



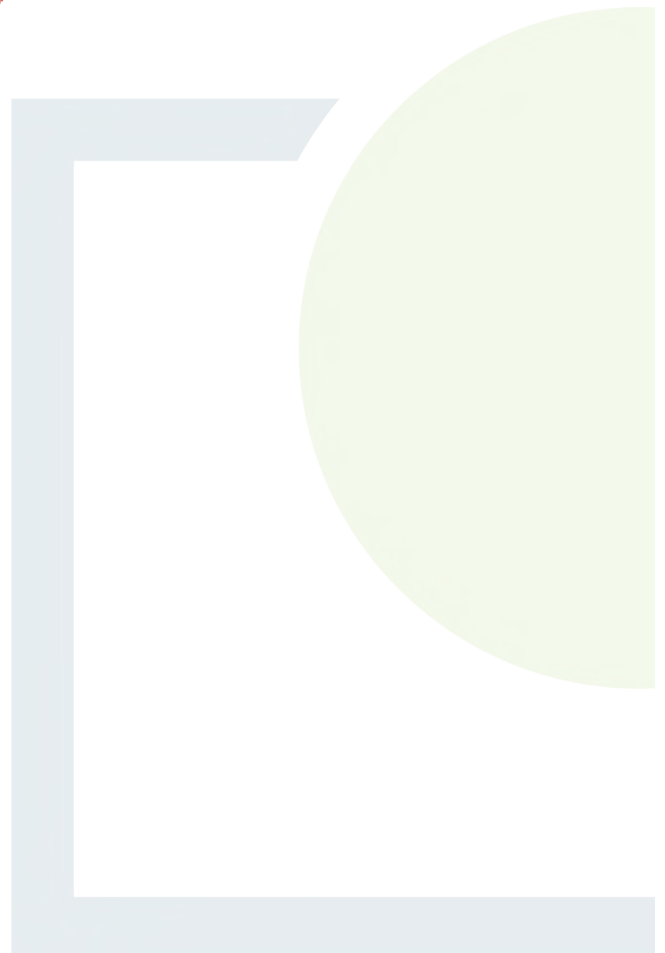
**FEHILY
TIMONEY**

**CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE & PLANNING**

APPENDIX 3

Remediation Plan Drawings

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New Inn Tier 3 Assimilative Capacity Assessment

Assimilative capacity = (Cmax – Cback) x F95 x 86.4 kg/day

Ammoniacal Nitrogen

Where:

C_{max} = maximum permissible concentration (EQS – 95%ile value) (mg/l)

0.14

C_{back} = background upstream concentration (mg/l mean value)

0.048

Q95 = the 95%ile flow in the river (m³/s)

0.0148

Note: (60x60x24)/1000 = 86.4

AC kg/d = (Cmax - Cbak) x F95 x 86.4
 = 0.14 - 0.048 x 0.0148 x 86.4
 = 0.092 x 0.0148 x 86.4
AC kg/d = 0.12 kg/day

Emission Concentration (mg/l)		22			
m3/sec	l/s	Flow (m3/day)	Daily Mass Emission (kg/day)	%-age of AC	
0.00003	0.02546302	2.2	0.048	41.1%	
0.00005	0.05092604	4.4	0.097	82%	
0.00006	0.06076403	5.3	0.116	98.2%	
0.00001	0.00601853	0.52	0.011	9.7%	

Mass balance Equation:

$$T = \frac{FC + fc}{F + f}$$

$$f(m^3/sec) = \frac{f\left(\frac{m^3}{day}\right) \div 24hours}{3600 seconds}$$

F = 0.0148 m³/sec
 C = 0.048 mg/l
 f = 2.2 m³/day
 0.000 m³/sec
 c = 22.000 mg/l

where:

- F is the river flow upstream of the discharge (95%ile flow m³/sec);
- C is the concentration of pollutant in the river upstream of the discharge (mean concentration in mg/l);
- f is the flow of the discharge (m³/sec);
- c is the maximum concentration of pollutant in the discharge (mg/l);
- T is the concentration of pollutant downstream of the discharge.

T =

	$\frac{F \times C}{F + f}$	+	$\frac{f \times c}{F + f}$
1	$\frac{0.0148 \times 0.048}{0.0148 + 0.000}$	+	$\frac{0.000 \times 22.000}{0.0148 + 0.000}$
2	$\frac{0.0007104}{0.0148}$	+	$\frac{0.000}{0.0148}$
3	$\frac{0.001}{0.015}$		
4	T = 0.057 mg/l		

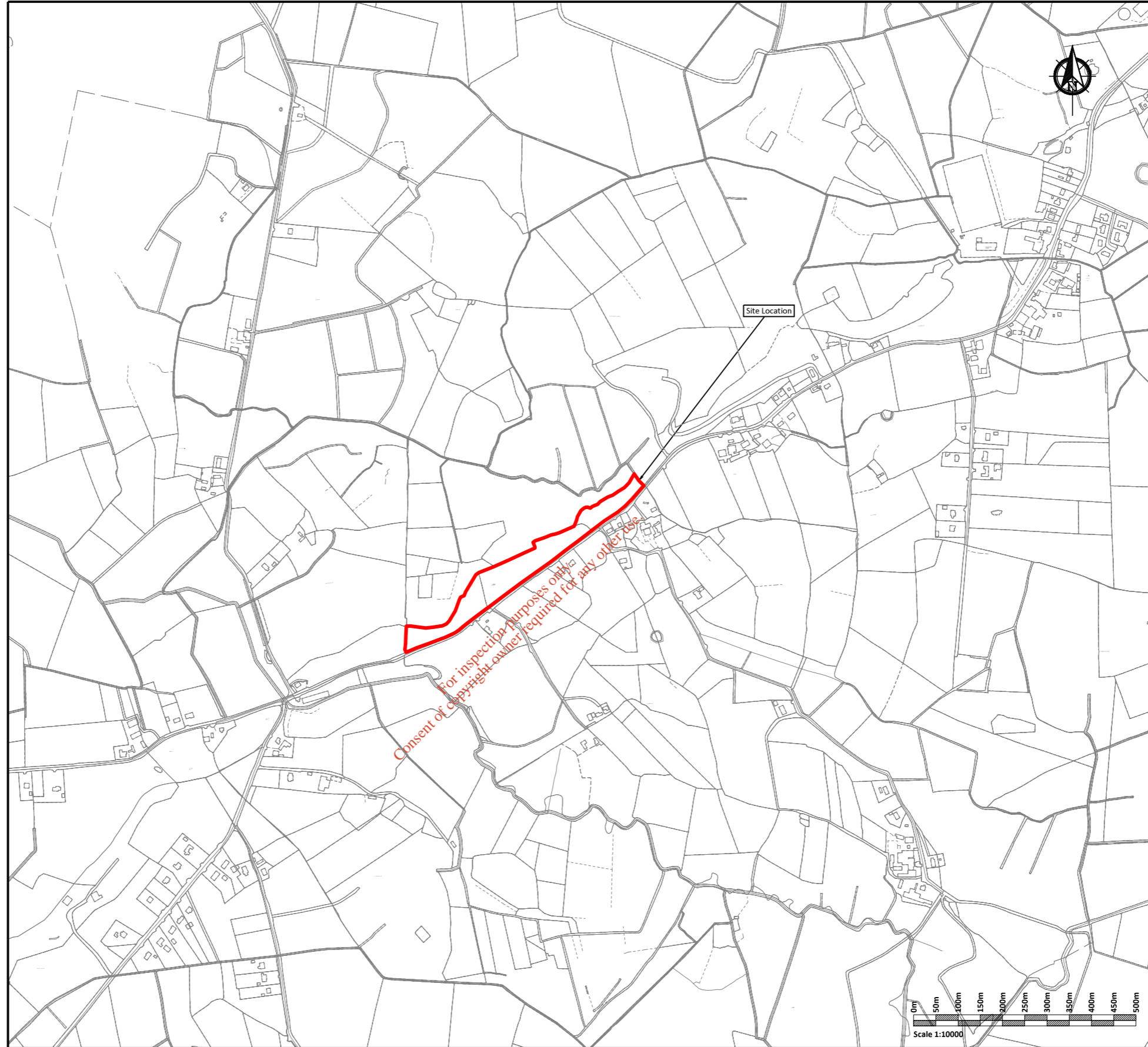
EQS (mg/l) 0.14 Good' Status 95%-ile EQS

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SITE LOCATION

Scale 1:50000



Legend:
— Site Boundary

SITE LOCATION

Scale 1:10000

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 2282, 2813-04, 2813-05, 2813-09, 2813-10, 2813-14, 2813-15, 2813-19, 2813-20, 2813-A, 2813-B, 2813-C, 2813-D, 2814, 2814-01, 2814-06, 2814-11, 2814-16, 2814-A, 2814-C, 2881, 2881-A, 2881-B, 2881-C, 3354, 3802-22, 3802-A, 3802-B, 3802-C, 3802-D



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Rev.	Description	App By	Date
A	FOR INFORMATION	JON	20.01.21

PROJECT	ERA GALWAY HISTORIC LANDFILLS			CLIENT	GALWAY COUNTY COUNCIL		
SHEET	SITE LOCATION MAP (NEW INN HISTORIC LANDFILL)			Date	20.01.21	Project number	P2282
				Scale (@ A3)	1:10000		Rev
				Drawn by	POR	Drawing Number	P2282-0102-0001
				Checked by	AB		A

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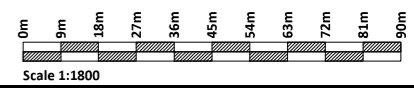


Legend:
— Site Boundary

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PLAN
 Scale 1:1800

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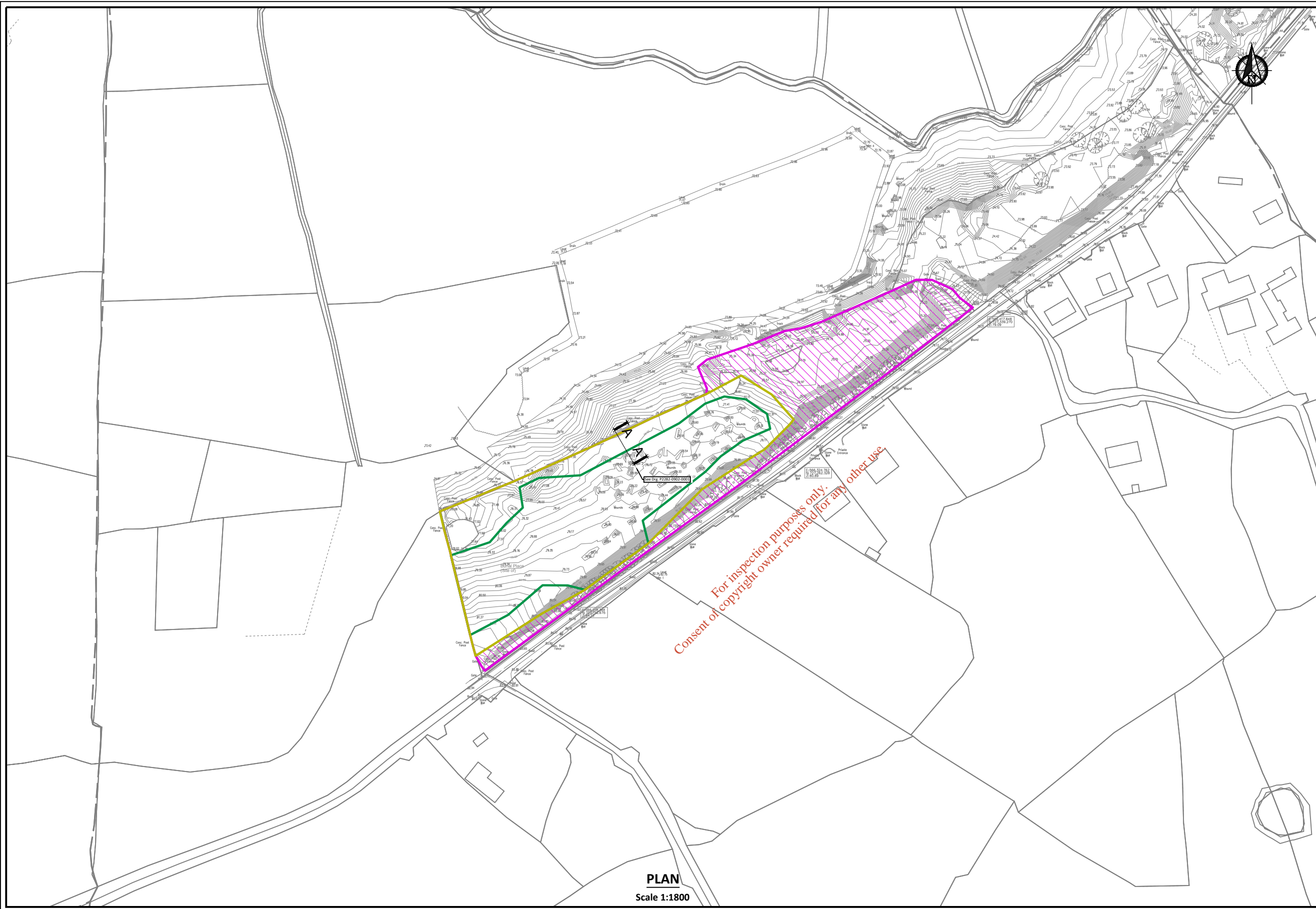


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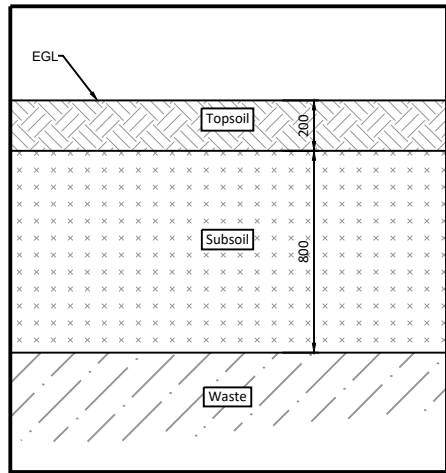
Rev.	Description	App By	Date
A	FOR INFORMATION	JON	20.01.21

PROJECT ERA GALWAY HISTORIC LANDFILLS		CLIENT GALWAY COUNTY COUNCIL	
SHEET EXISTING SITE SURVEY (NEW INN HISTORIC LANDFILL)		Date 20.01.21	Project number P2282
		Scale (@ A3) 1:1800	Rev A
		Drawn by POR	Drawing Number P2282-0102-0002
		Checked by AB	

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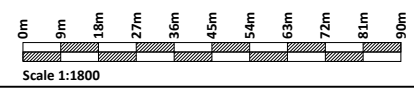


- Legend:
- Proposed Landfill Capping Area
 - Local Re-profiling and Landscaping to Return Area to Field
 - Extent of Waste Body



TYPICAL LANDFILL CAPPING DETAIL
Scale 1:30

PLAN
Scale 1:1800



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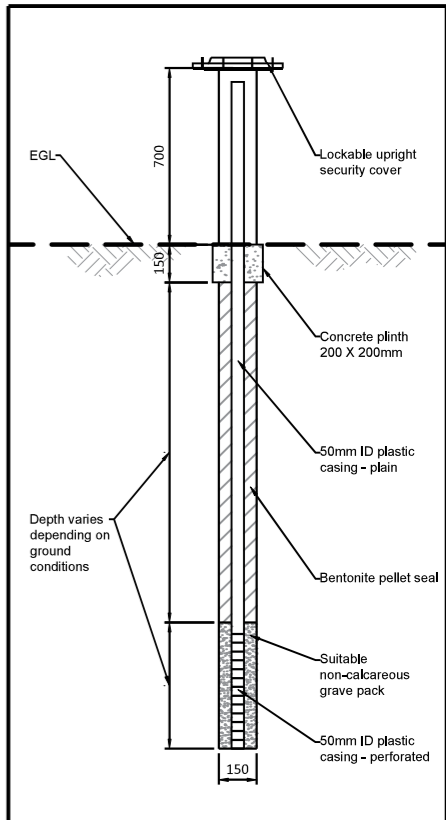
PROJECT	ERA GALWAY HISTORIC LANDFILLS			CLIENT	GALWAY COUNTY COUNCIL		
SHEET	PROPOSED LANDFILL CAPPING AREA (NEW INN HISTORIC LANDFILL)			Date	20.01.21	Project number	P2282
				Drawn by	POR	Drawing Number	P2282-0102-0003
				Checked by	AB	Scale (@ A3)	1:1800
				Rev	A		

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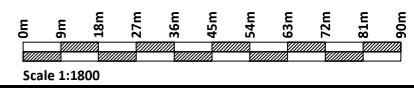


PLAN
Scale 1:1800

- Legend:
- Proposed LFG Monitoring Well
 - Proposed GW Monitoring Well
 - Existing GW Monitoring Well
 - Existing SW Monitoring Locations
 - Site Boundary



MONITORING WELL - TYPICAL DETAIL
Scale 1:30



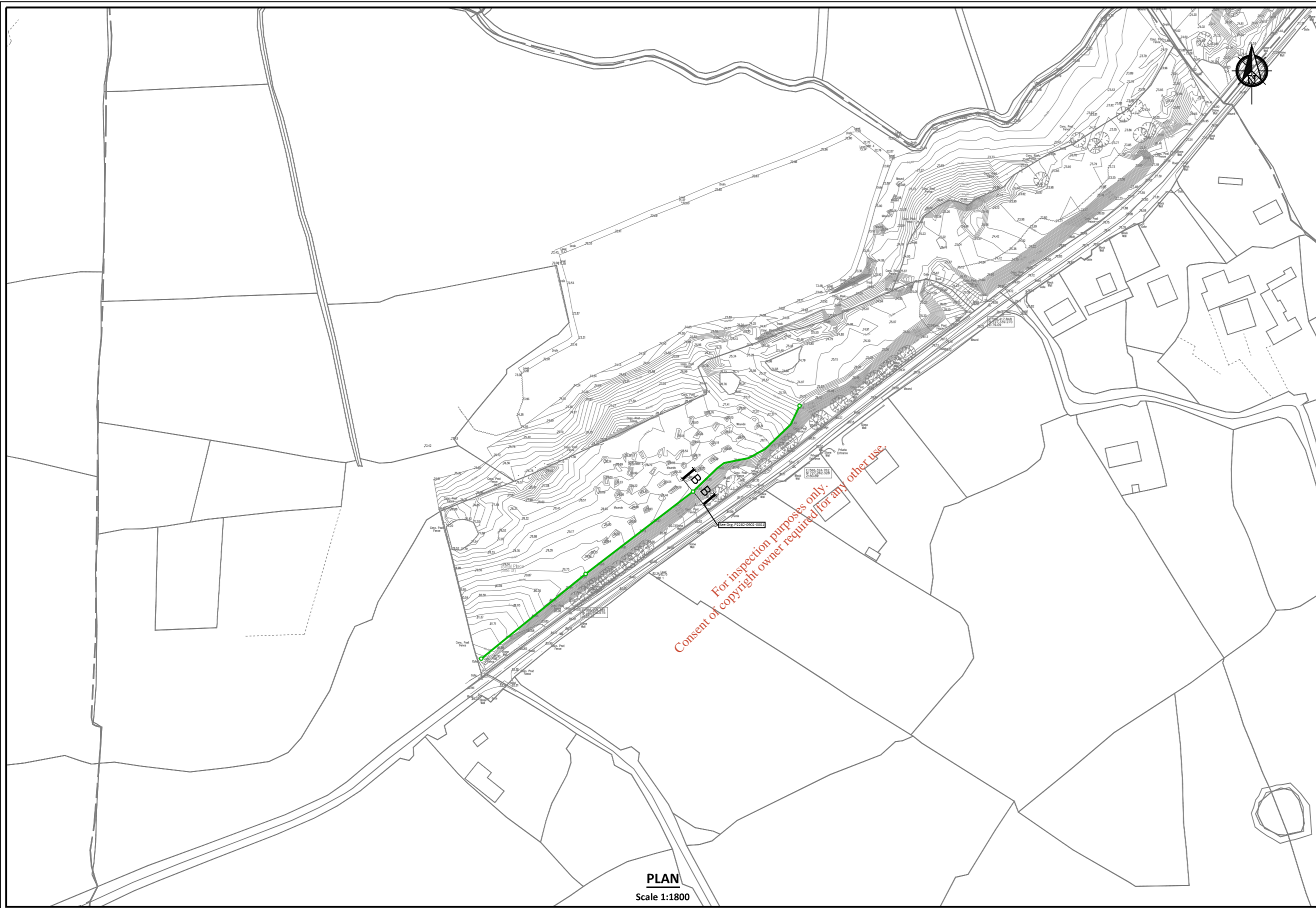
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Rev.	Description	App By	Date
A	FOR INFORMATION	JON	XX.12.20

PROJECT ERA GALWAY HISTORIC LANDFILLS		CLIENT GALWAY COUNTY COUNCIL	
SHEET EXISTING & PROPOSED MONITORING POINTS (NEW INN HISTORIC LANDFILL)		Date XX.12.20	Project number P2282
		Scale (@ A3) 1:1800	Rev A
		Drawn by POR	Drawing Number P2282-0102-0004
		Checked by AB	

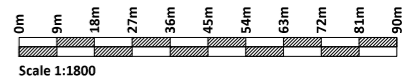
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- Legend:
- Slotted 110 HDPE Gas Collection Pipe in Gas Collection Trench
 - Passive Gas Vent

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PLAN
Scale 1:1800



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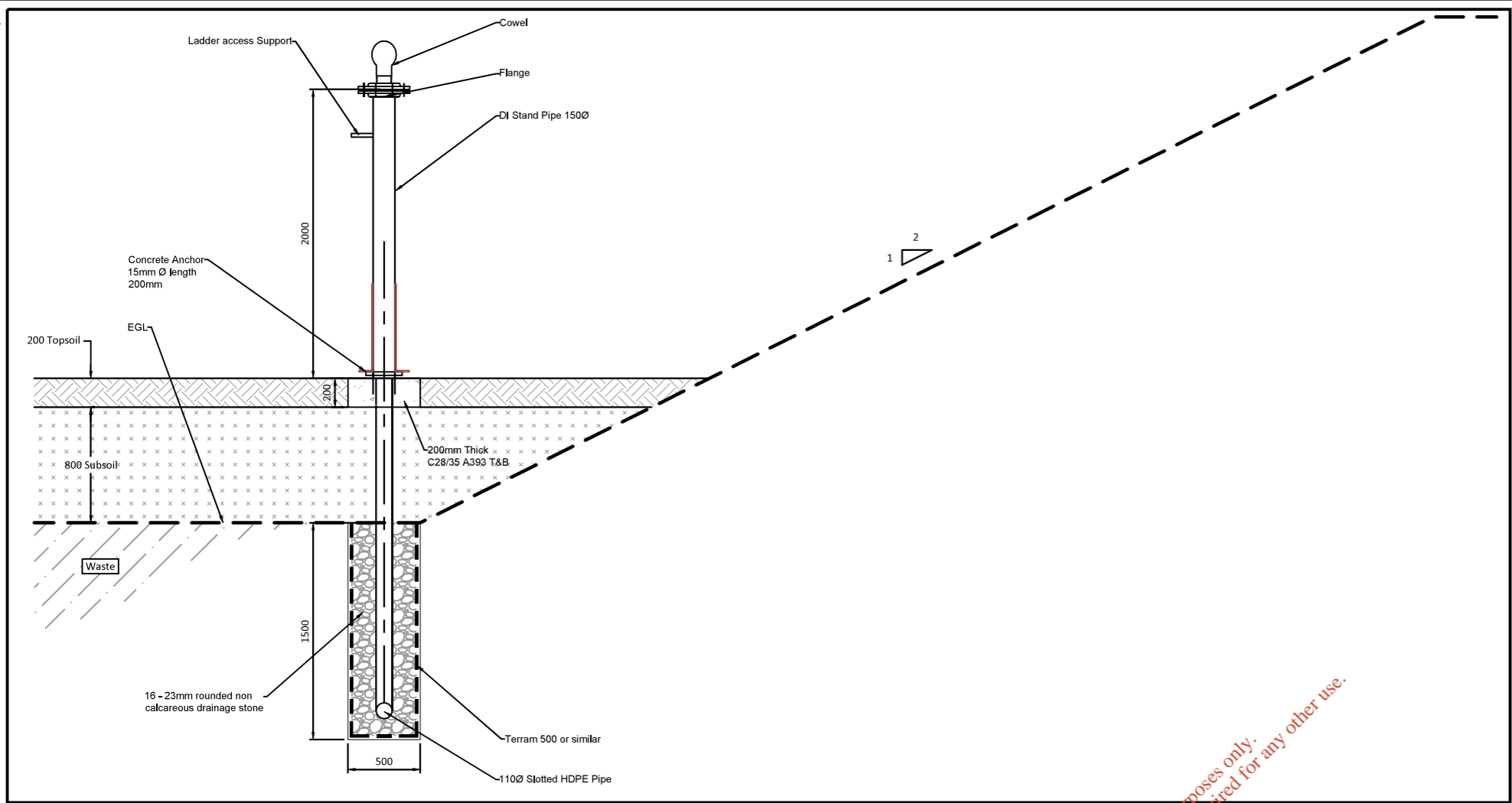


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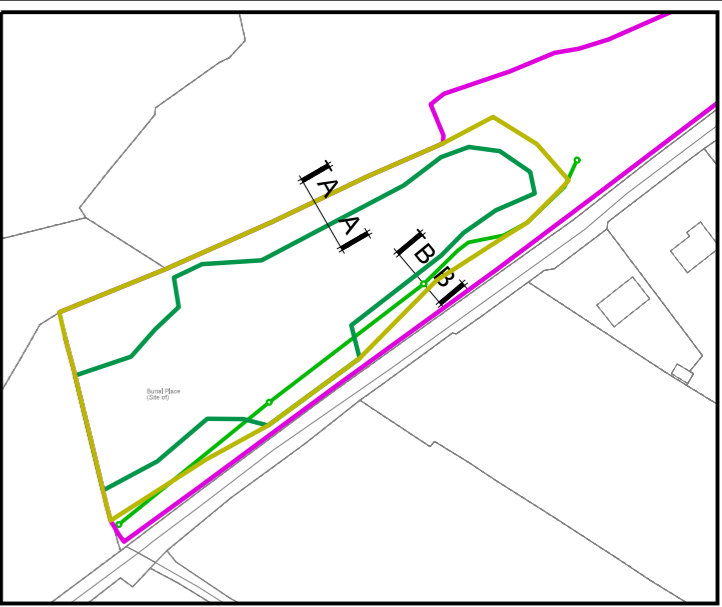
Rev.	Description	App By	Date
A	FOR INFORMATION	JON	20.01.21

PROJECT ERA GALWAY HISTORIC LANDFILLS		CLIENT GALWAY COUNTY COUNCIL	
SHEET PROPOSED PASSIVE GAS VENTING SYSTEM (NEW INN HISTORIC LANDFILL)		Date 20.01.21	Project number P2282
		Scale (@ A3) 1:1800	Rev A
		Drawn by POR	Drawing Number P2282-0702-0001
		Checked by AB	

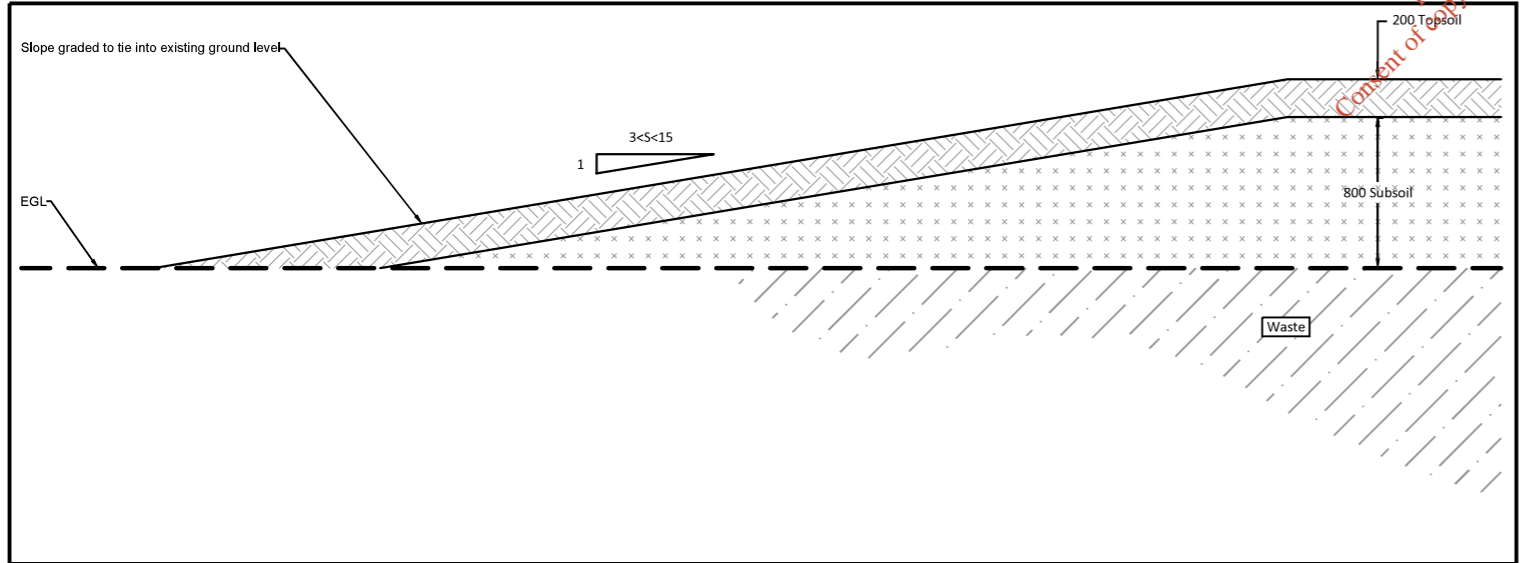
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SECTION B - B
Scale 1:40



KEYPLAN
Scale 1:2500



SECTION A - A
Scale 1:40

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PROJECT ERA GALWAY HISTORIC LANDFILLS		CLIENT GALWAY COUNTY COUNCIL	
SHEET SECTIONS A - A, B - B & PASSIVE GAS VENT TYPICAL DETAIL (NEW INN HISTORIC LANDFILL)		Date XX.12.20	Project number P2282
		Scale (@ A3) 1:40	Rev A
		Drawn by POR	Drawing Number P2282-0902-0001
		Checked by AB	

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