

# Table of Contents

<b>1.</b>	<b>Introduction</b>	<b>1-4</b>
1.1	<b>Background</b>	<b>1-4</b>
1.2	<b>Project Description</b>	<b>1-4</b>
1.3	<b>Project Objectives and Scope</b>	<b>1-4</b>
1.3.1	Flood Mitigation	1-4
1.3.2	Water Supply	1-5
1.3.3	Upgrade to Meet Current Dam Safety Standards	1-6
1.4	<b>The Proponent</b>	<b>1-6</b>
1.4.1	Business Activities	1-6
1.4.2	Previous Water Infrastructure Projects	1-6
1.5	<b>The Environmental Impact Assessment Process</b>	<b>1-8</b>
1.6	<b>Structure and Presentation of Findings</b>	<b>1-10</b>
1.7	<b>Public Consultation Process</b>	<b>1-11</b>
1.7.1	Purpose and Scope of Consultation Process	1-11
1.7.2	Stakeholder Consultation	1-11
1.7.3	Agency Consultation	1-16
1.8	<b>Planning Context</b>	<b>1-16</b>
1.8.1	South East Queensland Regional Plan	1-16
1.8.2	South East Queensland Infrastructure Plan 2006 - 2026	1-17
1.8.3	South East Queensland Regional Water Supply Strategy	1-17
1.8.4	State Coastal Management Plan & SEQ Regional Coastal Management Plan	1-18
1.8.5	Gold Coast Priority Infrastructure Plan	1-18
1.8.6	Gold Coast City Council Planning Scheme	1-18
1.8.7	Local Laws	1-19
1.8.8	Gold Coast Waterfuture Strategy 2006 - 2056	1-20
1.8.9	Water Resource (Gold Coast) Plan	1-21
1.9	<b>Project Approvals</b>	<b>1-21</b>
1.9.1	Commonwealth Legislation and Initiatives	1-21
1.9.2	State Legislation	1-23
1.9.3	Local Government	1-30
1.9.4	Project Approval Requirements	1-32
1.10	<b>Submissions on the EIS</b>	<b>1-32</b>

## Figures

■	Figure 1-1 The EIS Process under the SDPWO Act	1-9
■	Figure 1-2 Implementation Timeline - Gold Coast Waterfuture Strategy	1-20
■	Figure 1-3 Approvals Process under SDPWO Act and IPA/ IDAS	1-25

## Tables

■	Table 1-1 GCCC and Hinze Dam Alliance Key Project Staff	1-6
■	Table 1-2 Water Infrastructure Projects	1-7
■	Table 1-3 EIS Structure	1-10
■	Table 1-4 Project Stakeholders	1-12
■	Table 1-5 Project Approvals Timeframe	1-32

# 1. Introduction

## 1.1 Background

The Introduction to the Hinze Dam Stage 3 Environmental Impact Statement (EIS) presents an overview of the Project and the Proponent, Gold Coast City Council. It also presents the Project objectives, the environmental impact assessment process and the planning and approvals context.

## 1.2 Project Description

The raising of the wall for the Hinze Dam Stage 3 Project (the Project) is being undertaken to provide improved flood mitigation to the community downstream of the dam, to increase the overall water storage and supply capacity of the dam and to make the dam compliant with current dam safety guidelines and standards. The Project objectives are presented in **Section 1.3**.

The construction works for the raising of the dam will be undertaken over a period of approximately 36 months with the majority of the works occurring in the immediate vicinity of the existing dam wall. Construction works will also occur at the upper intake tower where upgrading works are required to allow the intake tower to operate under new dam level, within the road network surrounding the site, and at both the upstream eastern and western boat ramps.

**Section 3** of the EIS provides a detailed description of the Project and the associated works to be delivered as part of the raising of the dam wall. These are summarised below:

- raising of embankments and saddle dams;
- raising of the spillway;
- raising of the two intake towers;
- quarry establishment;
- vegetation clearing;
- re-establishment of recreation facilities;
- relocation of boat ramps;
- upstream fish transfer device;
- construction of site offices and amenities;
- upgrade of roads affected by increased full supply and flood levels of the dam; and
- replacement of the Pocket Road bridge.

## 1.3 Project Objectives and Scope

The Project has three key objectives and these are:

- reduce flooding in the lower Nerang River catchment by increasing the flood mitigation capability of Hinze Dam;
- increasing the storage capacity of the dam and the water supply available from Hinze Dam; and
- ensuring that the dam complies with current safety standards and guidelines.

### 1.3.1 Flood Mitigation

The lower Nerang River flows through dense residential, community and commercial areas in the suburbs of Carrara, Nerang, Burleigh Waters, Benowa, Miami, Surfers Paradise, Mermaid Waters, Main Beach, Robina, Mudgeeraba and Burleigh Heads. Major rainfall events in the Nerang River catchment can cause flooding to properties and infrastructure in this area. The flood mitigation component of the dam upgrade will reduce peak flood flows and delay the release of floodwater into the lower reaches of the floodplain. By reducing the rate at

which floodwater is released from the dam, the number of properties potentially affected by flooding in the lower catchment would be reduced, as would peak flood levels and flooding damage.

Currently 4,441 properties downstream of Hinze Dam could be affected in a 1 in 100 year Average Recurrence Interval (ARI) flood event. The effect of raising the dam in respect to flood mitigation is a reduction of 3,284 affected properties.

The personal costs of flooding can be immense – in terms of potential loss of life, financial and personal losses. Personal losses include damage to homes and valued items, loss of family possessions, and damage to fittings, whilst the psychological effects can include anxiety, stress and depression. Older people may be particularly at risk in floods, both from the perspective of personal losses, and from a personal safety perspective due to a higher level of frailty and disability. One quarter of the Gold Coast's population is aged over 55 years, and this proportion will reach about 32% in 2021.

Flooding also currently has significant impacts on commercial and industrial properties, public utilities and infrastructure on the Nerang River floodplain.

The reduction in flooding risk represents a significant community benefit to downstream areas and the broader community through the reduction in the economic, social and environmental impacts associated with flooding.

### 1.3.2 Water Supply

The Hinze Dam is the main bulk water supply source for the Gold Coast region. The Project constitutes an augmentation of the water supply within the South East Queensland Region, which is particularly significant given the effect of recent drought conditions decreasing dam levels across South East Queensland, and subsequent water restrictions placed on residents and businesses.

The Gold Coast Water Futures report (GCWF) (GCCC 2005c) outlined strategies and options for increasing water supply to the Gold Coast region over the next 50 years and identified the raising of Hinze Dam for water supply as a key element in the overall security of supply for the region. The South East Queensland Regional Water Supply Strategy (SEQRWSS) (DNRW and BCC 2004/2005) has identified a need for a range of measures that will provide enough water for short, medium and long term needs for the South East Queensland region. The raising of Hinze Dam is one of the medium to long term initiatives identified in the strategy to increase water availability and security.

In response to the current water supply emergency in South East Queensland, the State Government passed a Regulation to secure the essential water supply needs of the region. An emergency Regulation under the *Water Act 2000* was made on the 9th August 2006 (*Water Amendment Regulation (No. 6) 2006*). Within the *Regulation*, Schedule 10B: Measure 11 – Hinze Dam Stage 3 requires that the Stage 3 raising of the dam deliver a target of 16 ML/d of additional yield by 31st December 2010. It also requires that the Project prepare for associated water harvesting. Water harvesting is the diversion of run off from adjacent catchments into Hinze Dam.

The Gold Coast Local Government Area (LGA) population was projected to reach more than half a million people by December 2006, and will continue to grow by an average of 2.4% per year between 2001 and 2026<sup>1</sup>. Increased supply of water, and confidence that supply is adequate, will support the forecast population increase, and allow urban development to proceed as outlined in the South East Queensland Regional Plan<sup>2</sup>, and detailed in Gold Coast City Council's (draft) Local Growth Management Strategy.

The Hinze Dam Stage 3 Project will increase the available yield from the dam to 225 ML/d.

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<sup>1</sup> Gold Coast City Council (2006) Population Projections to 2026, prepared for the Priority Infrastructure Plan, by Planning Information Forecasting Unit, DLGFSR

<sup>2</sup> Queensland Government (2005) South East Queensland Regional Plan 2006 - 2026

### 1.3.3 Upgrade to Meet Current Dam Safety Standards

The *Water Act 2000* provides the regulatory framework for dam safety of water dams in Queensland and requires that the owners of referable dams must operate and maintain dams in accordance with the Guidelines on Acceptable Flood Capacity for Dams (DNRW 2007c). By virtue of its height and storage capacity Hinze Dam is a referable dam. Recent revisions to dam safety requirements and design inputs (extreme flood events hydrology) requires elements of the upgrade of Hinze Dam for compliance with these guidelines and standards.<sup>3</sup>. In order to comply with these guidelines and standards the raised dam and modified spillway must be capable of passing the Probable Maximum Flood (PMF) determined for the dam without overtopping of the dam crest.

## 1.4 The Proponent

The proponent of the Hinze Dam Stage 3 Project is Gold Coast City Council. Gold Coast City Council (GCCC) and Gold Coast Water (GCW) (a directorate of GCCC with responsibility for the provision of water and waste water services to the Gold Coast community) are involved in many water resource and management projects across the Gold Coast.

### 1.4.1 Business Activities

GCCC undertakes and delivers a wide range of business activities and services. All activities of Council are to service and support the community of the Gold Coast. GCCC has the responsibility to set local laws, collect rates and deliver municipal services to the community. Services provided by Council include animal control, building and development planning and control, cemetery management, , disaster management, community health, laws and regulations, libraries, lifeguard services, parking, rate collection and management, waste management, cleaning and recycling and water and wastewater management. All activities of GCCC occur within the boundaries of the Gold Coast Local Government Area (LGA).

### 1.4.2 Previous Water Infrastructure Projects

GCCC has extensive experience in the delivery of significant water infrastructure projects. Currently, GCCC is delivering the Gold Coast Desalination project, the Pumps and Pipes project, the Northern Wastewater and Reclaimed Water Scheme, the Merrimac Wastewater Treatment Plant project and the Helensvale Reservoir upgrade. All these projects are large, complex, multi-million dollar infrastructure projects that are necessary to upgrade and improve the delivery of water and waste water services to the community of the Gold Coast.

GCCC formed the Hinze Dam Alliance with Thiess, URS and Sinclair Knight Merz to deliver the Project. The Alliance was established in October 2006. Key members of the Alliance are listed in **Table 1-1**.

#### ■ Table 1-1 GCCC and Hinze Dam Alliance Key Project Staff

Staff	Contact Details	Role and Expertise
Darren Scott	Gold Coast City Council PO Box PO Box 5042 GCMC Qld 9729 Ph: 07 5582 8211 email: darrenscott@goldcoast.qld.gov.au	Director, Economic Development and Major Projects, GCCC Alliance Leadership Group (ALG) Chairman
Darren Stewart	Gold Coast City Council PO Box PO Box 5042 GCMC Qld 9729 Ph: 07 5582 8211 email: DSTEWARD@goldcoast.qld.gov.au	GCCC Hinze Dam Stage 3 Project Manager
Kirsty McInnes	Gold Coast City Council PO Box PO Box 5042 GCMC Qld 9729 Ph: 07 5582 8211 email: kmcinnes@goldcoast.qld.gov.au	Major Projects Manager, GCCC ALG member

<sup>3</sup> DNRW – Draft guidelines on the selection of acceptable flood capacity for dams (Information note)

Staff	Contact Details	Role and Expertise
Tim Packer	Gold Coast City Council PO Box PO Box 5042 GCMC Qld 9729 Ph: 07 5582 8211 email: tpacker@goldcoastwater.com.au	Catchment Management Coordinator, Gold Coast Water
Dale Gilbert	Hinze Dam Alliance PO Box 1522 Milton Qld 4064 Ph: 07 3305 0470 email: dgilbert@hinzedamalliance.com.au	Alliance Manager
Christopher Dann	Hinze Dam Alliance PO Box 1522 Milton Qld 4064 Ph: 07 3305 0470 email: cdann@hinzedamalliance.com.au	Alliance Design Manager
Scott Abbey	Hinze Dam Alliance PO Box 1522 Milton Qld 4064 Ph: 07 3305 0470 email: sabbey@hinzedamalliance.com.au	Alliance Environment, Approvals & Stakeholder Team Leader
Hunter Brownscombe	Hinze Dam Alliance PO Box 1522 Milton Qld 4064 Ph: 07 3305 0470 email: hbrownscombe@hinzedamalliance.com.au	EIS Leader

GCCC, Thiess, URS and SKM all have long track records on the delivery of the design, approval and construction of major water infrastructure projects, in both Australia and overseas. **Table 1-2** lists a range of projects that the Alliance members have been involved with over recent years.

■ **Table 1-2 Water Infrastructure Projects**

Project	Value	Location
Balambano Dam	\$180m	Indonesia
Burrinjuck Dam Upgrade		NSW
Jindabyne Dam Upgrade		NSW
Burrendong Dam Upgrade	\$50m	NSW
Splitrock Dam Upgrade	\$20m	NSW
Lake Belfield Upgrade	\$6m	NSW
Matahina Dam Upgrade	\$49m	NZ
Cosseys Dam Upgrade	\$15m	NZ
Upper Mangatawhri Dam Upgrade	\$8m	NZ
Alto Chicama Water Supply Dams	\$180m	Peru
Hinze Dam Upgrade Studies	NA	Qld
Awoonga Dam Raising	\$106m	Qld
Enoggera Dam Raising	NA	Qld
Burnett River Dam (design and planning and environmental approvals)	\$170m	Qld
Teemburra Dam	\$23m	Qld
Peter Faust Dam	\$18m	Qld
Walla Weir	\$12m	Qld
Eden Bann Weir	\$4.5m	Qld
Awoonga High Dam	\$53m	Qld
Bowen River Weir		Qld
Residue Dam-Comalco Alumina Refinery	\$21m	Qld
Julius Dam		Qld

Project	Value	Location
Splityard Creek Dam		Qld
Stanthorpe Water Supply dam		Qld
Millbrook Dam Upgrade		S.Aust
Cripple Creek Dam Upgrade	\$135m	USA
Morris Dam Upgrade - California	\$5m	USA
Las Baqeros Dam Upgrade - California	\$11m	USA
Dillon Dam Upgrade - Colorado	\$7m	USA
Green Ridge Glade Dam Upgrade	\$20m	USA
Almaden Dam Intake Tower	\$12m	USA
Tolt Intake Tower Seismic Assessment	\$7m	USA
Toker Dam		USA
Rocky Penn Dam Upgrade	\$100	USA
Marble Bluff dam - Nevada		USA
Grand Valley Diversion Dam		USA
Pyramid Lake Fishway - Nevada		USA
Link River Dam - Oregon		USA
Lake Eppalock Upgrade	\$15m	Vic
Lake Buffalo Upgrade	7m	Vic
Yarrowonga Weir Upgrade	\$10m	Vic
Sugar Loaf Dam		Vic
Dartmouth Dam	\$107m	Vic
Churchman Brook Dam Upgrade		WA
Samson Brook Dam		WA

Key features of the experience of the Hinze Dam Alliance members are:

- GCCC has planned, developed, managed and operated all aspects of water infrastructure for the provision of services to the Gold Coast community. Presently GCCC and GCW are involved in many alliances and major water infrastructure projects. These alliances involve the construction of new water infrastructure such as treatment plants, desalination plant, upgrades to reservoirs and recycled water distribution.
- Thiess has a long record of dam construction including the construction of 24 major dams in Queensland and 70 across Australia over the past 50 years. Thiess raised the dam wall on Awoonga Dam near Gladstone between 2000 and 2002. This was a project with parallels with the raising of Hinze Dam.
- URS is one of the largest engineering design firms on the world. URS has an established record in dam design and is a major player in the assessment, design and delivery of major dam upgrade projects in the Asia Pacific region.
- SKM has worked on a wide range of water infrastructure projects ranging from planning and investigation studies, environmental assessment, approval and community engagement. SKM has worked with GCCC and GCW over recent years with the development of many water infrastructure projects and strategies, many of which are being constructed. SKM has also undertaken the environmental assessment of dam projects such as the Paradise Dam near Bundaberg and is presently working on the Gold Coast Desalination project and Pumps and Pipes project.

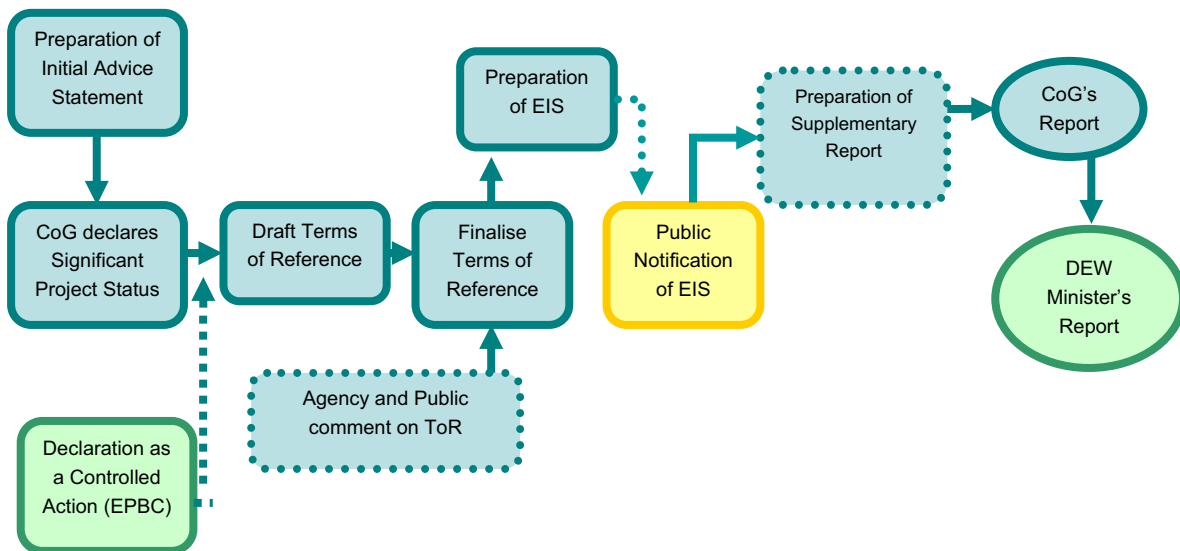
### 1.5 The Environmental Impact Assessment Process

GCCC and GCW sought to have the environmental and planning approvals required for this Project to be carried out under the *State Development and Public Works Organisation Act 1971* (SDPWO Act) thereby providing independent environmental evaluation of the Project. The EIS assessment process under the SDPWO Act is shown in **Figure 1-1**.

An Initial Advice Statement was prepared and submitted to the Coordinator General on 17 August 2006. The Initial Advice Statement was submitted to the Coordinator General to provide sufficient information to:

- enable determination of the significance of the Project; and
- provide information to enable advisory agencies and the public to have input into the draft Terms of Reference (ToR) for the EIS.

■ **Figure 1-1 The EIS Process under the SDPWO Act**



The Queensland Coordinator General declared on 20 October 2006 that the Project was a significant project for which an EIS is required, and this EIS was prepared to satisfy the requirement of the SWPWO Act.

The ToR for the EIS were prepared and exhibited from 24 February 2007 to 28 March 2007. Based on the requirements of the relevant agencies and submissions from the community, ToR was finalised on 25 April 2007. A copy of the ToR is contained in **Appendix A** of this EIS.

The EIS also provides the Coordinator-General with a framework to:

- consider the economic, social and environmental aspects of the Project in the context of legislative and policy provisions and decide whether the Project can proceed;
- set conditions for approval, as appropriate, to seek to achieve economically, socially and environmentally sustainable development; and
- where necessary, recommend an environmental management and monitoring program.

Although the Project will be assessed under the EIS provisions of the SDPWO Act, all approvals under the relevant State Government legislation will still be required to be obtained. All approvals required under Commonwealth, State and Local laws are identified in **Appendix B** of the EIS.

The Commonwealth Department of Environment and Water Resources was formally consulted through a referral of the Hinze Dam Stage 3 Project under the *Environment Protection and Biodiversity Conservation Act 1999* to determine whether the Project was a 'controlled action' under the Act. The Department responded in a letter dated 16 January 2007 that the Hinze Dam Stage 3 Project was a controlled action due to the potential impact on threatened listed species and communities.



## 1.6 Structure and Presentation of Findings

The results of investigations and findings associated with the raising of the Hinze Dam are presented in the EIS as a comprehensive document providing sufficient information to allow an informed decision on the potential impacts of the Project and mitigation measures to be implemented by the Alliance. The EIS provides the reader with information and background to understand:

- the scope of the Project;
- the Project alternatives that have been considered;
- the existing environment of the Project;
- impacts that may occur as a result of the Project; and
- the proposed solutions to particular issues identified in the EIS.

The EIS includes a high level of technical content as it will be used as the basis for the application of approvals. The issue of project approvals requires the assessment and interpretation of technical material, as the basis for the issue of approvals and the associated conditions.

The Executive Summary provides a broad overview of the Hinze Dam Stage 3 Project, the existing environment and the identified Project impacts. It also provides a summary of the conclusions reached and the recommendations put forward to the Coordinator-General. To gain a comprehensive understanding of the complexities of the Project, its likely impacts, proposed mitigation measures and outcomes of the process, the Executive Summary should be read in conjunction with the EIS and other supporting documentation.

The EIS is presented in 4 volumes. **Table 1-3** lists the volumes of the EIS and the sections contained in each volume

### ■ Table 1-3 EIS Structure

EIS Volume	EIS Section
Volume 1	Section 1 - Introduction Section 2 - Project Rationale Section 3 - Project Description
Volume 2	Section 4 - Topography, Geomorphology, Geology and Soils Section 5 - Land Contamination Section 6 - Land Use and Infrastructure Section 7 - Surface Water Resources and Water Quality Section 8 - Groundwater Section 9 - Terrestrial Ecology Section 10 - Aquatic Ecology
Volume 3	Section 11 - Air Quality and Greenhouse Gases Section 12 - Noise and Vibration Section 13 - Transport and Roads Section 14 - Hazard, Safety and Risk Section 15 - Waste Management Section 16 - Socio-Economic Section 17 - Cultural Heritage Section 18 - Landscape and Visual Amenity Section 19 - Management Plans Section 20 - Conclusions and Recommendations Section 21. - References
Volume 4	A - Final Terms of Reference B - Statutory Permits and Development Approvals C - Potential Impacts on Matters of National Environmental Significance D - Consultation Report

	E - Project Study Team Qualifications and Experience F - Research Reports and Specialist Studies G - List of Proponent Commitments H - Data Disclosure
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## 1.7 Public Consultation Process

### 1.7.1 Purpose and Scope of Consultation Process

As part of the development of the EIS for the Project an extensive community consultation program was implemented between November 2006 and April 2007. The consultation process aimed to inform, consult and involve the community in order to achieve positive outcomes for stakeholders directly and indirectly impacted by the Project.

Specifically, the objectives of community consultation for the Project were to:

- enhance community awareness and understanding of the Project;
- identify key stakeholders (including stakeholder group representatives), their needs and values;
- facilitate involvement by the community into Project development;
- provide information on the EIS process;
- seek input in terms of key issues and concerns and suggestions to mitigate these concerns
- seek feedback on the preferred concept;
- provide information on the outcomes of Project studies; and
- demonstrate how issues of concern to the community were identified, considered and addressed during the EIS process.

### 1.7.2 Stakeholder Consultation

Planning and initial consultation for the EIS commenced in October 2006. The aim of the community consultation was to communicate three key Project objectives namely:

- reduce flooding in the lower Nerang River catchment;
- increase water supply from Hinze Dam to 225 million litres per day; and
- ensure the dam complies with current safety standards and guidelines.

The Alliance has directly and indirectly engaged a number of stakeholders via a comprehensive stakeholder and community engagement program.

Activities used to engage and inform the community and identify key issues and concerns include:

- formation of a Community Advisory Committee (CAC) with representatives from interested groups and individuals from across the City;
- a series of design and optimisation workshops, involving Councillors and members of the CAC;
- static displays and information sessions at GCCC administration centres and libraries
- public meetings and information sessions at local venues such as the community hall and hotel;
- meetings with specific interested groups and individuals to discuss specific aspects of the Project;
- briefings for GCCC Councillors;
- meetings with State and Commonwealth agencies on the Project and environmental assessment;
- house calls with local residents;
- public notices in local newspapers and media releases;

- direct mail drops; and
- a dedicated community liaison officer from the Alliance based at Hinze Dam and available to the community to discuss Project matters and grievances.

Since the commencement of community consultation in November 2006, up to 5000 residents in the immediate Hinze Dam area were engaged via direct mail drops, print advertisements, road signage, website updates, face-to-face meetings, public displays, workshops, door knocks, direct mail and public information sessions.

The Hinze Dam Alliance has also:

- directly engaged 690 individuals;
- undertook 326 community consultation activities;
- directly engaged approximately 170 interested stakeholders through six Community Advisory Committee meetings (with a flow-on effect of 1700 persons indirectly engaged through respective community groups); and
- received over 230 enquires and comments from community members.

Consultation catchments for the EIS included upstream and downstream suburbs in the vicinity of the dam. Local suburbs included (but were not limited to) Advancetown, Gilston, Nerang, Bonogin, Highland Park, Lower Beechmont, Mudgeeraba, Tallai and Worongary.

Stakeholders fell into two groups:

- Tier 1 Stakeholders – affected persons; stakeholders that may be directly effected by the Project or those with a direct interest. Typically the Tier 1 stakeholders are those with a direct and regular involvement with dam and adjacent areas; and
- Tier 2 Stakeholders – interested persons; stakeholders with an interest in the Project or those that may experience a minor or related impact.

**Table 1-4** lists the stakeholders by tier, with a description of the stakeholder group.

■ **Table 1-4 Project Stakeholders**

Stakeholders	Profile
<b>Tier 1</b>	<b>Directly impacted/indirectly impacted community members</b>
Inner Hinze Dam Residents (within a 1 km radius of the dam wall)	Residents that lie within a 1 kilometre (km) radius of the dam wall and are most likely to be directly impacted by day-to-day construction operations.
Outer Hinze Dam Residents (within a 2 km radius of the dam wall)	Residents that lie between a 1 and 2 km radius of the dam wall. This group will be directly impacted by construction but to a lesser extent than the Inner Hinze Dam residents.
Residents in adjoining suburbs	Residents in neighbouring suburbs greater than 2km from the dam wall and therefore less likely to be directly affected by construction activities.
Community groups and organisations	Community members belonging to local groups that use the Hinze Dam for outings and organised events.
Recreational/sporting groups and organisations	These stakeholders use the dam and its surrounds for recreational purposes. This group includes (but is not limited to): <ul style="list-style-type: none"> <li>■ day trippers and families;</li> <li>■ fishing clubs and competitors;</li> <li>■ hikers;</li> <li>■ horse riders and equestrian clubs.</li> <li>■ mountain bikers and competitors; and</li> <li>■ rowers and dragon boat competitors.</li> </ul>
Business	These stakeholders use the Hinze Dam for business activities and include: <ul style="list-style-type: none"> <li>■ food and beverage outlets;</li> <li>■ tour groups;</li> <li>■ bus operators; and</li> <li>■ corporate coaching organisations.</li> </ul>

Stakeholders	Profile
Emergency service organisations	These stakeholders include: <ul style="list-style-type: none"> <li>■ The Gilston Bush Fire Brigade;</li> <li>■ Lower Beechmont Fire Brigade;</li> <li>■ Queensland Police Service;</li> <li>■ Department Emergency Services</li> <li>■ Queensland Ambulance Service; and</li> <li>■ Air Sea Rescue.</li> </ul>
Schools	These schools are located in the immediate Hinze Dam area and include: <ul style="list-style-type: none"> <li>■ Nerang State Primary School;</li> <li>■ Nerang State High School; and</li> <li>■ Gilston Primary School.</li> </ul>
<b>Tier 2</b>	<b>Broader Gold Coast and Regional / State-wide Community</b>
South East Regional Community	The broader South East Community (including the broader Gold Coast region and State-wide community) with an interest in the Hinze Dam and its ability to supply additional water to the water grid.
Environmental groups and organisations	Local environmental groups with an active interest in all major infrastructure developments on the Gold Coast
Government (State) departments and agencies	These agencies and departments have direct input into the Project, for example Project approvals, or where aspects of the Project impact their areas of jurisdiction. For example: <ul style="list-style-type: none"> <li>■ Department of Environment &amp; Water Resources;</li> <li>■ Department of Main Roads;</li> <li>■ Department of Natural Resources &amp; Water;</li> <li>■ Department of Primary Industries &amp; Fisheries;</li> <li>■ Department of Infrastructure;</li> <li>■ Environmental Protection Agency;</li> <li>■ Queensland Health;</li> <li>■ Queensland Transport; and</li> <li>■ Queensland Water Commission.</li> </ul>
Regional Environmental groups and organisations	Regional environmental groups concerned with the regional, state, national and global project impacts (for example Gecko).
Indigenous groups, traditional owners and organisations	These groups also include recognised Aboriginal parties with an interest in the Hinze Dam Advancetown Lake Area.  These groups may have traditional lands affected by new (Stage 3) inundation levels and have therefore registered their interest to become an endorsed party involved in the development of the Cultural Heritage Management Plan (refer <b>Section 17</b> ) .

Consultation activities undertaken since November 2006 have included:

- Hinze Dam Stage 3 Community Advisory Committee meetings;
- door-knocking local residents;
- face-to-face meetings with stakeholders, including, residents, environmental groups, emergency services, GCCC Councillors and business owners;
- direct mail-outs;
- display posters;
- spillway design workshops;
- EIS Terms of Reference Information Sessions;
- EIS Terms of Reference Staffed Library displays;
- EIS Terms of Reference Statutory Library displays;
- public Meetings;
- site visits;
- dedicated Hinze Dam Stage 3 website;
- newspaper advertising;
- media releases;

- telephone surveys;
- project briefings;
- on-site community liaison office;
- road signage;
- 1300 call centre number, through the GCW call centre;
- presentations to community groups;
- emails; and
- letters.

As a result of the feedback received by the Alliance through the community engagement activities outlined above (further detailed in **Table 7** and **Figure 5.1** in **Appendix D** of the EIS), the top four key issues of concern for stakeholders include:

- 1) impacts of construction;
- 2) changes to recreation and access;
- 3) environmental management of construction activities; and
- 4) impacts on the local community and lifestyle of the area.

The Project presents direct impacts on local residents, businesses and community groups living in and around the Hinze Dam area as well as indirect impacts on other residents, businesses and community groups who use the dam for specific activities.

An overview of the key issues raised during consultation between November 2006 to late April 2007 and proposed mitigation measures for each area of concern are outlined in **Section 19** and **Appendix D**.

The community was invited to provide input on a number of key issues. The primary channel for this input was achieved through the Community Advisory Committee (CAC), whose members represented a cross-section of the Gold Coast community. Other channels included meeting with particular representative groups including Gold Coast City Councillors, environmental, recreational and community groups, emergency services and other interested parties.

As a result of this process the Alliance and the relevant stakeholders were able to work together collaboratively to develop mutually beneficial solutions and mitigation strategies to address many of the impacts and issues arising out of this Project.

To address the communities' key areas of concern, proposed construction mitigation strategies include Environmental Management Plans for soil erosion, dust and noise management, vibration, surface water quality, hours of work, safety and risk management and community liaison and communication. Details are provided in the Environmental Management Plan presented in **Section 19**.

A summary of the mitigation measures for the communities' key areas of concern is provided below:

### **Construction**

- Soil and erosion
  - erosion controls and sedimentation traps
  - scheduled clearing outside summer months when storms are potentially more prevalent
- Dust and noise
  - construction dust management plans with physical containment measures (where feasible) and dust suppression methods (for example water trucks)

- dust monitoring prior to and during construction
- restricting work practices to construction exclusion zones
- prompt rehabilitation of construction areas to mitigate again dust, soil and sedimentation
- **Vibration**
  - vibration monitoring during each blast to monitor peak particle velocity
  - blasting will occur within strict controls to limit vibration
  - structural surveys to assess and record pre-blast conditions of properties within 1 km of blasting activity (this will also be available for properties and businesses outside the 1 km radius)
- **Vehicle management plan and other mitigation measures**
  - oversized vehicular movement control and monitoring
  - scrapers, excavators and trucks will be mobilised to site for quarrying during September 2007 prior to 2008 construction activity
  - construction of suitable heavy vehicle access roads for trucks and excavators
- **Traffic**
  - a traffic management plan will be developed to manage traffic during and after construction
  - the majority of truck movement will be contained within the construction zone itself
  - the majority of material required for stage 3 will be extracted within the Community Infrastructure Designation Zone
  - construction workers will be encouraged to Park n' Ride and take advantage of the daily shuttle that will limit the amount traffic on local roads
  - sufficient on-site parking will be provided to avoid roadside parking in the local area
  - traffic movement can occur within the hours of 6.30am and 6.30 pm Monday to Saturday
  - road signage will be provided
  - ongoing communication will occur between local residents, recreational groups and interested stakeholders
- **Recreation and access**
  - alternative recreation areas are proposed (to include the Lakeside Park on the left abutment of the crest wall in the area)
  - upgrades to the western and eastern upper boat ramps will occur prior to construction
  - an interpretive centre concept, downstream park and reinstatement of a kiosk is proposed for review by the CAC
- **Environmental management**
  - construction schedule in sensitive areas first to enable prompt rehabilitation were feasible
  - conducted in accordance with legislated Environmental requirements

## Community and Lifestyle

The Alliance has developed a four-year Communication and Consultation Strategy which is detailed in **Section 5** of **Appendix D**. The Strategy aims to provide timely information to stakeholders to mitigate potential impacts and advise them of the significant investment being made the proponent to improve the dam in terms of:

- prioritised flood mitigation;
- time efficient solutions and outcomes;

- efficient optimization of Project scope and cost;
- sustainable water resource and impact management; and
- enhanced outcomes for the community and stakeholders.

Regular construction updates will be provided throughout the Project (2008-2010), with communication on blasting and construction schedules taking priority during relevant periods. Following construction, effective promotion of the re-opening of Hinze Dam is also proposed.

### 1.7.3 Agency Consultation

The Alliance has held several meetings with Government agencies on the Project as part of the preparation of the EIS. These meetings are summarised below.

On 8 December 2006 a meeting was held with the Department of the Environment and Heritage (now the Department of the Environment and Water Resources) to discuss the referral of the Project under the EPBC Act. At this meeting it was agreed at the Project would be referred to the Department as a controlled action under the Act. The referral was made on 22 December 2006.

A briefing for all interested state Government agencies was held on 8 March 2007, at the start of the display of the draft ToR. At this briefing the Alliance gave an overview of the scope of the Project, as background to the ToR, to assist agencies comment on the draft ToR. Departments present at this briefing were the Environmental Protection Agency, Department of Primary Industries and Fisheries, Department of Main Roads, Queensland Police Service, Department of Infrastructure and Department of Natural Resources and Water.

A series of meetings have been held with the Department of Primary Industries and Fisheries to discuss the need for a fish transfer device on the raised dam and the aquatic ecology survey approach used for the EIS. Members of the Alliance and DPIF staff made a joint site inspection of the dam and nearby watercourses on 6 November 2006 to inspect the condition of the Nerang River, Little Nerang Creek and the dam. This inspection provided background to ongoing discussions on the need for, and type of fish transfer device to be built as part of the Project. Further meetings with DPIF have been held on the type of fishway that should be provided and the aquatic surveys. DPIF and the Alliance have agreed that a trap and transfer fishway will be provided for upstream fish passage.

The Alliance has also met with the Environmental Protection Agency on water quality, terrestrial ecology and noise issues. The purpose of these meetings was to discuss the findings of the EIS investigations and the proposed mitigation measures that are included in the EIS.

## 1.8 Planning Context

This section provides an assessment of the Project's consistency with the relevant state, regional and local planning policies.

### 1.8.1 South East Queensland Regional Plan

The South East Queensland Regional Plan (SEQRP) which came into effect in June 2005 is a statutory instrument under the *Statutory Instruments Act 1992*, and a planning instrument under the *Integrated Planning Act 1997*. The primary purpose of the SEQRP is to provide a sustainable growth management strategy for the region to the year 2026.

On average, the region has experienced a growth rate of 55,300 people per year between 1986 and 2004 and the Queensland Government projects that this trend will continue, with an average growth rate of 50,000 people per year from 2001 – 2026 (OUM, 2005)<sup>4</sup>. The continuing population increase, coupled with the current drought

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<sup>4</sup> OUM, 2005, *South East Queensland Regional Plan*

conditions, is placing enormous pressures on our natural and built environment, in particular water supply infrastructure.

The Regional Plan identifies 12 regional policies which set out the desired regional outcomes, principles and policies to address growth management issues. The policies are intended to guide State and local government planning processes and decision making. Policy 11 - Water Management, directly responds to water management in the region.

Section 11.3 of the Regional Plan addresses water supply. The overarching principle for water supply is to 'Provide assured supplies of water to meet the reasonable needs of growth and development in the region'. Furthermore, Policy 11.3.5 specifically identifies the upgrading of existing dams in order to meet the increasing water demand in the region.

### **1.8.2 South East Queensland Infrastructure Plan 2006 - 2026**

In order to support the implementation of the SEQRP, the South East Queensland Infrastructure Plan and Program (Infrastructure Plan) has been developed. The Infrastructure Plan outlines the State Government's infrastructure priorities and establishes priorities for regionally significant infrastructure over the next 10 years. The Infrastructure Plan is updated annually to reflect new developments in South East Queensland.

The revised Plan for 2007 has not been released, therefore some of the information contained within the 2006-2026 Plan does not reflect the current implementation dates.

The Infrastructure Plan builds on the water supply initiatives identified in the SEQRP, and details each water infrastructure initiative, funding arrangements and timeframes for implementation. The Plan states that the raising and upgrading of existing dams and weirs will be required to maintain SEQ water supplies over the next two decades. Furthermore, it shows the delivery timeframe for the raising of the Hinze Dam to be completed between 2010/2011 to 2014/2015.

### **1.8.3 South East Queensland Regional Water Supply Strategy**

The SEQ Regional Water Supply Strategy (SEQRWSS) is being progressed by the Queensland Government, in partnership with the Council of Mayors SEQ to formulate regional strategies for managing the future water supply needs of SEQ. This Strategy is essential to support the projected growth of the region, as identified in the SEQ Regional Plan 2005-2056.

The key objectives of the overall Project are to:

- assess future needs for a safe and reliable supply of water in south east Queensland;
- assess the processes and mechanisms required to meet those needs; and
- obtain agreement for an implementation framework for the strategy that achieves optimum social, environmental and economic terms.

Stage 1 of the Strategy was completed with the release of a report in August 2004. The Stage 2 Report was intended to be released at the end of 2006, however given the critical challenges associated with the continuing drought conditions in SEQ, an Interim Report was released in November 2006. The Stage 2 Report is planned to be released in mid 2007.

The purpose of the Interim Report is to accelerate urban and industrial water supply throughout the region in order to address the immediate and short-term challenges and to provide a long-term planning framework to secure water supply for the region. It identifies the water projects that will address the short, medium and long-term water supply issues.



The SEQRWSS (Interim Report) is a document that integrates the water supply policies and recommendations of the following:

- is a companion and builds upon the SEQ Regional Plan and SEQ Infrastructure Program;
- addresses contingency planning needs identified in the regional Drought Strategy; and
- compliments the Queensland Water Plan 2005-2010.

The Interim Report recommends the raising of the Hinze Dam as a medium-term project, with investigations to have commenced in 2005. The implementation of the Interim Report further indicates that the Stage 2 Report will recommend the raising of existing dams as a crucial water supply measure, as a way of minimising environmental impacts by not inundating pristine environments.

#### **1.8.4 State Coastal Management Plan & SEQ Regional Coastal Management Plan**

The South East Queensland Regional Coastal Management Plan (SEQCMP) is a statutory instrument under the *Coastal Management and Protection Act 1999*. The SEQCMP details 15 policies and one key coastal site under the framework established by the State Coastal Plan.

The SEQCMP describes how the coastal zone within the South-east Queensland region is to be managed and provides direction for implementing the State Coastal Management Plan – Queensland’s Coastal Policy (State Coastal Plan) and the South East Queensland Regional Plan 2005-2026 (the SEQ Regional Plan).

The purpose of the SEQCMP is to manage growth and associated change along the South East Queensland coast in the most sustainable way to minimise impacts on coastal resources. It includes policies to manage the environmental effects of development, recreation and tourism.

The SEQCMP applies to the coastal zone of SEQ, extending from Maroochy in the north, west to Toowoomba and south to the New South Wales border.

The water quality policies contained in the plan apply to the Project. Through the management of vegetation clearing for the Project and ongoing water quality monitoring for during construction and operation, water quality of coastal waters will be protected.

#### **1.8.5 Gold Coast Priority Infrastructure Plan**

The Gold Coast Priority Infrastructure Plan (PIP) is the first PIP to be introduced in Queensland. It was implemented in January 2007, and will be reviewed every four years to ensure that the plan remains consistent with the forecast, and actual growth of Gold Coast City.

The purpose of the PIP is to define the scale, type, timing and location of growth in the Gold Coast area in order to plan future trunk infrastructure and determine charges required to fund it. The PIP does not address the implementation of larger infrastructure projects such as the raising of the Hinze Dam, therefore it has not been discussed in detail.

#### **1.8.6 Gold Coast City Council Planning Scheme**

Under Schedule 10 of the Gold Coast City Council Planning Scheme, the site (Lot 4 SP164198) is designated for Community Infrastructure purposes, pursuant to the provisions of Chapter 2, Part 6 of the *Integrated Planning Act 1997*.

The effect of the designation is that:

- the development of the land for the purpose for which it is designated becomes exempt development under this Planning Scheme<sup>5</sup>, however approval for all other assessable development as identified under Schedule 8 of IPA is required; and
- if a public sector agency proposes or starts development under a designation, the agency is not required to pay any infrastructure charge for the development (refer IPA Section 2.6.6).

The intent of the designation is to provide a tool for both local and State Government to signify to the community where and how important infrastructure will be provided, and to ensure land that is vital for the provision of community facilities is not lost to other forms of development. Importantly, a designation signifies a planning intention, and does not impose any obligation on the designating authority to provide the infrastructure.

The existing inundation area is located entirely within Lot 4 SP164198, however the inundation area will extend outside of Lot 4 SP 164198 as a result of the increase in the Full Supply Level (FSL). Council has not resolved as to whether the Community Infrastructure Designation (CID) will be revised to include the additional inundation area. **Section 6** details the tenure acquisition process associated with this area.

### 1.8.7 Local Laws

Under Chapter 2, Part of the *Local Government Act 1993*, each local government has jurisdiction to make laws within their local government area. The Gold Coast City Council has implemented 44 Local Laws. The following local laws area applicable to the Project:

- Local Law 13 Hinze and Little Nerang Dams; and
- Local Law 23 Limitation of Hours of Building and Construction Work.

The objectives of Local Law 13 (Hinze and Little Nerang Dams) are to regulate the public use of Hinze and Little Nerang Dams, the land areas and the structures thereon:

- a) to protect the community against risk of injury or damage to property;
- b) to protect the public facilities against vandalism and malicious damage;
- c) to regulate access to the impounded lakes;
- d) to facilitate control over the Areas during;
  - i. construction/maintenance/operational activities;
  - ii. the conduct of sporting and social events in the Area;
  - iii. significant natural events, notably flooding;
- e) to ensure that the primary/function of the dams, the provision of a potable water supply, is adequately protected against pollution from humans, all forms of flora and fauna and all other sources.

This Local Law should also be read in conjunction with Local Law Policy No 13, which regulates the activities that are permitted within the dam area. Local Law 13 and the associated Policy document will continue to exist throughout the operation of the life of the dam, as Council deems necessary.

The intent of Local Law 23 Limitation of Hours of Building and Construction Work is to:

- a) regulate the hours during which building work or construction work is carried out; and
- b) to protect public health and safety and convenience by eliminating or reducing nuisances including excessive noise.

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<sup>5</sup> S2.6.5, *Integrated Planning Act 1997*

The local law regulates that all construction and building work is conducted between 7am and 6pm on weekdays and Saturdays. It further states that works cannot be carried out on a Sunday, Good Friday or Christmas Day. In order to conduct building and construction works outside of these hours, an application must be submitted to and approved by Council.

Should works be required to be conducted outside of the legislated timeframe, an application will be lodged with Council for approval.

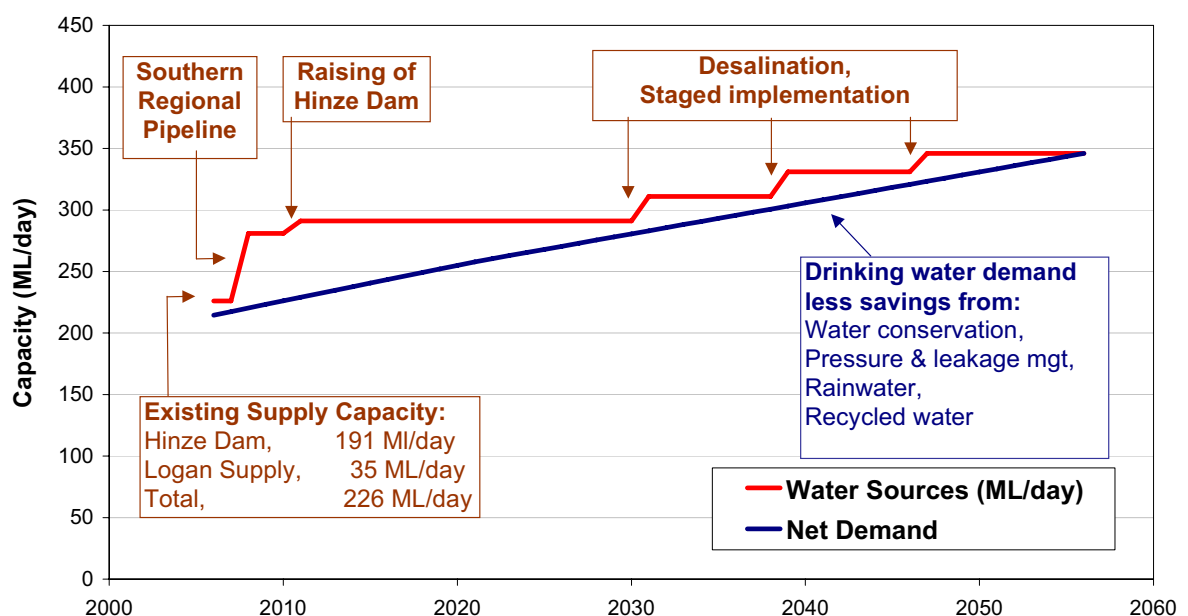
### 1.8.8 Gold Coast Waterfuture Strategy 2006 - 2056

In April 2004, the Gold Coast Waterfuture Strategy 2006 – 2056 (the Strategy) was launched to investigate all possible sources of water supply. The Strategy provides for the sustainable management of water supply across the Gold Coast City over the next 50 years. The Strategy was officially adopted by Gold Coast City Council in December 2005.

The Strategy identifies a diverse range of initiatives, which together create a strong water balance, in order to secure water needs of 466 ML per day by 2056.

The Strategy outlines the immediate, short-term and medium to long term initiatives/actions to be implemented. The continuation of planning activities for the raising of Hinze Dam is identified as an immediate action in the Strategy. **Figure 1-2** illustrates the implementation timeframes for water sources in comparison with projected water demands. However given the continuing drought conditions the region is experiencing, the government introduced the *Water Amendment Regulation (No. 6), 2006*, which legislates that the Hinze Dam must provide an additional 16ML/day by December 2010. Therefore the implementation date for Stage 3 has been brought forward to the end of 2010.

■ **Figure 1-2 Implementation Timeline - Gold Coast Waterfuture Strategy**



Note: The implementation timeframe may change in times of drought or emergency water sources are required.

### 1.8.9 Water Resource (Gold Coast) Plan

One of the primary objectives of the Gold Coast Water Resource Plan (WRP) is the sustainable management of water resources in the catchment. In order to achieve this, the WRP specifies a range of environmental flow objectives and water allocation security objectives that must be met. Three key scenarios are developed for the Gold Coast WRP: Pre-development, Current Condition and Full Entitlement. The provisions of the *Water Resource (Gold Coast) Plan 2006* are addressed more fully in **Section 7**.

The Pre-development case represents the natural condition of the Nerang River catchment. The Current Conditions case represents the catchment as it exists at present and the Full Entitlement case represents the catchment when all water licences are used to their maximum capacity. Future development scenarios, such as Hinze Dam Stage 3, are developed from the Full Entitlement case.

The environmental flow objectives for the Gold Coast catchment are outlined in the *Water Resource (Gold Coast) Plan 2006*, Schedule 5. Their aim is to maintain key flow conditions within the catchment in order to ensure ecosystem health.

## 1.9 Project Approvals

This section identifies all relevant Commonwealth and State Legislation applicable to the Project. It describes the approvals process and identifies the appropriate approvals required for the respective elements of the Project.

### 1.9.1 Commonwealth Legislation and Initiatives

#### Environment Protection and Biodiversity Conservation Act 1999

The primary objective of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance. The Commonwealth Department of Environment and Water Resources (DEW) administers the EPBC Act.

Under the EPBC Act, an action requires the approval of the Environment Minister if it has, will have, or is likely to have a significant impact on a Matter of National Environmental Significance (MNES). Matters of National Environmental Significance under the EPBC Act include:

- the world heritage values of a declared World Heritage Property;
- the National Heritage values of a National Heritage place;
- the ecological character of a declared Ramsar wetland;
- listed threatened species and communities;
- listed migratory species;
- nuclear actions; and
- the Commonwealth marine environment.

The Project was referred to the DEW on 21 December 2006, with the Hinze Dam Alliance recommending that the Project be a 'Controlled Action'. The public notification of the referral was on 3 January 2007. On 16 January 2007 the Commonwealth Minister for the Department for the Environment and Water Resources determined that the Project constituted a 'controlled action' under Section 75 of the EPBC Act in accordance with the following controlling provisions:

- Sections 18 and 18A - Listed threatened species and communities.

The Commonwealth and Queensland governments have negotiated a bilateral agreement for projects that require assessment and approval under legislation from the Commonwealth and Queensland. The purpose of the bilateral agreement is to avoid duplication of assessment process for proposals that are 'controlled actions' requiring

assessment under Part 8 of the EPBC and which are undergoing an environmental impact statement (EIS) process under Queensland legislation.

Under Part 5 of the EPBC Act, a bilateral agreement was entered into with the Queensland Government on 14 August. In the case of the raising of Hinze Dam, the bilateral agreement will be used for Commonwealth assessment, as the Project is both a controlled action and a significant Project under the SDPWO Act. The Commonwealth Minister has agreed to assess the Project in accordance with the agreed EIS provisions under Part 4 of the SDPWO Act.

### **Native Title Act 1993**

One option for ensuring that the interests of Aboriginal people are accounted for in the tenure acquisition process, is the preparation of an Indigenous Land Use Agreement (ILUA) under Subdivision C of the *Native Title Act 1993*.

An ILUA is a voluntary agreement between a native title group and others about the use and management of land and waters. Under the *Native Title Act 1993*, a registered ILUA is legally binding on the people who are party to the agreement and all native title holders for the area, even if they were not involved in the agreement.

An agreement must comply with the requirements under the *Native Title Act 1993* and the *Native Title (Indigenous Land Use Agreements) Regulations 1999 (Commonwealth)*, to be registered as an ILUA with the Register of Indigenous Land Use Agreements. This register is maintained by the Native Title Registrar at the National Native Title Tribunal.

The need for an ILUA is yet determined and discussions are ongoing between GCCC and the relevant departments.

### **National Water Initiative**

The National Water Initiative (NWI) is a strategy that has been developed by the Australian Government to improve water management throughout Australia. The NWI was agreed to and signed by the States and Territories (excluding Tasmania) on the 25 June 2004 at a meeting of the Council of Australian Governments (COAG).

The NWI encompasses a wide range of water management issues and encourages the adoption of best-practice approaches to the management of water in Australia. The main goals of the NWI include:

- expansion of permanent trade in water bringing about more profitable use of water and more cost-effective and flexible recovery of water to achieve environmental outcomes;
- more confidence for those investing in the water industry due to more secure water access entitlements, better and more compatible registry arrangements, better monitoring, reporting and accounting of water use, and improved public access to information;
- more sophisticated, transparent and comprehensive water planning that deals with key issues such as the major interception of water, the interaction between surface and groundwater systems, and the provision of water to meet specific environmental outcomes;
- a commitment to addressing over-allocated systems as quickly as possible, in consultation with affected stakeholders, addressing significant adjustment issues where appropriate; and
- better and more efficient management of water in urban environments, for example through the increased use of recycled water and stormwater.

Although there are three objectives for the Stage 3 raising of the Hinze Dam, one of the key objectives is to provide an additional 16ML per day of potable water for the region. The raising of the dam is one of the many diverse water supply initiatives that the GCCC has identified in order to meet the demand of future populations. The raising of an existing dam is also a way to increase water supply levels and minimising environmental impacts by not inundating pristine environments.

## National Strategy on Conservation of Australia's Biological Diversity

The Convention on Biological Diversity, ratified by Australia on 18 June 1993, deals at a global level with the full range of biological diversity conservation, its sustainable use, and the fair and equitable sharing of the benefits arising from this use. This National Strategy for the Conservation of Australia's Biological Diversity aims to bridge the gap between current activities and the effective identification, conservation and management of Australia's biological diversity.

Although the raising of the dam will result in the inundation of approximately 318 ha of terrestrial ecosystems, the impact of the incremental raise of an existing dam will have far less impacts than inundating pristine environments. An offset strategy will be implemented to mitigate the impact of the inundation on these ecosystems.

## National Competition Policy - Water Reform

In 1994, all State and Territory governments agreed that the management and regulation of Australia's water needed significant changes. They agreed on a package of reforms covering water prices, allocations and trading, environmental and water quality, and public education. The reforms promote good water management practices and ensure the development of strategies to promote water uses that make good business sense, are good for the environment and ultimately ensure the long term sustainability of the resource.

### 1.9.2 State Legislation

#### State Development and Public Works Organisation Act 1971

Under Section 26 of the *State Development and Public Works Organisation Act 1971* (SDPWO Act), the Coordinator General (CoG) may declare by gazette notice, that a Project is a 'Significant Project'. The CoG may declare a project to be a 'significant project' based on one or more of the following criteria:

- complex approval requirements, including local, State and Australian Government involvement;
- a high level of investment in the State;
- potential effects on infrastructure and/or the environment;
- provision of substantial employment opportunities, and
- strategic significance to a locality, region or the State.

The Significant Project approvals pathway is an advantage for large and complex projects that may:

- involve complex approvals at local, State and Federal government levels;
- potentially conflict with State government policy;
- have significant impacts on the environment and/or infrastructure;
- have significant benefits for the State in terms of employment and economic activity; and/or
- raise significant concerns among community members.

On 20 October 2006, the Coordinator General declared the Hinze Dam Stage 3 Project as a 'Significant Project' for which an EIS is required, in accordance with Part 4 of the SDPWO Act. The EIS assessment process under the SDPWO Act is presented in **Figure 1-1**. Although the Project has been declared a Significant Project, this 'status' does not negate the legislative requirements to obtain all relevant planning and environmental approvals under State legislation. The following provides a summary of the relevant legislation and approvals applicable to the Project. A list of approval requirements is also provided in **Appendix B**.

## Integrated Planning Act 1997

The *Integrated Planning Act 1997*, (IPA), forms the foundation of Queensland's planning and development assessment legislation. The purpose of this Act is to seek to achieve ecological sustainability by:

- coordinating and integrating planning at the local, regional and state levels;
- managing the process by which development occurs; and
- managing the effects of development on the environment (including managing the use of premises).

IPA establishes a step-by-step process for lodging, assessing and deciding development applications. This process is known as the Integrated Development System (IDAS). The following Acts (relevant to this Project) have been incorporated into the IDAS process:

- *Environmental Protection Act 1994*
- *Fisheries Act 1994*
- *Queensland Heritage Act 1992*
- *Vegetation Management Act 1999*
- *Water Act 2000*

The Hinze Dam Stage 3 works, while requiring a range of development approvals, is exempt development under the GCCC Planning Scheme and therefore does not require a development application for a material change of use. As such, the Project does not require public notification under the provisions of IPA with all required applications being code assessable. The statutory timeframes associated with the approvals are therefore anticipated to be shorter than if public notification was required. The assessment process under IDAS for all code assessable applications is presented in **Figure 1-3. Appendix B** identifies all approvals required for the Project.

## Environmental Protection Act 1994

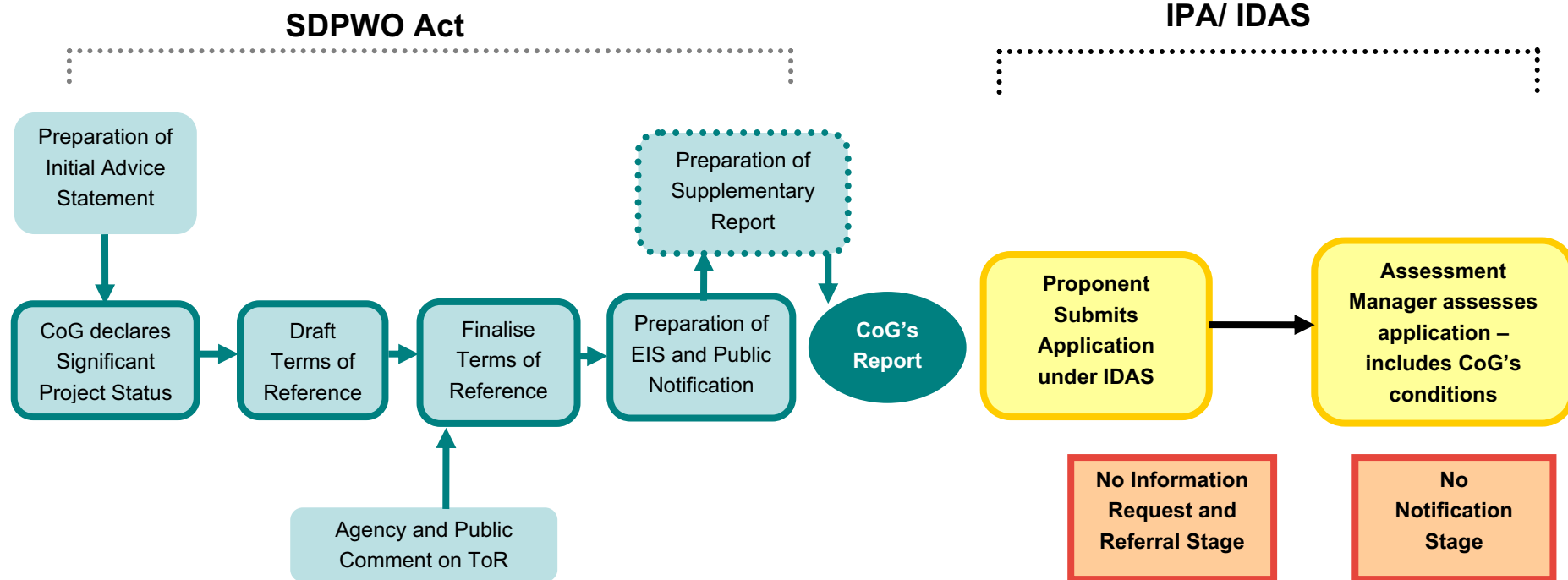
### *Environmentally Relevant Activities*

The *Environmental Protection Act 1994* (EP Act) includes a requirement for certain activities, being Environmentally Relevant Activities (ERA) to be licensed. Approval to operate an ERA is obtained through a Development Approval under IPA. ERAs are defined in Schedule 1 of the *Environmental Protection Regulation 1998*.

### *Duty of Care*

In addition to development approval requirements, Sections 319 and 320 of the EP Act establish a duty of care to all individuals and organisations to protect the environment. Therefore, it is not permissible to cause environmental harm (as defined in the Act) whilst undertaking any activity unless all reasonable and practical means are taken to minimise that harm.

■ **Figure 1-3 Approvals Process under SDPWO Act and IPA/ IDAS**





### *Environmental Protection Policies*

The EP Act outlines the scope and content for preparing environmental protection policies to protect Queensland's environment. These policies may be made with regard to the environment or anything that affects or may affect the environment. Environmental Protection Policies exist for:

- Air - Environmental Protection (Air) Policy 1997. The EPP (Air) aims to protect the air quality of Queensland by identifying environmental values to be enhanced or protected, sets goals for air quality and provides a framework for making decisions on the management of the air environment and involving the community in achieving these goals.
- Waste - Environmental Protection (Waste Management) Policy 2000. The EPP (Waste Management) intends to protect the Queensland environment by identifying values to be protected with regard to waste management, providing a framework to make consistent decisions, ensure waste is managed in a manner with the principals of ecologically sustainable development, minimising the impact of waste on the environment, minimise the volume of waste generated, maximise recycling and to provide for the preparation of waste management plans.
- Noise - Environmental Protection (Noise) Policy 1997. The EPP (Noise) protects the acoustic environment of Queensland by identifying values to be protected with regard to noise, specifies the acoustic quality objective, provides for a framework for consistent decisions with regard to noise and developing noise management plans.
- Water - Environmental Protection (Water) 1997. The EPP (Water) protects the waters of Queensland by providing a framework for identifying environmental values for Queensland waters, deciding and stating water quality guidelines and objectives for water quality and making consistent and equitable decisions regarding the efficient use of resources, as well as involving the community through consultation and education.

Among other things, these policies establish the desired state of the environment against which development approvals can be assessed. Development approvals for the Project therefore need to demonstrate compliance and consistency with these policies.

The Project will require the following ERAs:

- ERA 7 – chemical storage;
- ERA 11 - petroleum storage;
- ERA 19 - dredging if proposing to remove material from the bed of any tidal or non-tidal waterway;
- ERA 20 – extracting rock or other material;
- ERA 22 – screening materials;
- ERA 62 – concrete batching; and
- ERA 84 – regulated waste storage.

### **Fisheries Act 1994**

The *Fisheries Act 1994* regulates fisheries resources and fish habitats, and was 'rolled' into the IPA and IDAS process on 1 March 2005. The *Fisheries Act 1994* and *Fisheries Regulation 1995* are administered by the Department of Primary Industries and Fisheries, and regulate development including:

- aquaculture projects;
- waterway barrier works;
- removal, destruction or damage of marine plants; and
- activities being undertaken in a declared Fish Habitat Area.

For the Project, it will be necessary to apply for a waterway barrier works approval for the raising of the dam wall. A waterway barrier works approval is necessary as the Project is defined as development under IPA, consequently a development approval is needed for the Project. As part of the approval for a water barrier work, the Chief

Executive of the Department of Primary Industries and Fisheries (DPIF) may direct that a fishway be constructed as part of the Project, to allow fish to pass the barrier.

As part of the design process for the raising of the dam wall, the Alliance has commenced negotiations with DPIF on the need for a fishway. The aquatic ecology studies reported in **Section 10** of the EIS have been undertaken to assist with the collection of data relevant to the assessment of the water barrier works approval that will be submitted by the Alliance. Negotiations with DPIF have centred on the information needs of DPIF, the scope and methodology of the fish surveys and requirement for ongoing surveys that will be used to make a final determination of the application for a waterway barrier works approval.

### **Vegetation Management Act 1999**

A key outcome of the Project is the increase of FSL from 82.2 m AHD to 94.5 m. The existing Stage 2 dam currently covers an area of 974 ha and this will increase to 1,472 ha with the raising of the dam. This will result in the permanent inundation of approximately 340 ha of remnant native vegetation and regional ecosystems.

Under the *Vegetation Management Act 1999* (VMA) the Project requires approval for the clearing of native vegetation. An application will need to be submitted to the Department of Natural Resources and Water to obtain an Ongoing Purposes Clearing Permit for the Project. As part of this application, vegetation offsets will be required to maintain the extent of relevant native vegetation and associated environmental values. Various policies and codes under the VMA set out performance requirements that applications for clearing native vegetation must meet.

The Policy for Vegetation Management Offsets applies to an offset proposed to meet a performance requirement under a Regional Vegetation Management Code. To meet the performance requirements of the VMA and the Policy, the clearing application for the Project must provide vegetation offsets. The Alliance has identified what the proposed impacts to vegetation and wildlife are as a result of raising the dam, and has identified a number of possible solutions to form a compensatory habitat strategy for the Project, as a response to the Policy for Vegetation Management Offsets. The compensatory habitat strategy prepared for the Project is described in **Section 9.6.5** of the EIS.

However, the Alliance has received advice that an exemption may apply to the VMA based on the fact that immediately before the commencement of section 74 of the VMA, that site of the dam and the area impacted by the raising of the dam was designated as a special facilities zone, or like zone, under a planning scheme under IPA. The Alliance is in the process of discussing the applicability of such an exemption with the DNRW.

Regardless of the outcome of the discussions with DNRW regarding an exemption, GCCC is committed to delivering a compensatory habitat package in response the clearing and inundation of native vegetation. The objectives of the compensatory habitat strategy will be twofold:

- the strategy will aim to provide tangible conservation and biodiversity benefits at the local and citywide scale, with an emphasis on threatened species conservation (species listed as threatened under the EPBC Act); and
- the strategy will seek to comply with the intent of the VMA and associated Codes and Policies.

### **Water Act 2000**

The *Water Act 2000* provides a legislative basis for the sustainable planning and management of the State's non-tidal water resources. The *Water Act 2000* identifies that most water related developments or developments affecting water supply and freshwater streams require assessment and approval under the IPA.

The IPA defines water related developments as:

- most works in a watercourse (pumps, gravity diversions, stream diversions, weirs, barrages and dams);
- works that interfere with overland flow (in a declared 'Overland Flow' area);
- artesian bores; and

- subartesian bores (in a declared 'groundwater' area).

While some developments are exempt or self-assessable, others require a development permit from the Assessment Manager, being either the Department of Natural Resources and Water or the Local Government authority.

There is potential for the requirement of a number of permits and licenses under the *Water Act 2000* including the following:

- development permit (operational works) for the construction of a referrable dam;
- failure impact assessment is required under Section 480 for dams that are more than 8m in height and meet certain storage capacity criteria;
- permit to take water from a watercourse for a specified purpose where the activity has no foreseeable end date. A water allocation or resource operation license is also required; and
- riverine Protection Permit to destroy vegetation, excavate or place fill in a watercourse under Section 266 and Section 814.

### **Water Amendment Regulation (No. 6) 2006**

On 9 August 2006, the State Government passed the Water Amendment Regulation (No. 6) 2006 under the *Water Act 2000*. The Preamble of the Regulation states that:

*Reasons for the making of this regulation, and the context of its operation- ...creating additional water through the construction of desalination facilities to introduce additional supplies of water into the water grid; ...*<sup>6</sup>

The Regulation is a water supply emergency regulation under the *Water Act 2000*, where the purpose of Part 8 of the Regulation is to:

*...outline a range of measures to be carried out, and outcomes to be achieved, by service providers, and works to be carried out by the coordinator-general, to ensure the security of essential water supplies for the SEQ region.*<sup>7</sup>

The Regulation also directs a 'Service Provider' (Gold Coast City Council) to carry out each measure listed for the service provider in the schedule, before the day mentioned in Schedule 10B.<sup>8</sup> Section 4, Schedule 10B states that the Gold Coast City Council must:

*Take all necessary steps to prepare for, and construct, Hinze Dam Stage 3 and prepare for associated water harvesting works.*

Therefore the Gold Coast City Council is required to take all necessary steps to prepare for and construct the Hinze Dam and prepare for associated water harvesting by 31 December 2010, or it may face prosecution under the provisions of the Act.

### **Nature Conservation Act 1992**

The *Nature Conservation Act 1992* is intended to conserve biological diversity, ecologically sustainable use of wildlife, ecologically sustainable development and international criteria developed by the World Conservation Union (International Union for the Conservation of Nature and Natural Resources) for establishing and managing Protected Areas. An approval under the provisions of the *Nature Conservation Act* (not the IPA) is required to disturb, harm or destroy any species listed under the Act.

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<sup>6</sup> Preamble, Water Amendment Regulation (No.6) 2006

<sup>7</sup> Section 3, Part 8 Water Regulation (No. 6) 2006

<sup>8</sup> Section 3, Part 8, '86, Water Regulation (No. 6) 2006

### Aboriginal Cultural Heritage Act 2003

The *Aboriginal Cultural Heritage Act 2003* aims to provide recognition and protection of Aboriginal and Torres Strait Islander cultural heritage. This Act replaces the repealed *Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987*, which previously addressed cultural heritage issues.

Under this Act, Aboriginal and Torres Strait Islander cultural heritage is protected through a duty of care for all persons to take reasonable and practical measures to avoid harming cultural heritage. Duty of care guidelines have been gazetted under the Act, which set out reasonable and practical measures for ensuring that the duty of care established under the Act is met.

The *Aboriginal Cultural Heritage Act 2003* gives respect and empowerment to Traditional Owners to be directly involved in the assessment and management of their own cultural heritage. Traditional owners are able to register significant cultural heritage places, such as sacred sites, on a cultural heritage register administered by the Cultural Heritage Coordination Unit within the Department of Natural Resources and Water.

Key elements of the *Aboriginal Cultural Heritage Act 2003* include:

- blanket protection of areas and objects of traditional and customary significance, as well as areas of archaeological significance;
- recognition of the key role of traditional owners in cultural heritage matters;
- establishment of practical and flexible processes to address cultural heritage in a timely and cost efficient manner;
- the replacement of cultural heritage permitting arrangements with the duty of care, the cultural heritage management planning process and other agreement based mechanisms; and
- increased penalties for harming Aboriginal and Torres Strait Islander cultural heritage.

The *Aboriginal Cultural Heritage Act 2003* states that a notified Cultural Heritage Management Plan (CHMP) is required if an EIS is undertaken. The Act also provides information on the nature and content of a CHMP. A CHMP is also required to be registered by the Minister for Natural Resources and Water, and may also be dealt with under an Indigenous Land Use Agreement (ILUA).

### Queensland Heritage Act 1992

The *Queensland Heritage Act 1992* provides for the conservation and protection of places and items of historical and/or non-indigenous cultural heritage, i.e., all places that derive from the post-settlement history of Queensland. Under this Act, places and items must be entered into a Queensland Heritage Register in order to be protected.

Substantial penalties may apply for damage to a place or items that has been entered on the Register. At least one of the following criteria must be satisfied in order to be entered onto the Register (Section 23 (1)):

- the place is important in demonstrating the evolution or pattern of Queensland's history;
- the place demonstrates rare, uncommon or endangered aspects of Queensland's heritage;
- place has potential to yield information that will contribute to an understanding of Queensland's history;
- the place is important in demonstrating the principal characteristics of a particular class of cultural places;
- the place is important in exhibiting particular aesthetic characteristics valued by the community or a particular cultural group;
- the place is important in demonstrating a high degree of creative or technical achievement at a particular period;
- the place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; and
- the place has a special association with the life or work of a particular person, group or community of importance in Queensland's history.

There are no structures listed on the Queensland Heritage Register within the inundation area, or area of construction works of the dam.

### **Transport Infrastructure Act 1994**

The *Transport Infrastructure Act 1994* provides for the management of the National and State road network and rail network. A permit under this Act is required to work in, or interfere with, a State-controlled road or railway.

### **Land Act 1994**

The *Land Act 1994* regulates the opening and closing of State and local roads and land dealings relating to changes in land tenure. Permits to clear vegetation on State-owned land are administered under the *Land Act 1994*.

Roads are managed on a day to day basis by the relevant local government authority, or in the case of state controlled roads, by the Department of Main Roads. The Department of Natural Resources and Water through the provision of the *Land Act 1994*, is responsible for the land in roads.

There is potential for the requirement of a number of permits under the *Land Act 1994* including the following:

- road closure application; and
- permit to occupy unallocated State land, a reserve or a road.

## **1.9.3 Local Government**

### **Gold Coast City Council Planning Scheme – ‘Our Living City’**

The Gold Coast Planning Scheme – “Our Living City” seeks to coordinate and integrate planning dimensions at state and regional level, by effectively managing the development process and the impacts of development on the environment.

Under the provisions of the Gold Coast City Council Planning Scheme – ‘Our Living City’, the proposed Hinze Dam Upgrade and associated works is defined as a Public Utility. Part 5, Chapter 2 of the Planning Scheme defines “Public Utility” as:

*land, buildings or structures, usually owned by a government, local government or government agency, or regulated by legislation and used for, or in the nature of, any of the following:*

- *...to collect, treat, transmit, store or distribute water.*

Section 4.8.4 of the Gold Coast City Council Planning Scheme provides for exemption of Public Utilities from assessment under the provisions of the planning scheme. Section 4.8.4 details (in part) that:

"For the purposes of this Planning Scheme, the following is exempt development:

*development for a Public Utility, being an undertaking for supply of water cycle management infrastructure... or any development required for the purpose of that undertaking by way of:*

- *development of any description at or below the surface of the ground;*
- *the installation of any plant inside a building, or erection within the premises of the undertaking of any plant or other structures, or erections required in connection with the undertaking;*
- *the placing of pipes above the surface of the ground as part of the supply of water cycle management infrastructure network, or the installation in a water cycle management infrastructure network of pumping station, storages, communications structures, meter;*
- *any other development except where it involves erection of new buildings or reconstruction or alteration of existing buildings that would materially affect their design or external appearance."*

Therefore, no assessment or approval process, pursuant to Council's Planning Scheme, is required for the proposed Dam upgrade and associated works.

Furthermore, Schedule 10 of the Gold Coast City Planning Scheme designates the site (Lot 4 SP 164198 for Community Infrastructure purposes, pursuant to the provisions of Chapter 2, Part 6 of the *Integrated Planning Act 1997*.

The effect of the designation is that the development of the land for the purpose for which it is designated becomes exempt development under this Planning Scheme<sup>9</sup>, however approval for all other assessable development as identified under Schedule 8 of IPA is required; and

The site (lot 4 SP164198) is located within the Community Purposes Domain. The domain seeks to retain and reserve appropriate land throughout the City for community purposes and public infrastructure. These purposes and infrastructure encompass social facilities and important physical infrastructure and service establishments that are essential for urban living and often also necessary for rural communities. Community purposes infrastructure may include both public and private services and facilities. However, they are traditionally provided by government or regulated by Government legislation.

The FSL extends outside of Lot 4 SP 164198 on the western arm into the Numinbah Forest Reserve. This area is located within the Public Open Space domain. The intent of this domain is to provide for the protection of land in public ownership for nature conservation, outdoor recreation, landscape preservation, environmental buffers and natural resource management and natural hazard management purposes.

The FSL also extends outside of Lot 4 SP164198 on the eastern arm into unallocated State land. This area is not subject to a Planning Scheme Domain, however it is assumed to take on the designation on the adjacent property, which is the Community Purposes Domain.

The existing inundation area is located entirely within Lot 4 SP 164198, however the inundation area resulting from the increase in the FSL will extend outside of Lot 4 SP 164198. Given the use is defined as a *Public Utility* under the Planning Scheme, the use, and all works associated with the construction of the dam are exempt from assessment under the provisions of the Gold Coast City Planning Scheme regardless of the domain designation of the affected land.

However, all approvals as identified under Schedule 8 of IPA are required to be obtained. **Appendix B** identifies all relevant approvals associated with the Project.

The proposed reinstatement of the recreation facilities do not fall within the definition of *Public Utility* and therefore will require approvals under the Planning Scheme. All recreation works are located within the Community Purposes domain and the CID boundary. The Table of Development identifies the establishment of a 'Park' as exempt development, therefore a material change of use application is not required. As the provisions of the planning scheme are applicable for the establishment of the recreation uses any relevant operational works approvals will be required to be obtained from the Gold Coast City Council.

The proposed information centre is defined as a 'community use' under the planning scheme, and is identified as self assessable development under the table of development for the Community Purpose Domain. The use will need to comply with the applicable planning scheme codes, however a material change of use application will not be required under the planning scheme. Approval will be required for all operational works associated with the construction of the information centre under the planning scheme.

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<sup>9</sup> S2.6.5, *Integrated Planning Act 1997*

### 1.9.4 Project Approval Requirements

A list of the approvals required to be obtained under the relevant State legislation described above is provided in **Appendix B**. The anticipated program for the approvals is also presented in **Table 1-5**.

■ **Table 1-5 Project Approvals Timeframe**

Approval	Date
Draft EIS display period	June to July 2007
Submission of Supplementary EIS report	August 2007
Coordinator General assessment	August to September 2007
EIS approved	September 2007
Department of the Environment and Water Resources assessment	September to October 2007
Preparation of IDAS applications	June to July 2007
Submit IDAS applications	August 2007
Assessment of applications by referral agencies	August to September 2007
Application decision period	September to October 2007
Approvals issued	October 2007

### 1.10 Submissions on the EIS

The EIS for the Project will be on public display for 20 business days from June 2007. This process aims to inform and engage stakeholders with an interest in the Project.

Members of the community, organisations and Government agencies are invited to make formal submissions on the EIS, in accordance with the SDPWO Act. Submissions are to be written (either electronically or in hard copy) and, in the case of hard copy submissions, signed by each person making the submission. The submission should state the name and address of each person making the submission and state the grounds of the submission and the facts and circumstances relied on to support the submission.

The Coordinator-General, Department of Infrastructure, will consider all properly made submissions on the EIS received within the submission period. Copies of all submissions will be provided to the Proponent. All submissions will be treated as public documents, unless the author of the submission requests that the submission be treated as a confidential submission.

Submissions are to be received by the Coordinator-General on or before close of business on the last day of the submission period. The submission period will be clarified in public advertisements made in early June and via the Department of Infrastructure website at the following address:

[http://www.infrastructure.qld.gov.au/major\\_projects/hinze.shtml](http://www.infrastructure.qld.gov.au/major_projects/hinze.shtml)

Written submissions should be addressed to:

The Coordinator-General  
 Attention: EIS Project Manager  
 Hinze Dam Stage 3 Project  
 SEQ Water Grid, Department of Infrastructure  
 PO Box 15009  
 BRISBANE CITY EAST QLD 4002

Telephone: (07) 3237 7473

Fax: (07) 3237 7530

Email: [hinze@infrastructure.qld.gov.au](mailto:hinze@infrastructure.qld.gov.au)

A properly made submission on the EIS will be considered a properly made submission for any application for development approval of material change of use for this Project under the *Integrated Planning Act 1997*. If such an application is made to the assessment manager, the information and referral stage and the notification stage outlined in the *Integrated Planning Act 1997* will be deemed to be fulfilled by the EIS process managed by the Department of Infrastructure.