SOUTH32 WORSLEY ALUMINA MINE CLC MEETING

20 August 2024

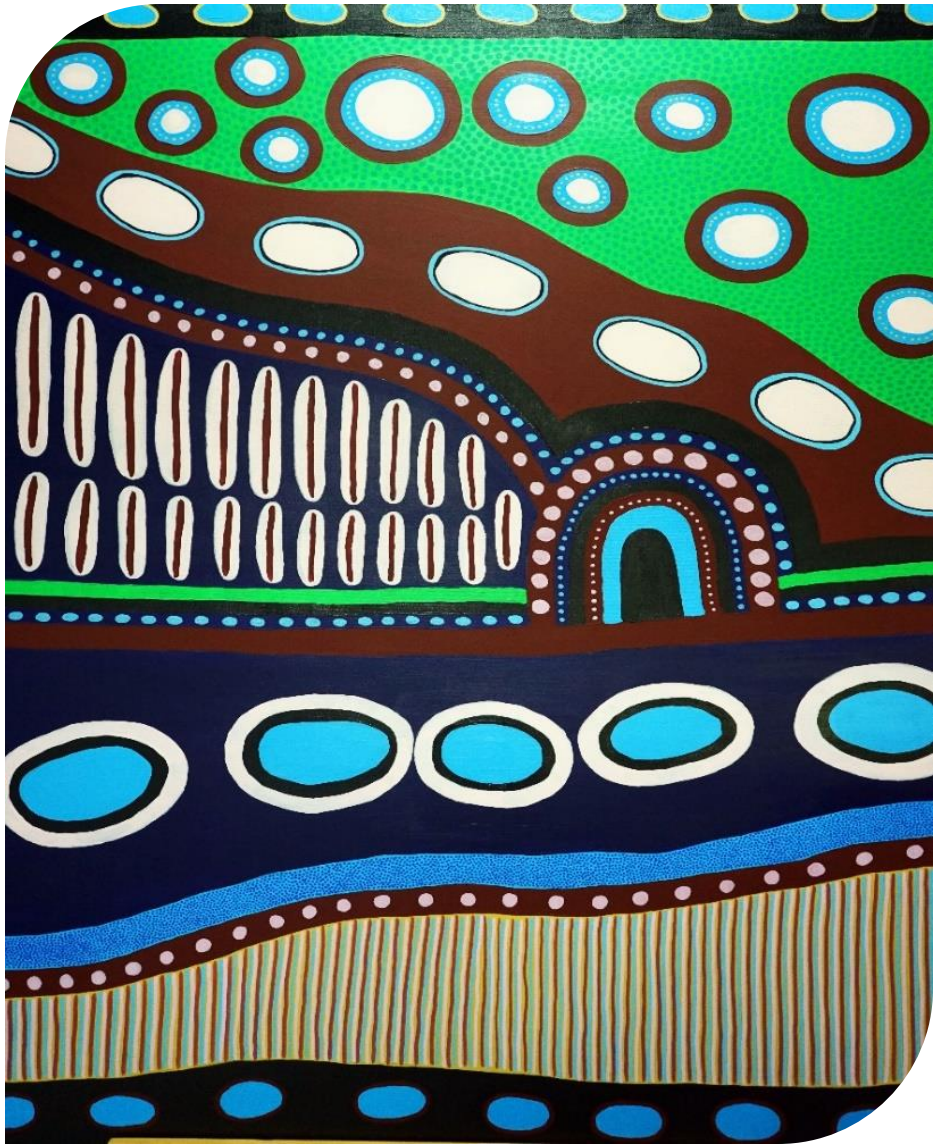
AGENDA

Item	Description	Presenter
1	Open meeting and note apologies	G Cavanagh
2	Acknowledgement of Country	G Johnson
3	Read and accept previous minutes Review actions and responses	G Cavanagh
5	Worsley Business Update • Boddington Bauxite Mine Update • Worsley Mine Development • Environment • Water Import • Community • Crystalline Silica Update	Various
6	Issue discussion and members' updates	All
7	Any other business	G Cavanagh
8	Review actions from meeting	G Cavanagh
9	Arrangements for next meeting (date/venue)	G Cavanagh
10	Close meeting	G Cavanagh

Acknowledgment of Country

I would like to acknowledge the Wilman people of the Noongar nation who are the Traditional Custodians of this land we meet on today.

I would also like to pay my respect to all Elders past, present and emerging.



WORSLEY BUSINESS UPDATE

GENERAL UPDATE

Quarterly Report June 2024

- Delivered strong sales in the June 2024 quarter, capturing higher commodity prices and releasing working capital to finish the year.
- Alumina production was largely unchanged year-on-year, with improved plant availability at Brazil Alumina partially offsetting a temporary bauxite conveyor outage at Worsley Alumina in the quarter.
- Advanced our portfolio transformation, completing key milestones for the sale of Illawarra Metallurgical Coal, and progressing construction at Hermosa's Taylor zinc-lead-silver deposit as planned.
- Impairment expenses for Worsley Alumina (~US$554M pre-tax) and Cerro Matoso (~US$264M pre-tax) will be recognised in our FY24 financial results (29 August)
- Worsley Alumina: ~US$554M (~US$389M post-tax) to a carrying value of ~US$2,027M, reflecting increased uncertainty created by the Western Australian Environmental Protection Authority's recommended conditions for the Worsley Mine Development Project approval and associated challenging operating conditions

WORSLEY BUSINESS UPDATE

BODDINGTON BAUXITE MINE UPDATE

Safety

•Good performance with regards to safety.

•Wet Weather having minimal impacts on mining – wash out and Dam Capacity management main focus

•Safety Training for all levels of staff (Lead Safely Every Day) commenced

Production

- Total Material Movement on track YTD for the mine – still seeing challenges with grade
- Conveying – remediation work paying-off
- Rehabilitation record seeding FY24 - 327ha

People

•Regular visits at the Mine by COO and VP offering support

•Recruitment commenced for apprentices – shortlist

•Recruitment continues as we try to fill vacancies with a preference for local (Boddington, Williams and Wandering) applicants – SWP, HAYS and Fulltime

WORSLEY BUSINESS UPDATE

QUINDANNING MINE ENBALING INFRASTRUCTURE PROJECT

The **Quindanning Mine Enabling Infrastructure Project** is a mine development project to allow mining east of Pinjarra-Williams Road. It delivers a pre-cast concrete arch road crossing over the Pinjarra-Williams Road.

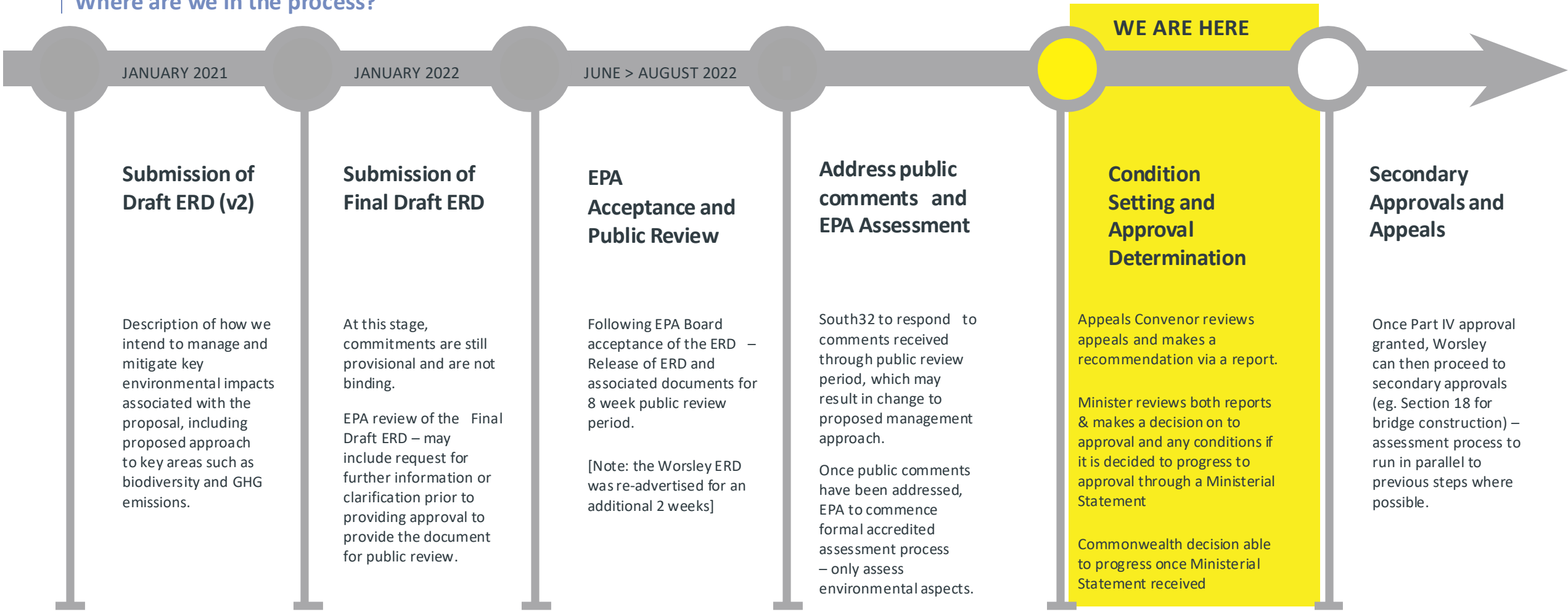
- Project completed start of July and Mine Development work has commenced

- The new Optus Tower has been erected and the solar panels have been installed. Commissioning works have commenced.

WORSLEY BUSINESS UPDATE

WORSLEY MINE DEVELOPMENT

Where are we in the process?

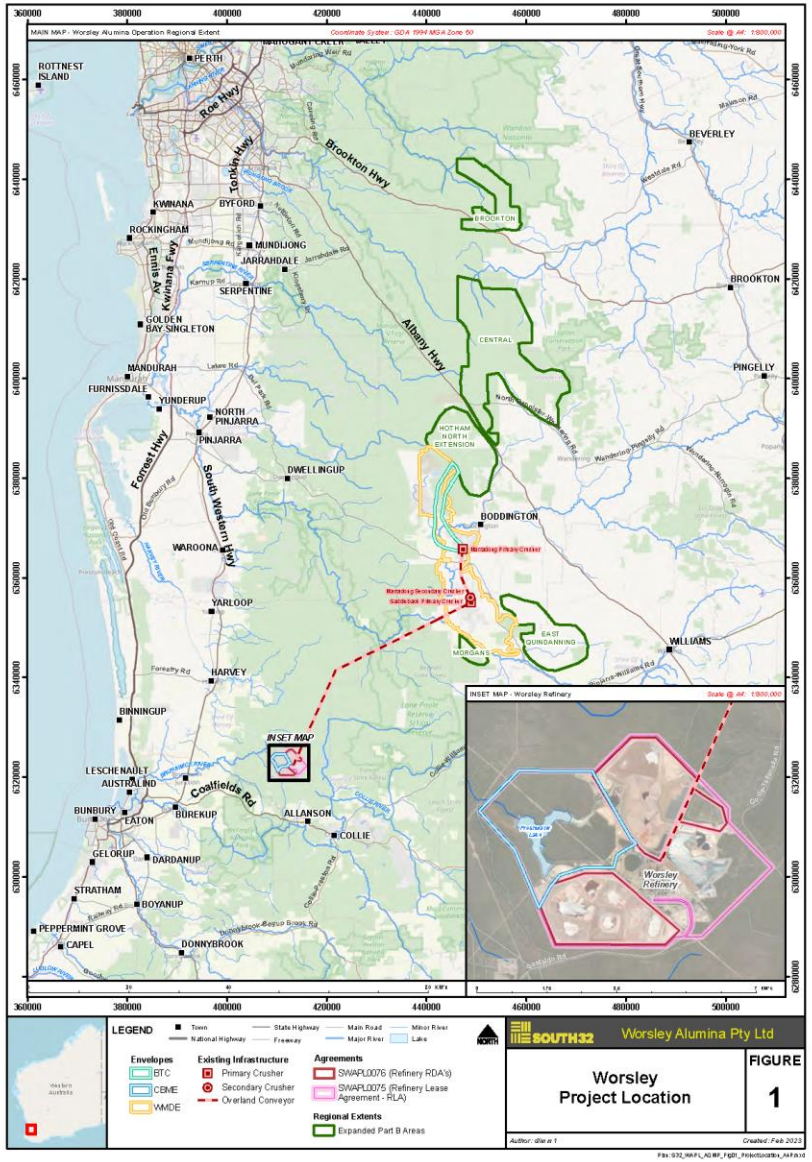


WHAT'S BEEN HAPPENING?

- **Response to Submissions document resubmitted with minor changes 12 March 2024**
  - Additional offsets, requested by the EPA Board – outside of the States offset calculator
  - Updated BOP and OIP's
  - Updated GHG Management plan, including decreased GHG emissions for the life of the project with targets that reflect reasonable and practicable measures to decarbonising Worsley Alumina with the ultimate goal of reaching net zero by 2050 along a linear trajectory so far as practicable
- **The final RTS also includes commitments already provided in the RTS document submitted 14 Dec 2023**
  - Including:
    - Further reduction in native vegetation clearing (from 7,119.5 ha in original referral – 3,855ha now proposed)
    - Additional commitments to avoid impacts to Matters of National Environmental Significance
    - Additional protected areas added
    - Increased size of Ecological Linkages
    - Additional actions added to Environmental Management Plans (consistent with recovery plans)
- **Response to Submissions document accepted by DWER on 28 March 2024 and published to the EPA's webpage (**Worsley Mine Expansion – Revised Proposal | EPA Western Australia**)**
- **EPA Board released their report recommending approval with Conditions**
- **Appeals process open for 21 days – closed 29 July 2024**
- **Appeals Convenor now considering the appeals received**

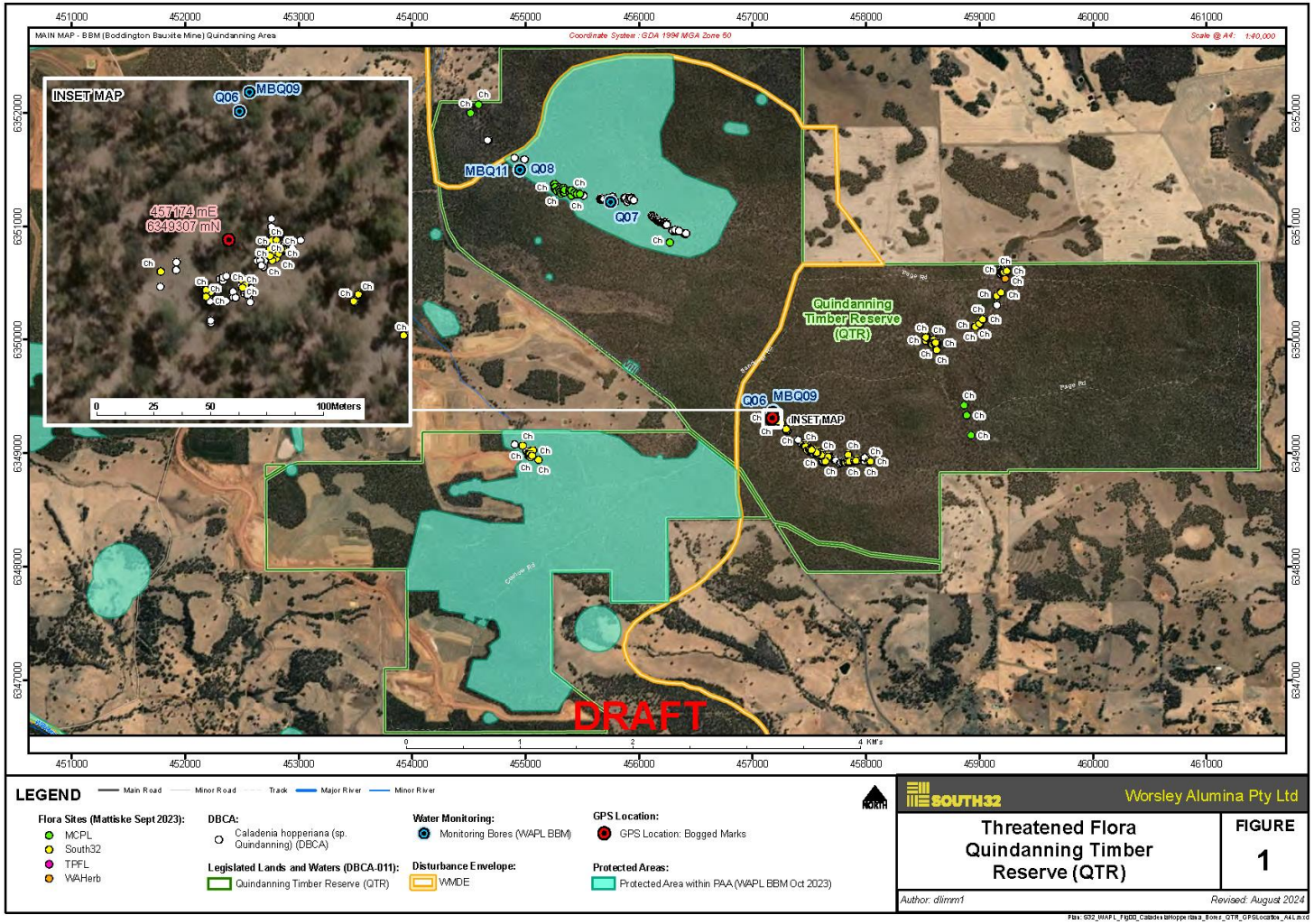
WHAT'S NEXT?

- Appeals Convenor writes a report and submits to the Minister
- Minister progresses application in accordance with recommendations
- Commonwealth (DCCEEW) commence assessment utilising EPA Report
- Ministers (State and Commonwealth) make decision on application – different processes & different timelines



QUINDANNING TIMBER RESERVE – BORE ESTABLISHMENT

- Bore required to monitor perched aquifer (that the species relies upon)
- Reg 4 (DBCA) Authorisation: to install the bore
- Location of bogged vehicle and subsequent retrieval operations was not at the known location of any *Caladenia hopperiana* plants
- Known records of individuals from population census:
  - 2023 DBCA census
  - Mattiske's targeted surveys (2022, 2019)
  - Previous targeted surveys (2009, 2010, 2011, 2012, 2013 2017)
- Reported to DBCA regarding the Reg 4 requirements
  - Awaiting any advice from DBCA regarding site remediation
- Improvements to project activity outside of Development Envelopes
  - Firmer internal requirements to commence work
  - Physical demarcation where appropriate



WORSLEY BUSINESS UPDATE

ENVIRONMENT

Marradong Brook

- Worsley self reported silt leaving the HV bridge to DWER in June. Immediate actions and feedback from DWER have been completed, including the installation of a silt curtain and an ongoing contract for water and silt removal from the bridge post rain days. This process will be ongoing until the road works can be completed commencing in spring. No silt has since been recorded leaving the bridge surface.

Rehab

- 326 Ha of rehabilitation has been completed during the 2024 season. Including 268.7ha in State Forest, 57.3ha in Private properties.
- Recalcitrant planting program has also been completed for 2024.

Research

- Review of previous pasture improvement programs has resulted in an expansion trial with the use of available clays. The larger areas allow for increased monitoring capabilities and removal of small plot variables and assessing the impact on rehab optionality.
- DNA degradation trial continuing with Red-Tailed Phascogales (lab/zoo based). Assays refinement work required as they are too sensitive and are generating a significant amount of non-negatives.
- eDNA chapter review may result in a change in methodology for future sampling. Was planned on using insect DNA (iDNA), however air DNA sampling is having improved results with an honours project based in Dryandra.

WATER USAGE (REFINERY)

Refinery Freshwater and Catchment Lakes

At South32 Worsley Alumina's Refinery, we have a Catchment Lake (RCL) and Freshwater Lake (FWL) as the primary source of our operational water needs. Typically, we are self-sufficient with both facilities providing the approximate 13GL of water it takes to maintain Refinery production.

In years of low rainfall and when our catchment lakes cannot supply the necessary water required to meet our production targets, Worsley has an agreement with Harvey Water to purchase and import water from Wellington Dam. This water is imported directly into our Refinery catchment lake because high salinity levels make it non-potable.

In 2021 Worsley completed construction of a permanent pump facility to minimise noise during import periods. Regretably, in 2022 the facility was vandalised and remains inoperable while repairs are being undertaken. Temporary pumps with noise attenuation will be used to minimise ambient noise for park users, permanent infrastructure is scheduled to be repaired early 2025.

Pumping in Wellington Dam National Park is only undertaken when the Refinery is not self-sufficient in supplying our own water requirements. It takes approximately five weeks to import one gigalitre of water from the pumping station to our Catchment Lake at the Refinery.

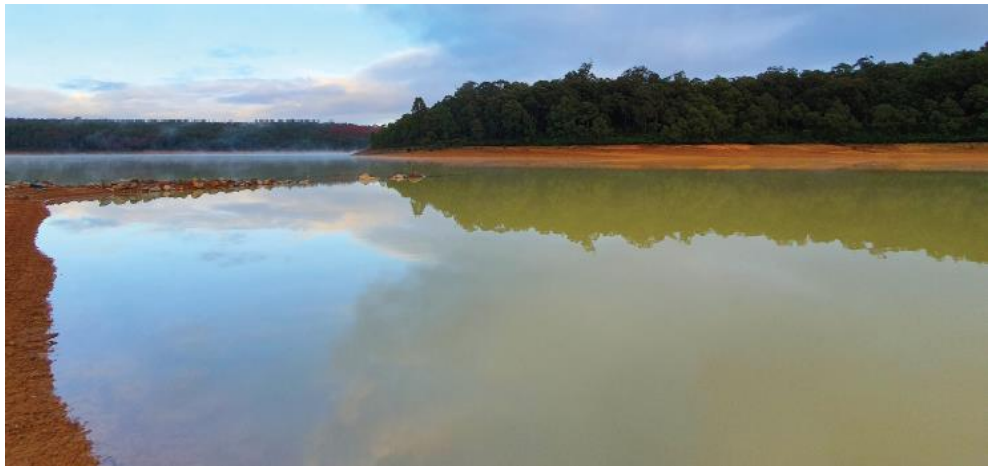
Since 2020 Worsley has imported and purchased the following amounts of water from Wellington Dam, our medium import is typically 1.3GL.

2020	2021	2022	2023	FY24
3.90GL	No import	No import	1.8GL	2.5GL

Winter for the South West

During winter the Bureau of Meteorology's official station located in Collie recorded 423mm of rainfall to 19th August, closely approaching the winter median of 485mm. As of 12th August 2024, Wellington Dam was at 42% capacity, holding 78 gigalitres (GL) of water. This is a 17% decrease in the dam level from the same time last year.

Worsley's water import of up to 2.5GL represents the equivalent of approximately 1.5% of total dam capacity.



WORSLEY BUSINESS UPDATE

COMMUNITY

- Monthly rehabilitation tours continuing
- South32 Local Voices – Community survey finalised 712 responses, will provide an update to community in September/October.

Community Investment

- Community Grants Round 2, 1 August – 31 August.

Community Complaints

- 17 complaints FY24, Q4
- All the complaints related to BBM
    - 12 of the complaints related to noise
    - 4 of the complaints related to dust
    - 2 of the complaints related to traffic

WORSLEY BUSINESS UPDATE

Community Liaison Committee Purpose

Committee commitment:
The Mine CLC is the core 'community' representative body for the communities surrounding the mining operation. Members act as a proxy for the broader community of Boddington and surrounding areas. The CLC's purpose is to act as a two-way discussion and engagement mechanism between Worsley and the community.

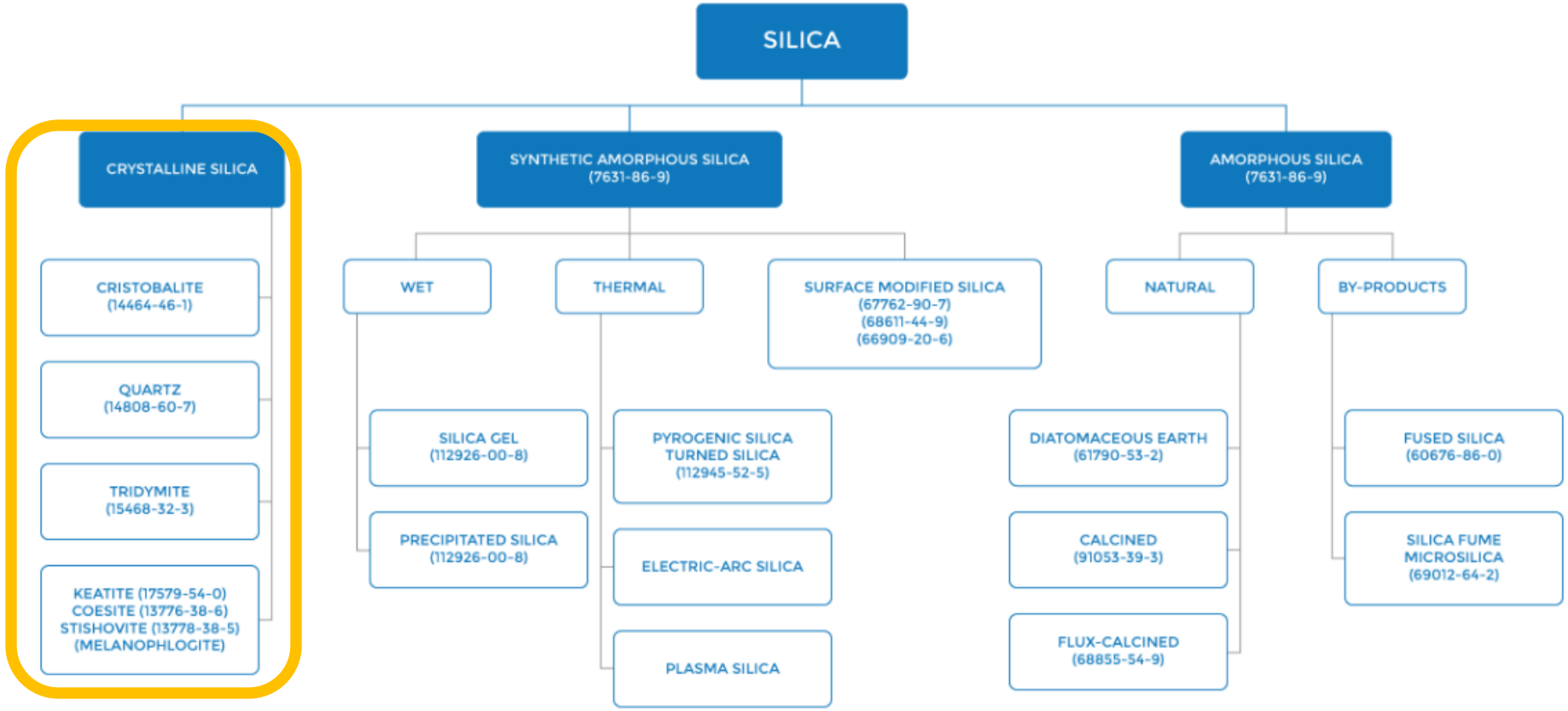
To support this purpose Worsley commits to:

- Transparently share information about the operation, key issues, other risks and opportunities of community interest.
- Seek regular feedback on the quality of the relationship between the operation and the community and how the operation is performing in the community.
- Listen, investigate, remedy and close out issues important to the community that are the direct result of the Worsley operation.
- Consult with members in relation to the activities within the Worsley Community Investment Plan.

Committee Minutes - discussion

WHAT'S SILICA?

- Silica (silicon dioxide) is naturally occurring and can be crystalline and non-crystalline (amorphous).

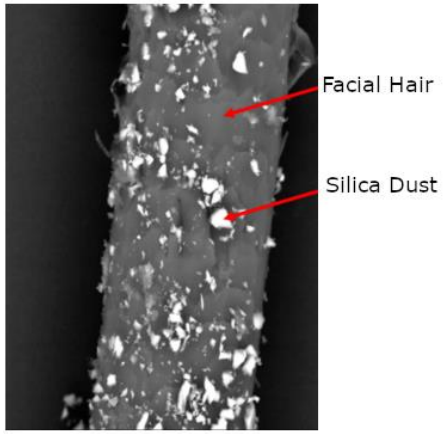


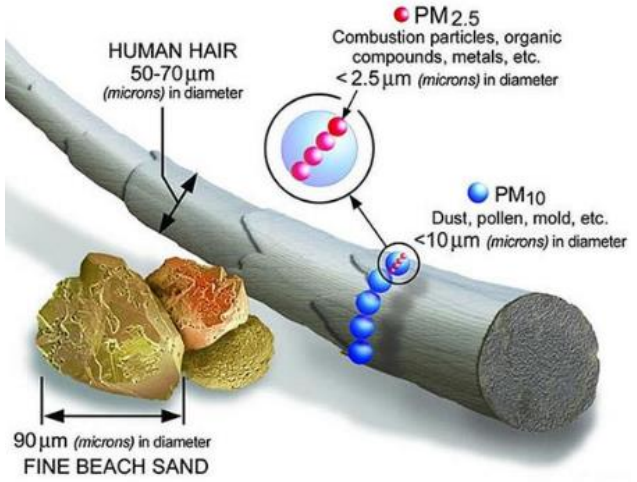
- There are various forms of crystalline silica with the most common being α-quartz.

- α-quartz exists in most types of rock and rock-based products.
  - Granite (25-40%), Shale (~22%), Sandstone (70-90%), Concrete (~30%), Engineered stone (90-97%).

WHEN DOES SILICA BECOME HARMFUL TO HEALTH?

- Inhalable dust includes all airborne particles below 0.100mm (<100 micrometres).
- The portion of airborne dust that has a diameter below 0.010mm (<10µm) is called respirable dust.
- Respirable dust around 2.5µm in diameter, is small enough to penetrate deep into the gas exchange region of the lungs.
- A wide range of illnesses and diseases can develop even after just 3-10 years of exposure to high concentrations of Respirable Crystalline Silica (RCS) dust, including:
  - Chronic obstructive pulmonary disease (COPD) – Bronchitis, Emphysema
  - Chronic kidney disease
  - Autoimmune disorders – Tuberculosis
  - Lung cancer
  - Silicosis – The formation of scar tissue and a stiffening of the lungs
- The non-crystalline form of silica does not cause this kind of lung damage.
- Silicosis is irreversible and uncurable. You can only prevent it from getting worse.
- Occupational Silicosis was thought to be well managed in Australia … but in October 2018, a spike in silicosis cases for the Engineered Stone Industry stonemasons in NSW, ACT and VIC hit the National news headlines.





ARE WE EXPOSED TO RCS DUST AT BBM AND ALONG THE OBC?

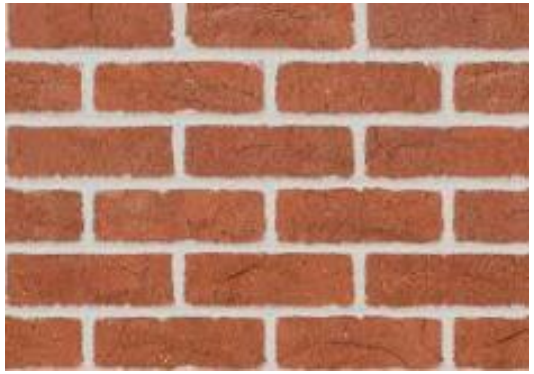
- Yes, but current exposures to RCS dust are very low and are not a health concern.

- There are many natural and man-made sources of crystalline silica at BBM and along the OBC of varying concentration:
  - Rocks, soil, bauxite ore, concrete, sand, bricks, mortar, ceramic tiles, and grout.

- As a result, most workgroups have a potential to be exposed to varying concentrations of RCS dust.

- While it is an unavoidable part of mining bauxite, RCS is a well-recognised airborne contaminant that already has multiple layers of control using the Hierarchy (substitution, dust extraction, dust suppression, SWIs, PPE).

- Even though current exposures to RCS dust currently very low and not a health concern, both the Process Lab and OBARK Team confirmed that the crystalline silica (quartz) in our bauxite will steadily increase from 5% (currently) to 25% as our mine develops over the upcoming years. This is equivalent to a 5-times increase.



HOW DO WE CALCULATE EXPOSURE NOW AND IN THE FUTURE?

- Worsley's Senior Occupational Hygienist:
  - Collects RCS samples from 45 different workgroups (grouped in 9 SEGs) across BBM and the OBC.
  - Analyses sampling data and compares results to the shift-adjusted Occupational Exposure Limit, to better understand our current exposures and to identify the sources.
  - Trends past and present exposure data to quickly identify even the smallest of changes.

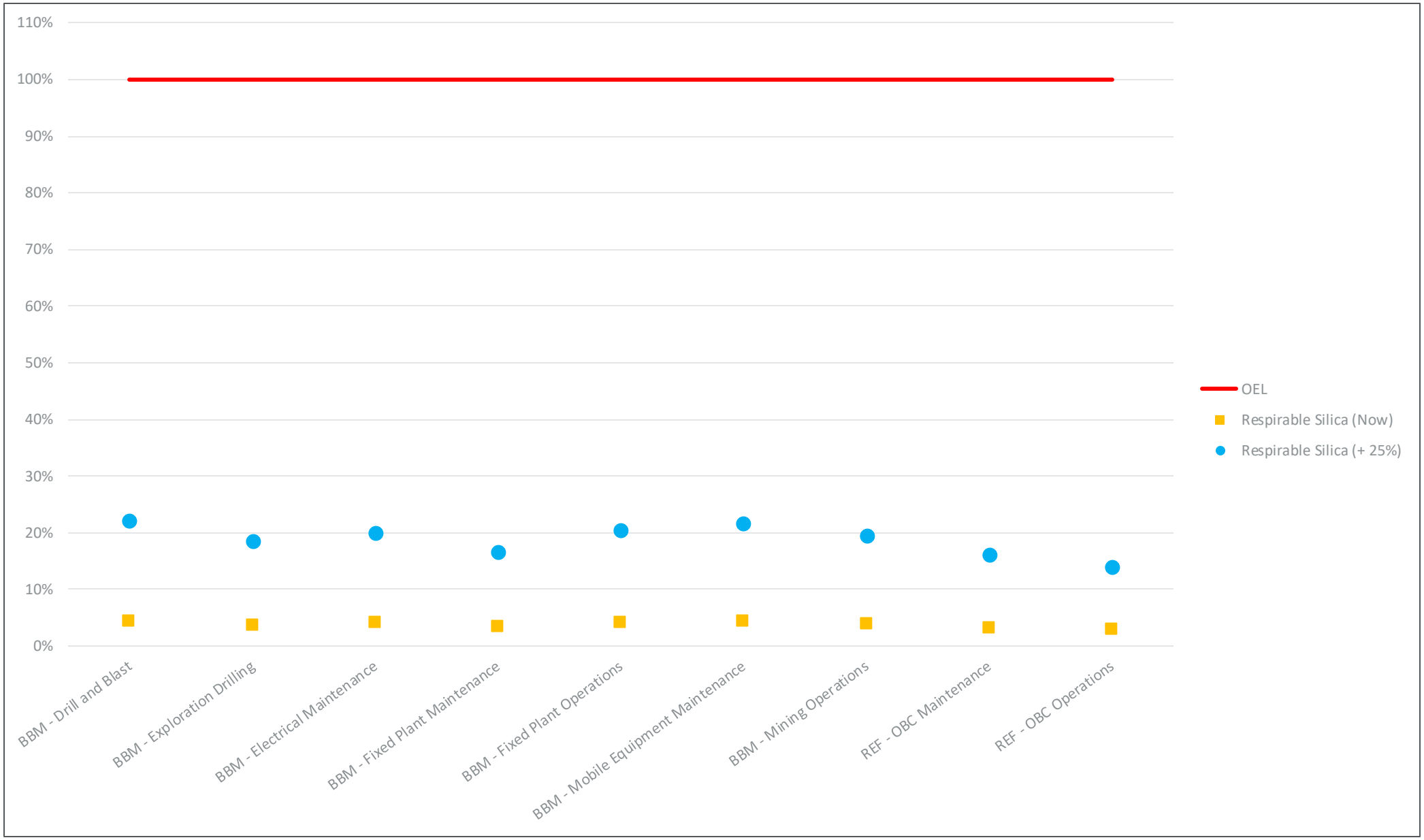
- Even if we see the full 25% increase in crystalline silica (quartz) in our bauxite, it is difficult to estimate how much of the associated dust will just be within the respirable dust range (<10µm).

- As a result, we use current RCS dust exposures (from end of FY24-Q4) to predict how the increase in bauxite silica might convert to RCS dust exposures in the future. Here are the BBM and OBC workgroups:

SEG #	SEG	Respirable Silica (Now)	Respirable Silica (+ 25%)	Shift-Adjusted OEL	Units
2	BBM - Drill and Blast	4.4%	22.0%	0.048	mg/m3
3	BBM - Exploration Drilling	3.7%	18.5%	0.048	mg/m3
4	BBM - Electrical Maintenance	4.0%	20.0%	0.048	mg/m3
5	BBM - Fixed Plant Maintenance	3.3%	16.5%	0.048	mg/m3
6	BBM - Fixed Plant Operations	4.1%	20.5%	0.048	mg/m3
8	BBM - Mobile Equipment Maintenance	4.3%	21.5%	0.048	mg/m3
11	BBM - Mining Operations	3.9%	19.5%	0.048	mg/m3
9	REF - OBC Maintenance	3.2%	16.0%	0.048	mg/m3
10	REF - OBC Operations	2.8%	14.0%	0.048	mg/m3

Note: Exposure data does not include respiratory protection factors. This is normal practice, and it estimates exposure to workers who do not wear any respiratory protection.

RCS DUST EXPOSURES – JUNE'24 VS. FUTURE 25% INCREASE



NEXT MEETING

Arrangements for next meeting and meeting dates for 2024 proposed:

- 19 November 2024 - Boddington


SOUTH32

BACKUP SLIDES

WATER USAGE-MS719

In the Ministerial Statement we have a condition which allows us to use 500ML on average. Since 2006 we have been recording our abstraction and overtime using a rolling average to keep us accountable for our water usage. YTD our water abstraction average sits at 498.92ML.