



***MRL CRG***

*Cleanaway Update*

*19 November 2020*

# Environmental Compliance Update

## Landfill Gas Collection Update



- The next phase of gas field infrastructure in stage 3 and 4 is approximately 70% complete.
- 21 vertical extraction wells have been installed in Cell 4A to mitigate gas control on site.
- Installing head works and flow lines the next stage for the wells.
- Header line extension in stage 3 and 4 is in the final stages.
- Knock out pots have been installed which aid the with condensate management on-site.

# Operations Update

## Gas Plant Expansion

- Install 8 new landfill gas generator modules
- Double power generating capacity to 68,600MWh of electricity per year
- Mitigate over 220,000 tonnes of greenhouse gas emissions per year
- Approvals: Planning permit issued and Cleanaway working collaboratively with EPA towards a Work Approval

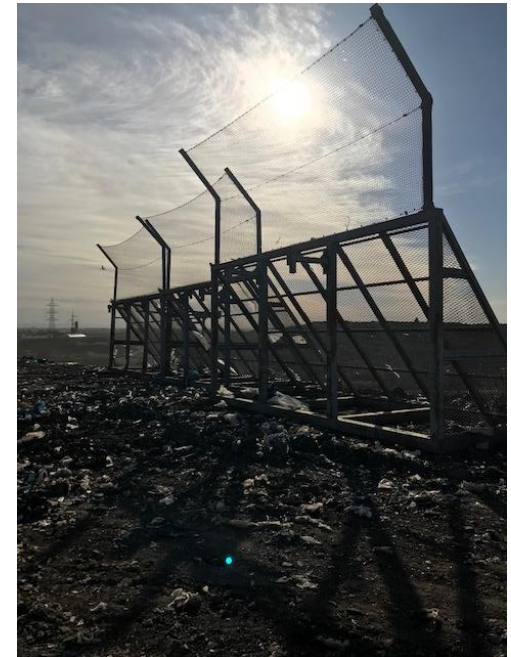
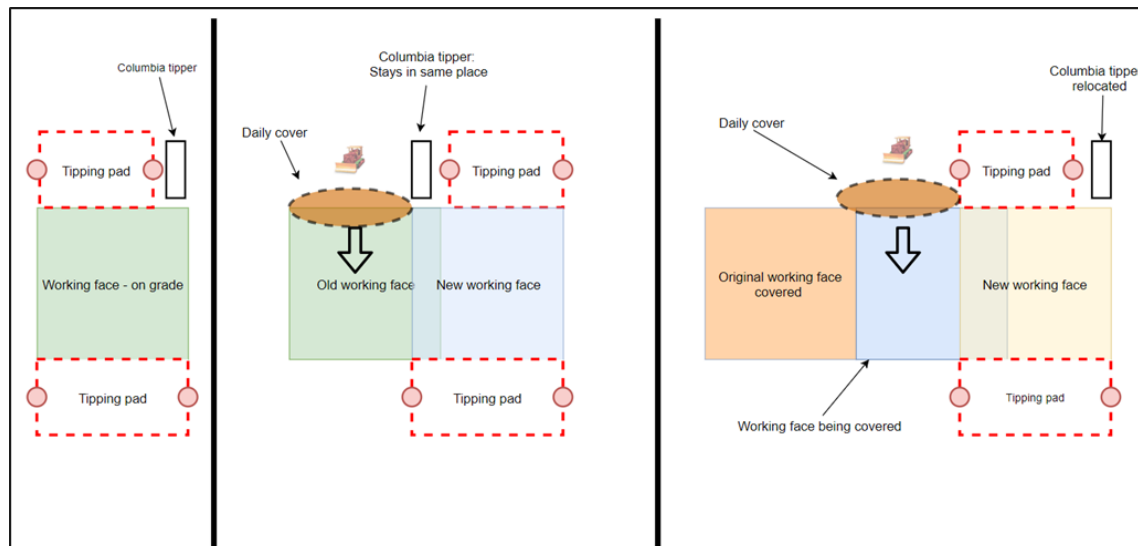




# Operations Update

## Working Face Management

- Management Plan in place
- Safety, Odour, Litter & Vermin
- Waste Compaction - life of landfill, odour reduction, settlement and stability
- Technology - (Visionlink and Propeller) – Field planning, compaction, Face size
- Weekly in-house drone fly overs
- Daily odour inspections (perimeter and site)
- Face measurement - using handheld GPS



# Leachate Redrills in Stage 2

Project summary:

- 13 wells to be installed.

Current status of works:

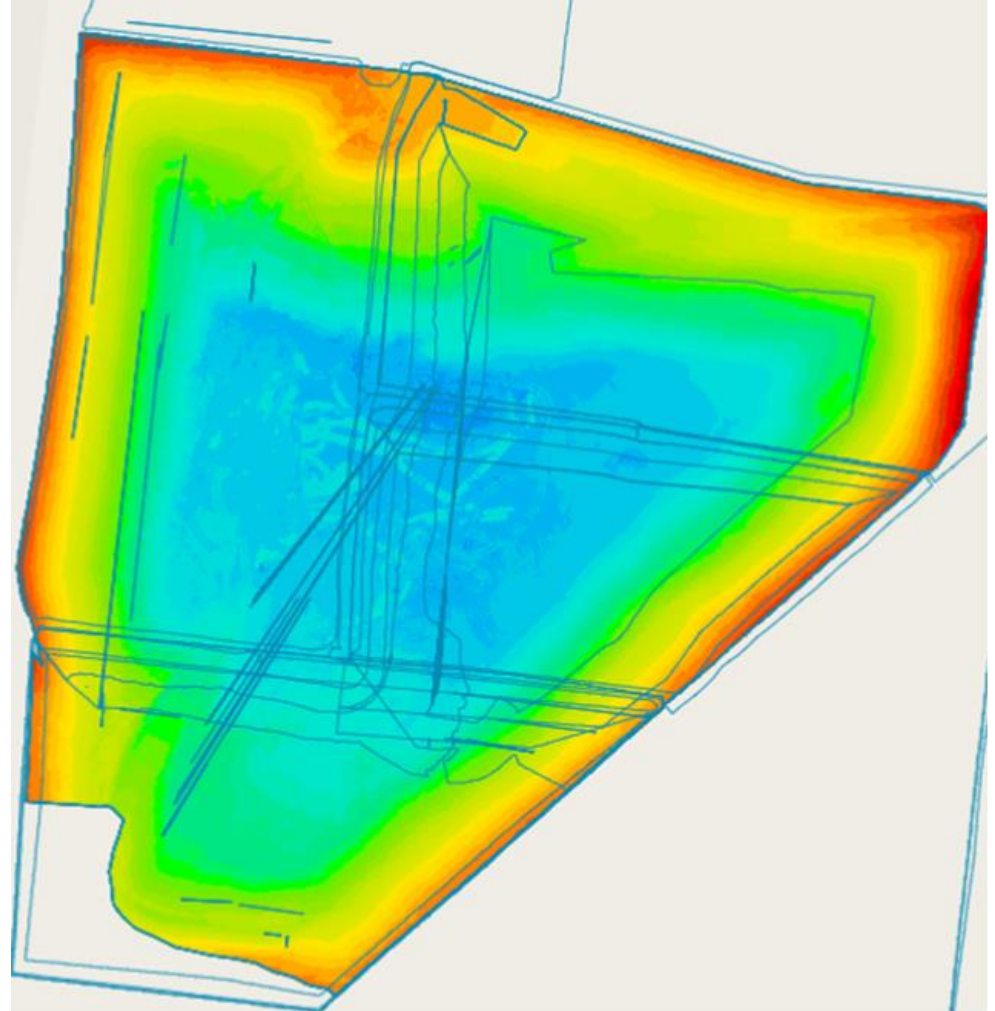
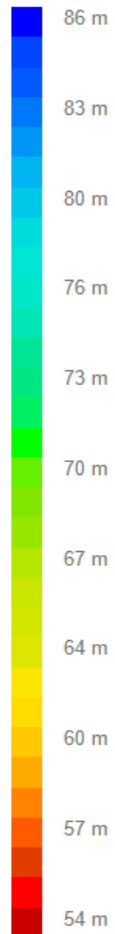
- The 13 wells have all been successfully installed with both leachate and gas extraction.
- Gas extraction to maintain environmental control.
- Leachate is currently being drawn down in stage 2 and discharged into the site leachate pond for aeration.
- Cleanaway working with EPA regarding Leachate PAN and compliance.



# Landfill Fill Plan Update

Fill progression – Finalising the lift 6 in stage 4

Elevation (AHD)

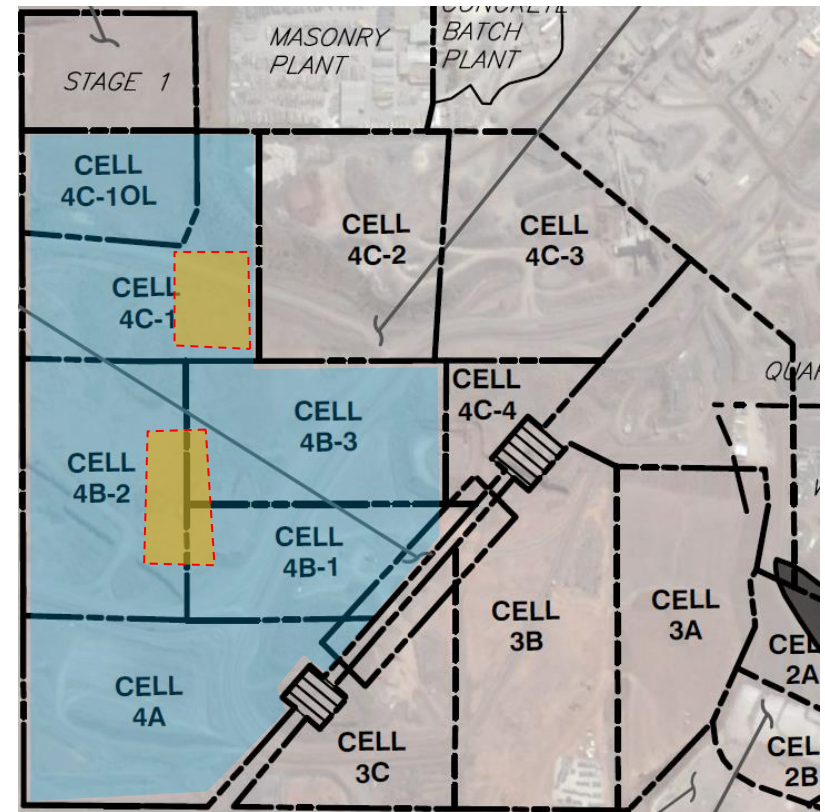




# Landfill Fill Plan Update

## Stage 4 Currently finalizing (lift 6)

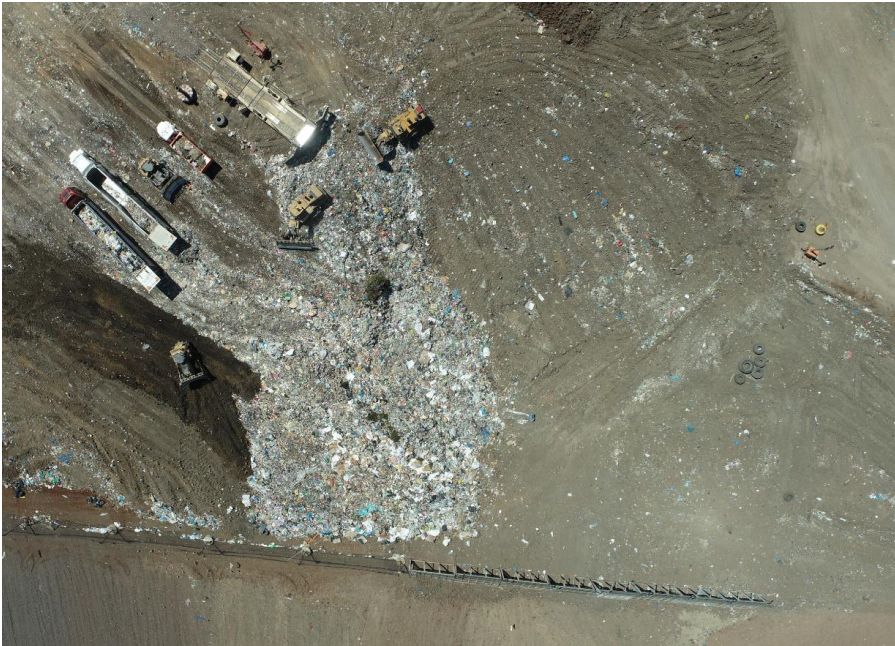
Whilst Licenced cells are 4A, 4B1, 4B2, 4B3 and 4C1 this does not imply the operational area is spanning across the entire Stage 4 area.  
At any given day, a single operating face (maximum of two faces during peak times) is open within a dedicated area until the waste height has reached design level, then onto the next block and so on.



# Landfill Fill Plan Update

## Stage 4 Currently finalizing (lift 6)

*Active face is limited to 1,800 sqm and is continuously moving within the Licenced cell. The area (face size) limit is maintained through daily cover soils which are placed over the waste once it has received adequate compaction and trimmed to grade.*

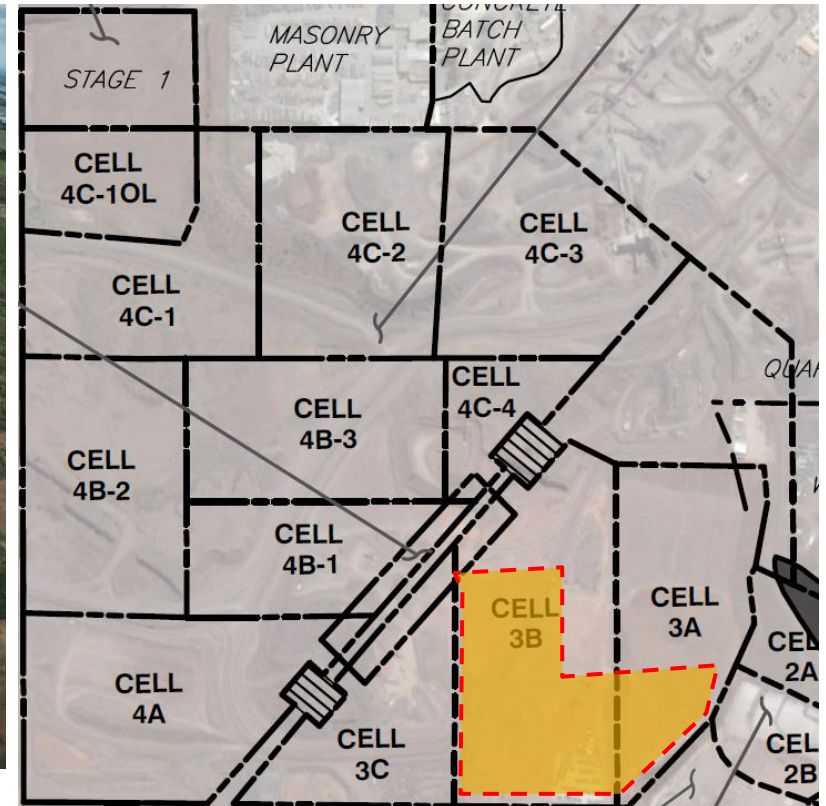




# Landfill Fill Plan Update

*Stage 3 Currently dressing of external batters*

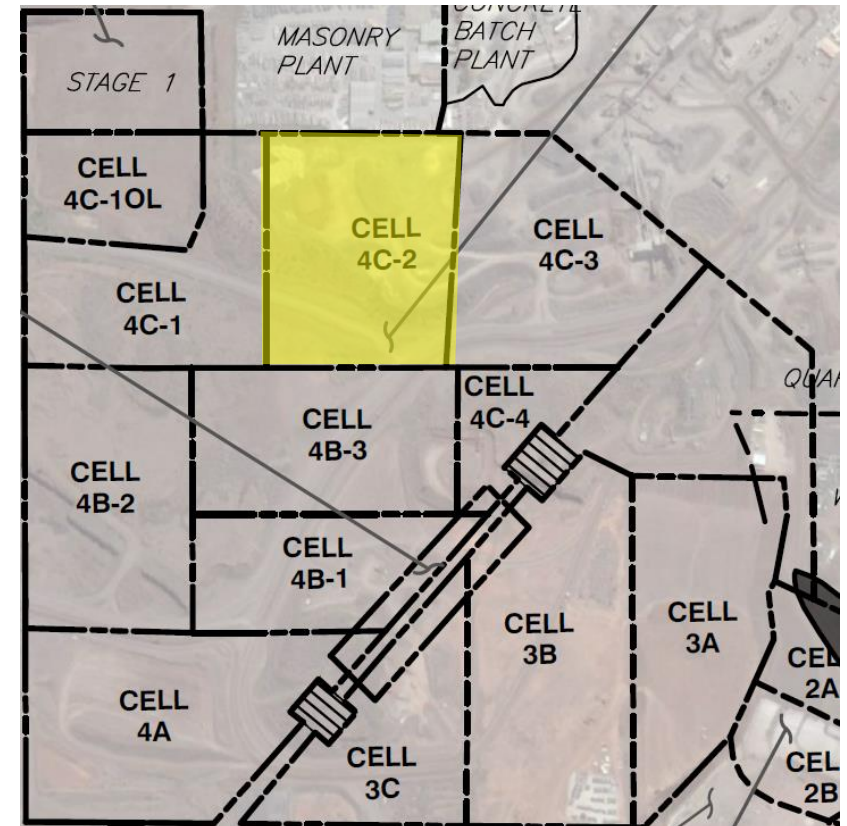
*As good practice additional cover being placed on the batter for beautification of stage 3.*



# Construction Update

Current cells under Construction – Cell 4C1 and 4C-2

- Cell 4C2 due to come online Dec/Jan





## Cell Status and PC Dates (4C2)

Shamrock works officially started 23<sup>rd</sup> April 2020

Practical Completion reached by 6<sup>th</sup> November 2020

- Subgrade works: 100% complete
- Compacted Clay Liner: 100% complete
- GCL/Geomembrane: 100% complete
- Geotextile Cushion: 100% complete
- Leachate Drainage Aggregate: 100% complete
- Geotextile Filter: 100% complete

Key Milestones / Items	Cell 4C1
Practical Completion Date	01-Nov-20
Inclement Weather Allowance	01-Dec-20
Auditor Sign-off	20-Nov-20
EPA Approval	15-Dec-20
Airspace reached by:	01-Jul-21
Airspace Buffer (relative to 4C1 construction)	7 months





## *Cell 4C2 (final product)*



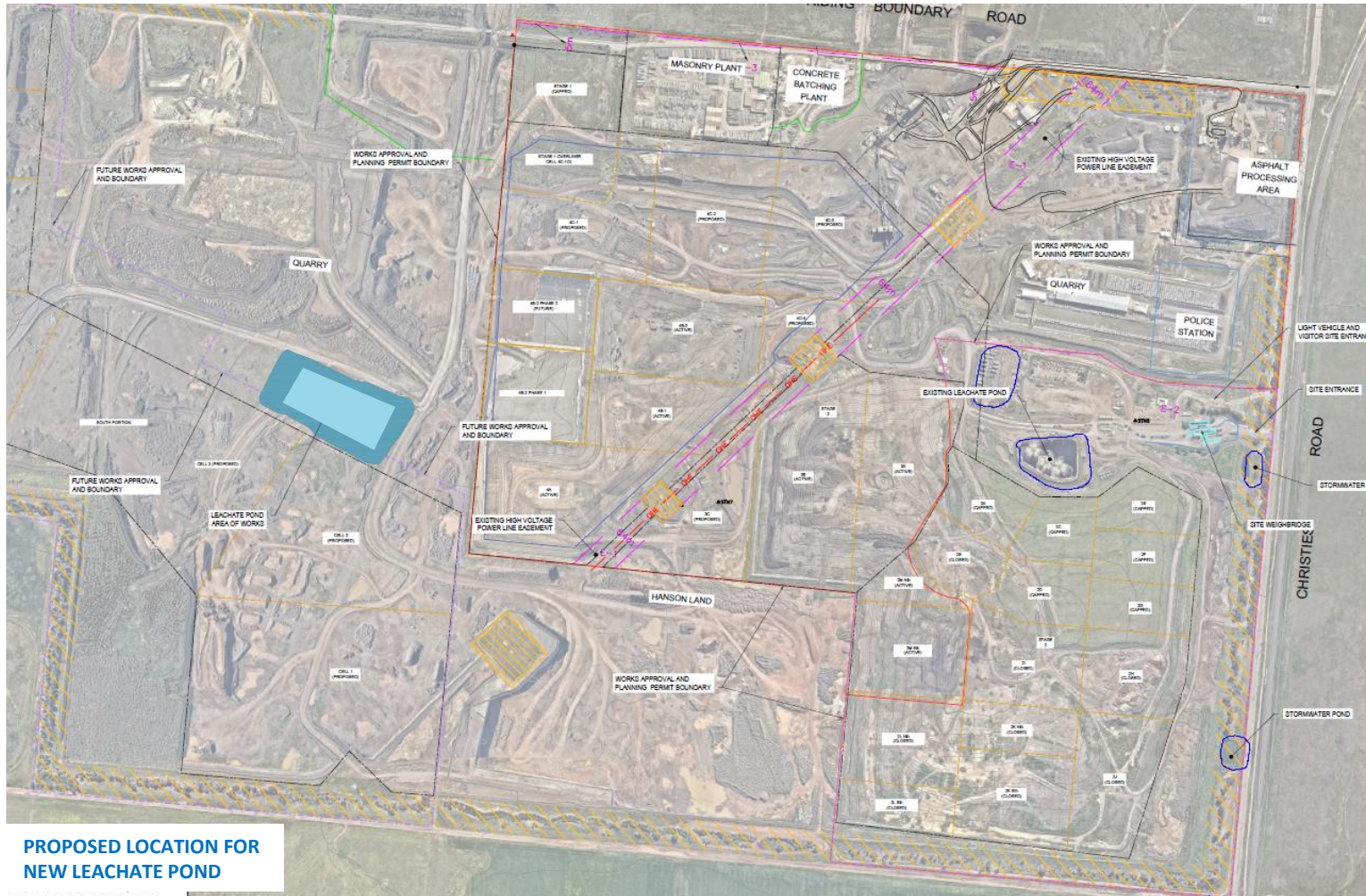
## *Cell Construction Team*





# Proposed Leachate Pond

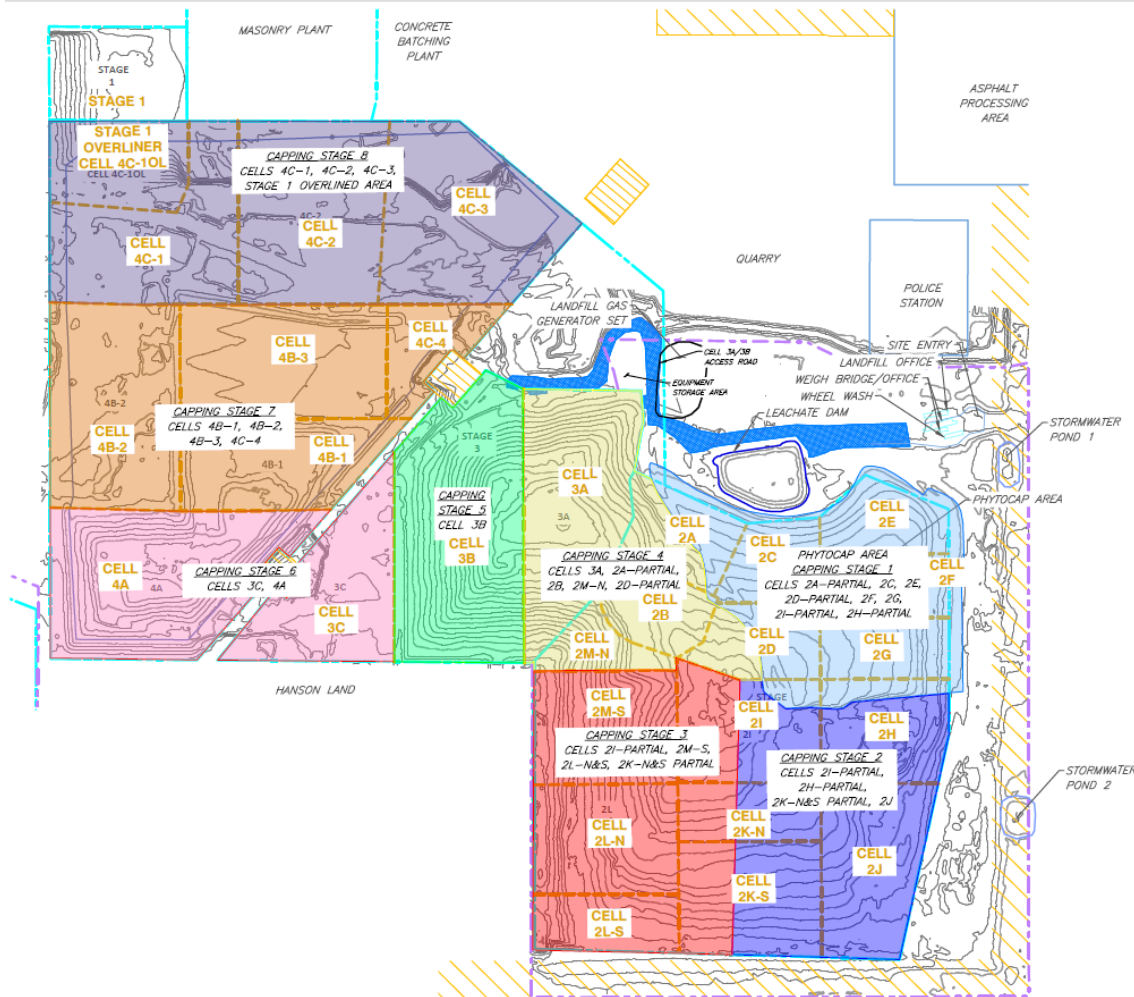
New leachate pond construction is pending Planning Permit Application with Council. Likely to start construction early 2021





# Landfill Remediation Update

## Rehabilitation Plan



- Phyto cap trial is still in progress and due for completion in May 2021
- Early works currently taking place in preparation for future capping is the installation of additional LFG infrastructure (stage 2/3 and stage 3/4) and compliance with the Leachate Redrill (PAN)
- 13 leachate bores to be re-drilled in accordance with PAN – Complete
- Interim capping has taken place over completed cells as best practice
- Once the trial is approved, capping works will occur continuously in approximately 15Ha phases per hatched areas shown



### **Home Safe**

*We take responsibility for our personal safety, as well as that of our team. We are committed to Goal Zero, because everyone deserves to go Home Safe, every day.*



### **Stronger Together**

*Building from a place of strength, we are focused on creating something stronger than the sum of our parts each and every day.*



### **Integrity**

*We do the right thing – no matter what. Holding ourselves to higher standards, we say what we mean, and we do what we say.*



### **We Make A Difference**

*We are proud of what we do to make a sustainable future possible – for our employees, our customers, our investors, the communities in which we work, and the planet.*