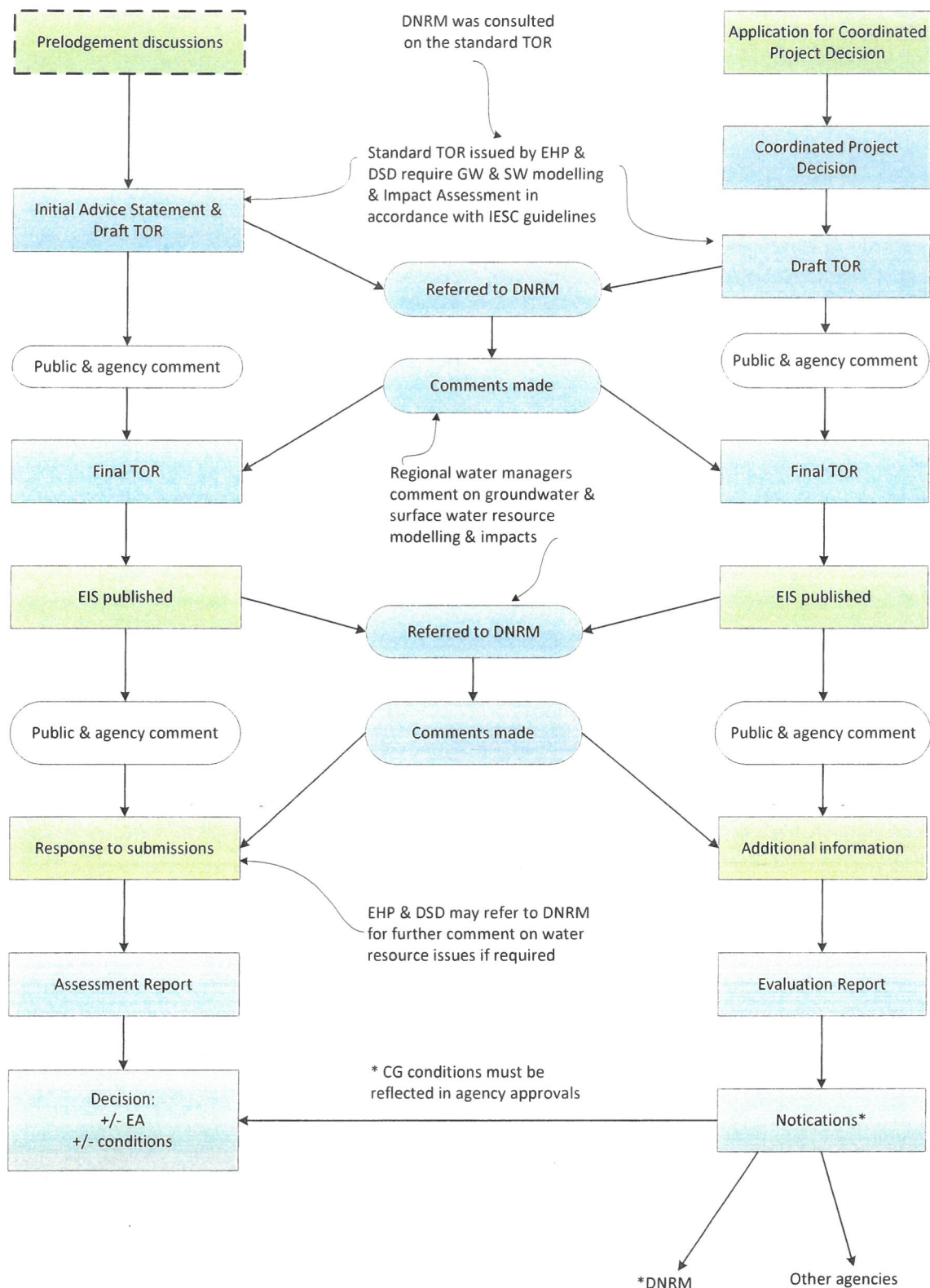
**Figure 2: Process for making a Make Good Agreement**





## Mining Lease Approval Process



EPASDPWOA



## What does the Water Legislation Amendment Bill 2015 deal with?

In November 2014, Parliament passed the *Water Reform and Other Legislation Amendment Act 2014* (WROLA Act). On the 18 February 2015, the Government postponed commencement of the majority of WROLA Act provisions in order to review them for alignment with Government policy and commitments.

