

**2012 - 2016**  
State of  
Environment  
Report

**BROKEN HILL**  
CITY COUNCIL

**AUSTRALIA'S FIRST  
HERITAGE LISTED CITY**

| QUALITY CONTROL      |  |           |           |
|----------------------|--|-----------|-----------|
| KEY DIRECTION        | 3 Our Environment  |           |           |
| OBJECTIVE            | 3.1 Our Environmental footprint is minimised   |           |           |
| FUNCTION             | Public Order   |           |           |
| STRATEGY             | 3.1.1.10 Provide information to our community in relation to their environment           |           |           |
| FILE REFERENCE No    | 11/146   | TRIM No   | D16/42252 |
| RESPONSIBLE OFFICER  | Environment, Waste and Recycling Specialist  |           |           |
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| ASSOCIATED DOCUMENTS | Community Strategic Plan 2033<br>Annual Report 2015/2016                                 |           |           |

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# EXECUTIVE SUMMARY

## STATE OF ENVIRONMENT REPORT

The State of Environment Report (SoE) is a report on the environmental issues relevant to the objectives established in Broken Hill City Council's (Council) Community Strategic Plan. The SoE is prepared in accordance with the Office of Local Government's Integrated Planning and Reporting Manual and the *Local Government Act 1993, s428(2)*.

The report is included in Council's Annual Report in the year in which an ordinary election is held. The report is for the period 1 July 2012 to 30 June 2016.

## BROKEN HILL COMMUNITY STRATEGIC PLAN

During 2009 the Office of Local Government released the finalised guidelines and manual for the implementation of Integrated Planning and Reporting (IPR). The purpose of the framework is to ensure that councils remain effective, efficient and accountable to their community for the works and services they provide. The guidelines and manuals continually make reference to councils being accountable to their community and to fully engage with their community in the development of plans and strategies.

The Broken Hill Community Strategic Plan 2033 is a document for the whole community that encompasses all aspects of life in the iconic City of Broken Hill and sets a vision for the future. The Plan acknowledges that not one party alone can make this happen. It takes a partnership to achieve this vision. Government, business and industry, community groups and individuals all have a role to play.

The Plan outlines the social, economic, environmental, governance and leadership directions expressed by the Broken Hill community and includes:

- Objectives – where do we want to be?
- Strategies – how do we achieve this?
- Measures – how do we know we are heading in the right direction?
- Contributors – who has a role to play?

Taking action:

- Our Community Strategic Plan requires and deserves commitment and action from all of our community. Therefore residents, government, business and community groups will all need to work with the Plan and take responsibility for key areas.

### Key Direction 3: Our Environment

We all depend upon our natural environment. It provides the essentials of life; the air we breathe, the water we drink. It is central to our health and wellbeing and inspires us through the personal and economic benefits derived from its existence.

At the same time we value the natural environment, using it for our social and economic gain but human activity leaves a footprint. Our consumption of resources and raw materials and our subsequent disposal impacts not only our local environment but the greater global environment.

As custodians of this land for future generations, we have an obligation to treat the natural environment with care and minimise the impact we have today. Many of the environmental challenges for our community are similar to those of people across the world as sustainability is given greater focus and importance for our future generations.

### KEY DIRECTION 1: OUR COMMUNITY

### KEY DIRECTION 2: OUR ECONOMY

### KEY DIRECTION 3: OUR ENVIRONMENT

This Key Direction relates to the conservation and preservation of the natural environment and greater reduction of the human impact on the surrounding environment to ensure a sustainable and healthy community. It contains a number of strategies to better manage and use the natural resources within the Broken Hill region.

### KEY DIRECTION 4: OUR LEADERSHIP



During development of the Community Strategic Plan 2033, three objectives were identified as priorities and included as part of Key Direction 3: Our Environment:

- **Objective 3.1** – Our environmental footprint is minimised
- **Objective 3.2** – Natural flora and fauna environments are enhanced and protected
- **Objective 3.3** – Proactive and responsible planning supports the community and the environment

### **Integrated Planning and Reporting - Linking the Plans**

Measuring the Community Strategic Plan under the framework; Council used the Community Strategic Plan to determine which goals and strategies could be implemented at a Local Government level. These goals and strategies are included in a four year Council Delivery Program. Progress reports are provided to the Council with respect to the principal activities detailed in the Delivery Program, at least six monthly. To ensure that Council has the required resources to achieve the goals and strategies set out in the Delivery Program, a Resourcing Strategy has also been prepared to address long term asset management, financial management and workforce planning. The Operational Plan is a plan which focuses on the short term. It provides a 1 year detailed plan of which activities and projects from the Delivery Program will be implemented. Each year, our success in achieving the goals and strategies set out in these plans are reported through Council's Annual Report. The State of Environment Report is a report that is required in the year in which an ordinary election is held, and included in the Annual Report.

### **Community Engagement**

In preparing the State of Environment Report 2012-2016, Council invited the community to provide input on the environmental objectives in accordance with the Community Strategic Plan. Contributions were received from key stakeholders and are included in the report.

## **OUR VISION**

Broken Hill is a vibrant, prosperous and culturally rich Heritage City shared with visitors from around the world.

## **OUR MISSION**

Council provides high quality services and leadership to enhance community living and facilitate a prosperous economy.

## **OUR STATEMENT OF VALUES**

### **Inspiring**

We're leading Broken Hill into the Future  
This means we:

- Recognise change starts with us
- Share our passion
- Act as positive role models
- Are focused on delivering results

### **Open**

We're transparent and honest  
This means we:

- Are united
- Are reliable – when we make a decision we stick to it
- Can be trusted
- Are always available to listen

### **Original**

We're pioneering new ideas while remembering what makes us unique  
This means we:

- Won't forget our past, even when forging our future
- Are open to new ideas and think outside the square
- Champion our uniqueness
- Look for new solutions rather than relying on the old ways

### **Human**

We're involved in the community  
This means we:

- Are inclusive
- Respect diversity and how different people think
- Value doing it together
- Have a genuine sense of humanity

### **Fearless**

We're up for the challenge  
This means we:

- Strive to solve our own problems
- Defend what's important to our community
- Are prepared to take the lead
- Take opportunities and make something of them
- Are not afraid to make tough decisions

## KEY DIRECTION 3: OUR ENVIRONMENT

### OBJECTIVE 3.1 – OUR ENVIRONMENTAL FOOTPRINT IS MINIMISED

The strategies adopted in the Community Strategic Plan to meet Objective 3.1 – Our Environmental Footprint is Minimised are:

- 3.1.1** Reduce resource consumption and minimise waste
- 3.1.2** Increase use of renewable resources and decrease the use of non-renewable resources
- 3.1.3** Change consumer behaviour to reduce impacts on the environment without affecting quality of life
- 3.1.4** Reuse and recycling of resources is embraced by the community
- 3.1.5** Secure a clean, reliable and sustainable water supply for the area
- 3.1.6** Investigate and plan for the minimisation of environmental impacts associated with mining activity on the City

Council and other key stakeholders have been involved in and undertaken a range of projects to address the strategies identified and work towards minimising of our environmental footprint.

#### 3.1.1 Reduce Resource Consumption and Minimise Waste

##### Annual Household Hazardous Waste Collections

Council participates in annual Household Hazardous Waste (HHW) collections, in partnership with NetWaste. This annual collection is partially funded by the NSW EPA and allows councils to collect hazardous items from households for reprocessing and recycling.

Collections are normally held during October or November, and participation rates have gradually increased with participants returning annually.

The following table provides participation rates and volume of HHW collected:

| Year                           | 2012  | 2013  | 2014  | 2015  |
|--------------------------------|-------|-------|-------|-------|
| <b>Number of Participants</b>  | 13    | 27    | 16    | 23    |
| <b>Volume of HHW Collected</b> | 269kg | 570kg | 384kg | 500kg |



Household Hazardous Waste includes toxic materials...



...and paint

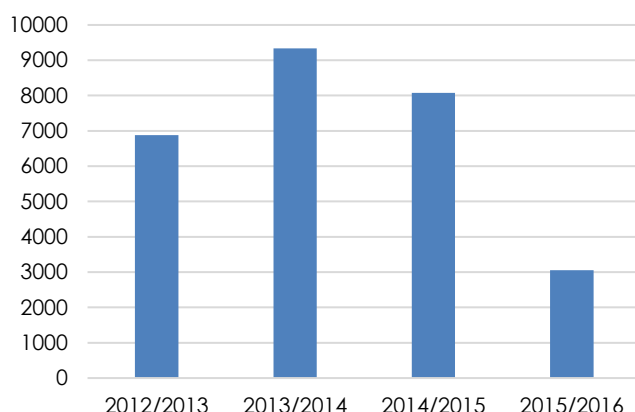
## Green Waste

Green Waste is collected at the Waste Management Facility by either self-haulage or through the Garden Organics Kerbside Collection.

Green Waste is processed on site and used as a dust suppressant around the facility. A quantity of green waste is sent to landfill when contamination levels are too high.

The volume of green waste collected during 2015/16 is significantly lower than previous years, however it is the first year using weighbridge data instead of vehicle estimates.

**Green Waste Collected at Landfill**

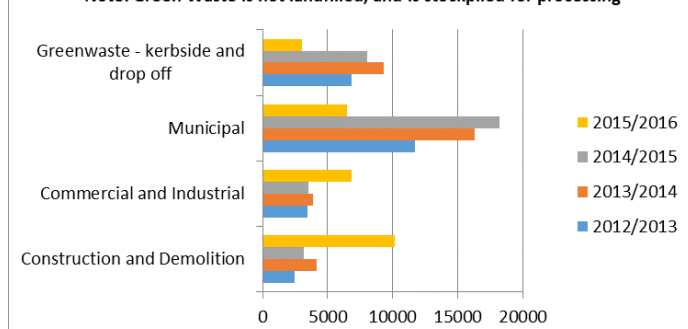


## Waste Collected at the Waste Management Facility

Waste is divided into three main categories in Broken Hill - Municipal (households); Commercial and Industrial; and Construction and Demolition. Council services have also included Green Waste (both self haulage and kerbside collection).

**Waste to Landfill 2012 - 2016**

Note: Green Waste is not landfilled, and is stockpiled for processing



The graph provided shows volumes of waste collected at the landfill for each waste source. It should be noted that the data up to 2014/15 is estimated, and 2015/16 is the first weighed data.

The data collected for 2015/16 is more accurate with all business waste being weighed and recorded, and domestic waste continuing to be estimated. Clean fill is included in the data collection for construction and demolition waste, explaining the large increase in 2015/16.

## 3.1.2 Increase use of renewable resources and decrease the use of non-renewable resources

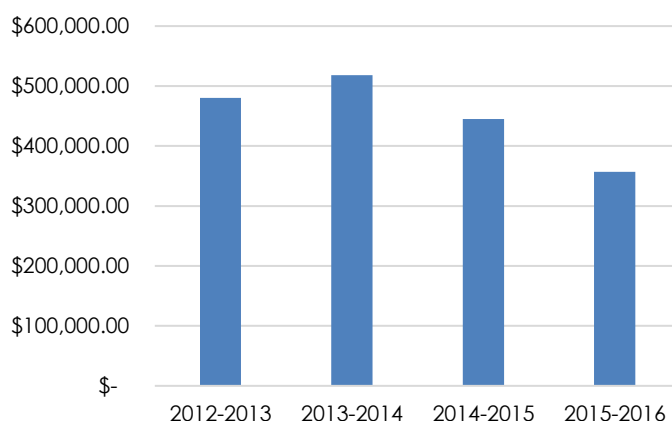
### What is Councils Energy Consumption?

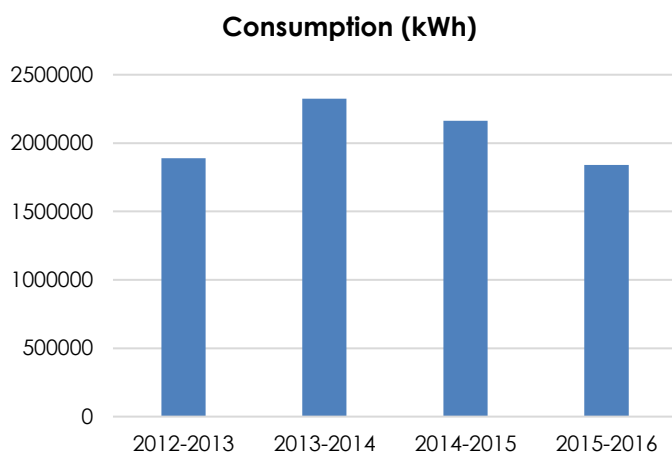
Council monitors its energy consumption through the subscription service Planet Footprint.

During 2012-2016 Council undertook a major LED lighting project to assist in reducing energy costs – see Council LED Lighting Project on the following page.

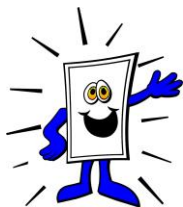
A combination of the results of this project included changing energy suppliers for our larger sites, gaining a reduced kW/hour price and reduced usage at some sites has reduced Council's energy costs from \$480,350 at the commencement of the reporting period to \$356,871 by the final year of the reporting period. Energy usage has also now reduced below the 2012/13 year, following increases in 2013/14.

**Energy Costs**





### Council LED Lighting Project



In 2013 Council received a grant of \$38,500 from the Australian Commonwealth Government as part of the Community Energy Efficiency Program to retrofit four buildings with LED lighting. The buildings were:

- Administration Centre – first floor only
- Visitors Information Centre
- Broken Hill Regional Art Gallery
- Broken Hill Regional Airport

The project contributed to the Community Energy Efficiency Programs objectives by reducing energy consumption, undertaking activities to engage staff and developing a sustainability fund.

The overall cost of the project was \$94,448.64, with Council contributing the remaining funds required.

Major works included:

- Removal of 770 lights and the installation of 446 new LED lights across all four buildings

| Building                                | Lights removed | Lights installed |
|---|----------------|------------------|
| <b>Administration Building</b>          | 400            | 172              |
| <b>Visitor Information Centre</b>       | 22             | 20               |
| <b>Broken Hill Regional Art Gallery</b> | 189            | 189              |
| <b>Broken Hill Regional Airport</b>     | 159            | 65               |

The use of LED panel lights significantly reduced the number of lights that needed to be re-installed in both Council's Administration Centre and the Airport Terminal.



The Airport Terminal before the lighting upgrade



The Airport Terminal after the lighting upgrade

A payback period of 4 years was predicted for the whole project cost. Savings have already surpassed Council's contribution to the project, in just over 2 years. Since installation of the new lights in May 2014 Council has saved \$66,200 and 159,940kWh. These savings were also influenced by changing Council's electricity supplier and a change in kWh pricing in some locations.

Council staff were involved in the project through competitions to see which work areas could undertake the most energy efficient actions, including turning off their computers and monitors at the end of each work day and over the weekends. Staff were presented with certificates and prizes for their efforts.

The project included the development of an organisation wide water and energy vision to instil a commitment to saving energy and water now and into the future.



### 3.1.3 Change consumer behaviour to reduce impacts on the environment without affecting quality of life

#### Waste Workshops - Primary Schools

Every 2 years Council engages EnviroMentors from Keep NSW Beautiful to undertake Waste Workshops for our local primary schools. These workshops are presented to the students free of charge and were held in 2012 and 2014. The workshops that were held included:

- *Close the Loop*: students learned about what can be recycled locally; the value of waste as a resource; how recyclables are made from natural resources; the social and environmental benefits of recycling; and importance of purchasing recycled and recyclable products.
- *School Yard Harvest*: creating a food garden; natural ways to manage pests; composting; how growing your own food benefits the environment and health benefits of your own food.
- *Compost Critters*: value of organic waste; greenhouse gases created when organics are buried; benefits of composting and how to care for your compost.
- *In the Bin*: benefits of sorting your waste; what goes in each bin; importance of waste avoidance and waste reductions; and what happens to the different types of waste produced.

The workshops are highly interactive, and engage students from Kindergarten to Year 6. Feedback from the schools has been very positive, and participation rates reflect this.



The Compost Critters at work

#### Waste Tours and Presentations - High School

Each year Broken Hill High School students undertake a major waste project that includes a 45 minute power point presentation on waste management in Broken Hill and a 2 hour tour of the Waste Management Facility.

Whilst on the tour, students have the opportunity to see the operations of the facility; recycling efforts; participate in games to sort their waste; see the green waste operations; and in recent years students have provided suggestions on how Council can improve the facility

#### Landfill Upgrades

A range of upgrades to the Waste Management Facility have been undertaken. These upgrades are designed to improve the management of waste in our community, meet the requirements of state legislation and provide increased recycling opportunities for the community.

The largest infrastructure development has been the installation of a weighbridge. This infrastructure will assist in collecting more accurate data on waste received at the facility; enable implementation of fees and charges to all applicable facility users and improve communication between staff and facility users.

In the first 12 months of operation there were 65,539 vehicles entering the facility to dispose of waste.



The new weighbridge in operation

### 3.1.4 Reuse and recycling of resources is embraced by the community

#### Community Recycling Centre

A Community Recycling Centre (CRC) has been constructed at the Broken Hill Waste Management Facility. The CRC was funded with a grant of \$112,000 from the NSW Environment Protection Authority (EPA) Waste Less, Recycle More initiative and supported by the NSW Environmental Trust.

The CRC is designed to collect household hazardous wastes, including gas bottles, fire extinguishers, paint, fluorescent globes and tubes, car batteries, household batteries, motor and other oils and smoke detectors. The facility was officially opened on 4 November 2015 by Kevin Humphries, MP, Member for Barwon.

Since the opening of the facility, 4 tonnes of household hazardous waste has been removed for recycling and reprocessing by ToxFree.



The Community Recycling Centre



Inside the Community Recycling Centre, which has sorting bins available for distinguishable deposits

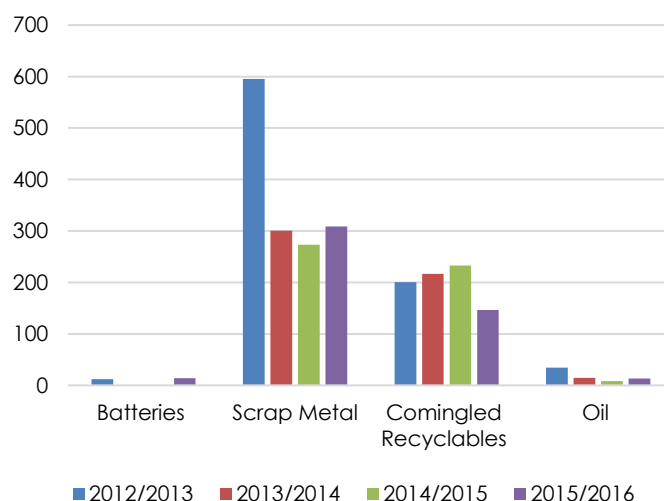
#### Waste Recycled

Recycling figures are low for Broken Hill and will remain low while recycling is dependent on residents and businesses delivering their own recycling to the Waste Management Facility.

State Targets are:

- Municipal (household) 70%
- Commercial and Industrial 70%
- Construction and Demolition 80%

#### Recycling Categories in Broken Hill



The Broken Hill averages for recycling during 2012–2016 are:

- Municipal (household) 26%
- Commercial and Industrial 25%
- Construction and Demolition 20%

The following graph provides a visual image of the main recycling categories that are monitored in Broken Hill. Commingled recyclables include paper/cardboard, plastics and aluminium cans.

Improving Broken Hill's recycling rates will require a shift in the culture of Broken Hill for waste management and will include further upgrades and changes to the Waste Management Facility to increase recycling and separation opportunities.

### 3.1.5 Secure a clean, reliable and sustainable water supply for the area

#### Essential Water – Catchment Management

Essential Water is the water business of Essential Energy. Essential Water is a water retailer and distributor with a 10GL water extraction licence from the Darling River. Essential Water operates services for a total of 18,500 customers, including 9,500 water services customers in Broken Hill, Menindee, Sunset Strip and Silverton and 9,000 sewerage services customers in Broken Hill.

Essential Water also operates and maintains three storages; Stephens Creek Reservoir, Umerumberka Reservoir and Imperial Lake Dam. Non-potable water is also supplied to; mines, parks and ovals, rural users along the Menindee to Broken Hill pipeline and Umerumberka to Broken Hill pipeline for stock and domestic purposes.

#### Essential Water – Water Quality Monitoring

Essential Water is committed to providing safe, secure, reliable and high quality water to their customers and the community. Essential Water has a comprehensive water sampling and quality control regime that includes testing for over 70 water quality parameters from 38 locations throughout the supply and distribution network. Water samples are analysed by an independent National Association of Testing Authority, Australia (NATA) accredited laboratory.

During 2012-2016 Essential Water reported only one non-compliance for Total Dissolved Solids (TDS) which was in 2016 and was against the water quality monitoring requirements. Criteria requirements met the criteria for each round of testing during 2012-2015.

Full report details are available on Essential Water's website:  
<http://www.essentialwater.com.au/content/water-quality-reports>

#### Essential Water Imposed Water Restrictions

During the reporting period water restrictions were in place across the City.

Council's watering schedules were reviewed to meet Essential Water's water restrictions, to reduce water consumption. Council had watering exemptions in place with Essential Water under the following conditions:

- No watering is undertaken on Sunday and Mondays.
- All automated watering takes place between 11pm and 6am only.
- Any manual watering takes place between 6am and 9am only.

The actions were expected to provide a reduction in water consumption, however data is unavailable at the time of compiling this report and therefore Council is unable to provide a comparison of water usage for the reporting period.

#### AGL Solar Farm – Supporting Renewable Energy

In conjunction with the Australian Renewable Energy Agency (ARENA) and the NSW Government, AGL delivered two large-scale solar photovoltaic (PV) power plants with a total capacity of 155 MW (AC) at Nyngan (102 MW) and Broken Hill (53 MW) in regional New South Wales. ARENA provided \$166.7 million in funding and the NSW Government provided \$64.9 million.

The Broken Hill Solar Plant is expected to generate approximately 126,000 megawatt hours (MWh) of clean, renewable electricity each year.

On an annual basis, the Broken Hill Solar Plant will produce enough electricity to meet the needs of approximately 17,000 average sized homes in NSW.

The solar plant will reduce greenhouse gas (GHG) emissions by over 105,840 tonnes of CO<sub>2</sub> equivalent per annum, assuming a rate of 0.84 tonnes per MWh of electricity. This is roughly equivalent to removing approximately 29,000 cars from the road. Particulate and heavy metal emissions will also be reduced.

Source: <https://www.agl.com.au/about-agl/how-we-source-energy/renewable-energy/broken-hill-solar-plant>



### 3.1.6 Investigate and plan for the minimisation of environmental impacts associated with mining activity on the City

#### Broken Hill Environmental Lead Program - Background

On 13 February 2015, the NSW Government allocated more than \$13 million, over the 5 years from 1 July 2015 to 30 June 2020, to address the issue of lead exposure in Broken Hill and ongoing detection of elevated blood lead levels in local children.

The funding has established the Broken Hill Environmental Lead Program (BHELP), with an aim of developing sustainable solutions to ensure children aged 0-4 meet the National Health & Medical Research Council (NHMRC) guidelines for blood lead levels into the future. The program has a focus on Aboriginal children who have been shown to have higher incidences of elevated blood lead levels.



Kevin Humphries, MP, Member for Barwon, Mayor Wincen Cuy and Professor David Lyle at the official announcement of \$13m Lead Program Funding

Engaging and partnering with key local stakeholders and the community is key for the program's success, and several Memorandum of Understandings (MoU) have been established with the NSW Health Far West Local Health District (FWLHD), Council and Maari Ma Health Aboriginal Corporation (Maari Ma).

The funding partnership with FWLHD has already seen enhancements to the Child & Family Health's existing program of blood lead testing, monitoring and home assessments, and will allow the commencement of a research project, led by the University of Sydney's University Department of Rural Health (UDRH) to

identify risk factors influencing elevated blood lead levels in Broken Hill.

The MoU with Maari Ma has resulted in the start of a home assessment program, targeted at all Aboriginal children under the age of five. As part of their home assessments, both Maari Ma and Child & Family Health have been using an X-ray Fluorescence (XRF) Machine, funded under the program, to instantaneously detect lead levels in soil, dust and paint. This means action can be taken sooner to reduce children's exposure to lead in their home.

#### Memorandum of Understanding - Broken Hill Environmental Lead Program

In May 2016, the Broken Hill Environmental Lead Program (BHELP) commenced a formal partnership with the Council with the signing of a MoU, outlining a number of lead remediation projects over the 4 years to June 2020. The projects are aimed at managing and minimising exposure to lead in the local environment and addressing blood lead levels, particularly in children. These include:

- *Joint co-ordination of the management of lead contaminated public land*

This includes Council remediation of lead contaminated public land in accordance with an annual work plan. The annual work plan has been developed on a priority based system – focusing on projects identified by the BHELP Steering Committee requiring remediation to effectively manage exposure to lead on public sites/land.

The first remediation project commenced in June 2016 on the Willyama Common behind Queen Street residences and Robinson College. The works included excavations and covering or surface capping of lead contaminated soil with clean material – such as limestone, clean soil and mulch - to provide a barrier to loose soil and minimise lead dust. A new higher and stronger permanent fence has also been placed around the perimeter of the affected area to limit accessibility. Eroded areas on the sides of the tailings dams will also be repaired.



- *Ongoing annual maintenance of Council parks and playground equipment*

High pressure cleaning of playground equipment and surrounding surfaces will continue weekly at Sturt Park and Duff Street Park. Facilities and signage will be regularly inspected and maintained at Duff, Sturt and AJ Keast Parks to ensure that children are able to wash their hands after playing and before eating. Bare surfaces at local parks and playgrounds will be tested regularly for lead levels and will be remediated with appropriate ground covers where necessary.

- *Modification and scheduling of a new street sweeper*

Modification of a newly purchased street sweeper has seen it fitted with a dust control system – to keep lead dust generated by sweeping activities to a minimum and to avoid recontamination of previous lead remediated sites. Council's street sweeping schedule envisions priority given to local streets with known high lead levels in storm water sediment/runoff.

- *Education*

Ongoing education of Council staff on appropriate lead remediation processes and practices.

#### **Partnership with Council - Playgrounds**

The BHELP in partnership with Council has also completed a program to remove lead contaminated soil and minimise children's exposure to lead at Duff Street, Patton Street and Duke of Cornwall playgrounds.

Funding of \$225,000 was allocated to this project by the EPA through its Contaminated Land Management Program, funded through the Environmental Trust. The work included:

- Preliminary surveys and inspections
- Installation of roofing and hand washing facilities
- Installation of connections to allow high pressure equipment to clean playground surfaces
- Replacement of existing bare play surfaces with mulch, wood chips, synthetic grass, plants and gravel - providing a barrier to loose soil and minimising lead dust.



NSW Minister for the Environment Mark Spearman, Councillor Christine Adams, and Broken Hill Environmental Lead Program Project Manager Peter Oldsen at the new hand washing facility at Duff St Park

#### **Broken Hill Lead Reference Group**

The Broken Hill Lead Reference Group (BHLRG) is facilitated by Council. The group consists of representatives from a range of organisations and industries, including community representation.

Representatives include:

- Broken Hill City Council (Council)
- Broken Hill Environmental Lead Program
- Far West Local Health District
- Broken Hill University Department of Rural Health
- CBH Resources
- Perilya Limited
- Department of Industry
- Compass Housing Services
- NSW Environment Protection Authority (EPA)
- Western NSW Primary Health Network (WNSW PHN)
- Essential Energy (Essential Water)
- Local Member (MP)
- Community Representatives (2)
- Maari Ma Health
- Educational Institutions

The group was reformed in 2007/08 due to community concerns about falling participation levels in blood lead monitoring, and aims to provide a coordinated whole of community approach to the management of environmental lead in Broken Hill. The role of the group was modified following the funding of the Broken Hill Environmental Lead Program. The group meets quarterly to discuss many environmental lead issues for Broken Hill and is an important community consultation tool, providing guidance and feedback to each of the representatives in the group.

### **NSW Environmental Protection Authority - Licencing and Monitoring**

The NSW Environmental Protection Authority (EPA) had a significant reduction in reports about noise and vibration made to Environment Line during the reporting period. The Environment Line handles all general enquiries about environmental issues and takes reports of pollution for which the EPA has regulatory responsibilities.

The number of reports made to the Environment Line about air/dust and water pollution remained low during 2012-2016.

The EPA licences activities scheduled under the *Protection of the Environment Operations Act 1997*. There are nine premises within the Broken Hill Local Government Area (LGA) that are licensed with the EPA. The EPA regulates these activities via licence conditions and reporting. The regulation of activities by the EPA includes Environmental Protection Licence conditions that require some licensees to undertake monitoring, and all licensees to submit an annual return. The EPA also undertakes site inspections of the sites that it licences.

### **Blood Lead Levels**

The 2014 annual report is the most current report available for blood lead testing and provides trends for the blood lead levels in children under the age of 5 years in Broken Hill since the early 1990s.

In 2011 several key strategies were implemented to improve the participation rates for voluntary blood lead level screening including:

- Alignment of lead testing with childhood immunisation clinics
- Introduction of text message reminders to reduce 'did not attend' rates and;
- Development of partnerships to improve initial testing and case management of children with high blood lead levels.

From 1998 there was progressive decline in the number of children voluntarily undertaking blood lead screening. However from 2011 there has been a reversal in this trend following the inclusion of the testing with routine immunisation at both Broken Hill Child and Family Health and Marri Ma.

By 2014:

- 719 children were tested with no child having a blood lead level greater than 29ug/dL
- The average blood lead level was 5.2ug/dL, lower than 2012 and 2013
- The average Aboriginal blood lead level was 7.5ug/dL, also less than 2012 and 2013

Throughout the reporting period the National Health and Medical Research Council (NHMRC) reviewed the guidelines for blood lead levels from 10ug/dL to 5ug/dL, working on the premise that no lead level is safe.

In February 2016 the National Health and Medical Research Council introduced the new notifiable lead level of 5ug/dL, a decrease from 10ug/dL. This has a significant impact for the children of Broken Hill with average readings above 5ug/dL as follows:

- |                           |     |
|---------------------------|-----|
| • All children            | 47% |
| • Indigenous Children     | 79% |
| • Non-indigenous Children | 35% |

The BHELP has been established to implement long term strategies to reduce blood levels in the children of Broken Hill with a particular emphasis on the Indigenous community.

### **CBH Resources Extension of Underground Mining - Project Approval**

Broken Hill Operations Pty Ltd (BHOP) sought Project Approval under Section 75J the *Environmental Planning and Assessment Act 1979* to extend underground mining to include Block 7 located on Consolidated Mining Lease 7 (CML7) at Broken Hill.

### **CBH Resources – Monitoring of Dust and Lead**

BHOP monitors ambient air for total dust and total lead amounts as a requirement of the Environmental Protection Licence (EPL) 12559, under the *Protection of the Environment Operations Act 1997*, in accordance with using a network of three high volume air samplers, seven dust deposition gauges and two TEOM real-time ambient air monitors.

Monitoring results are available online at:  
<http://www.cbhresources.com.au/operations/rasp-mine/sustainability/environment/environmental-monitoring/>

### **CBH Resources – Rehabilitation Works**

Rehabilitation works included a waste rock trial over a sample free area. Free areas have no rock armoring or other ground cover to control dust other than the annual dust suppressant application. An area was selected on the west side of Kintore Pit as a representative sample of all site free areas. Approximately 3,100 tonnes of waste rock was applied at a thickness of 400 - 500 mm over an area of 3,000m<sup>2</sup>.

### **CBH Resources - Pollution Reduction Programs**

BHOP has implemented Pollution Reduction Programs as prescribed in the Environmental Protection Licence (EPL) 12559 including lining of Ryan Street Dam to prevent seepage during high rainfall events.

### **CBH Resources – Dust Control**

Scheduled maintenance for dust control continued throughout the reporting period including water truck spraying as required, use of a street sweeper on sealed roads and car parks and application of dust suppression chemicals. 100% of the dust suppression chemicals have been applied for the 2016 campaign. Spreading was completed in June. The chemical Total Ground Control has a guaranteed life of 18 months; reapplication is conducted every 12 months or earlier if the crust shows signs of breakdown. Total Ground Control is supplied by Reynolds Soil Technologies (RST).



Image of a dust suppression chemical application, where a green dye is added to a solution on PVA glue which is used as a crusting agent

Photo supplied by CBH Resources – Rasp Mine

### **CBH Resources – Community Lead Management Plan**

BHOP has revised the Community Lead Management Plan (CLMP) in accordance with the Project Approval 07\_0018. The plan was prepared in consultation with the Broken Hill Lead Reference Group, including NSW Health Western NSW Local Health District and Council. The plan outlines the management measures undertaken by the Rasp Mine to minimise the potential for blood lead contamination in the community and how these measures will be assessed, monitored and communicated to the community. The CLMP has been submitted to the Department of Planning and Environment (DPE) for final approval.

### **CBH Resources – Health Risk Assessment**

A revised Health Risk Assessment has been produced by independent consultant Pacific Environment Limited. The site Health Risk Assessment has been reviewed at length by the EPA; queries were lodged with the DPE during May 2016 as to whether the document was adequate. DPE found the document content to be acceptable meeting the Project Approval conditions. DPE issued a conditional approval in late June stating the sub-reports were to be compiled into a single document. The document was compiled and sent to DPE for approval.

### **CBH Resources – Funding Contributions**

BHOP make available \$50,000 as a contribution in funding to NSW Health Far West Local Health District (FWLHD) each year for public health monitoring and public education. A submission was received from FWLHD for progressing works on the lead screening database module, signed by both parties - FWLHD and Cerner (the consultant) finalised on 17 June 2016. The application for the grant was accepted by BHOP management in July 2016, with the funding released in August.

### **Perilya Limited - Environmental Monitoring**

Perilya undertake monthly environmental monitoring for both the Southern Operations and Potosi Operations.

Details of the environmental programs and monthly reports can be accessed online:

<http://www.perilya.com.au/health--safety--environment/environment>

## KEY DIRECTION 3: OUR ENVIRONMENT

### OBJECTIVE 3.2 - NATURAL FLORA AND FAUNA ENVIRONMENTS ARE ENHANCED AND PROTECTED

The Strategies adopted in the Community Strategic Plan to meet Objective 3.2 – Natural Flora and Fauna Environments are enhanced and protected are:

- 3.2.1** Protect and enhance regeneration areas for the benefit of the City
- 3.2.2** Increase awareness and understanding of the natural environment
- 3.2.3** Increase involvement in actively protecting the natural environment
- 3.2.4** Manage the impact of pests and weeds on Broken Hill's natural environment

#### 3.2.1 Protect and enhance regeneration areas for the benefit of the City

##### Willyama Common and Regeneration Areas

The Willyama Common is an area of land approximately 87km<sup>2</sup> and makes up the bulk of the area within the Broken Hill Local Government Area (LGA), excluding the main urban area, the Living Desert Reserve, private leases, freehold land and a number of recreational areas. The common is of cultural significance to the Wiljakali people. The Common's use is governed by a Plan of Management, prepared by Council in 2003 under the *Commons Management Act 1989*.

Broken Hill's Regeneration areas almost encircle the City. The Regeneration areas are fully fenced to limit access as this provides the best results for natural regeneration of the sites. A management plan for the Regeneration areas will be developed over the next 2 years to ensure there is sufficient funding and actions taken to maintain these areas.

Both the Willyama Common and Regeneration areas are regularly inspected, which includes:

- fence condition, replacement and repair needs

- monitoring of natural regeneration
- weed monitoring and control activities
- weekly inspections are carried out to identify illegal dumping occurrences

Recently Council has received notification of over 200 Aboriginal Land Claims for the Broken Hill LGA, with many of these claims falling within the boundaries of the current Willyama Common and Regeneration areas. Council will be involved in providing advice on each claim as each claim is assessed.

##### The Living Desert

The Living Desert Reserve includes The Sculptures and The John Simons Flora and Fauna Sanctuary. The site covers an area of 24.2km<sup>2</sup> and were established as a nature conservation and tourism facility. It continues to be a great attraction for visitors and locals alike attracting around 30,000 visitors annually. The grounds are maintained by Friends of the Flora and Fauna of the Barrier Ranges Community Committee; volunteers who carry out regular working bees, including maintenance to the walking tracks and grounds. Friends of the Flora and Fauna of the Barrier Ranges Volunteers undertake track maintenance.

In February 2015, a new ticket machine was installed at the entry gate for the Living Desert. This replaced the old envelope system, as fees moved to a per person amount, instead of per vehicle amount. The machine works on the same premise as obtaining a parking ticket. The machine has improved the management of the income for the Living Desert, and reduced costs for entry fee arrangement by approximately \$5,000 per year.

##### Living Desert Visitor Numbers

| Year      | Number of Visitors |
|-----------|--------------------|
| 2012/2013 | 35 633             |
| 2013/2014 | 31 084             |
| 2014/2015 | 29 494             |
| 2015/2016 | 27 112             |

The Living Desert is a highly successful tourist attraction operated by Council staff, it is the only State Park that is listed that does not have a water view. It highlights and showcases the dry arid environment of outback Australia.



### **Living Desert Primitive Campground development and installation**

In 2014, a primitive campground commenced development within the Living Desert Reserve with initiatives to provide short stay camping options for visitors and locals alike.

The infrastructure is now in place, and final operational arrangements are continuing. The campground has BBQ facilities; toilets and showers; tent area; and caravan/camper trailer area.



The new ablution block was funded through the Public Reserves Management Fund Program, administered through NSW Crown Land



20 designated caravan/camper trailer parking spaces

### **Sculpture Symposium – Twentieth Anniversary**

On 18 May 2013, Council celebrated the 20 year anniversary since the installation of the Sculpture Symposium.

The Sculpture Symposium was officially opened on 23 May 1993 in the Living Desert. It has a

major input into the local tourism industry, and has become one of Broken Hill's most iconic sites.

Work began on the Symposium in April 1993. Twelve sculptors from around the world worked 14 hours a day, 7 days a week to complete 4 months of work in 6 weeks.

The huge sculptures were carved by hand from massive Wilcannia sandstone blocks. The blocks travelled 210kms in convoy and were set in place with the help of volunteer truck and crane operators.

The following photos highlight why the Sculptures have become one of the most photographed landscapes in the region.



### 3.2.2 Increase awareness and understanding of the natural environment

#### Harold Williams Home – World Environment Day Presentation

Council gave a presentation to residents at the Harold Williams Home to celebrate World Environment Day, promoting some of the activities that Council undertakes to support our local environment.

Topics covered included:

- Waste Management
- Tidy Towns Events
- Living Desert State Park
- Regeneration Reserve
- Willyama Common
- Energy Savings
- Lead Management

### 3.2.3 Increase involvement in actively protecting the natural environment

#### Tidy Towns Community Committee

At the February 2015 Council meeting the Tidy Towns Community Committee was disbanded as it was determined the committee was not acting in an advisory capacity, which was the intended role of the committee. The committee was reclassified to the Tidy Towns Volunteer Group, and Council staff support was significantly reduced.

#### National Tree Planting Day

Tidy Towns supported National Tree Day during 3 of the 4 reporting years:

- 2012 – Jubilee Oval - with support from the AFL Broken Hill
- 2013 – Queen Elizabeth Park - with support from the Girl Guides Association
- 2014 – Picton Oval – with support from the Picton Sportsground Community Committee and Girl Guides Association

Following varied success with these plantings and implemented water restrictions, the Tidy Towns Group ceased tree plantings for the rest of the reporting period.

#### Clean Up Australia Day and other Clean Up Activities

The Tidy Towns Volunteer Group hosted Clean Up Australia Day (CUAD) activities annually in March; returning to the Barrier Highway town entrance (Adelaide entrance) each year. Each event has collected approximately 60-80kg of litter, mostly consisting of take away containers, and in 1 year also included 4-5 tyres.

In July 2015 the Tidy Towns Volunteer Group once again assisted Broken Hill with a spruce up of one of Broken Hill's popular roads, the "Back Track" (formally known as Holten Drive). The committee focused efforts on cleaning up the road from the railway tracks through to King Street and collected 4 x 3m<sup>3</sup> dumper bins in one morning.

As with every year, Council again supported Clean Up Australia Day in 2016. Council and the Tidy Towns Volunteer Group organised 24 volunteers to focus on the Lions Reserve, Joe Keenan Lookout, areas surrounding Broken Hill Public School and Broken Hill High School, the TAFE College and the Visitor Information Centre. Volunteers collected 62kgs of rubbish with approximately 80% being take-away wrappers and drink containers. The Girl Guides also supported the event with a focus on Block 10 Lookout.



Volunteers at Clean Up Australia Day 2016

## **Tidy Towns Awards – Keep Australia Beautiful NSW**

The Tidy Towns Volunteer Group works with local community members and Council staff to annually submit an entry in the Tidy Towns Awards.

Broken Hill is assessed with other towns with populations between 10,000 – 25,000 people.

Broken Hill has received an abundance of awards during the 2012-2016.

Awards received during 2012-2016 include:  
**2012**

- Office of Environment & Heritage, Wildlife Corridors and Habitats Conservation Award (Category E, Population 10,001 – 25,000) – Broken Hill Living Desert Sanctuary – Winner

### **2013**

- Overall Town (Category E, Population 10,001 – 25,000) – Third

### **2014**

- Overall Town (Category E, Population 10,001 – 25,000) – Second
- Young Legends Award (Individuals EF) – Dylan Stone – Winner
- Schools Environment Award (School Category 4, 160-300) – Alma Public School – Highly Commended
- Bush Spirit Award (Category E, Population 10,001 – 25,000) – Broken Hill St Patrick's Race Club – Highly Commended
- Packaging Stewardship Forum Waste Management and Litter Reduction Award (Category E, Population 10,001 – 25,000) – Schools leave nothing to Waste, Broken Hill - Winner

### **2015**

- Overall (Category E, Population 10,001 – 25,000) – Third
- Young Legends Award – Jarrah Seager
- Australian Packaging Covenant Litter Reduction Award – Tidy Towns Strategic Plan for Litter Reduction (Highly Commended)
- Sustainable Business Award – Tip Shop Life Line
- Office of Environment and Heritage

Community Actions and Partnerships Award – Broken Hill Far West Festival of Respect

- Office of Environment and Heritage Conservation Partnerships Wildlife Corridors and Habitat Conservation Award – Broken Hill White Leeds Wetlands and Wildlife Refuge (Judges Commendation)
- Water Conservation Award – Broken Hill White Leeds Wetlands and Wildlife Refuge (Highly Commended)
- Office of Environment and Heritage Cultural Heritage Award – Broken Hill Restoration – Replica of Royal State Coach (Highly Commended)
- Energy Efficiency Award – Solar Evacuated Tube Installation – Alma Oval and Warnock Street Depot (Highly Commended)

**2016** – Unsuccessful on awards submitted



Council Officer Rebecca McLaughlin and Councillor Darriea Turley accept the 2013 Tidy Towns Award



2014 Tidy Towns Awards



### 3.2.4 Manage the impact of pests and weeds on Broken Hill's natural environment

#### Willyama Common Noxious Weed Project

Council received a total grant of \$22,000 through the Public Reserves Management Fund Program (PRMFP) to undertake widespread noxious weed control on the Willyama Common. Targeted species included mesquite and a range of cactus species. Local contractors were hired to undertake the works. The works have reduced the impact of these species on the Common, and prevent the infestations from spreading further, particularly into neighbouring properties. The works were highly successful and Council staff conduct follow up spraying to prevent the weed species from spreading.



Cactus following spraying

#### Essential Water – Noxious Weed Program

During the period July 2015 to June 2016 a noxious weeds control program was undertaken:

- Stephens Creek Reservoir;
  - 375 boxing glove cactus heads were treated. Plants were of average 750mm in height and treated by the Local Lands Services Western Region Department
  - Mesquite was treated
- Mesquite was also treated within the boundaries of;
  - Umberumberka Reservoir
  - South Waste Water Treatment Plant
  - Wills Street Waste Water Treatment Plant



Looking across the levees at Stephens Creek  
Photo supplied by Essential Water



## KEY DIRECTION 3: OUR ENVIRONMENT

### OBJECTIVE 3.3 – PROACTIVE AND RESPONSIBLE PLANNING SUPPORTS THE COMMUNITY AND ENVIRONMENT

The Strategies adopted in the Community Strategic Plan to meet Objective 3.3 – Proactive and responsible planning supports the community and the environment are:

**3.3.1** Encourage environmentally sustainable building and subdivision

**3.3.2** Preserve the heritage and streetscapes of the City

**3.3.3** Reuse and repurposing of the existing built environment is managed in a sustainable manner.

#### 3.3.1 Encourage environmentally sustainable building and subdivision

##### New Local Environmental Plan 2013

Subsequent to the development of a new Strategic Land Use Plan in 2012, Council commenced with the development of a new Local Environmental Plan (LEP). The new LEP was gazetted on 30 August 2013 and can be viewed at <http://www.legislation.nsw.gov.au/#/view/EPI/2013/506>

The plan aims to make local environmental planning provisions for land in Broken Hill in accordance with the relevant standard environmental planning instrument under section 33A of the *Environmental Planning and Assessment Act 1979*.

The particular aims of this Plan are as follows:

- to encourage sustainable economic growth and development in Broken Hill,
- to encourage and provide opportunities for local employment growth, and the retention of the population, in Broken Hill,
- to encourage the retention of mining and acknowledge that industry's heritage and regional significance,

- to identify, protect, conserve and enhance Broken Hill's natural assets,
- to identify and protect Broken Hill's built and nationally significant cultural heritage assets for future generations,
- to provide for a range of housing types and living opportunities,
- to allow for the equitable provision of services and facilities for the community,
- to provide for future tourist and visitor accommodation in a sustainable manner that is compatible with, and will not compromise, the natural resource and heritage values of the surrounding area.

#### 3.3.2 Preserve the heritage and streetscapes of the City

##### National Heritage Listing

In recognition of its outstanding contribution to Australia, the City of Broken Hill became the Nation's First Nationally Heritage Listed City on 20 January 2015. Inclusion on the National Heritage List is the highest heritage honour in Australia. It recognises and protects our most valued natural, indigenous and historic heritage sites and is a collection of 103 sites which have been deemed to have "outstanding significance to the nation". Council first nominated the City for listing in 2005, with environmental lawyer and the Chairman of the International National Trusts Organisation, Professor Simon Molesworth AO, QC, spearheading the campaign over the last 10 years. The City was assessed against nine values by the Australian Heritage Council (AHC).

The City of Broken Hill met 8 of the 9 criteria by demonstrating the following:

- Historic value taking into account its mining importance, industrial relations significance, and the initiatives with respect to regeneration of native vegetation
- Rarity as a mining town with more than 125 years of continuous mining activity
- Research value with respect to mining inventions and diverse ore bodies
- Ability to demonstrate the principal characteristics of an evolving mining town
- Aesthetic significance
- Creative and technical achievements through the discovery of new and revolutionary mining processes

- A place with strong community spirit and resilience
- Recognition of significant people such as Charles Rasp, WL Baillieu, WS Robertson and GD Delprat



large crowd gathered for the official announcement on 20 January 2015



Mayor Wincen Cuy, Peter Oldsen, Elizabeth Vines and Professor Simon Molesworth

### Heritage Advisory Service

Council provided a free heritage advisory service during the reporting period. This is a key service that provides free conservation assistance and expertise for the community on all areas of heritage conservation including:

- practical conservation advice for heritage places (commercial, residential and public)
- upgrades of building facades and verandahs
- external paint schemes for all properties
- preparation of heritage strategies and reports where required
- advocacy for heritage issues within the City in a wider arena.

| Year             | Number of People accessing the service |
|------------------|--|
| <b>2012/2013</b> | 80                                     |
| <b>2013/2014</b> | 81                                     |
| <b>2014/2015</b> | 83                                     |
| <b>2015/2016</b> | 79                                     |

### Built Heritage Activities

Council provides two programs to support Broken Hill's existing heritage – Commercial Paint Grants and the Verandah Revival Program.

The Commercial Paint Grants provide up to \$500 or 50% of the total project cost for residential premises and \$1,000 grants or 50% of the total project cost for commercial premises.

The Verandah Revival Program concentrates on the construction, reconstruction and/or restoration of verandahs for commercial buildings, particularly within the CBD.

| Year             | Heritage Paint Program | Verandah Restoration Program |
|------------------|------------------------|------------------------------|
| <b>2012/2013</b> | 21 grants              | 2 loans                      |
| <b>2013/2014</b> | 18 grants              | 2 loans                      |
| <b>2014/2015</b> | 16 grants              | 2 loans                      |
| <b>2015/2016</b> | 9 grants               | 1 loan                       |

### 3.3.3 Reuse and repurposing of the existing built environment is managed in a sustainable manner

#### Development Application Tracking

The NSW DPE has provided Council with grant funding of \$15,000 to launch an upgraded online portal to make it easier for residents and local businesses to follow the progress of their Development Application (DA).

The tool provides easily locatable information about DAs and ensures there is sufficient time for the community to comment on new proposals, where permitted.

This collaboration demonstrates Council's Planning, Development & Compliance Department's support of the commitment to the introduction of more online services for NSW citizens through its ePlanning Program and the

NSW Planning Portal. The program seeks to provide the community and industry with easy online access to planning services and authoritative information from anywhere at any time. The online tool features improved functionality, including a mapping function allowing people to view where new developments are proposed.

DA tracking ensures that people can find the information they need at their fingertips in order to keep track of the progress of an application and make an informed and well-considered submission to Council. This type of tool also assists in ensuring transparency in the assessment process. To view the upgraded tracking portal, visit Council's DA tracking page [www.datracker.brokenhill.nsw.gov.au](http://www.datracker.brokenhill.nsw.gov.au)

#### **Electronic Housing Code**

Council switched on the Department's Electronic Housing Code in September 2015.

A complying development is a straight-forward project that meets all the building standards for complying development, without the need for a development application.

The Electronic Housing Code means:

- Faster planning approval times for straight-forward home building or renovations.
- Conveniently-located and simple to understand information on what is allowed on a property without a development application.

The Electronic Housing Code is a tremendous tool that offers a range of advantages that the old paper system can't match.

For more information, please visit [www.electronichousingcode.com.au](http://www.electronichousingcode.com.au)

#### **Public Health Inspections**

Council undertakes annual inspections and audits of food premises, cooling towers, skin penetration establishments, commercial swimming pools and spas, and septic tanks.

During 2012-2016 Council conducted inspections to local food premises and other commercial enterprises as listed in the table below.

| Inspection Type and Number of inspections | 2012 /13 | 2013 /14 | 2014 /15 | 2015 /16 |
|---|----------|----------|----------|----------|
| <b>Cooling Towers</b>                     | 0        | 8        | 8        | 8        |
| <b>Skin Penetration Establishment</b>     | 26       | 7        | 5        | 6        |
| <b>Food Premises Public</b>               | 149      | 136      | 210      | 195      |
| <b>Swimming Pools</b>                     | n/a      | 34       | 30       | 20       |

Council received food complaints related to handling/hygiene, foreign matter and food quality. During 2012-2016 the number of complaints received has reduced, which could be attributed to regular inspections and support provided to local businesses.

| Year             | Number of Complaints Received |
|------------------|-------------------------------|
| <b>2012/2013</b> | 13                            |
| <b>2013/2014</b> | 8                             |
| <b>2014/2015</b> | 5                             |
| <b>2015/2016</b> | 5                             |



## Development Activity

The following tables summarise development applications received by Council 2012-2016. The general trend is an annual decrease in the number and value of applications received.

| Year             | No. DA's | Value        |
|------------------|----------|--------------|
| <b>2012/2013</b> | 206      | \$19,800,766 |
| <b>2013/2014</b> | 197      | \$14,903,631 |
| <b>2014/2015</b> | 188      | \$13,094,814 |
| <b>2015/2016</b> | 170      | \$23,824,789 |

Major Projects during the reporting period have included:

- Hungry Jacks Building Upgrades
- YMCA Building Upgrades
- Additional 5 motel units
- Alterations to RSPCA
- Shop/Office added to the Uniting Church
- Health Club and Gymnasium
- Medical Centre
- New Holding Cells for the Court House
- Student accommodation
- Shed and amenities block at the Broken Hill Waste Management Facility
- Extensions and renovations to Barrier Social Democratic Club
- Extension to McDonald's Restaurant
- Upgrade to Civic Centre
- New hanger at Royal Flying Doctor Service
- Refurbishment of ground floor and basement at Broken Hill City Council Administration Building for Archives
- Development of RV site at Broken Hill Golf Club
- Refurbishment of premises as funeral home



The new weighbridge at the Broken Hill Waste Management Facility



Council's General Manager James Roncon with Kevin Humphries, MP, Member for Barwon, inspecting the progress of the Civic Centre upgrades



The ground floor foyer at the Civic Centre during the upgrade



A concept design of how the Council Administration Building might look with the refurbishment of the ground floor to include a public display of the Broken Hill Archives



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