

Stratford Extension Project Environmental Impact Statement

ATTACHMENT 5

WATER LICENSING ADDENDUM



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Licences

A5 WATER LICENSING ADDENDUM

This Attachment provides further discussion on the requirements and application of water licensing and associated approvals under the *Water Management Act, 2000* and *Water Act, 1912* to the Stratford Extension Project (the Project).

References to Sections 1 to 7 in this Attachment are references to the Sections of the Main Report of the Environmental Impact Statement (EIS). Internal references within this Attachment are prefixed with “A5”.

A5.1 WATER MANAGEMENT ACT, 2000

Consideration of the Project against the objects, water management principles and access licence dealing principles under the *Water Management Act, 2000* and a discussion of the licences and approvals required for the water source associated with the Project are provided below.

A5.1.1 Objects of the Act

Section 3 of the *Water Management Act, 2000* outlines the objects of the Act:

The objects of this Act are to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations and, in particular:

- (a) *to apply the principles of ecologically sustainable development, and*
- (b) *to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality, and*
- (c) *to recognise and foster the significant social and economic benefits to the State that result from the sustainable and efficient use of water, including:*
 - (i) *benefits to the environment, and*
 - (ii) *benefits to urban communities, agriculture, fisheries, industry and recreation, and*
 - (iii) *benefits to culture and heritage, and*
 - (iv) *benefits to the Aboriginal people in relation to their spiritual, social, customary and economic use of land and water,*
- (d) *to recognise the role of the community, as a partner with government, in resolving issues relating to the management of water sources,*
- (e) *to provide for the orderly, efficient and equitable sharing of water from water sources,*

- (f) *to integrate the management of water sources with the management of other aspects of the environment, including the land, its soil, its native vegetation and its native fauna,*
- (g) *to encourage the sharing of responsibility for the sustainable and efficient use of water between the Government and water users,*
- (h) *to encourage best practice in the management and use of water.*

The Project would be consistent with the principles of ecologically sustainable development (Section 6.9.4).

A cumulative assessment of potential impacts of the Project on groundwater and surface water has been conducted as part of this EIS (Appendices A and B). Potential groundwater inflows and surface water containment requirements are described in Sections 2.12, 4.4 and 4.5. Groundwater and surface water licensing and approval requirements and the Project's proposed use of existing surface water/alluvial aquifer and fractured rock aquifer extraction entitlements under the *Water Management Act, 2000* and *Water Act, 1912* are summarised in Sections 4.4.3 (Table 4-4) and 4.5.3, and described in the sub-sections below.

Mitigation measures, management and monitoring would be implemented to minimise potential impacts on downstream surface water flows, aquifers, water quality, soils, groundwater dependent ecosystems and biodiversity (Sections 2.12 and 4). Sections 4.9.4, 4.10.4, 4.11.4 and 7 summarise the Project offset and compensatory measures that would assist in maintaining the biodiversity of the region. Project water management measures, including the implementation of best practice, is described in Appendices A and B and Sections 2.12, 4.4 and 4.5.

The benefit cost analysis in the Socio-Economic Assessment (Appendix P) indicates a net production benefit of approximately \$146 million (M), and a net benefit of between approximately \$145M and \$174M would be forgone if the Project's use of these water resources was not to occur. Comparative analysis of the economic benefits that alternative regional uses of this water may provide (i.e. for agriculture) has been undertaken (Appendix K). No material adverse impacts on urban communities, regional agriculture, fisheries, industry or recreation would arise due to the Project water use or water management.

The Project Groundwater and Surface Water Management Plans (Sections 4.4.3 and 4.5.3) would describe measures/procedures to respond to potential exceedances of water-related criteria, and contingent mitigation/compensation/offset options that would be enacted in the event that downstream surface water users or groundwater users are adversely affected by the Project.

Community consultation regarding the Project is described in Section 3, including where relevant feedback has been received from the community regarding Project water use and water management.

A5.1.2 Water Management Principles

Section 5 of the *Water Management Act, 2000* outlines the principles of water management:

- 5 *Water management principles*
- (1) *The principles set out in this section are the water management principles of this Act.*
 - (2) *Generally:*
 - (a) *water sources, floodplains and dependent ecosystems (including groundwater and wetlands) should be protected and restored and, where possible, land should not be degraded, and*
 - (b) *habitats, animals and plants that benefit from water or are potentially affected by managed activities should be protected and (in the case of habitats) restored, and*
 - (c) *the water quality of all water sources should be protected and, wherever possible, enhanced, and*
 - (d) *the cumulative impacts of water management licences and approvals and other activities on water sources and their dependent ecosystems, should be considered and minimised, and*
 - (e) *geographical and other features of indigenous significance should be protected, and*
 - (f) *geographical and other features of major cultural, heritage or spiritual significance should be protected, and*
 - (g) *the social and economic benefits to the community should be maximised, and*

- (h) *the principles of adaptive management should be applied, which should be responsive to monitoring and improvements in understanding of ecological water requirements.*
- (3) *In relation to water sharing:*
 - (a) *sharing of water from a water source must protect the water source and its dependent ecosystems, and*
 - (b) *sharing of water from a water source must protect basic landholder rights, and*
 - (c) *sharing or extraction of water under any other right must not prejudice the principles set out in paragraphs (a) and (b).*

As described above cumulative assessments for impacts on groundwater and surface water have been conducted (Appendices A and B) as part of this EIS. Mitigation measures, management and monitoring would be implemented to minimise potential impacts on water sources, floodplains and groundwater dependent ecosystems (Sections 2.12, 4.4.3, 4.5.3, 4.9.3 and 4.10.3). With the proposed management and monitoring measures in place, dealings associated with the Project are not expected to adversely affect the ability of a person to exercise their basic landholder rights.

Section 5 presents Stratford Coal Pty Ltd's (SCPL's) rehabilitation strategy for the Project. The disturbance areas associated with the Project would be progressively rehabilitated and revegetated to include a combination of native bushland and grazing land. Rehabilitation would include passive management of runoff (i.e. allowing runoff to drain off-site from sediment dams which are not actively dewatered between rainfall events) after rehabilitation areas have become stabilised by vegetation (Appendix B).

Sections 4.9.4, 4.10.4, 4.11.4 and 7 summarise the Project offset and compensatory measures that would assist in maintaining the biodiversity of the region, including consideration of native vegetation and fauna species.

The Groundwater Assessment concludes that there is expected to be negligible change in groundwater quality within the fractured/basement rock groundwater systems as a result of mining in the short-term and in the long-term (Appendix A). In the long-term, the salinity in the final voids would increase through evaporative concentration, but as the final voids would remain groundwater sinks, there would be no deleterious effect on the beneficial uses of any groundwater sources (Appendix A).

Given the similarity of salinity for the various source waters (fractured rock and alluvial), no appreciable change in groundwater salinity is expected as a consequence of mining (Appendix A).

Based on the above, there would be negligible impact on surface water quality in local creeks (i.e. Dog Trap Creek and Avondale Creek) due to the interaction of groundwater (Appendix A). In addition, with implementation of management strategies and monitoring recommended in the Geochemistry Assessment (Appendix L) the risks of elevated dissolved solids and other contaminants impacting downstream waters is considered to be low (Appendix B).

Mitigation measures, management and monitoring to minimise potential impacts on water quality are described in Sections 4.4.3 and 4.5.3. The Project water management system has been designed to avoid, to the maximum extent practical, the contamination of water as a result of mining activities (Appendix B).

An Aboriginal Cultural Heritage Assessment has been conducted for the Project in consultation with the Aboriginal community (Section 4.12 and Appendix I). A Heritage Management Plan would be prepared in consultation with the Aboriginal community and the New South Wales (NSW) Office of Environment and Heritage to specify management and mitigation measures relevant to the management of Aboriginal heritage at the Project (Section 4.12).

The benefit cost analysis in the Socio-Economic Assessment (Appendix P) indicates a net production benefit of approximately \$146M, and a net benefit of between approximately \$145M and \$174M would be forgone if the Project is not implemented. Comparative analysis of the economic benefits that alternative uses of the Project lands and water usage may provide (i.e. agriculture) has also been undertaken (Appendix K).

SCPL would implement an adaptive management approach through Groundwater and Surface Water Management Plans (Sections 4.4.3 and 4.5.3), which would describe measures/procedures that would be implemented over the life of the Project to respond to potential exceedances of water-related criteria. It would also describe the contingent mitigation/compensation/offset options that would be enacted in the event that downstream surface water users or groundwater users are adversely affected by the Project (Sections 4.4.3 and 4.5.3).

A5.1.3 Access Licence Dealing Principles

The *Access Licence Dealing Principles Order 2004* outlines the access licence dealing principles which prevail over the access licence dealing rules to the extent of any inconsistency.

Clause 7 of the *Access Licence Dealing Principles Order 2004* relevantly states:

- 7 *Impacts on water sources*
- (1) *Dealings should not adversely affect environmental water and water dependent ecosystems as identified in any relevant management plan.*
 - (2) *Dealings should be consistent with any strategies to maintain or enhance water quality identified in any relevant management plan.*
 - (3) *In unregulated river water sources, dealings should not increase commitments to take water from water sources or parts of water sources identified in any relevant management plan as being of high conservation value.*
 - (4) *In unregulated river water sources or a groundwater source, dealings should not increase commitments to take water from water sources above sustainable levels identified in any relevant management plan.*
- ...
- (6) *In this clause, **commitments to take water** refers, in relation to all access licences with nominated works in that water source or part of a water source, to:*
 - (a) *the total volume of water allocations in water allocation amounts, or*
 - (b) *where relevant, the sum of limits on rates of extraction in extraction components.*

Dealings associated with the Project would involve the use of share components that existed at the commencement of the relevant water sharing plan (Section A5.1.4) (and/or entitlements issued under Part 2 of the *Water Act, 1912* immediately prior to the commencement of the water sharing plan) and therefore would not adversely affect environmental water.

The Project dealings would not adversely affect high priority groundwater dependent ecosystems identified in the current water sharing plan (i.e. Karst ecosystems at the Gloucester Caves).

Notwithstanding, consideration of potential impacts on other groundwater dependent ecosystems is provided in Appendix A, Appendix E and Sections 4.4 and 4.9.

The Groundwater Assessment concludes that there is expected to be negligible change in groundwater quality within the fractured/basement rock groundwater systems as a result of mining in the short-term and in the long-term (Appendix A). In the long-term, the salinity in the final voids would increase through evaporative concentration, but as the final voids would remain groundwater sinks, there would be no deleterious effect on the beneficial uses of any groundwater sources (Appendix A).

Given the similarity of salinity for the various source waters (fractured rock and alluvial), no appreciable change in groundwater salinity is expected as a consequence of mining (Appendix A).

Based on the above, there would be negligible impact on surface water quality in local creeks (i.e. Dog Trap Creek and Avondale Creek) due to the interaction of groundwater (Appendix A). In addition, with implementation of management strategies and monitoring recommended in the Geochemistry Assessment (Appendix L) the risks of elevated dissolved solids and other contaminants impacting downstream waters is considered to be low (Appendix B).

Mitigation measures, management and monitoring to minimise potential impacts on water quality are described in Sections 4.4.3 and 4.5.3.

The Project would not involve extraction from water sources identified in any relevant management plan as being of high conservation value.

A cumulative assessment of potential impacts on groundwater and surface water has been conducted as part of this EIS (Appendices A and B). Access licences for the Project would be obtained in accordance with the applicable water sharing plan (Section A5.1.4) and the NSW *Water Management Act, 2000*, and therefore the Project is unlikely to increase commitments to take water from water sources above sustainable levels (i.e. the sustainable use of water is integrated in the objects of the *Water Management Act, 2000* and the visions and objectives of the relevant water sharing plan).

Clause 8 of the *Access Licence Dealing Principles Order 2004* states:

- 8 *Impacts on indigenous, cultural, heritage or spiritual matters*
- (1) *Dealings should not adversely affect geographical and other features of indigenous significance.*
 - (2) *Dealings should not adversely affect geographical and other features of major cultural, heritage or spiritual significance.*

As discussed above, an Aboriginal Cultural Heritage Assessment (Appendix I) has been conducted for the Project in consultation with the Aboriginal community. Relevant consultation, management and mitigation measures are outlined in Section 4.12.

Clause 9 of the *Access Licence Dealing Principles Order 2004* states:

- 9 *Impacts on water users*
- (1) *Dealings should not adversely affect the ability of a person to exercise their basic landholder rights.*
 - (2) *Dealings should have no more than minimal effect on the ability of a person to take water using an existing approved water supply work and any associated access licences. This should be addressed by constraints of dealings established in access licence dealing rules in relevant management plans.*

An assessment of potential impacts on groundwater and surface water users has been conducted as part of this EIS (Appendices A and B). With the proposed management and mitigation measures in place, dealings associated with the Project are not expected to adversely affect the ability of a person to exercise their basic landholder rights or have more than minimal effect on the ability of a person to take water using an existing approved water supply work.

Notwithstanding, SCPL would implement Groundwater and Surface Water Management Plans (Sections 4.4.3 and 4.5.3) that would describe the contingent mitigation/compensation/offset options that would be enacted in the event that private surface or groundwater users are adversely affected by the Project.

Clause 10 of the *Access Licence Dealing Principles Order 2004* states:

- 10 *Maximising social and economic benefits*
- (1) *The objective of access licence dealings is to help facilitate maximising social and economic benefits to the community of access licences as required under the objects of the Act. Dealings do this by:*
- (a) *allowing water to move between alternative uses, and*
- (b) *allowing the establishment of water markets that value the access licences, thereby encouraging investment in water efficient infrastructure, and*
- (c) *allowing greater flexibility to access licence holders.*
- (2) *Subject to other principles in this Order, access licence dealing rules should allow maximum flexibility in dealings to promote the objectives set out in subclause (1).*

The Project would provide for continuation of operations at the Stratford Mining Complex, with the employment of approximately 30 construction and 250 operational personnel. The Socio-Economic Assessment (Appendix P) indicates that operation of the Project is likely to result in an average annual stimulus of approximately 250 direct and indirect jobs in the local region and approximately 714 direct and indirect jobs in NSW. The benefit cost analysis in Appendix P indicates a net production benefit of approximately \$146M, and a net benefit of between approximately \$145M and \$174M would be forgone if the Project is not implemented.

The Project would utilise the mechanisms in the relevant water sharing plan (Section A5.1.4) that allow for the flexible use of water between alternative uses within the relevant water sources. Comparative analysis of the economic benefits that would arise from Project water use, as opposed to use of the same water for agriculture in the region, has also been conducted (Appendix K).

A5.1.4 Lower North Coast Unregulated and Alluvial Water Sources Water Sharing Plan

Under the *Water Management Act, 2000*, the Water Sharing Plan for the Lower North Coast Unregulated and Alluvial Water Sources (the Water Sharing Plan) commenced on 1 August 2009.

Applicable Waters

Clause 4(3) of the Water Sharing Plan provides that the plan applies to the following waters:

- 3) *Subject to subclause (4), these water sources include:*
- (a) *all water occurring naturally on or below the surface of the ground shown on the registered plan for these water sources, and*
- (b) *all water in rivers, lakes and wetlands in these water sources, and*
- (c) *all water contained within all alluvial sediments below the surface of the land shown on the registered plan for these water sources (hereafter **the alluvial sediments in these water sources**).*

The surface waters and alluvial aquifers associated with the Project area therefore fall wholly within the Avon River Water Source, in the broader Manning Extraction Management Unit of the Water Sharing Plan.

Clause 4(4)(c) of the Water Sharing Plan provides that the plan does not apply to any water contained in fractured rock aquifers and basement rocks in the water sources. Discussion of the licensing requirements for the proposed extraction of water from fractured rock aquifers under the *Water Act, 1912* as a component of the Project is provided in Section A5.2.

At the commencement of the Water Sharing Plan there were 1,985 unit shares of unregulated river access licences and 20 unit shares of aquifer access licences in the Avon River Water Source. In all of the sources in the Water Sharing Plan on commencement there were approximately 46,500 unit shares of unregulated river access licences and approximately 212 unit shares of aquifer access licences.

Existing SCPL Access Licences under the Water Sharing Plan

SCPL holds unregulated river access licence(s) for some 140 megalitres (ML) (Water Access Licences [WALs] 19536 and 19514) in the Avon River Water Source under the *Water Management Act, 2000* that are associated with its existing landholdings. Copies of the licences are provided at the back of this Attachment.

No extraction of surface water from an unregulated stream is proposed for the Project, as no requirement for such extraction has been identified by the water balance modelling conducted for the Surface Water Assessment (Appendix B).

The predicted Coal Handling and Preparation Plant water supply reliability averaged 99.9 percent (%) (over all modelled climatic scenarios) which indicates a very low operational risk of water supply deficit over the life of the Project (Appendix B).

SCPL currently holds no aquifer access licences in the Avon River Water Source under the *Water Management Act, 2000*. Notwithstanding, part of the existing unregulated river access licence entitlements (i.e. 140 ML) may be available for conversion into Project aquifer access licences in accordance with the Water Sharing Plan for model predicted inflow volumes from alluvial sediments (refer below).

Surface Water Containment

The Project incorporates a range of water storages that would be utilised as component of the site water management system (Section 2.12).

Clause 12(1) of Part 1 of Schedule 5 of the *Water Management (General) Regulation, 2011* provides access licence exemptions under the *Water Management Act, 2000* for certain excluded works.

Schedule 1 (clauses 1 to 3) of the *Water Management (General) Regulation, 2011* describes relevant excluded works as follows:

- 1 *Dams solely for the control or prevention of soil erosion:*
 - (a) *from which no water is reticulated (unless, if the dam is fenced off for erosion control purposes, to a stock drinking trough in an adjoining paddock) or pumped, and*
 - (b) *the structural size of which is the minimum necessary to fulfil the erosion control function, and*
 - (c) *that are located on a minor stream.*
- 2 *Dams solely for flood detention and mitigation:*
 - (a) *from which no water is reticulated or pumped, and*
 - (b) *that are located on a minor stream.*
- 3 *Dams solely for the capture, containment and recirculation of drainage and/or effluent, consistent with best management practice or required by a public authority (other than Landcom or the Superannuation Administration Corporation or any of their subsidiaries) to prevent the contamination of a water source, that are located on a minor stream.*

In addition, Schedule 1 of the Water Sharing Plan defines a *runoff harvesting dam* as a privately owned dam that captures surface or rainfall runoff.

The taking of water from a runoff harvesting dam requires an access licence and a water supply work approval, except to the extent that the runoff harvesting dam is within an owner or an occupier's harvestable rights entitlement under section 53 of the *Water Management Act, 2000* (in which case it will not require an access licence or water supply work approval).

Gilbert & Associates Pty Ltd (Appendix B) has reviewed the above and concluded that no access licences would be required for Project surface water containments. This conclusion was made on the basis that Project water storages would be relevant excluded works under Schedule 1 (clauses 1 to 3) of the *Water Management (General) Regulation, 2011*.

Notwithstanding, a detailed assessment of the potential impacts of the Project on surface water flows, including surface water catchment excisions is provided in Section 4.5 and Appendix B.

The reduction in average flow in the creeks is likely to be proportional to the reduction in catchment area, however compared to the existing/approved total catchment area excised by the Stratford Mining Complex, the Project is not expected to result in a measurable change to downstream flows in Avondale Creek, Dog Trap Creek or the Avon River (Appendix B). Specifically for licensed surface water users on the Avon River and Dog Trap Creek, this is estimated to be a small reduction in average flows of the order of 3% to 4%, respectively (Appendix B).

Water from Alluvial Sediments

The Project open cuts would not be located within 40 metres (m) of the high bank of Avondale Creek or Dog Trap Creek (Section 2.7.2). In addition, no direct pumping of water from alluvial sediments is proposed for the Project.

However, three of the open cut mining operations have predicted maximum annual inflow volumes from alluvial sediments via either directly to the Project water management system (excavation of Quaternary alluvium), increased leakage to the underlying fractured rock aquifers or reduced rainfall recharge as follows (Appendix A and Table 4-4):

- Bowens Road North Open Cut (BRNOC) – 6 ML (maximum);
- Roseville West Pit Extension – 14 ML (maximum);
- Avon North Open Cut – 34 ML (maximum); and
- Stratford East Open Cut – Nil.

Appropriate aquifer access licences and share components for any Project take of water from alluvial aquifers would be sought and obtained under the *Water Management Act, 2000* in consultation with the NSW Office of Water (NOW). Aquifer access licences would be obtained with reference to the access licences dealing rules outlined in Part 12, and managed in accordance with the rules outlined in Part 11, of the Water Sharing Plan (refer below).

Access Licences and Dealing Rules

Table 4-4 provides estimated groundwater licensing requirements for the Project and indicates that the alluvial groundwater take of the Project would, at maximum, be approximately 54 ML per annum. The volumetric quantities are however considered overly conservative as the groundwater model has assumed all Quaternary alluvium mapped at the regional scale (Roberts *et al.*, 1991) comprises alluvial sediments.

SCPL would, where necessary, purchase and apply for the assignment of an appropriate allocation for the extraction of alluvial groundwater by the Project under section 71Q, or nomination of additional water supply works under section 71W of the *Water Management Act, 2000*. Note that section 71W(3) relevantly states:

- (3) *For the avoidance of doubt, a water supply work or group of water supply works may be nominated under this section even though no approval is required to be held in relation to the work or works under this Act.*

There are a number of mechanisms within the *Water Management Act, 2000* called access licence dealings, to change either the holder of all or part of an access licence, or the location within a water source at which all or part of the share and extraction components of access licences can be exercised. Part 12 of the Water Sharing Plan outlines the access licence dealing rules that apply to dealings under the *Water Management Act, 2000*.

In accordance with clause 68(2) of the Water Sharing Plan an access licence dealing may only be made in accordance with the water management principles (Section A5.1.2), the access licence dealing rules established by the Water Sharing Plan (below) and any access licence dealing principles order which is in force under section 71Z of the Act (refer below).

Prohibited Dealings

Subclause 69(2) of the Water Sharing Plan provides dealings under sections 71Q, 71S, 71T and 71W of the *Water Management Act, 2000* that are prohibited within the water sources defined by the Plan. Potentially relevant subclauses are addressed below.

Subclause 69(2)(a) is not relevant to the Project as there would be no dealing involving a major utility licence.

The potential impacts of the Project on alluvial groundwater resources are described in Appendix A, which concluded:

- negligible drawdown in the aquifers of the alluvial groundwater system; and
- negligible impact on groundwater levels or groundwater yield for groundwater users with privately owned bores in the alluvial groundwater system.

Hence the Project dealings would not result in extraction of water from the alluvial sediments to the extent that requires a temporary water restriction order to be made under section 324 (2) of the *Water Management Act, 2000*, and subclause 69(2)(b) would not apply.

Excluding monitoring bores, no Project bores would be located within 40 m of a river and hence subclauses 69(2)(c) and 69(2)(f) would not apply.

Project dealings would not involve an assignment of access rights under section 71Q, or an allocation assignment from an access licence under section 71T, of the *Water Management Act, 2000* to or from water sources or management zones that are prohibited in clause 69(2)(d)(i-xii) of the Water Sharing Plan, and hence this subclause would not apply.

Rules for Conversion of Access Licence Category

Under clause 71 of the Water Sharing Plan, conversion of an access licence from an unregulated river access licence to an aquifer access licence is permitted.

As there were only 20 unit shares of aquifer access licences in the Avon River Water Source on commencement of the Water Sharing Plan, it is anticipated that, if required, unregulated river access licences from within and/or outside of the Avon River Water Source would be converted into aquifer access licences for use by the Project in accordance with clause 71(2)(a) of the Water Sharing Plan.

Rules for Change of Water Source

Clause 70 of the Water Sharing Plan provides the rules for dealings under section 71R and 71W of the *Water Management Act, 2000*. While SCPL already holds approximately 140 ML of entitlements in the Avon River Water Source (refer discussion above), the Project may be able to obtain additional access licences within the Avon River Water Source, if required. Therefore, consideration of the potential for dealings that involve a change of water source are also provided below.

The Project would not involve dealings with a change of water source from one extraction management unit to another extraction management unit, or unregulated (high flow) access licences and hence subclauses 70(2) and 70(3) would not apply.

As described above, the Project dealings would not result in extraction of water from the alluvial sediments to the extent that requires a temporary water restriction order to be made under section 324 (2) of the *Water Management Act, 2000*, and therefore subclause 70(4) would not apply.

Section 89J(g) of the NSW *Environmental Planning and Assessment Act, 1979* (EP&A Act) provides that water management work approval under section 90 of the *Water Management Act, 2000* is not required for an approved State Significant Development project (Section 6.2.2). Therefore the restrictions set out in subclause 70(5) of the Water Sharing Plan do not apply. Notwithstanding, the Project open cuts would not be located within 40 m of the high bank of Avondale Creek or Dog Trap Creek.

Subclause 70(6) of the Water Sharing Plan indicates that dealings to change the water source to which an access licence applies from the Lower Manning River, Lower Barrington/Gloucester Rivers and the Manning Estuary Tributaries Water Sources into the Avon River Water Source are not prohibited (providing the dealing causes the sum of all access licence share components in the water source to exceed the sum of all access licence share components in the respective water source at the commencement of the Water Sharing Plan). The Project may make use of this facility, if required.

Rules for Interstate Access Licence Transfer

Clause 72 of the Water Sharing Plan is not applicable to the Project as no dealing for interstate transfer of an access licence or assignment of water allocations is proposed.

Rules for Water Allocation Assignment between Water Sources

Clause 73 of the Water Sharing Plan provides the rules for dealings under section 71T of the *Water Management Act, 2000* involving the assignment of water allocations between access licences.

Subclauses 73(2) and 73(3) of the Water Sharing Plan would not apply to the Project as no dealing from one extraction management unit to another extraction management unit is proposed, nor would the Project involve an unregulated river (high flow) access licence.

As described above, the Project dealings would not result in extraction of water from the alluvial sediments to the extent that requires a temporary water restriction order to be made under section 324(2) of the *Water Management Act, 2000*, and subclause 73(4) would not apply.

Subclause 73(5) of the Water Sharing Plan indicates that dealings that result in water allocation assignments from the Lower Manning River, Lower Barrington/Gloucester Rivers and the Manning Estuary Tributaries Water Sources into the Avon River Water Source are not prohibited (providing the dealing causes the sum of all access licence share components in the water source to exceed the sum of all access licence share components in the respective water source at the commencement of the Water Sharing Plan).

Management of Surface and Groundwater Connectivity

Under subclause 67(2) of the Water Sharing Plan any aquifer access licence arising from a dealing involving the conversion of an unregulated river access licence to an aquifer access licence, under Part 12 of the Water Sharing Plan, shall be subject to the same mandatory condition imposed under clause 75 of the Water Sharing Plan on an unregulated river access licence in the same water source or management zone as the aquifer access licence. It should be noted that clause 75(2)(d) indicates that clause 75(1) does not apply to aquifer access licences.

Appendices A and B have assessed the potential impacts of the Project on surface water and groundwater resources, including impacts on surface and groundwater connectivity and interflow (Sections 4.4 and 4.5).

Appendix A concluded that potential impacts on baseflow contributions to Dog Trap Creek and Avondale Creek would be negligible (Section 4.4.2) and therefore the downstream potential impacts on the Avon River would be negligible.

Management of Access Licences

In accordance with Division 2 of Part 11 of the Water Sharing Plan, the maximum volume that may be taken under aquifer access licences in any three consecutive water years may not exceed a volume equal to the sum of water allocations accrued under the access licence from available water determinations in those years (plus or minus any water allocations assigned or credited to or from the licence in accordance with sections 71T and 76 of the *Water Management Act, 2000*).

SCPL would manage its access licences to ensure that extraction does not exceed the water allocation account in any water year in accordance with the Water Sharing Plan.

A5.1.5 Water Use and Water Management Works

Section 89J(1) of the EP&A Act provides that water use approvals under section 89, water management work approvals under section 90, or an activity approval (excluding an aquifer interference approval) under section 91 of the *Water Management Act, 2000* are not required for an approved State Significant Development project (Section 6.2.3).

Aquifer Interference Approvals

An aquifer interference approval under section 91 of the *Water Management Act, 2000* confers a right on its holder to carry out one or more specified aquifer interference activities at a specified location, or in a specified area, in the course of carrying out specified activities. Under the *Water Management Act, 2000* an aquifer interference activity includes the taking of water from an aquifer in the course of carrying out mining (and the disposal of this water).

Under Clause 33 of the *Water Management (General) Regulation, 2011* a person who is engaged in an aquifer interference activity in connection with mining is exempt from section 91A(1) of the *Water Management Act, 2000* in relation to the using of water from an aquifer, if the water is used in accordance with an aquifer interference approval.

In the event that a proclamation in the NSW Government Gazette pursuant to section 88a of the *Water Management Act, 2000* requires an aquifer interference approval for relevant Project activities in the Avon River Water Source (or the relevant part of NSW, or the whole State of NSW) the Project would require an aquifer interference approval granted by the NOW in accordance with section 91(3) of the *Water Management Act, 2000*.

It is noted that at the time of writing a *Draft NSW Aquifer Interference Policy - Stage 1* (NSW Department of Trade and Investment, Regional Infrastructure and Services, 2012) had recently concluded public exhibition. The finalisation of the NSW Aquifer Interference Policy is expected to provide direction on whether mining developments such as the Project would require aquifer interference approvals in the future.

Water Supply Works Taking Water from Alluvial Sediments

Division 2 of Part 9 of the Water Sharing Plan provides rules for granting and amending water supply works approvals (minimum distance conditions) for taking water from alluvial sediments, including requirements with respect to proximity to contamination sources and sensitive environmental areas in accordance with sections 21(c) and 21(e) of the *Water Management Act, 2000*.

Potentially relevant components of Division 2 are reproduced below.

39 Rules for granting or amending water supply works approvals

- (1) A water supply work approval shall not be granted under section 95 of the Act, amended under section 107 of the Act, or amended under section 71W of the Act, where a water supply work to be constructed or used to take water from the alluvial sediments in these water sources is located within:
- (a) 200 metres of a water supply work being constructed or used to take water from the alluvial sediments in these water sources nominated by another access licence,
 - (b) 200 metres of a water supply work being constructed or used to take water from the alluvial sediments in these water sources for basic landholder rights,
 - (c) 300 metres from the property boundary,
 - (d) 100 metres from a water supply works being constructed or used to take water from alluvial sediments in these water sources by a local water utility or a major utility, or
 - (e) 400 metres of a Departmental observation or monitoring bore.

Note. The distance conditions in this clause apply to new or amended approvals. That is, when the applicant wants to construct a new water supply work being used to take water from the alluvial sediments in these water sources, and add it to an existing approval. The distance conditions also apply when the licence holder wants to nominate new or different works on the licence.

- (2) The distance restrictions specified in subclause (1) do not apply where the application:

...

- (c) relates to a water supply work which is to be constructed or used to take water from the alluvial sediments in these water sources for monitoring, environmental management purposes, or remedial works.

- (3) Where the distance restrictions specified in subclause (1) cannot be met, a water supply work approval may be granted provided:

- (a) a hydrogeological study undertaken by the applicant, and assessed as adequate by the Department, demonstrates that the water supply work will have no more than minimal impacts on the existing licenced taking of water from the water source,
- (b) all potentially affected persons in the near vicinity of the water supply work, holding an access licence or having a right under the Act to take water, have been notified by the applicant, and

Note. These persons may include neighbouring access licence, approval holders or other persons having a right to take water in the near vicinity of the water supply work.

- (c) any approval granted contains conditions setting out a process for remediation in the event that any more than minimal impact on existing extraction from the water source occurs in the future.

Note. In some water sources the general size of properties means that the application of exclusion distances would result in no new or replacement bores being able to be installed. Applicants must apply to the Department for special consideration in these instances.

...

40 Rules for granting or amending water supply works approvals near contamination sources

- (1) A water supply work approval shall not be granted under section 95 of the Act, amended under section 107 of the Act, or amended under section 71W of the Act, where a water supply work to be constructed or used to take water from the alluvial sediments in these water sources is located within:
- (a) 100 metres of a contamination source as listed in Schedule 3, unless the applicant can demonstrate to the Minister's satisfaction, that:

- (i) a lesser distance will result in no more than minimal harm to the water source, and

- (ii) the taking of water will not impact on the environment or cause a threat to public health as confirmed by the Minister for Health, or

- (b) a greater distance than in paragraph (a), as determined by the Minister, to ensure that no more than minimal harm will occur to the water source, and that extraction will not impact on the environment or cause a threat to public health as confirmed by the Minister for Health.

- (2) A water supply work approval shall not be granted for a new water supply work to be constructed or used to take water from the alluvial sediments in these water sources for any purpose, except basic landholder rights, which is between 100 metres and 500 metres of a contamination source listed in Schedule 3, unless the applicant provides evidence, to the Minister's satisfaction, that no drawdown of groundwater within 100 metres of the respective contamination source will occur.

Note. Schedule 3 is relevant to the granting of access licences and approvals for water supply works to be constructed or used to take water from the alluvial sediments in these water sources.

- (3) The distance restrictions specified in subclauses (1) and (2) do not apply to:
- (a) a water supply work to be constructed or used for monitoring, environmental management purposes or remedial works, or

...

41 Rules for granting or amending water supply works approvals near sensitive environmental areas

- (1) A water supply work approval shall not be granted under section 95 of the Act, amended under section 107 of the Act, or amended under section 71W of the Act, where the water supply work to be constructed or used to take water from the alluvial sediments in these water sources is located within:
- (a) 100 metres of a high priority groundwater dependent ecosystem, excluding high priority karst environment groundwater dependent ecosystems, listed in and shown on the maps in Schedule 4, for basic landholders rights only, or

- (b) 200 metres of a high priority groundwater dependent ecosystems excluding high priority karst environment groundwater dependent ecosystems, listed in and shown on the maps in Schedule 4, for water supply works nominated by an access licence, or
 - (c) 500 metres of a high priority karst environment groundwater dependent ecosystem, listed in and shown on the maps in Schedule 4, or
 - (d) 40 metres of the top of the high bank of any third order or above stream, or lagoon, or
 - (e) 40 metres of first and second order stream, unless the water supply work to be constructed or used to take water from the alluvial sediments in these water sources is drilled into the underlying parent material, and the slotted intervals of the works commences deeper than 30 metres.
- Note.** Subclause (1) will not apply to current authorised extraction from an existing water supply work being used to take water from the alluvial sediments in these water sources at current or equal share component.
- (2) The distance restrictions specified in subclause (1) do not apply to:
 - (a) a water supply work which is constructed or used for extracting water from alluvial sediments in these water sources for monitoring, environmental management purposes or remedial works, or
 - ...
 - (3) Where the distance restrictions specified in subclauses (1) (a) and (1) (b) cannot be met, a water supply work approval may be granted provided:
 - (a) a hydrogeological study undertaken by the applicant, and assessed as adequate by the Department, and
 - (b) the applicant providing evidence that no drawdown of the groundwater at the outside edge of the perimeter of the groundwater dependent ecosystem in Schedule 4.
 - (4) The restrictions specified in subclause (1) (e) on the drilling into the underlying parent material and the depth of slotted intervals may be amended if the applicant can demonstrate, to the satisfaction of the Department, that the water supply work to be constructed or used to take water from the alluvial sediments in these water sources will have no more than minimal impact on base flows in the stream.

- (5) Subclause 1 (d) and 1 (e) do not apply to a new water supply work which is constructed or used to take water from the alluvial sediments in these water sources required as part of a dealing involving the conversion of an unregulated river access licence to an aquifer access licence under section 710 of the Act.

...

Section 89J(1) of the EP&A Act provides that water use approvals under section 89 and water management work approvals under section 90 of the *Water Management Act, 2000* are not required for an approved State Significant Development project (Section 6.2.3).

A groundwater assessment (hydrogeological study) has been conducted for the Project including the development of groundwater drawdown predictions (Appendix A). The Project would not adversely affect high priority groundwater dependent ecosystems identified in the Water Sharing Plan (i.e. Karst ecosystems at the Gloucester Caves). Notwithstanding, consideration of potential impacts on other groundwater dependent ecosystems is provided in Appendix A, Appendix E and Sections 4.4 and 4.9.

In addition, a preliminary investigation for land contamination has been completed for the Project in accordance with the requirements of *State Environmental Planning Policy No. 55 - Remediation of Land* (Appendix M).

A5.2 WATER ACT, 1912

Clause 4(4)(c) of the Water Sharing Plan excludes any water contained in fractured rock aquifers and basement rocks in the water sources. Because no separate water sharing plan applicable to these aquifers has yet commenced, the *Water Act, 1912* remains the relevant Act for approval of groundwater extraction from aquifers other than alluvial aquifers within the Project area.

There is currently an embargo order under section 113 of the *Water Act, 1912* that applies to alluvial groundwater within coastal NSW. However, due to the commencement of the Water Sharing Plan under the *Water Management Act, 2000*, this embargo does not apply to alluvial groundwater within the Project area. There is currently no embargo that applies to fractured or porous rock aquifers in the Project area under section 113 of the *Water Act, 1912*.

SCPL holds various existing groundwater licences under Part 5 of the *Water Act, 1912* for open cut groundwater dewatering activities at the Stratford Mining Complex to a total of 1,021 ML per annum which comprises (Appendix A):

- Stratford Main Pit - 20 ML (20BL169101);
- Roseville Pit - 315 ML (20BL169102);
- BRNOC - 500 ML (20BL168400); and
- Parkers/Bowens Road West Pit - 186 ML (20BL169104).

Copies of the licences are provided at the back of this Attachment.

The above entitlements are significantly more than the predicted fractured rock and basement rock aquifer Project open cut inflows which at maximum are predicted to be approximately 600 ML per annum (Table 4-4).

A5.3 REFERENCES

Department of Trade and Investment, Regional Infrastructure and Services (2012) *Draft NSW Aquifer Interference Policy – Stage 1*.

Roberst, J., Engel, R., Lennox, M. and Chapman, J. (1991) *Dungog, New South Wales 1:100,000 Geological Sheet 9233, Geological Survey of New South Wales 1:100,000 geological sheet series, Iv, Map*.

LICENCES



Statement of Conditions

as at Friday, 23 March 2012
Issued under Water Management Act 2000

WAL number 19536

Reference number 20AL204410

Primary holder

Name Stratford Coal Pty Limited

Address P O BOX 168 GLOUCESTER 2242 NSW

All holders

Name(s) Stratford Coal Pty Limited

Licence details

Water source AVON RIVER WATER SOURCE

Water sharing plan LOWER NORTH COAST UNREGULATED AND ALLUVIAL WATER SOURCES

Management zone

Category UNREGULATED RIVER

Tenure type Continuing



Conditions

The water access licence with DWE Reference No 20AL204410 is subject to the following conditions:



Statement of Conditions

as at Wednesday, 28 March 2012

Issued under Water Management Act 2000

WAL number 19514

Reference number 20AL204348

Primary holder

Name Gloucester Coal Limited

Address P O BOX 2275 GREENHILLS 2323 NSW

All holders

Name(s) Gloucester Coal Limited
C I M Stratford Pty Limited

Licence details

Water source AVON RIVER WATER SOURCE

Water sharing plan LOWER NORTH COAST UNREGULATED AND ALLUVIAL WATER SOURCES

Management zone

Category UNREGULATED RIVER

Tenure type Continuing



Conditions

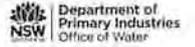
The water access licence with DWE Reference No 20AL204348 is subject to the following conditions:

NSW Office of Water

Hunter Region
Po Box 2213
3/26 Honeysuckle Drive
Dangar NSW 2309
Phone: (02) 49042500

BORE LICENSE RENEWAL CERTIFICATE
UNDER SECTION 115 OF THE WATER ACT, 1912

20BL169101



C I M Stratford Pty Ltd
Attn: Anthony Dwyer
P O Box 168
Gloucester NSW 2242

LICENSE NUMBER	
20BL169101	
DATE LICENSE VALID FROM	
29-Sep-2009	
DATE LICENSE VALID TO	
28-Sep-2014	
FEE	
\$151.00	Paid
ABN 47661556763 GST NIL	

LOCATION OF WORKS

Portion(s) or Lot/Section/DP	PARISH	COUNTY
72//979859	Avon	Gloucester
73//979859	Avon	Gloucester

TYPE OF WORKS	PURPOSE(S) FOR WHICH WATER MAY BE USED
1 X Excavation - Groundwater	Dewatering (groundwater)

CONDITIONS APPLYING TO THIS LICENSE ARE SHOWN ON ATTACHED CONDITION STATEMENT.

COPY

NSW Office of Water**CONDITIONS STATEMENT REFERRED TO ON
20BL169101
RENEWED UNDER PART V OF THE WATER ACT, 1912
ON 29-Sep-2009**

- (1) THE LICENSEE SHALL GRANT THE NSW OFFICE OF WATER OR ANY PERSON AUTHORISED BY IT, FULL AND FREE ACCESS TO THE WORKS, EITHER DURING CONSTRUCTION OR AFTER COMPLETION, FOR THE PURPOSE OF CARRYING OUT ANY INSPECTION, OR TEST OF THE WORKS FOR THE PROTECTION OF THE QUALITY AND PREVENTION FROM POLLUTION OR CONTAMINATION OF SUB-SURFACE WATER.
- (2) ANY INSPECTIONS OF THE SITE BY THE NSW OFFICE OF WATER WILL BE CARRIED OUT IN CONSULTATION WITH THE MINE OPERATION.
- (3) ANY WATER EXTRACTED FROM THE WORK SHALL NOT BE DISCHARGED INTO ANY WATERCOURSE OR SOURCE OF GROUNDWATER UNLESS IT MEETS THE REQUIREMENTS OF THE POEO ACT 1997 OR HUNTER SALINITY TRADING SCHEME.
- (4) WORKS USED FOR THE PURPOSE OF CONVEYING, DISTRIBUTING OR STORING WATER FROM THE WORK AUTHORISED BY THIS LICENCE SHALL NOT BE CONSTRUCTED OR INSTALLED SO AS TO OBSTRUCT THE FREE PASSAGE OF FLOOD WATERS FLOWING IN, TO OR FROM A RIVER OR LAKE.
- (5) THE LICENSEE SHALL INSTALL TO THE SATISFACTION OF THE NSW OFFICE OF WATER, IN RESPECT OF LOCATION, TYPE AND CONSTRUCTION AN APPLIANCE(S) TO MEASURE THE QUANTITY OF WATER EXTRACTED FROM THE WORK. THE APPLIANCES(S) SHALL CONSIST OF A METER OR MEANS OF MEASUREMENT AS MAY BE APPROVED BY THE NSW OFFICE OF WATER. THE APPLIANCE(S) IS TO BE MAINTAINED IN GOOD WORKING ORDER AND CONDITION.
- (6) DETAILED RECORDS OF ALL WATER EXTRACTED FROM THE WORKS SHALL BE KEPT AND SUPPLIED TO THE NSW OFFICE OF WATER ON REQUEST. THE LICENSEE WHEN REQUESTED MUST PROVIDE A TEST CERTIFICATE AS TO THE ACCURACY OF THE MEASUREMENTS APPLIANCE(S) FURNISHED EITHER BY THE MANUFACTURER OR BY SOME PERSON OR AUTHORITY DULY QUALIFIED.
- (7) AS PART OF THE OVERALL ENVIRONMENTAL MANAGEMENT PLAN (EMP) FOR THE PROPOSAL, THE APPLICANT SHALL DEVELOP A GROUNDWATER MANAGEMENT PLAN (GMP), BASED ON NSW OFFICE OF WATER REQUIREMENTS, WHICH DETAILS THE MONITORING, CONTINGENCY AND REMEDIATION MEASURES, AND RELEASE CRITERIA. THE GMP COMPONENT OF THE EMP IS TO BE SUBMITTED TO NSW OFFICE OF WATER WITHIN THREE (3) MONTHS FROM THE DATE OF ISSUE OF THE LICENCE.
- (8) ALL MONITORING DATA SHALL BE SUBMITTED TO THE NSW OFFICE OF WATER IN A REPORT AND IN DIGITAL FORMAT ACCEPTABLE TO NSW OFFICE OF WATER, WHICH INCLUDES DATA, INTERPRETATION OF RESULTS, AND A DISCUSSION OF MONITORING RESULTS COMPARED TO GROUNDWATER AND SALINITY IMPACT PREDICTIONS STATED IN THE EIS. AFTER REVIEWING THE ANNUAL REPORT, NSW OFFICE OF WATER MAY REQUIRE THE APPLICANT TO TAKE PARTICULAR MEASURES OR PERFORM PARTICULAR WORK WITHIN A SPECIFIED TIME FRAME.
- (9) THE LICENSEE MUST GIVE NSW OFFICE OF WATER PROMPT WRITTEN NOTIFICATION OF THE PERMANENT CESSATION OF ITS OPERATIONS BY WHICH GROUNDWATER IS EXTRACTED DIRECTLY OR INDIRECTLY FROM THE AREA. UPON SUCH NOTICE BEING RECEIVED BY THE NSW OFFICE OF WATER:
 - (A) THE LICENSEE MUST PROVIDE EVIDENCE THAT ALL AREAS AFFECTED BY DE-WATERING (AND ANY ASSOCIATED ACTIVITY) HAVE BEEN REHABILITATED/RESTORED TO PRE-MINING OR OTHERWISE AGREED CONDITION;
 - (B) THE LICENSEE MAY BE REQUIRED TO UNDERTAKE FURTHER REHABILITATION WORK, BASED ON THE FINDINGS OF ANY INVESTIGATION INTO THE PERFORMANCE OF THE LICENSEE'S CESSATION OBLIGATIONS, OR AS REQUIRED BY THE NSW OFFICE OF WATER

(10) A COPY OF THE LICENCE, ONCE ISSUED TO THE LICENSEE, MUST BE KEPT AT THE PREMISES TO WHICH THE LICENCE APPLIES.

(11) THE LICENSEE MUST BE AVAILABLE FOR INSPECTION BY ANY EMPLOYEE OR AGENT OF THE APPLICANT WORKING ON THE PREMISES.

(12) THE LICENSEE, BY REASON OF THIS PERMIT, IS NOT RELEIVED OF THE OBLIGATION TO OBTAIN OR COMPLY WITH OTHER AUTHORITIES OR PERMISSION THAT MAY APPLY TO THE EXTRACTION OPERATIONS. THE APPLICANT MUST OBTAIN AND OBSERVE ALL STATUTORY PROVISIONS AND LAWFUL ORDERS MADE BY ANY OTHER GOVERNMENT AUTHORITY OF COMPETENT JURISDICTION IN RELATION TO THE EXTRACTION OPERATIONS THAT ARE IN FORCE FROM TIME TO TIME.

(13) THE VOLUME OF GROUNDWATER EXTRACTED FROM THE WORKS AUTHORISED BY THIS LICENCE SHALL NOT EXCEED 20 MEGALITRES IN ANY 12-MONTH PERIOD COMMENCING 1ST JULY.

End Of Conditions

NSW Office of Water

Hunter Region
Po Box 2213
3/26 Honeysuckle Drive
Dangar NSW 2309
Phone: (02) 49042500

BORE LICENSE RENEWAL CERTIFICATE
UNDER SECTION 115 OF THE WATER ACT, 1912

20BL169102



C I M Stratford Pty Ltd
Attn: Anthony Dwyer
P O Box 168
Gloucester NSW 2242

LICENSE NUMBER
20BL169102
DATE LICENSE VALID FROM
29-Sep-2009
DATE LICENSE VALID TO
28-Sep-2014
FEE
\$151.00 Paid

ABN 47661556763 GST NIL

LOCATION OF WORKS

Portion(s) or Lot/Section/DP	PARISH	COUNTY
59//979859	Avon	Gloucester
62//1093998	Avon	Gloucester
63//1093998	Avon	Gloucester

TYPE OF WORKS	PURPOSE(S) FOR WHICH WATER MAY BE USED
1 X Excavation - Groundwater	Dewatering (groundwater)

CONDITIONS APPLYING TO THIS LICENSE ARE SHOWN ON ATTACHED CONDITION STATEMENT.

COPY

NSW Office of Water**CONDITIONS STATEMENT REFERRED TO ON
20BL169102
RENEWED UNDER PART V OF THE WATER ACT, 1912
ON 29-Sep-2009**

(1) THE LICENSEE SHALL GRANT THE NSW OFFICE OF WATER OR ANY PERSON AUTHORISED BY IT, FULL AND FREE ACCESS TO THE WORKS, EITHER DURING CONSTRUCTION OR AFTER COMPLETION, FOR THE PURPOSE OF CARRYING OUT ANY INSPECTION, OR TEST OF THE WORKS FOR THE PROTECTION OF THE QUALITY AND PREVENTION FROM POLLUTION OR CONTAMINATION OF SUB-SURFACE WATER

ANY INSPECTIONS OF THE SITE BY THE NSW OFFICE OF WATER WILL BE CARRIED OUT IN CONSULTATION WITH THE MINE OPERATION.

(2) ANY WATER EXTRACTED FROM THE WORK SHALL NOT BE DISCHARGED INTO ANY WATERCOURSE OR SOURCE OF GROUNDWATER UNLESS IT MEETS THE REQUIREMENTS OF THE POEO ACT 1997 OR HUNTER SALINITY TRADING SCHEME

(3) WORKS USED FOR THE PURPOSE OF CONVEYING, DISTRIBUTING OR STORING WATER FROM THE WORK AUTHORISED BY THIS LICENCE SHALL NOT BE CONSTRUCTED OR INSTALLED SO AS TO OBSTRUCT THE FREE PASSAGE OF FLOOD WATERS FLOWING IN, TO OR FROM A RIVER OR LAKE.

(4) THE LICENSEE SHALL INSTALL TO THE SATISFACTION OF THE NSW OFFICE OF WATER, IN RESPECT OF LOCATION, TYPE AND CONSTRUCTION AN APPLIANCE(S) TO MEASURE THE QUANTITY OF WATER EXTRACTED FROM THE WORK. THE APPLIANCES(S) SHALL CONSIST OF A METER OR MEANS OF MEASUREMENT AS MAY BE APPROVED BY THE NSW OFFICE OF WATER. THE APPLIANCE(S) IS TO BE MAINTAINED IN GOOD WORKING ORDER AND CONDITION.

(5) DETAILED RECORDS OF ALL WATER EXTRACTED FROM THE WORKS SHALL BE KEPT AND SUPPLIED TO THE NSW OFFICE OF WATER ON REQUEST. THE LICENSEE WHEN REQUESTED MUST PROVIDE A TEST CERTIFICATE AS TO THE ACCURACY OF THE MEASUREMENTS APPLIANCE(S) FURNISHED EITHER BY THE MANUFACTURER OR BY SOME PERSON OR AUTHORITY DULY QUALIFIED.

(6) AS PART OF THE OVERALL ENVIRONMENTAL MANAGEMENT PLAN (EMP) FOR THE PROPOSAL, THE APPLICANT SHALL DEVELOP A GROUNDWATER MANAGEMENT PLAN (GMP), BASED ON NSW OFFICE OF WATER REQUIREMENTS, WHICH DETAILS THE MONITORING, CONTINGENCY AND REMEDIATION MEASURES, AND RELEASE CRITERIA. THE GMP COMPONENT OF THE EMP IS TO BE SUBMITTED TO NSW OFFICE OF WATER WITHIN THREE (3) MONTHS FROM THE DATE OF ISSUE OF THE LICENCE.

(7) ALL MONITORING DATA SHALL BE SUBMITTED TO THE NSW OFFICE OF WATER IN A REPORT AND IN DIGITAL FORMAT ACCEPTABLE TO NSW OFFICE OF WATER, WHICH INCLUDES DATA, INTERPRETATION OF RESULTS, AND A DISCUSSION OF MONITORING RESULTS COMPARED TO GROUNDWATER AND SALINITY IMPACT PREDICTIONS STATED IN THE EIS. AFTER REVIEWING THE ANNUAL REPORT, NSW OFFICE OF WATER MAY REQUIRE THE APPLICANT TO TAKE PARTICULAR MEASURES OR PERFORM PARTICULAR WORK WITHIN A SPECIFIED TIME FRAME.

(8) THE LICENSEE MUST GIVE NSW OFFICE OF WATER PROMPT WRITTEN NOTIFICATION OF THE PERMANENT CESSATION OF ITS OPERATIONS BY WHICH GROUNDWATER IS EXTRACTED DIRECTLY OR INDIRECTLY FROM THE AREA. UPON SUCH NOTICE BEING RECEIVED BY THE NSW OFFICE OF WATER:

(A) THE LICENSEE MUST PROVIDE EVIDENCE THAT ALL AREAS AFFECTED BY DE-WATERING (AND ANY ASSOCIATED ACTIVITY) HAVE BEEN REHABILITATED/RESTORED TO PRE-MINING OR OTHERWISE AGREED CONDITION;

(B) THE LICENSEE MAY BE REQUIRED TO UNDERTAKE FURTHER REHABILITATION WORK, BASED ON THE FINDINGS OF ANY INVESTIGATION INTO THE PERFORMANCE OF THE LICENSEE'S CESSATION OBLIGATIONS, OR AS REQUIRED BY NSW OFFICE OF WATER;

- (9) A COPY OF THE LICENCE, ONCE ISSUED TO THE LICENSEE, MUST BE KEPT AT THE PREMISES TO WHICH THE LICENCE APPLIES.
- (10) THE LICENSEE MUST BE AVAILABLE FOR INSPECTION BY ANY EMPLOYEE OR AGENT OF THE APPLICANT WORKING ON THE PREMISES.
- (11) THE LICENSEE, BY REASON OF THIS PERMIT, IS NOT RELEIVED OF THE OBLIGATION TO OBTAIN OR COMPLY WITH OTHER AUTHORITIES OR PERMISSION THAT MAY APPLY TO THE EXTRACTION OPERATIONS. THE APPLICANT MUST OBTAIN AND OBSERVE ALL STATUTORY PROVISIONS AND LAWFUL ORDERS MADE BY ANY OTHER GOVERNMENT AUTHORITY OF COMPETENT JURISDICTION IN RELATION TO THE EXTRACTION OPERATIONS THAT ARE IN FORCE FROM TIME TO TIME.
- (12) THE VOLUME OF GROUNDWATER EXTRACTED FROM THE WORKS AUTHORISED BY THIS LICENCE SHALL NOT EXCEED 315 MEGALITRES IN ANY 12-MONTH PERIOD COMMENCING 1ST JULY.

End Of Conditions

NSW Office of Water

Hunter Region
Po Box 2213
3/26 Honeysuckle Drive
Dangar NSW 2309
Phone: (02) 49042500

BORE LICENSE RENEWAL CERTIFICATE UNDER SECTION 115 OF THE WATER ACT, 1912

20BL169104



C I M Stratford Pty Ltd
Attn: Anthony Dwyer
P O Box 168
Gloucester NSW 2242

LICENSE NUMBER
20BL169104
DATE LICENSE VALID FROM
29-Sep-2009
DATE LICENSE VALID TO
28-Sep-2014
FEE
\$151.00 Paid

ABN 47661556763 GST NIL

Portion(s) or Lot/Section/DP	LOCATION OF WORKS	
	PARISH	COUNTY
54//979859	Avon	Gloucester
57//979859	Avon	Gloucester
56E//979859	Avon	Gloucester
3//1062249	Gloucester	Gloucester
4//1062249	Gloucester	Gloucester

TYPE OF WORKS	PURPOSE(S) FOR WHICH WATER MAY BE USED
1 X Excavation - Groundwater	Dewatering (groundwater)

CONDITIONS APPLYING TO THIS LICENSE ARE SHOWN ON ATTACHED CONDITION STATEMENT.

COPY

NSW Office of Water**CONDITIONS STATEMENT REFERRED TO ON
20BL169104
RENEWED UNDER PART V OF THE WATER ACT, 1912
ON 29-Sep-2009**

(1) THE LICENSEE SHALL ALLOW THE NSW OFFICE OF WATER OR ANY PERSON AUTHORISED BY IT, FULL AND FREE ACCESS TO THE WORKS, EITHER DURING CONSTRUCTION OR AFTER COMPLETION, FOR THE PURPOSE OF CARRYING OUT ANY INSPECTION, OR TEST OF THE WORKS FOR THE PROTECTION OF THE QUALITY AND PREVENTION FROM POLLUTION OR CONTAMINATION OF SUB-SURFACE WATER

NOTE: ANY INSPECTIONS OF THE SITE BY THE NSW OFFICE OF WATER WILL BE CARRIED OUT IN CONSULTATION WITH THE MINE OPERATION.

(2) ANY WATER EXTRACTED FROM THE WORK SHALL NOT BE DISCHARGED INTO ANY WATERCOURSE OR SOURCE OF GROUNDWATER UNLESS IT MEETS THE REQUIREMENTS OF THE POEO ACT 1997 OR HUNTER SALINITY TRADING SCHEME

(3) WORKS USED FOR THE PURPOSE OF CONVEYING, DISTRIBUTING OR STORING WATER FROM THE WORK AUTHORISED BY THIS LICENCE SHALL NOT BE CONSTRUCTED OR INSTALLED SO AS TO OBSTRUCT THE FREE PASSAGE OF FLOOD WATERS FLOWING IN, TO OR FROM A RIVER OR LAKE.

(4) THE LICENSEE SHALL INSTALL TO THE SATISFACTION OF THE NSW OFFICE OF WATER, IN RESPECT OF LOCATION, TYPE AND CONSTRUCTION AN APPLIANCE(S) TO MEASURE THE QUANTITY OF WATER EXTRACTED FROM THE WORK. THE APPLIANCES(S) SHALL CONSIST OF A METER OR MEANS OF MEASUREMENT AS MAY BE APPROVED BY THE NSW OFFICE OF WATER. THE APPLIANCE(S) IS TO BE MAINTAINED IN GOOD WORKING ORDER AND CONDITION.

(5) DETAILED RECORDS OF ALL WATER EXTRACTED FROM THE WORKS SHALL BE KEPT AND SUPPLIED TO THE NSW OFFICE OF WATER ON REQUEST. THE LICENSEE WHEN REQUESTED MUST PROVIDE A TEST CERTIFICATE AS TO THE ACCURACY OF THE MEASUREMENTS APPLIANCE(S) FURNISHED EITHER BY THE MANUFACTURER OR BY SOME PERSON OR AUTHORITY DULY QUALIFIED.

(6) AS PART OF THE OVERALL ENVIRONMENTAL MANAGEMENT PLAN (EMP) FOR THE PROPOSAL, THE APPLICANT SHALL DEVELOP A GROUNDWATER MANAGEMENT PLAN (GMP), BASED ON NSW OFFICE OF WATER REQUIREMENTS, WHICH DETAILS THE MONITORING, CONTINGENCY AND REMEDIATION MEASURES, AND RELEASE CRITERIA. THE GMP COMPONENT OF THE EMP IS TO BE SUBMITTED TO NSW OFFICE OF WATER WITHIN THREE (3) MONTHS FROM THE DATE OF ISSUE OF THE LICENCE.

(7) ALL MONITORING DATA SHALL BE SUBMITTED TO THE NSW OFFICE OF WATER IN A REPORT AND IN DIGITAL FORMAT ACCEPTABLE TO NSW OFFICE OF WATER, WHICH INCLUDES DATA, INTERPRETATION OF RESULTS, AND A DISCUSSION OF MONITORING RESULTS COMPARED TO GROUNDWATER AND SALINITY IMPACT PREDICTIONS STATED IN THE EIS. AFTER REVIEWING THE ANNUAL REPORT, NSW OFFICE OF WATER MAY REQUIRE THE APPLICANT TO TAKE PARTICULAR MEASURES OR PERFORM PARTICULAR WORK WITHIN A SPECIFIED TIME FRAME.

(8) THE LICENSEE MUST GIVE NSW OFFICE OF WATER PROMPT WRITTEN NOTIFICATION OF THE PERMANENT CESSATION OF ITS OPERATIONS BY WHICH GROUNDWATER IS EXTRACTED DIRECTLY OR INDIRECTLY FROM THE AREA. UPON SUCH NOTICE BEING RECEIVED BY THE NSW OFFICE OF WATER:

(A) THE LICENSEE MUST PROVIDE EVIDENCE THAT ALL AREAS AFFECTED BY DE-WATERING (AND ANY ASSOCIATED ACTIVITY) HAVE BEEN REHABILITATED/RESTORED TO PRE-MINING OR OTHERWISE AGREED CONDITION;

(B) THE LICENSEE MAY BE REQUIRED TO UNDERTAKE FURTHER REHABILITATION WORK, BASED ON THE FINDINGS OF ANY INVESTIGATION INTO THE PERFORMANCE OF THE LICENSEE'S CESSATION OBLIGATIONS, OR AS REQUIRED BY NSW OFFICE OF WATER;

(9) A COPY OF THE LICENCE, ONCE ISSUED TO THE LICENSEE, MUST BE KEPT AT THE PREMISES TO WHICH THE LICENCE APPLIES.

(10) THE LICENSEE MUST BE AVAILABLE FOR INSPECTION BY ANY EMPLOYEE OR AGENT OF THE APPLICANT WORKING ON THE PREMISES.

(11) THE LICENSEE, BY REASON OF THIS PERMIT, IS NOT RELEIVED OF THE OBLIGATION TO OBTAIN OR COMPLY WITH OTHER AUTHORITIES OR PERMISSION THAT MAY APPLY TO THE EXTRACTION OPERATIONS. THE APPLICANT MUST OBTAIN AND OBSERVE ALL STATUTORY PROVISIONS AND LAWFUL ORDERS MADE BY ANY OTHER GOVERNMENT AUTHORITY OF COMPETENT JURISDICTION IN RELATION TO THE EXTRACTION OPERATIONS THAT ARE IN FORCE FROM TIME TO TIME.

(12) THE VOLUME OF GROUNDWATER EXTRACTED FROM THE WORKS AUTHORISED BY THIS LICENCE SHALL NOT EXCEED 186 MEGALITRES IN ANY 12-MONTH PERIOD COMMENCING 1ST JULY.

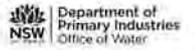
End Of Conditions

NSW Office of Water

Hunter Region
 Po Box 2213
 3/26 Honeysuckle Drive
 Dangar NSW 2309
 Phone: (02) 49042500

BORE LICENSE RENEWAL CERTIFICATE UNDER SECTION 115 OF THE WATER ACT, 1912

20BL168400



Stratford Coal Pty Limited
 P O Box 168
 Gloucester NSW 2242

LICENSE NUMBER
20BL168400
DATE LICENSE VALID FROM
01-Aug-2007
DATE LICENSE VALID TO
31-Jul-2012
FEE
\$151.00 Paid

ABN 47661556763 GST NIL

Portion(s) or Lot/Section/DP	LOCATION OF WORKS	
	PARISH	COUNTY
B//116316	Avon	Gloucester
1//194827	Avon	Gloucester
771//826955	Avon	Gloucester
772//826955	Avon	Gloucester
52//979859	Avon	Gloucester
79//979859	Avon	Gloucester
80//979859	Avon	Gloucester

TYPE OF WORKS	PURPOSE(S) FOR WHICH WATER MAY BE USED
1 X Excavation - Groundwater	Dewatering (groundwater)

CONDITIONS APPLYING TO THIS LICENSE ARE SHOWN ON ATTACHED CONDITION STATEMENT.

COPY

NSW Office of Water

**CONDITIONS STATEMENT REFERRED TO ON
20BL168400
RENEWED UNDER PART V OF THE WATER ACT, 1912
ON 01-Aug-2002**

(1) THE LICENSEE SHALL ALLOW THE DEPARTMENT OR ANY PERSON AUTHORISED BY IT, FULL AND FREE ACCESS TO THE WORKS EITHER DURING OR AFTER CONSTRUCTION, FOR THE PURPOSE OF CARRYING OUT ANY INSPECTION OR TEST OF THE WORKS FOR PROTECTION OF THE QUALITY AND PREVENTION FROM POLLUTION OR CONTAMINATION OF SUB SURFACE WATER. ANY INSPECTIONS OF THE SITE BY THE NOW WILL BE CARRIED OUT IN CONSULTATION WITH THE MINE OPERATOR.

(2) THE LICENSEE SHALL WITHIN TWO MONTHS OF COMPLETION OR AFTER THE ISSUE OF THE LICENSE IF THE WORK IS EXISTING, FURNISH TO THE DEPARTMENT OF LAND AND WATER CONSERVATION:-

(A) DETAILS OF THE WORK TO BE SET OUT ON A FORM "A" (THAT MUST BE COMPLETED BY THE DRILLER AND RETURNED TO THE DEPARTMENT ASAP).

(3) ANY WATER EXTRACTED FROM THE WORKS SHALL NOT BE DISCHARGED INTO ANY WATERCOURSE OR SOURCE OF GROUNDWATER UNLESS IT MEETS THE REQUIREMENTS OF THE POEO ACT 1997 AND THE RULES OF THE HUNTER SALINITY TRADING SCHEME.

(4) A RECORD OF ALL WATER EXTRACTED FROM THE WORKS SHALL BE KEPT AND SUPPLIED TO THE DEPARTMENT UPON REQUEST.

(5) THE VOLUME OF GROUNDWATER EXTRACTED FROM THE WORKS AUTHORISED BY THIS LICENCE SHALL NOT EXCEED 500 MEGALITRES IN ANY 12 MONTH PERIOD COMMENCING 1ST JULY.

(6) THE GROUNDWATER EXTRACTION VOLUME LIMIT MAY BE VARIED FOLLOWING CONSULTATION WITH, AND TO THE SATISFACTION OF THE NOW.

(7) SPECIAL CONDITIONS:

End Of Conditions

BOX 1089X
(AG27598)



NEW SOUTH WALES
CERTIFICATE OF TITLE
WATER MANAGEMENT ACT, 2000



WAL TITLE REFERENCE WAL19536	
EDITION 2	DATE OF ISSUE 2/2/2011
CERTIFICATE AUTHENTICATION CODE DXTJ-7V-2SH9	

This certificate is issued under s87B of the Water Management Act, 2000.



WARNING NOTE: INFORMATION ON THIS REGISTER IS NOT GUARANTEED

TENURE TYPE: CONTINUING

HOLDER(S)

STRATFORD COAL PTY LTD

(T AG27598)

ENCUMBRANCES

- SECURITY INTERESTS IN THE WATER ENTITLEMENT REPLACED BY THIS ACCESS LICENCE THAT WERE REGISTERED OR CAPABLE OF BEING REGISTERED WITH LPI OR ASIC BEFORE THE COMMENCEMENT DATE OF THIS LICENCE 1/8/2009 MAY BE RECORDED ON THIS LICENCE WITHIN THREE YEARS FROM THE COMMENCEMENT DATE. SEE NOTES.
- TERM TRANSFER: NIL

ACCESS LICENCE DETAILS

CATEGORY: UNREGULATED RIVER

SHARE COMPONENT:

SHARE - 133 UNITS

WATER SOURCE - AVON RIVER WATER SOURCE

WATER SHARING PLAN - LOWER NORTH COAST UNREGULATED AND ALLUVIAL WATER SOURCES 2009

EXTRACTION COMPONENT:

TIMES/RATES/CIRCUMSTANCES - ANY TIME OR RATE

EXTRACTION FROM - RIVER, LAKE OR SURFACE WATER RUNOFF

EXTRACTION ZONE - WHOLE WATER SOURCE

NOMINATED WORKS:

WORK APPROVAL NUMBER(S) - 20CA204411

INTERSTATE TAGGING ZONE - NIL

CONDITIONS

LICENCE CONDITIONS FORM A PART OF THIS LICENCE AND AFFECT THE SHARE AND EXTRACTION COMPONENTS. CONDITION STATEMENTS ARE AVAILABLE FROM NOW.

NOTES

A WATER LICENCE INFORMATION SHEET IS AVAILABLE FROM THE NSW OFFICE OF WATER (NOW) AND SHOULD BE REFERRED TO IN INTERPRETING THIS LICENCE. NOW WEBSITE WWW.WATER.NSW.GOV.AU, PHONE 1800 353 104, EMAIL INFORMATION@WATER.NSW.GOV.AU
NOW REFERENCE NUMBER: 20AL204410
PREVIOUS WATER ACT LICENCE NUMBER(S): 20SL061679.

**** END OF CERTIFICATE ****

ANY ATTEMPT TO ALTER THIS CERTIFICATE COULD RESULT IN HEAVY FINES OR IMPRISONMENT (S.141 REAL PROPERTY ACT)

TAX INVOICE

Customer Account:
GLOUCESTER COAL LIMITED
P O BOX 137
CHATSWOOD NSW 2057

Enquiries:
Tel 1800 353 091
Fax (02) 6684 2603
E-mail billing@statewater.com.au



Office
of Water

ABN: 30 841 387 271

3270823 001 IN 02253 IN 00544 IP 00546



GLOUCESTER COAL LIMITED
P O BOX 137
CHATSWOOD NSW 2057

Date: 03/11/2010
Invoice No: 012621983
Period of Invoice: 01/07/2009
to: 30/06/2010
Licence/Ref No: HM / 20SL022591D
Customer Account No: 10149
Payment Terms: Net 30 Days
Payment Due Date: 06/12/2010

DESCRIPTION OF SUPPLY	QTY	\$/UNIT	\$ AMOUNT
Opening Balance			\$0.00
Unregulated Water Irrigation Minimum	1.00	\$60.00 Each	\$60.00

Water Management Services-this fixed charge is based on your licensed irrigation entitlement. A minimum bill applies. It recovers part of NOWs unregulated river system management costs in accordance with IPARTs bulk water price determination(s).

Period: 01/07/2009 to 01/08/2009
The invoice quantity is pro-rata of 7.000ML for 32days.

Per 12/11/10

Total Amount Payable (includes GST of \$0) \$60.00

Information held by NSW Office of Water such as your name, address and entitlement details may be forwarded to the New South Wales Irrigators' Council (NSWIC) for the purpose of collecting its annual levy. If you do not wish to have your details forwarded, please contact us by mail or by one of the enquiry options listed above.

Leased to Bill Williams

If an asterisk * appears at the end of a product description this indicates a taxable supply.

Please note: Invoices for water charges not paid by due date are subject to Interest.

PAYMENT ADVICE SLIP

Payment Due Date: 06/12/2010
Customer Account No: 10149
Invoice No: 012621983
Licence/Ref No: HM / 20SL022591D
Customer Name: GLOUCESTER COAL LIMITED

Total Amount Payable
\$60.00

See Reverse for Payment Options



Biller Code: 29546
Reference No: 100466176



*455 3646 000000000046617 96



Billpay Code: 0455
Ref: 3646 4661 796