

6. Land Use and Planning

Burnett Catchment Water Infrastructure - Burnett River Dam

6.1 Land Use and Tenure

6.1.1 Land Use

The proposed major storage site lies on the Burnett River adjacent to the Shires of Biggenden and Kolan approximately 20 kilometres north west of the Town of Biggenden. Dallarnil on the Isis Highway is the nearest sizeable settlement to the site at approximately 14 kilometres to the east.

The proposed dam structure is a concrete spillway with earth and rock embankments designed to a full supply level of EL 67.6 metres. The abutments and banks are designed to be above the probable maximum flood level. The dam will have a storage capacity of approximately 300,000ML and will inundate an area of 2253 hectares at full supply level. Inundation of the Burnett River channel by the storage facility will occur over a 45 kilometre length. (Chenoweth, 1999).

Construction of the facility will extend over two years with work in the river during the dry season involving the creation of both permanent and temporary roads for haulage of materials and vehicle access. The main access road to the site will be from Dallarnil with the majority of haulage occurring during the first construction season.

This section of the Lower Burnett Catchment is characterised by agricultural activity comprising predominantly pastoral areas (beef cattle), with some National Parks, State Forests and some intensive horticulture (mostly citrus and sugar cane) interspersed by rural service centres. **Figure 6.1** shows the broad land use activity within a 10 kilometre radius of the inundation area.

Areas of cultivation are located mostly in the southern upstream reaches of the inundation area adjoining and in proximity to the Burnett River. The largest areas occur around Gayndah, north to the area surrounding Ideraway up to Grey's Waterhole, along Barambah Creek and around Wetheron. Other smaller areas of cultivation exist at intervals along the Burnett River for the length of the inundation area mostly, but not exclusively, adjacent to the western banks of the River.

There are several service towns located within 10 kilometres of the inundation area. These include One Tree Hill (7.5 kilometres north of the dam site) in Kolan Shire, Didcot (10 km south) in Biggenden Shire, Mt. Steadman (8 km south), Gooroolba (10 km south), Byrnestown (9 km east) and Ideraway (500m from the upper tailwaters) in Gayndah Shire.

The town of Gayndah is located along the Burnett River in the upper most reaches of the tailwaters of the water storage facility.

The nearest residence to the dam site is located at 'Campbell's Orchard' approximately 500 – 1000 metres downstream from the site. The residence will not be affected by inundation but some existing orchards will be inundated.

A total of 14 residences have been identified as being located adjacent to the major haul routes which comprise of local roads such as Campbell's Road, River Road and North Dallarnil Road which connect to the Isis Highway. Of the 14 residences identified on these local roads five are within 50 metres, two are 50 – 500 metres and seven are between 500 – 1000 metres from the road. These dwellings are also indicated on **Figure 6.1**.

6.1.2 Land Tenure

Land affected by the inundation area is largely held in freehold title. **Figure 6.2** shows the broad land tenures within the inundation area. Land tenures are almost solely for private use with the exception of:

- Gayndah Shire Council owned land of a lot adjacent to the Burnett River at Mingo Crossing utilised for Council purposes;
- RSPCA land adjacent to the Burnett River south of Mingo Falls; and
- Crown land occupied by Goodnight Scrub as National Park located on the northern bank adjacent to the dam site.

Freehold land within the inundation area is occupied by predominantly rural landowners utilised for a variety of agricultural purposes including beef cattle grazing, cane growing, and other various horticultural activity.

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6.1.2.1 Native Title

There are two current Native Title claims or applications of relevance to the Burnett River Dam.

To the north, a consolidated Native Title claim application (Federal Court No.Q6026/01) was lodged on 17 August 2001 on behalf of the Gurang People, Gooreng Gooreng People and the Tarinbelang Bunda People. This claim is referred to as “The Port Curtis Coral Coast Native Title Determination Application”.

This application corresponds to the Burnett River Dam site and includes the Goodnight Scrub National Park.

The Wakka Wakka Peoples claim (QC99/033) reaches the southern bank of Burnett River in the vicinity of the proposed Burnett River Dam.

The Port Curtis Coral Coast Native Title Determination Application and the Registered Native Title claim from the Wakka Wakka People are relevant to any current tenures where Native Title still exists eg bed and banks, reserves etc.

6.2 Conservation Estate

The Conservation Estate generally refers to land defined within the *Nature Conservation Act 1992*, *Forestry Act 1957* and the *Environmental Protection and Biodiversity Conservation Act 1999*.

There are several National Parks located within the Burnett Water Catchment and these are listed in Section 10 of this report.

The Goodnight Scrub National Park (totalling 7150 hectares) (QPWS, 2001, Visitor information brochure) is a newly declared national park and is the only protected area located adjacent to the proposed inundation area. The National Park and Resource Reserve was declared in 1998. Access into the park is gained largely from old Gayndah Road and Goodnight Scrub Road. Camping in the park is permitted along the southern most reach of the Burnett River.

As a newly declared park area, the boundaries of the park have been determined by taking the proposed inundation area into consideration. The National Park will not be impacted at the dam full supply level.

6.3 Planning Controls

6.3.1 Zoning

There are four shires which are situated adjacent to the inundation area of the dam. They are the Shire of Kolan adjacent to the northern most edges of the storage area, the Shire of Biggenden located on the southern bank of the Burnett River adjacent to the proposed dam site at a southern section of the main inundation area. The Shire of Perry on the northern bank of the Burnett River adjacent to the storage area and the Shire of Gayndah through which the majority of the upstream tailwaters of the storage facility flow.

The current zoning of the land within a 10 kilometre radius of the inundation area is provided in **Figure 6.3**.

6.3.1.1 Shire of Biggenden

The *Biggenden Shire Planning Scheme* divides the Shire into two zones being Urban and Rural. The Urban Zone applies to any township areas and the Rural Zone applies over the remaining areas of the Shire. There are no significant townships in Biggenden adjacent to or within a 10 kilometre radius of the inundation area.

Development in the Rural Zone is intended to accommodate rural uses as well as recreational, tourist and industrial development in suitable locations. The most notable constraint to development in the Rural Zone is the minimum required lot size of not less than 100 hectares.

6.3.1.2 Shire of Kolan

The zoning of land adjacent to the inundation area is predominantly Rural Class B with small pockets of Rural Class C in accordance with *the Kolan Shire Planning Scheme*.

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Rural B land is located mostly adjacent to the southern reaches of the inundation area and predominates over the rural areas of the shire and contains prime agricultural land envisaged to have viable and productive agricultural farms.

Rural C land is to provide for rural residential allotments with a minimum area of 10 hectares. These areas are not necessarily intended to be used for agricultural purposes.

6.3.1.3 Shire of Perry

The *Perry Shire Planning Scheme*, as for Biggenden, divides the Shire into two zones: Urban and Rural. Only the Town of Mt. Perry is within the Urban Zone. All other areas of the Shire are in the Rural Zone.

Development in the Rural Zone is intended to accommodate rural uses as well as recreational, tourist and industrial development in suitable locations. The most notable constraint to development in the Rural Zone is the minimum required lot size of not less than 100 hectares.

6.3.1.4 Shire of Gayndah

The *Gayndah Shire Planning Scheme* divides the Shire into four zones: Urban, Commercial, Industrial and Rural. With the exception of the town of Gayndah, all land in the Shire is in the Rural Zone.

Development in the Rural Zone is intended to accommodate rural uses as well as recreational, tourist and industrial development in suitable locations. The most notable constraint to development in the Rural Zone is the minimum required lot size of not less than 100 hectares.

6.3.2 Strategic Plans

A compilation of the Strategic Plans Preferred Dominant Land Use for each Shire is provided in **Figure 6.4**.

6.3.2.1 Shire of Biggenden

The *Biggenden Shire Strategic Plan* designates land as preferred for either Urban, Rural, Commercial or Industrial use. Land is also identified as Good Quality Agricultural Land, Open space/Recreation and Extractive Industry areas. Land within a 10 kilometre radius of the inundation area is designated as Rural with Good Quality Agricultural Land around and east of Degilbo Creek approximately 4-5 kilometres east and north of the dam site and well removed from the area of inundation. Extractive industry is identified about 4 kilometres south of the dam site near Mount Shamrock.

Rural land is to be developed for a range of grazing and agriculture including “*intensive animal husbandry, forestry, recreation and tourist related activities and extractive industry*” (Biggenden Shire Council, 1999, p. 4). These areas can include good quality agricultural land as identified in SPP 1/92 in addition to that identified on the Strategic Plan Map.

6.3.2.2 Shire of Kolan

The southern area of the Kolan Shire lies adjacent to the site of the water storage facility. The majority of this southern area is occupied by the Goodnight Scrub National Park and resource area. The Kolan Shire Strategic Plan therefore identifies this area as “Forestry/Conservation” to reflect the land tenure as National Park. The surrounding land is designated as Rural Class C.

Forestry/Conservation designation includes “*land owned by the Crown used for conservation and multiple forestry purposes managed pursuant to the Forestry Act 1959.*” (Kolan Shire Council, 1996)

Rural Class C lands are considered to be unsuitable for continuous cultivation but suitable for improved pastures.

The Strategic Plan also makes provision for the protection of existing catchment areas. These objectives include consultation with the DNRM on any development in the catchment, to protect water quality and support recreation and tourism opportunities. These same provisions are likely to be applicable to the establishment of a new storage facility in the Shire. Amendments to the Planning Scheme would be required in order to better control land use in areas adjacent to a new dam site.

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6.3.2.3 Shire of Perry

The *Perry Shire Strategic Plan* has adopted the same designations as that of Biggenden and Gayndah. Those areas of the Shire adjacent to the Burnett River and within a 10 kilometre radius of the inundation area are designated Rural with a large part of the area identified as Good Quality Agricultural Land. Extractive industry resources are identified about 8 kilometres north of the inundation area.

6.3.2.4 Shire of Gayndah

The *Gayndah Shire Strategic Plan* has adopted the same designations as that of Biggenden and Perry. The majority of Gayndah Shire is designated as Rural preferred land use. As the Burnett River progresses north towards the Shire from the Town of Gayndah, the majority of the inundated area and environs is identified as having Good Quality Agricultural Land.

6.3.3 Current Development Applications

There are no known current development applications of significance within the area of inundation for the affected Shires.

6.4 Land Use and Planning Impacts

6.4.1 Land Use Within Area of Inundation

The dam will inundate a total area of 2253 hectares at full supply level and preclude any other use of land in this area. The majority of land within the inundation area comprises grazing land with areas of cultivation including cane growing and other horticulture. Agricultural land from Classes A, B, C and D will be inundated by the proposed dam. McCarroll and Brough (2000) identify 298 hectares of crop land and 1677 hectares of pasture land will be subject to inundation. The areas of land class inundated are provided in **Table 5-7**.

Infrastructure and equipment (troughs, dips, yards, pumps, fencing, etc) associated with affected land holdings will also be subject to inundation.

No townships will be inundated. Gayndah is located at the uppermost tailwaters of the dam but the storage is anticipated to be below the existing Q100 flood level for the town and is unlikely to cause any additional flooding impacts. Section 8 of this report provides details of any flooding impacts. Ideraway is the only other township which may potentially be affected and, like Gayndah, is in the upper tailwaters and will not experience any increased flooding impacts or inundation.

Whilst townships are not directly affected by inundation, there are a number of residences on rural holdings which will be inundated. Based on the Chenoweth (1999) research, there are 32 residences likely to be inundated requiring relocation. In addition, numerous sheds (ie.90), watertanks (ie 90) and stockyards are likely to be inundated.

Further, areas around the edge of the impoundment will be subject to fluctuations in water levels and will not be suitable for construction of houses or other structures. Typically, development of properties should not take place within the Q100 flood level.

6.4.2 Compatibility with Adjacent Land Use

The proposed dam is compatible with adjacent agricultural and grazing land uses and will not have adverse impacts on these land uses.

It is possible that restrictions may be placed on adjoining land holdings to ensure that the water quality in the catchment is maintained at required levels. Restrictions can be in the form of additional limitations on subdivision or development of the land as well as management practices for existing uses in terms of sediment and other runoff from the land. The need for such controls will however be dependent upon issues of water quality maintenance. Controls over new land uses are typically provided for within planning schemes.

Where inundation of land intrudes substantially into a single land holding there is however potential for such inundation to affect the ultimate viability of that land holding for agricultural purposes. Should this occur then liaison with land owners will be needed at the acquisition phase of the project to assess loss of viability. In addition, it is recommended that an acquisition policy be established in which such indirect impacts of the inundation are considered. A hardship policy is included within the statutory requirements of the *Integrated Planing Act 1997* where land is designated for Community Infrastructure.

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6.4.3 Loss of Good Quality Agricultural Land

Protection of Good Quality Agricultural Land (GQAL) is the key objective of *State Planning Policy 1/92*. For the purposes of the policy, GQAL is defined as land “capable of sustainable use for agriculture with a reasonable level of inputs, and without causing degradation of land or other natural resources”. GQAL is protected against removal or loss unless there is appropriate justification.

The key planning consideration to this policy is that agricultural land “should not be built on unless there is an over-riding need for the development in terms of public benefit and no other site is suitable for the particular purpose” (DPI/DHLGP, 1993). The loss of good quality agricultural land is to be considered having regard to the potential public benefit of an increased supply of reliable water potentially available to other areas of good quality agricultural land within the catchment. Refer to Section 5 of this report for details of those agricultural areas lost due to inundation.

The Planning Guidelines attached to the policy states that major infrastructure (including dams) have specific siting requirements that might require the loss of GQAL.

6.4.4 Conservation Estate

As a newly declared park area, the boundaries of the Goodnight Scrub National Park (totalling 7150 ha) have been determined by taking the proposed inundation area of the proposed storage into consideration. Nevertheless, should the project proceed monitoring should be undertaken of any intrusions into the park area and any impacts on existing facilities such as the camping site, identified. The camping areas adjacent to the river may require additional management to ensure that there is no conflict between the park activities and the function of the water storage facility.

6.4.5 Construction Impacts

Construction impacts will be in three main locations;

- adjacent to the site of the dam structure;
- adjacent to the haul routes; and
- near any extractive resources (ie. quarries) utilised as a source of construction material.

The construction impacts include noise, dust and vibration created by the dam construction and from heavy vehicle traffic along the main haul routes.

The impacts on noise, dust and vibration on any residences in proximity to the construction site and the haul roads is discussed in Section 9 of this report.

Of the 14 residences identified as being located adjacent to the major haul only five are within 50 metres of the road with the potential to experience any adverse impacts.

6.4.6 Compatibility with Strategic Plans

The Shires of Biggenden, Gayndah, Perry and Kolan have very similar and in some cases identical provisions in their planning documents and can therefore be discussed together. All shires allocate rural activities of various classes adjacent to the inundation area. Therefore the provision of a reliable supply of water has the potential to enhance the use of the land for rural purposes.

The loss of good quality agricultural land is the key issue with respect to the Strategic Plans for all Shires. The designation of land within Rural Class A and B land is provided in accordance with the provisions and guidelines of the State Planning Policy. Development of those lands are to occur in accordance with the policy and, as discussed in section 6.4.3 above, must involve a “public benefit”. A major infrastructure development such as the major storage facility can provide a public benefit and justify the loss of those lands as assessed by the Planning Scheme in accordance with the policy.

For each Shire the introduction of a major storage facility is currently not provided for within the existing Planning Scheme documents. Should the project proceed then modifications will be required to the Shires planning documents, both in terms of the zoning and the Strategic designations and will typically also include development controls such as restrictions on subdivision and stringent controls over waste and emissions.

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Amendments to the Strategic and zoning plans and new development controls will need to be introduced into all Planning Schemes. With the exception of the Bundaberg City council. All Shires in the affected regions are currently in the process of preparing new Planning Schemes. Liaison with each Shire by the proponents involved with development of the dam would facilitate the most desirable outcome in terms of incorporation of planning controls into the Planning Schemes which meet both the community needs and the function of the dam.

6.4.7 Indirect Land Use Changes

The zoning and strategic designations of the planning schemes make provision for the introduction of recreational and tourist activity within the rural areas of the Shires. Should the introduction of the facility provide opportunity for such uses, these can readily be accommodated by the Planning Schemes.

6.5 Bundaberg Water Supply Scheme

The proposed major storage facility is not anticipated to alter the irrigation area. However, should unutilised water assignments be taken up then the potential impact should be investigated and this can be done using existing statutory mechanisms as described in Section 1 of this report.

6.5.1 Summary of Land Use and Planning Impacts

In summary the impacts of the project on land use and Planning Schemes are:

- Loss of good quality agricultural land. The loss of this land can be justified on the basis of an overriding public benefit created by the establishment of an increased reliable water supply to service the region.
- Loss of residential dwellings and other property infrastructure such as sheds, pumps, tanks, dips, yards etc. The loss of property infrastructure due to inundation is required to be compensated.
- Whilst the surrounding land uses are generally compatible with the major storage facility, there is potential for increased restrictions on future land use activity in the catchment when having regard to the need to maintain water quality.
- Potentially enhanced agricultural productivity at the both the local and regional level.
- Potential increase in opportunity for recreational and tourism development.
- Potential need to amend planning documents to properly manage the future development of land within the catchment area. Amendments to documents are at the Council's discretion and may be needed to both the Strategic Plan and zones.