



# Soil management during a nationwide electrical vehicle roll out

By Lucie Kibblewhite





# Z programme

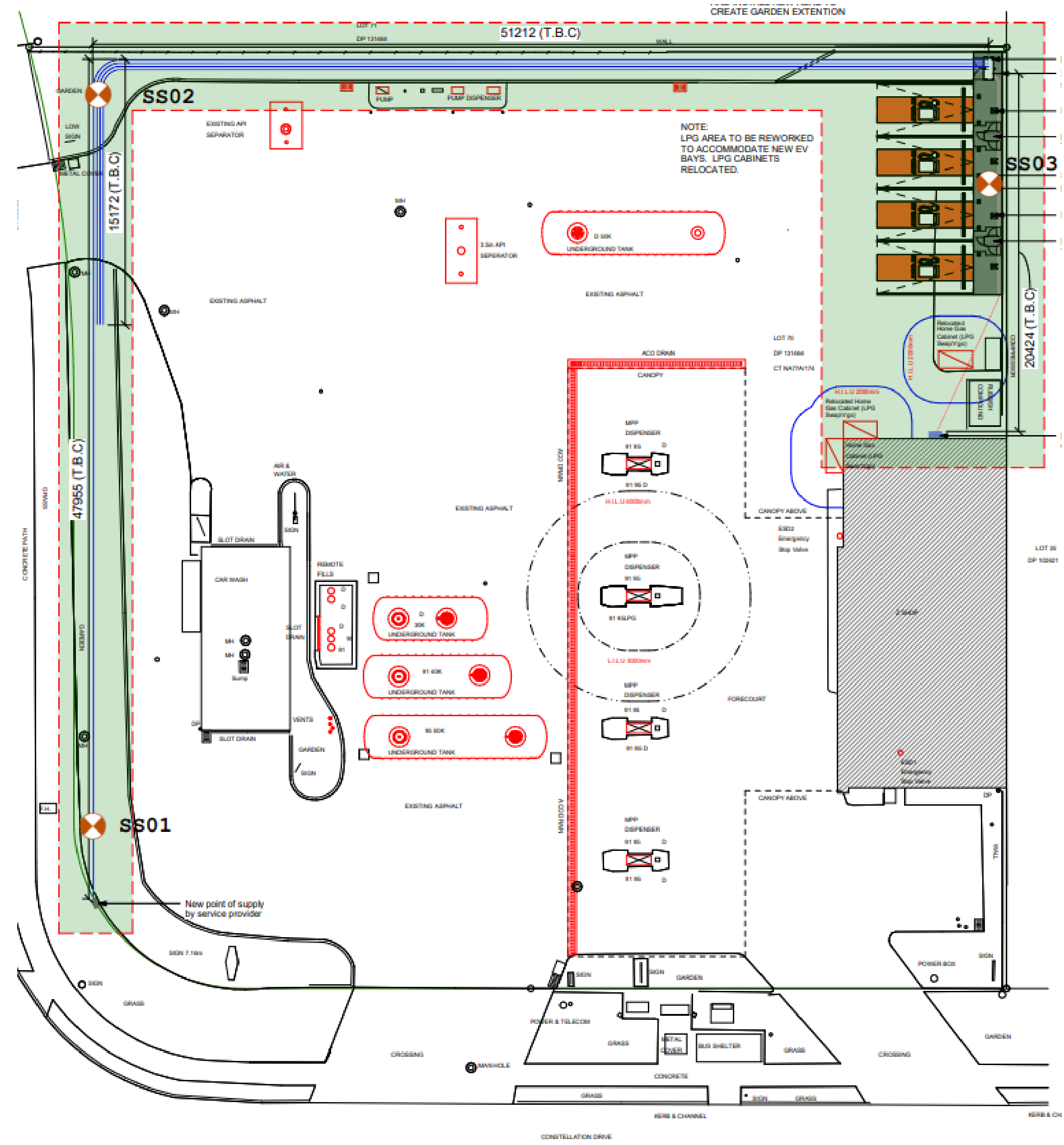
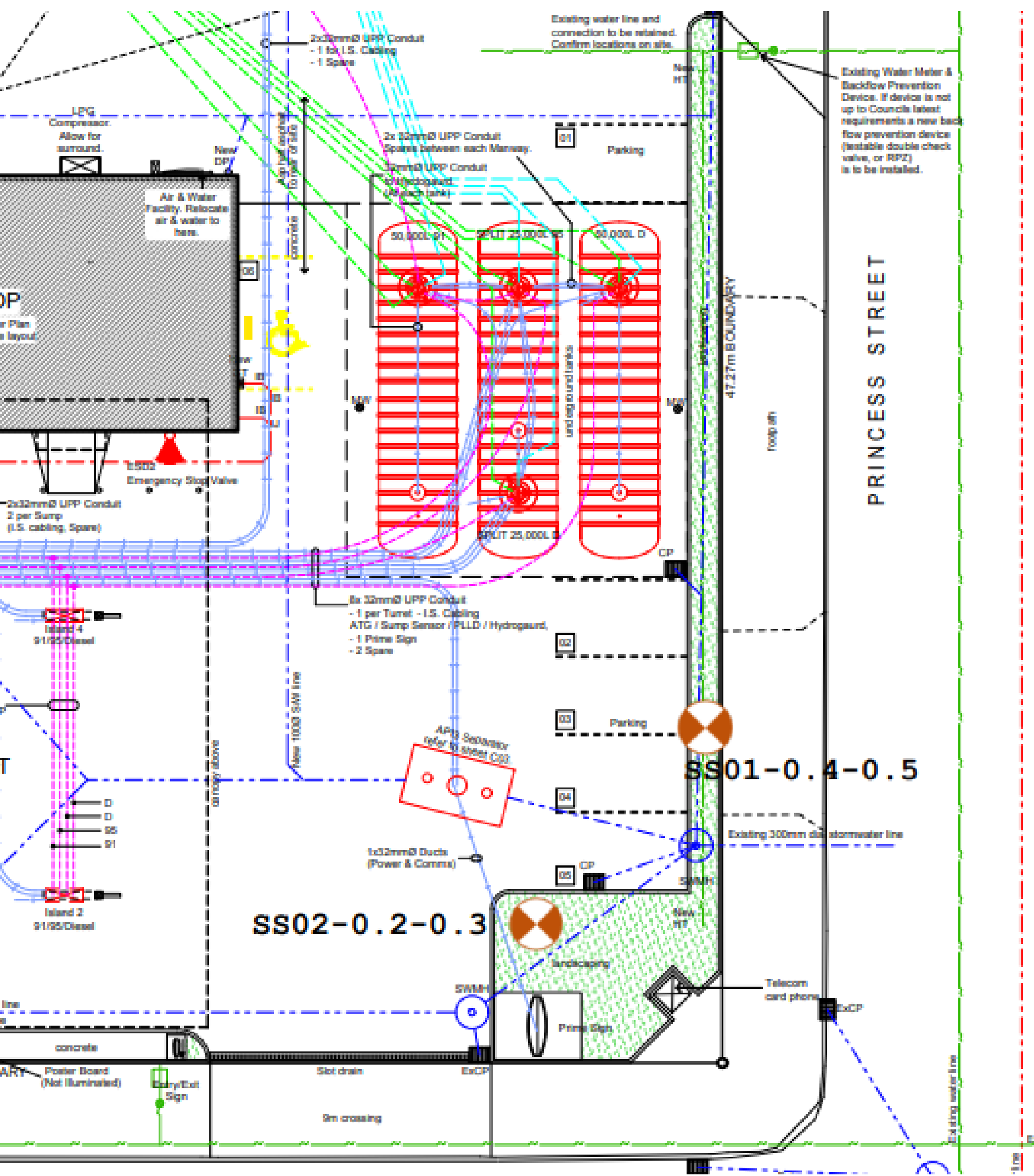
49 Stations currently have Z electric vehicles chargers installed.

Two phases to the works:

- Design phase
- Construction phase



# Design Phase



ko māia ko angitu    fortune favours the bold



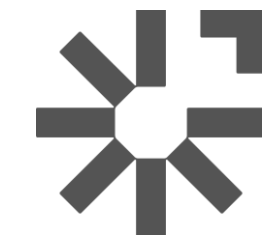
# Metrics

- Completed sampling at **74 sites**
- Class 3 (managed fill): **38 sites**
- Class 5 (cleanfill): **23 sites**
- Mix (spilt either by location or depth): **13 sites**





# Disposal resources



- Z database
- Contractor relationships
- MfE database
- Regulator / council relationships

5/12/2020	Envirowaste Hampton Downs - Contaminated	163 Hampton Downs Road, Hampton Downs	Danielle Pavanelli, Contaminated Soils Manager / Wendy Hodge	Danielle 096228843 / 021741640 Daniele.Pavanelli@envirowaste.co.nz Wendy.Hodge@envirowaste.co.nz	Yes	Class A Criteria	Low level Hydrocarbon contaminated soil at Hampton Downs: •Disposal Rate: \$72.00 per tonne  Rates can be negotiated depending on volume. Above rates valid until 30th June 2021	If material is to be accepted before results are given it will have to be accepted as Class A
3.11.20	EnviroFill south (Previous Holcim quarry)	587 Ridge Road, Bombay	Ashwin Prasad or Danielle Pavanelli,	Ashwin Prasad 027 225 0018 Ashwin.Prasad@envirowaste.co.nz Daniele 096228843 / 021741640 Daniele.Pavanelli@envirowaste.co.nz	Yes	Cleanfill and managed fill	Managed Fill material at EnviroFill South: •Disposal Rate: \$14 per tonne  Cleanfill material at EnviroFill South: •Disposal Rate: \$8 per tonne	Must have results before accepting material. Can take asbestos material as asbestos TBC.
29/07/2014	Envirowaste - Old Greenmount Landfill - Cleanfill/Managed	Smiles Road, East Tamaki	Tony Barker or Daniele Pavanelli - Assistant Environmental/Civil Engineer Telephone +64 9 622 8843 Mobile +64 9 622 8843	DP (09-622-8843)			<b>\$38.44 /tonne</b> for Managed Fill according to DP on 22/07/2014.	TESTING REQUIRED prior to disposal as Managed Fill  <b>LANDFILL CLOSED</b>
16.11.20	Waste Management (formerly Transpacific) Redvale - Contaminated (Z Rate)	Redvale - Dairy Flat	Tim Brake	09 427 0620		Contaminated fill	\$62 + GST per tonne (from 1 July 2020 for one year)	Needs Z manifest form and Redvale Forms: - UNSUIT (soils with HCs); - M31 (geotech not suitable);
16.11.20	Waste Management (formerly Transpacific) Redvale - Managed Fill (Z Rate)	Redvale - Dairy Flat	Tim Brake	09 427 0620		Managed Fill	\$25+ GST per tonne	Needs Z manifest form
16.11.20	Redvale - Clean/Cover	Redvale - Dairy Flat	Tim Brake	09 427 0620		Cleanfill	\$25+ GST per tonne	
as at Sept 2013	Smith & Davies - Cleanfill	Onehunga-Foreshore	Steve Tom (Manager) or Keven Rigby (Site Supervisor at Onehunga)	027-288-3320 (ST), 027-246-7901 (KR)		Taking hardfill for free, may need to inspect it, won't pick up need to drop off at Onehunga	Need 40,000 m3 of clay in 2014	Free
Updated Oct 2013	Ward Resource Recovery - concrete breakers	Te Papapa	-	-		currently no room in storage yard		pay for disposal
22/03/2016	Whitford Landfill, Waste Management (Transpacific) - Clean and Managed	Whitford - Auckland	Sarah Watene Mike Winterbottom	sarah.watene@wastemanagement.co.nz mwinterbottom@wastemanagement.co.nz		Clean and managed fill	Various - see tab in this workbook	They do accept other soil. If it does not meet their cover specification, they will not accept it and charge the disposal cost accordingly.
8/09/2023	Ridge Rd Quarry Ltd - Cleanfill and Consented Managed Fill	252 Ridge Road, Bombay, Auckland	Paul Livesey	Paul Livesey Ridge Road Quarry Ltd 021 767 950 paul@rrq.co.nz	Yes	Managed fill and asbestos	Email Paul - for acceptance or questions: paul@rrq.co.nz 2023 prices: https://andrewstewart.sharepoint.com/xr/sites/SharePoint/Job/CO RPORATE/Z%20Energy/Z%20Ad min/8%20-%20Landfill%20Information/Ridge Rd Quarry Ltd/2023 Prices/2023 Prices	Just had acceptance criteria updated following a S.127 - managed fill limit

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North Island Soil Disposal

South Island Soil Disposal

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# Ngā wāhi taipuni para - Waste facility locations

Activity status

Open

Facility type

All

Location

All



## Registered facilities

664

Registered facilities

584

Open facilities

80

Closed facilities

## Landfills

40

Class 1 landfills

14

Class 2 landfills

129

Class 3 & 4 landfills

## Other facilities

120

Class 5 cleanfills

27

Industrial monofills

254

Transfer stations

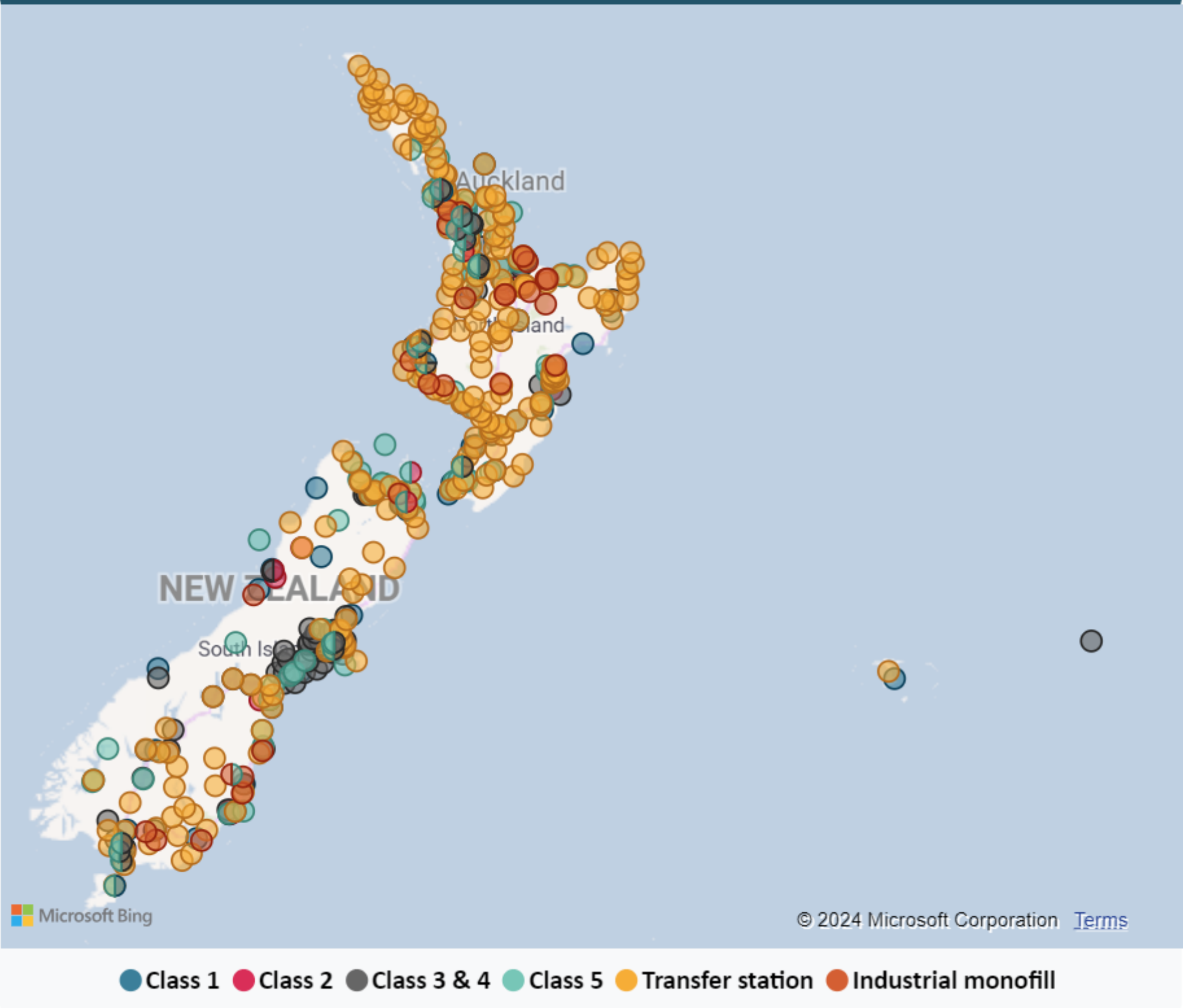
Disclaimer: data presented relies on self-reporting from facility operators

About the data

## Registered waste management facilities

Site name	Region	Facility type	Status
#1 Warner Road, Oropi	Bay of Plenty, Te Moana-a-Toi	Class 5	Open
1 Airport Road - Downer NZ	Manawatū-Whanganui	Class 3 & 4	Open
105 Douglas Road	Tasman, Te Tai-o-Aorere	Class 5	Open
1118 Kopuku Rd, Maramarua	Waikato	Class 5	Open
117 Miners Road	Canterbury, Waitaha	Class 5	Open
121 Ngatira Road - Lichfield - Downer NZ	Waikato	Class 3 & 4	Open
14 Taylors Pass Road	Marlborough, Te Taihū-o-Te-Waka-a-Māui	Class 3 & 4	Open
2169A Buckland Road Pukekohe	Waikato	Class 3 & 4	Open
230 Mangaroa Valley Road	Wellington, Te Whanganui-a-Tara	Class 5	Open
233 Old West Coast Road Class 3&4	Canterbury, Waitaha	Class 3 & 4	Open
233 Old West Coast Road Class 5	Canterbury, Waitaha	Class 5	Open
3312 Christchurch Akaroa Road (Brown Pit)	Canterbury, Waitaha	Class 5	Open
3608 State Highway 6, Havelock, Industrial Monofill	Marlborough, Te Taihū-o-Te-Waka-a-Māui	Industrial monofill	Open
377 West Coast Road	Canterbury, Waitaha	Class 3 & 4	Open
399 Whitford Park Road	Auckland, Tāmaki Makaurau	Class 3 & 4	Open
433 Tauraroa Rubbish and Recycling Station	Northland, Te Tai Tokerau	Transfer station	Open
467 Suffolk Road	Nelson, Whakatū	Class 5	Open
495 Allans Beach Road - Cleanfill	Otago, Ōtākou	Class 5	Open
600 Rangitatau West - Cleanfill	Manawatū-Whanganui	Class 5	Open
711 North Road - MF	Auckland, Tāmaki Makaurau	Class 3 & 4	Open

## Facility map





# Ngā wāhi taipuni para - Waste facility locations

Activity status

Open

Facility type

Class 3 & 4

Location

All



## Registered facilities

150

Registered facilities

127

Open facilities

23

Closed facilities

## Landfills

40

Class 1 landfills

16

Class 2 landfills

127

Class 3 & 4 landfills

## Other facilities

124

Class 5 cleanfills

24

Industrial monofills

253

Transfer stations

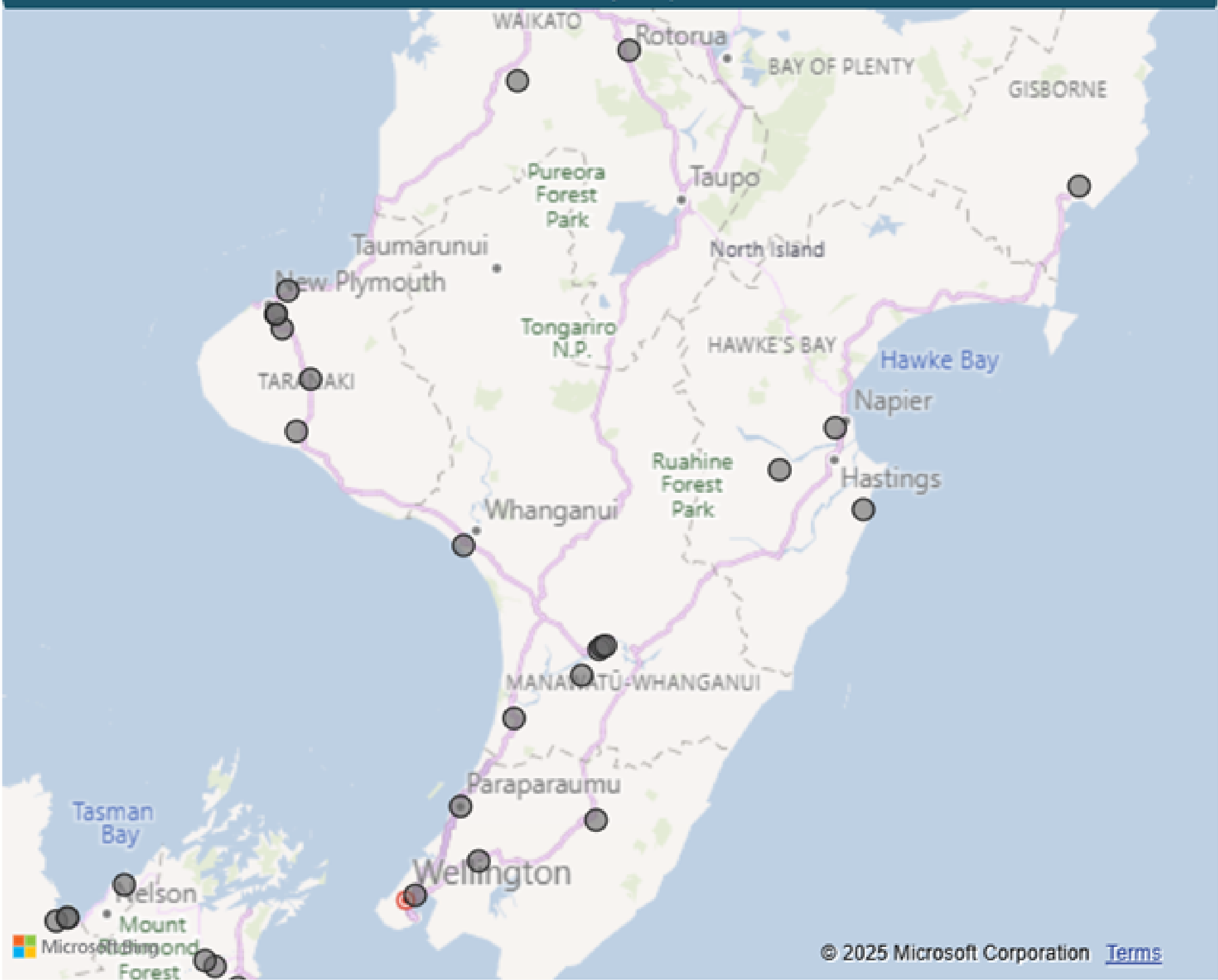
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14 Taylors Pass Road	Marlborough, Te Taihū-o-Te-Waka-a-Māui	Class 3 & 4
233 Old West Coast Road Class 3&4	Canterbury, Waitaha	Class 3 & 4
377 West Coast Road	Canterbury, Waitaha	Class 3 & 4
399 Whitford Park Road	Auckland, Tāmaki-makaurau	Class 3 & 4
711 North Road - MF	Auckland, Tāmaki-makaurau	Class 3 & 4
81 Leggett Road, Templeton	Canterbury, Waitaha	Class 3 & 4
Alex Braas Landfill	Canterbury, Waitaha	Class 3 & 4
Andersons Pit - 73 Hackthorne Road - Property 5130/5131	Canterbury, Waitaha	Class 3 & 4
Ashburton Forks Pit - Ashburton Staveley Road - Property Number 21476	Canterbury, Waitaha	Class 3 & 4
Askins Pit - Junction Road - Property Number 4690/23972	Canterbury, Waitaha	Class 3 & 4
Bedford Road	Waikato	Class 3 & 4
Big Stone Limited	Hawke's Bay, Te Matau-a-Māui	Class 3 & 4
Blackbridge Road Managed Fill	Auckland, Tāmaki-makaurau	Class 3 & 4
Blackbyre Quarry	Tasman, Te Tai-o-Aorere	Class 3 & 4
Brixton Clean Fill Class 3-4	Taranaki	Class 3 & 4

## Facility map



● Class 3 & 4

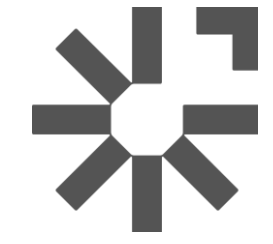


# Soil sampling benefits

- Soils goes to most appropriate facility
- Contaminated soils are handled appropriately during the works
- Accidental discovery impacts during the construction works will be reduced
- The ability to manage soils onsite based on results - segregate and retain soils







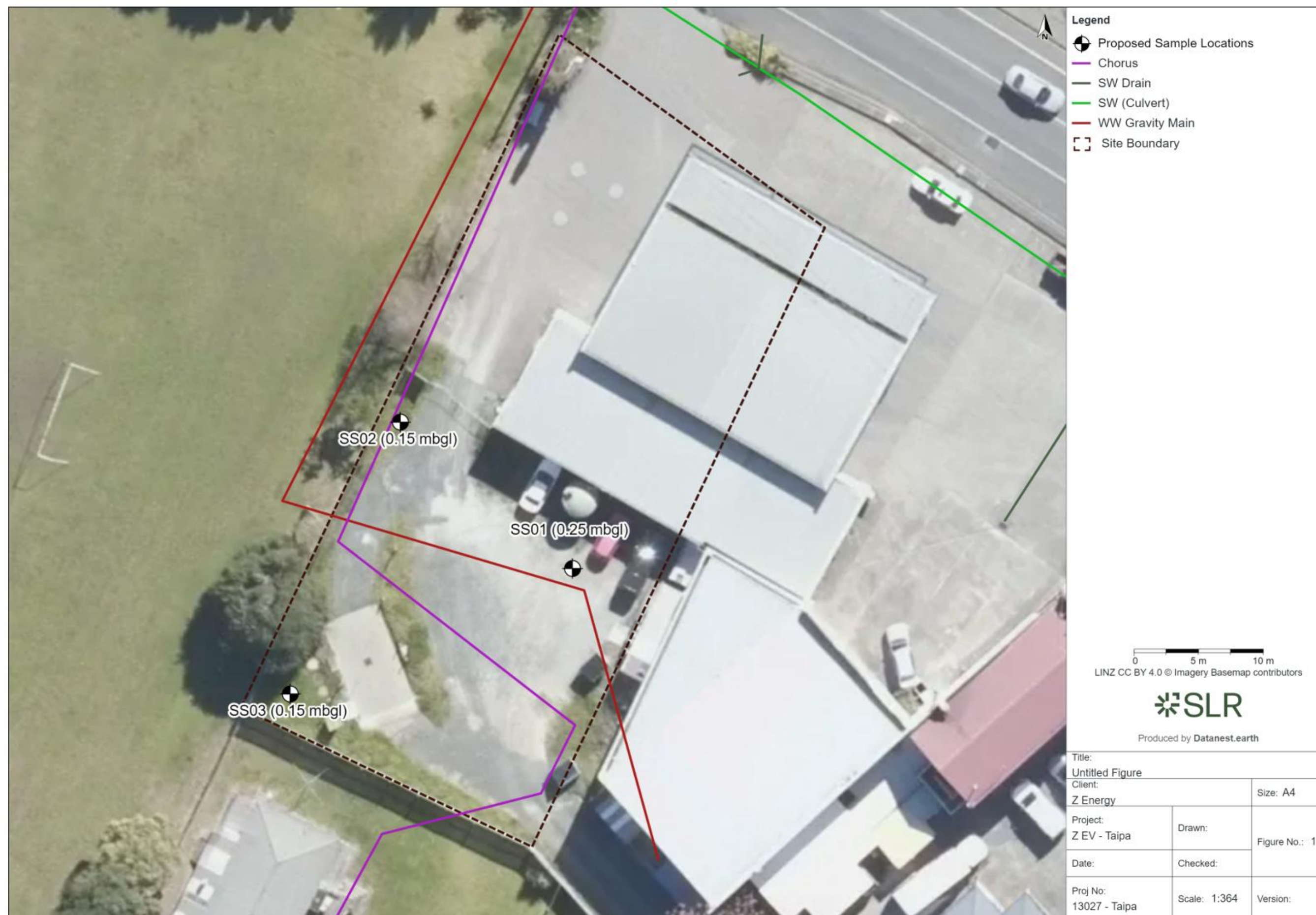
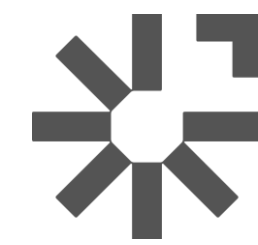
## CASE STUDY 01

# Andy Bay

- Former gasworks
- Discussion at design stage
- Reduce costs/exposure
- Safety in design





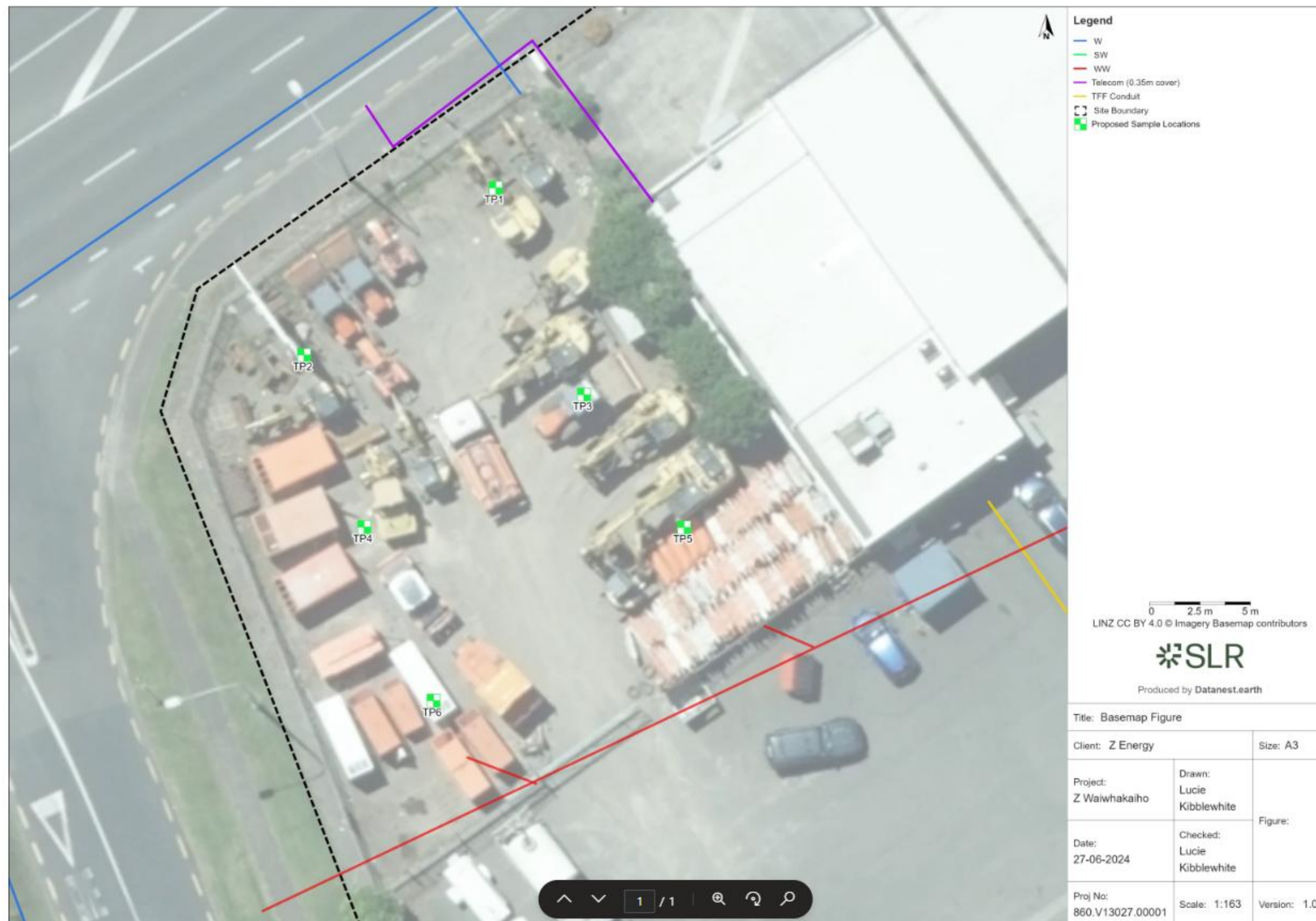
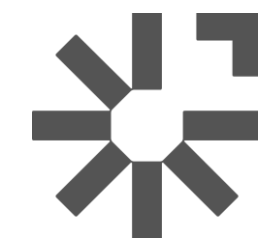


- Remote working
- Early engagement and liaison with landfill
- Compliance with landfills consent

CASE STUDY 02

Taipa





- Large volume of soil
- Review disposal options
- Communication with local council

## CASE STUDY 03

# Waiwhakaiho

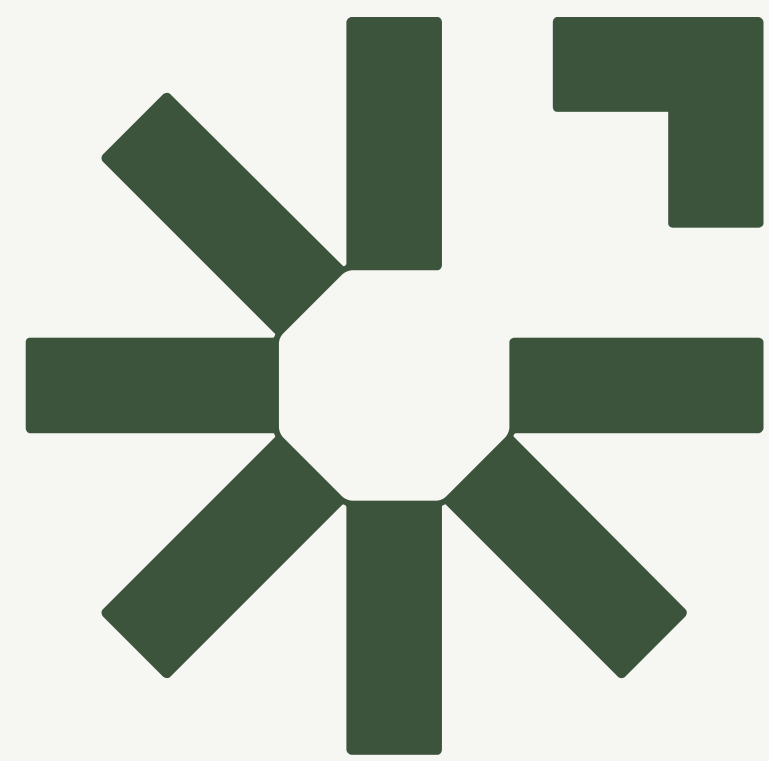




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# Making Sustainability Happen