Note that minutes are paraphrased to an extent and may not match actual statements exactly.

Project	Hydro Kurri Kurri Site Redevelopment Project	From	Emily Strauss
Subject	Community Reference Group Meeting	Tel	1800 066 243
Venue/Date/Time	Thursday 17 August 2023 MS Teams video conference 6.05pm – 7.12pm	Job No	2218982
Copies to	All committee members		
Attendees	Mr Toby Thomas – Community representative, Towns with Heart (TT) Mr Andrew Walker – Hydro Kurri Kurri Project Manager (AW) Ms Emily Strauss – Minutes, GHD (ES) Mr Michael Ulph – CRG Chair, GHD (MU) Cr Robert Aitchison – Maitland City Council (RA) Ms Jenny Mewing – Cessnock City Council (JM) Mr Darrin Gray – Community representative (DG) Mr Alan Gray – Community representative - Retired Mineworkers (AG)		
Guests/observers			
Apologies	Mr Richard Brown – Managing Director, Hydro Kurri Kurri (RB) Mrs Kerry Hallett – Hunter BEC (KH) Mr Rod Doherty – Kurri Kurri Business Chamber (RD)		
Not present	Mr Bill Metcalfe – Community representative (BM) Clr Rosa Grine – Cessnock City Council (RG) Clr Mitchell Hill – Cessnock City Council (MH)		

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1 Welcome and Acknowledgement of Country

Meeting commenced at 6.03pm

Michael Ulph (Chair) (MU)

Acknowledgement of country.

Emily Strauss from GHD taking minutes.

2 Declaration of Pecuniary Interests

Nothing to declare.

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3 Meeting agenda

Time	Subject	Speaker
Meeting opening		
6.00pm	Welcome.	Michael Ulph – Chair
6.10pm – 6.15	Other introductions, apologies	Michael Ulph
6.15 – 6.15	Declaration of pecuniary interests	ALL
Last minutes		
6.15 – 6.20	Acceptance of last minutes and matters from the previous meeting.	ALL
Agenda items		
6.20 – 6.45	Demolition / remediation update	Andrew Walker
6.45 – 7.00	Approvals, Rezoning and other items	Andrew Walker
7:00 – 7:10	CRG questions and answers	Hydro CRG members
General business		
7:10 – 7:15	All other business	ALL
Meeting close		
7:15pm	Next meeting and meeting close. (Next meeting in 3 months). November 16.	

4 Welcome and meeting opening

MU welcomed attendees, provided an Acknowledgement of Country and noted apologies.

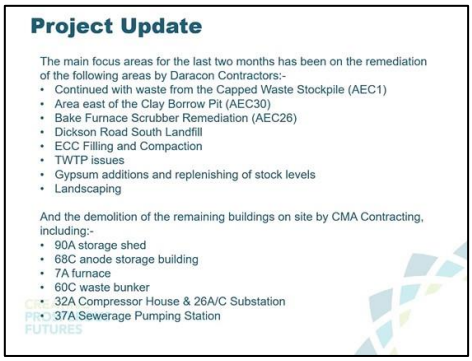
MU asked those present to declare any pecuniary interests.

5 Last meeting minutes

TT moved the minutes.

AW seconded the minutes.

6 Project Update



AW: So since the last meeting quite a lot has happened with the remediation of the site and the cell is nearly completely full. I just checked the figures and as of last Friday, we've just hit 600,000 tonnes of material that's gone into the cell. So that's waste plus gypsum and we're adding 10% gypsum to all the aluminium smelter waste from the capped waste stockpile.

The activities that Daracon have been working on onsite, obviously the capped waste stockpile, which is the largest amount of waste, an area called AEC30, which is an area east of the clay borrow pit, which was a staging area for line three construction in the mid-80s, the bake furnace scrubber footprint remediation in the carbon plant, an area that we call the Dickson Road South Landfill, which was some land that was used as a landfill up to the mid-80s. Probably not the best idea, whoever came up with it and it's a mixture of smelter waste and municipal waste I would say. We've cleaned that area up and I'll talk a bit about the cell filling and compaction.

The water treatment plant, and we have had some issues with that so I'll talk about that. I'll talk about gypsum and then landscaping. Also, as of the 1st of May, we've had CMA Contracting back on site, demolishing the remaining buildings that were in their scope to be demolished. These were buildings where we were either storing materials for cell construction or waste.

So 90A storage shed was a shed over on the west side of the site. The anode storage building is where we were storing non-recyclable demolition waste. The 7A furnace tubs is where we were storing process waste.

For those buildings, the waste has been removed by Daracon and then handed over to CMA for demolition, after we got a validation from Ramboll and Ross McFarland, our site auditor. 60C waste bunker was demolished. It was just a small shed where we were storing some pot lining ramming paste and in the last week or so they've been demolishing the compressor house and nearby substations and the sewerage pumping stations.

So I'll just run through these slides. It's just a series of photographs as usual, just stop me for questions along the way. Please feel free to do that.

This is just going back to where we were at the last meeting in May, so this photo shows stripping of the last few hundred millimetres of clay and then exposing the waste at the Capped Waste Stockpile. That clay, because it was free of waste, we could use that in the bottom 1.5 metres in each of the quadrants in the cell which we call the fluffy layer. So that was something that the cell designer wanted

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us to include - a 1.5 metre thick layer on the floor and the side walls to protect the liner so this material was good for that purpose.

This is early June and you can see work is underway and it's been good actually that this supposed forklift that was supposed to be buried in there, we haven't found it and I don't think we will so it doesn't exist or if it did it must have rusted away. It's been mainly carbon anodes and cathode blocks.

MU: Anything particular of interest, apart from that?

AW: Not really. Just anodes, cathodes, steel collector bars which are the bars that are inside the cathode blocks and what looked to be like geotextile cloth, things like that. We didn't find any drums of liquid waste. We were worried about that because we were worried about what effect that could have on the liner. Also, you'll see in this photo there's a decontamination unit. That's a wet decon unit, so the operators park up where those vehicles are parked in the bottom of the screen, and they go through a decon unit. They have to wear all their PPE - so paper overalls, gloves, booties and a half face P3 respirator which is suitable for asbestos, filtering out asbestos fibres and acid gases. And we have one of these wet decon units at both the capped waste stockpile and at the cell. So anywhere where there's a risk of airborne asbestos fibres. And that's all under the control of the asbestos supervisor from Enviropacific, they are a subcontractor to Daracon.

EPS have also engaged an occupational hygienist from a company called Prensa and they do air monitoring. They set up air monitors just on the fence around the capped waste stockpile on all four sides of the capped waste, all four sides of the fence at the cell and four locations along the haul road. And since we started moving waste on the 4th of May, there's been no positive readings for asbestos, which I think has been a really good result.

Daracon have a water cart running around wetting down the haul roads, the capped waste stockpile and the cell to suppress any dust and of course we add the gypsum to the waste and then the truck drives through a set of water sprays to wet down the gypsum. The gypsum stops or helps to prevent asbestos coming out of the truck and the water wetting it down also helps keep the gypsum in place so it doesn’t blow out. So yeah, it's been going well.

Another thing that I'll point out. Daracon have been putting in diversion bunds to separate clean water from dirty water. So this is looking in the opposite direction. So the previous photo was looking east. This is now looking west across the site and you can see a bund in the drain between the capped waste stockpile and the SPL sheds, and that's a clay bund. So anything on the far side is dirty, and that water was running around to a leachate collection pond in

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the northwest corner of the capped waste stockpile. Anything that fell this side of the bund - so off the clean clay cap - collected in a clean water bund. So if we got rain that way we could separate clean water from dirty water and that bund was moved from west to east as the work progressed, so as the cap was removed from west to east.

This is now showing well only six days ago. We've now removed most of the capped waste stockpile. They are just working on the last bit of waste. I'd say the bottom 1.5 to 2 metres and there's more waste than we were expecting. We were expecting 225,000 tonnes and we had enough gypsum to cover that amount. So 10% of that is 22,500 tonnes. It looks like it's going to be up around 265 to 270,000 tonnes. So we've had to order more gypsum and we're doing that at the moment. So Daracon have just had to pause for about a week on the capped waste and they're doing some other areas while we rebuild our stocks of gypsum so they can get started again next Tuesday.

MU: Andrew, can I ask you just the difference between the tonnes and the cubic metres? Were you basing it on the same sort of thing? The same proportion of cubic metres giving everything similar weight? Or were you expecting maybe there was some voids in the middle of the stockpile or something else?

AW: Well, we weren't really sure. We knew the volume was around 140,000 cubic metres, but the mass was an unknown because we actually thought the density of this stockpile was 1.6 tonnes per cubic metre and we based that on the density of a carbon anode and a carbon cathode but it's actually turned out to be a lot higher. It's probably up around, I would say, 1.9 to 2 tonnes per cubic metre, which pushes the mass up to between 265,000 – 280,000 tonnes. We had some information from those cores that we did back in 2015. We actually had the bore logs and we surveyed the top of the cap and we worked out approximately where the interface was between the waste and natural ground, but it was only approximate.

So about a month ago, we went through and did about 9 or 10 test pits and surveyed actually where the waste to natural interface was and that was when we realized we had to start ordering more gypsum.

We realised the waste went a lot deeper than what we're expecting. The other thing I'll point out, I'll talk about this later on, but in the cell we gave Daracon the KPI of meeting 1.6 tonnes per cubic metre minimum density in the cell. But because the waste is denser than we thought and they've done a good job with compaction. They've reached a global density of 2.12 tonnes per cubic metre and we measure that by - well we weigh everything that goes into the cell,

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every truckload of waste and every bit of gypsum is weighed. And each week Daracon are doing a survey with a drone flight over the cell and measuring the volume, so they know the volume of waste and we know the tonnes that went in and that's how we arrive at that density figure, which was a lot higher than I was expecting. Which is a good thing because it means we've been able to fit all the waste into the cell and nothing will have to go off-site at this stage, but we still have a few risk areas. We have to scrape the haul roads and we've allowed a certain amount, but that will then have to be validated through sampling and if we have to scrape more off, that could increase the amount of waste going to the cell - that's one of the last things we have to do. Plus we've still got Daracon remediating a few final areas and CMA still demolishing so that will increase the amount of waste as well.

We have noticed some leachate pooling on the natural surface, but we've been lucky with the weather and it is actually above the water table. This leachate you can see here in this photo was just from some rain that we had. But I was worried that the water table was higher than the bottom of the waste and that we might end up with a swimming pool. So far it's been okay, but once all the waste is removed, we'll then do a 200 millimetre scrape with the swamp dozer and then Ramboll will go in and do sampling on a 25 square metre grid pattern and we may have to remove more of the natural material underneath. So it's still a bit of an unknown, we might still end up with water problems, but Daracon are going to fall the floor to the east and we'll have a bit of a sump where we can pump the leachate out to the water treatment plant, which is just next to the capped waste stockpile.

DG: Andrew, what's stopping that from leaking into the water table in the other direction?

AW: That's a good question, Darren. And so far we believe most of the floor is clay. To go in there we have to get all suited up and wear our masks so we've only done that once to do the test pitting. We try and stay out of there, but the whole reason we're doing this project is that we know there are sandy lenses running through the clay. It's a mixture of clay and sand and that's why we were getting the impact in what we call the *veg impact zone* to the northeast of the capped waste stockpile and that's why we didn't want to leave that as a legacy and that's why we're doing this project. So at the moment that's only very shallow and it's not really an issue, but if we get significant rain, we'd have to get guys in there fully suited up, set up a flex drive and pump the water out to the treatment plant.

Some other areas that we've been remediating. So this is the area I was talking about earlier. This was a staging area for Line 3

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construction and we know that with Line 3 they took slag from Pasminco lead zinc smelter and they were using it as a bedding material for the stormwater pipes and the water pipes all around Line 3 and other areas that were constructed during Line 3 project.

Then they dug out the northwest dam and we believe that they put that material on top of the slag and made a level pad to use as a laydown area. Anyway, what we've been doing, I would call it an archaeological dig finding all this lead slag and waste concrete, bits of broken concrete pipe. So Ramboll did an estimate, I think it was supposed to be under 5,000 tonnes and we've ended up over 25,000 tonnes that we've taken out of this area. And that's just one of the high voltage feeders. That was actually the feeder that was for line three, you can see on the right hand side. Once we remediate this area, it will actually be handed over to APA, the pipeline authority, they're going use it as a staging area for the gas pipeline, for the Hunter Power Project.

DG: And that's going to have to go into the pit?

AW: Yeah, that's all been going into the cell.

DG: And the lead?

AW: Yes. We had some onsite, you might recall - about two years ago we were remediating the site. We found a lot of it around the footprint of Line 3 and that's all had to go into the cell as well. Now this is a little bit later on after the work has progressed a bit further.

And this is a bit later on again, an aerial view.

Another area that we've had to clean up was, you might recall about three years ago, we demolished the bake furnace scrubber. We were aware of this drainage pit outside the fence just adjacent to the northeast dam. It was a pit that was used to supply water to the cooling tower of the scrubber, but it wasn't successful because sediments blocked up the spray nozzles of the cooling tower, and they stopped using it after only 12 months and they went to potable water. So this pit was never used after that. But since CMA came back in May, we've had them demolish it and then we've found a lot of contamination of the soil around that pit, which we believe was from cleanouts of the scrubber duct work and the cooling tower.

The soils in that area are high in coal tar pitch and PAHs which are not mobile contaminants, they're not water soluble but they're in the soil. So CMA did some of the work and we gave Daracon the job of cleaning up the rest of it. And it's quite extensive. It's been there for a long time and there's a few drains where water was running from the carbon plant to the north and we've been cleaning that up over the last few weeks.

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This is just showing the drainage pit being removed. It was in a series of concrete rings.

That's where we've been storing them. So we gave CMA an area to store their waste and Daracon come and collect it periodically and put it in the cell. So this concrete was contaminated and all that soil was contaminated. And that's all gone to the cell.

This is the excavation where we removed the pit and you probably can't see it very well, but there's a lot of black discoloration on the soil there. That's what we've been cleaning up.

Another area, I mentioned this earlier, Dickson Road South. For one reason or another, people that were in control of the smelter at that time in the early 80s decided to use this area, which we call Dickson Road South as a landfill and there were smelter materials there. We've been cleaning that up. We found refractory bricks,

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graphite fluxing tubes from casting which I instantly recognise because I worked in casting for nine years, an extrusion billet. We even found machine repair tags from central maintenance that had been filled in but the writing was all faded. Gloves and other types of PPE. But there was other waste there as well - municipal waste, people's bathrooms, fibro sheeting with tiles on it. So other people have been dumping in this area. But anyway, we've cleaned it up.

This is about a week later. Some of the trees had to be removed unfortunately, which we didn't want to do. But those trees have grown on the waste, so we had to remove them.

This is a bit later on again, mid-July. So you can see where it is in relation to the Kurri Speedway just to the north of it.

We finished that and got a validation from Ramboll and the site auditor looked over it and all the sampling came back fine. There was a little bit of fluoride I should add from the smelter waste. But the sampling came back as zero fluoride after we remediated it, and here we had a small dozer in there shaping it so it's free draining and then we've put some topsoil in there, about a 100 millimetres of topsoil, and we're just about to hydromulch it in the next week or so.

Moving on to the next item, this is the cell filling. This is an aerial view of the cell back in April, taken from the last meeting. So that's where we got to at the last meeting - we'd filled the two eastern quadrants and we'd just started putting fluffy layer into the northwestern quadrant. And we were doing that for a reason. We were only filling quadrants as we needed to, to minimise leachate generation if we had rain. We've now got all four quadrants with waste in them and obviously the capped waste stockpile footprint is fully exposed. So if we get rain we're now at the most vulnerable stage of the project. If we get significant rain, we could get a lot of leachate, which would put a lot of load on the water treatment plant.

So this is now looking at say mid-June. All four quadrants are being filled with waste. The white/grey coloured waste is the capped waste stockpile. The gypsum gives it a white colour. The eastern half, I would say that would have been from Dickson Road South and also Dickson Road North.

This is a bit later again. So we're filling the cell up, moving up in height.

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And this is now at the end of July and you can see there that they're mainly using the two western ramps. They stopped using the eastern ramps because they were getting too steep, especially if we got any rain. The Moxies were slipping and sliding down those eastern ramps as they were leaving because they were empty so they didn't have much weight and they weren't getting good traction so they prefer to use the western ramps so they've got a good circuit going where they can do a loop and go out through the wheel wash of course. Which is just on the left hand side as they exit through the access road.

This is only a week ago. The waste is now four metres below the design height or 17 metres thick in total, which is nine metres below the batter. The batter is the orange coloured clay you can see around the perimeter and they've now gone eight metres above that batter and the design is to go a total of 12 metres above the batter. Daracon also put a clean diversion bund using clean clay. You can see that around the perimeter of the cell just inside the batter and the purpose of that is if we get rain we want it to stay in the cell and soak through the waste down to the sumps because anything that falls on the waste has to be treated as leachate. We didn't want that leachate, running out of the cell into the storm water system and getting into our two storm water sediment basins.

Obviously that would be bad because that would mean that the stormwater would also have to be treated as leachate. So Daracon actually, say on a Saturday if they're expecting there could be rain on Sunday, they actually block off the ramps with the bund as well temporarily until the Monday morning or until rain finishes. We do also check the stormwater for fluoride and cyanide and we would pick it up that way before we discharged it. That's part of our procedure.

MU: So Andrew, the brown area, so let's say we've got the pink looking area which is the bund. You've got that lighter looks like sand wall, which is the area you've described as basically stopping any rainfall from going over the side. That area inside there, which

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is a brownie, sort of sandy, but browner colour. That is still porous and not clay and so water would go through there and potentially that's contaminated. So that's why you need to look after that water.

AW: Yeah, that's correct. So that's mainly material from Dickson Road South.

MU: Because it looks fairly clean, doesn't it? You know to the untrained eye.

AW: Yes, it does. For the bund - for that we used a stockpile that came from the switchyard which we call switchyard unsuitable. It's unsuitable in that Snowy Hydro didn't want it because it was geotechnically unsuitable for their purpose, but otherwise clean, free of contaminants and that's clean material that was used for that bund. We've still got about 50,000 cubes of that we could use that as a veneer on the top of the waste if we're worried about any protruding objects, sharp objects like bits of steel. But I'm hoping that we don't need to put any of that in the cell and we can use that as recovery material to backfill the footprint of the capped waste stockpile.

This is just showing the landfill compactor that I was talking about, so he's been doing a good job compacting the waste, getting the global density up to around 2.12 tonnes per cubic metre. And there's also a D6 dozer, assisting him, spreading the waste into thin layers, so he can compact it. That's all working well.

You'll notice those plastic pipes there, so they're part of the gas collection system. There's eight vertical gas bores and Daracon's labourers have to go up there. They get all suited up in their PPE and they fill up those pipes with the same aggregate that we used in the base of the cell - the rounded stone. They have to keep doing that because if we didn't, the pressure of the waste would cause the PVC pipe to collapse. So we have to keep filling it and they keep adding new lengths of pipe as the waste starts to go up in height. So eventually, before we put the lining over the cap, once all the waste is finished, they'll put in the horizontal gas trenches in, which is like eight horizontal trenches that will be filled with drainage aggregate again and that will convey the gas from those vertical pipes up to the central gas vent, which is a 160 millimetre diameter pipe that will actually go through the liner - it will have a pipe boot fitted to seal it so it doesn't leak and then once we finish the cap there will be a steel pipe, we'll fit a steel pipe over the plastic pipe with a cowling on the top and that will sit on a concrete foundation. I'll probably talk about that more in the next meeting because we will be into the capping then.

MU: Andrew, the eight vertical pipes you're talking about here that are being filled with rock to stop them from caving in under the

pressure of the fill. Are they planning to take that out later and let the gas flow more freely, or is it porous enough that the gas would just flow through there?

AW: No, it's porous enough for the gas to pass through and I should have mentioned the pipe is actually slotted as well. It's slotted PVC pipe.

MU: To allow ingress of gas.

AW: Yes, it's to allow the gas from the waste to travel up and then make its way to the central gas vent. This is probably more suited to a putrescible waste landfill, a municipal landfill - the design that we have, because we're not expecting anywhere near the sort of gas that you would get off putrescible waste, they get a lot of methane. They get so much methane they can actually produce electricity off it. We're only expecting small volumes of ammonia gas and maybe a little bit of hydrogen and methane based on our experience with the capped waste stockpile over the last 30 years.

DG: What happens to the ammonia?

AW: It just dissipates. It's very low amounts. We were measuring it on the capped waste stockpile up until just recently and we were generally getting around 2 ppm in the gas stream so it's not hazardous.

DG: What's the standard?

AW: For ammonia in the workplace it’s 25ppm maximum eight hour time weighted average and 35ppm maximum short term exposure limit. We used to walk around up there without any PPE and never even noticed it. But because we've disturbed the waste and we've driven vehicles over it, we've excavated it. We could have created new fracture surfaces on the cathode material and moisture will react with that and produce ammonia. We know that. And the guys in the machines actually wear monitors for personal monitoring and they have had a few hits of ammonia and when that happens, Daracon have a procedure that they should immediately put their mask on because they don't have to wear the mask in the cabin because it has a HEPA filter and they have it on recirculate and it's a sealed cabin. But if they get a hit of ammonia, they put their mask on and they leave the area by tracking their machine away from the waste, wait a few minutes and then come back. It was an issue earlier on in our project, probably more so at the capped waste stockpile I would say, less so at the cell, but they did get some readings at the cell as well. But more recently, it hasn't been an issue. Because we’re getting towards the end of it, I think we're more into anode material rather than cathode material and there's less ammonia.

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MU: And ammonia is lighter than air, so it should dissipate upwards fairly readily, I'd think.

AW: Yes, and the gas vent on top of the cell will be four metres high. So if we have workers on top of the cell later on, like mowing the grass or pulling out weeds or environmental people doing gas monitoring they shouldn't be affected because it's four meters high and there'll be a sampling point about a metre off the cap in the pipe.

We've been continuing to monitor the liquid levels in the sumps and pumping as necessary. We're checking the groundwater and leak detection sumps as well for fluoride and I'm happy to say that we've had no change in fluoride. So it's very low. We're getting fluoride in the leachate sumps from the waste but no increase in the fluoride in the leak detection sumps or the groundwater sumps. If you remember that our sump has three compartments. The leachate sump is above the primary liner. The leak detection sump is in between the primary and the secondary, and the groundwater sump is below the secondary. So that's all good news. There's no leaks in the cell. We're very happy to say that.

This is our level probe that one of the guys in the team came up with this design that works really well. Just a water level sensor that you would use in a caravan and it's working very well.

The water treatment plant. It was working well up until mid-May and then for some reason they started having trouble removing molybdenum. It seemed to coincide with the capped waste material getting into the cell because most of the leachate they're treating is coming from the cell. And we think it was because of an increase in cations and anions. So basically salt levels started going up, which is from the sodium and the fluoride and the aluminium and other elements, and I think it made it more difficult to treat the leachate. One good thing is that the fluorides have been very low like I was expecting the fluoride levels in the leachate coming from the cell to be 100 to 200 milligrams per litre, but it's only around 10 to 20 which shows that the gypsum addition is doing its job. So fluoride has not been an issue, nor has cyanide. It's these other trace elements that are causing problems.

In the case of molybdenum, initially we wanted to use the short term irrigation values - because we're only intending to use this treatment plant short term - which is .05 milligrams per litre which is equal to the drinking water guidelines. The EPA said no because you've been irrigating for the last 30 years in our irrigation area, you have to use the long-term irrigation values which is .01 which is 20% of the drinking water guidelines. So it's an extremely tight limit and EPS who are running the water treatment plant have had some trouble meeting that. They tried replacing the media. That didn't

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really work and they made some other process changes and it seems to be working again. They've treated about half a dozen batches and they've all been less than .01 molybdenum, but I was worried for a while because, yeah, obviously having it out of action for two months was a real concern, but we have been lucky with the weather. Fortunately, we're back in operation.

As I mentioned, we've been getting gypsum back in. This is a photo of a truck tipping in shed six. And we've ordered about 5,000 tonnes and we may need another 2,000 on top of that. So anyway, we're just keeping a close eye on it ordering what we need each week and trying to stay ahead of Daracon. But Daracon are using about 400 tonnes a day, so they're moving 4,000 tonnes a day of waste from the capped waste stockpile and using 400 tons a day of gypsum. We can only average about 200 tons a day that we're bringing in. So we need to build up some inventory and then they'll restart on Tuesday as I mentioned.

We've had CMA back on site since 1st of May and one of the buildings that they have been working on is demolishing the 7A furnace. If you recall, we had process waste stored in this building and Daracon removed that process waste. We had Ramboll do sampling and a combination of visual validation of the concrete surfaces and sampling and the site auditor also looked at it and they were satisfied that everything was clean enough.

We had to scrape the ramps a bit. We had some fluoride and some PAHs and hydrocarbons got into the ramps. The ramps were made of crushed refractory but we were able to scrape them down enough so that we got a validation and in this photo, CMA are backfilling the tubs with refractory. So refractory has been approved for reuse on site under the EPA's recovered aggregate order. And that's what's happening here.

So this is about 3 weeks later, they're nearly up to the correct level. That's the blue line on the tubs that they painted on, and that's to allow the big 120 tonne excavator, the big demolition excavator to march through the building, demolishing ahead of itself. It was able to track upon those refractory bricks and demolish it as it went through.

And that's what you can see happening here on the 28th of June. We did pull some cranes out prior to this, there were two vacuum cranes, multi-purpose machines, we call them and two DC cranes or anode handling cranes. They were pulled out of the building first and then CMA started demolishing. They were using a combination of the watercart, wetting down the building, including the inside of the building and fogger units or spray units at the western end of the building because we've been getting a lot of westerly winds, so

that was good to let that water spray through the building and that's what you can see here.

That's one of those fogger units spraying a mist or fog through the building, so they demolished it pretty quickly. It only took a few days.

This is now after the demolition you can see where they cut the building columns in the centre between the two tubs. The outer building columns they were just able to break off the concrete foundations.

Then they started the process of removing the ring main. We had tested this and we knew it was contaminated. It had one of the highest readings of PAHs, which is one of the contaminants in coal tar pitch. It stands for poly aromatic hydrocarbons, and so we knew that this ring main was going to be a problem.

MU: Andrew, could you just mention what the ring main used to do when it was part of that that building?

AW: Yes, sorry, the bake furnace consisted of nine flue walls that ran longitudinally along the tubs and transverse to that were the head walls and they were all made of refractory. The head walls were solid, but the flue walls were hollow and we used to put carbon anodes into the pits in between the flue walls and head walls then fill them with packing coke, and we had an exhaust manifold that connected between the flue walls into the ring main, and then the ring main connected into the scrubber duct work and the bake furnace scrubber.

The bake furnace scrubber had four big fans, 355 kilowatt motors, that provided negative pressure or vacuum on the ring main, which drew gases through the flue walls out the exhaust manifold into the ring main. And there were periods during the operation of the bake furnace where we didn't have good combustion. We had incomplete combustion and some of the pitch - if we had cold air ingress into the flue walls or the packing coke was too low because of a hole in

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a flue wool or a gap between the flue wall and the head wall - cold air would get in and the pitch wouldn't burn properly and then it would coat the inside of the ring main, which was cooler and it would condense out in there and you can see that in the next photo. The ring main was lined with bricks, refractory bricks, and there's a black material coating inside that ring main which is pitch condensate probably mixed with a bit of packing coke and carbon dust and soot. And we used to get fires from time to time in the ring main or in the scrubber duct work, and that was always a problem because it would require shutting down the scrubber, going to bypass, and we'd have to have guys on fire hoses, putting out the fire and then you'd think it would go out and then a few hours later it would reignite as soon as you tried to restart the scrubber. As soon as there was oxygen, it would restart. Those fires were notoriously difficult to put out. I think everybody that worked in the carbon plant would have experienced fires. I know I did. First day I was there, I was standing next to a ring main cap and it blew right next to me, that was a baptism of fire so to speak.

MU: Literally.

AW: I remember spending about 8 hours on a fire hose one shift, putting out a fire in the cooling tower, duct of the bake furnace, and lots of other people were involved in that sort of thing too.

MU: So the ring main is like a big exhaust system for gases that then end up going up the stacks. Is that right? After being scrubbed.

AW: Yes, that's right. The other thing I should mention. Because we actually shut this furnace down in 2005. So as soon as you turn the heat off on duct work, it starts to corrode. We noticed that with the pot room scrubbers and the bake furnace scrubber ductwork - it all started rusting within weeks of shutting down the smelter. Well, this duct had been sitting there in moisture for the last 18 years and it started out three sixteenths of an inch, but after that length of time in some places it was paper thin. But CMA were able to recover the ring main riser caps -those round discs that you can see and they were filled with concrete when we shut the furnace down. They were actually a cast iron or a casting that was connected to the steel duct. They were able to recycle them and some of the steel, but the brick lining and the pitch condensate all had to go to the cell and this sand bedding layer. All of that had to be removed, put into moxies and taken to the cell as well because it was contaminated with coal tar pitch and we did notice some carbon dust had got on the surface of it because the ring main was under vacuum. I think any spillages would get in through the gaps in the concrete and get onto that sand layer.

So this is a little bit later on, this is the north side of the furnace.

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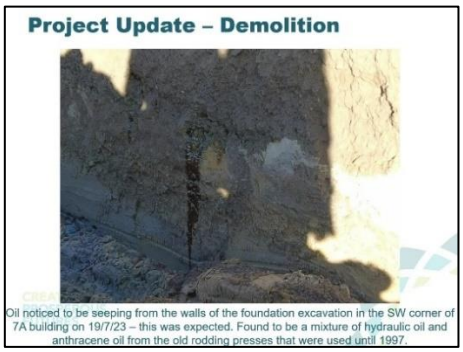
We managed to get that ring main out. There's a little bit of carbon there, but once that was all cleaned out, we got a validation for that, then it was okay to continue on.

This is looking at it as an aerial shot around the same time. So the north is done, the south, that's a work in progress. They've also been hammering the tub walls, the centre tub walls in between the two tubs.

And this is a couple of days later. The south side ring main was just about finished and ready for validation.



Then CMA moved on to removing the foundations for the building columns on the furnace, and when we did that there was a big foundation in the SW corner.

We noticed this oil starting to ooze out of the soil that was around the foundation and we had it tested. We were kind of expecting this because we had problems in the nearby area. You might recall back in 2020 we did a lot of work with CMA. We spent about 12 months cleaning up the carbon plant. There was a lot of oil that had spilled into the ground around the butt breaker. Hydraulic oil and we found anthracene oil. We found heavy fuel oil. Anyway, this turned out to be a mixture of hydraulic oil and anthracene oil. We know the rodding presses were nearby. They used to use a process for joining the anode rods to the carbon anodes. It was called the Alusuisse mixed rodding process and there was anthracene oil in that rodding mix. It was like a carbon paste with anthracene oil. And the collar mix, that was used was to put aluminium collars around the anode rod spade tips and fill that with a carbon paste that also had anthracene oil. I think a lot of that oil had seeped into the ground and so anyway, we found it and we've remediated it.

We also had fuel oil contamination. We knew about this as well. There was a room here that used to be the day tank for storing the fuel oil, and there was a heating system. We had to dig all of that footprint out because it was contaminated with heavy fuel oil and it came from the technical services area and we previously

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remediated all of the rest of the fuel oil trenches back in 2020, but we couldn't do this until we had demolished the building. You might notice there's a small sump in the excavation, which you'll see in the next photo. That's the sump for the 7A furnace. We're still pumping water out of that. It's high in fluoride and that's because the building roof had dilapidated and the guttering was rusted. We were getting water going into the waste in the furnace and leaching fluoride into the water under the tubs. Because of the problems we've had with the water treatment plant, we haven't been able to remove that water and get it treated. We're about to restart pumping that. We know it was down at 5 milligrams per litre previously and at the moment it's up between 40 and 50. We need it to be back down or at least below 15, preferably down at 5 milligrams per litre. So we need to remove that water and let normal groundwater back in. That's a work in progress that will be happening over the next couple of months, I would say. And we know that the volume of water under the furnace tubs, we calculated that and it's about 600,000 litres. So it's quite a bit that we need to pump out.

This is a bit later on showing that the tubs pretty much fully backfilled and those two excavations I mentioned, the one at the bottom of the screen is the anthracene oil and hydraulic oil and the one halfway along the furnace on the south side, that's the heavy fuel oil excavation. So that's all been validated now and that's been backfilled.

That's just another photo of it.

In the last week or so, CMA have been demolishing the 32A compressor house. That wasn't contaminated. It was just a small building that had air compressors in it for the pot lines and for plant

air. We converted it into a workshop and we were using that the last few years. So that's all been demolished now. The substation is just to the north of it. I haven't got a photo of it, but there was a substation. We knew we had PCB impacted soil from old transformers and so we got CMA to dig up that soil and put it on plastic on the slab of the compressor house and then we engaged Enviropacific to take it down to their facility at Altona in Victoria. It's a thermal desorption unit, so it destroys PCBs, and it's also good for PFAS contaminated soils. We've used them in the past for both those contaminants and yes, it was about 100 tonnes that we recently sent down to Victoria. We had to do all the EPA waste tracking etcetera.

This is the 37A pump house, so it was used for sewerage and also there was some other pumps used for the DC-1 cooling towers. We got CMA to remove the superstructure and then lift out the grates and pull out all the pumps and pipework and then we got a sucker truck in. Removed any sewage and then got some plumbers in to just fill it with bags of lime to disinfect it and then we backfilled it. So that's just recently happened. We put in our own septic tank as a separate system a while back. There's a trench here you can see to the south of that pump house. It was contaminated with fuel oil. It hasn't happened in this photo, but in the last few days CMA have been pulling that trench out and removing that contaminated soil and that's all going to the cell as well. It was contaminated with heavy fuel oil. The main fuel oil tank was just next to that pump house.

Okay, so that's all the demolition and remediation.

MU: Might just pause for a second mate and just see if anyone has got any questions around that demo and remediation stuff. Jenny, I note you're on mute. Just wonder if there's anything from anyone.

JM: No, nothing from me. Thanks.

MU: All right. Lovely. I'll just ask one question, Andrew. I noticed that the other new developments happening in the background of some of those photographs are the Snowy Hydro facility, my question is how has that been interfacing with sort of traffic and that sort of thing in relation to filling the cell and so forth.

AW: We have had some challenges at our main intersection. We have the main intersection between the Daracon Haul Road and what we call Wonarua Road, which is the road that runs up the middle of the site. We have traffic controllers and boom gates there. And because Daracon's 40-tonne moxies, they're running along that haul road at 40 kilometres an hour, we give them priority because they're difficult vehicles to stop in a hurry. Obviously, when they're fully loaded, so we make everybody else stop. There's a lot

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of light vehicle traffic going up to Snowy Hydro and some heavy vehicles as well. There have been a few incidents where people have tried to run the gauntlet - go through as the boom gates are closing. One guy was in a cement truck and he tried to weave through and it was a little bit dangerous so he won't be coming back to site but all in all, the cooperation is good between our management team and Snowy Hydro's management team.

If there's any big heavy equipment like some of those cranes, you can see in the background, they usually get moved after hours. Like on a Saturday afternoon or a Sunday and they have a crossing point further along to the west of our main intersection. Where they can run heavy equipment through using those low loader trailers like mega-lift trailers and things. There are probably going to be more movements coming up. They've moved some big alternators, alternator generator units, but the gas turbines are still to be moved. And I noticed they are assembling the stacks in the southern half of the site and they'll have to be moved as well, so there's some big equipment yet to be moved, but they're working towards having the power station up and running by December next year. And I'm not sure if it's going to be running on natural gas straight away. It can run on diesel and I notice they're putting tanks in for diesel.

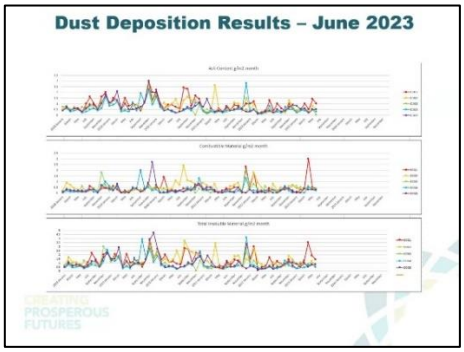
All in all, it's working well. We're trying to cooperate with each other, they're helping us, we're helping them just so that we can both achieve our objectives and obviously they're working to a deadline because Liddell has shut and we need a backup if there's no wind or solar from time to time and you're going to need that gas fired generator as a backup for NSW.

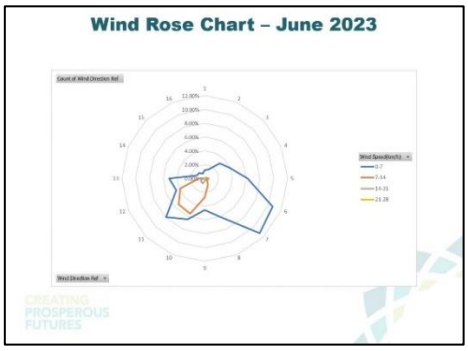
MU: Busy, busy.

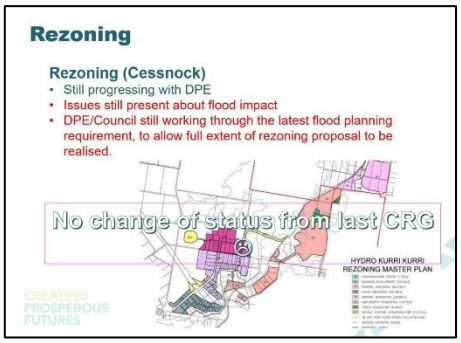
AW: Yes, these are the dust deposition gauge results. We did get a high reading in April, which we couldn't explain on combustibles, but I think I talked about that at the last meeting. Since then, May, June's been fine. We haven't got the results for July, but we'll have them for the next meeting and everything is going well with CMA with dust suppression and Daracon have a water cart running around full time.

It's an off-road water cart and so it drives into the capped waste stockpile and into the cell, which is good because it's wetting down all the areas where the moxies are running. This is the wind rose chart for June. So only from the southwest and the southeast so we use that obviously to track if we did get a high reading where the dust could be coming from.

Moving on to Richard's slides. So unfortunately there's been no change of status from the last meeting on the rezoning. I'm not really that involved in this, so happy for somebody else to talk about







this from Cessnock Council, if somebody would like to speak about it.

JM: I can talk to that slide if you like.

So effectively, yes, it is still an issue for Council that we're trying to resolve. And the flood impact zone, the proponent has delivered some more flood modelling to Council. Since our last meeting we've had the release of the Flood Risk Management Manual in June and we are seeking some advice from the Department of Planning and Environment and the Biodiversity Conservation Division as to what impact that particular manual and the provisions therein will have on the modelling for procedure to date. And we're hoping to have a response to that within the next fortnight or so to understand what that might mean in terms of finalising the rezoning footprint.

AW: Thanks Jenny. And then on the BioCert, so BCD provided a draft BioCert agreement for us to review. We've made a number of suggestions in our response to BCD, so yeah, hopefully not too much longer on that one.

And that's all I had to present. So any questions?

MU: Thanks Andrew. Anyone got anything further for Andrew? Photos are looking fantastic I have to say.

AW: Yeah, that's one of the guys that works for me. Andrew Solomou takes very good photos. I'll get another video maybe for the next meeting, because he's planning on getting all those drone shots of the cell and stitching them together into like a time lapse which should be good.

General Business

MU: That'll be awesome. Alright. Fantastic. Well, if there's nothing else. Last call for any other comments? And there's nothing coming from the community that people are asking about what's going on around the site?

AG: Well not particularly on that. Mainly on Snowy Hydro and the Wangara development with the by-road and I think we got back that Maitland has ticked off on Wangara, but Cessnock hasn't ticked off last I heard, but personally I haven't spoken either to Andrea at Snowy Hydro or to Shane.

MU: Alright, Thanks, Alan.

MU: I'll just mention that I've got a bunch of management plans to update on the website, so I'll be doing that shortly. Shaun Taylor has sent through some documents for me to update. Is there any other general business?

MU: Well, if not, then we'll just refer to the next meeting which was down for three months from now, which is November and on the third Thursday would be the 16th of November. We'll confirm that but that's what we're looking at, at this point in time. Has anyone got any issues with that?

RA: Not at this point in time.

TT: I wouldn't mind hearing from Shane Boslem on how everything is going.

MU: Wouldn't mind an update from Shane?

AW: Richard and I spoke about this. I guess our project is winding up. Probably at the next meeting we will be capping and then we might have one more meeting after that. So February next year and then I think we will be pretty much done and dusted by then. We'll be hopefully getting a site audit statement imminently after that. It's probably best if you want to know more information that you go to the Snowy Hydro website or the McCloy's website and make contact with them directly. We're sort of really in the wind down phase now and we're not really planning on having too many more of these meetings.

AG: We had Richard come into the retired mineworkers and bring us up to date pretty well on the Hydro stuff, which was good and well received. We might go back to Snowy and McCloy shortly and see whether we can get them back again.

MU: Alright. Thanks, Alan. Thanks, Andrew. Any other comments or questions?

DG: No, all good.

MU: Lovely, alright, well I'll close the meeting at 12 minutes past seven and let you get on with it.

7 Meeting close

Meeting closed: 7:12 pm

Date of following meeting: 16 November 2023