

EXECUTIVE SUMMARY

PREFACE

The Supplementary Environmental Impact Statement (EIS) for the Wandoan Coal Project (the Project) consists of three Volumes. Volume 1 covers the mining lease application (MLA) areas and surrounding lands; with other Volumes assessing two remaining alternative operational raw water supply options. Volume 2 covers the southern coal seam methane (CSM) water supply pipeline, and Volume 4 covers the Glebe Weir raising and pipeline raw water supply option (Glebe Option). The EIS included the western CSM water supply pipeline in Volume 3; however, this option is no longer being considered as a water supply option by the Wandoan Joint Venture.

INTRODUCTION

The Project EIS was released by the Coordinator-General for public consultation from Saturday, 6 December 2008 until Monday 2 February 2009. Sixty-two submissions were received by the Coordinator-General on the EIS from affected landowners and other local stakeholders, members of the public, and government and non-government organisations.

In response to submissions, and in response to a request for further information from the Coordinator-General, this Supplementary EIS has been prepared with further assessments undertaken where required. At the same time, planning for the Project has advanced, resulting in refinements and/or modifications to the Project's construction and mining operations. Some regulatory changes to air, noise and water requirements have occurred, requiring additional assessment by the WJV. This has resulted in some updating of the potential impacts and some refinement of the mitigation actions proposed in the EIS.

This Executive Summary discusses the key modifications/refinements, while also addressing the individual submissions provided by submitters to the EIS.

THE PROPONENT

The Wandoan Coal Project Proponent is the Wandoan Joint Venture (WJV). The partners of the Project are:

- Xstrata Coal Queensland Pty Ltd (75%)
- ICRA Wandoan Pty Ltd (12.5%)
- Sumisho Coal Australia Pty Limited (12.5%).

Since publication of the EIS, no changes to the structure of the WJV have occurred.

In terms of the two alternative operational raw water supply options, if the Southern CSM water supply pipeline option is selected by the WJV, it is intended that the pipeline will be managed and operated by the licensed water provider. If the Glebe Weir raising and pipeline option is selected, SunWater Limited, as owner and operator of Glebe Weir, will undertake the weir raising and pipeline construction. As a government-owned corporation (GOC), SunWater's shares are held by its shareholding Ministers on behalf of the State of Queensland. Final selection of a raw water supply is subject to commercial arrangements.

The WJV proposes to assist with resources to enable the Western Downs Regional Council to build new infrastructure or upgrade existing infrastructure, including upgrading of the potable water supply, upgrading of the wastewater treatment facilities, and site selection and development of a new multi-user municipal waste facility for the Wandoan area.

With regard to air transport options, the WJV also proposes to assist with the potential upgrade of the Taroom Aerodrome, or to assist with the potential construction of a new airstrip in the Wandoan district, to be owned and operated by the relevant Local Government Council.

Disclaimer – This document is an executive summary of the key findings of the Project Supplementary Environmental Impact Statement (EIS). This document does not constitute the Project Supplementary EIS, nor does it detail all of the existing environmental values, benefits and potential adverse impacts, or mitigation and management measures relevant to the Project. Full details of the Project and its components are contained in the main body of the EIS and Supplementary EIS.

To meet the traffic management needs of the Project (including any road impacts associated with passenger travel to and from air transport) and the community the WJV proposes to assist with relevant government authorities with potential upgrades of local and State roads, intersections and bridges.

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ACKNOWLEDGEMENTS

Volumes 1 and 2 of the Supplementary EIS have been prepared by Parsons Brinckerhoff Australia Pty Ltd (PB) and other specialist environmental subconsultants for the Wandoan Joint Venture (WJV). The assessment team drew primarily on in-house resources in project approvals; construction activities; mining operations; climate; land use; geology, mineral resources, overburden and soils; groundwater; water supply and management; transportation; terrestrial ecology; waste management; social assessment; economics; hazard and risk assessment; health and safety; decommissioning; and cumulative impacts assessment. Specialist technical contributions were provided in:

- Groundwater by URS
- Air quality by Katestone Environmental Pty Ltd
- Greenhouse gas assessment and climate change by URS
- Noise by Aurecon
- Vibration by Scott Mine Consulting Services Pty Ltd
- Terrestrial ecology by Hansen Botanical Assessments, Lewis Ecological Services
- Aquatic ecology by frc environmental
- Visual amenity by Integral Landscape Architecture and Visual Planning
- Indigenous cultural heritage by Bilvana Archaeological Consultancies
- Non-Indigenous Cultural Heritage by Bonhomme Craib and Associates
- Agricultural economics by Brennan Mayne Agribusiness.

General technical guidance was provided to PB by the WJV, Xenith Consulting and Sedgman Ltd. Environmental monitoring equipment was provided by Ecowise Environmental.

Legal advice, tenure, native title, Indigenous cultural heritage, and Draft Environmental Management Plan (mining) assistance and drafting was provided by Allens Arthur Robinson.

Volume 4 of the Supplementary EIS was prepared by Sunwater Ltd and WRM Water and Environment Pty Ltd (for Water Resources).

SUPPLEMENTARY EIS DISPLAY LOCATIONS

Members of the public may review copies of the Supplementary EIS document during normal office hours at the following locations:

- Wandoan:
 - Library and Council Customer Service Centre
 - WJV's Project Information Centre in Royds Street Wandoan, (next to the pharmacy).
- Taroom – Library and Council Customer Service Centre
- Miles – Pioneer Library
- Office of the Coordinator-General, 100 George Street, Brisbane.

SUPPLEMENTARY EIS PURPOSE

The Wandoan Coal Project (the Project) was declared a significant project for which an EIS is required by the Coordinator-General under section 26(1) of the *State Development and Public Works Organisation Act 1971* (SDPWO Act) on 21 December 2007. Under a Bilateral Agreement with the Queensland Government, the Australian Government has accredited the SDPWO Act EIS process to meet the impact assessment requirements of the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth).

Figure ES1 outlines the Federal and State Regulatory Approvals Process for the Project, including progression into the Supplementary EIS phase of the process. Further information on approvals is found in Chapter 3 and Appendix 3 of the EIS and Supplementary EIS.

The Wandoan Joint Venture (WJV) prepared and provided the EIS to the Coordinator-General, who as required under section 33 of the SDPWO Act, released the EIS for public consultation from Saturday, 6 December 2008 until Monday 2 February 2009. Sixty-two submissions were received by the Coordinator-General on the EIS.

All these submissions, including a request for additional information about the EIS pursuant to section 35(2) of the SDPWO Act, were forwarded to the WJV by the Coordinator-General. This Supplementary EIS has been developed in response to the Coordinator-General's request. The Supplementary EIS clarifies, builds on and, where required, amends sections of the EIS based on the submissions received. It also includes refinements and/or modifications made to the Project as it has progressed from pre-feasibility to the feasibility stage.

Appendix 1-5-SV1.4 presents a summary of the submissions received and cross references to the relevant sections within Volumes 1, 2 and 4 containing additional information relating to each issue.

PROJECT CHANGES SINCE RELEASE OF EIS

Generally, the Project is as described in the EIS, with development of an open cut coal mine and supporting infrastructure, producing around 30 million tonnes of Run of Mine (ROM) coal per year (revised during the feasibility phase). The Project is situated in the Surat Basin to the west of the Wandoan township, located approximately 350 km northwest of Brisbane and 60km south of Taroom. The Project will be mined using dragline, truck and excavator equipment. It is proposed that the coal will be crushed, processed and blended on site before being transported by rail to the Gladstone area for export. However, since publication of the EIS, some features of the Project have been refined or modified, being:

- Mine Planning:
 - › proposed revised mining lease application boundaries, following further landowner consultation, with resultant changes to the list of sensitive receptors
 - › the mine schedule
 - › the scheduling of mining has been modified for Frank Creek Pit due to its proximity to Wandoan township
 - › the deferral of Woleebee South Pit from the proposed 30-year life of the mine operations – this pit no longer forms part of the Project
 - › addition of Wubagul Pit to the south of Wandoan township, adjacent to the Leichhardt Highway following scheduling changes to the Frank Creek Pit and further exploration drilling
 - › identification of an approximate outline of Glen Haven Pit between Woleebee South Pit and Wubagul Pit, with no mining scheduled within the first thirty years of operation of the mine – this pit does not form part of the Project
 - › modifications to the coarse and fine (tailings) rejects disposal strategy
 - › refinement of the post-mine rehabilitation strategy, including clarification on post mining land use
 - › refinement of the Project's biodiversity offsets strategy.

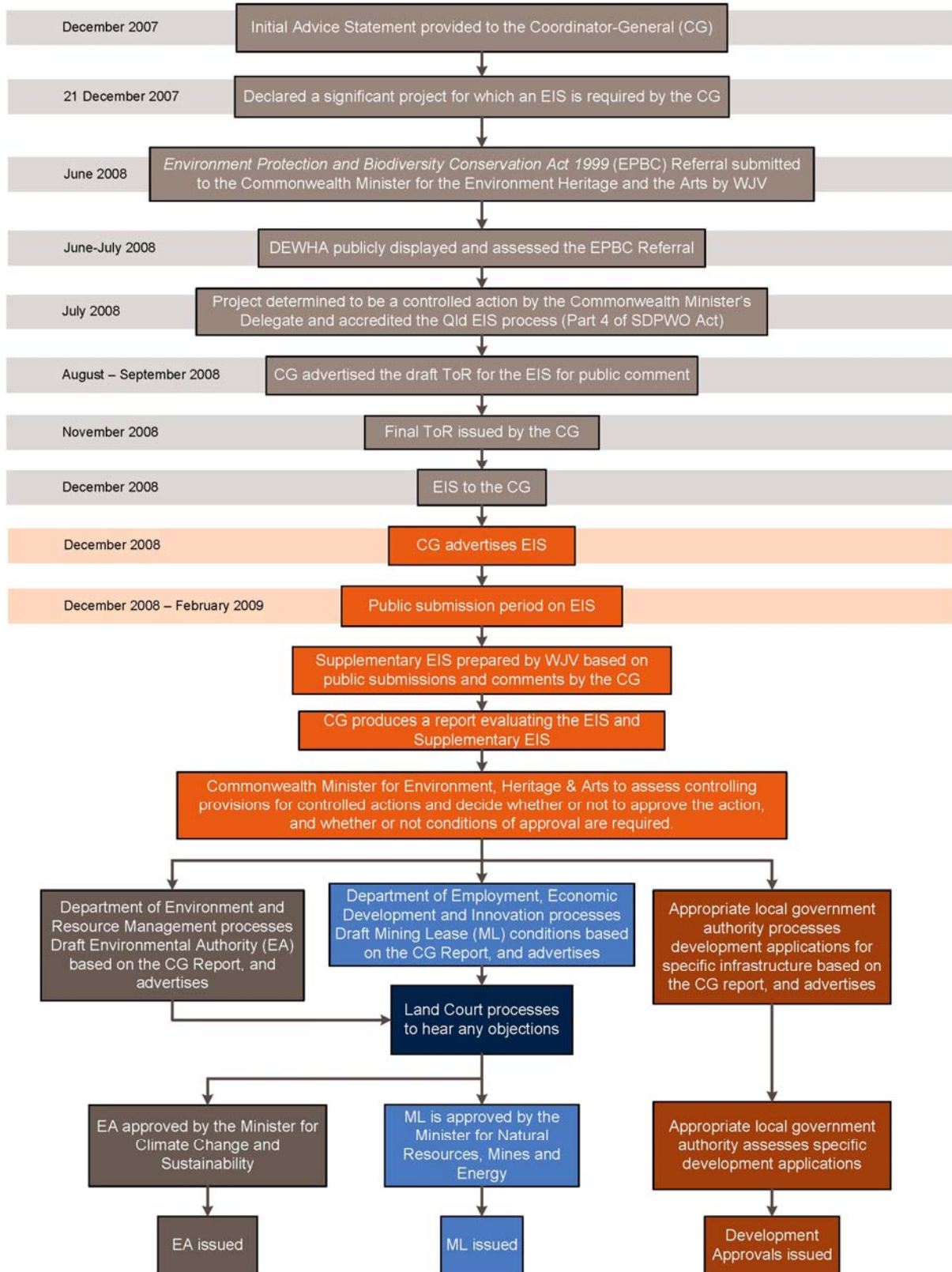


Figure ES1: Outline of Federal and State Regulatory Approvals Process for the Project, including progression into the Supplementary EIS phase

- Proposed Supporting Infrastructure:
 - › refinement of the proposed upgrading of the existing Wandoan town potable water supply treatment facilities, with Western Downs Regional Council confirmed as the Proponent for the upgrading
 - › refinement of the proposed upgrading of the existing Wandoan town wastewater treatment facilities and wastewater disposal, with Western Downs Regional Council confirmed as the Proponent for the upgrading
 - › the WJV, with Western Downs Regional Council as the Proponent, is still exploring options for development of a municipal waste facility, including a review of sites within or adjacent to the current MLA boundary:
 - if a site within the current MLA area is selected, the site will be excluded from the MLA areas.
- Water Supply:
 - › removal of the western coal seam methane (CSM) by-product water supply pipeline as an option to meet the Project's raw water supply for coal washing and other requirements:
 - as a result, no further assessment to Volume 3 of the EIS has been undertaken in the Supplementary EIS.
 - › in response to community consultation, variation to the proposed alignment for the proposed southern CSM by-product water pipeline at its northern end.
- Power Supply:
 - › an additional option to develop combined cycle gas fired generators of less than a total of 10MW electrical output for construction and long term emergency power, as an alternative to use of diesel generators
- Traffic management:
 - › refinement of the progressive road closures and road relocations over the life of the mine, including local and State roads, and bridges
 - › refinement of the strategy to transport the operational workforce by air.

MLA BOUNDARY CHANGES AND SENSITIVE RECEPTORS

Following review of the mine schedule, the boundaries of mining lease applications (MLAs) 50229, 50230 and 50231 are proposed to be modified, removing some parcels of land from the MLA areas following further consultation and negotiations with landholders. These parcels of land removed from the MLA areas will return to pre-existing exploration permits and mineral development licenses. The proposed revised boundaries of the MLA areas are shown in Figure ES2. As a consequence, the size of the MLA areas is proposed to decrease. The WJV is continuing to consult with adjacent landholders.

The proposed revision to the MLA boundaries have resulted in four properties and two residences no longer being within the MLA areas, with one residence to the north of the proposed revised northern boundary of MLA 50229 and one to the south of MLA 50229. The WJV is under negotiations with the property owners to relocate these sensitive receptors to locations that comply with guideline limits. These relocated residences and associated buildings have now been assessed as sensitive receptors in the Supplementary EIS.

The WJV is considering further reductions to the MLA areas, and hence potential ongoing MLA boundary changes. A final decision on the MLA boundaries is yet to be made, and will be finalised as part of the recommencement of the mining lease process in the first half of 2010.

The EIS and Supplementary EIS have assessed the potential impacts of the Project on sensitive receptors surrounding the MLA areas. Where residences are purchased by the WJV, or are otherwise under the control or management of the WJV, subsequent to the publication of the Supplementary EIS, these residences will no longer be treated as sensitive receptors.

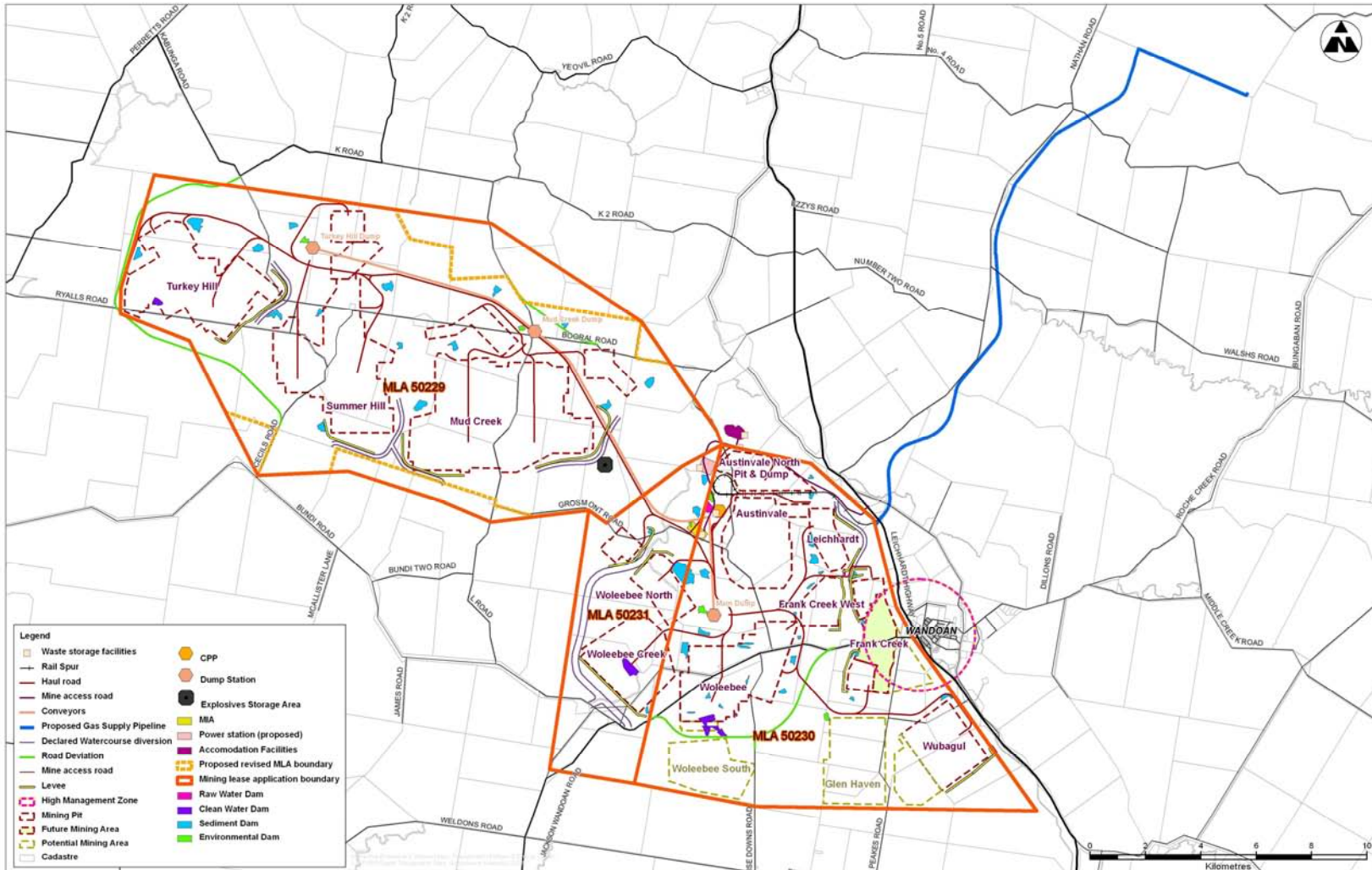


Figure ES2: Mining Lease Application (MLA) areas and surrounds

SUMMARY OF MAJOR ISSUES RAISED IN SUBMISSIONS

A summary of the general issues raised in submissions includes:

- Concerns on the proximity of mining (specifically Frank Creek Pit) to Wandoan township
- Impacts of changes in the Environmental Protection Policies for Air and Noise, and the Environmental Protection Regulation, which came into effect as of 1 January 2009
- Clarification on soil classifications, loss of good quality agricultural land, final landform
- Mine decommissioning and mine area rehabilitation
- Use and quality of coal seam methane (CSM) water used across the site
- Clarification on extent of existing and future estimated economic contributions from agricultural based industries on the MLA areas
- Clarification on biodiversity off-sets
- Various surface water management issues
- Infrastructure associated with Western Downs Regional Council (roads/waste/water)
- Clarification on the Project draft Environmental Management Plan
- Clarification on issues associated with Glebe Weir Raising
- Route of the northern portion of the southern CSM water supply pipeline.

While all issues raised in submissions to the EIS are addressed in Volumes 1, 2 and 4 of the Supplementary EIS (and summarised and cross referenced in Appendix 1-5-SV1.4), key issues raised and responded to include:

CHANGES TO MINING OPERATIONS

Based on a review of EIS submissions and feedback from the local community, mining of Frank Creek Pit in the initial years of operation will not be carried out within a 2 km zone around the western side of the township of Wandoan. The potential for future mining within the 2 km zone will be dependent upon the current and ongoing monitoring program results carried out for a period of not less than 3 years. Not less than 3 months prior to the commencement of any mining activities in the 2 km zone, the WJV will assess the results of the monitoring of the actual mining conditions associated with air quality, noise and vibration, and compare these with the predicted potential air quality, noise and vibration impacts shown in the EIS and Supplementary EIS, and the requirements of the mine Environmental Authority. Further modelling will be undertaken, if necessary. Mining within the 2 km zone will only be undertaken if the assessment and further modelling indicates that mining can be undertaken within the 2 km zone, in compliance with the Environmental Authority. A written report will be provided to the Department of the Environment and Resource Management. If this occurs, the community will be consulted at the relevant time, and prior to mining commencing.

In response to the above scheduling changes to the Frank Creek Pit, and as a result of further exploration drilling, the WJV has:

- included an approximate outline of Glen Haven Pit between Woleebee South Pit and Wubagul Pit. This Pit is also identified as a potential mining area, and subject to further exploration drilling. While the WJV expects that this area will ultimately be mined, at this stage approval is not being sought
- deferred Woleebee South Pit from the proposed 30-Year life of mine operations, due to the close proximity of sensitive receptors to the south of the MLA areas. While the WJV expects that this area will ultimately be mined and is considered a potential mining area, at this stage approval is not being sought.

AIR QUALITY AND NOISE

Following the release of the EIS, the Queensland Government released revised EPP (Air) and EPP (Noise). The release of these two new policies necessitated additional air and noise modelling and development of appropriate response measures by the WJV. Also, the proposed changes to the MLA mining boundaries and subsequent change in sensitive receptors, has required additional modelling. Volume 1, Chapters 13 and 15 respectively provide responses to issues raised in submissions and provide details on the additional work undertaken since the release of the EIS.

GEOLOGY AND SOILS

A number of submissions raised concerns on the assessment used in the EIS to evaluate quality of agricultural land both before and post mining. A number of different land evaluation systems exist for assessing the quality of agricultural land. More common systems include the land suitability assessment, land capability assessment and land classification for strategic planning.

The EIS used the land suitability classification as this methodology was specified in the Wandoan Coal Project Terms of Reference, and is the recommended methodology under the Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland (Department of Mines and Energy 1995). However, information from the Department of Environment and Resource Management (DERM) indicated that some land suitability criteria used (nutrient availability and water erosion) in the EIS require modification for use in Central Queensland dry land cropping areas. As such, the pre-mining land suitability has been reassessed with revised criteria.

Also, in response to submissions on the EIS, an assessment of existing and future cattle grazing potential of the MLA areas has been conducted based on the framework included in Queensland Primary Industries and Fisheries (now Department of Employment, Economic Development and Innovation) (DEEDI) 'Stocktake' program. The study also assessed the economic impact (refer Chapter 22, Volume 1).

WATER MANAGEMENT

A number of refinements have been made to the assessment studies undertaken including:

- Water Management:
 - the new EPP (Water) 2009 has been considered
 - water quality assessment has been revised with additional background water quality monitoring data included in the assessment of existing water quality. The proposed network of operational monitoring points and discharge points, has also been revised to reflect changes to the proposed pit layouts
 - conceptual water management system design has incorporated a number of changes including the number, size and location of water management dams to cater for changes made to the mine layout
 - historical simulation water balance assessment has been updated for the revised water management system layout, and additional details have been provided on downstream impacts. An indicative assessment of site water quality has also been prepared for comparison with the proposed licensed water quality limit and water quality objectives
 - flood impact assessment has incorporated additional ground survey data into the hydraulic flood models, and the flood inundation assessment over the eastern portion of the site has been extended upstream and downstream. Historical flood observations have been collated from local landholders and compared to modelled flood levels in these events to validate the model. Mitigation measures to reduce the potential impact of the operation on off-site flood levels have also been investigated.
- Water Supply:
 - the Project water demand estimates have been refined in light of changes to the production schedule and unit water consumption
 - the potable water supply and wastewater disposal system conceptual designs have been further refined to improve their performance.

Volume 1, Chapter 11 provides detail on the responses outlined above.

POST-MINING REHABILITATION

The EIS Supplementary provides further assessment and information on rehabilitation and post-mining aspects in response to various submissions on the EIS and refinements/modifications to the Project and mine scheduling since publication of the EIS. Volume 1, Chapter 25 provides further information on selected items in the EIS, including the post mining landform and rehabilitation activities and incorporates assessment of refinements/modifications to the Project subsequent to the EIS, including the provision of a final landform. This chapter also clarifies points raised in submissions on the EIS regarding the form and order of rehabilitation, decommissioning and mine closure.

TEMPORARY ROAD CLOSURES

A number of submitters sought clarification on the extent and timing of proposed temporary road closures and realignments. Table ES1 provides a summary of the proposed temporary closures and realignments:

Table ES1: Timing of proposed temporary road closures and realignments

Number	Description	Timing
1	Road closure of Q Road	Year -2
2	Road closure of Grosmont Road from the Woleebee Creek Causeway to the Jackson Wandoan Road	Year -2
3	Road closure of the Jackson-Wandoan Road from the Leichhardt Highway to Bundi Road	By end of Year 1
4	Road closure of the northern end of Paradise Downs Road	By end of Year 1
5	Completion of Jackson-Wandoan Road relocation	By end of Year 1
6	Completion of the 1 km reseal of Paradise Downs Road connecting to the relocated Jackson-Wandoan Road	By end of Year 1
7	Road closure of Peakes Road, from the Jackson-Wandoan Road to the southern end of Peakes Road, adjacent to lot 6 on plan FT432	By end of Year 2
8	Completion of upgrading works for Burunga Lane, from Peakes Road to the Leichhardt Highway	By end of Year 2
9	Road closure of Grosmont Road, between Woleebee Creek and the government bore on lot 56 on plan FT987	By end of Year 4
10	Road closure of Grosmont Road, from the intersection of Grosmont Road and L Road, to Booral Road	By end of Year 4
11	Road closure of Booral Road, between Grosmont Road and Kabunga Road	By end of Year 4
12	Completion of the road realignment works adjacent to the Mud Creek dump station, at the Booral Road and Grosmont Road intersection	By end of Year 4
13	Road closure of Kabunga Road, from south of K Road	By end of Year 7
14	Road closure of Ryals Road, from Cecils Road to the MLA boundary	By end of Year 7
15	Road closure of Cecils Road, from Booral Road South	By end of Year 7
16	Completion of the Western deviation connecting Cecils and Ryals Roads with the Kabunga Road and K Road intersection	By end of Year 7

The main change to the road realignments compared to the EIS is associated with the Jackson-Wandoan Road. Changes to the proposed realignment have resulted from recent exploration programs to further understand the coal resources in the southern portion of MLA 50230. The length and width of the stock route associated with the Jackson-Wandoan Road will be re-established. Also, the road realignment works adjacent to the Mud Creek dump station, at the Booral Road and Grosmont Road intersection have been realigned to increase the separation distance between public road users and mine operations.

Some submissions raised concerns about potential loss of wide load vehicle access (e.g. harvesters with wide headers) and flood access as a consequence of the temporary closure of Grosmont Road from the Woleebee Creek Causeway to the Jackson-Wandoan Road. The WJV is proposing to construct a new two way crossing of One-Arm Man Creek on the Jackson-Wandoan Road and a new two way crossing of Wandoan Creek at or near the existing Sundown crossing on Bundi Road thereby improving carriage way width and flood immunity.

TERRESTRIAL AND AQUATIC ECOLOGY

As required under the Project's Terms of Reference, the WJV undertook further field investigations within the MLA areas for aquatic ecology, as well as investigations for both terrestrial and aquatic ecology over the proposed southern CSM water supply pipeline corridor and gas supply pipeline corridor. These investigations included the re-aligned northern section of the southern CSM water supply pipeline corridor. The results of these investigations are summarised in Chapter 17A (Terrestrial Ecology) and Chapter 17B (Aquatic Ecology).

Due to the modifications of the pits and infrastructure within the MLA areas, the extent of vegetation and habitat clearing has decreased considerably. The EIS estimated approximately 1,170 hectares of vegetation would be cleared within the MLA areas. This has now decreased in the Supplementary EIS to 790.8 hectares,

being a reduction of 379.2 hectares. Within the MLA areas, 82% of remnant vegetation and 53% of non remnant vegetation will be retained, compared with 63% of remnant and 51% of non remnant vegetation stated in the EIS.

Details on the WJV's Biodiversity Offsets Plan are also outlined in Chapter 17A.

SOCIAL INVOLVEMENT PLAN

Since the release of the EIS, the WJV has continued to engage with directly impacted landowners and the general Wandoan community, including providing information on progress with development of the Supplementary EIS.

As committed to in the EIS, a comprehensive Social Involvement Plan (SIP) will be developed for the Project in consultation with the community, Western Downs Regional Council and the Queensland State Government. The SIP will cover the construction and operation phases of the Project.

The Wandoan Coal Project Social Involvement Plan – outlined in detail in Volume 1, Chapter 21 - contains the following elements:

- ongoing community consultation and communication processes
- a community visioning process
- social issues management initiatives
- specific corporate-community projects
- economic development and business opportunities initiatives
- employment and training initiatives
- engagement of WJV employees
- minor donations and sponsorships
- major donations through the Xstrata Coal Global Social Involvement Program.

In partnership with Queensland Health, the WJV has already announced plans and is well advanced with re-development of the primary health care facilities in Wandoan; and in partnership with Education Queensland has announced plans to bring a range of enriched curricular programs to Wandoan, Taroom and Miles State Schools.

ECONOMIC ANALYSIS

The development of the Project is expected to provide significant and on-going economic benefits of between approximately \$9.7 billion and \$12.0 billion to the regional, State and national economies over the construction and 30-year operational period. In the absence of the mine, the economic contribution of the existing agriculture enterprises over the next 30 years is estimated to be between \$138 and \$243 million to the regional, State and national economies. Land will be rehabilitated for cattle grazing post-mining land use, with an approximate 11% decrease in productivity, or \$500,000 per annum, across the MLA areas in comparison to pre-mining productivity.

PROJECT TIMING

The commencement date for construction is dependent upon the timing of the Project approvals process. The feasibility and progression of pre-construction/early works and construction activities of the Project will be determined by a number of factors including the economic climate, thermal coal market outlook and resolution of infrastructure plans and costs, particularly the Surat Basin Rail, QR Network upgrades to Gladstone and export coal terminals. As a guide, Table ES2 provides indicative Project timing:

Table ES2: Indicative Project timing

Year	Explanation	Indicative dates
Year -3	Early works	2010
Year -2	1 st Year of construction	2011
Year -1	2 nd Year of construction	2012
Year 1	Commencement of operations	2013

PROJECT COMMITMENTS

In the EIS, the WJV made a number of commitments to enhance the environmental, social and economic benefits of the Project. These commitments have been developed to reflect the outcome of consultation with the local community and other key stakeholders, as well as the WJV's Sustainable Development Policy. Additions/clarifications on the WJV's key commitments are listed in Chapter 28 of Volumes 1 and 2, and Chapter 22 of Volume 4 of the Supplementary EIS.

COARSE AND FINE REJECTS DISPOSAL STRATEGY

Results from the trial washing of the run of mine coal from the 2008 bulk sample led to further understanding of the coarse rejects and tailings of the site, resulting in a change in assumptions associated with the mix of coarse rejects to fine rejects (tailings), going from up to 70% coarse rejects and as low as 30% fine rejects (tailings) as stated in the EIS, to as low as 20% coarse rejects and up to 80% fine rejects. This change is due to a greater rate of breakdown of clay content in the coal than earlier small trial plant and laboratory testing indicated. Further studies during bulk sample pit and initial mining, as described in section 6.2.2 will further refine and improve the understanding of the coarse to fine rejects mix. The implications of the further analysis is a refinement in the Project's mine planning and tailings disposal strategy, outlined in detail in Chapter 6, Volume 1.

SOUTHERN CSM WATER SUPPLY PIPELINE

Volume 2 details responses to relevant submissions on the EIS and the Coordinator-General's request for further information. The key issues raised in submissions included (i) concerns on CSM water quality and potential long term soils impact on its storage and use in dust management; and (ii) concerns over its proposed route through a number of properties in the northern section of the pipeline corridor. The proposed re-alignment also required ecological assessment of the revised pipeline section.

WATER QUALITY

In relation to use of CSM water for site dust management, the WJV has developed a range of measures to limit the potential for impacts, including:

- when it is available, using water captured in the site water management system as a raw water source in preference to CSM water
- providing small catch dams to intercept runoff from haul road table drains during low flows, which also limit the extent of salt discharge during small rainfall events
- the WJV has commissioned an experimental program to assess potential accumulation of salt in the road surface, the potential for precipitated salts to be dissolved and mobilised by rainfall, in relation to rainfall intensity. The results of this program will guide future management of salt on haul roads
- conducting periodic monitoring of salinity and sodicity during the operation of haul roads, including the road drains and adjacent land. If monitoring suggests a build-up of high levels of salinity or SAR, suitable management measures will be investigated and implemented
- a large portion of the haul roads requiring dust suppression are associated with pit ramps. These ramps will be removed and buried as a component of decommissioning and rehabilitating mine pits
- conducting measurements of soil salinity and sodicity prior to the decommissioning of a haul road, including the road surface, drains, sediment ponds and adjacent land. Where required, material with high salinity or SAR will be excavated, appropriately disposed of, or otherwise remediated, during haul road rehabilitation.

Such measures may be included in the Project's overall Site Water Management Plan as detailed in Volume 1, Chapters 11 and 27A, which provide further details on CSM water quality management.

CORRIDOR RE-ALIGNMENT

In relation to the northern section of the CSM water pipeline corridor, following a review by the WJV, the corridor has been re-aligned, generally from the intersection of Baileys and Giligulgul Roads (refer Figure ES3). The southern CSM water pipeline corridor is now intended to proceed in a north-easterly direction within the road reserve of Baileys Road. Where Baileys Road intersects with the Leichhardt Highway, the alignment turns into the western side of the Leichhardt Highway road reserve and progresses in a northerly direction. At this point, the route proceeds in a northerly direction within the western side of the road reserve of the Leichhardt Highway until the south-eastern corner of Lot 3 FT695, which is owned by the WJV. At this point, the proposed alignment traverses this allotment in a northerly direction to enter MLA 50230 in the south-east corner. The precise location of entry has not yet been determined and will depend largely on detailed design.

TERRESTRIAL AND AQUATIC ECOLOGY

Generally the vegetation types, habitat types and species present were the same as those recorded during the earlier surveys. However, due to the route modification, four Regional Ecosystems (REs) not identified along the original route were recorded in the February and March 2009 survey. Also, one threatened species not recorded in August 2008 was recorded in the February 2009 surveys: *Gonocarpus urceolatus*. This species of plant is listed as vulnerable under the NC Regulations and was recorded at three distinct locations. The proposed pipeline is likely to result in removal of 93 hectares of remnant vegetation, of which 1.6 hectares is listed as endangered. Other impacts and the proposed mitigation remain the same from the EIS technical assessment. Consistent with the conclusions discussed in the EIS, the proposed pipelines are considered unlikely to result in a significant impact to any threatened species or communities.

The results of the wet season aquatic ecology survey undertaken for the Supplementary EIS in the southern CSM water supply pipeline study area have not altered the assessment of environmental values or potential impacts of this component of the Project.

GLEBE WEIR RAISING

Volume 4 details responses to relevant submissions on the EIS and the Coordinator-General's request for additional information on the proposed Glebe Weir Raising. Most submissions required clarification of the EIS but the submissions which required more significant response related to:

- water resource process issues
- impacts on existing downstream users and the ability of trading to satisfy the needs of the WJV
- terrestrial ecology, related to habitat rehabilitation
- aquatic ecology primarily related to fish habitat
- DEWHA clarification and the provision of further data relating to the Boggomoss Snail.

PROCESS

SunWater acknowledges that the proposed arrangements for Glebe Weir raising will need to be detailed in the Fitzroy Basin Resource Operations Plan (ROP) after approval by the Department of Environment and Resource Management (DERM). As discussed with DERM, SunWater will not seek an amendment to the current Fitzroy ROP as it will expire in late 2010. However, SunWater will propose that the new arrangements be included in the new Fitzroy ROP, which will in turn be based on the Fitzroy Basin Water Resource Plan (WRP) now undergoing its 10 year review. At a later date SunWater will make a formal proposal to DERM regarding Glebe Weir raising in the new Fitzroy ROP.

IMPACTS ON DOWNSTREAM USERS

The Fitzroy Basin Food & Fibre (FBF&F) Association, the Irrigator Advisory Committee (IAC) and the Dawson Valley Development Association (DVDA) were identified as representatives of the irrigation community. Representatives from FBF&F and IAC met with the regional manager of SunWater in Biloela as part of the consultation program for the EIS. DVDA was also consulted. Further consultation with FBF&F has been undertaken during the development of the Supplementary EIS, particularly in relation to potential impacts to downstream users. SunWater has committed to ongoing communication with FBF&F throughout the approval and implementation process. Consultation with other representatives of the downstream irrigation community will continue.

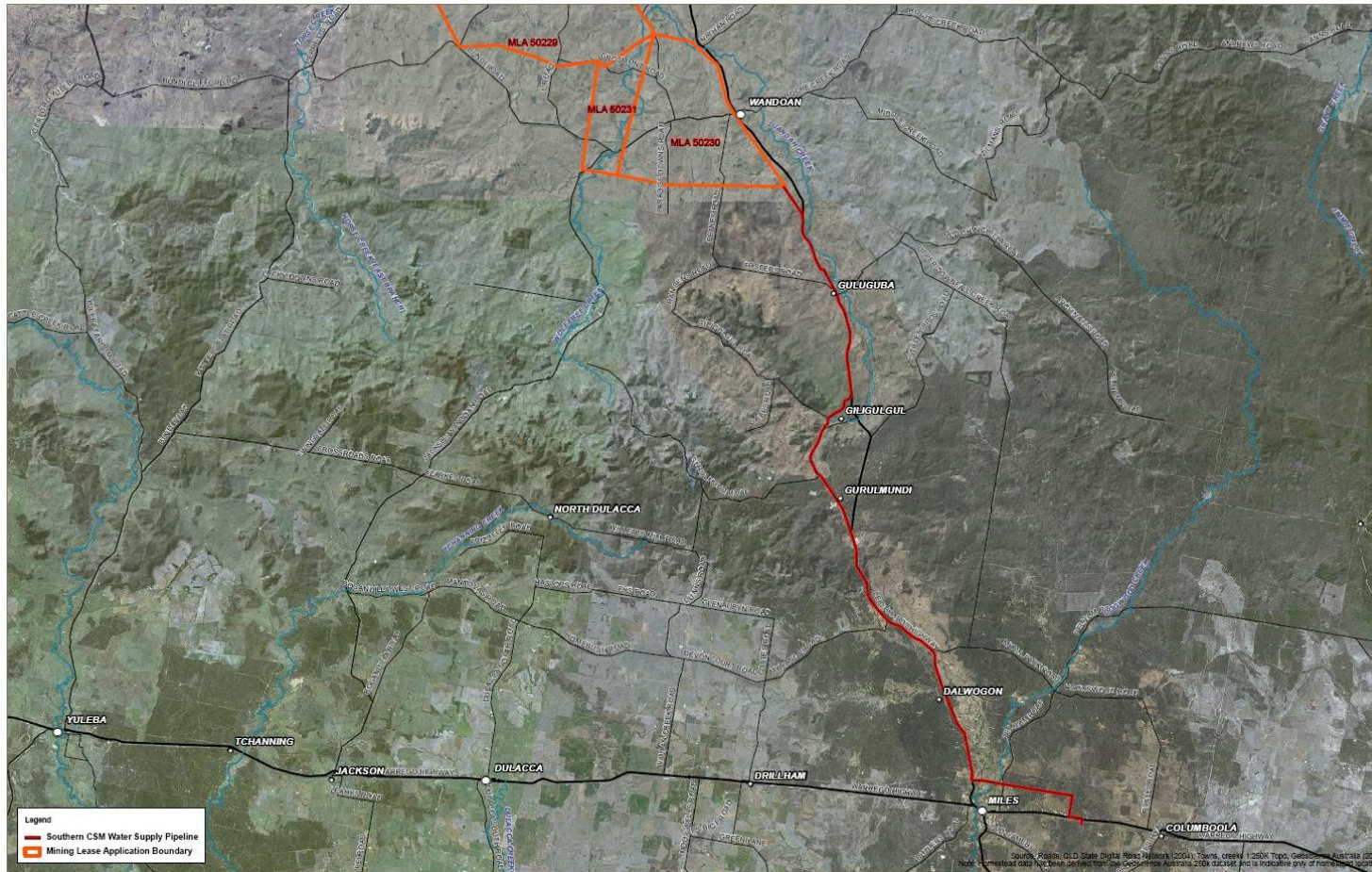


Figure ES3: Southern Coal Seam Methane Water Supply Pipeline

Further modelling was undertaken for the Supplementary EIS and the results show that the proposed demand scenario achieves the WRP target reliability for both Medium A and Medium Priority licences. There are no Medium A Priority entitlement holders in the Lower Dawson.

A 'Level of Service' (LOS) analysis was undertaken for the existing ROP scenario and the proposed development scenario (6,500 ML/yr) to determine the change in frequency and duration of restrictions of supply throughout the water year. The results show that these changes do not significantly impact on the level of water availability (announced allocations) in the early months of the year and in fact show that announced allocations are equal or higher at the start of the water year in the development scenario compared to the existing ROP scenario.

Modelling of water harvesting opportunity indicated that there are no systemic changes to the seasonal distribution of available pumping days when compared to the existing ROP scenario and therefore the impacts to downstream users are minimal. There are some occasional timing effects evident, which are generally associated with the Glebe to Gyrauda reach and the Theodore to Moura reach of the Dawson River. On a year-by-year basis, the amount of water harvested was estimated to be between 0% and 2% less than the amount of water harvested under the existing ROP scenario.

It is noted that the Fitzroy WRP has no mandatory requirements related to these timing considerations. SunWater proposes to offer monetary compensation to unsupplemented water users for any lost harvesting opportunities. Compensation by providing Medium Priority allocations will not be considered.

TRADING

As discussed in Volume 4 of the EIS, sections 17.4.2.3 and 18.3.2.2, currently there are about 135 irrigators operating in the Dawson Water Supply Scheme, with nominal allocations of approximately 56,253 ML per annum. The volume actually delivered varies from year to year depending on the yield capabilities of the system and the intentions of the irrigators. If trading is used to increase the volume obtainable by the Project, then this will lead to decreased availability of medium priority entitlements by approximately 5% to 10%. Data extracted from SunWater Water Information Management System (SWIMS) for the last four water years (2004 to 2008) indicates that anywhere between 16% and 47% of available water (including Announced Allocations and Available Water) is not used in any one water year. This indicates that the use of trading to obtain the volume of water required for the Project would have a negligible impact on agricultural production as much of the water is not used currently.

TERRESTRIAL ECOLOGY

Volume 4 of the EIS, section 12.3.2.1, concluded that the necessary clearing of RE 11.3.25, though listed as Not of Concern, represented a Significant preliminary (unmitigated) impact which would require significant offset in the form of habitat rehabilitation in order to achieve the targeted post-mitigation impact level of Minor. The assigned impact level recognised the role of this ecosystem in providing the major wildlife corridor in the region.

The impact was therefore recognised and discussed in the EIS. Appropriate mitigation for a corridor cannot be provided through offset in another location. As such, the mitigation proposed was rehabilitation of the remaining vegetation within the corridor. Section 12.4.2.1 recognised restoration of the buffer linking the east – west wildlife corridor as critical. The Habitat Rehabilitation Management Plan was described in Appendix 12-C and while it recognised that the existing corridor was at times represented by just a single row of mature trees and in places it was degraded through access by stock and feral animals, it also recognised that it served a corridor role. The Plan represents a commitment by the proponent. The mitigation emphasis is considered to be appropriate. The revegetation planned for the Boggomoss Creek levee will also reinstate the north-south corridor in this area.

Once appropriate mitigation measures and management plans are implemented, the detrimental impacts of the construction and operational phases of the weir project on terrestrial flora and fauna are predicted to be "minor" or "negligible" as identified in Table 12-5, Table 12-6, Table 12-12 and Table 12-13 of Volume 4 of the EIS.

AQUATIC ECOLOGY

In its submission, the Department of Primary Industries and Fisheries (DPIF) raised a number of concerns with respect to the value of the fish habitat to be lost or created. It also sought clarification with respect to the provision of a fishway.

Discussions with DPIF have now confirmed the preferred alternative is retrospectively fitting a fishway on Tartarus Weir on the Mackenzie River (providing that this fishway was not already funded through alternative means). The proponent agrees with this strategy based on the assumption that a fish movement exemption notice for Glebe Weir would be provided by DPIF and that no fishway will be required on Glebe Weir as a consequence of the Project.

The EIS noted that the area of catchment upstream of Glebe Weir was 2,318,000 ha while the increased inundation area of the Weir would represent 901 ha. Similarly, the increased riverine inundation represents between 7.5% and 20% of the current inundated length of individual waterways entering Glebe Weir. Furthermore the data below indicates no detrimental impact of the existing weir pool, and hence this level of change is unlikely to result in an impact on riverine fish communities that could be classified as major.

The EIS clearly recognised a range of negative impacts, including the increased inundation of riverine habitat (section 13.4.2.1 of Volume 4 of the EIS). However, the EIS also assessed the data obtained from field surveys when estimating what changes to fish communities may be produced by those habitat changes. In order to be able to make those assessments, the EIS baseline aquatic studies sampled fish in the existing Glebe and Gylanda Weir pools, in riverine reaches above and below Glebe Weir and in tributaries. Analysis of that data showed:

- fish diversity was highest in a weir pool (Gylanda)
- fish diversity in Glebe Weir was the highest pre-wet season, equalling or exceeding that at all riverine sites
- fish abundance was highest in Glebe Weir both pre- and post- wet season
- 14 of the 19 species recorded overall were recorded in weir pools, with only uncommon and very patchily distributed species not present (though some uncommon species were only recorded in weir pools)
- introduced species were not more abundant in weir pools.

The EIS concluded that while changes in the length of river inundated were acknowledged and there would be an increase in deep inhospitable areas, there would be a net increase in diversity of habitat because of that offered by the over-bank areas of Cockatoo Creek and Boggomoss Creek. The treatment of the Cockatoo Creek outbreak area is a question of balance. SunWater recognises that the removal of topsoil may generate some negative consequences as noted by DPIF; however, SunWater believes that the strategy will mitigate other potential negative impacts and the net result will be positive with respect to fish habitat diversity.

EPBC ACT

In relation to issues raised in a submission by the Commonwealth Department of Environment, Water, Heritage and the Arts (DEWHA), the Supplementary EIS provides:

- Recent results of specific surveys conducted for the Boggomoss Snail showed that the snail is more widespread and abundant than previously indicated
- Further discussion as to why the project will not result in an impact, including potential impacts of hydrological change
- A specific management plan for the Boggomoss Snail has been developed and is presented in Volume 4, section 21.2.4 of the Supplementary EIS
- Mitigation in the event of levee failure is addressed and concludes that no mitigation is necessary
- Discussion of a proposal to trial translocation (Volume 4, Appendix 12-B of the Supplementary EIS)
- Discussion that the action is not inconsistent with the Recovery Plan is provided and the conclusion was that many actions were specifically in accordance with the Plan, thereby progressing the actions within the Plan, and none were inconsistent with the Plan.

It should be noted that the translocation trial proposal relates to the Nathan Dam and Pipelines project and the translocation process is not required as part of mitigation strategies related to the proposal to raise Glebe Weir as no snail habitat is either directly impacted or indirectly threatened to the extent that such a strategy would be warranted.

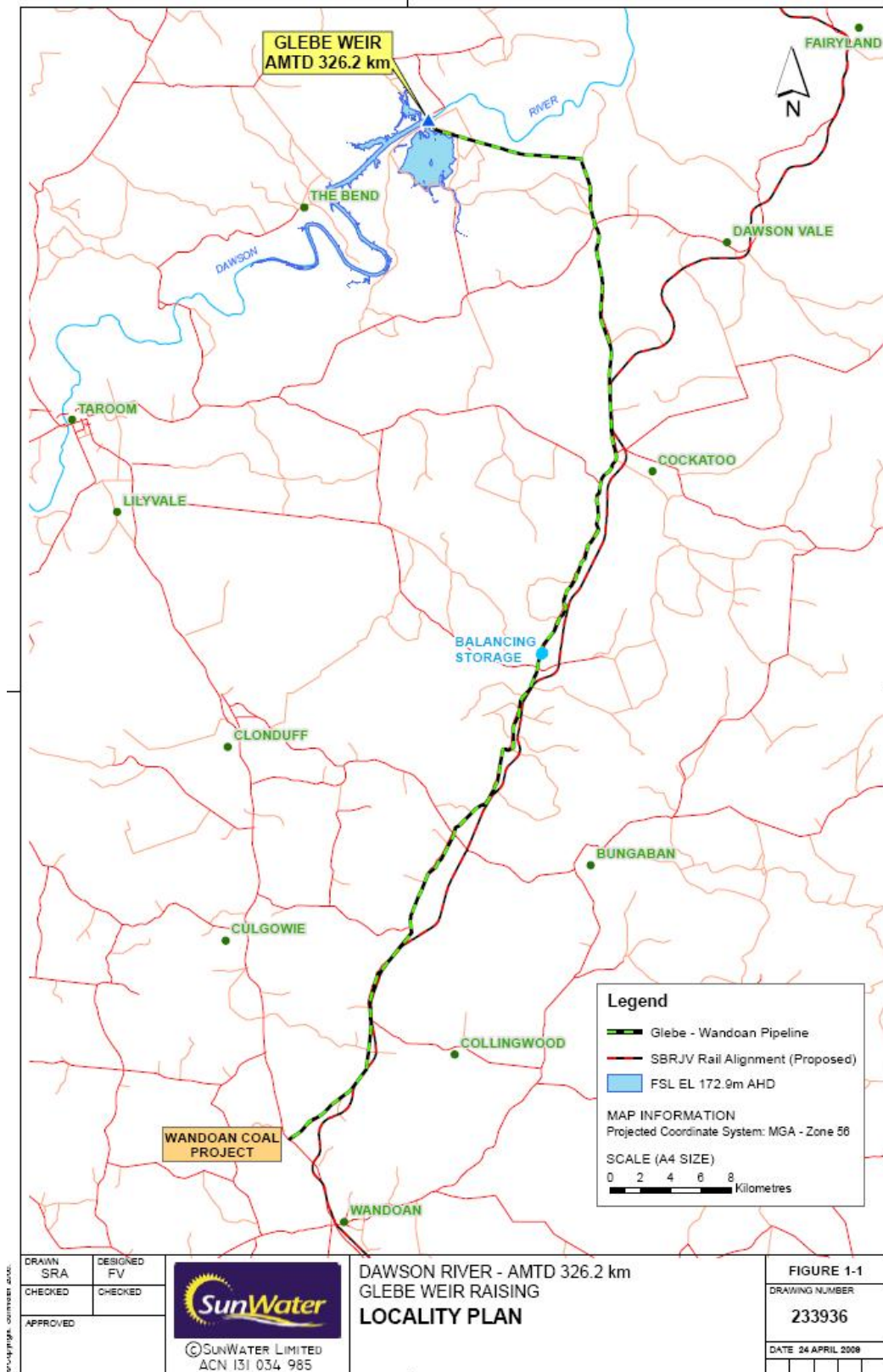


Figure ES4: Glebe Weir Raising and proposed Raw Water Supply Pipeline

CONCLUSIONS

In summary, from the information developed for and provided in the EIS and Supplementary EIS, it has been demonstrated by the WJV that, taking into account the implementation of the proposed mitigation measures, most of the adverse impacts of the Project will be appropriately mitigated whilst providing significant economic, as well as other, benefits for the local, regional, state and national economies.

The EIS and Supplementary EIS have addressed the Project's Terms of Reference, and in addition, have addressed matters additional to those required by the Terms of Reference, where considered appropriate. Full details of the Project and its components are contained in the main body of the EIS and Supplementary EIS.