



Mining and energy industry impacts on natural resources in the Queensland Murray-Darling Basin

Policy for the Queensland Murray-Darling Basin Final Draft 03 December 2009

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02/04/2009	First draft: Presented to QMDC Executive Committee at St George. Adopted for consultation with modifications.
03/04/2009	First draft: Presented to QMDC Members Meeting at St George.
14/04/2009	First draft with modifications: Consultation with key organisations.
03/08/2009	Second draft: Modifications from QMDC to QMDB regional focus/targets.
19/08/2009	Third draft: Edits
05/10/2009	Third draft: Edits Regional Local Government consultation meeting
13/10/2009	Third draft: Edits Industry Group consultation meeting
15/10/2009	Fourth draft: Finalisation of edits and preparation for Executive Committee
06/11/2009	Final draft: Supported by QMDC Executive Committee, with Land and Soils Policy Options subject to further consultation and later endorsement
26/11/2009	Final draft: QMDC Executive Committee Land and Soils Policy supported
03/12/2009	Final draft: Presented to QMDC Executive Committee at Goondiwindi. For final consultation and stakeholder support.

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Queensland Murray-Darling Committee Inc.



Purpose of the policy

The purpose of this policy document prepared by the Queensland Murray-Darling Committee Inc. (QMDC) is to address the impacts of the mining and energy industry on the Queensland Murray-Darling Basin's natural resources.

The policy provides a framework for the decision-making, risk management and response to the specific impacts of the mining and energy industry on the Queensland Murray-Darling Basin's natural resources. This framework will provide direction not only for QMDC, but other organisations and stakeholders who have provided direction and support for the policy development.

Community members and representative organisations within the Queensland Murray-Darling Basin were invited to provide direction and input into the region's response to the impacts of mining and energy industry activities. A register of this input and consultation process is detailed in Appendix 1.

Support for the policy

Community members and representative organisations within the Queensland Murray-Darling Basin are invited to indicate their support for this policy document. Letters of support for this policy are attached in Appendix 2.



Background

Southern Queensland is a major producer of energy projects (coal, oil, natural gas, condensate, liquefied petroleum gas and coal seam gas). In the Queensland Murray-Darling Basin energy reserves are significant in the Surat Basin and underlying Bowen Basin. Development of these energy reserves involves coal seam gas extraction, as well as open cut coal mining and supporting industries.

Significant renewable energy projects are proposed within the region on the Darling Downs. These include the largest wind farm in the southern hemisphere (the 500 megawatt Coopers Gap Wind Farm 65km north of Dalby) and a 23 megawatt solar plant to be added to the existing 750 megawatt Kogan Creek coal power station, near Chinchilla.

Development of the Surat and Bowen Basin energy reserves has the potential to impose considerable local and cumulative impacts on the natural resource assets in the Queensland Murray-Darling Basin.

Overall QMDC is supportive of the need for the mining and energy industry and recognise the economic and social benefits to the region and State from this sector.

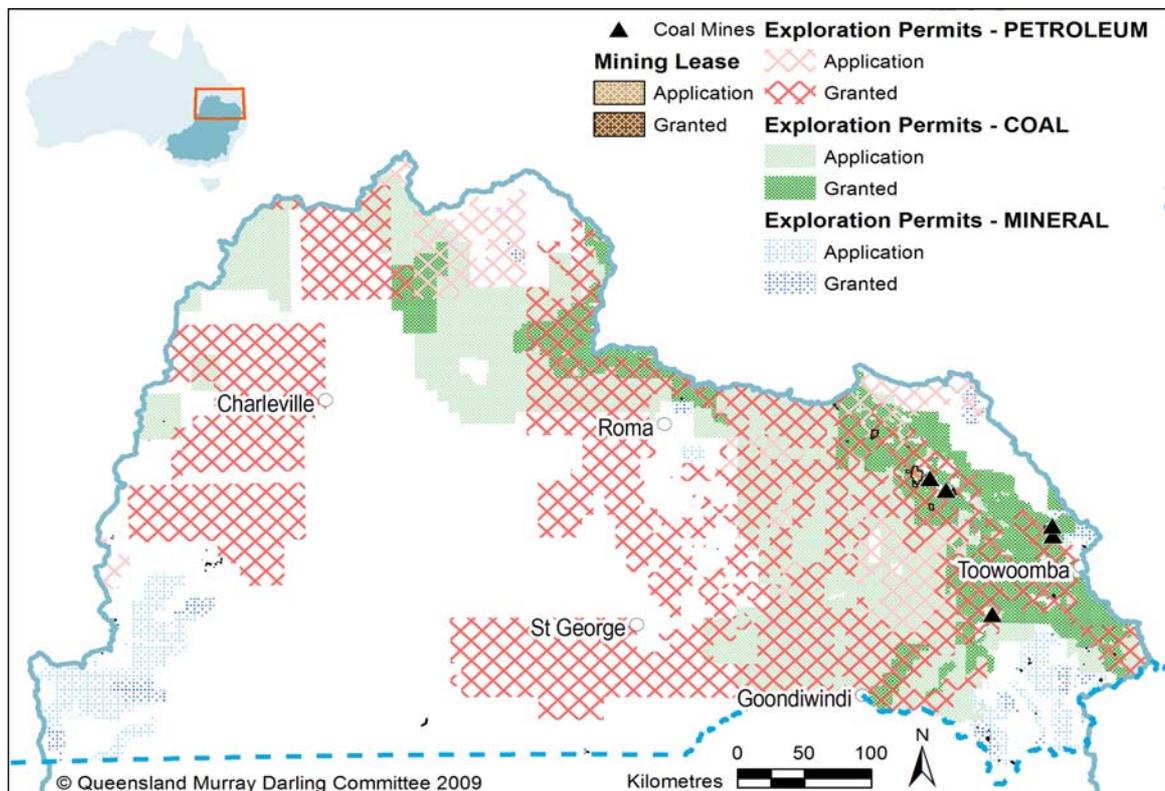


Figure 1. Extent of mining leases and exploration permits at September 2009 in the Queensland Murray-Darling Basin.

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For up to date information visit the IRTM website http://www.dme.qld.gov.au/mines/tenure_maps.cfm Based on or contains data provided by the State of Queensland Department of Employment, Economic Development and Innovation) 2009 which gives no warranty in relation to the data (including accuracy, reliability, completeness or suitability) and accepts no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of the data.



Policy context

Overall the Queensland Murray-Darling Committee, and organisations supporting this policy, is not averse to mining and energy industry activity if the issues identified below can be effectively managed, mitigated or preferably avoided.

The region's Natural Resource Management (NRM) Plans, approved by State and Australian Governments (Joint Steering Committee), document the key natural resource assets and values of the region and targets for their management. The potential risk to these assets from the mining and energy industry activities is the foundation for the policy context.

The issues below have been identified as key risks to natural resource assets from mining and energy industry activity.

Biodiversity: decline in vegetation extent through clearing and the loss of habitat through the fragmentation of remnant vegetation.

Water Quality: pollution/sedimentation of waterways (rivers, creeks and wetlands) from erosion of mine sites and spoil heaps; and leakages and possible overtopping of storage ponds.

Riverine/Wetlands: the modification of river and floodplains flows caused by creek and river diversions and floodplain levy banks diverting flows. This leads to erosion of floodplains and creek banks, and slumping as well as diminished connectivity between river channels and off-stream wetlands.

Salinity: waste water with high salt content has the potential to be used (e.g. irrigation) or leak causing damage to farming land and creeks, rivers and wetlands.

Land Use: mining that utilises areas of good quality soil (agricultural land) that are not able to be rehabilitated will mean productive farming land is lost forever.

Weeds: weed seed spread from machinery and other vehicles.

This detailed policy position and framework for the Queensland Murray-Darling Basin was developed by the QMDC Executive Committee to respond to existing and emerging issues relating to impacts on natural resources from mining and energy industry activities.



Policy framework

The policy has been developed against a consistent framework for each of the key asset areas within the Regional NRM Plans. This framework is set out below.

Key Asset Area

Prevention

Regional impact

1. Prevent adverse impacts to the extent, value and function of the asset across the Queensland Murray-Darling Basin.



2. Manage the cumulative impact of individual site activities on the extent, value and function of the asset across the Queensland Murray-Darling Basin.



Individual site impact

3. Prevent the direct impact of individual site activities on the asset.



4. Prevent the indirect or off-site impact of individual site activities on the asset.



5. Where impacts of individual site activities cannot be prevented they are:



a. Not permitted where the impact is not acceptable, includes enforcing existing legislation where it adequately protects the asset.



b. Within determined threshold limits for the asset, defining the point at which the impact is no longer acceptable.

Minimisation



c. Minimised through appropriate planning, design and execution.

Mitigation



d. Offset – to be clearly defined and appropriate.



e. Actively managed.



f. Rehabilitated – to be clearly defined and appropriate.

Principles and logic underpinning the policy

The development and application of the policy framework, the policies and future implementation strategies is underpinned by a number of guiding principles. These principles aim to apply a consistent and transparent approach within the policy framework. The principles are outlined and described in Appendix 3.

A logic model also informs the policy framework by helping to understand the cause/effect relationships between mining and energy industry activities and the short and long term goals for the region's natural resource assets. This is outlined in Appendix 4.



Vegetation and Biodiversity

The Regional NRM Plans form the baseline of vegetation and biodiversity assets in the Queensland Murray-Darling Basin. A summary of the target intentions are listed below.

- *Priority landscape scale ecosystems are maintained or improved.*
- *Natural assets including native vegetation are managed or conserved to maintain ecological processes and ecosystem linkages, and increased in extent and abundance at priority catchment scales.*
- *Increase in area of sustainably managed native vegetation for landscape and biodiversity outcomes through traditional and innovative economic uses.*
- *Areas of identified high nature conservation significance are maintained in current condition and improved against the Common Nature Conservation Classification System.*
- *Decline in populations of 'at risk' flora and fauna species are halted.*
- *The biodiversity condition and ecological health of native vegetation in priority catchments are maintained or improved.*

Policy

VB 1. Prevent adverse impacts from mining and energy industry activities on landscape functions of native vegetation coverage, ecosystem linkages, ecological processes and biodiversity condition in the Queensland Murray-Darling Basin.

VB 2. Manage the cumulative impact across the Queensland Murray-Darling Basin to vegetation and biodiversity assets from individual site activities by:

- a. Appropriate planning and design at a local and landscape level, including negotiations with landholders, to avoid unnecessary clearing causing fragmentation or loss of habitat.
- b. Requirement to offset using native vegetation within the local area to cause no cumulative impact (or net loss) in the Queensland Murray-Darling Basin.

VB 3. Prevent individual site impacts from mining and energy industry activities by:

- a. Not permitting clearing of Regional Ecosystems mapped as 'Endangered' or 'Of Concern' protected under the *Vegetation Management Act 1999*, or listed ecological communities under the *Environmental Protection and Biodiversity Conservation Act 1999*.
- b. Avoiding areas covered by voluntary Conservation Agreements or covenants.



c. Requiring rehabilitation to at least the site's pre-mining condition (including former value and extent), with native (endemic) vegetation. A rehabilitation plan must be established in a timely manner and state clear and acceptable short term and long term goals and plans, and include financial security.

VB 4. The establishment of endemic vegetation and enhancement of biodiversity values are considered for the reclamation of land (recovery of waste land), or for plantation or agroforestry ventures, or offset requirements, where it is appropriate and adds value to landscape and ecological functioning.

- a. Vegetation plantings or offset regeneration must not impact on:
- existing land use, such as primary production, where it may cause local or cumulative impacts to the industry
 - soil, surface or groundwater assets through the use of saline or excessive irrigation water.



Riverine, Floodplains and Wetlands

The Regional NRM Plans form the baseline assets in the Queensland Murray-Darling Basin. A summary of the target intentions are listed below.

- *Priority riverine, aquatic, wetland, floodplain and riparian ecosystems are maintained or improved relative to baseline conditions.*
- *Flow regimes for health of wetland organisms are maintained or improved against baseline conditions.*
- *Balance ensured between ecosystem health and water use by achieving priority water quality objectives.*
- *The following key water quality indicators remain below baseline levels within specified conditions:*
 - *salinity concentrations at end of valley locations*
 - *total suspended sediment loads*
 - *pesticide concentrations*
 - *nutrient concentrations.*

Policy

RFW 1. Prevent adverse impacts from mining and energy industry activities to the riverine, aquatic, wetland, floodplain and riparian assets and function in the Queensland Murray-Darling Basin.

RFW 2. Manage the cumulative impact across the Queensland Murray-Darling Basin to riverine, aquatic, wetland, floodplain and riparian assets from individual site activities by:

- a. Appropriate planning and design of activities at the landscape and local level to identify and adequately protect all waterways, floodplain functioning and wetlands, considering values and function, taking into account:
 - in-stream flow regimes
 - surface water flow systems (including potential contaminants such as salt, erosion, groundwater interface, barriers to movement of flow and in-stream species risks)
 - groundwater flow systems
 - riparian function (ground cover, bank stability, habitat, connectivity)
 - wetland and floodplain function.
- b. Restricting activities within water quality baseline indicators to be set appropriate to sub-catchment levels, and local and regional threshold limits (when determined).



RFW 3. Prevent direct and indirect adverse impacts from mining and energy industry activities by:

- a. Excluding mining and energy industry activities from within a defined buffer zone for waterways appropriate to Stream Order and defined buffer zones upstream from and including wetlands.
- b. Ensuring adequate legislative protection for Ramsar listed wetlands.
- c. Not permitting diversions of number 4, 5, 6, and 7 Stream Order waterways.
- d. Not permitting and actively preventing off-site movement of soil, salt, contaminants and weeds to riverine, aquatic, wetland, floodplain and riparian areas, either directly or through landscape processes.
- e. No adverse impact to surface water flow systems within the floodplains including interaction with groundwater flow systems.

RFW 4. Minimise direct disturbance to riverine, floodplain or wetland environments, or hydrological downstream impacts to established infrastructure from mining and energy industry activities by:

- a. Appropriate planning and design for Stream Order waterways 1, 2 and 3, considering values and function and taking into account:
 - in-stream flow regimes
 - surface water flow systems (including potential contaminants such as salt, erosion, groundwater interface, barriers to movement of flow and in-stream species risks)
 - groundwater flow systems
 - riparian function (ground cover, bank stability, habitat, connectivity)
 - wetland and floodplain function.
- b. Requiring rehabilitation of the site at least to its pre-mining condition (including former value and function).



Associated Water

The Regional NRM Plans form the baseline of surface water and groundwater and associated flow systems assets in the Queensland Murray-Darling Basin. A summary of the target intentions are listed below.

- *Water assets are sustainably managed in a conjunctive manner to include:*
 - *Water use efficiency measures for high water use industries/sectors.*
 - *Stabilise groundwater levels for high priority sub artesian groundwater systems and reduce decline in pressure in the Great Artesian Basin.*
 - *Achieve trading rules in accordance with water allocation security objectives as defined by the final Condamine Balonne, Border Rivers and Moonie Water Resource Plans.*
 - *Achieve ecological outcomes, in accordance with Environmental Flow Objectives as specified in the Condamine Balonne, Border Rivers, Moonie and Warrego, Paroo, Bulloo and Nebine Water Resource Plans.*

Policy

AW 1. Prevent adverse impacts from mining and energy industry activities on the surface and groundwater flow system assets and function in the Queensland Murray-Darling Basin.

AW 2. Manage the cumulative impact across the Queensland Murray-Darling Basin to surface and groundwater flow system assets from individual site activities by:

- a. Appropriate planning and design at a local and landscape level to manage changed surface flow regimes under varying circumstances and reduce impact to local and downstream natural and built assets.
- b. Restricting activities impacting on water quantity, quality and pressure, with baseline indicators to be set appropriate to local and regional threshold limits (when determined).
- c. Requiring all water to be accounted for and subject to Water Resource Planning and associated legislation regulating changes to and allocation of overland flow, surface water and groundwater flow systems.

AW 3. Prevent and minimise adverse impacts caused by direct disturbance to surface water flow systems by:

- a. Not permitting activities on floodplains within established buffer zones.
- b. Enforcing the Floodplain Management Infrastructure Guidelines.



- c. Compliance with existing legislation applicable to surface water, including enforcement of the Water Resource Planning guidelines for the appropriate catchment.
- d. Subjecting associated water and its use to Water Resource Plans and associated legislation regulating changes to overland flow and surface water flow systems.
- e. Requiring rehabilitation of the site at least to its pre-mining condition (including former value and function).

AW 4. Prevent adverse impacts caused by direct disturbance to, or extraction from, groundwater flow systems by:

- a. Not permitting activities where the impacts are not known or understood.
- b. Not intermingling groundwater flow systems.
- c. Not permitting activities where there are known impacts to stock and domestic or irrigation supplies.
- d. Not permitting activities that may, or will cause an impact to the groundwater quality, quantity and pressures in the Great Artesian Basin.

AW 5. Re-injection of associated water into aquifers by the mining and energy industry is not supported due to:

- a. Lack of evidence, scientific data and experience regionally to have certainty there will be no impact to receiving or other connected aquifers.
- b. Lack of agreed definition of a 'safe' aquifer for re-injection disposal.
- c. Lack of independent monitoring and assessments of this practice.
- d. Potential for impact to the Great Artesian Basin.

AW 6. Where mining and energy industries make associated water available for 'beneficial use', the water must be:

- a. Subject to risk assessments based on the immediate, future or cumulative impact which may result from its use, taking into account potential contaminants including salt, surface and groundwater interaction, changes to overland flow, and new and existing infrastructure.
- b. Subject to existing legislation, including the *Water Act 2000* and Water Resource Plans for the relevant catchment and associated Land and Water Management Plans, including mining or energy company owned land.



AW 7. Associated water (including by-products such as brine) must be:

- a. Subject to Water Resource Plan guidelines for the appropriate catchment.
- b. Subject to Water Resource Plans and associated legislation regulating changes to overland flow and surface water flow systems.
- c. Aggregated only where risk and safety measures are appropriate for the volume of water and storage location within the landscape.
- d. Disposed of in a manner whereby 'disposal' is defined against specific criteria and limitations that mitigates the risk and safety issues associated with the storage, transport, destination, and cumulative and long term impacts of such volumes of water.
- e. 'Disposed' of within natural systems where it does not impact on the ecological functioning of that system and is subject to other policies within this document, including cumulative impact to that system.
- f. 'Disposed' of into a natural system only when the water quality parameters are within locally established guidelines or historical baseline, as per other policies within this document, including cumulative impact to the system.

AW 8. By-products from associated water treatment processes, including brine, must be:

- a. Removed from the landscape and managed within a controlled and safe environment, with disposal sites registered with the Environmental Protection Agency.
- b. Not permitted to be covered or buried in situ in the landscape from or within evaporation ponds or storage ponds, regardless of whether the pond has clay or impermeable lining.



Land and Soils

Regional NRM Plans form the baseline of land and soil assets in the Queensland Murray-Darling Basin. A summary of the target intentions are listed below.

- *Land is managed in a sustainable manner and sufficient land is available to meet high value community and environmental needs.*
- *Salinity impacts on assets are reduced against baseline conditions, and salinity impacts in areas of high salinity hazard are avoided or minimised.*
- *Soil health targets are 'fit for purpose' where soil condition is maintained or improved, and soil degradation impacts have not increased against a baseline.*

Policy Options

LS 1. Prevent adverse impacts from mining and energy industry activities on land and soil assets and function in the Queensland Murray-Darling Basin.

LS 2. Prevent direct impacts from mining and energy industry activities on land and soil assets by:

- a. Not permitting disturbance of soils where the structure or condition is impacted.
- b. Restricting activities by enforcing the *State Planning Policy 1/92 Development and the Conservation of Agricultural Land* for the protection of areas defined as 'Good Quality Agricultural Land', where the ability for primary production on that land is reduced or removed in the short or long term.
- c. Not permitting activities within areas defined as 'Premium Quality Agricultural Land'. Whereby, Premium Quality Agricultural Land is land which is inherently suitable for the sustained long term use for agriculture. This land is suitable for the production of six to eight crops in 10 years with limitations and agricultural risks ranging from none to low. In this context, premium agricultural land is defined as land used exclusively for crop production, excluding plant nurseries based on hydroponics or imported growth media.

The characteristics for Premium Quality Agricultural Land are:

- SPP 1/92 Agricultural Land Class A, A1 or A2
- Myall (*Acacia pendula*) communities (pre clearing extent)
- slope between 0% and 4%
- rainfall of more than 550mm (annual average rainfall) (*to be finalised*)

Attached as Appendix 5 is the draft Premium Quality Agricultural Land map.

Modify the State Planning Policy 1/92 to include this classification.



LS 3. Minimise impacts caused by direct disturbance to soil assets and function by:

- a.** Appropriate planning and design, including identification of low risk areas in the landscape for mining and energy industry development.
- b.** Not permitting activities causing off-site movement of soil, salt and other contaminants and weeds, either directly or through landscape processes.
- c.** Requiring rehabilitation of the site and area of impact, at least to its pre-mining condition (including former value and function). A rehabilitation plan must be established in a timely manner and state clear and acceptable short term and long term goals and plans, and include financial security.



Weeds and Pest Animal

Regional NRM Plans form the baseline of weeds and pest animal threats to assets in the Queensland Murray-Darling Basin. A summary of the target intentions are listed below.

- *The extent and impact of priority terrestrial and aquatic weeds and pests are stabilised and decreasing.*
- *Reduce the incidence of recorded infestations of new weed and pest outbreaks.*

Policy

WP 1. Prevent impacts from mining and energy industry activities caused by the introduction or spread of invasive plants and animals, posing a threat to riverine, floodplain, biodiversity, land and soil, and cultural assets and function in the Queensland Murray-Darling Basin.

WP 2. Prevent the introduction or spread of invasive plants in the Queensland Murray-Darling Basin from mining and energy industry activities by:

- a. Adoption and implementation of an industry Code of Conduct that meets current legislative requirements within the *Land Protect Act (Stock Routes and Pest Management) 1994*, best management practice for weed seed spread prevention, and has adequate compliance for all stages of operations (and operators).
- b. Identification of risk of weed seed introduction or spread at all stages of exploration, production and rehabilitation operations of the mining and energy industries and associated activities.
- c. Preparation and delivery of pest management plans in line with the Code of Conduct, and property, district, local government, regional and state pest management plans to mitigate risk.
- d. Increasing the knowledge and skills of people working in the mining and energy industry, including post mining activities, to identify weeds and potential risks and respond appropriately.

WP 3. Where mining and energy industry activities or persons are responsible for the introduction or spread of invasive plants or animals, they must prevent further spread of the infestation and actively manage with the aim of eradication.

WP 4. Where mining and energy industry activities are conducted within existing invasive plant or animal infestation areas, they must prevent further spread, and work cooperatively with the landholder to actively manage the infestation.



Aboriginal Interests and Cultural Assets

Regional NRM Plans form the baseline of the Aboriginal interests and cultural assets the Queensland Murray-Darling Basin. A summary of the target intentions are listed below.

- *Increase Aboriginal participation in NRM.*
- *Improved knowledge and awareness of Aboriginal interests in NRM.*
- *Maintain and enhance significant cultural heritage sites that result in NRM outcomes.*

Policy

AI 1. Prevent adverse impacts from mining and energy industries to Aboriginal interests and cultural assets in the Queensland Murray-Darling Basin.

AI 2. Enforce existing legislation where it adequately protects and manages objects, sites or areas of Indigenous or cultural value.



Institutional Assets

Regional NRM Plans form the baseline of the institutional assets and community capital in the Queensland Murray-Darling Basin. A summary of the target intentions are listed below.

- *Improved institutional frameworks to engender sustainable natural resource management.*
- *Increase in private sector (non-government) investment and involvement in sustainable natural resource management.*
- *Robust regional bodies demonstrating leadership in sustainable natural resource management processes.*
- *Effective and comprehensive monitoring and evaluation programme in place.*

Policy

IA 1. Prevent adverse impacts to the region's natural resources, community, and economy in the short and long term from mining and energy industry activity by enforcing a rigorous overarching legislative framework for development within the Queensland Murray-Darling Basin.

IA 2. Manage the cumulative impact of mining and energy industry development within the Queensland Murray-Darling Basin by:

- a. Applying rigorous institutional planning mechanisms, such as a Regional Growth Management Strategy, to identify appropriate areas within the landscape, community and economy of the region for mining and energy industry development and activities.
- b. Safeguarding natural resource and community assets and values, and traditional or potential economic opportunities in the region in the short to long term, from short to medium term economic gains.
- c. Notifying local governments and communities of proposed developments in a timely manner. Involving local governments in all stages of planning and providing adequate notification and support to plan for and manage the impact of significant developments and associated developments on the resources and services of the local government and the wider community.
- d. Setting within legislation cumulative upper and lower limits for changes to natural resource asset condition and function in defined zones and timeframes to protect the integrity, health and value of the asset, and productive capacity, of those zones. Exceeding such limits would not be permitted under any circumstance, and would be an offence to do so.



e. Ensuring monitoring requirements and management are consistent (including units of measure), within the defined asset, and across mining and energy industry operations and that they report against site, total and cumulative thresholds.

f. Conducting independent monitoring for **b.** and **c.** to ensure transparency and accountability to the community.

IA 3. A code of conduct for community engagement and disclosure of information is developed addressing:

a. Community expectations for a more enduring and direct role in the planning, decision-making and implementation of natural resource policies and activities as they relate to mining and energy industry impacts.

b. Timely and adequate notification of proposed developments, particularly to local governments and communities where the development and associated developments have the potential to impact on the planning and resourcing of supporting infrastructure, services and land use e.g. industrial and residential zoning, refuse management, sewerage management, roads, infrastructure, services (health, police, schools), airports and emergency services.

c. Engagement that is timely, meaningful and relevant and conducted appropriately for each stakeholder.

d. Consistent signage and direction to all sites for provision of emergency services, e.g. ambulance, fire, police and state emergency service.

e. Public notification and consultation for any proposed changes to Environmental Management Overview Statements from that initially agreed by the State Government, and timely and public disclosure of changes.

f. Timely and public disclosure of monitoring requirements and subsequent results for the condition and trend of natural resource assets including site, total and cumulative impacts as they relate to the mining and energy industry.

g. Landholders notified of all chemicals stored and used on the property. Further contingency planning is needed across industries for risks associated with direct contamination of livestock, food and fibre crops; failure to comply with chemical declaration requirements and withholding periods by landholders; compensation for lost sales; and potential collapse of export industries.



IA 4. Minimise the risk and potential impact to the natural resources, community and economy of the region by:

a. The State Government securing a significant bond or proportion of royalties for implementation of short and long term rehabilitation/remediation plans, safeguarding against risk associated with collapse/abandonment of companies and/or the industry.

b. Considering the loss of rates, and increase of costs to local governments for management of infrastructure, resources and services as a direct result of mining and energy industry development.

c. Be considerate of the unique issues of smaller rural and residential holdings and the compounded impact to communities and natural resource values of the area.

IA 5. A pre-determined percentage of the royalties received from the mining and energy industry is invested in natural resource management within the originating region.



Appendix 1 Consultation Objectives and Response

The Queensland Murray-Darling Committee Executive Committee approved a strategy for the development of this policy in February 2009. A Communication Plan was subsequently developed outlining the consultation process, communication objectives, target audiences and proposed timeframe and consultation methods.

The objective of the consultation was to:

1. To inform the community of the Queensland Murray-Darling Basin of the policy in development and the objectives of the policy.
2. To source a wide range of views from all stakeholders (landholders, rural and regional community members, agriculture and agribusinesses, environment and conservation, State and local government, mining and energy sector, research and science).
3. To secure feedback from organisations and individuals to inform and provide direction for the policy development.

Consultation was conducted over a period of eight months from April to November 2009. The draft policy document was distributed to a wide audience via post and email and was available on the QMDC website at www.qmdc.org.au. The responses received from this consultation process are documented below.

Consultation Response

Date	Type	Organisation	Policy Version	Comments
05/03/09	QMDC Executive Meeting (Toowoomba)	QMDC Executive	Draft 1_090303	Draft for consideration by Executive Committee Amendments.
02/04/09	QMDC Executive Meeting (St George)	QMDC Executive	Draft 1 Members_090403	Draft for consideration by Executive Committee. Release for consultation.
03/04/09	QMDC Members Meeting (St George)	QMDC Members	Draft 1 Members_090403	Members split into 4 groups and reviewed sections of the draft policy. Feedback documented.
15/04/09	State Roundtable NRM Meeting	RGC, QFF, AgForce, OCC, WWF, LGAQ	Draft 1 Consultation_090414	Presentation and outline of policy provided.
29/04/09	Meeting	Kerry Shine, Member for Toowoomba North	Draft 1 Consultation_090414	Presentation and outline of policy provided.
08/05/09	Meeting	South West NRM	Draft 1 Consultation_090414	Presentation and outline of policy provided. Feedback documented. Taking to committee for further consideration.
21/05/09	Meeting	SWNRM Condamine Alliance RGC	Draft 1 Consultation_090414	Outline of policy provided. Agreement to collective approach with further consideration by committees.
20/05/09	Conference Townsville	NRM Showcase Conference	Presentation Mapping and policy development	Presentation and outline of policy development.
03/07/09	QMDC Members Meeting (Moonie)	QMDC Members	Draft 1 Consultation_090414	Members split into 4 groups and reviewed sections of the draft policy. Feedback documented.



Date	Type	Organisation	Policy Version	Comments
28/07/09	Meeting (Tara)	Tara and District Rural Residents and Private Landholders Group	Draft 1 Consultation_090414	Provided outline of presentation and policy. Received documented concerns regarding local issues.
28/07/09	Closed community meeting (Tara)	Tara and District Rural Residents and Private Landholders Group; Queensland Gas Company; Department of Mines & Energy; Environmental Protection Agency		No direct policy consultation. Agenda as requested by Tara and District Rural Residents and Private Landholders Group. QMDC staff (Liz Todd & Alexis Green) attended as observing participants at request of Tara and District Rural Residents and Private Landholders Group.
20/08/09	Surat Basin Conference (Dalby)	QGC QG M&E	Draft 3 Consultation_090819	Distributed policy document. Detailed discussion with QGC. Brief discussions with other gas and coal companies. Discussion with Future Food members.
03/09/09	Meeting CSG Water Futures Taskforce (Dalby)	CSG Water Futures Taskforce	Draft 3 Consultation_090819	Reviewed some of draft. Draft distributed to members.
22/09/09	Email	Western Downs Regional Council	Draft 3 Consultation_090819	Documented feedback.
29/09/09	Meeting Darling Downs Regional Landcare (Oakey)	Darling Downs Landcare Groups	Draft 3 Consultation_090819	Presentation and outline of policy provided.
29/09/09	Senate Inquiry: Impacts mining NRM (Oakey)	Senators	Draft 3 Consultation_090819	Senate Inquiry: Submission based on mapping and draft policy options. Evidence documented in Hansard.
05/10/09	Meeting Local Governments (Miles)	Western Downs Maranoa Balonne Goondiwindi Toowoomba	Draft 3_LG_091005	Presentation and review of draft. Comments inserted track changes.
13/10/09	Meeting Industry (Marque Brisbane)	QCC, WWF, AgForce, RGC	Draft 3 Industry_091013	Presentation and review of draft. Comments inserted track changes.
06/11/09	Meeting Agricultural stakeholders (Dalby)	Local Government, AgForce, Landcare, industry groups	Draft 3 Consultation_091015	Review of definition, mapping and policy on Premium Quality Agricultural Land Recommendations documented in meeting minutes. QMDC_PQAL_Meeting_Dalby_091106
26/11/09	Meeting (Brisbane)	Queensland Resources Council	Draft ConsultationQRC_091124	Discussion and outline of policy. Follow up required.



Appendix 2

Letters of support for policy



Appendix 3

Principles underpinning policy development and implementation

The principles that underpin the development and application of the policy have been drawn from those that guided the development of the Regional NRM Plans for setting targets and management of the region's natural resource assets; and additionally from the consultation process for the development of this policy document. These principles aim to apply an agreed, consistent and transparent approach within the policy framework.

Outline and description of principles

Principle	Description of use in the policy
<i>Managing natural resources</i>	
Prevent adverse impacts on natural resources from occurring	Prevention of adverse impacts to natural resources is the underpinning of a number of other principles. Where an impact can not be prevented it should be minimised; and rehabilitated.
Address causes not symptoms	Identify causes of natural resource degradation and address those causes (where known) as a priority.
Rehabilitate impacts to natural resources	Restoration of disturbed land or natural resource to its pre-mining condition (includes value and function), or an acceptable alternative. Rehabilitation (amelioration) or reclamation (recovery of waste land) goals and plans to be clear and acceptable in the short and long term.
Conservation of natural assets	A fundamental underpinning of the policy is the conservation of the region's natural assets and resources. In particular, those that are in short supply, endangered or threatened. Prevention of impact to high value assets is the highest priority. Criteria needs to be identified to establish value of asset, including those already established.
Sustainable use of natural resources	Recognition of the need for balance between economically viable production and sustainable use of natural resources.
Precautionary principle	The lack of full science certainty should not be used as a reason for postponing a measure to prevent degradation of the environment if there are threats of serious or irreversible environmental damage.
Ecologically sustainable development	The <i>Natural Heritage Trust of Australia Act 1997</i> (subsection 21 3a) states that the principles of ESD consist of the following core objectives: i) to enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations ii) to provide equity within and between generations iii) to protect biological diversity and maintain essential ecological processes and life-support systems.
Identify and protect baseline natural resource assets and their values	The natural resource assets and their values and management targets are set out in the Regional NRM Plans. These Plans are the result of extensive community consultation and endorsement of the State and Australian Governments.
Threshold limits are determined for each asset	A threshold limit defines the point at which an impact is no longer acceptable. Threshold limits need to be identified and set for natural resource assets and determined on a regional (cumulative) and local scale. They reflect the capacity of the asset to withstand certain impacts without irreversible degradation.
Cumulative impacts on natural resources are considered and prevented	A cumulative impact is where individual site impacts across multiple sites over multiple years are considered.



Principle	Description of use in the policy
Institutional frameworks	
Alignment of planning processes	Coalition of existing relevant planning processes, within the region and across jurisdictions including state and local government to achieve desired community outcomes.
Consistency with other policies and legislation	Referenced where appropriate and reflected in policies.
Existing legislation is applied where it adequately protects the natural resource assets	Existing legislation in most circumstances protects natural resource assets. Policies therefore address cases where an exemption to such legislation applies, or is inadequate, and unacceptable degradation to a natural asset is likely.
Continuous development and improvement of policies	The policy development and implementation process is iterative with monitoring and evaluation element feeding back into the ongoing planning and policy. New and updated information will contribute to the improvement of successive policies.
Best available science	Planning for sustainable use of natural resources requires access to and understanding of many scientific and technical issues and approaches. The development and implementation of the policy is based on best available science at the time and will continue to be the case through iterative versions of the policy.
Risk management approach to policy and protection of assets	Policies are developed based on a risk management approach, or potential threat based on certain activities.
Public consultation and disclosure of information	The timely and appropriate disclosure of information, including monitoring data is expected by the public. The community expects to be consulted on changes or decisions currently made outside of the public arena where significant changes to intent are imminent.
Activities are carried out in a responsible manner	Mining and energy industry activity is expected to be carried out in a wider socially and environmentally acceptable/responsible manner.
Safe guard against the collapse of industries/companies and subsequent responsibilities	The issuing of a license needs to stipulate a guarantee for rehabilitation and ensure safeguarding against collapse of industries/companies and subsequent responsibilities identified.
Consultation process	
Community based process	The consultation process allows for the community to express its directions for natural resource management on the basis of local knowledge as well as scientific and technical rigour.
Effective and continual engagement of stakeholders	Provide the opportunity for the engagement of stakeholders and for people and organisations to have input in the development of the policy, and ongoing implementation and review of the policy.
Capacity building to ensure quality of ongoing process	The capacity of Regional Bodies and other stakeholders is recognised as vital to the ongoing development and implementation of the policy.
Objectivity and transparency	The policy has been developed in an objective and transparent manner with all people having the opportunity to provide input into the process. Receiving, analysing and responding to that feedback is done in a way that is open to scrutiny.



Appendix 4

Program logic

Program logic is a method of clarifying the rationale behind the policy options at the strategic and operational levels. The purpose is to understand the cause-and-effect relationships between mining and energy industry activities, intermediate outcomes and ultimate goals.

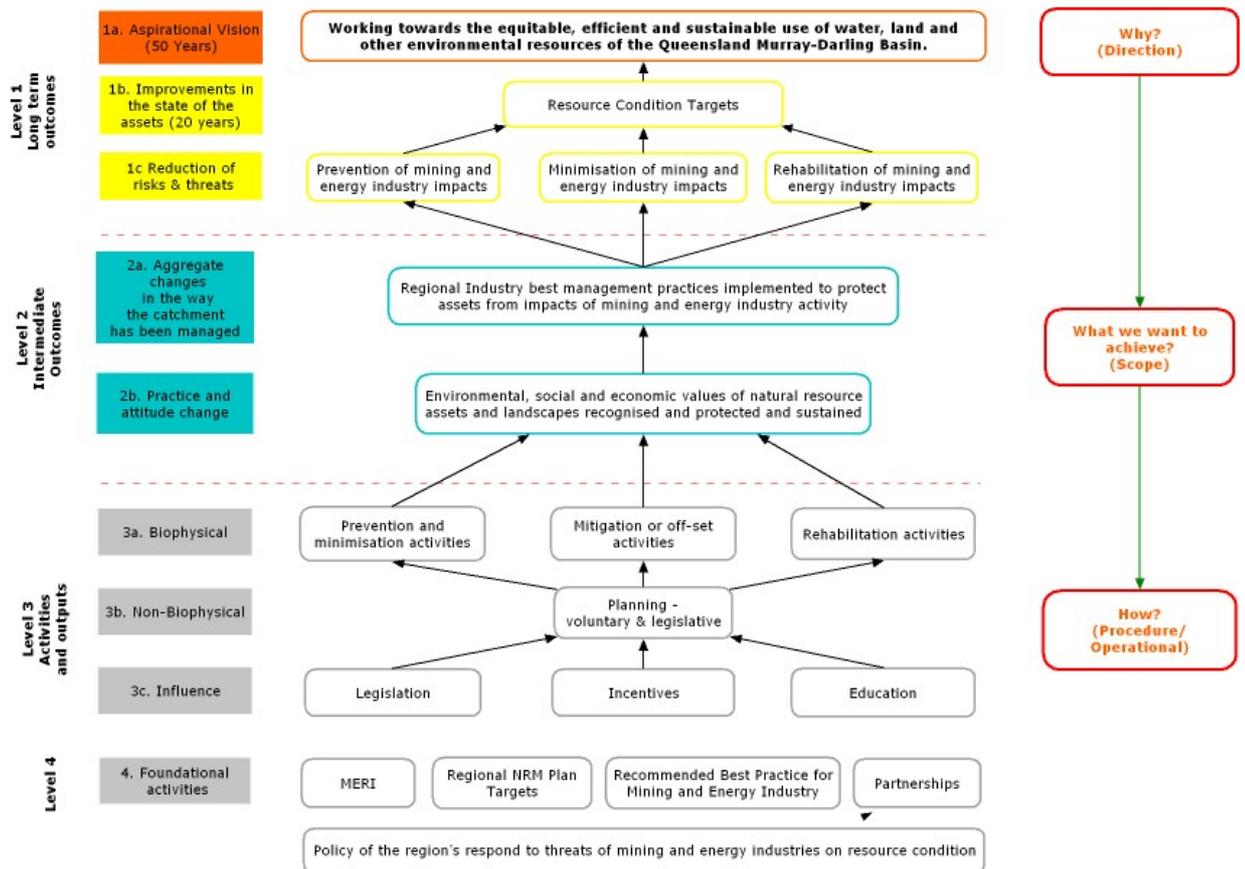


Figure 2. Program Logic for responding to impacts of mining and energy industry on natural resource condition in the Queensland Murray-Darling Basin.



Appendix 5
Premium Quality Agricultural Land



Acronyms and definitions

Associated water referred to in State legislation is the water that reaches the surface as a result of Coal Seam Gas being liberated by reducing the hydrostatic pressure in coal seams by dewatering. The term 'associated water' may also be used to refer to water produced from other petroleum activities. <http://www.dip.qld.gov.au/resources/report/coal-seam-gas-water-discussion-paper.pdf>

Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular timeframe. While impacts can be differentiated by direct, indirect, and cumulative, the concept of cumulative impacts takes into account all disturbances since cumulative impacts result in the compounding of the effects of all actions over time. Thus the cumulative impacts of an action can be viewed as the total effects on a resource, ecosystem, or human community of that action and all other activities affecting that resource no matter what entity is taking the actions.

Energy industry is a generic term for all of the industries involved the production and sale of energy, including fuel extraction, manufacturing, refining and distribution. In particular, the energy industry comprises:

- the petroleum industry, including oil companies, petroleum refiners, fuel transport and end-user sales at gas stations
- the gas industry, including natural gas extraction, and coal gas manufacture, as well as distribution and sales
- the electrical power industry, including electricity generation, electric power distribution and sales
- the coal industry
- the nuclear power industry
- the renewable energy industry, comprising alternative energy and sustainable energy companies, including those involved in hydroelectric power, wind power, and solar power generation, and the manufacture, distribution and sale of alternative fuels.

Individual site impacts include clearing of native vegetation (causing loss of habitat extent and connectivity, and habitat), weed incursions, pest animal presence, and disturbance to wildlife (noise, dust, traffic, displacement).

Mining is the extraction of valuable minerals or other geological materials from the earth, usually from an ore body, vein or (coal) seam. Materials recovered by mining include base metals, precious metals, iron, uranium, coal, diamonds, limestone, oil shale, rock salt and potash.

Native vegetation means plants that are indigenous to the QMDB, including trees, shrubs, herbs and grasses. Endemic refers to plant material (seeds, seedlings) sourced from the same bio-province of the original cleared vegetation. Province is as defined in Sattler and Williams (1999).

NRM natural resource management



Offset (native vegetation) is any works or other actions to make reparation for the loss of native vegetation arising from the removal of native vegetation. Its purpose is for the protection, enhancement or regeneration of native vegetation leading to no net loss, or a net gain of native vegetation in the Queensland Murray-Darling Basin.

An offset may be:

- an area of non remnant vegetation that is protected and managed
- an area that is revegetated and protected
- an area that is set aside for regeneration or restoration, or
- any combination of the above.

An offset may involve undertaking works or making a payment for certain works to be provided. In either case, an offset should:

- achieve a gain in the quality and quantity of native vegetation commensurate with the native vegetation lost, and
- be secure and ongoing.

QMDB Queensland Murray-Darling Basin

Ramsar is the Convention on Wetlands of International Importance. It is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. www.ramsar.org

Re-established (native vegetation) is the provision for replanting of native species, of those that are indigenous to the area, to replace native vegetation lost on the site during the life of the mining and energy industry activities.

If an area of intact remnant vegetation is to be removed or destroyed:

- it is replaced with at least an equivalent area of planting using native vegetation (trees, shrubs and grasses) that are indigenous to the area and that are appropriate to the site, to reinforce or restore existing environmental values on the land or within the general area surrounding it
- measures such as fencing and weed control programs are taken to ensure the long term protection and enhancement of other intact remnant vegetation on the land or within the general area surrounding it.

Stream Order is a numerical ordering classification of each watercourse segment according to its position within a catchment, as shown in the Figure below (page 28). When two streams of the same order join, the resulting watercourse becomes one stream order larger. If two streams of a different order join, the resultant stream order is that of the larger stream.

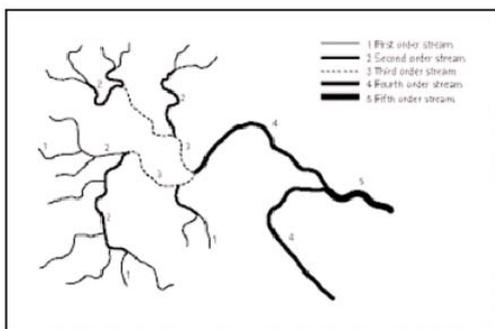


Figure 1 Stream ordering

Digital drainage data exists over most of Queensland and has been derived from relief and/or elevation mapping. Digital drainage data can be used to derive stream order classification. For the Murray-Darling Basin, stream order mapping has been produced and managed by DERM.

http://www.derm.qld.gov.au/land/management/lwmp/pdf/mackay_whitsun_info_kit_1.pdf

Local water quality guidelines Queensland Water Quality Guidelines 2009 are technical guidelines for the protection of aquatic ecosystems. They complement the National Water Quality Management Strategy (NWQMS) including the Australian water quality guidelines (AWQG) by delivering guidelines that include locally and regionally relevant water quality data for fresh, estuarine and marine waters.