

**STATE OF ENVIRONMENT
REPORT 2016-2021**

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		
STRATEGY	3.1.1 Review Waste Management Strategy and implement actions to reduce environmental footprint		
FUNCTION	Public Order		
FILE REFERENCE NUMBER	11/146	EDRMS NUMBER	D21/48781
RESPONSIBLE OFFICER	Manager Sustainability and Waste		
REVIEW DATE	2024		
DATE	ACTION	MINUTE No	
24 November 2021	Presented to Council	N/A	
NOTES	Images sourced from Council's Image Library © Copyright Broken Hill City Council 2016		
ASSOCIATED DOCUMENTS	Community Strategic Plan 2033 Annual Report 2020/2021		

TABLE OF CONTENTS

TABLE OF CONTENTS	3
STATE OF ENVIRONMENT REPORT	4
BROKEN HILL COMMUNITY STRATEGIC PLAN 2033	4
KEY DIRECTION 3: OUR ENVIRONMENT.....	4
OBJECTIVE 3.1 – OUR ENVIRONMENTAL FOOTPRINT IS MINIMISED	9
3.1.1 Reduce resource consumption and minimise waste	9
3.1.2 Increase use and innovation of renewable resources and decrease the use of non-renewable resources	12
3.1.3 Change consumer behaviour to reduce impacts on the environment without affecting quality of life	14
3.1.4 Reuse and recycling of resources is embraced by the community.....	14
3.1.5 Secure a permanent clean, reliable and sustainable water supply for the area	15
3.1.6 Investigate and plan for the minimisation of environmental impacts associated with mining activity on the City	16
OBJECTIVE 3.2 – NATURAL FLORA AND FAUNA ENVIRONMENTS ARE ENHANCED AND PROTECTED	21
3.2.1 Protect and enhance regeneration areas for the benefit of the City	21
3.2.2 Increase awareness and understanding of the natural environment	22
3.2.3 Increase involvement in actively protecting the natural environment.....	23
3.2.3 Manage the impact of pests and weeds on Broken Hill's natural environment	24
OBJECTIVE 3.3 – PROACTIVE, INNOVATIVE AND RESPONSIBLE PLANNING SUPPORTS THE COMMUNITY, THE ENVIRONMENT AND BEAUTIFICATION OF THE CITY	25
3.3.1 Encourage environmentally sustainable building and subdivision.....	25
3.3.2 Preserve the heritage and streetscapes of Australia's First Heritage City.....	25
3.3.3 Reuse and repurposing of the existing built environment is managed in a sustainable manner	

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 2016 to 30 June 2021.

BROKEN HILL COMMUNITY STRATEGIC PLAN 2033

During 2009 the Office of Local Government released the finalised guidelines and manual for the implementation of Integrated Planning and Reporting (IP&R). 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 refer to councils being accountable to their community and to fully engage with their community in the development of plans and strategies.

The IP&R Framework requires councils to develop a Community Strategic Plan, which outlines the Vision, Goals and Strategies for the community. The plan is not limited to the responsibilities of any one government or organisation.

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.

Key Directions taken from the Broken Hill 2033 Community Strategic Plan include:

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

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 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.

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. Participants in Broken Hill 2033 Community Strategic Plan consultation activities in 2013, 2014 and 2017 expressed a number of significant aspirations for the future which are incorporated in this planning document.

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 & 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.

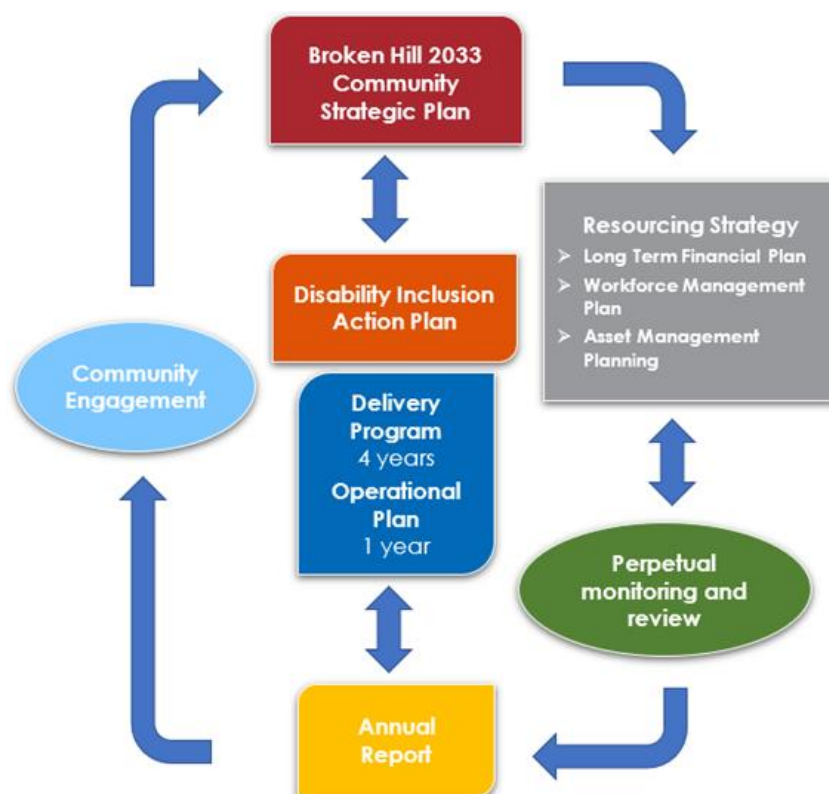
Each year, our success in achieving the goals and strategies set out in these plans are reported through Council's **Annual Report**. The **State of Environment Report** is a report that is required in the year in which an ordinary election is held and included in the Annual Report.

COMMUNITY ENGAGEMENT

Council undertook a series of engagement activities in the local community between March 2020 and July 2021, to gather information to inform the Community Strategic Plan - Your Broken Hill 2040.

This engagement included workshops, interviews, surveys and pop-up engagement sessions in busy areas of the City over the 15-month period. Engagement was undertaken prior to the implementation of public health measures related to the COVID-19 pandemic and post the first lockdown, to test the information gathered in the initial engagement period.

The community's attitudes about the environment had not changed in that time. The Broken Hill community prioritises the environment and understands the influence of a drying climate on the liveability of the City and residents' health and wellbeing, including physical, social and emotional. The community values the regeneration area that encircles the City and the need to maintain and support the natural environment contained within it and in the wider region.



Economically, the community identified the opportunities present in becoming a centre for recycling, green power generation and playing a part in leading environmental industrial developments.

The community identified the natural environment beyond the City bounds for eco-tourism opportunities, education and recreation (including bushwalking, hiking and mountain bike riding, bird and fauna watching) and the need to protect the environment so that benefits will flow back to the people of the region.

Additional education, training, career development and general knowledge about the environment and the opportunities present were identified as a need.

The community identified training and educational opportunities such as tertiary courses, permaculture opportunities, water saving measures.

Knowledge about how drought affects the land, water and air are important, as is networking with like-minded people to discuss and learn about environmental measures.

A smaller group of residents sought more information such as technical information and investment options for local solar farms and other power generation.

The protection of the environment and the enhancement of the greening of the City, aids in the liveability of the City and region and is also seen as an action to be highly prioritised to the community.

Preparation for the widespread use of electric cars and other developments is seen as a priority for the community, so that it can embrace change and also cater to our current and new markets of tourists.

The COVID-19 pandemic highlighted the value of comfortable outdoor spaces and the community saw value in enhancing our outdoor spaces, to ensure comfort and amenity for longer periods of the year.

Greening streets to enhance liveability creates enhanced opportunities to walk or cycle, rather than utilising private vehicles, which is also recognised as a primary objective for the community.

Overall, the care, protection, preservation and growth in areas influencing and utilising the environment are prioritised by the community of Broken Hill. This will be reflected in the Your Broken Hill 2040 CSP.



Image: Broken Hill City Council Community Engagement Day, 2020.

KEY DIRECTION 3: OUR ENVIRONMENT

CITIES POWER PARTNERSHIP

In 2017, Broken Hill City Council became a Power Partner with [Cities Power Partnership](#). This partnership enables Council and the community to work in collaboration with other Councils and stakeholders, to investigate best practice, share opportunities and knowledge and ensure that a national asset is protected for generations to come.

Broken Hill City Council has committed to the following five Cities Power Partnership environmental pledge items:

- Renewable Energy Action
- Energy Efficiency Action
- Sustainable Transport Action
- Sustainable Transport
- Work Together and Influence

Pledge #1 Renewable Energy Action

- Investigate opportunities for Council buildings and facilities to achieve 100% renewable status – Install renewable energy (solar PV and battery storage) on council buildings for example childcare facilities, libraries, street lighting, recreation centres, sporting grounds, and council offices.

The adoption of Council's Sustainability Strategy set targets around Council's buildings being powered by renewables by 2023.

Council has engaged a consultant who has prepared a Renewable Energy Action Plan that will seek to pursue that goal. Stage 1 of the Plan has been approved by Council and commenced in 2021. Council has also completed the design of its Cultural Precinct and Library & Archive project which will be underpinned by the construction of a sustainable new library and archive, powered by renewables complete with battery back-up. Link provided below.

<https://www.youtube.com/watch?v=dFJV4YQzPXI>

Pledge #2 Energy Efficiency Action

– Rollout LED street lighting with smart controls. Council is working with other southern Councils in NSW on the Southern Lights Project, to reduce energy usage and maintenance of its street lighting infrastructure with the introduction of LED street lighting with smart controls.

Public lighting can use a large proportion of a City's energy budget – roll out energy efficient lighting (particularly street lighting) across the municipality.

Roll out of the replacement of the City's entire street lighting network with LEDs and smart controllers, has commenced in partnership with Essential Energy. It is envisaged that the lighting network will be able to seamlessly integrate into Councils IoT platform, to allow even greater efficiencies in lighting to occur.

Pledge #3 Sustainable Transport Action

– Renew and improve our cycling, walking and mobility connections to reduce carbon emissions and increase our City's liveability - Providing for adequate cycle lanes (both space and connectivity) in road design and supporting cyclists through providing parking and end-of-ride facilities (covered, secure bike storage, showers, bicycle maintenance and incentives).

Council has produced and adopted a Cultural Framework for Broken Hill, that in part commences work towards this pledge in terms of the walkability of the City. Council has adopted the principles of a 2.5 minute and 5-minute walking radius within the CBD and is looking at how that can be implemented in terms of parking and encouraging the community to be more active. Council is also considering the CBD master planning exercise, that will seek to firm up other mobility and connectivity issues in the City, which includes cycling.

Pledge #4 Sustainable Transport

– Introduction of hybrid or electric vehicles to Council's fleet as part of fleet replacement - Ensure Council fleet purchases meet strict greenhouse gas emissions requirements and support the uptake of electric vehicles.

Council has introduced one hybrid vehicle into its fleet as part of an initial trial and will seek to expand the hybrid fleet as vehicles come up for changeover. Council is also working closely with Electric Vehicle (EV) charging entities, to have a charger built in the City, from which council will then trial EVs as part of its fleet.

Pledge #5 Work Together and Influence

– Achieve 100% renewable status for the City of Broken Hill by 2030 - Set City-level renewable energy or emissions reduction targets and sustainable energy policies, to provide a common goal and shared expectations for residents and businesses.

The adoption of Council's Sustainability Strategy set targets around the City being powered by renewables by 2030. Council has adopted a Renewable Energy Action Plan and entered Stage 1 of the Plan implementation during 2021.

SUSTAINABILITY STRATEGY

Broken Hill City Council is committed to developing a sustainable and liveable City. As a result, Council faces a number of challenges within this space to ensure energy, procurement, carbon footprint, water, waste, environmental impacts and built environment are managed so future generations can enjoy the City in which we live in.

The Sustainability Strategy 2018-2023 provides a direction for Council to consider everything it does to work in a more sustainable way. It identifies 11 Sustainability Action Plans which include energy, water, waste, transport and the built environment. These action plans have been developed in line with the Sustainable Development Goals adopted by the United Nations as part of the 2030 Agenda for Sustainable Development.

Broken Hill City Council identified the following seven Sustainable Development Goals and 11 actions to which it can contribute:



1. Energy Efficiency Plan - Reduce energy use, costs and greenhouse gas emissions



2. Renewable Energy Plan – Produce energy from renewable sources to reduce costs and greenhouse gas emissions



3. Gas Consumption Plan - Reduce energy use, costs and greenhouse gas emissions



4. Transport Energy Plan - Reduce fuel consumption and promote active transport (reduce Greenhouse Gases)



5. Sustainable Procurement Plan – Use procurement to support positive environmental, social and economic outcomes



6. Carbon Emissions Plan – Measure and reduce greenhouse gas emissions



7. Water Plan - Reduce water use, costs and have a positive impact on liveability



8. Waste Plan - Reduce waste to landfill, increase recycling and re-use of resources



9. Plan for Minimising the Environmental Impacts of Mining - Improve the liveability of Broken Hill



10. Plan for Enhancing and Protecting the Natural Flora and Fauna - Improve the liveability of Broken Hill



11. Built Environment Plan - Increase the liveability of Broken Hill



Further information regarding the 11 Action Plans can be found within the Sustainability Strategy. This can be viewed online at:

<https://www.brokenhill.nsw.gov.au/Council/Other-strategies-documents/Sustainability-Strategy-2018-2023>

DECLARATION OF CLIMATE EMERGENCY

On 25 September 2019, Broken Hill City Council joined 55 other Local Governments in Australia, in declaring a climate emergency.

In becoming a signatory to the Paris Agreement, Australia agreed on the need limit global warming to 1.5°C above preindustrial levels. A climate emergency perspective acknowledges notes that immediate action is required, to reduce greenhouse gas emissions and a transition away from fossil fuels. By declaring a Climate Emergency, the Council is committing to accelerate our own level of response to climate change, as well as playing a key role in:

- Education on the climate emergency using existing or low cost communication channels, while building support for a broader climate emergency mobilisation at the state, national and international levels.
- Mitigation - reduce emissions and drawdown previous emissions.
- Build community resilience against some climate change impact.

At a local government level, in the latest Climate Change Adaptation survey, commissioned by NSW Office of Environment & Heritage and Local Government NSW, found that:

- The overwhelming majority (82 per cent) of local governments are currently experiencing impacts from climate change in their organisations, up from 59 per cent in 2015, with increasing awareness particularly at the executive levels of local government.
- Storms and flooding are still viewed as the most common climate impacts, while extreme heat and drought are described as having the most severe impacts.
- Concerns about impacts on assets and infrastructure, biodiversity and landscapes and general environmental health remain high, as are demands for emergency services, impacts on public safety and water supply/demand.
- Additional climate impacts have been identified in 2018; including urban heat effects, groundwater impacts, changed rainfall patterns (not drought), cold snaps (not long cold periods) and an increasing number of invasive species.
- Incorporation of climate change/adaptation measures into council operational plans has increased in recent years and prioritisation of climate adaptation activities has increased by in excess of 25 per cent since 2015.

Today there are 105 local governments in Australia that have made the declaration.

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 and innovation 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 permanent 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

Waste Collected at the Waste Management Facility

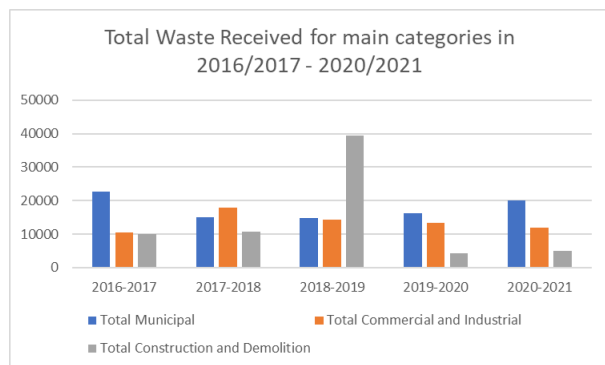
Total waste received at the Waste Management Facility remained relatively constant aside from the 2018-2019 reporting period averaging ~40,000 tonnes per year.

During the 2018/2019 period, construction and demolition waste increased nearly 400% from 10,727.69 tonnes to 39,529.58 tonnes.

This increase is attributed mainly to two major projects that occurred during this time - the demolition of the Far West Local Health District's Kincumber House and the construction of the Wentworth to Broken Hill pipeline.



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).



The last year of the previous reporting period, 2015/2016 was the first year that weighed data was collected with the installation of the weighbridge during this time. The software was upgraded in May 2021 to allow for greater accuracy of waste recording.

Waste Management Operational Improvement

A new Caterpillar 826K Landfill Compactor was acquired and began operating at the Waste Management Facility in October 2020.

In the first 7 months of operation, a noticeable improvement was made with the annual landfill survey identifying an additional 10,000m³ of available space at the Waste Management Facility and therefore potentially significantly increasing the life of the Facility.

Waste Reduction Campaigns

Waste Reduction Projects were carried out during the term which included the annual Household Chemical Cleanout, Waste Reduction Media Campaign in partnership with NetWaste, Recycle Right Competition, the Garage Sale Trail, Waste to Art and Clean Up Australia Day.



PARTICIPATION

226

Residents who participated as sellers, shoppers or attended a Trail Tutorial

11

Total sale, stall and Trail Tutorial registrations

434

Number of residents who visited the website

WASTE REDUCTION

1,005 kg

The estimated weight of items reused locally

33%

The percentage of items that would have otherwise gone to landfill

81%

The percentage of residents more likely to reduce waste after participating

COMMUNITY ENGAGEMENT

79%

The percentage of participants who feel more connected to the local community



The percentage of residents who would participate again

ECONOMIC DEVELOPMENT

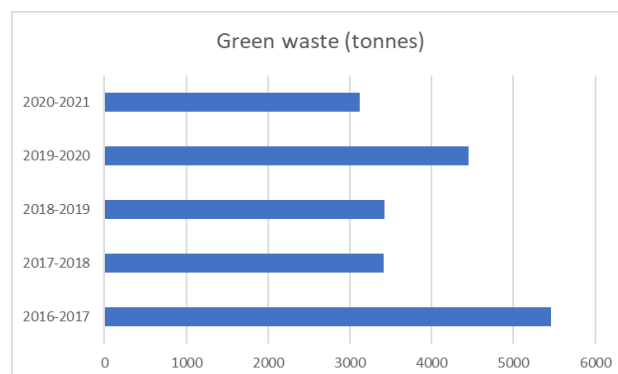
\$990

The total amount of money that changed hands locally over the weekend

Green Waste

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

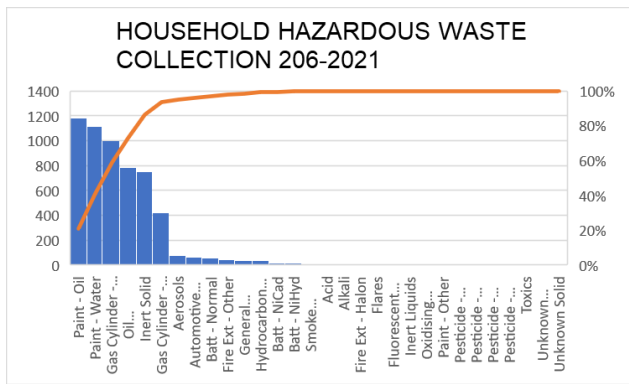
Green Waste is processed on site through contract shredding and either used as cover around the facility or stockpiled on site. A quantity of green waste is sent to landfill when contamination levels are too high.



Household Hazardous Waste Collections

Council participates in Household Hazardous Waste (HHW) collections, in partnership with NetWaste and the EPA. This incorporates a range of items and includes paints, fire extinguishers, gas bottles, fluorescence globes, batteries and aerosols. Residents can deposit these items at the Waste Management Facility fee free. This annual collection is partially funded by the NSW EPA and allows councils to collect hazardous items from households for reprocessing and recycling.

Since 2016, A total of 5,2136.25kg of HHW has been collected and exported from site.



Household Chemical Collection Campaign

The Council participated in a Household Chemical Collection campaign for the first time in 2021, with a total of 1,497kgs of household chemical collected.



Image: Household Chemical Cleanout community collection campaign.

Smart Bins

A roll out of 'smart bins' in the City's Central Business District commenced in 2019 and was completed in the 2020.

Smart bins operate on solar power and feature a compacting mechanism to allow the bins to hold up to sixteen times more waste than our standard bins.

The bins feature a cleaner and more hygienic enclosed design, a router to boost the City's free Wi-Fi network, a built-in extinguisher for bin fires and sensors to alert Council staff if a bin is full or emitting unpleasant odours.

Being enclosed and through the compaction mechanism, the smart bins also result in a significant decrease in wind-blown litter around the City.

A total of 29 Smart Bins were installed within the Central Business District and outlying areas.



Image: 'Big Belly' smart bin

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

Renewable Energy Action Plan

During 2020, the Broken Hill City Council Renewable Energy Action Plan (REAP), was prepared by Constructive Energy Pty Ltd in consultation with the Environmental Key Working Group, to examine the options available to the Council on achieving 100% renewable status.

The REAP was developed to support the Council's Sustainability Strategy 2018 – 2023, the 11 action plans within that strategy, the five Cities Power Partnership pledge items including energy efficiency, renewable energy, sustainable transport, working together and the Climate Emergency Declaration, adopted September 2019.

The REAP addresses the Council's pledges to investigate opportunities for Council buildings and facilities to achieve 100% renewable status, ensure Council fleet purchases meet strict greenhouse gas emissions requirements and support the uptake of electric vehicles and set City-level renewable energy or emissions reduction targets and sustainable energy policies, to provide a common goal and shared expectations for residents and businesses.

The REAP presents renewable energy options that will enable Council to achieve its pledge to achieve 100% renewable status for the City of Broken Hill by 2030.

The Plan outlined priority renewable energy options including energy efficiency measures, smart metering and load control, solar (medium scale solar arrays and distributed solar installation), Council as an energy generator/retailer, energy storage, retail arrangements, transport and plant; and other renewable energy options such as pumped hydro, wind, virtual power plants, bioenergy, microgrids etc.

Three potential pathways were identified as potential preferred options to achieve net zero emissions on Council assets by 2023 and within the City of Broken Hill by 2030. The identified pathways include:

1. mid-scale array;
2. distributed energy and community program; or
3. wait for a 3rd party to de-carbonise the local grid

Following an initial review of the REAP and in consultation between Constructive Energy and the Key Working Group, it was recommended to adopt the mid-scale array option in conjunction with improved energy monitoring and control.

This pathway to 100% renewable was recommended, as it will provide an integrated approach to energy management. Energy monitoring and control will provide visibility on consumption patterns within Council's infrastructure, optimise energy use and provide cost savings to Council. A mid-scale array is recommended as a Council owned and controlled asset, it has the potential to generate both energy for self-consumption and a revenue stream to off-set unavoidable consumption costs such as street lighting.

The REAP additionally outlines a potential roadmap for Council to adopt to achieve the objectives of this Plan.

The Renewable Energy Action Plan creates a blueprint for Broken Hill, to use to map the course of our own history, as an innovative and adaptive City.

Council plans to see all of its own buildings and ancillary operations powered by renewables by 2023 and the broader City by 2030 – meaning that the costs of electricity may very well be neutralised.

The Renewable Energy Action Plan was presented to Council and the community in late 2020 for consultation and feedback; and adopted in early 2021 as the road map forward.

Energy Efficiency Action

The roll out energy efficient lighting (particularly street lighting) across the municipality continued throughout the reporting period. Council worked in collaboration with other southern Councils in NSW on the Southern Lights Project, to reduce energy usage and maintenance of its street lighting infrastructure, with the introduction of LED street lighting with smart controls. A joint project between Essential Energy and Council saw Council purchase new LED light fixtures and Essential Energy completing installation.

What is Council's Energy Consumption?

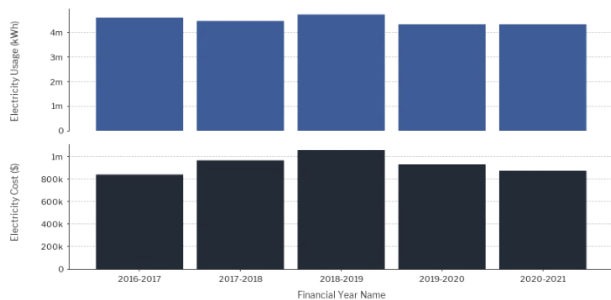
Council monitors its energy consumption through the subscription service, Azility (rebranded from Planet Footprint 2019).

During the 2012-2016 reporting period, Council undertook a major LED lighting project to assist in reducing energy costs. This included the removal of 770 lights and the installation of 446 new LED lights across four buildings - Administration Centre (first floor only), Visitors Information Centre, Broken Hill Regional Art Gallery and the Broken Hill Regional Airport.

Since the installation of the LED lighting in May 2014, the following reductions have been experienced:

- Energy Usage (GJ) -17%
- Energy Costs (\$) - 29%
- Energy Costs per GJ (\$) -11%
- Electricity Usage (kWh) -18%
- Electricity Costs -27%

Energy Costs and Consumption (kWh)



Sustainable Transport Action

Sustainable Transport Action provides for adequate cycle lanes (both space and connectivity) in road design and supporting cyclists through providing parking and end-of-ride facilities (covered, secure bike storage, showers, bicycle maintenance and incentives).

The Council's Power City Partnership pledge to renew and improve our cycling, walking and mobility connections, will reduce carbon emissions and increase our City's liveability.

The Active Transport Plan was developed by Council includes bicycle, walking and mobility paths. In 2020, Council approved \$14M over the next 10 years towards prioritised actions in Active Transport Plan.

AGL Solar Farm – Supporting Renewable Energy

Identified as having one of the highest levels of solar radiation in NSW, Broken Hill was one of two locations selected for a 53 MW solar photovoltaic (PV) power plant delivered by AGL in 2015.

This project was jointly funded by the Australian Renewable Energy Agency (ARENA) and the NSW Government, with \$166.7 million and \$64.9 million in funding provided respectively.

The Broken Hill Solar Plant generates approximately 126,000 megawatt hours (MWh) of clean, renewable electricity each year, which is enough electricity to meet the needs of approximately 22,000 average Australian homes.

The solar plant reduces greenhouse gas (GHG) emissions by over 103,710 tonnes of CO₂ 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/broken-hill-solar-plant>



Image: Broken Hill Solar Plant.

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

Reducing Landfill - Reusable Bags and Keep Cups

During 2018, Council introduced reusable coffee cups as an initiative to reduce landfill. Through media releases and social media posts, Council encouraged the community to help the environment, reduce landfill and save money every time they have a coffee, by purchasing a Broken Hill KeepCup.

Council and other community organisations supported and continue to support the ban of plastic bags in Broken Hill, by promoting the use of reusable bags that are made from 100% recycled materials.

The vision is for Broken Hill to become plastic bag free and demonstrate our commitment to becoming an environmentally conscious and sustainable City.

To date, nearly 700 shopping bags and 400 keep cups have been distributed.



Image: Councillors Maureen Clark and Marion Browne April 2019 with Council's reusable shopping bags. Source: <https://www.facebook.com/135116653229221/photos/pb.100064317542525.-2207520000.../2581154211958774/?type=3>

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

WASTE MANAGEMENT FACILITY UPGRADES

New Weighbridge Software

Installation and go-live of new weighbridge software, 'Clearweigh' completed in the week commencing 12 April 2021. The new software will enable greater accuracy and reporting of waste streams, to assist in future waste management improvements.

Waste Transfer Station

The Waste Transfer Station opened in February 2020, to improve recycling opportunities, reduce waste to landfill and reduce windblown litter.

Residents are encouraged to sort their waste prior to visiting to the Waste Management Facility, to utilise recycling opportunities and assist in reducing the amount of waste heading to landfill.

The Waste Transfer Station also encourages residents to recycle and rethink waste and removes the indiscriminate 'tipping' of waste.

The Waste Transfer Station creates a more user-friendly facility, provides easy access for vehicles to utilise sealed roads and provides a clean and tidy space to easily dispose of waste.



Image: New Waste Transfer Station funded with the assistance of the NSW Government's Waste Less Recycle More

3.1.4 Reuse and recycling of resources is embraced by the community

WASTE RECYCLING

Low recycling figures continue in Broken Hill and will remain low, while recycling is dependent on residents and businesses delivering their own recycling to the Waste Management Facility.

In 2021, NSW Government released the NSW Waste and Sustainable Materials Strategy 2041. The Strategy sets the following targets for waste reduction:

- Reduce total waste generated by 10% per person by 2030.
- Have an 80% average recovery rate from all waste streams by 2030.
- Significantly increase the use of recycled content by governments and industry.
- Phase out problematic and unnecessary plastics by 2025.
- Halve the amount of organic waste sent to landfill by 2030.

Community Recycling Centre

A Community Recycling Centre (CRC) was 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 collects household hazardous wastes, including gas bottles, fire extinguishers, paint, fluorescent globes and tubes, car batteries, household batteries, motor and other oils and smoke detectors.

An additional mobile CRC cabinet was placed in the Broken Hill City Library at the beginning of 2020, to provide an accessible drop off point for household hazardous wastes.



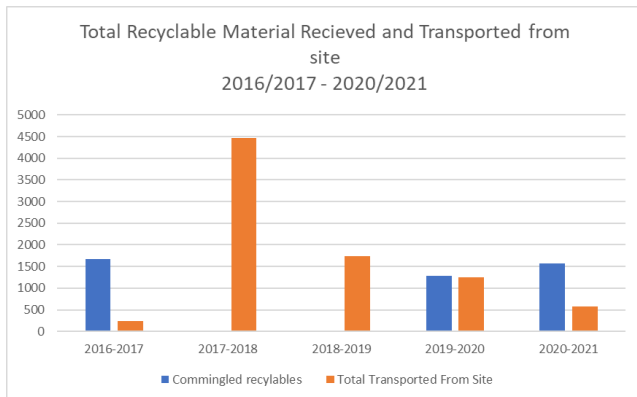
Image: Mobile Community Recycling Cabinet in place at the Library

Community Recycling

The Community Recycling Centre (CRC) continued to improve the recycling capability of the facility, with commingled recyclables increasing during the term.

The additional, mobile CRC installed in the Broken Hill City Library at the beginning of 2020, allowed for greater accessibility to recycling of household problem items.

A total of 1,575 tonnes of comingled recyclables was received in 2020/21, an increase of 23% from the 2019/200 reporting year.



The table above shows the comparison between commingled recyclables and material that is transported from site to be recycled.

The majority of transported material is made up of ferrous (iron or steel) which is not recorded under recyclable material received.

The spike in 2017/2018 reflects the number of roof replacement that occurred during this period, as a direct result of the 2016 hailstorm.

In the 2020/2021 reporting period, COVID-19 restrictions limited the collection of materials, significantly reducing the amount of material transported from site.

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 permanent clean, reliable and sustainable water supply for the area

Wentworth to Broken Hill Pipeline

The 270km Wentworth to Broken Hill Pipeline (W2BH) commenced construction in January 2018 and was completed at the end of the same year. The pipeline supplies 37.4 megalitres of raw water per day from the Murray River to Broken Hill. The pipeline infrastructure contains a 720 megalitre bulk water storage facility and four pumping stations along the route.

Council regularly met and corresponded with Water NSW and contractors on the progression of the pipeline and raising any matters of concern on community safety, communication to the community, loss of vegetation in the Albert Morris Regeneration Area, loss of trees in road verge/nature strips, road reinstatement requirements, soil management and contamination management.

Essential Water – Catchment Management

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

Essential Water also operates and maintains three storages: Stephens Creek Reservoir, Umberumberka 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 Umberumberka 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.

Full report details are available on Essential Water's website:

<http://www.essentialwater.com.au/content/water-quality-reports>.

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 established the Broken Hill Environmental Lead Program (BHELP), with the 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.

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 saw enhancements to the Child & Family Health's existing program of blood lead testing, monitoring and home assessment and 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 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 (MoU) - Broken Hill Environmental Lead Program

In May 2016, the Broken Hill Environmental Lead Program (BHELP) commenced a formal partnership with 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.

Since 2015, over 20 hectares of public land have been remediated through the partnership between Council and BHELP under the MoU. This equates to an area over 40 football ovals and includes parks, ovals, sporting grounds and playgrounds.

The aim is to deliver targeted, cost-effective and sustainable lead remediation works based on research and monitoring and risk assessments, to remove or mitigate lead exposure and provide a safer environment for local children and the community into the future.

During 2020-2021, a major project was completed to reduce airborne lead contaminated dust and access to soils with high lead levels, on over two hectares of public land in the vicinity of South Road, Block 10 and the RSPCA. The project involved clearing the area, filling and compacting soil with road base and capping with a rock mulch layer.

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

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

- **Modification and scheduling of a new street sweeper**

The Council's street sweeper increased its sweeping schedule to give priority to local streets with known high lead levels in storm water sediment /runoff. The street sweeper was fitted with a dust control system to keep lead dust generated by sweeping activities to a minimum and to avoid recontamination of previously lead-remediated sites.

- **Education**

BHELP continued to collaborate with key stakeholders in the development of community-wide and targeted programs, interventions and initiatives to generate awareness and knowledge of the key LeadSmart behaviours, that people should adopt in their everyday life, to help keep themselves and other safe from lead harm.

Source: https://leadsmart.nsw.gov.au/wp-content/uploads/2021/05/BHELP-2019-20-Annual-Report_FINAL.pdf

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.

Blood Lead Levels

Advocacy and funding from the BHELP initiated and supported the review of the Broken Hill Clinical Guidelines and the reintroduction of screening of children aged 6 months to less than 12 months in 2018, for the first time since 2012. Blood lead tests are now offered at 6, 9 and 18 months in addition to the pre-existing monitoring at 12 months, 2 years, 3 years and 4 years. In 2019, there was an increase in the number of tests undertaken by Child & Family Health and Maari Health Aboriginal Corporation, from 1,569 in 2018 to 1,754.

In addition, the proportion of children participating in the screening program has increased by 10% - from 77% in 2015 to over 87% in 2019 - up from 82% in 2018. A total of 201 children aged 6 to less than 12 months were tested in 2019 - an increase from the 156 children in 2018.

The geometric mean lead level of children in this category was 2.8 µg/dL, a slight increase from 2.7 µg/dL in 2018, but down from 3.9 µg/dL in 2012. The proportion of all children in the 6 months to less than 12 months age category with blood lead levels below 5µg/dL increased by 10%, from 75% in 2012 to 85% in 2018 and 2019.

Source: https://leadsmart.nsw.gov.au/wp-content/uploads/2021/05/BHELP-2019-20-Annual-Report_FINAL.pdf

Blood lead levels, full year 2012-2020 comparison (All children)

Full year	2012	2013	2014	2015	2016	2017	2018	2019	2020
GeoMean µg/dL	5.4	5.5	5.1	5.7	5.8	5.5	4.6	5.1	4.7
Max	49.0	46.0	29.0	30.0	50	39	56.7	41.8	34.7
Mode	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0
Median	5.0	5.0	4.0	5.0	5.0	5.4	4.8	5.1	4.7
95 percentile	17.0	16.0	16.0	16.0	17.9	17.7	15.0	14.8	14.7
No. children tested	674	695	719	679	687	730	637	681	689

Image: Blood lead levels in children 2012-2020. Source: Memo to BHCC Lead Reference Group, 14 May 2021.

Broken Hill Environmental Lead Study

The Broken Hill Environmental Lead Study (BHELS) was commissioned by the NSW Environment Protection Authority (EPA) in 2016, to inform remediation efforts underway as part of the Broken Hill Environmental Lead Program (BHELP), to address lead contamination and exposures.

OEH was engaged to develop and deliver this four-year study, in collaboration with the EPA and with Macquarie University. The BHELP Steering Committee has endorsed the study as a high priority project.

The study aimed to monitor airborne and deposited lead and assess contributions of current emissions from Line of Lode mining leases and emissions from areas affected by historic emissions ('legacy lead').

Source:

<https://www.environment.nsw.gov.au/topics/air/research/current-research/broken-hill-environmental-lead-study>

As part of the study, an extensive network of wind directional high-volume air gauges was installed at five sites representative of community exposure to lead in Broken Hill.

Dust deposition samplers were installed at the same sampling sites, to provide information on total dust deposition and deposited lead levels. Each air gauge continuously measures the wind speed and direction, air temperature and barometric pressure, and logged the volume of air sampled. The filters are changed weekly. Total suspended particle (TSP) samples are collected in the filters of the deposition samplers over a seven-day period before being sent to an independent laboratory for analysis.

The sampling program continues; however, three-years of sampling data will be used to outline likely source areas contributing to the amount of lead that is in the air and deposited at various locations across Broken Hill.

Data will also be used to track seasonal variations such as temperature, rainfall and wind conditions and impacts on lead levels over time. This information will be useful to inform targeted, zonal public land and home remediation programs into the future.

Source: https://leadsmart.nsw.gov.au/wp-content/uploads/2021/05/BHELP-2019-20-Annual-Report_FINAL.pdf

CBH Resources Extension of Underground Mining - Project Approval

Broken Hill Operations Pty Ltd (BHOP) underwent several Environmental Assessments during the reporting period including:

- Original EA June 2010
- EA MOD1 Relocation of Primary Vent November 2011
- EA MOD4 Erection of Concrete Batching Plant & Extension of TSF2 April 2017
- EA MOD5 Warehouse Extension, Cement Silo and Adjustment of Air Quality Monitoring August 2018
- EA MOD7 - Utilising Rock Fill Material in BHP Pit for TSF2 Embankment Construction June 2019
- EA MOD8 - Underground Mining Extension April 2021

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 armouring 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 3,000m².

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.

BH 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. Total Ground Control (green mixture) continues to be applied to free areas atop historic waste dumps and is effective for between 12 and 18 months depending on rainfall.

An additional Dust Suppressant called Dustbinder which has been effective in controlling dust lift-off from road and tailings dam surfaces. It is also used by Perilya and CMC.

Image below is 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

Perilya Broken Hill Limited - Environmental Monitoring

Perilya has eleven deposited particulates monitoring points located around the North Mine and Potosi Operations and nine monitoring points located around the Southern Operations site. Additionally, environmental license conditions require five ambient air monitoring sites, one located at the Potosi Operations, two at the North Mine and two on the Southern Operations lease. Perilya currently uses high volume air samplers (HVAS) for the ambient air monitoring program. The HVAS operate (sample) for 24 hours every six (6) days. Perilya also monitors two (2) real time air quality monitoring sites, one located on the Argent St side of the North Mine and the other located on the Menindee Rd side of the North Mine. Perilya currently uses Beta Attenuation Monitors (BAM) for the real time air monitoring program. The BAM operate (sample) for 24 hours every day.

Perilya has introduced several initiatives to suppress dust emissions: enhanced industrial sprinklers; water carts on haul roads and open areas; and tighter dust monitoring.

Perilya received no complaints during the reported period that pertained to dust emissions.

Details of the environmental programs and monthly reports can be accessed online: <http://www.perilya.com.au/health--safety--environment/environment>

Lead Remediation

Lead remediation projects undertaken during the reporting period included:

- Queen Street remediation works
- South Road - Block 10 remediation works
- AJ Keast Park fencing project
- E.T. Lamb Memorial Oval capping works
- Patton Park Refurbishment Project
 - Construction of shelter over new playground equipment
 - Handwash basin at the playground
- Fencing off the BMX track at O'Neil Park
- Ongoing Street sweeping operations

Street Sweeper



A new Street Sweeper was purchased in July 2016 with the support of the Broken Hill Environmental Lead Program who provided \$50,000 of funding over a 4-year period to support street sweeping in Broken Hill.

Some of these funds were allocated to install extra micro sprayers on the vehicle and to support extra sweeping time, particularly after wet weather events. Council and BHELP staff worked together to develop Lead Smart signage that was placed on the side of the street sweeper, promoting a lead safe community.

Mini Street Sweeper



To continue supporting a lead safe community, Council purchased a new miniature street sweeper in 2017, to keep the shopping precincts in the City's Central and South districts cleaner. The ride-on vehicle was predominantly used in the Central Business District, Patton Street and around the Civic Centre, to provide an extra level of cleanliness and to also maintain a neat appearance for tourists and locals.

Being more agile, the mini street sweeper was able to get into gutters and smaller spaces, while also cleaning footpaths in areas with high foot traffic and additional vehicle traffic.

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 87km² 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.

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.

The management of the Common and the Regeneration Area is governed by a Plan of Management, prepared by Council in 2003 under the *Commons Management Act 1989*.

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

The Living Desert

The Living Desert is Council's contribution to the environment, for the protection of native flora and fauna and for the better management of our ecosystem and sustainability. It includes the Sculptures and the John Simons Flora and Fauna Sanctuary.

The Sculptures comprise 12 sandstone artworks, completed in 1993 by artists from around the world and is now considered one of the top attractions in Outback NSW.

The Flora and Fauna Sanctuary comprises of an area of 180ha and was established in 2002, as a nature conservation and tourism facility.



Image: Sculptures. Source: Jackson Schorn Photography <https://www.facebook.com/JacksonSchornPhotography/photos>

During the reporting period, a number of improvements were made to the Living Desert and include:

- Starview Campsite
- 2.2km of Sanctuary Cultural Walk Trails
- New pathway at campsite
- New accessible BBQ
- New shelter for animal feed
- Updated tap and go ticketing system
- Educational signage installed



Image: New accessible BBQ and shelter.

The Living Desert continues to be a great attraction for visitors and locals alike, attracting averaging over 30,000 visitors annually.

In 2017, The Starview Campsite was opened and provides unpowered sites for RVs and a large tent site in a tranquil setting.

The campsite provides 15 unpowered sites, a wood-chipped tent area, a shelter with free gas BBQs and picnic tables, accessible toilets and showers, drinking water and star-view seating.



Image: Construction of new campsite walking trail.

The grounds are maintained by the 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 also undertake track maintenance.



Image: Living Desert Ranger, Darrell Ford taking care of the Reserve for 17 years. Source: <https://www.facebook.com/135116653229221/photos/pb.100064317542525.-207520000../2614216161985912/?type=3>

Living Desert Visitor Numbers

Year	Number of Visitors
2017/2018	31,137
2018/2019	30,996
2019/2020	22,123
2020/2021	47,680

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.

Whilst the numbers remained constant in the first half of the reporting period, 2019/2020 visitors were reduced due to the COVID-19 lockdown restrictions in the first half of 2020. Visitor numbers spiked in the following year, when the area saw significant tourist numbers following the 2020 lockdown.

3.2.2 Increase awareness and understanding of the natural environment

Waste Education

Media campaigns were conducted throughout the reporting period to increase awareness and an understanding of the natural environment. These included campaigns in partnership with NetWaste in the aim to reduce waste reduction. This campaign consisted of radio, newspaper advertising and posters for smart bins.

A campaign in partnership with the EPA was also conducted during 2020/2021. An illegal dumping campaign, funded by the NSW Environmental Protection Authority, commenced in 2021 to encourage the use of the EPA's RIDonline system to report illegal dumping.

RIDonline is a database used by councils and government agencies across NSW to record and manage illegal dumping incidents.

When you report via RIDonline, Council is sent an email alert about the incident so we can respond.

When illegal dumping is reported, you help the EPA and Council:

- protect human health and the environment;
- detect and penalise dumpers;
- find and clean up dumped waste;
- identify dumping hot spots so we can develop strategies to prevent this behaviour in future in the local area.

The Reporting Illegal Dumping Online reporting system can be found via this link
<https://ridonline.epa.nsw.gov.au/#/home>.

Riddiford Arboretum

The Riddiford Arboretum Sculpture Symposium was funded by Create NSW, in partnership with Broken Hill City Council. Artist Robbie Rowlands was commissioned by Council to create the sculptural works installed at the Riddiford Arboretum in 2020.

The project combines nature's forms and our mining heritage to interpret the significance of Australia's first green belt and the ground-breaking work of Albert Morris, the Barrier Field Naturalists' Club and the Zinc Corporation to green our City.

Combining the Sculpture Symposium with the Arboretum was a perfect way to provide an educational tool for current and future generations of locals and tourists, to understand our unique conditions here in the outback and the steps we've had to take to overcome them.



Image: Riddiford Arboretum sculpture, 'Nestle' – Robbie Rowlands, 2020.

3.2.3 Increase involvement in actively protecting the natural environment

Free Tree Give Away

Council participated in Free Tree Giveaways annually from 2016 to 2019 and is proud to support this initiative, where residents of the Broken Hill Local Government Area receive free native trees or shrubs, to plant in their garden to continue to green our City.

Planting more trees and shrubs in our City is identified as important, not only for visual appeal and urban heat reduction, but more importantly for the long lasting positive environmental impacts. Council focuses on a range of native trees and shrubs with a strong focus on local species.



Image: 2017 Tree give away saw 1300 plants distributed to the community. Source:

<https://www.facebook.com/135116653229221/photos/pb.100064317542525.-2207520000../1575331692541036/?type=3>

Tidy Towns Committee

The Tidy Towns Committee, as part of caring for our environment, regularly conducted clean-up activities throughout the term in a bid to reduce litter in and around our City. This small group of dedicated Committee members and volunteers worked tirelessly picking up litter in our parks, cemetery and roadways.

Throughout the term, Council supported the Broken Hill Tidy Towns Committee to submit entries to the Keep NSW Beautiful Blue Star Sustainable Cities Awards Programs.

Broken Hill's success in these awards, is an example of the Tidy Towns dedication to the local environment and a recognition of the City as a sustainable community.

Sustainable Cities Tidy Towns Awards 2020

WINNER: Overall Population Category D (Population category D: 12,001-20,000)

Judges' comment: Like many communities and towns in NSW, Broken Hill has been badly affected by the drought and more recently, the COVID-19 pandemic. Prior to these, Broken Hill was experiencing serious and unique threats to its viability caused by climate change, a decline in mining activity, isolation and a decline in population. The City Council resolved to address these threats and embarked on a plan to strengthening the City's resilience.

WINNER: Environmental Communication Award - Population Category D - Greening the Hill Mk2 - The Call to Action - Landcare Broken Hill

WINNER: Circular Economy Award - Population Category D - Lifeline Broken Hill Country to Coast Tip Shop

WINNER: Waste Less, Recycle More Award - Population Category D - Lifeline Tip Shop Recycling Centre, Lifeline Country to Coast from Broken Hill

WINNER: Community Spirit and Inclusion Award - Population Category D - Greening the Hill Mk2 - A Role for Everyone. Showing Australia how it can be done, Landcare Broken Hill

Highly Commended: Young Legend's Environment Award – Population Category D - Broken Hill Scouts Clean up their Act - 3rd Broken Hill Sea Scouts

2019

FINALIST: Population Category D: (Population category D: 12,001-20,000) - Don't Be a Tosser! Litter Action Award

WINNER: Smart Thinking.

Judges Comment: "Broken Hill is Australia's first heritage listed town and brings many attributes consistent with ongoing improvement to the table. Their stand-out was their Smart City Framework which will see them placed for future generations and allows the town to maintain their outstanding environmental and sustainability programs."

WINNER: Heritage and Culture Award - Broken Hill Mosque: The Surviving 'Ghan Town' Mosque in Australia

Highly Commended: Johns Bros Joyland – Sulphide Street Railway and Historical Museum. Environmental Communication Award

WINNER: Riddiford Arboretum Conservation Park Community Spirit and Inclusion Award

Highly Commended: Broken Hill Heritage Festival 2019.

2018

WINNER: Population Category D: 12,001-20,000 Heritage and Cultural Award - Broken Hill Regeneration Reserves Management Plan Community Spirit and Inclusion Award

SECOND: Broken Hill Cemetery Restoration
Highly Commended: 2018 Heritage Festival

2017

WINNER: Hey Tosser! Litter Action Award – Tidy Towns Volunteer Working Group

Highly Commended: Cultural Award – Sulphide Street Railway and Historical Museum Hospital Museum Annexe and Restoration.



Image: Councillor and Tidy Towns Organiser, Christine Adams with 2020 Tidy Town Award recipients.

Clean Up Australia Day and other Clean Up Activities

The Tidy Towns Committee, Living Desert Volunteers and the Riddiford Arboretum Committee worked hard and continued with regular clean-up activities throughout the term, with a total of nearly 100 clean up events taking place.

Volunteer Working Bees – 2016-2021		
Living Desert	Riddiford Arboretum	Tidy Towns – Clean Up Events
21	40	36



Image: 2021 Tidy Towns Clean Up Australia Day activity saw 22 people participating and 9m³ of rubbish and plastic removed from the cemetery and the surrounding bushland and creek.

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

Weed Spraying

Council officers continued with weed control programs throughout the term. In a Memorandum of Understanding with Western Land Services, species such as mesquite, cacti, thornapple, noogurra burr, Bathurst burr and onion weed were targeted.



Image: Prickly pear treated with herbicide in the regeneration area

KEY DIRECTION 3: OUR ENVIRONMENT

OBJECTIVE 3.3 – PROACTIVE, INNOVATIVE AND RESPONSIBLE PLANNING SUPPORTS THE COMMUNITY, THE ENVIRONMENT AND BEAUTIFICATION OF THE CITY

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 design

3.3.2 Preserve the heritage and streetscapes of Australia's First Heritage 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

The new LEP was gazetted on 30 August 2013 and can be viewed at

<http://www.legislation.nsw.gov.au/#/view/EPI/2013/506>.

During the reporting period, there have been 2 amendments. These amendments allowed for "additional permitted uses".

- LEP Amendment 2 – use of land at 39 Morgan Street, Broken Hill – for the purpose of a funeral home
- LEP Amendment 3 – use of land at Airport Road, Broken Hill – for the purpose of an animal pound.

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.

A new comprehensive Development Control Plan (DCP) was developed and adopted in October 2016. The purpose of this plan is to guide development within the Broken Hill LGA and to be consistent with the aims and objectives of Broken Hill LEP 2013. It contains objectives and development controls that expand upon the requirements of Broken Hill LEP 2013. Whilst a DCP does not carry the statutory "weight" of LEP provisions, it does still provide guidance and requirements that are to be considered when preparing a proposal to develop land in Broken Hill.

As of late 2021, Council planning staff have been reviewing and preparing possible amendments to the DCP.

3.3.2 Preserve the heritage and streetscapes of Australia's First Heritage City

Broken Hill Heritage Strategy 2020-2023

The purpose of Council's Heritage Strategy is to provide a summary of strategies that will be employed to guide heritage management in the City. The Strategy is prepared to meet the requirements of the New South Wales Heritage Office three-year funding agreement to support local government heritage management in New South Wales.

The NSW Heritage Office document "Recommendations for local council heritage management" is used by Council to inform the preparation and updating of the heritage strategy. The document provides a framework of 9 recommendations for heritage management. These 9 recommendations are reflected in Council's Heritage Strategy.

Broken Hill City Council Heritage Strategy 2017-2020 was adopted by Council on 31 May 2017. The current strategy (Heritage Strategy 2020-2023) was adopted by Council on 24 February 2021.

National Heritage Values Framework

Council received Commonwealth Government funding in 2019, to assess the National Heritage Values of Broken Hill and develop guidelines, protocols and publications to assist the community, the Council and statutory authorities to identify, protect, enhance and manage those values through the proposals, strategies and projects that take place within the City.

Heritage Advisor, Paul Davies conducted the study on behalf of Broken Hill City Council.

The National Heritage Values Framework, articulates and sets out how the National Heritage values of Broken Hill can be understood in the day-to-day development and planning for the future of the City. The Framework will guide strategic planning for the City and will provide practical guidelines and protocols for the community to work with National Heritage values, Council and other statutory bodies in assessing how projects and strategies may impact or ideally enhance National heritage values.

The Framework forms the basis of understanding and making assessments related to National heritage values including:

- Developing the National Heritage themes with practical explanations and guidance on how they apply to all aspects of Broken Hill
- Establishing a protocol for how to assess National Heritage values as part of the overall assessment process of proposals and strategic documents within the City Council area.

Local Government Heritage Study

Broken Hill is Australia's only Nationally Heritage Listed City. The previous 1990's heritage study, while sound at the time and with some updates, did not address the themes that are important to the National Listing and, by inference, to the State level heritage significance of the City.

Council received NSW Government Funding in 2019 to review the national and State themes, assess the current listings against those themes, identify aspects of significance that are not addressed in heritage listings and develop a strategy to expand, adjust or approach listings to reflect State and national and local values.

Heritage Advisor Paul Davies conducted the studies on behalf of Broken Hill City Council.

The National Heritage Study contains an analysis of ten different place types and their relationship to National (and local) heritage values. Some of that material included in this report is directly applicable to the consideration of new heritage items and heritage conservation areas in this study including application in the areas of:

- Residential
- Commercial
- Hotels
- Infrastructure
- Religious
- Associations, Lodges, Societies and Orders
- Education
- Government (State and Local) including civic and recreation
- Environment
- Mining

A key matter that is set out in some detail in the National Values Study is the role of heritage conservation areas in protecting national heritage values. The study concludes that the National listing is about the collective values of Broken Hill. Link to National Heritage Values Study: <https://www.brokenhill.nsw.gov.au/Council/Other-strategies-documents/Broken-Hill-National-Heritage-Values-Study>

Heritage Advisory Service

Broken Hill City Council continues its Heritage Advisory Service, now in its 33rd year of operation. It was the second advisory service established in NSW and has the reputation for being a very successful program.

The Heritage Advisor:

- Provides input in the assessment of development applications likely to impact on the heritage significance of buildings and places – ensure that this is broadly applied given the National Heritage List status of the whole City.
- Continues to provide advice for pre-Development Application (DA) meetings.
- Continues to provide designs for new verandahs including preparation of sketches and drawings in Broken Hill Heritage Conservation Areas.
- Actively promotes and identifies sources of funding for projects, such as State or Commonwealth Government initiatives and advises property owners on required information for grant applications.

- Continues to provide input into the review of Council reports, policies and standards relating to heritage management and urban design.

Ms Elizabeth Vines was Broken Hill City Council's Heritage Advisor from the introduction of the Advisory service until July 2017.

Mr Paul Davies was Heritage Advisor during the period of July 2017 until June 2020.

Ms Elizabeth Vines was re-appointed Heritage Advisor in July 2020 and is currently still in the role.

Year	Number of People Accessing the Service
2016/2017	62
2017/2018	78
2018/2019	58
2019/2020	75
2020/2021	66

Heritage Advisory Service 2016-2021				
Number of Advisor Visits	Number of Heritage Paint Grants	Value of Heritage Paint Grants	Number of Verandah Revival Grant/Loans	Value of Verandah Revival Grant/Loans
38	16	\$26,650	3	\$44,520

Built Heritage Activities

Council's Heritage Assistance Grants Policy was amended and adopted in 2017. This policy aims to provide financial assistance to residents and businesses to beautify our City and maintain its heritage appeal, through the provision of grants and loans to paint and maintain houses and buildings in Broken Hill with historical significance.

The Paint Grant program provides up to \$1500 grant or 50% of the total project cost, for either residential or commercial premises and \$3000 low interest loans.

The Verandah Revival Program concentrates on the construction, reconstruction and/or restoration of verandahs for commercial buildings, particularly within the CBD. It provides financial assistance through 80% loan funding and 20% grant funding.

Over the past 5 years there has been a gradual decrease in the number of property owners utilizing the program and Council has considered options as to whether to restructure the grant program and to advertise the program in a different manner.

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

Development Application Tracking

Council utilises a Development Application Tracker. This tool provides easily locatable information about DAs and ensures there is sufficient time for the community to comment on new proposals, where permitted.

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

NSW Planning Portal

Council's Planning, Development and Compliance Department have supported the introduction of more online services for citizens through the NSW Planning Portal.

All Development applications and Certificates including Construction certificates and Complying Development Certificates, are submitted and processed via the NSW Planning Portal. The Planning Portal became mandatory to use for the submission of Applications from 1 July 2021.

The digital service provided by the Planning Portal aims to:

- improve application determination times,
- increase transparency of the planning system; and
- ensure greater accountability of all stakeholders.

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.

Development Activity

The following tables summarise development applications received by Council 2016-2021.

Year	Number DAs	Value
2016/2017	149	\$8,445,158
2017/2018	194	\$33,745,237
2018/2019	183	\$16,839,132
2019/2020	206	\$12,968,093
2020/2021	173	\$34,758,781

Major Projects approved during the reporting period have included:

- Construction of new two storey Police Station
- New "ALDI" supermarket
- Companion animal shelter
- City gateway signage
- New medical and rehabilitation centre
- Restoration of BHP chimney
- Broken Hill Cultural precinct, library and archive
- Redevelopment of YMCA
- Restoration of mosque
- Aboriginal Housing Office dwellings

Public Health Inspections

Council undertakes annual inspections and audits of food premises, cooling towers, skin penetration establishments, public swimming pools and spas, caravan parks, boarding houses and mortuaries/crematoriums.

During 2016-2021 Council conducted inspections to local food premises and other registered premises as listed in the table below.

Inspection Type and Number of inspections	2016/17	2017/18	2018/19	2019/20	2020/21
Food Premises	213	58	98	151	66
Cooling Towers	0	0	0	4	0
Skin Penetration Premises	3	0	0	19	22
Public Swimming Pools	17	0	0	18	17
Caravan Parks	0	0	0	2	2
Boarding Houses	1	0	0	2	2
Mortuaries/crematoriums	0	0	0	3	1

Council received food complaints related to handling/hygiene, foreign matter and food quality.

Year	Number of complaints received
2016/17	4
2017/18	17
2018/19	6
2019/20	7
2020/21	10

In addition to Council's routine inspections, during 2020/2021, Local councils were asked by the NSW Government to conduct COVID-19 Safety Inspections for cafes and restaurants in their local government areas. This was to ensure that as per the Public Health Order, all cafes and restaurants that had the capacity for customers to dine-in, had a COVID-19 Safety Plan and were taking all practical measures to ensure that businesses were complying with the Public Health Order.

Council's Environmental Health Officer carried out 26 initial COVID-19 Safety Inspections. Re-inspections were conducted for businesses that required follow up due to missing a key component of the COVID-19 Safety Inspection, such as an incomplete COVID-19 Safety Plan or lack of COVID-19 signage.

Civic Centre

The Civic Centre underwent a major refurbishment between April 2016 and August 2018. The result has seen the Civic Centre transformed to a contemporary multi-purpose space. The transformation of the upper level from Art Gallery space to multi-functional meeting and conference space, has become a major draw card for business events conducted at the Civic Centre.

Business events conducted at the Civic Centre continue to grow, with a number of government agencies and organisations using the Civic Centre function rooms as regular clients. The function rooms have delivered on the vision through the refurbishment, becoming instrumental in the success of the Civic Centre.

The Civic Centre technology has also come to the fore, allowing for streaming and recording of functions to extend viewing beyond the allowed numbers attending in person at the venue.

Despite uncertainty around gatherings and live events due to the COVID-19 pandemic, the Civic Centre recorded its highest booking numbers since reopening in 2018 with 102 bookings for 2020/21.

The Civic Centre also hosted 11 conferences across the term, with attendees ranging from 80 to over 400 people.



This page intentionally left blank.



www.brokenhill.nsw.gov.au