



BUSINESS PAPER

Health and Building
Committee Meeting

Council Chambers
20 February 2023
5:30pm

BROKEN HILL

CITY COUNCIL

**AUSTRALIA'S FIRST
HERITAGE LISTED CITY**

MEMBERS OF THE HEALTH & BUILDING COMMITTEE:

Mayor Kennedy, Deputy Mayor Hickey (Chairperson), Councillor Chandler, Councillor Jewitt, Councillor Gallagher and Councillor Turley

Notice is hereby given, in accordance with the provisions of the *Local Government Act 1993*, that the Health and Building Standing Committee of the Broken Hill City Council will be held in the Council Chambers on **Tuesday 20 February 2024 at 5:30pm** to consider the following business:

AGENDA	
1	Opening the Meeting
2	Apologies
3	Leave of Absence Applications
4	Prayer
5	Acknowledgement of Country
6	Acknowledgement of Broken Hill's Mining History
7	Minutes for Confirmation
8	Disclosure of Interest
9	Reports
10	Confidential Matters
11	Conclusion of the Meeting

STATEMENT OF ETHICAL OBLIGATIONS

All Councillors undertook an Oath or Affirmation at the beginning of their term of office and declared to undertake the duties of the office of Councillor in the best interests of the people of the Broken Hill Local Government Area and the City of Broken Hill; and that they will faithfully and impartially carry out the functions, powers, authorities and discretions vested in them under the *Local Government Act 1993* or any other Act to the best of their ability and judgment.

LIVE STREAMING OF COUNCIL MEETINGS

This Council meeting is being streamed live, recorded, and broadcast online via Facebook. To those present in the gallery today, by attending or participating in this public meeting you are consenting to your image, voice and comments being recorded and published. The Mayor and/or General Manager have the authority to pause or terminate the stream if comments or debate are considered defamatory or otherwise inappropriate for publishing. Attendees are advised that they may be subject to legal action if they engage in unlawful behaviour or commentary.

JAY NANKIVELL
GENERAL MANAGER

MINUTES FOR CONFIRMATION

Minutes of the Health and Building Committee of the City of Broken Hill held Tuesday, December 12, 2023.

**MINUTES OF THE HEALTH AND BUILDING COMMITTEE MEETING HELD
TUESDAY, DECEMBER 12, 2023 (5.30PM)**

PRESENT:

Councillor T Kennedy (Mayor) Councillor J Hickey (Deputy Mayor)(Chairperson), Councillors A Chandler, D Gallagher and D Turley.

General Manager, Director Corporate and Community, Director Finance and Commercial, Manager Communications and Marketing, Executive Officer and Executive Assistant.

Media (nil), Members of the Public (nil).

APOLOGIES:

Councillor H Jewitt.

Procedural Motion

Moved Councillor Dave Gallagher, Seconded Councillor Alan Chandler

That the apology submitted on behalf of Councillor Jewitt be accepted.

CARRIED UNANIMOUSLY

**LEAVE OF ABSENCE
APPLICATIONS:** Nil.**PRAYER**

Councillor Chandler delivered the Prayer.

ACKNOWLEDGEMENT OF COUNTRY

Councillor Gallagher delivered the Acknowledgement of Country.

ACKNOWLEDGEMENT OF BROKEN HILL'S MINING HISTORY

Mayor Kennedy delivered the Acknowledgement of Broken Hill's Mining History.

MINUTES FOR CONFIRMATION**Recommendation**

Moved Councillor Alan Chandler, Seconded Councillor Darriea Turley

That the Minutes of the Health and Building Committee meeting held Tuesday November 21, 2023 be confirmed.

CARRIED UNANIMOUSLY

DISCLOSURE OF INTEREST

Nil

REPORTS

1. BROKEN HILL CITY COUNCIL REPORT NO. 242/23 - DATED NOVEMBER 22, 2023 - MINUTES OF THE FRIENDS OF THE FLORA AND FAUNA OF THE BARRIER RANGES COMMUNITY COMMITTEE MEETING, HELD ON TUESDAY, 14 NOVEMBER 2023 D23/63333

Recommendation

Moved Deputy Mayor Jim Hickey, Seconded Councillor Darriea Turley

1. That Broken Hill City Council Report No. 242/23 dated November 22, 2023, be received.
2. That the minutes of the Section 355 Friends of the Flora and Fauna of the Barrier Ranges Community Committee Meeting, held on Tuesday, 14 November 2023 be received.
3. That Council endorses and acknowledges in writing the resignation of Mr David Spielvogel and Mrs Jill Spielvogel from the Section 355 Friends of the Flora and Fauna of the Barrier Ranges Community Committee and express its gratitude and appreciation for their contribution to the Committee and the Community.

CARRIED UNANIMOUSLY

The General Manager took a question on notice from Councillor Turley regarding 'Item 12 – Next Meeting' of the minutes of the Friends of the Flora and Fauna of the Barrier Ranges Community Committee, as the minutes states that the date for the next meeting is Tuesday, 13 January 2023 (not 2024), and that 13 January 2024 is a Saturday. Councillor Turley asked for clarification of the next meeting date.

Procedural Motion

Moved Mayor Tom Kennedy, Seconded Councillor Dave Gallagher

That the meeting move into closed session in accordance with Section 10A(2) of the Local Government Act 1993 whilst the Committee considers the confidential matter.

CARRIED UNANIMOUSLY

There were no members of the public or media present at the meeting.

The livestream of the meeting ceased at 5:34pm.

CONFIDENTIAL REPORTS

2. BROKEN HILL CITY COUNCIL REPORT NO. 243/23 - DATED NOVEMBER 28, 2023 - PROPOSED EASEMENT TO A-CAES NSW PTY LTD - CONFIDENTIAL
(**General Manager's Note:** This report considers an easement and is deemed confidential under Section 10A(2) (c) of the Local Government Act, 1993 which provides for information that would, if disclosed, confer a commercial advantage on a person with whom the Council is conducting (or proposes to conduct) business).

Recommendation**Moved Councillor Darriea Turley, Seconded Councillor Alan Chandler**

1. That Broken Hill City Council Report No. 243/23 dated November 28, 2023, be received.
2. That Council (as Willyama Common Trust Manager and Crown Land Manager) consent the proposed easement to A-CAES NSW Pty Ltd, for the purposes of access and a transmission easement over the Willyama Common and other Crown Land managed by Council (as identified in Attachment 1 – Schedule of Land).
3. That the General Manager be delegated to negotiate the final terms and conditions of the proposed easement.
4. That the Mayor and General Manager be authorised to sign and execute the easement documents under the Common Seal of Council.

CARRIED UNANIMOUSLY

The General Manager took a question on notice from Councillor Turley regarding an update from Transgrid on increasing the capacity and reliability of the transmission lines.

Procedural Motion**Moved Mayor Tom Kennedy, Seconded Councillor Dave Gallagher**

That the meeting resumes in open session.

CARRIED UNANIMOUSLY

There being no further business to consider, the Committee meeting was declared closed at 5:38pm.

The foregoing minutes were read and confirmed at the Health and Building Committee Meeting held on 20 February 2024.

Chairperson

REPORTS

1. BROKEN HILL CITY COUNCIL REPORT NO. 13/24 - DATED DECEMBER 13, 2023 - BROKEN HILL LEAD REFERENCE GROUP - MINUTES OF MEETING HELD 23 NOVEMBER 2023 (D23/67682) 8

HEALTH AND BUILDING COMMITTEE

December 13, 2023

ITEM 1**BROKEN HILL CITY COUNCIL REPORT NO. 13/24**

SUBJECT: **BROKEN HILL LEAD REFERENCE GROUP - MINUTES OF MEETING HELD 23 NOVEMBER 2023** **D23/67682**

Recommendation

1. That Broken Hill City Council Report No. 13/24 dated December 13, 2023, be received.

Executive Summary:

The minutes of the Broken Hill Lead Reference Group for meeting held 23 November 2023 are presented to Council for endorsement.

Report:

The Broken Hill Lead Reference Group (BHLRG), chaired by the Broken Hill City Council, is a collaborative of the many companies, Perri and community representatives that work with, have an interest in and contribute to lead management in the local community.

The BHLRG has developed the Broken Hill Lead Reference Group Integrated Strategy to provide a forum for information exchange and to guide activity relating to lead issues for Broken Hill.

Community Engagement:

Community engagement through community representation on the Committee.

Strategic Direction:

Key Direction:	4.	Our Leadership
Objective:	4.1	Openness and transparency in decision making
Strategy:	4.1.5	Support the organisation to operate within its legal framework

Relevant Legislation: Nil

Financial Implications: Nil

Attachments

1. [↓](#) Broken Hill Lead Reference Group - Minutes of meeting held 23 November 2023

CODIE HOWARD
DIRECTOR INFRASTRUCTURE AND ENVIRONMENT

JAY NANKIVELL
GENERAL MANAGER

MINUTES OF THE BROKEN HILL LEAD REFERENCE GROUP (BHLRG) MEETING HELD THURSDAY, 23 NOVEMBER 2023 AT 10.00AM, COUNCIL CHAMBERS

Meeting commenced at 10.05am

1 Present

Marisa Pickett	Manager Waste and Sustainability (BHCC) (Chair)
Clr Marion Browne	Council Delegate
Devon Roberts	Broken Hill Operations (BHO)
Judi Louvel	Broken Hill Environmental Lead Program (BHELP)
Frances Boreland	Broken Hill Environmental Lead Program (BHELP)
Nyrie Waite	Administration Officer – (BHCC) - Minute Taker

Present Via Teams

Cathy Dyer	Maari Ma Health
Neil Glastonbury	Transport NSW (TfNSW)
Linda Mason	Western NSW Local Health District (WLHD)
Joel Sulicich	Broken Hill Operations (BHO)
Pam Tucker	Community Representative
Kelli Morris	Far West Local Health District (FWLHD)
Vilmae Appleton	Far West Local Health District (FWLHD)
Christina Low	Broken Hill Environmental Lead Program (BHELP)
Adam Forster	Perilya
Georgina Seward	Public Health Unit (PHU)

Apologies

Jacinta Clark	Broken Hill Operations (BHO)
Aroma Harkin	Essential Water

2 Acknowledgement of Country

Acknowledgment of Country recited by Council's Manager Waste and Sustainability.

Introductions around the table and via Teams

Welcome to Christina Low, new Senior Technical Policy Advisor with BHELP

3 Confirmation of Minutes of Previous Meeting

Previous meeting:	24 August 2023
Moved:	Frances Boreland
Seconded:	Devon Roberts

4 Business Arising from Previous Minutes

Contact SafeWork NSW to discuss a lead awareness training program

Georgina Seward has contacted SafeWork who advised they are happy to talk about the risks of lead exposure and the business must request the service first. SafeWork have visited Broken Hill and inspected some premises.

Adam Forster advised feedback from the visit was positive.

Judi Lovel has met with SafeWork to discuss the possibility of creating a training program on lead awareness, to be used for tradespeople and contractors in Broken Hill.

Marisa Pickett suggested to Judi Lovel that the meeting be opened to other stakeholders to attend. Judi Lovel will share the information about the meeting when it is organised.

Earth Moving Companies

Jess Ierace has compiled a list of earth moving companies that will be circulated for comment.

A letter has been created to send to the companies once the list is finalised.

Clarification and or an update around Point Of Care (POC) testing

Cathy Dyer has been advised to continue with POC testing. In 2024 there will be a move to Capillary testing. Cathy Dyer advised there has been no guidance from either the Public Health Unit (PHU) or the Ministry of Health, on the methodology for ongoing blood lead testing. The concern is that Maari Ma could be using out of date testing which would render their results incomparable with the Local Health District (LHD) results.

Vilmae Appleton advised that FWLHD does have information on QAQC, if needed. Vilmae Appleton is aware that the move is to capillary testing and laboratories would need to be contacted to organise the testing. There is a new POC machine being developed for the future. Vilmae Appleton advised there are some issues regarding the capillary testing - clients are not happy with waiting for their results and it is often difficult contacting clients with about their results and the increased workload of data entry and preparing and sending specimens to the laboratory.

Linda Mason advised that Pricilla Stanley has been dealing directly with the Ministry. Linda Mason asked that there be an action that the PHU report on this at the next meeting. Linda Mason will ensure Cathy Dyer at Maari Ma will be kept up to date with any information received.

Adam Forster advised that Perilya have used both finger prick and capillary testing and now opt for Venipuncture tests. This would be a difficult test for children. Adam Forster is now involved with the Ministerial Lead Response Group and will raise the matter at that level.

5 Correspondence In

13 November 2023 – email from Frances Borland, BHELP requesting BHLRG discuss inviting Teck Resources Limited from Trail (Canada) to do a presentation about their fugitive emissions control work and its impact on blood level levels. To be discussed in General Business.

6 Correspondence Out - Nil

7 Quarterly Reports

7.1 Broken Hill Environmental Lead Program (BHELP) (Report attached)

Meeting update: – BHELP representative, Judi Louvel delivered the report, highlighting the return of Lead Ted.

7.2 Maari Ma Health (No written report)

Meeting update: Maari Ma currently has a Public Health Medicine Registrar, advanced trainee reviewing the clinical guidelines used to manage individual children. There is a proposal for some changes to the guidelines and they have been in discussion with BHELP. Maari Ma has been invited to participate in the Ministerial Response Group. They also have two staff representing Maari Ma on the Ministry of Health Expert Panel. Staff continue with the blood lead monitoring of children and home assessments for children with elevated blood lead levels.

7.3 Western Local Health District (WLHD) (Report Attached)

Meeting update: – Linda Mason delivered the report, highlighting an increase in the number of children being screened this year with the 3rd quarter blood lead levels below the guidelines. Kelli Morris updated the meeting on staff changes at Far West Local Health District. Kelli has accepted the role of Team Leader Lead Health Program. Vilmae Appleton will be Senior Lead Health Education Officer and there is a part time position being advertised.

7.4 Broken Hill Operations (Report Attached)

Meeting update: – Devon Roberts delivered the report. Confirming the announcement of the closure of Rasp Mine. Joel Sulicich explained that the intent is that the mine remains open and that is why they are continuing to upgrade the Tailing Storage facilities. If the mine does close the site would be left in a safe, stable and non-polluting manner. The Rehabilitation Management plan and strategy (both are on the website) will be put in place. The mine could theoretically be reopened in the future. It's a tough time on site at the moment and workers are being supported. Pam Tucker conveyed support from the meeting and community for the workers at the mine.

7.5 Perilya (verbal Report)

Meeting update: – Perilya representative, Adam Forster reported -

There have been 417 blood lead tests conducted in the last quarter. Perilya is moving to a three-monthly periodical assessment. They have 63 compliant contractors. Contractors are requested to have their own blood lead management plan and strategy, providing Perilya with a current blood lead record below 15 before they can enter the site. One exceedance was reported for a contractor who had been onsite for three days, the test was conducted by the contracting company.

The NSW Resource Regulator and NSW Department of Planning & Environment conducted site visits. The visits revolved around lead awareness, policies in place and precautions taken to minimise lead risk to workers and the town. Perilya has a continual rehabilitation management strategy being implemented and remediating properties. There is approximately nine hectares of land to be encapsulated, in particular an area that is town facing near South mine, to be used to arrest any potential fugitive dust that may be generated in contaminated sites. There was also a recorded high blood lead level in an infant. The dirt in the yard was remediated. Adam Forster explained their employee induction provides extensive information about lead and the risks involved and properties provided for rent are inspected and tested for lead contamination.

7.6 Essential Water (Report from Essential Water website attached)

Meeting update: – no representative

8 General Business

Frances Borland advised Trail is a smelter community on the western side of Canada, similar to Port Pirie and Broken Hill with industry located very close to town. They have had great success with reducing blood lead levels and their lead in air levels. Frances Borland has been attending their equivalent of the Lead Reference Group, the Trail Area Health and Environmental Program - online, and feels BHLRG could benefit from their knowledge. Frances Borland suggests that we contact the Company that operates the smelter, Teck, for a presentation about what and how they made the improvements and the benefits to the community. All at the meeting were in agreeance to have the presentation.

9 Action List for next meeting

Action	Responsible Person	Due Date
Meet with SafeWork to discuss the possibility of a lead awareness program for workers in Broken Hill	Judi Lovel - to share details of the meeting when it is organised	when possible
Industry contact details, to be distributed for comment and letter sent	Nyrie Waite	February 2024
Clarification and or an update around POC testing	PHU to report	February 2024
Contact details from the Company in Canada	Frances Borland	when possible

10 Next Meeting Date

10am Thursday, 22 February 2024, venue to be advised and via Teams.

11 Meeting Closed

10.58am



BHELP REPORT TO BROKEN HILL LEAD REFERENCE GROUP November 2023

1. Remediation/Abatement Program

Home Remediation/Abatement Program – Round 8 has commenced.
To date.

- 60 home assessments have been completed
- 12 residences have been remediated.
- 15 residences approved for remediation and with the contractor

Home assessments for Family Day Care have also commenced on the basis that these premises host a large number of children and to date 6 properties have been put forward for remediation work.

2. Community Engagement and Communications Activities

School incursions have recommenced in term 4 and since the last BHLRG meeting we have completed an incursion at Railwaytown Public School with 45 students participating and have Burke Ward Public School planned with approximately 60 children expected to participate in the program.

3. Technical Activities

Technical advice has been provided to individuals as required.
BHELP meets regularly with Trail in Canada to share information.

4. Funding

BHELP has received funding for this and then next financial years to continue the remediation program and focus on the longer – term solutions.

4. Other Activities

Dust monitoring program is being maintained.

Monitoring of landscape supplies is being maintained – all samples are well within the guidelines for soil lead levels.

Recruitment is completed and BHELP has engaged 3 additional team members.

- Project Officer
- Senior Technical Policy Advisor who will work closely with Frances and will TEAMS into these meetings.
- Senior Operational Policy Officer

Initial meeting with SafeWork to discuss a lead safe program for trade and contract workers, further meeting scheduled for 2024.

Blood lead levels in children aged 6 months to <5 years, Broken Hill, by quarter, 2013-2023

1. Blood lead levels for children aged 1 year to <5 years

Key points for the 3rd Quarter, 2023.

- Overall, numbers of children screened for 2023 to date are 18% higher than that for the same period in 2022 (Tables 1, 2, 3).
- For the third quarter, the total number of children screened for the first time this year was higher than that for the same period for the years 2013 to 2022 (Table 3).
- The third quarter blood lead level (BLL) geomean for 2023 is below the guideline (3.8 µg/dL v 5 µg/dL) (Table 3).
- The monthly BLL geomeans for the third quarter increased slightly from those for the second quarter but remain below the guideline (Figure 1).
- The 2019-2023 monthly BLL geomeans show an increase in July but for August and September fell below 2 SDs of the 2012-2016 geomeans for the same quarter (Figure 4).

Table 1: Blood lead levels, first quarter (January-March), 2013-2023 (All children)*

1st quarter	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
GeoMean µg/dL	5.6	4.9	6.2	5.8	6.4	5.7	5.8	5.6	4.0	4.4	5.1
Max	46.0	27.0	30.0	35.0	39.0	56.7	41.8	24.1	30.1	25.3	65.0
Mode	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Median	5.0	5.0	6.0	5.0	6.3	6.3	6.0	5.7	3.8	4.7	5.2
95 percentile	16.0	18.0	19.1	17.8	18.2	17.0	16.8	16.3	14.3	11.0	16.5
No. children tested	242	257	219	226	311	256	266	305	266	174	264

Table 2: Blood lead levels, second quarter (April-June), 2013-2023 (All children)*

2nd quarter	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
GeoMean µg/dL	6.0	4.8	5.8	5.8	5.2	4.3	5.2	4.4	3.6	3.6	3.4
Max	31.0	29.0	30.0	50.0	38.1	21.7	23.1	34.7	25.0	65.0	48.4
Mode	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0
Median	5.5	3.0	5.0	5.0	4.8	4.2	5.2	4.1	3.4	3.3	2.0
95 percentile	17.7	15.0	15.2	15.8	16.3	14.1	15.5	15.2	14.0	12.3	12.9
No. children tested	209	193	198	207	197	136	203	176	250	213	190

Table 3: Blood lead levels, third quarter (July-September), 2013-2023 (All children)*

3rd quarter	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
GeoMean µg/dL	5.0	4.8	5.1	5.8	4.9	4.0	4.3	4.0	2.8	4.1	3.8
Max	38.0	28.0	29.0	27.4	30.1	20.5	14.1	20.2	15.3	50.5	34.5
Mode	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Median	4.0	4.0	5.0	5.5	4.6	4.4	4.9	4.5	2.0	4.1	3.7
95 percentile	19.5	13.0	15.7	17.7	16.9	10.6	11.6	10.2	8.0	15.4	16.2
No. children tested	136	141	147	113	131	137	114	122	88	122	149

**All children=Aboriginal, non-Aboriginal and Aboriginality not stated total for age group*

Prepared by: L. Mason, Public Health Unit, Health Protection; WNSWLHD. Data Source: CHOC for 2018 onwards. Date of extraction: 31.10.2023.

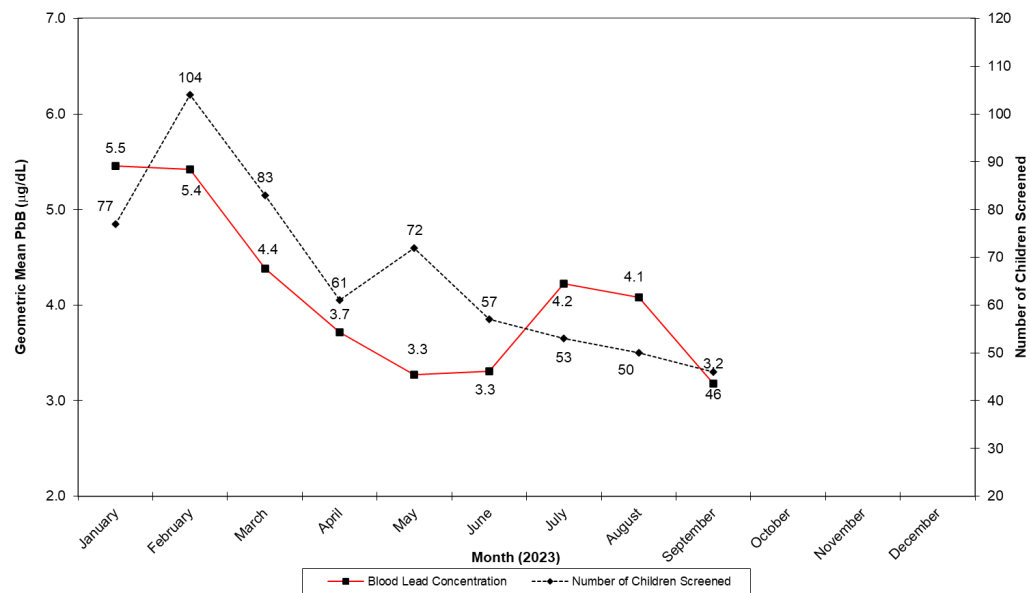
Table 4: Blood lead levels, fourth quarter (October-December), 2013-2023 (All children*)

4 th quarter	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
GeoMean µg/dL	5.0	4.8	5.1	5.4	4.2	3.8	4.0	3.4	4.8	3.6	
Max	38.0	28.0	29.0	27.0	23.3	19.5	29.0	13.3	14.2	61.1	
Mode	3.0	3.0	3.0	3.2	2.0	2.0	2.0	2.0	2.0	2.0	
Median	4.0	4.0	5.0	4.6	4.1	3.9	3.8	3.3	5.9	2.0	
95 percentile	19.5	13.0	15.7	15.9	16.1	12.4	13.0	8.5	13.7	13.3	
No. children tested	136	141	147	141	91	108	98	86	11	110	

Table 5: Blood lead levels, full year 2013-2023 comparison (All children*)

Full year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
GeoMean µg/dL	5.5	5.1	5.7	5.8	5.5	4.6	5.1	4.7	3.5	3.9	
Max	46.0	29.0	30.0	50	39	56.7	41.8	34.7	30.1	65.0	
Mode	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	
Median	5.0	4.0	5.0	5.0	5.4	4.8	5.1	4.7	2.0	3.9	
95 percentile	16.0	16.0	16.0	17.9	17.7	15.0	14.8	14.7	12.9	13.6	
No. children tested	695	719	679	687	730	637	681	689	561	619	

Figure 1 Children aged 1 to < 5 years: monthly geomean Pb level and number of children, screened, 2023



*All children=Aboriginal, non-Aboriginal and Aboriginality not stated total for age group

Prepared by: L. Mason, Public Health Unit, Health Protection; WNSWLHD. Data Source: CHOC for 2018 onwards. Date of extraction: 31.10.2023.

Figure 2 Children aged 1 < 5 yrs. screened by month, 2013-2023 ytd

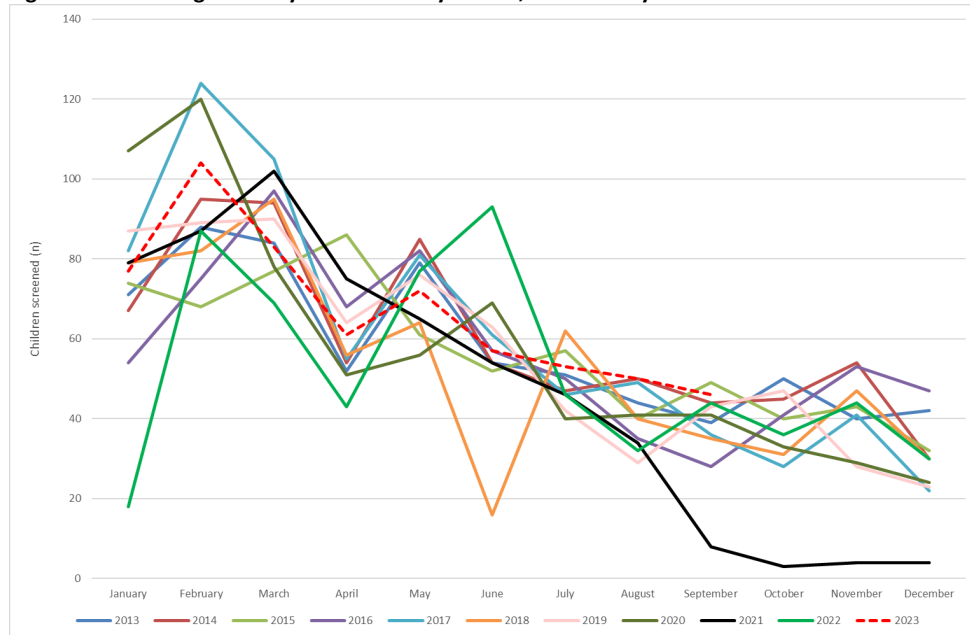
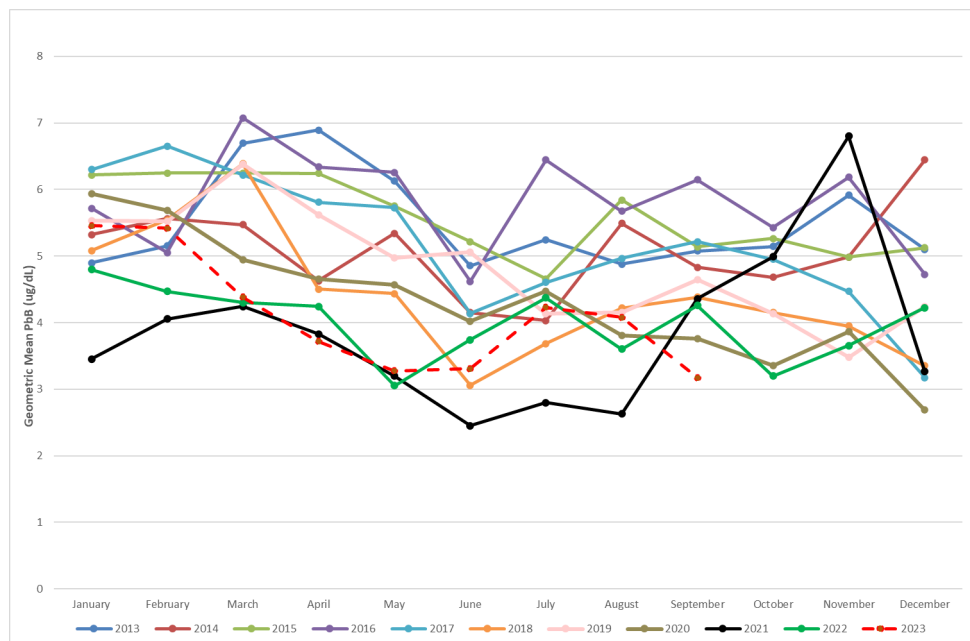
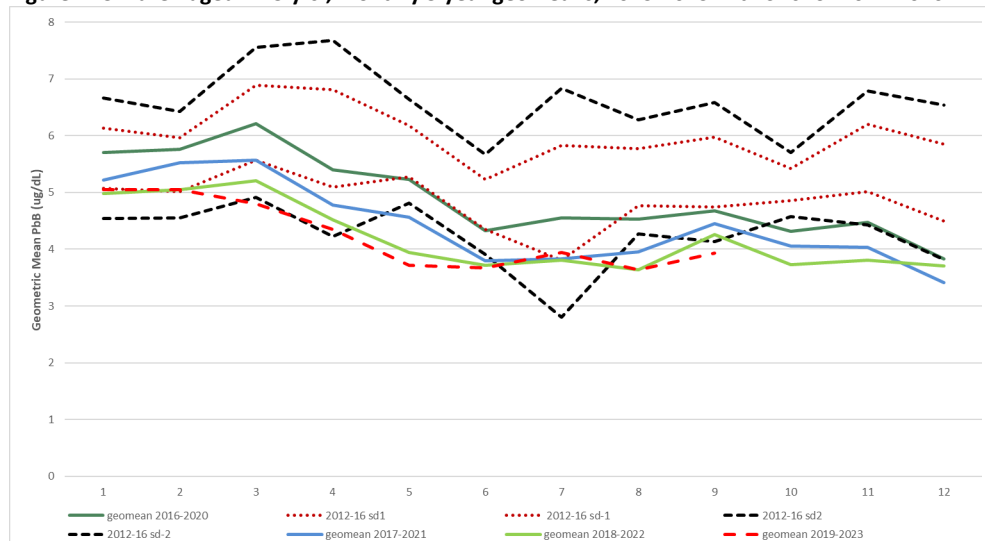


Figure 3. Children aged 1-<5 yrs. monthly Pb geomean 2013-2023 ytd



**All children=Aboriginal, non-Aboriginal and Aboriginality not stated total for age group
Prepared by: L. Mason, Public Health Unit, Health Protection; WNSWLHD. Data Source: CHOC for 2018 onwards. Date of extraction: 31.10.2023.*

Figure 4. Children aged 1-<5 yrs., monthly 5 year geomeans, 2013-2023 with SDs for 2012-2016



2. Blood lead levels for children aged 6^ months to <12 months

Key points for the 3rd Quarter, 2023.

- The BLL geomean for the third quarter is well below the guideline (2.2 µg/dL v 5 µg/dL) and is equal to or lower than the geomeans for the same quarter for the years 2018 to 2022 (Table 8).
- The number of children screened in 2023 to date is 7% more than for the same period in 2022.

Table 6: Blood lead levels, first quarter, 2018 – 2023 (All children)*

First quarter	2018	2019	2020	2021	2022	2023
GeoMean µg/dL	2.6	3.5	4.2	2.4	2.6	2.8
Max	6.9	13.5	17.3	11.2	9.7	16.2
Mode	2.0	2.0	2.0	2.0	2.0	2.0
Median	2.0	3.6	2.0	2.0	2.5	2.0
95 percentile	6.0	10.5	8.2	5.8	8.9	8.4
No. children tested	33	54	87	73	57	71

^To fit most closely to previous <12 months testing, as conducted up to 2012, this includes all children tested 5 months to <12 months.

**All children=Aboriginal, non-Aboriginal and Aboriginality not stated total for age group*

Prepared by: L. Mason, Public Health Unit, Health Protection; WNSWLHD. Data Source: CHOC for 2018 onwards. Date of extraction: 31.10.2023.

Table 7: Blood lead levels, second quarter, 2018 – 2023 (All children)*

Second quarter	2018	2019	2020	2021	2022	2023
GeoMean µg/dL	2.7	3.1	2.4	2.3	2.7	2.2
Max	13.2	15.9	9.4	9.2	16.5	11.4
Mode	2.0	2.0	2.0	2.0	2.0	2.0
Median	2.0	2.0	2.0	2.0	2.0	2.0
95 percentile	8.9	9.1	4.4	5.2	9.4	5.2
No. children tested	32	52	46	75	49	46

Table 8: Blood lead levels, third quarter, 2018 – 2023 (All children)*

Third quarter	2018	2019	2020	2021	2022	2023
GeoMean µg/dL	2.7	2.4	2.4	2.2	2.2	2.2
Max	21.2	7.6	6.4	13.8	6.3	7.8
Mode	2.0	2.0	2.0	2.0	2.0	2.0
Median	2.0	2.0	2.0	2.0	2.0	2.0
95 percentile	9.9	5.9	5.1	4.4	5.0	6.8
No. children tested	42	49	44	35	40	39

Table 9: Blood lead levels, final quarter, 2018 – 2023 (All children)*

Fourth quarter	2018	2019	2020	2021	2022	2023
GeoMean µg/dL	2.8	2.4	2.7	2.0	2.4	
Max	9.1	8.6	14.0	2.0	6.4	
Mode	2.0	2.0	2.0	2.0	2.0	
Median	2.0	2.0	2.0	2.0	2.0	
95 percentile	7.0	5.1	6.9	2.0	4.5	
No. children tested	50	46	45	8	62	

Table 10: Annual Blood lead levels 2018 – 2023 (All children)*

Full year	2018	2019	2020	2021	2022	2023
GeoMean µg/dL	2.7	2.8	2.7	2.4	2.5	
Max	21.2	15.9	17.3	13.8	16.5	
Mode	2.0	2.0	2.0	2.0	2.0	
Median	2.0	2.0	2.0	2.0	2.0	
95 percentile	7.1	8.1	6.9	5.3	8.1	
No. children tested	157	201	222	160	208	

Methodology notes

- Blood lead levels included in the calculation were only from those children whose blood test was their first valid test for the calendar year.
- Where a child had more than one test result for the quarter, the first result was used in the analysis. However, if a venous blood lead result had been recorded, this result was used in the analysis, irrespective of its value.
- Geometric means reported here are not age-sex standardised.

**All children=Aboriginal, non-Aboriginal and Aboriginality not stated total for age group*

Prepared by: L. Mason, Public Health Unit, Health Protection; WNSWLHD. Data Source: CHOC for 2018 onwards. Date of extraction: 31.10.2023.



Broken Hill Operations Pty Ltd Quarterly Activities Report September to November 2023

Occupational Hygiene Monitoring

Six-monthly Blood Lead testing on employees and required contractors is due to commence in the coming weeks.

Occupational Hygiene Consultants were onsite in September to conduct occupational hygiene sampling, including monitoring for inhalable dust and lead, respirable dust, diesel particulate matter, noise and whole body vibration. The next round of monitoring is scheduled for the end of November 2023.

Dust Suppressant Application

The application of Total Ground Control (green mixture) dust suppressant to free (unused) areas of the site was completed earlier this year, with spot applications continuing through the recent quarter. A Dust Suppressant called Dustbinder is continuing to be used on site roads and is effective in controlling dust lift-off from road and tailings dam surfaces for approximately three months.

Site works

The Boxcut earthworks as approved under MP 07_0018 MOD6 started in August 2022. The boxcut is now complete and the new portal has been operational since 18 October 2023. Works on preparing Kintore Pit to become TSF3 have commenced, including preparation to seal the portal (mine entry) at the base of Kintore Pit.

Development Approval Modifications

MP 07_0018 MOD11 for the installation of a ventilation intake and extension of underground development was submitted earlier this month. Particulars of the Modification applications can be viewed on the DPIE Major Projects Portal at www.planningportal.nsw.gov.au/major-projects.

Rehabilitation Strategy

The Rehabilitation Strategy (required under the Project Approval) has recently been reviewed and updated with comments from stakeholders and is provided on the CBH Rasp Mine website. The Rehabilitation Management Plan (required under the Mining Act) is being updated to align with the Rehabilitation Strategy and the latest version will replace the version currently on the website.

Regulator Site Inspections

Officers from the NSW Resources Regulator (RR) and NSW Environmental Protection Agency (EPA) have visited site in October to conduct separate inspections.

The NSW RR officers reviewed rehabilitation planning and waste material assessment.

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The EPA officers were new to the roles and took the opportunity to familiarize themselves with the site and inspect the works conducted on past incident locations.

No issues were identified on site from either inspection.

Rasp Mine Operational Updates

Toho Zinc advised the market on the 10th November, following a thorough review of the business plan of Rasp Mine, that it is not in a position to invest in the further development to sustain the operation in the medium to long term. As a result, Toho Zinc will be actively seeking a new owner and if this does not eventuate, the Rasp mine will progress to a staged closure in 2024.

FOR PUBLIC RELEASE

Quarterly Drinking Water Quality Report Broken Hill

1 April to 30 June 2023



Quarterly Drinking Water Quality Report - Broken Hill - 1 April to 30 June 2023

FOR PUBLIC RELEASE

1 Overview

Essential Water produces this report to inform Essential Water customers about water quality. Essential Water tests and monitors water quality during various locations of the distribution system. Drinking water results for the distribution system are based on samples representative of water supplied to customer's taps to ensure that the Australian Drinking Water Guidelines are met.

Essential Water's assessment, based on our water quality test results for this period, indicates that drinking water quality has complied with all the health and aesthetic values in the Australian Drinking Water Guidelines (ADWG).

The ADWG recognise that occasionally there may be health or aesthetic related test results that fall outside the guidelines and that these results are not necessarily an immediate threat to health. The guidelines do not require a 100% result in all cases. All test results above the guidelines are investigated and actions, if necessary, taken.

For more information contact us on **13 23 91** or visit www.essentialwater.com.au.

What is our aim?

Essential Water is committed to providing safe, secure, reliable, and high-quality water to our customers.

How do we test water quality?

Water samples are taken from several locations including the reservoirs and at the inlet and outlet of the water filtration plant. Independent laboratories certified to the National Association of Testing Authorities (NATA) standards carry out all testing, and the results are reviewed by NSW Health.

In the **attached** table you will find a summary of the test results for the reporting period 1 April to 30 June 2023.

What is tested?

Your water is tested for up to 70 different characteristics including taste, colour, odour, micro-organisms and chemical content. This report is a summary of a selection of health and aesthetic characteristics, chosen in consultation with NSW Health.

What are the water guidelines we must meet?

Australian Drinking Guidelines (ADWG) are set by the National Health and Medical Research Council (NHMRC) and the National Resource Management Ministerial Council (NRMMC). The ADWG are part of the National Water Quality Management Strategy.

The role of Essential Water is to ensure that safe drinking water is supplied to meet all guidelines.



FOR PUBLIC RELEASE

2 Broken Hill quarterly drinking water quality report for the period 1 April to 30 June 2023

BROKEN HILL		FILTERED WATER						
Characteristics		No. Samples	Min	Quarter Average	Max	ADWG	% passed	Comply
Health	E.Coli	26	0	0	0	0 orgs / 100 mL (100%)	100%	Y
	Fluoride **	3	0.8	0.9	1.0	0.9 to 1.5 mg/L	100%	Y
	Free Chlorine	26	0.5	1.2	2.4	0.2 to 5 mg/L	100%	Y
	Lead	3	0.0002	0.0002	0.0002	<0.01 mg/L	100%	Y
	Arsenic	3	0.001	0.001	0.001	<0.01 mg/L	100%	Y
	Manganese	3	0.0005	0.0062	0.0173	0.5 mg/L	100%	Y
	Cadmium	3	0.0	0.0	0.0	<0.002 mg/L	100%	Y
	Copper	3	0.002	0.005	0.008	< 2 mg/L	100%	Y
	Mercury	3	0.0008	0.0008	0.0008	0.001 mg/L	100%	Y
	Trihalomethanes	3	0.123	0.167	0.217	<0.250 mg/L	100%	Y
Aesthetic	Turbidity	9	0.0	0.1	0.4	< 5 NTU	100%	Y
	True Colour	3	1.0	1.0	1.0	15 HU	100%	Y
	pH	29	7.2	7.4	7.8	pH 6.5-8.5	100%	Y
	EC***	3	245	277	338	<1090 µS/cm	100%	Y
	Iron	3	0.0	0.0	0.0	<0.3 mg/L	100%	Y
	Zinc	3	0.01	0.01	0.01	< 3 mg/L	100%	Y

* Filtered Water is defined as the water leaving the Water Treatment Plant or within the treated water reticulation
 ** ADWG 2013, health guideline for fluoride is upper limit of 1.5mg/L
 *** ADWG 2013, salinity measure of 'good quality' limit of 600TDS converts to 1090EC



FOR PUBLIC RELEASE

3 Glossary*

Australian Drinking Water Guidelines (ADWG) – The Australian Drinking Water Guidelines (the ADWG) are intended to provide a framework for good management of drinking water supplies that, if implemented, will assure safety at point of use. The ADWG have been developed after consideration of the best available scientific evidence. They are designed to provide an authoritative reference on what defines safe, good quality water, how it can be achieved and how it can be assured. They are concerned both with safety from a health point of view and with aesthetic quality.

Arsenic – Based on human health considerations, the concentration of arsenic in drinking water should not exceed 0.01 mg/L.

Cadmium – Based on health considerations, the concentration of cadmium in drinking water should not exceed 0.002 mg/L. Contamination of drinking water by cadmium may occur as a result of impurities in the zinc of galvanised pipes or in solders used in fittings, water heaters, water coolers and taps.

Chlorine – Based on health considerations, the guideline value for total chlorine in drinking water is 5 mg/L. When used as a disinfectant, the free chlorine residual in major Australian reticulated supplies ranges from 0.1 mg/L to 4 mg/L, with typical concentrations in the reticulation of about 0.2 to 0.4 mg/L.

Essential Water comment: If a low reading of chlorine is detected in the reticulation system, personnel attend the site and flush until chlorinated water concentration of 0.5 mg/L is attained.

Copper – Based on health considerations, the concentration of copper in drinking water should not exceed 2 mg/L. Based on aesthetic considerations, the concentration of copper in drinking water should not exceed 1 mg/L. Copper is present in uncontaminated surface waters at very low concentrations, usually less than 0.01 mg/L.

Escherichia coli (E. coli) – Bacterium found in the gut, used as an indicator of faecal contamination of water. E. coli should not be detected in a minimum 100 mL sample of drinking water. In practice, E. coli may occasionally be present in drinking water in the absence of any identifiable source of faecal contamination. Nevertheless, if samples taken are found to contain E. coli, the response to each detection should be rigorous.

Electrical Conductivity (EC) – No specific health guideline value is provided for total dissolved solids (TDS), as there are no health effects directly attributable to TDS. However, for good palatability total dissolved solids in drinking water should not exceed 600 mg/L (1090EC). As a rough guide, electrical conductivity, measured in micro-Siemens per cm ($\mu\text{S}\cdot\text{cm}^{-1}$, also known as EC, or electro conductivity units), is multiplied by (a factor¹) to estimate TDS. Inferring a TDS value therefore has to be based on local circumstances.

Essential Water comments: ¹The conversion factor for Broken Hill water is 0.55. Fair quality water ranges to 900TDS (1640EC).

Fluoride – Drinking water is fluoridated to reduce the occurrence of dental caries. Occurs naturally in some water from fluoride-containing rocks. Often added at up to 1 mg/L to protect against dental cavities. >1.5 mg/L can cause dental fluorosis. The health guideline value is <1.5 mg/L.

Iron – Based on aesthetic considerations (precipitation of iron from solution and taste), the concentration of iron in drinking water should not exceed 0.3 mg/L. Iron has a taste threshold of about 0.3 mg/L in water, and becomes objectionable above 3 mg/L.

Lead – Based on health considerations, the concentration of lead in drinking water should not exceed 0.01 mg/L. In major Australian reticulated supplies, total lead concentrations range up to 0.01 mg/L, with typical concentrations less than 0.005 mg/L.

Manganese – Based on aesthetic considerations, the concentration of manganese in drinking water should not exceed 0.1 mg/L, measured at the customer's tap. Manganese would not be a health consideration unless the concentration exceeded 0.5 mg/L. At concentrations exceeding 0.1 mg/L, manganese imparts an undesirable taste to water and stains plumbing fixtures and laundry.

Maximum – The highest recorded reading.

Minimum – The lowest recorded reading.



Quarterly Drinking Water Quality Report - Broken Hill - 1 April to 30 June 2023

FOR PUBLIC RELEASE

Mercury - Based on health considerations, the concentration of total mercury in drinking water should not exceed 0.001 mg/L. Food is the main route of exposure, with highest concentrations found in fish and fish products. The average Australian adult dietary intake of mercury is approximately 0.004 mg per day. Drinking water is likely to constitute only a small fraction of total intake.

pH - Based on the need to reduce corrosion and encrustation in pipes and fittings, the pH of drinking water should be between 6.5 and 8.5. Chlorine disinfection efficiency is impaired above pH 8.0. When pH is below 6.5 or above 11, the water may corrode plumbing fittings and pipes.

Reservoir - An artificial body of water.

Trihalomethanes (THMs) - Based on health considerations, the concentration of trihalomethanes, either individually or in total, in drinking water should not exceed 0.25 mg/L. Trihalomethane concentrations fluctuating occasionally (for a day or two annually) up to 1 mg/L are unlikely to pose a significant health risk. Action to reduce THMs is encouraged, but must not compromise disinfection, as non-disinfected water poses significantly greater risk than THMs.

True Colour - Based on aesthetic considerations, true colour in drinking water should not exceed 15 HU. Badly corroded iron pipes can produce a brownish colour whereas corrosion of copper pipes can produce a blue-green colouration on sanitary ware and a faint blue colour in water in extreme cases. The condition of household pipes can significantly influence water colour.

Turbidity - 5 NTU is just noticeable in a glass. <0.2 NTU is the target for effective filtration of *Cryptosporidium* and *Giardia*. <1 NTU is the target for effective disinfection. The aesthetic guideline for turbidity is <5 NTU.

Zinc - Based on aesthetic considerations (taste), the concentration of zinc in drinking water should be less than 3 mg/L. No health-based guideline value is proposed for zinc. Taste problems can occur if the zinc concentration in drinking water exceeds 3 mg/L.

**Glossary definitions adapted from the ADWG.*



CITY COUNCIL

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