

Project	Hydro Kurri Kurri Site Redevelopment Project	From	Sonya Pascoe
Subject	Community Reference Group Meeting	Tel	1800 066 243
Venue/Date/Time	Thursday 17 February 2022 Hydro Aluminium, Hart Road, Loxford 5:00 pm – 7.15pm	Job No	2218982
Copies to	All committee members		
Attendees	<p>Mr Andrew Walker – Hydro Kurri Kurri Project Manager (AW)</p> <p>Mr Richard Brown – Managing Director, Hydro Kurri Kurri (RB)</p> <p>Mr Kerry McNaughton – Environmental Officer, Hydro Kurri Kurri (KM)</p> <p>Mr Shannon Sullivan – ESS (SS)</p> <p>Mr Michael Ulph – CRG Chair, GHD (MU)</p> <p>Clr Rosa Grine – Cessnock City Council (RG)</p> <p>Mr Toby Thomas – Community representative, Towns with Heart (TT)</p> <p>Mrs Kerry Hallett – Hunter BEC (KH)</p> <p>Ms Tara Dever – CEO Mindaribba Local Aboriginal Land Council (TD)</p> <p>Clr Robert Aitchison – Maitland City Council (RA)</p> <p>Mr Andrew Neil – Manager Strategic Planning, Maitland City Council (AN)</p> <p>Ms Debra Ford - Community representative (DF)</p> <p>Mr Rod Doherty – Kurri Kurri Business Chamber (RD)</p> <p>Mr Iain Rush – Cessnock City Council (IR)</p> <p>Mr Bill Metcalfe – Community representative (BM)</p> <p>Ms Sonya Pascoe – Minutes, GHD (SP)</p>		
Guests/observers	NA		
Apologies	<p>Mr Allan Gray – Community representative - Retired Mineworkers (AG)</p> <p>Mayor Phillip Penfold – Maitland City Council (PP)</p>		
Not present	<p>Mr Brad Wood – Community representative (BW)</p> <p>Mr Darrin Gray – Community Representative (DG)</p>		



## Table of Contents

1	Meet and depart Hydro site office .....	3
2	Location 1 – gypsum shed .....	3
3	Location 2 – East surge pond.....	4
4	Location 3 – Engineered containment cell (ECC).....	5
5	Return to site office area and Acknowledgement of Country .....	7
6	Last meeting minutes .....	7
7	Post site visit chat / Q&A .....	8
8	Meeting close .....	8

## 1 Meet and depart Hydro site office

CRG attendees met at Hydro site office at 5pm. All attendees were provided PPE (hi-vis vest, hard hat) and travelled in 4WD vehicles to participate in a site inspection.

## 2 Location 1 – gypsum shed

AW: provides description on use and procurement of gypsum. Some gypsum is mined, some is recycled gyprock. Recycled gypsum is validated by Ramboll before use on site.

Discuss progress of demolition on site, most structures are down. Some sheds and buildings will be left for the developer to demolish or retain.

Discussion around content and management of stockpiles on site.

Discuss waste cell and anticipated completion date (late May/early June for completion of base liners and start of waste filling). Discuss process of machinery to bring waste material to the cell, including gypsum. Noted that Hydro will manage and audit gypsum stock closely.

TT: where will the clay be sourced from?

AW: explains clay will be sourced on site. Drainage material to be sourced off site from a local quarry.

Discusses process of collecting water on site, sampling, treating and release into stormwater system.



### 3 Location 2 – East surge pond

RB: discusses that three teenagers broke into site and were caught swimming in the pond

AW: provides summary of remediation activities for the east surge pond, including removal of PAH's (Polycyclic Aromatic Hydrocarbons) from coal tar pitch, these do not migrate in the same way fluoride does.

Discusses process and machinery required to remediate pond. Took a number of months to remove the PAH's.

Discuss that western surge pond was contaminated by PFAS (Perfluoroalkyl and Polyfluoroalkyl Substances) from fire-fighting training activities with aqueous film - forming foams in 1970s. Explains sediment gets mixed with 4% by weight of cement and loaded into SPL (spent pot lining) sheds for storage.

Was a difficult time to do the remediation of these two ponds during the rainy season but it needs to dry out before it goes into the cell.



#### 4 Location 3 – Engineered containment cell (ECC)

AW: Provides description of the ECC, it is approximately six hectares. Discusses preparation of the soil and earth for construction.

Provides description of the lining system of the cell, and passes samples of the materials for each layer around the group. Including:

1. GCD (geo-composite drainage layer)
2. GCL - geosynthetic clay liner (geotextile impregnated with bentonite paste)
3. HDPE (2mm) – prefer smooth type on the floor and textured on the sidewalls. Hot wedge fusion welding method used. 200 mm wide weld gap.

AW: describes QA (quality assurance) measure for HDPE layer using both destructive and non-destructive testing methods. Destructive QA testing includes taking samples from the welded seams for shear strength and peel strength testing at an off-site laboratory. Non-destructive QA testing includes testing through pressurisation between the welded seams to detect breaches, vacuum box testing, arc testing and dipole testing (a test using positive and negative electrodes, which picks up pin holes). When found, they can be patched up through an extrusion weld.

BM: asks whether a tractor could travel over HDPE layer.

AW: explains that vehicles are used to lay material to create posi track access. No plant or equipment touches the liner system. Always a minimum of 300mm of sand or drainage aggregate between the positracks and the liner materials.

TT: do you find many failures?

AW: through destructive testing, not many. Through non-destructive testing (dipole testing) we do pick up defects.

AW: Goes on to describe other features of the ECC, including bunds across the cell to create quadrants, which will have 300 mm drainage aggregate to collect





leachate. Also describes ramps that will be lined with clay and pavement materials so that trucks can bring in waste material.

MU: asks about the size of the cell.

AW: about 200 metres by 200 metres, roughly a square shape. Will have capacity of 345 thousand cubic metres.

AW: describes the capping process, includes a 300mm clay seal bearing layer, GCD, GCL, linear low density polyethylene (LLDPE) - which has some elasticity and allows for differential settlement of the waste, protection geotextile, 300mm of drainage aggregate, separation geotextile, a 1.3 metre clay subsoil layer and then 100mm of top soil and a vegetation layer.

AW: describes council containment cells for waste have only one layer, this ECC has 2 layers.

AW: describes thermal expansion and how heat caused wrinklies in the outer lining (HDPE). This needs to be avoided, because if the wrinkles fold over on to themselves it will create damage to lining. Lay down sand to sort it out.

MU: what are sandbags for?

AW: to stop wind from lifting the layer. Explains the challenges to the construction of the ECC over the last 6 months. In particular, a lot of wet weather has meant a lot of water pumping, adjusting water PH, and dewatering permits. Have dewatered about 1.6 mega litres.

RA: how high will the cell be from the edge when capped?

AW: about 12-15 metres from where we are standing now to the top of the cap and about 6 metres depth to the bottom of the cell from the edge we are standing on now.

SS: describes that the cell capping will be only a few metres higher than it was originally, before excavation.

IR: will you revegetate on top of the cap once complete?

AW: yes, anything that won't turn into a tree – no large root systems



RA: any warranty on the system?

AW: 3 years defects liability period from Daracon.  
Around 20-25 years warranty on the lining system from the lining suppliers. For 5-6 years Hydro will monitor the cell then hand over to the government for management. There is money invested into a fund to maintain the cell in perpetuity.

RB: the cell is also insured, and the insurance will transfer over along with management once that occurs.

RA: how will you detect faults?

AW: we will take baseline measurements of sump capacity and keep regular checks on capacity, we will monitor the amount of leachate coming out of sumps. The gypsum will react with fluoride to become calcium fluoride, which forms a solid.

RB: two other methods, including sand in middle – a leak detection layer, we will see leachate accumulate there. There is also a groundwater sump, if we detect fluoride we will know the base liners have failed. If all three layers fail, the leachate will go into a naturally clay rich layer, which directs into a nearby creek, which would take the fluoride 10 thousand years to travel across. The system is designed to be very conservative.

MU: is there anywhere else in the world with an ECC like this?

AW: it is a very specialised cell, but its not completely unique.

RB: it is specialised because we know what will go into this cell, where as council owned landfills will have various unknown materials end up in there.

## **5 Return to site office area and Acknowledgement of Country**

MU: thanks attendees for joining on site visit, Acknowledgement of Country and noted apologies.

MU: Sonya Pascoe from GHD taking minutes.

## **6 Last meeting minutes**

KH moved the minutes.

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RA seconded the minutes.

## **7 Post site visit chat / Q&A**

RB: discussion around re-zoning with Maitland and Cessnock councils.

SS: Cessnock Council land is encountering many roadblocks to re-zoning, the BCAR (biodiversity certification assessment report) is still with BCD (Biodiversity and Conservation Division of the Department of Planning and Environment. The land is under new legislation processes, and there is less certainty on the outcome.

RB: Hydro's stance on the re-zoning of the land remains the same as day one. The primary driver for remediation is for land to become suitable development that benefits the community through housing and employment. The value for community outcomes is appropriate to the nature of the site. As it is a former brownfield site and has existing infrastructure.

RB: discusses the competing legislation and approval pathways that make the determination difficult and conflicting. One comes from the Minister of Planning, and the other from BCD. BCD are more conservative in their determinations. We feel that not re-zoning the land will have broader impacts to housing and other socio-economic outcomes, whereas the species present on this land is widespread in the region.

IR: Cessnock council hope to have a decision from BCD May or June to make the gateway

SS: discusses how much intact vegetation is still on site.

## **8 Meeting close**

Meeting closed: 7.15pm

Date of following meeting: 28 April 2022

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