

# 1. Introduction

## 1.1 Background to the Project

Hunter Water Corporation (Hunter Water) is proposing to construct a 450 GL dam at Tillegra near the town of Dungog in the Hunter Valley. The dam would be located within the Williams River catchment, a subcatchment of the Hunter River catchment. The dam is deemed an essential component of the NSW Government's State Plan *A New Direction for NSW* (NSW Government 2006a) in order to secure the water future of the region for the next 50 years. The dam would substantially increase the total existing water storage capacity and water security of the Lower Hunter region.

Tillegra Dam was initially conceived as a water supply option in the 1950s due to the large catchment area, good rainfall and low environmental impacts. Hunter Water began purchasing land in the Tillegra area in the early 1980s at which time landholders were informed of the proposed dam. In the mid to late 1980s Hunter Water deferred plans for the construction of Tillegra Dam as a result of the community's positive response to pay-for-use water pricing and the overall reduction in water demand.

Further background to the Project and discussion of the need for the dam is presented in Section 3.

## 1.2 Project status

The Project is being assessed under Part 3A of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). An overview of the key stages of the Part 3A environmental assessment process is presented in Figure 1.1. Following consultation with relevant public authorities, the Director-General of the NSW Department of Planning (DoP), issued environmental assessment requirements, or Director-General's Requirements (DGRs) on 8 January 2008 (refer Appendix 4 to the Environmental Assessment (EA) Report).

The Commonwealth and NSW governments have signed a bilateral agreement that accredits the assessment regime under Part 3A of the EP&A Act for assessment purposes under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The bilateral agreement applies to actions that the Minister for the Environment, Heritage and the Arts has determined are controlled actions under the EPBC Act in relation to a matter of National Environmental significance (NES) with the exception of nuclear actions. The bilateral agreement only provides accreditation of the NSW assessment process. The Commonwealth still needs to issue a separate approval for the Project if it is a controlled action. An approval under the EPBC Act would only be given by the Commonwealth once approval had been obtained through the NSW process.

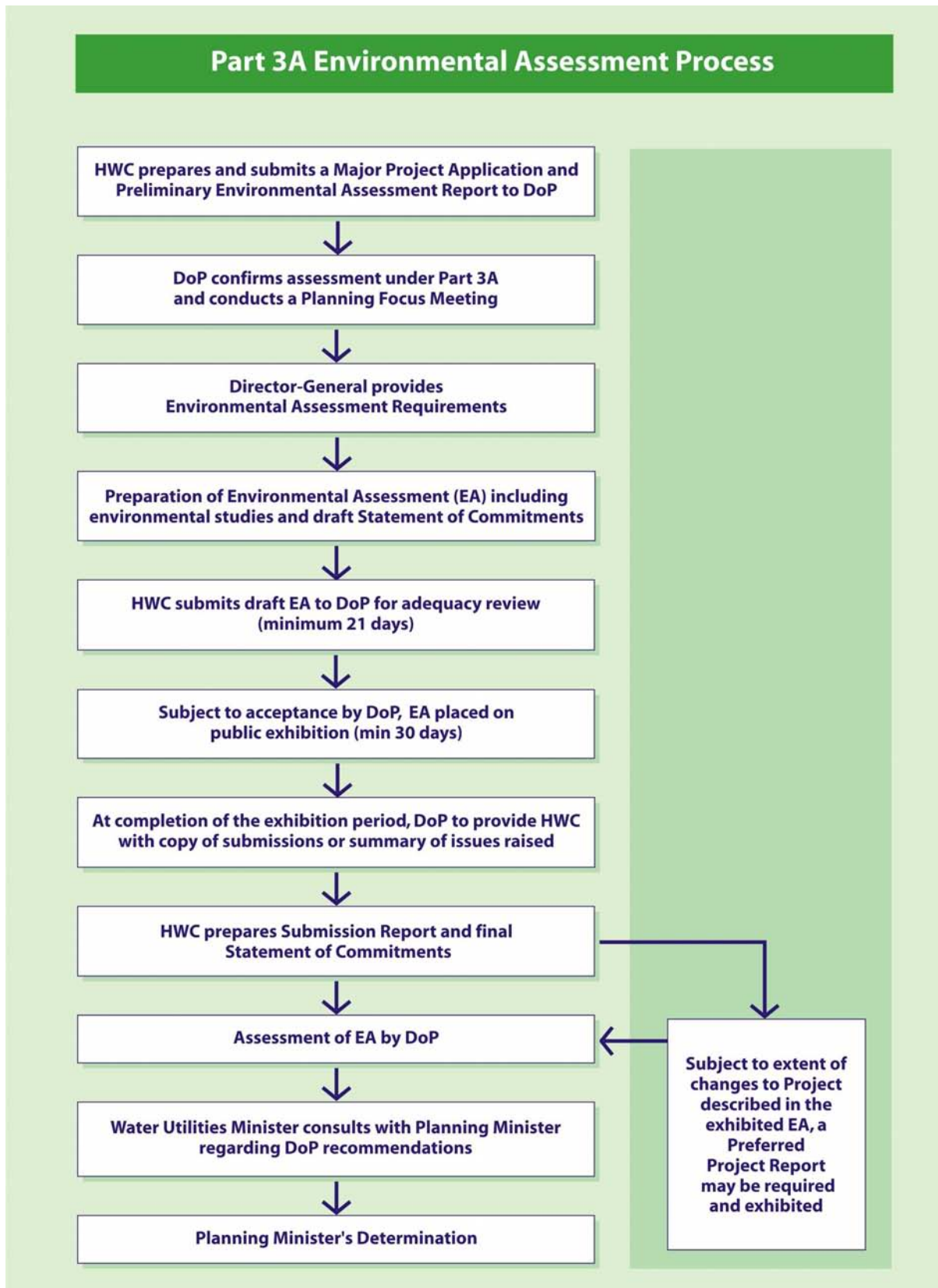
The Project was referred to the Commonwealth Minister for further appropriate consideration and to determine whether approval was required under the EPBC Act. The Minister determined that the Project may have potential to affect the Hunter Estuary Wetlands which are listed wetlands of international importance ('Ramsar wetlands'). As a consequence, the Project was declared to be a controlled action requiring assessment under the bilateral agreement.

Supplementary DGRs (refer Appendix 5 to the EA Report) were issued by the Director-General of DoP on 1 May 2009 following consultation between the Department and the Commonwealth Department of the Environment, Water, Heritage and the Arts (DEWHA). These requirements directed Hunter Water to address specific issues relating to potential impacts of the Project on the Hunter Estuary Wetlands Ramsar site.


The EA Report was prepared in accordance with the relevant matters under the EP&A Act and the EPBC Act. It provides a comprehensive analysis of the key issues relating to the Project as specified by the DGRs. The draft EA Report was issued to DoP in August 2009 for adequacy review.

Following acceptance by DoP, the EA Report was placed on public exhibition at the following locations:

- DoP Information Centre, DoP, 23-33 Bridge Street, Sydney
- DoP, Newcastle Office, Price Waterhouse Coopers Centre, Level 2, 26 Honeysuckle Drive, Newcastle
- Nature Conservation Council of NSW, Level 2, 301 Kent Street, Sydney



**Figure 1.1** Part 3A environmental assessment process

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- Dungog Shire Council, 198 Dowling Street, Dungog
  - Dungog Shire Library, Mackay Street, Dungog.

The EA Report was also available from the DoP website and displayed by Hunter Water at the following locations:

- Tomaree Library (Port Stephens)
- Maitland Library
- Toronto Library
- Swansea Library
- Charlestown Library
- Wallsend Library
- Newcastle Library.

The document in full was also displayed at Hunter Water's Head Office, Newcastle and at Hunter Water customer contact centres at Maitland and Speers Point. A copy was also displayed at Munni House. A second copy of the EA Report was placed at Dungog Library and made available for overnight loans. A summary document containing details on the Project was distributed from all these locations. Copies of the EA Report on CD were also available from these locations.

The public exhibition of the EA Report was managed by DoP. The exhibition period ran from 10 September 2009 to 13 November 2009 which exceeded the statutory minimum of 30 calendar days specified by the EP&A Regulation.

## **1.3 Overview of submissions and key issues raised**

### **1.3.1 Submissions received**

A total of 2,669 submissions were received by DoP in response to the exhibition of the EA Report. Copies of these were provided to Hunter Water progressively during the exhibition with the final batch being forwarded after the exhibition period closed. Of the 2,669 submissions received, ten were from government agencies and public authorities while the balance was from individuals or community groups/public organisations.

The submissions received comprised:


- 30 in support of the Project
- 38 neutral
- 2,601 submissions objecting to the Project.

A brief summary of the general nature of these submissions is provided as follows.

#### **Government**

Submissions were received from:

- Department of Environment, Climate Change and Water (DECCW), Environment Protection and Regulation Group
- NSW Office of Water (NOW, part of DECCW, formerly part of the Department of Water and Energy)
- Land and Property Management Authority (LPMA, formerly Department of Lands)
- Dungog Shire Council
- Hunter-Central Rivers Catchment Management Authority (HCRCA)
- Industry and Investment NSW (Fisheries Conservation and Aquaculture) (I&I NSW (Fisheries), formerly part



of the Department of Primary Industries)

- NSW Maritime
- NSW Rural Fire Service (, RFS, Bendolba/Salisbury)
- NSW Rural Fire Service (Head Office)
- TransGrid.

Submissions raised issues related to the respective agency or authority's areas of governance. NSW Maritime provided no specific comment but indicated that it retained an interest in the Project and offered to provide additional review if required. TransGrid noted the Project site was clear of TransGrid interests and as such no objections were noted.

## Public Submissions

### *'Form' letters*

Several community groups such as The Wilderness Society and the No Tillegra Dam Group produced a series of 'form' letters to assist interested parties (individuals/other groups) in preparing a submission. For the purposes of this report, form letters are defined as standardised response letters that have been signed by different individuals.

Thirteen different form letters, or variations of these, were identified in the received submissions. A total of 2,463 form letters were received, representing 93% of all submissions. Of these, 19 submissions included minor variations to the form template and identified additional issues.

### *Unique public submissions*

A total of 196 unique public submissions were received from individuals or community groups/public organisations. These comprised 168 submissions from individuals and 28 submissions from community groups/public organisations.

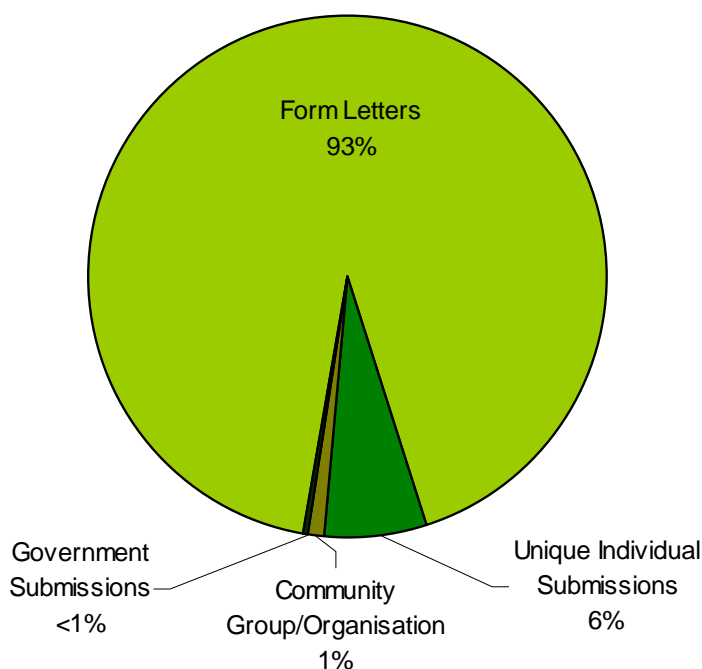
Submissions were received from the following community groups/public organisations:

- Australian Water Network
- Community Environment Network Inc
- Dungog District Chamber of Commerce
- Dungog Historical Society
- Dungog Information and Neighbourhood Service
- Hunter Environment Lobby Inc
- Hunter Koala Preservation Society
- Hunter Regional Committee of the National Trust
- Institute for Sustainable Futures, University of Technology Sydney
- Ironstone Community Action Group
- Lakes Precinct Committee
- Mount Annan Botanic Gardens
- National Parks Association of NSW (2 submissions)
- Native Fish Inc
- Natural Conservation Council of NSW
- No Tillegra Dam Group
- North East Forest Alliance: Hunter Region
- NSW Council of Freshwater Anglers

- Recreational Fishing Alliance of NSW
- Red Herring Fishing Club
- Rivers SOS
- Save Water Alliance
- Singleton Fly-Fishing Club
- STEP Inc
- The Junction Inn Fishing Club
- The Wilderness Society (3 submissions)
- Total Environment Centre
- Williams River Care Association (2 submissions).

### Summary of submission respondents

A breakdown of submission respondents is provided in Appendix A. As noted, the majority of submissions received were form letters, followed by unique individual submissions, those from community groups/organisation and then government departments.




**Figure 1.2 Summary of submission respondents**

### 1.3.2 Summary of key issues

A wide range of issues were raised in submissions and related to the topics typically considered for dam projects. Many of the issues raised were identified during the EA process and have been addressed in the EA Report to varying levels of detail.





The majority of issues identified by respondents related to the following topic areas:

- Project need and justification
- Socioeconomic issues
- Terrestrial ecology
- Impacts on the Williams River
- Impacts on the Hunter Estuary Wetlands.

As noted, 93% of the submissions received comprised form letters. These were produced primarily by two environmental/community groups and as such many identified similar issues, including:

- The time available for respondents to review the EA Report and prepare a submission
- The need for and justification of the Project, the level of drought security proposed by Hunter Water and consideration of alternative options for securing water supply for the Lower Hunter
- Socioeconomic issues including the impact on the local community, the loss of agricultural land, the cost of the dam, and the potential for recreational activities
- Impacts on the aquatic and terrestrial ecology of the Williams River and surrounds, and the effectiveness of the proposed mitigation and offset measures
- The length and detail of the surveys undertaken to inform the environmental assessment
- Impacts on the Hunter Estuary Wetlands
- The greenhouse gas (GHG) assessment, specifically the need to include methane gas emissions from decaying vegetation
- The impact of the construction and operation of the dam on the region's roads and infrastructure.

A complete list of the submissions received and a cross reference to the issues raised by each respondent is provided at Appendix A.

## 1.4 Downstream Project study boundary

The EA Report provides a list of the key Project components. The immediate footprint of these largely relates to the dam embankment (wall), the inundation area at FSL (full supply level) and surrounding area together with the area occupied by the new section of Salisbury Road that would be provided to maintain connectivity above and below the dam and storage.


From an operational perspective, however, the effect of the Project would extend beyond this area. Transfer of water would occur via run-of-river flows (in accordance with a release strategy designed to accommodate river health maintenance requirements). Therefore the influence of the dam would extend downstream, decreasing as distance from the dam decreases and as other influences in the intervening catchment come into play.

For the purpose of the environmental assessment, the downstream study boundary was nominally set at Seaham Weir. It should be noted that this does not imply that the effect of the dam ceases at this location. Rather the effect of it, relative to other influences within the Williams River catchment is diminished such that it has negligible material effect on hydrology and related aspects such as aquatic ecosystems.

Support for this position is provided in the specialist report *Tillegra Dam Ramsar Wetland Impact Assessment*, attached as Appendix 6 to the EA Report. This investigation specifically considered the two main perceived impacts on the Hunter Estuary Wetlands from the Project. These were hydrological changes and changes to the materials budgets and chemical composition of water in the estuary.

The investigation concluded:

- No areas of the Hunter River Estuary wetland would be destroyed or substantially modified
- Predicted changes in water levels would be negligible. The low water mark is predicted to be within  $\pm 1$  cm of current levels and the high water mark within -1.2 cm to +1 cm compared to the current daily tidal range



under the average tidal condition of 0.7–1.45 m. Predicted changes in inundation height would be in the range of 1-2 cm

- There would be no direct impacts on native species or vegetation communities within the wetlands given the minor alterations in nutrient and salinity regimes and water inundation levels
- As the estuary is dominated by oceanic influences with approximately 92% of the water entering the estuary coming from ocean tides it is unlikely that there would be any substantial or measurable change in the water quality of the estuary.

It is noted that an opposing view is expressed in a number of submissions. The specific issues raised are considered elsewhere in this report, principally in Section 6 which responds to issues raised in relation to potential impacts of the Project on the Hunter Estuary.

Hunter Water remains of the view that the assignment of Seaham Weir as the downstream boundary for the Project, with the exception of consideration of the potential impact of the Project on the Ramsar wetlands as required by the supplementary DGRs, is entirely appropriate.

### **Influences on water resource management in the Lower Hunter region**

Figure 1.3 shows the location of the proposed dam in the Williams River catchment and the location of the latter in the wider context of the Hunter River catchment. It also shows features of interest to water resource management in general and which are of indirect relevance to the Project. The former include major storages on the Hunter River such as Glenbawn and Glennies Creek Dams operated by State Water. Other major water users in the Hunter River catchment include electricity generators and coal mines as well as irrigators. As noted in the *Water Sharing Plan – Hunter unregulated and alluvial water sources: Background document* (DWE 2009:9)

The Hunter River has played an important role in the development of the region. Major industries located in the catchment include power generation, coal mining, heavy industry, agriculture and associated businesses and infrastructure. As a result a number of large water storages have been constructed. Glenbawn, Glennies Creek and Lostock dams store water and regulate river flows for use by irrigation, town water supply, industrial use and power generation.

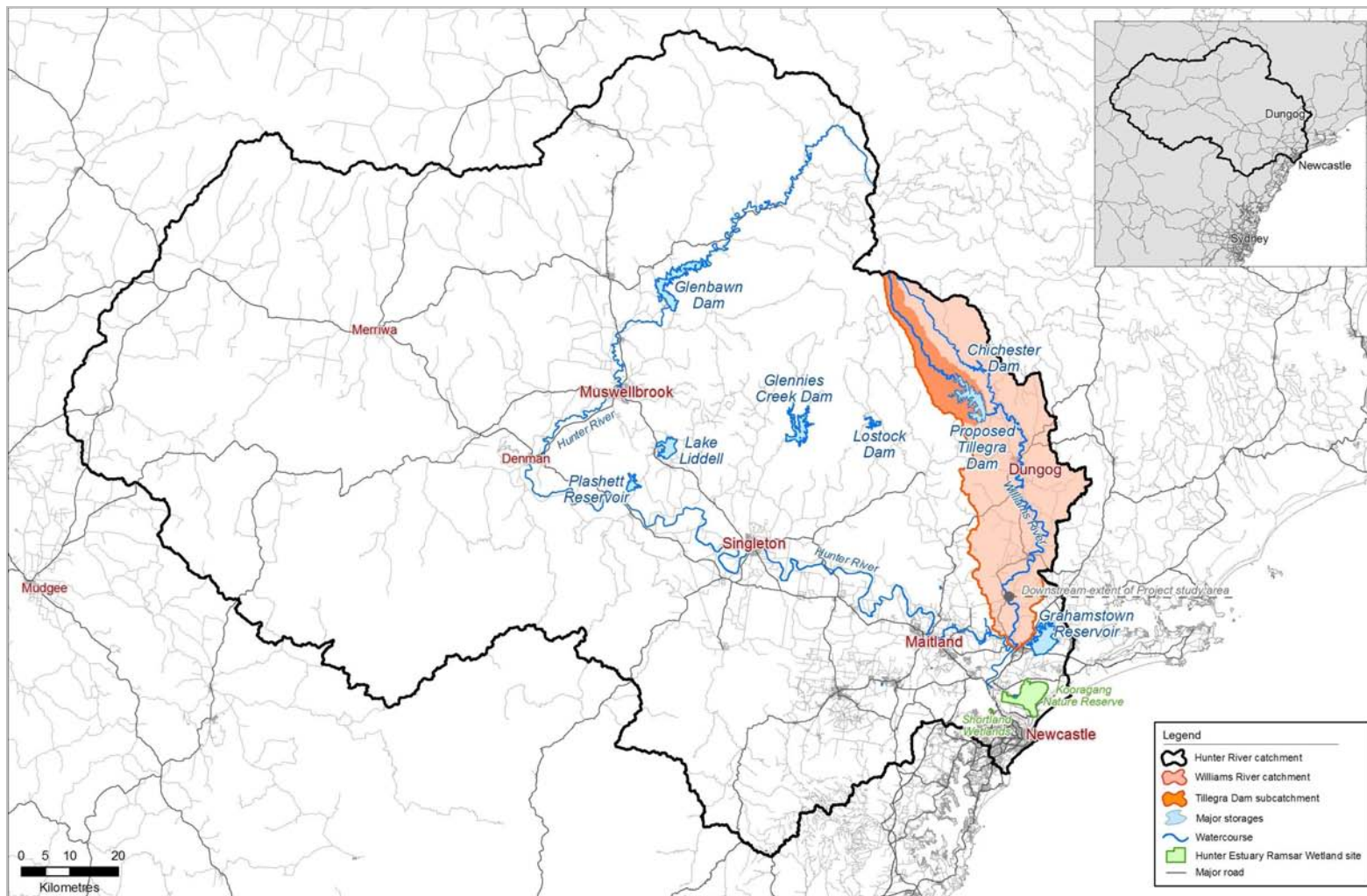
Hunter Water currently holds a Water Management Licence under Part 9 of the *Water Act 1912* (and which now falls under the *Water Management Act 2000*). The licence was issued on 26 December 1998 and expires on 25 December 2023. The licence is in the process of being converted to a works approval and access licence under the *Water Management Act 2000* and will be reviewed at five-yearly intervals with the next review scheduled on 25 December 2013. Tillegra Dam, should it be approved, would be operated under this licence regime (which would be amended to include the dam and related infrastructure as ‘authorised water management works’).

The *Hunter Unregulated and Alluvial Water Sharing Plan* (HUAWSP) commenced on 1 August 2009 and applies to the entire Hunter catchment. The HUAWSP includes rules for protecting the environment, water extraction, managing licence holders’ water accounts and water trading in 39 water sources. The sources include the Williams River water source which is divided into two management zones; these being the Williams River Management Zone and the Seaham Weir Management Zone.

The HUAWSP background document (DWE 2009:28) notes

The development of the Tillegra Dam in the Williams River Water Source is likely to impact on a number of Plan provisions such as access rules, share components, accounting, trading and storage operation.

The NOW submission acknowledges that with respect to the HUAWSP, a considerable amount of information is yet to be generated to inform development of the water sharing rules and, consequently, it is not possible to formulate relevant water sharing plan conditions relating to Tillegra Dam for the purpose of the Part 3A process. It notes specifically clause 90 of the HUAWSP that provides for amendment of the Plan to account for construction and operation of Tillegra Dam.



**Figure 1.3 Hunter River catchment**



## 1.5 Purpose and structure of the submissions report

### 1.5.1 Purpose of the submissions report

In accordance with Section 75H(6) of the EP&A Act, the Director-General of DoP may require a proponent (in this case Hunter Water) to submit 'a response to the issues raised' and provide 'any revised Statement of Commitments' reflecting any changes in the Project as a result of addressing the submissions.

Each of the submissions received has been reviewed closely to identify issues of interest to the respondent. Discussion of each issue, where considered appropriate, is provided in this submission report. This report will accompany Hunter Water's request for planning approval.

Following Hunter Water's application for approval of the Project, the Director-General of DoP will prepare an assessment report for the Project. This report will be considered by the Minister for Planning with respect to the determination of the Project under Part 3A of the EP&A Act and, should it be approved, what conditions should be attached to the approval.

The submissions report will be publicly available together with the DoP assessment report and the Minister's determination on the DoP website.

### 1.5.2 Approach to analysis of issues

Hunter Water recognises the considerable effort by respondents in preparing their respective submissions. With the large number of submissions received, not unexpectedly there was considerable overlap in the issues raised. From a logistic perspective, it was decided to respond on an issue-by-issue basis rather than separately to each respondent.

This notwithstanding, all practicable effort has been made to address each of the issues raised by individual respondents. To facilitate identification where in the submissions report a respondent's issues have been considered, reference tables have been provided as Appendix A. These identify each respondent, provide a summary of the issues raised within their submission and include a cross reference to a specific section(s) within this submissions report where the issue in question is considered.

In some cases, a particular issue identified in a submission has been acknowledged by Hunter Water, but was not considered to require additional comment or a change to the Project as described in the EA Report. In these cases, the issue has been recognised and noted in Appendix A.

### 1.5.3 Structure of the submissions report

This report has been structured to facilitate review and discussion of the Project in addressing the issues raised by respondents in submissions. Where considered appropriate, additional information has been provided to facilitate the Minister for Planning's review and determination of the Project. The report also includes a Final Statement of Commitments based on consideration of the issues identified in the submissions and from further consultation with government agencies and key stakeholders.

An outline of each section of the submissions report is provided as follows:

- 1 **Introduction:** background information and a summary the submissions received.
- 2 **Consultation activities:** overview of the consultation undertaken before and during the public exhibition period and future consultation activities planned by Hunter Water.
- 3 **Justification for the Project:** discussion on the need for the Project and consideration of alternatives undertaken by Hunter Water during the planning process. This section also addresses the issues raised



within submissions relating to Project need and justification.

- 4 **Issues in the Williams River Catchment Upstream of Seaham Weir:** this section contains discussion of key issues relating to water quality, fluvial geomorphology, aquatic ecology, environmental flows and terrestrial ecology within the Williams River catchment.
- 5 **Consideration of Other Key Issues:** this section contains the majority of responses to issues raised within the submissions received. The section is structured to reflect each of the key areas.
- 6 **Assessment of Issues in the Estuary:** this section address the issues raised that relate to the estuary downstream of Seaham Weir.
- 7 **Matters relating to the Commonwealth EPBC Act:** response to issues relating to the EPBC Act, specifically the potential impacts on the Hunter Estuary Wetlands.
- 8 **Modifications to the Project:** details of material changes to the Project since the exhibition of the EA Report or in response to specific issues raised in submissions.
- 9 **Response to Proposed Conditions of Approval:** discusses proposed conditions of approval and other recommendations made by public authorities.
- 10 **Final Statement of Commitments:** Hunter Water's amended Statement of Commitments from that presented in the EA Report.
- 11 **References.**