



APPENDIX Q10

## **Social indicators**



## Q10 SOCIAL INDICATORS

This appendix provides further information on indicators that could be used to monitor and track impacts and benefits on the social environment as a result of the proposed Olympic Dam expansion. This information provides further detail to support Chapter 19, Social Environment, of the Draft EIS and provides a framework for the future development of a Social Management Plan (to be established and implemented collaboratively by BHP Billiton, the State Government and the local community).

### Q10.1 APPROACH

The approach to undertaking this study involved:

- a review of social indicators used by other mining companies, international authorities, government agencies or local and regional authorities
- a workshop and consultation with project stakeholders to identify and rank the possible social indicators for use in monitoring the impacts and benefits of the proposed expansion
- defining a set of criteria that could be used to select and refine possible social indicators
- identifying possible sources of data for indicators.

Key criteria that might be used to select and refine indicators (based on the SMART test: Department of Natural Resources and Water 2007) are:

- simple – easy to interpret, monitor and understand by the community and others who need to act
- measurable, quantifiable and reliable
- accessible – based on accessible and consistent information that is available over time
- relevant – the geographic area is relevant to the purpose for which it is intended: it measures what people need to know and can be acted on by the community, government or private sector
- timely – responds to changes in social conditions and alerts people to action that is required.

In selecting indicators, the Centre for Social Responsibility in Mining (2005) and others have also noted the importance of:

- focusing on tracking key impacts, taking account of those areas of greatest interest and concern to the community and external stakeholders
- using multiple rather than single indicators
- using qualitative and quantitative measures
- engaging with stakeholders in defining the monitoring and performance measures and in quantifying, reviewing and reporting on results.

Implicit in the use of indicators is the need to report on changes in baseline conditions over time and, or in comparison to, other areas (such as state or regional averages).

### Q10.2 PURPOSE OF USING SOCIAL INDICATORS

The purpose of establishing a set of social indicators for inclusion in the Social Management Plan would be to identify and quantify both positive and negative impacts to:

- monitor and assess changes in baseline social conditions
- measure progress towards a desired outcome
- build on positive effects
- provide early warning of unanticipated or emerging issues
- identify and measure issues that may have flow-on effects, or result in wider social impacts
- provide a trigger for additional mitigation measures to address emerging issues, reduce adverse impacts and maximise social benefits.

To achieve these multiple purposes, both 'lead' and 'lag' indicators may be required. Lead indicators can provide information on changes in social conditions at an early stage, and offer an opportunity to respond or intervene before changes occur or become unacceptable. Lag indicators can be used to monitor and report on impacts and outcomes, both positive and negative, over time.

### Q10.3 SUMMARY OF SOCIAL INDICATORS USED IN OTHER PROJECTS

Table Q10.1 summarises a range of social indicators that have been used in other reports and projects of potential relevance to the proposed expansion and, in particular, indicators used to assess changes in the social environment and in creating socially sustainable communities.

Table Q10.1 Social indicators and sources

Indicator	Commission on Sustainable Development (i)	SA's Strategic Plan (ii)	State of the Outback (iii)	Port Augusta Regional Service Centre Report (iv)	Centre for Social Responsibility in Mining (v)	Australian Department of Families and Community Services (vi)	Wood Buffalo Region, Canada (vii)	Onkaparinga Council (SA) (viii)	Other
<b>Population</b>									
Distribution and demography			√	√		√	√	√	√ (xvii)
Population change	√	√	√		√	√	√	√	√ (xvii)
Household types						√		√	
Ethnicity						√		√	
Migration		√	√	√			√		√ (xi)
<b>Equity</b>									
Income and distribution	√	√	√	√		√		√	√ (xi, x, xviii, xiv )
Poverty and disadvantage	√		√	√		√			√ (xvii, xviii, xiv)
Income support/social assistance		√	√			√		√	√ (xi)
Indigenous <sup>1</sup> well-being		√				√			√ (xviii)
Gender	√	√				√			
<b>Employment and training</b>									
Labour force participation		√	√		√	√		√	(xi)
Employment by: - rate - industry - residence - age, sex and minority group status		√	√	√	√	√			√ (ix, xi, xviii, xiv, xv)
Unemployment by: - rate - industry - residence - age, sex and minority group status	√	√	√	√				√	√ (xi, x, xviii)
Training					√	√		√	√ (xviii, xv)
<b>Social, cultural and community services</b>									
Awareness, access/availability, utilisation and satisfaction			√	√		√		√	√ (xvi, xviii, xiv)

Table Q10.1 Social indicators and sources (cont'd)

Indicator	Commission on Sustainable Development (i)	SA's Strategic Plan (ii)	State of the Outback (iii)	Port Augusta Regional Service Centre Report (iv)	Centre for Social Responsibility in Mining (v)	Australian Department of Families and Community Services (vi)	Wood Buffalo Region, Canada (vii)	Onkaparinga Council (SA) (viii)	Other
Cultural and recreational		√				√	√	√	√ (xiii, xiv, xviii)
Expenditure					√	√			√ (xiv, xv)
Communications			√			√		√	
<b>Health and well-being</b>									
Services and access	√			√	√		√		√ (xiii, xiv, xvi, xvii, xviii)
Life expectancy	√	√	√			√			√ (xviii)
Mortality						√		√	
Morbidity		√				√		√	√ (xi, xiii, xiv)
Infant and childhood health	√	√	√						√ (xi, xiii, xiv, xvii, xviii)
Family planning	√	√							√ (xi, xiii, xiv)
Accident and emergency							√		√ (xi, xiv)
Mental health		√	√						√ (xi, xiii, xvi, xviii)
Lifestyle:	√	√	√			√		√	√ (xiv, xvi, xviii)
- smoking and alcohol									
- drug use									
- physical activity									
- weight									
<b>Education</b>									
Adult education, literacy and qualifications	√	√		√				√	√ (xiv, xviii)
Higher/vocational education		√	√			√	√	√	√ (xi, xiv, xviii)
School education:	√	√	√	√		√			√ (xiii, xiv, xvi, xvii, xviii)
- participation and achievement									
- literacy and numeracy									
- minority group status									
Staffing									√ (xiv)
Financial support					√				
<b>Housing</b>									
Supply/vacancies					√		√		√ (xviii)
Housing price and affordability		√	√	√		√	√	√	√ (xii, xiv, xvii, xviii)

Table Q10.1 Social indicators and sources (cont'd)

Indicator	Commission on Sustainable Development (i)	SA's Strategic Plan (ii)	State of the Outback (iii)	Port Augusta Regional Service Centre Report (iv)	Centre for Social Responsibility in Mining (v)	Australian Department of Families and Community Services (vi)	Wood Buffalo Region, Canada (vii)	Onkaparinga Council (SA) (viii)	Other
Condition, quality and size	√	√				√			√ (ix, xi)
Other:		√	√	√				√	√ (xiv)
- tenure and dwelling type									
- property values									
- special need									
- visitor accommodation									
<b>Public safety</b>									
Crime:	√	√	√			√	√	√	√ (xiii, xiv, xi, x, xvi, xvii, xviii)
- rates and type									
- victims									
- perceptions									
- family violence									
Road accidents		√	√			√	√		√ (xiv)
<b>Community cohesion and engagement</b>									
Voting participation		√	√			√	√	√	√ (xiii, xiv, xvii, xviii, xiv)
Governance									√ (xiv, xviii)
Participation:		√			√	√		√	√ (x, xiv, xvii, xviii)
- community activities									
- leadership/ decision making									
- minority groups									
- barriers									
Support, satisfaction and belonging:		√						√	√ (x, xiii, xviii, xiv)
- networks and support									
- acceptance of diversity									
- community pride, identity and optimism									
Volunteering:		√	√		√	√	√		√ (xiv, xvi, xviii, xiv)
- rates									
- issues									
Donations							√		√ (xiv)

Table Q10.1 Social indicators and sources (cont'd)

Indicator	Commission on Sustainable Development (i)	SA's Strategic Plan (ii)	State of the Outback (iii)	Port Augusta Regional Service Centre Report (iv)	Centre for Social Responsibility in Mining (v)	Australian Department of Families and Community Services (vi)	Wood Buffalo Region, Canada (vii)	Onkaparinga Council (SA) (viii)	Other
<b>Heritage</b>									
Cultural awareness		√							
Heritage sites and places						√		√	√ (xviii)
<b>Land use and amenity</b>									
Amenity:		√	√		√		√	√	√ (ix, x, xii, xviii, xiv, xv, xvi)
- public facilities									
- noise, dust, disturbance and pollution									
- public/open space									
- complaints									
- perceptions									
Land use:			√		√			√	√ (xviii)
- landfill/recycling									
- change									
- rehabilitation									
- development approvals									
Building approvals (number and value):				√					√ (xviii)
- residential									
- non-residential									
<b>Workplace</b>									
Equity:		√		√					√ (xv, xviii)
- profile									
- qualification									
- residence									
- income									
- discrimination									
Working conditions:		√			√	√			√ (xv, xvi)
- work-life balance									
- turnover									
- hours of work/shifts									
- satisfaction									
Occupational health and safety		√				√			√ (xv)

Table Q10.1 Social indicators and sources (cont'd)

Indicator	Commission on Sustainable Development (i)	SA's Strategic Plan (ii)	State of the Outback (iii)	Port Augusta Regional Service Centre Report (iv)	Centre for Social Responsibility in Mining (v)	Australian Department of Families and Community Services (vi)	Wood Buffalo Region, Canada (vii)	Onkaparinga Council (SA) (viii)	Other
<b>Transport</b>									
Road/rail and traffic conditions			√						
Transport mode and travel times			√	√				√	√ (x, xiii, xiv, xvii, xviii)
Public transport use and satisfaction							√	√	√ (x, xviii)
<b>Economic</b>									
Investment/business confidence				√	√				√ (xv, xviii)
Job creation					√				√ (xv)
Local and regional business: - number by industry type - activity and growth - gross product / income - turnover		√	√	√	√			√	√ (x, xv, xviii)
Wealth: - material wealth - cost of living									√ (xviii)
Tourism		√	√					√	√ (xviii, xiv)

<sup>1</sup> The term 'Indigenous' is intended to include Aboriginal and Torres Strait Islanders in Australia and other 'first nation' people overseas.

Sources:

- (i) Commission on Sustainable Development 2001, *Indicators of Sustainable Development: Guidelines and Methodologies*, United Nations Division for Sustainable Development.
- (ii) Department of Premier and Cabinet 2007, *South Australia's Strategic Plan*, Government of South Australia, Adelaide.
- (iii) Outback Areas Community Development Trust 2005, *State of the Outback*, Government of South Australia, Adelaide.
- (iv) Collins Anderson Management 2006, *Port Augusta – Regional Services Centre*, Report prepared for the Northern Regional Development Board, South Australia.
- (v) Centre for Social Responsibility in Mining 2005, *A Sourcebook of Community Impact Monitoring Measures for the Australian Coal Mining Industry*, Sustainable Minerals Institute, University of Queensland, Brisbane.
- (vi) Black, A, and Hughes, P 2001, *The identification and analysis of indicators of community strength and outcomes*, Occasional Paper No. 3, A report to the Department of Families and Community Services, Commonwealth of Australia, ACT.
- (vii) Nichols Applied Management, Management and Economic Consultants 2006, *Sustainable Community Indicators: Summary Report*, Revised version, prepared for the Athabasca Regional Issues Working Group, Suncor Energy and the Regional Municipality of Wood Buffalo, Canada.
- (viii) City of Onkaparinga 2000, *Monitoring Outcomes: Achieving Goals*, South Australia.
- (ix) Schaenman, P and Muller T, *Measuring the Impacts of Land Development: An Initial Approach*, The Urban Institute.
- (x) The Australia Institute and Newcastle City Council 2000, *Newcastle Indicators of a Sustainable Community: Improving Quality of Life in Newcastle*, Discussion Paper No 28.
- (xi) Government of the North West Territories 2000, *Communities and Diamonds – Socio-Economic Impacts on the Communities of Lutselke, Rae-Edzo, Rae Lakes, What Ti, Wekweti, Dettah, Ndilo, and Yellowknife: 2000 Annual report of the Government of the North West Territories under the BHP Socio-economic Agreement*, Prepared by the Government of the North West Territories Departments of: Health and Social Services; Education, Culture and Employment; Housing Corporation; Resources, Wildlife and Economic Development and Bureau of Statistics.
- (xii) City of Santa Monica, California, *Sustainable Measures: Indicators of Sustainability*, viewed October 2007, <<http://www.sustainablemeasures.com/Indicators/index.html>>.
- (xiii) Minneapolis City Council, *Minneapolis Sustainability Indicators*, viewed May 2008, <<http://www.ci.minneapolis.mn.us/sustainability/indicators.asp>>.
- (xiv) Jacksonville Community Council 2007, *Florida 2007 Quality of Life Progress Report*, viewed May 2008, <[www.jcci.org/statistics/qualityoflife.aspx](http://www.jcci.org/statistics/qualityoflife.aspx)>.
- (xv) UK Aluminium Industry 2002, *Progress on Sustainability November 2002*, viewed May 2008, <<http://www.pioneersgroup.co.uk/uploads/stored/Alfed%20report.pdf>>.
- (xvi) University of Waterloo Campus Sustainability Assessment Framework, *Overview of Social Equity Indicators*, prepared for Eugene Mayor Piercy's Sustainable Business Initiative, viewed November 2007, <[http://ri.uoregon.edu/publicationspress/SBI\\_Overview\\_Social\\_Equity.pdf](http://ri.uoregon.edu/publicationspress/SBI_Overview_Social_Equity.pdf)>.
- (xvii) Cities Environment Reports on the Internet, *Core Indicators*, viewed November 2007, <<http://ceroi.net/ind/matrix.asp>>.
- (xviii) Victorian Community Indicators Project, 2005, *Sustainable strategies for the development of community wellbeing indicators by Victorian local governments and their communities: Discussion Paper*, Institute for Community Engagement and Policy Alternatives, Victoria University, Melbourne.

#### Q10.4 SOCIAL INDICATORS FRAMEWORK

Table Q10.2 outlines the scope of social indicators that could be used to measure or assess the effects of the proposed expansion in relation to the key impacts and benefits identified in Chapter 19, Social Environment, of the Draft EIS, and the area of likely effect. This table also reflects priorities identified by key project stakeholders. Attachment Q10.1 to this appendix expands on these social indicators and details potential social indicators, their relevance and applicability to the proposed expansion, data sources and other comments on their use.

Table Q10.2 Social indicators framework

Area	Scope of indicators	Area of potential impact or benefit				
		Roxby Downs	Andamooka & Woomera	Northern region	South Australia	Australia
<b>Labour supply and business</b>						
Employment and training	Job creation	√	√	√	√	√
	Workforce recruitment and retention	√	√	√	√	√
	Workforce structure and diversity	√				
	Apprenticeships, training and skills development	√	√	√	√	√
	Labour force participation and unemployment	√	√	√	√	√
Business opportunities	Contribution to local, regional and SA businesses	√	√	√	√	
	Business development	√	√	√	√	√
<b>Crime and safety</b>						
Crime	Crime rates & fear of crime	√	√			
Safety	Drugs and alcohol	√	√			
<b>Housing</b>						
Housing conditions	Housing supply & suitability	√	√	√	√	
	Housing affordability	√	√	√		
<b>Social services and facilities</b>						
Population	Population and demography	√	√	√	√	
Disadvantage	Income distribution and support	√	√	√	√	
Access and availability	Utilisation, demand and capacity	√	√	√		
Health	Access to health services	√	√			
	Health service contacts	√				
Education	Educational participation and attainment	√				
	Access and contribution to education services	√				
<b>Social character, amenity and wellbeing</b>						
Community cohesion and identity	Community attitudes and interactions	√	√			
	Community participation and engagement	√				
	Contribution to the community	√	√	√	√	√
Amenity	Lifestyle and amenity	√	√			
	Community satisfaction	√	√	√		
<b>Access and disturbance</b>						
Transport	Disruptions and delay	√	√	√	√	

## Attachment Q10.1 Potential social indicators and data sources

<b>Suggested or possible measure – Job creation</b>			
Applicability and relevance:			
The net number of new positions and additional jobs created is a direct indicator of economic benefit and can have an impact on the prosperity and sustainability of communities and regions			
Changes in the number of people employed and living locally – including people employed at the mine, in indirect or support roles, and in non-mine activities (for example, services providers, business and retail) – will have an impact on the demand for services			
The opportunity for increased employment is one of the primary advantages of the proposed expansion that has been identified by government and regional communities			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comment</b>
New jobs created	Net number of new jobs created (permanent/long term and temporary/short term) by occupancy and commuter status	Source: BHP Billiton Scale: Olympic Dam Frequency: Quarterly	This measure is commonly reported on by mining companies
<b>Suggested or possible measures – Workforce recruitment and retention</b>			
Applicability and relevance:			
BHP Billiton would be the largest recruiter in the local area, region and the State. Therefore timely information on labour conditions would provide valuable insights for management and the community			
The ability to recruit and retain staff external to the mine operations (i.e. in support industries, such as retail, health, education, transport, etc.) would affect the ability of the local area to be self-sufficient. Without support services, community satisfaction and well-being could decline			
In a competitive labour market, it may be difficult to fill positions and wage levels may rise, particularly in high-demand occupations. Alternative/less-traditional sources of labour may also be targeted			
Labour sourcing and the potential drawdown on the regional workforce as a result of the expansion is a priority issue for regional stakeholders			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Recruitment times – BHP Billiton	Average/median length of time to fill vacancies at Olympic Dam by occupation and area of operation (mining, processing etc.)	Source: BHP Billiton Scale: Olympic Dam Frequency: Quarterly	
Recruitment times – local businesses and service providers	Average/median length of time to fill vacancies in other businesses and organisations by occupation and industry sector	Source: Various Scale: n.a. Frequency: n.a.	Data availability is unknown but a potential source of information may be local economic development boards or a survey of local businesses
Wage differentials	Wage levels/wage increases at Olympic Dam by occupation, age, gender, ethnicity/race and Aboriginal status	Source: BHP Billiton Scale: Olympic Dam Frequency: Quarterly	
Turnover – BHP Billiton	Number of permanent/long-term workers leaving employment at Olympic Dam by occupation, length of service and area of operation (mining, processing, other)	Source: BHP Billiton Scale: Olympic Dam Frequency: Quarterly	Staff could be asked the reason for leaving Olympic Dam operations
Turnover – local businesses and service providers	Number of staff leaving employment by occupation/industry and location	Source: Regional Development Boards, Survey of business and/or employees Scale: Regional Frequency: n.a.	Data availability is unknown but a potential source may be local economic development boards or a survey of local businesses  Staff could be asked the reason for leaving their previous employer

## Attachment Q10.1 Potential social indicators and data sources (cont'd)

<b>Suggested or possible measures – Workforce structure and diversity</b>			
Applicability and relevance: The structure and diversity of the workforce can be an indicator of labour market conditions; equal opportunity policies; workplace conditions; or the state of the labour market, where greater diversity may indicate a tighter labour market			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Workforce diversity	Number of persons employed by BHP Billiton at Olympic Dam by age, gender, ethnicity, Indigenous status, disability, occupation and position/seniority	Source: BHP Billiton Scale: Olympic Dam Frequency: Quarterly Format: Numeric	This provides information for potential support programs  The number of Indigenous employees is commonly reported on by mining companies
<b>Suggested or possible measures – Apprenticeships, training and skills development</b>			
Applicability and relevance: The number of apprentices and trainees would have an impact on the future supply of labour. The number/proportion of people in ongoing training/skills development can also have an impact on retention rates (quality and quantity). Proactive approaches to skills development would provide a competitive advantage			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Apprentices and trainees	Number of apprentices and trainees starting, graduating and finding continuous employment with BHP Billiton by occupation/operational area	Source: BHP Billiton Scale: Olympic Dam Frequency: Annual	The number of apprentices and trainees is commonly reported on by mining companies
Ongoing skills training	Number of programs and participants in training/re-skilling programs with BHP Billiton by occupation/operational area	Source: BHP Billiton Scale: Olympic Dam Frequency: Annual	In combination with other indicators, this can be used for workforce planning
<b>Suggested or possible measures – Labour force participation and unemployment</b>			
Applicability and relevance: The workforce participation rate is a measure of economic and labour force conditions and it can indicate potential labour sources. Flexibility in workplace conditions can also affect workforce participation rates The unemployment rate reflects economic conditions (job availability) and can also indicate social disadvantage, particularly when there are high rates of unemployment within particular population groups			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Labour force participation	Proportion of population over 15 years participating in the workforce (part-time/full-time) by age, gender and Indigenous status	Source: DEWR Scale: Local Government Area Frequency: Quarterly	The ABS also reports on labour force participation, but less frequently
Unemployment	Proportion of unemployed people as a percentage of the workforce	Source: DEWR Scale: Local Government Area Frequency: Quarterly Format: Numeric	The ABS also reports on unemployment, but less frequently
Barriers to employment	Reasons given by people who are not in the workforce for not taking up employment opportunities	Source: Regional Development Boards, Survey Scale: Regional Frequency: n.a.	Data availability is unknown but a potential source may be local economic development boards or a sample survey

## Attachment Q10.1 Potential social indicators and data sources (cont'd)

<b>Suggested or possible measures – Business development</b>			
<p>Applicability and relevance:</p> <p>The value of goods and services supplied to BHP Billiton and its contractors by South Australian companies would provide a direct measure of the benefits from the Olympic Dam expansion to the state's economy. There may also be indirect business activity and opportunities arising from flow-on effects (such as servicing residents and workers, or other complementary services). New business start-ups, the expansion of existing businesses and business diversity provides a direct measure of the health of the economy. Development activity, including development approvals and the take-up of land for industrial and commercial purposes, can also provide an indication of business activity, investor confidence and employment growth</p>			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Development activity	Number of development approvals by type and value	Source: Council Scale: Local Government Area Frequency: Quarterly	
Industrial and commercial land	Take up of appropriately zoned land for industrial and commercial uses	Source: BHP Billiton and PIRSA Scale: Local Government Area Frequency: n.a.	Current legislation requires a three-year review of land supply by councils
Value of goods purchased locally	Dollar value and the percentage of goods and services purchased from local, regional and South Australia companies by BHP Billiton	Source: BHP Billiton Scale: Olympic Dam Frequency: Quarterly	This measure is commonly reported on by mining companies
New business start-up	Net number and proportion of new businesses commenced (less business closures)	Source: ABS Scale: Local Government Area Frequency: Annual Format: Numeric	The ABS business register contains information about new business start-ups Not all new business start-ups would necessarily be related to the expansion
Indigenous business	Dollar value of the percentage of Indigenous businesses supplying goods or services directly to Olympic Dam by industry sector	Source: BHP Billiton Scale: Olympic Dam Frequency: Quarterly	This may need to be reported as part of any land use agreement with traditional owners
<b>Suggested or possible measures – Crime and fear of crime</b>			
<p>Applicability and relevance:</p> <p>Crime rates provide an indication of the level of security for residents, visitors and businesses. Crime can be reported by either a victim or by the police. Victim recorded crime is less influenced by policing practice and specialist operations, and may therefore provide a better indication of changes over time</p> <p>A number of factors can increase the likelihood of offending, including age and gender, alcohol and substance misuse, social and community factors and situational and environmental factors. Fear of crime is also influenced by a combination of demographic, environmental and experiential variables</p> <p>Crime and the fear of crime can have an impact on an individual's quality of life, the attractiveness of an area to workers and their families, community cohesion and business confidence. The demand for social services is also likely to be affected by rising crime rates, with flow-on effects for police and justice agencies, including courts, correctional institutions, legal services, juvenile justice services and services for victims of crime</p> <p>Crime and anti-social behaviour has been raised by local residents as a concern, particularly during the construction period, but also as the residential population increases</p>			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Complaints and callouts to police	Number and type of call-outs and complaints to police	Source: SAPOL Scale: Local Government Area Frequency: Quarterly	

Attachment Q10.1 Potential social indicators and data sources (cont'd)

Crime rates	The number and type of police reported offences and victim reported offences per capita	Source: Office of Crime Statistics and Research, SAPOL Scale: Local Government Area Frequency: Quarterly	There is no single way of measuring the actual prevalence and incidence of crime. Victim reported crime relies on self-reporting, and police detected crime can be affected by policing practice and operations
Perception of crime	Attitudes and perceptions of crime	Source: Periodic survey, stakeholder interviews, other Scale: Roxby Downs, Andamooka, Woomera Frequency: n.a.	The ABS conducts periodic surveys on victim-related crime and fear of crime at the state level, but not by LGA Qualitative research through surveys would be required to assess community views about crime
Drug and alcohol related offences	Number and proportion of drug-related crimes, including number of people apprehended drink/drug driving, number of drug offences, and number of police drug diversions	Source: Office of Crime Statistics and Research, SAPOL Scale: Local Government Area Frequency: Quarterly	Generally relies on police detection

**Suggested or possible measures – Drugs and alcohol**

Applicability and relevance:

Drug and alcohol misuse can be an indicator of a number of factors including stress, job insecurity, long working hours, boredom, isolation, peer pressure, limited family or social supports, or a combination of these

Drug and alcohol misuse can affect health and well-being, road safety, crime and anti-social behaviour, workplace safety and family life

It can also have an impact on the demand for services (including health, police and emergency services) or indicate the need for additional services, such as drug and alcohol-support services, family support and accommodation services

Performance indicator	Metric	Data availability	Comments
Drug and alcohol-related hospital admissions	Number and proportion of drug and alcohol related hospital admissions	Source: SA Department of Health Scale: Local Government Area Frequency: Annual	
Drug testing at Olympic Dam	Number and proportion of people testing positive for alcohol and drugs at Olympic Dam	Source: BHP Billiton Scale: Olympic Dam Frequency: Monthly	
Drug and alcohol support services	Number of contacts with drug and alcohol-related health and community services	Source: SA Department of Health, non-government organisations, community support groups Scale: n.a. Frequency: n.a.	Data is available from individual service providers Issues of confidentiality would need to be addressed

**Suggested or possible measures – Housing supply and suitability**

Applicability and relevance:

The size of the residential population and the number and type of households will affect the demand for housing

Housing costs and suitability, the demand for housing in neighbouring townships (including Andamooka and Woomera) and the proportion of long-distance commuters in the workforce are indirect measures of the adequacy of housing supply. Housing supply and affordability was identified as a priority, particularly by the local and regional community

Housing is a contributor to quality of life and can have an impact on health, work, schooling, family and community life. It can also affect the ability to attract and retain the workforce at Olympic Dam and in support industries and services.

## Attachment Q10.1 Potential social indicators and data sources (cont'd)

Performance indicator	Metric	Data availability	Comments
Vacancy rates	Number of households on waiting lists (BHP Billiton, real estate agents, caravan parks) and median time to move into a house	Source: Various Scale: Local Government Area Frequency: Quarterly	Data is available from individual sources and not collated
Dwelling type and occupancy	Number of houses by number of bedrooms and occupancy	Source: ABS Census Scale: Local Government Area, suburb Frequency: Five-yearly	
Housing suitability	Number of households (with and without children) in alternative accommodation (e.g. caravan parks) by length of residency	Source: ABS, Roxby Downs Council, caravan parks, survey Scale: Local Government Area Frequency: Five-yearly (census)	Information is available from the ABS census, but it will be necessary to supplement this, as information is only available every five years  Supplementary information may be available from caravan park operations and Roxby Downs Council
Long-distance commute workforce	Number and proportion of long-distance commuters in the long-term workforce	Source: BHP Billiton Scale: Olympic Dam Frequency: Quarterly	The census also provides a five-yearly count of people recorded in a location on census night and usual residents
Residential development activity	Number of dwelling approvals by type and value	Source: Council Scale: Local Government Area Frequency: Quarterly	The ABS also documents the number of building approvals (residential and other) by value at LGA level, available annually  Supplementary information may be available from Planning SA in Andamooka and Woomera
Dwelling construction times	Time between dwelling approval and dwelling construction	Source: Council Scale: Local Government Area Frequency: Quarterly	Councils maintain information about dwelling approvals and start-ups
Residential land availability	Amount of vacant residential land	Source: PIRSA Scale: Local Government Area Frequency: n.a.	Current legislation requires a three-year review of land supply by councils. This may be required more regularly in the start-up phase of the expansion
<b>Suggested or possible measures – Housing affordability</b>			
Applicability and relevance:			
The cost of housing (both rental and purchase) is an indirect measure of supply			
Housing affordability may be a particular issue for low to moderate income households, or other critical population groups, including women and young people			
This indicator is relevant to Andamooka and Woomera, as well as Roxby Downs, if workers and their families choose to live in these townships because of unmet demand or high housing costs in Roxby Downs			
Housing affordability has been raised as a priority in consultation with residents of Roxby Downs and other residents and stakeholders in the region			
Performance indicator	Metric	Data availability	Comments
Rent assistance	Number of people receiving rent assistance by age and gender, as a percentage of all renters	Source: Centrelink Scale: Postcode Frequency: Monthly	

Attachment Q10.1 Potential social indicators and data sources (cont'd)

Residential rents	Median residential rents for new residential bonds lodged, and per cent increase	Source: Housing SA Scale: Suburb, postcode or LGA Frequency: Quarterly	Data is available for houses and flats by number of bedrooms  Bonds on rental housing may not be lodged in townships such as Andamooka
Residential sale price	Median sales price of residential properties and per cent increase	Source: Valuation Services SA Scale: Suburb, postcode or LGA Frequency: Annual	Data is available for housing and units
Residential property values	Median residential property value and per cent increase	Source: Valuation Services SA Scale: Suburb, postcode or LGA Frequency: Annual	Data is available for housing and units
Affordability for key public sector workers	House price to earnings ratio	Source: BankWest Scale: LGA Frequency: Annual	Key Workers Housing Affordability Report published by BankWest in 2008, ranks local government areas across Australia on a house price to earnings ratio for key public sector workers (i.e. nurses, teachers, police officers, fire-fighters and ambulance officers)
Affordability for low and moderate income households	Per cent of low and moderate income households paying greater than 30% of their income on housing costs	Source: ABS Census Scale: LGA Frequency: Five-yearly	Measure is based on definitions used by Housing SA Data is available relatively infrequently
Building costs	Average cost of building a house by location	Source: Council Scale: Local Government Area, suburb Frequency: Quarterly	Council maintains data on housing approvals and their estimated value, however, not all approvals translate into construction and the estimates may not reflect actual costs

**Suggested or possible measures – Population and demography**

Applicability and relevance:

The number of residents and their characteristics (such as age, gender, income, household type, ethnicity and English proficiency) will affect the demand for services and facilities, including housing, schools, childcare, health services, and recreation and sporting facilities. Different occupations and/or commuter status (i.e. residential or long-distance commute) can also affect the level and type of service demand

Planning for services will need to take account of population growth in Roxby Downs, Andamooka and Woomera; the size of the short-term construction workforce and long-term operational workforce; the number of overseas workers; and the characteristics of these population groups and changes over time

The provision of social services and facilities has been identified as a priority for residents in Roxby Downs, Andamooka and Woomera

Performance indicator	Metric	Data availability	Comments
Population size	Estimated residential population by age and sex	Source: ABS Scale: Local Government Area Frequency: Annual	The estimated residential population can lag actual population, and supplementary information may therefore be required  Additional analysis will be required to draw conclusions about the demand for services  This data is only available at the small area level through the census (every five years)

## Attachment Q10.1 Potential social indicators and data sources (cont'd)

Socio-demographic and economic profile	Number and proportion of the population by Indigenous status, ethnicity, place, English proficiency, income, occupation	Source: ABS Census Scale: Suburb, Local Government Area Frequency: Five-yearly	Additional analysis of data is required to draw conclusions about the demand for services
Long-distance commuters	Number and proportion of long-term and short-term workers at Olympic Dam who are residentially-based or long-term commuters	Source: BHP Billiton Scale: Olympic Dam Frequency: Quarterly	
<b>Suggested or possible measures – Income distribution and support</b>			
Applicability and relevance: Income is an indicator of living standards, including the ability to purchase goods and services and achieve a basic quality of life With increases in community wealth, the potential for a widening gap between income levels can increase, especially if the cost of living increases with average incomes. Increasing proportions of people on lower incomes may necessitate a greater investment in intervention and support services and/or job training/employment programs			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Income distribution	Number and proportion of people by income, occupation and usual residence	Source: ABS census Scale: Local Government Area, urban centre/locality Frequency: Five-yearly	This data is only available at the small area level through the census (every five years)
Low income households	Proportion of households on low to moderate incomes by household type	Source: ABS census Scale: Suburb, Local Government Area Frequency: Five-yearly	This data is only available at the small area level through the census (every five years)
Income support	Proportion of people on income support by age and gender	Source: Centrelink Scale: Local Government Area or postcode Frequency: Monthly	Centrelink retains information on people reliant on income support including pensions, family care benefits and other welfare payments
<b>Suggested or possible measures – Utilisation, demand and capacity of social services and facilities</b>			
Applicability and relevance: The use of services and facilities is an indicator of the availability and need for services, and when used with demand-based data, can be an indirect indicator of relevance/suitability and/or access issues. The capacity of services to meet increased demand is also important in planning for the expansion The availability of services can have an impact on quality of life and workforce recruitment and retention The provision of social services and facilities is a key issue for residents of Roxby Downs and other residents and stakeholders in the region			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Utilisation rates	Number and type of social service by the number of people using the service	Source: Various Scale: Local Government Area Frequency: n.a.	Supplementary qualitative information could be collected on satisfaction with services
Capacity of services to meet demand	Median time to access services and number of people on waiting lists by type of service	Source: Various Scale: Local Government Area Frequency: n.a.	This information may only indicate expressed demand for service, and not unmet need. Qualitative data may be used to supplement this information, including the capacity of services to meet increased demand

## Attachment Q10.1 Potential social indicators and data sources (cont'd)

New programs and services	Number and proportion of new programs and services by population	Source: Various Scale: Local Government Area Frequency: n.a.	
<b>Suggested or possible measures – Access to health services</b>			
Applicability and relevance: Access to appropriate health services is fundamental to well-being. Poor access is an indicator of disadvantage in a specific community or location. Access can encompass distance, cost, availability and relevance/suitability of services			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Service times	Number of people on waiting lists and average waiting time for GPs, other health services and visiting professionals	Source: Department of Health Scale: Organisation Frequency: Annual	Data is available by organisation Collation and analysis would be required
General practitioner-to-resident ratio	Number of GPs per resident	Source: Medicare, Rural Doctors Workforce Agency Scale: Local Government Area Frequency: Annual	Data is available on the number of provider numbers from Medicare
<b>Suggested or possible measures – Health service contacts</b>			
Applicability and relevance: Contact with health services (hospitals, GPs, community health, etc) is an indicator of demand, but can also be affected by the availability of services Health care is linked to environmental, social and economic conditions and can indicate the general health of the community			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Hospital admissions	Number and proportion of admissions by type (accident and emergency, general, etc.)	Source: Department of Health, local health service Scale: Hospital Frequency: Annual/other	These indicators would need to be compared to state or regional averages, or other relevant measures, and show changes over time
Community health service contacts	Contact with community health services by type of contact	Source: Various Scale: n.a. Frequency: n.a.	Data is not collated at present, but is maintained by separate service providers (government, community, not-for-profit)
<b>Suggested or possible measures – Educational participation and attainment</b>			
Applicability and relevance: Educational participation and attainment will impact on an individual's life chances and capacity to gain employment. It is also an indirect indicator of the capacity of the local community to provide people with the skills to meet future work demands			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Education participation	Proportion of people participating in education by age and level/type	Source: ABS Census Scale: Suburb, Local Government Area Frequency: Five-yearly	Census data provides information on education by school (public, private), TAFE, university and other educational types

## Attachment Q10.1 Potential social indicators and data sources (cont'd)

School retention rates	Proportion of people leaving school before completion of SA Certificate of Education (SACE) (or equivalent)	Source: Department of Education Scale: School Frequency: Annual	The Department of Education retains information about school leaving rates by year level  Census data provides five-yearly information on the highest level of schooling completed
Educational attainment	Proportion of people with SACE (or equivalent), post-school qualification	Source: ABS Census Scale: Suburb, Local Government Area Frequency: Five-yearly	Census data provides information on level of education
<b>Suggested or possible measures – Access and contribution to education services</b>			
Applicability and relevance: Access to education is an indicator of community equity and overall capacity in the areas of skill development and employment Through education, people are able to gain skills to equip them for the future, to improve their job prospects and satisfaction, and to build confidence and self-esteem			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Student-to-teacher and student-to-school ratio	Number of teachers per student, number of schools per student by public/private status	Source: ABS, Department of Education and Children's Services Scale: Local Government Area Frequency: Annual	Department of Education provides information on the number of teachers per student and number of schools per student. This is also periodically reported on by the ABS
Distribution of schools and further education	Number and location of schools and further education facilities in relation to target populations	Source: Department of Education and Children's Services Scale: Local Government Area Frequency: n.a.	Spatial location of schools and assessment of the adequacy of catchment areas requires some analysis in relation to demographic profiles
BHP Billiton support to education facilities	Value of BHP Billiton support to local school, education services	Source: BHP Billiton Scale: Organisation Frequency: Annual	
BHP Billiton support to students	Number of students given work experience and/or receiving scholarship or financial support	Source: BHP Billiton Scale: Organisation Frequency: Annual	Work experience and vacation work by BHP Billiton and its contractors
<b>Suggested or possible measures – Community attitudes and interactions</b>			
Applicability and relevance: Social attitudes and community interactions can provide a measure of community cohesion, identity and inclusion. The experiences of community members can also provide an indication of community tolerance and acceptance of diversity Concerns about changes to the social character and well-being during the construction period and as a result of population increases have been raised by residents of Andamooka and Roxby Downs			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Social attitudes	Results of community surveys on social attitudes and experiences about community life; cultural diversity; and social interactions	Source: Survey Scale: n.a. Frequency: n.a.	A survey would need to be undertaken  The views and perceptions of key community stakeholders could provide an input or be sought to verify survey findings

## Attachment Q10.1 Potential social indicators and data sources (cont'd)

Participation and representation in community groups	Number and membership of community groups and diversity of representation on governing bodies	Source: Roxby Downs Community Board, Council, community organisations Scale: Local Government Area Frequency: n.a.	A comparison could be made with socio-demographic and cultural characteristics Representation on community forums could be sourced through the Roxby Downs Community Board
Community events and programs	Number, breadth and diversity of events and programs	Source: Council and other sources Scale: Local Government Area Frequency: n.a.	Data is not currently collated but could be sourced through council and community information guides
Discrimination	Incidences of discrimination or harassment reported in the workplace, to service providers or other community stakeholders	Source: Equal Opportunity Commission, BHP Billiton, Council and others Scale: Suburb Frequency: n.a.	Some information may be collected by the Equal Opportunity Commission and other sources, but incidents may go unreported Collation and analysis of information would be required
<b>Suggested or possible measures – Community participation and engagement</b>			
Applicability and relevance: Community participation and engagement is an indicator of the commitment, investment and attachment of residents to the community, and can be an indirect measure of community pride and identity Community participation is an important component of democracy, accountability and transparency			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Community involvement	Number of people participating and attending meetings of the Community Board and forums per capita	Source: Community Board Scale: Organisation Frequency: n.a.	This could be sourced through the Roxby Downs Community Board
Voter turnout	Percentage of the eligible population enrolling to vote; participating in elections; and casting a formal vote	Source: Council, Electoral Commission Scale: Local Government Area Frequency: Four-yearly	No local government elections are held in Roxby Downs, Andamooka or Woomera
Governance	Satisfaction levels with governance and involvement	Source: Survey Scale: Suburb Frequency: n.a.	A survey would need to be undertaken or other sources of data established
<b>Suggested or possible measures – Contribution to the community</b>			
Applicability and relevance: Voluntary service is an indicator of social cohesion, commitment and involvement in the community The contribution made by BHP Billiton to the community (through financial and other support to community groups, public infrastructure and volunteer programs) provides an indication of their commitment to community well-being			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
BHP Billiton Matched Giving Program	Number of participants and value of contribution in BHP Billiton Matched Giving program	Source: BHP Billiton Scale: Organisation Frequency: Quarterly	BHP Billiton keeps records on participation rates in its Matched Giving program

## Attachment Q10.1 Potential social indicators and data sources (cont'd)

Volunteer work	Number, proportion and hours of voluntary work by type (sporting groups, clubs etc)	Source: ABS Scale: Local Government Area Frequency: Five-yearly (census), periodically (three to four years)	The ABS currently collects information on volunteering through the census as well as through its Voluntary Work Survey (undertaken three times in the last 12 years the most recent was 2006)
Volunteer groups	Number of volunteer groups and volunteer participants	Source: None Scale: n.a. Frequency: n.a.	Data is not yet available in collated form Local government and online community directories currently exist from which the information could be obtained
BHP Billiton contribution to local groups	Value of BHP Billiton contribution (cash and in-kind) to local authority, public infrastructure, local organisations and indigenous groups	Source: BHP Billiton Scale: Organisation Frequency: Quarterly	Data is available from BHP Billiton
BHP Billiton contribution to community programs	Value of BHP Billiton contribution (cash and in-kind) to community programs per capita	Source: BHP Billiton Scale: Organisation Frequency: Quarterly	Data is available from BHP Billiton

**Suggested or possible measures – Lifestyle and amenity**

Applicability and relevance:

Among the factors affecting lifestyle and amenity are the cost of living, and the quality, standard and maintenance of the built and natural environment. Environmental conditions, including air quality and noise, can also affect amenity

Levels of community satisfaction can provide an indication of amenity, quality of life and community well-being. Disruptions to everyday activities, caused by nuisance or disturbance, can also affect community satisfaction

Concerns about the cost of living, dust and amenity have been raised in community consultation

Performance indicator	Metric	Data availability	Comments
Quality of life	Ranking of Local Government Areas	Source: BankWest Scale: LGA Frequency: Annual	Quality of Life Index, published by BankWest in 2008, is based on 10 key criteria including employment levels, crime rates, internet access, health, education levels, earnings, home ownership rate, house size, proportion of empty homes and community involvement
Cost of living	Consumer Price Index	Source: ABS, Council, survey Scale: Australia, capital cities, LGA Frequency: Annual	A survey of living costs would be required to assess comparative costs
Air quality	Number of days air quality limits are exceeded at sensitive sites	Source: BHP Billiton Scale: LGA Frequency: ongoing	
Community satisfaction	Results of community satisfaction survey	Source: Survey Scale: n.a. Frequency: n.a.	A survey would need to be undertaken

Attachment Q10.1 Potential social indicators and data sources (cont'd)

<b>Suggested or possible measures – Disruptions and delay</b>			
<p>Applicability and relevance:</p> <p>Changed traffic conditions and increased traffic volumes can cause disruption and delays to residents, tourists and commercial drivers on public roads. The provision and use of commuter bus services provided by BHP Billiton for the expansion can also influence local traffic conditions</p> <p>The level of complaints about activities associated with the proposed expansion, including the construction and operations of off-site infrastructure, transport of goods and materials, and expanded operations at Olympic Dam, would provide a measure of disruption and inconvenience</p> <p>Disruptions caused by the construction and operation of off-site infrastructure, and transporting equipment and materials for the expansion, are issues of community concern</p>			
<b>Performance indicator</b>	<b>Metric</b>	<b>Data availability</b>	<b>Comments</b>
Traffic volumes and conditions	Annual Average Daily Traffic Volumes (AADT) and commercial vehicle traffic volumes	Source: DTEI Scale: Road network Frequency: Annual	Effect of traffic volume flows can be assessed using the Level of Service (LoS) measurement, which ranks operational road conditions
Traffic delays	Number of vehicles delayed and length of delays associated with movement of over-dimensional loads	Source: BHP Billiton, Council, DTEI, SAPOL and others Scale: Road network Frequency: n.a.	Data not currently collected
Method of travel to work	Patronage of commuter bus services	Source: BHP Billiton Scale: Various (see comments) Frequency: Monthly	Commuter bus services provided by BHP Billiton between: <ul style="list-style-type: none"> <li>• Port Augusta and Roxby Downs</li> <li>• Roxby Downs and Olympic Dam</li> <li>• Workforce accommodation and Olympic Dam and associated worksites</li> </ul>
Community complaints	Number and type of community complaints made to BHP Billiton, local councils, SAPOL and others	Source: BHP Billiton, Council, SAPOL Scale: Local Government Area Frequency: n.a.	Information is retained but not collated in a single source  Media monitoring may also provide an indication of public concerns

## Q10.5 REFERENCES

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