

# Resource Reuse Monofill Storage – Void or Viable?

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Envitech Projects

- Automotive shredder residue (ASR) or “floc”
- from Recovery of metal resources from end-of-life vehicles (ELVs)



*“I'm glad,”  
said Pooh happily,*

*“that I thought of giving you a Useful Pot  
to put things in,”*

*“I'm very glad,”  
said Piglet,*



*“I thought of giving you Something to put in the Useful Pot,”*

**(A.A. Milne Winnie-the-Pooh, 1926)**

Mā te mahi tahi  
Driving impact through collaboration

wasteMINZ ALGA



# *WHY ? ... to determine the WHAT? and HOW?*

*Helmut Karewa Modlik, 18 May 2026*

1. WHY are we FUTURE-FOCUSSED on storing waste in a Monofill?
2. WHAT's the FUTURE of waste-recovery-waste?
3. A current Project Case – The Green Steel Fast Track Project
4. WHAT do we need to resolve
5. HOW do we Collaborate in Future?

# *What's a Monofill? – single waste-stream storage facility*

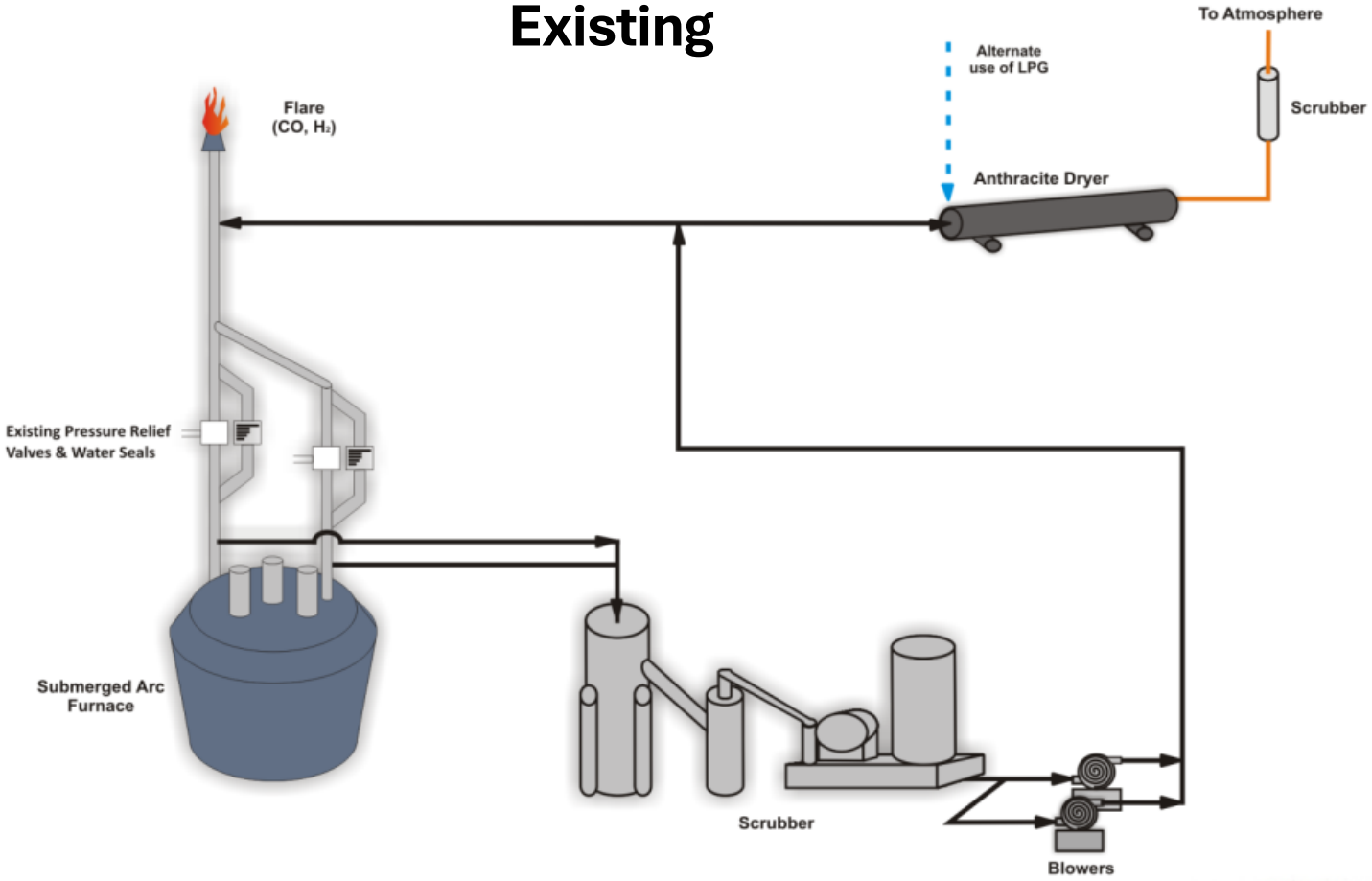




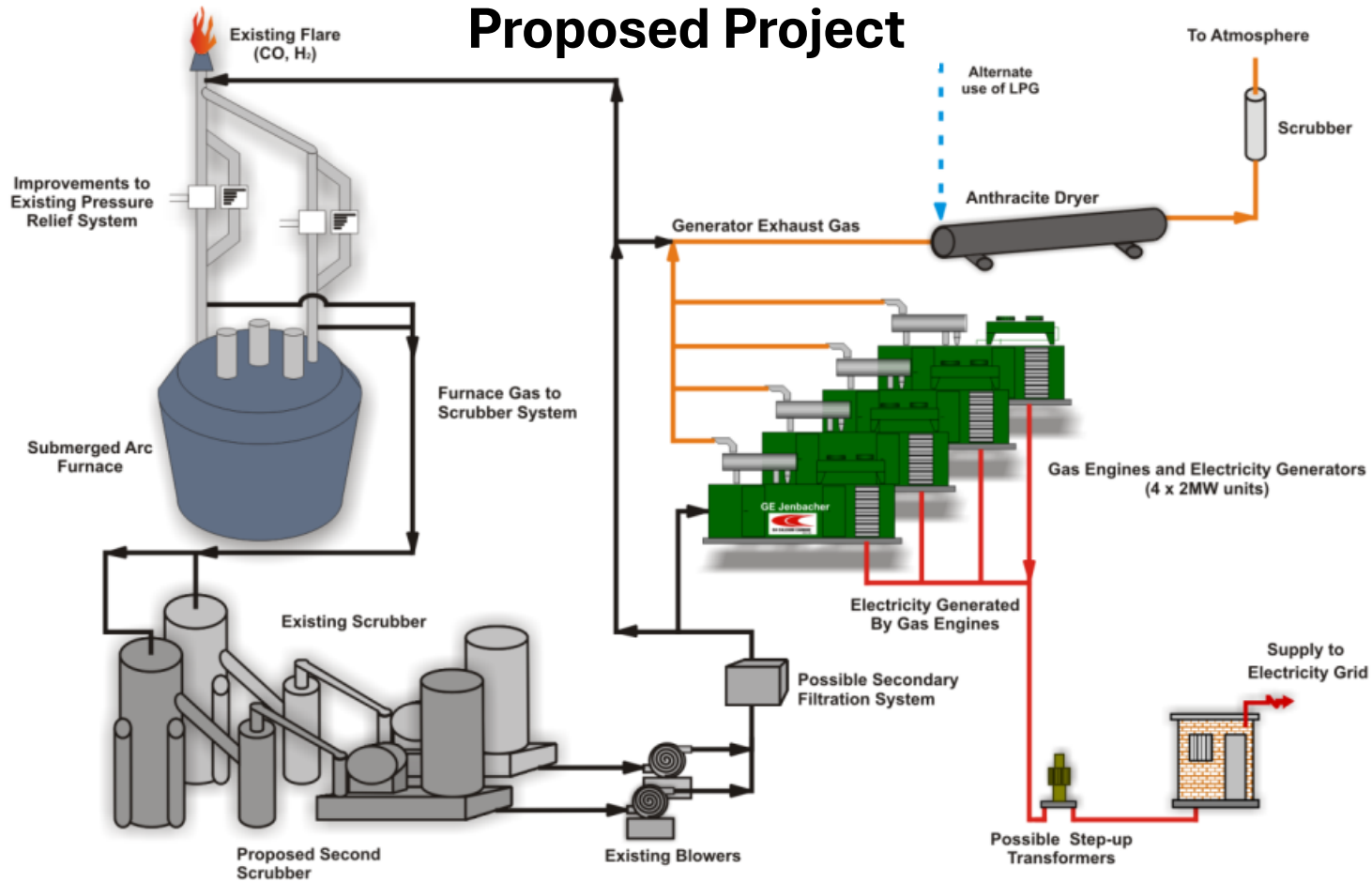


Technology	Maturity	Emissions	Residues	NZ Suitability
RDF / SRF	High	Low (controlled)	Some ash	<b>WtE focused problem</b>
Cement kilns / Smelter reheating fuel / Other similar	High	Very low	None	Established
Gasification	Medium	Very low	Minor	<b>Future Focus</b>
Pyrolysis	Medium	Very low	Char	<b>Future Focus</b>
Plasma	Low	Ultra-low	Inert slag	Low
AD	High	Low	Digestate	Established

# Existing

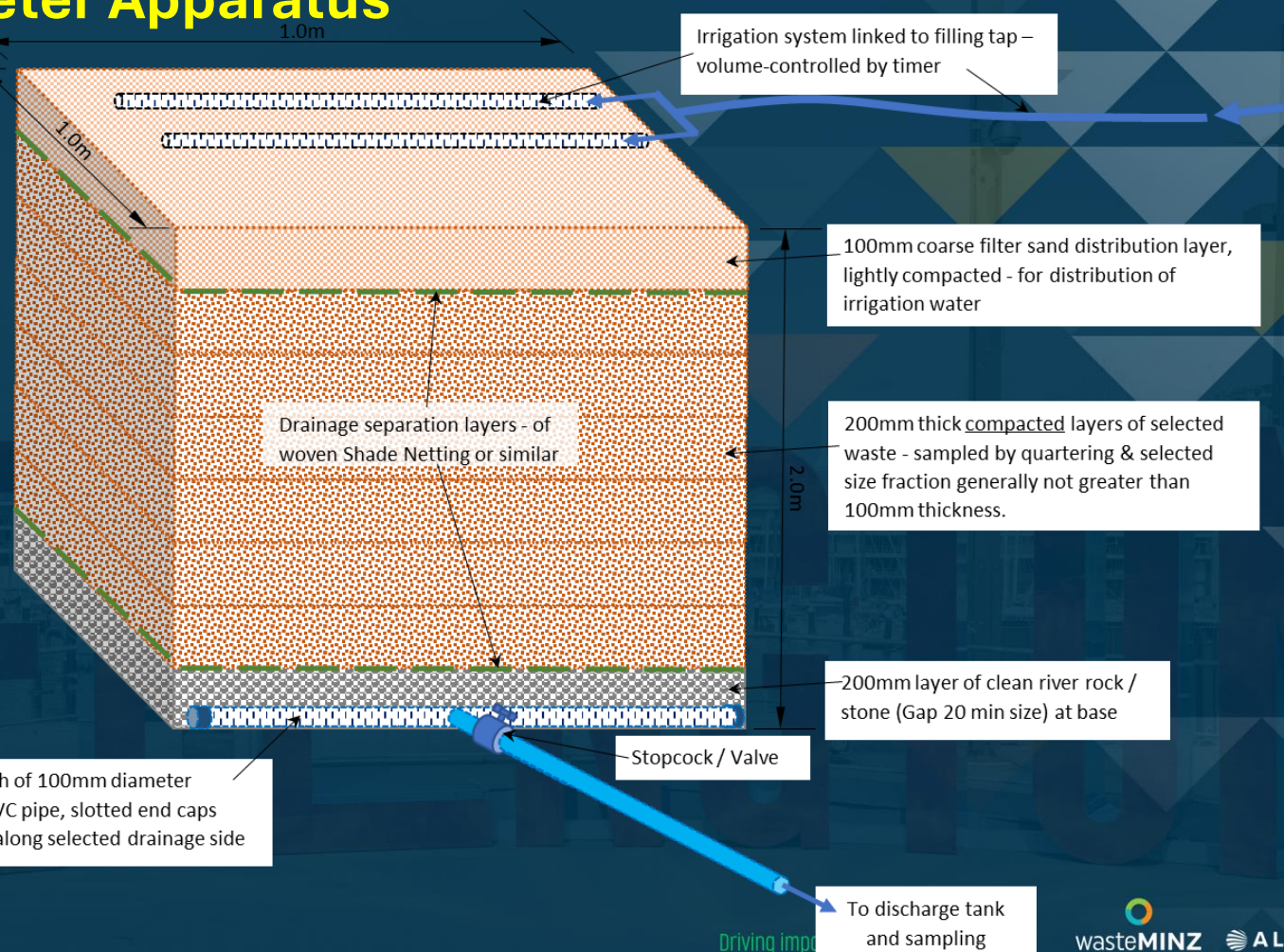


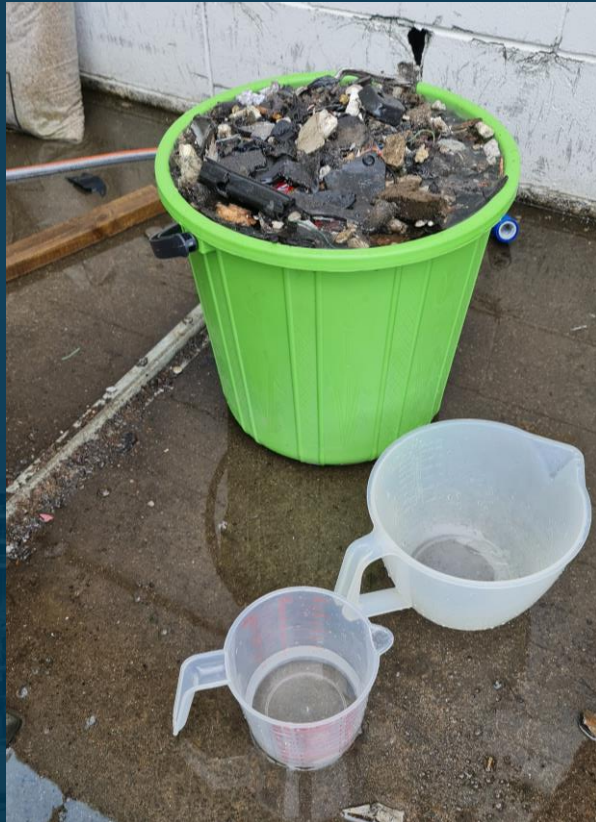
# Proposed Project





# Leachate Lysimeter Apparatus Establishment













To Auckland

Hampton Downs Motorsport Park

SH1 On/Off Ramp

HAMPTON DOWNS ROAD

SITE

WAINUI ROAD

SPRING HILL ACCESS ROAD

Hampton Downs Landfill

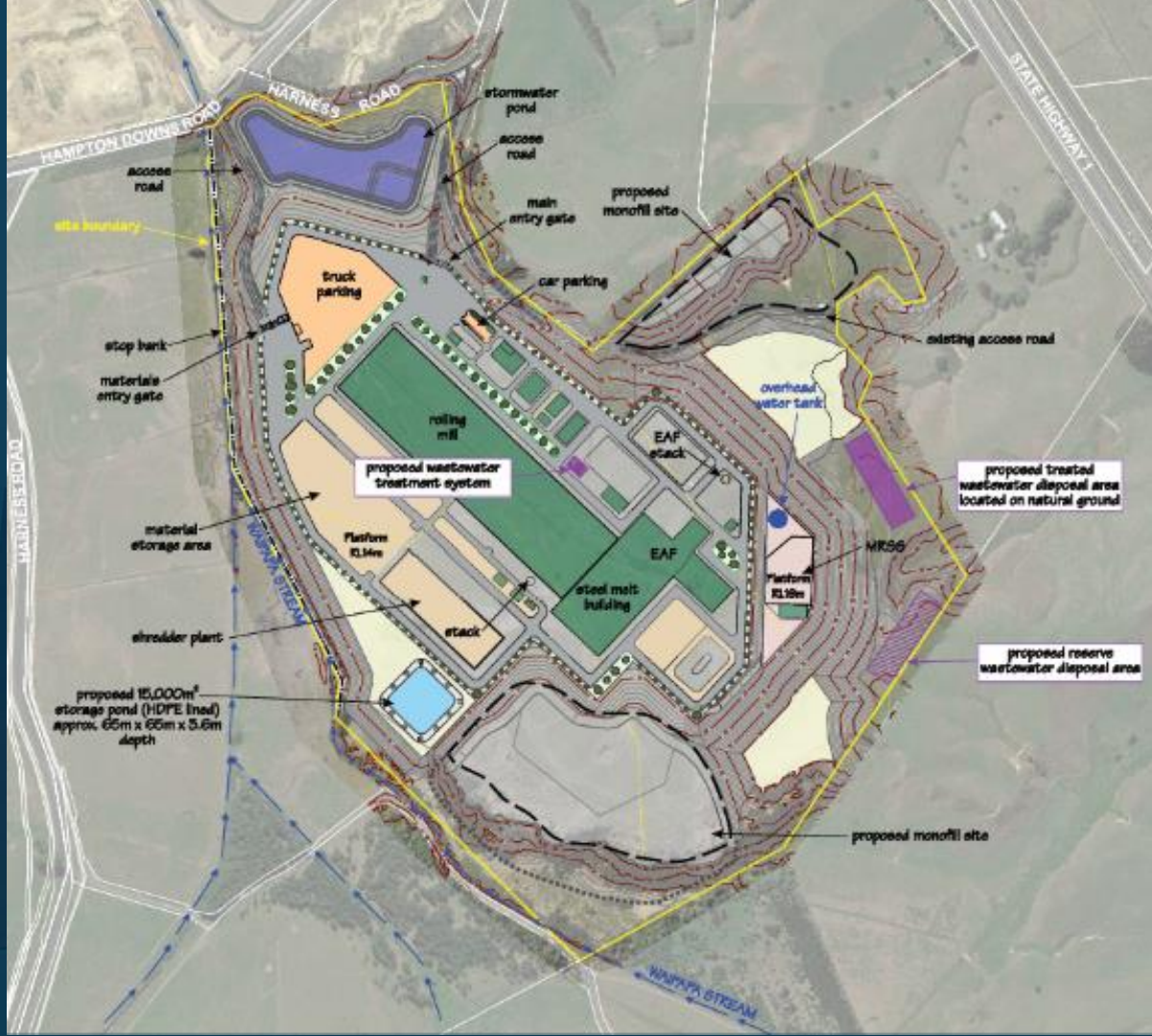
Spring Hill Corrections Facility

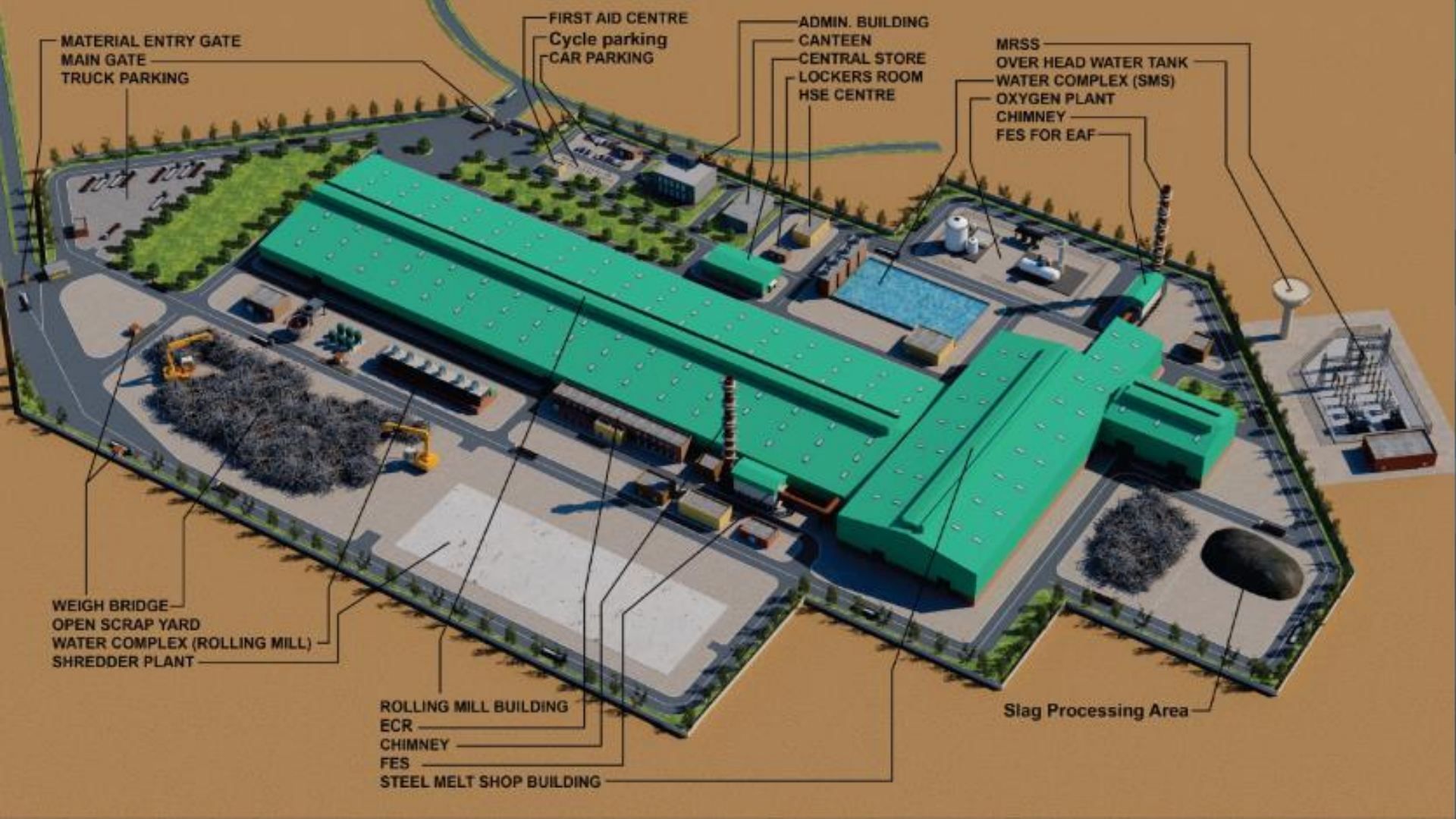
To Hamilton

Notes:  
1. Aerial from Google (2023)  
2. Parcel from LINZ

0m 150 300 450 600 750m  
Scale 1:15,000







MATERIAL ENTRY GATE  
MAIN GATE  
TRUCK PARKING

FIRST AID CENTRE  
Cycle parking  
CAR PARKING

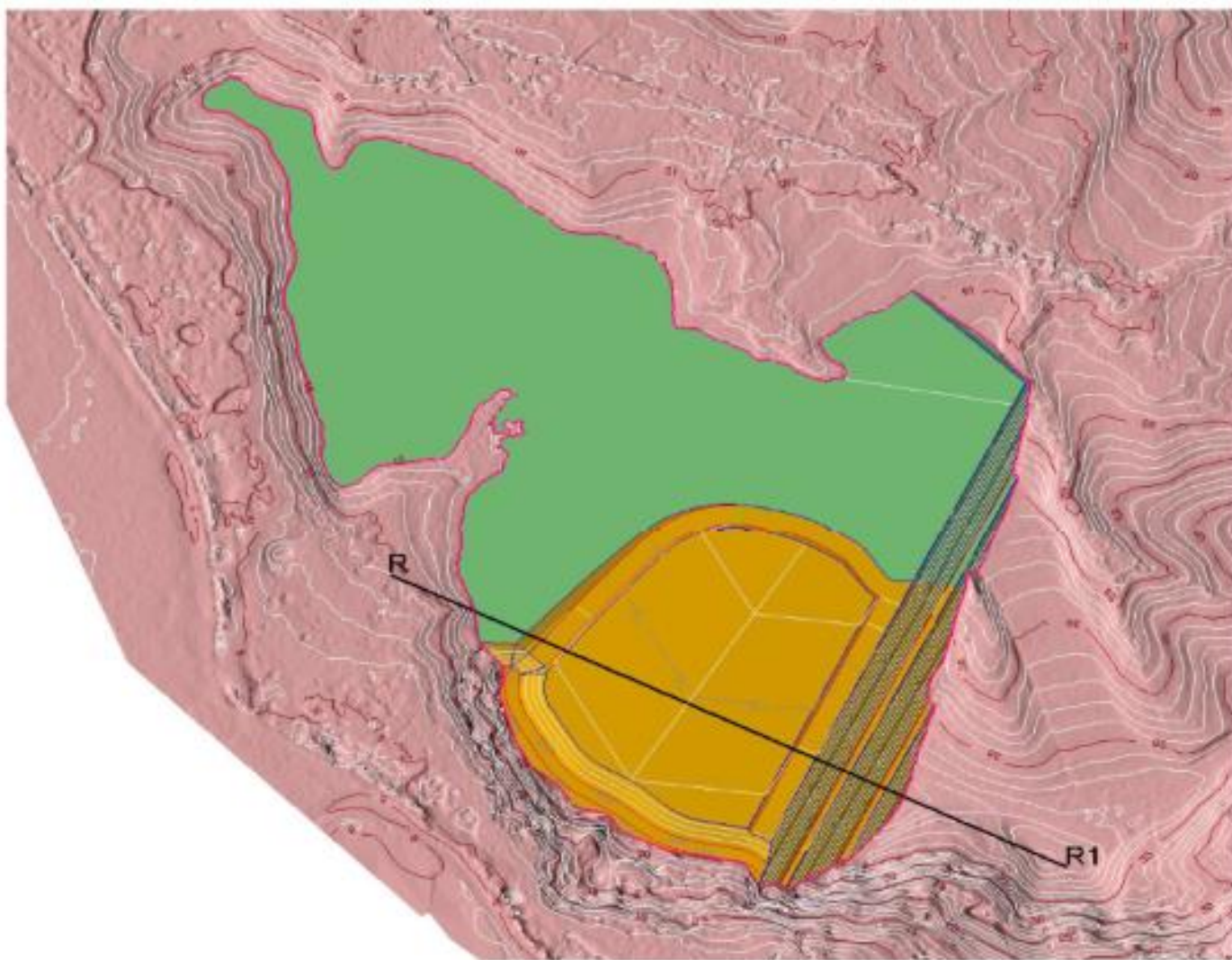
ADMIN. BUILDING  
CANTEEN  
CENTRAL STORE  
LOCKERS ROOM  
HSE CENTRE

MRSS  
OVER HEAD WATER TANK  
WATER COMPLEX (SMS)  
OXYGEN PLANT  
CHIMNEY  
FES FOR EAF

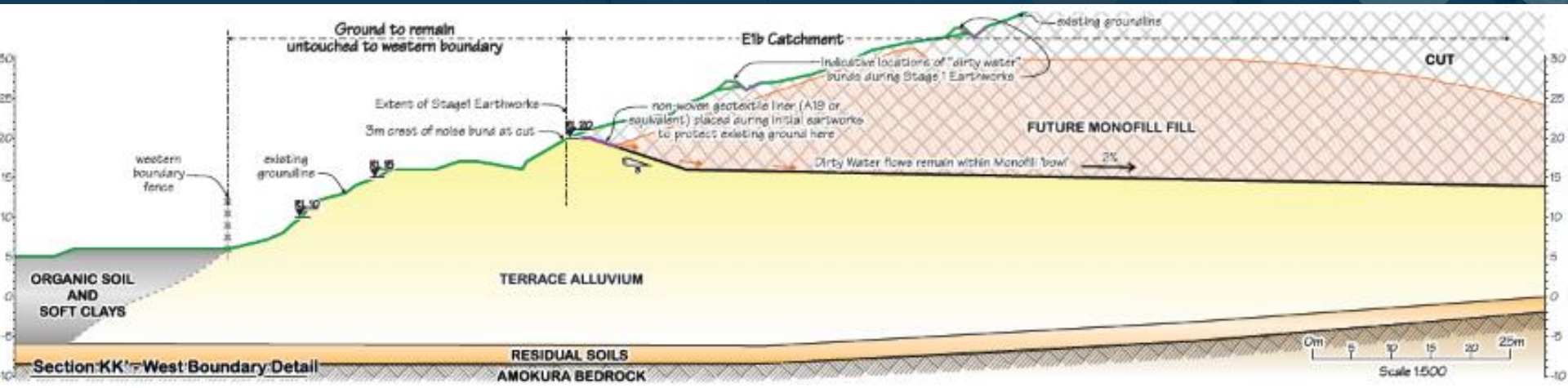
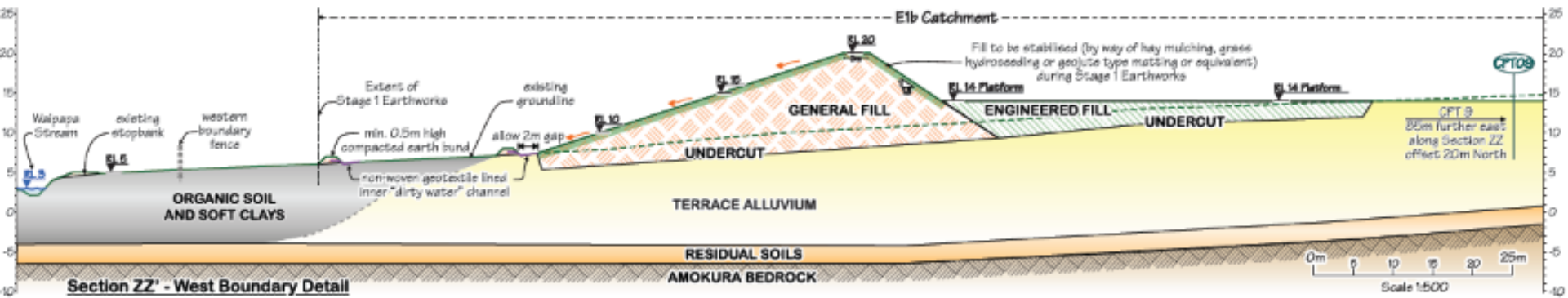
WEIGH BRIDGE  
OPEN SCRAP YARD  
WATER COMPLEX (ROLLING MILL)  
SHREDDER PLANT

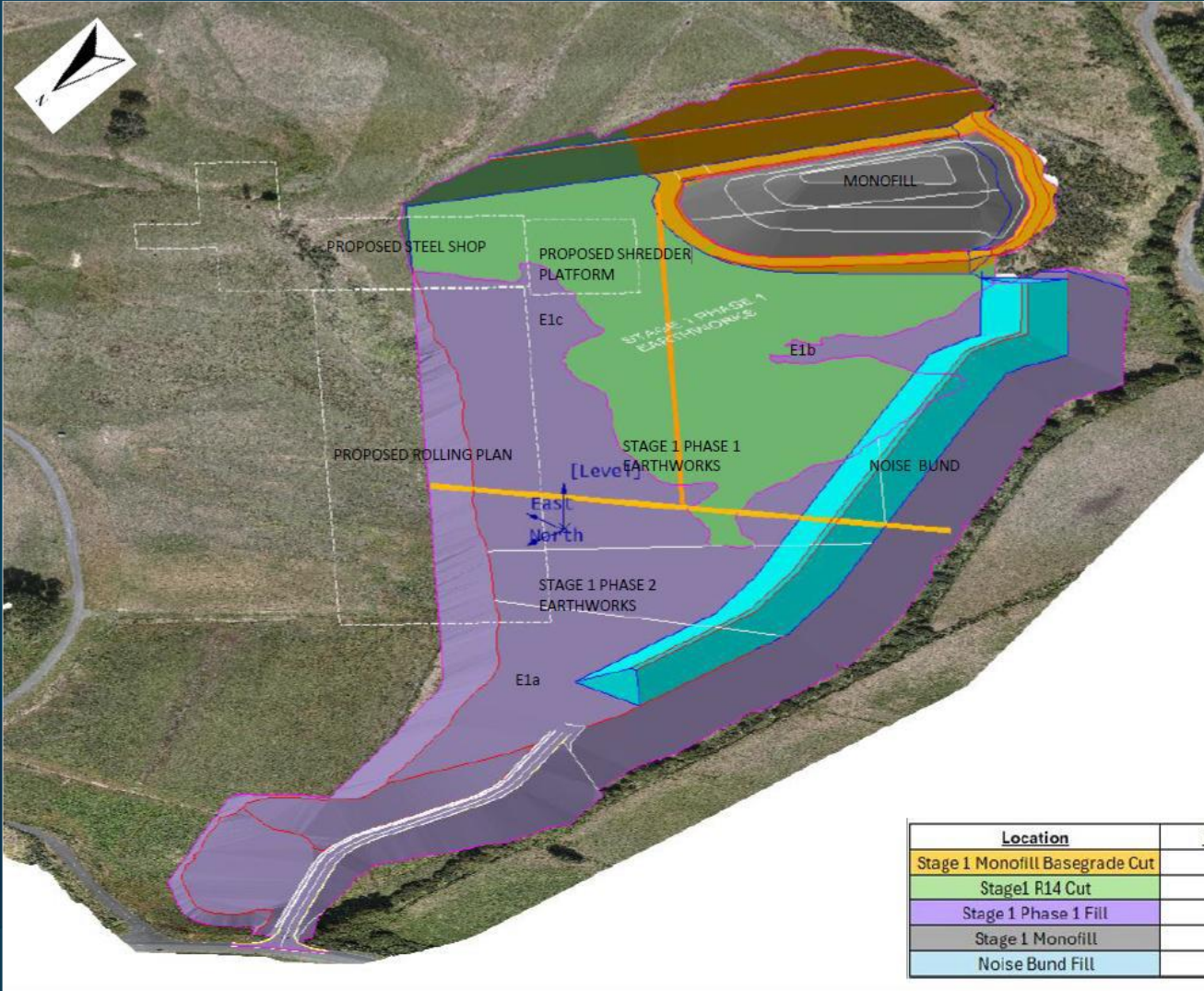
ROLLING MILL BUILDING  
ECR  
CHIMNEY  
FES  
STEEL MELT SHOP BUILDING

Slag Processing Area



EnviTech NOT TO SCALE

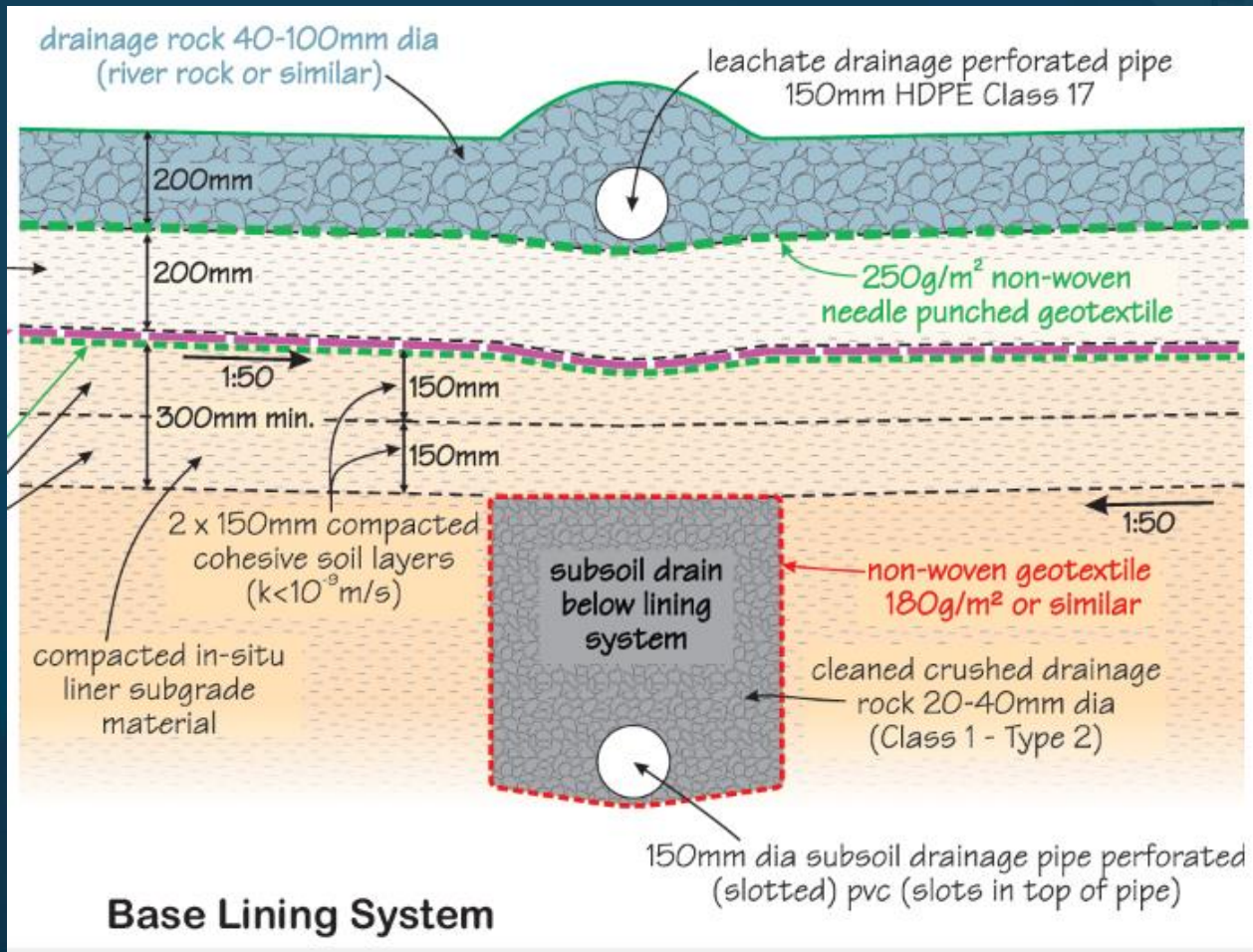




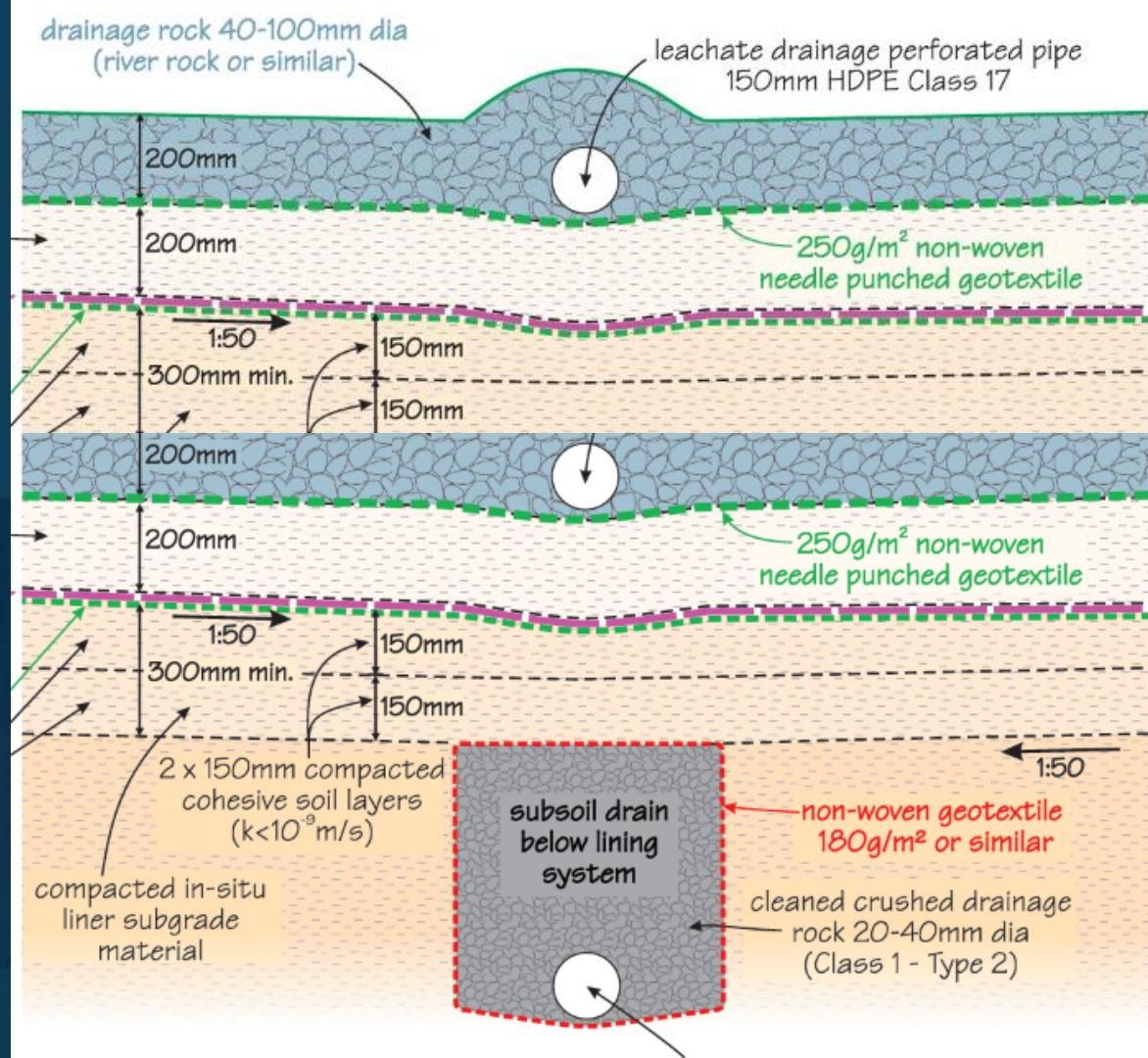
Location	Volume (m3)
Stage 1 Monofill Basegrade Cut	419,402
Stage1 R14 Cut	265,666
Stage 1 Phase 1 Fill	585,013
Stage 1 Monofill	108,960
Noise Bund Fill	60,703

*"The Consent Holder must include a double composite liner for the monofills unless further monitoring and modelling are undertaken ... to advise on whether a single composite liner is sufficient"*

*A monitoring programme for assessing the leachable PFAS concentrations of the floc, based on the PFAS NEMP 3.0*



**Base Lining System**



	PFH <sub>x</sub> S + PFOS (µg/l)	PFOA (µg/l)
Lysimeter leachate (highest values from trials):	0.12	0.24
No Liner	0.07	0.56
Single Composite Liner (current design)	0.70	5.60
Double Composite Liner	7.00	56.00





*Thank you everyone for listening*  
*Tēnā koutou katoa*

Questions / Nga patai?