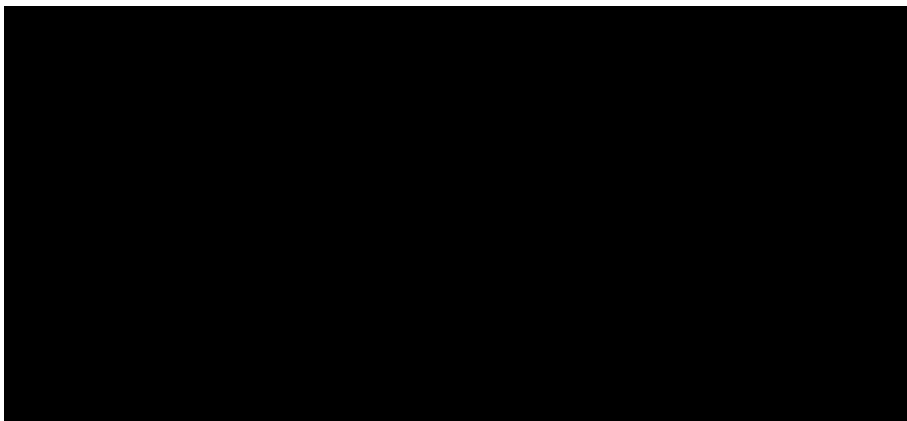
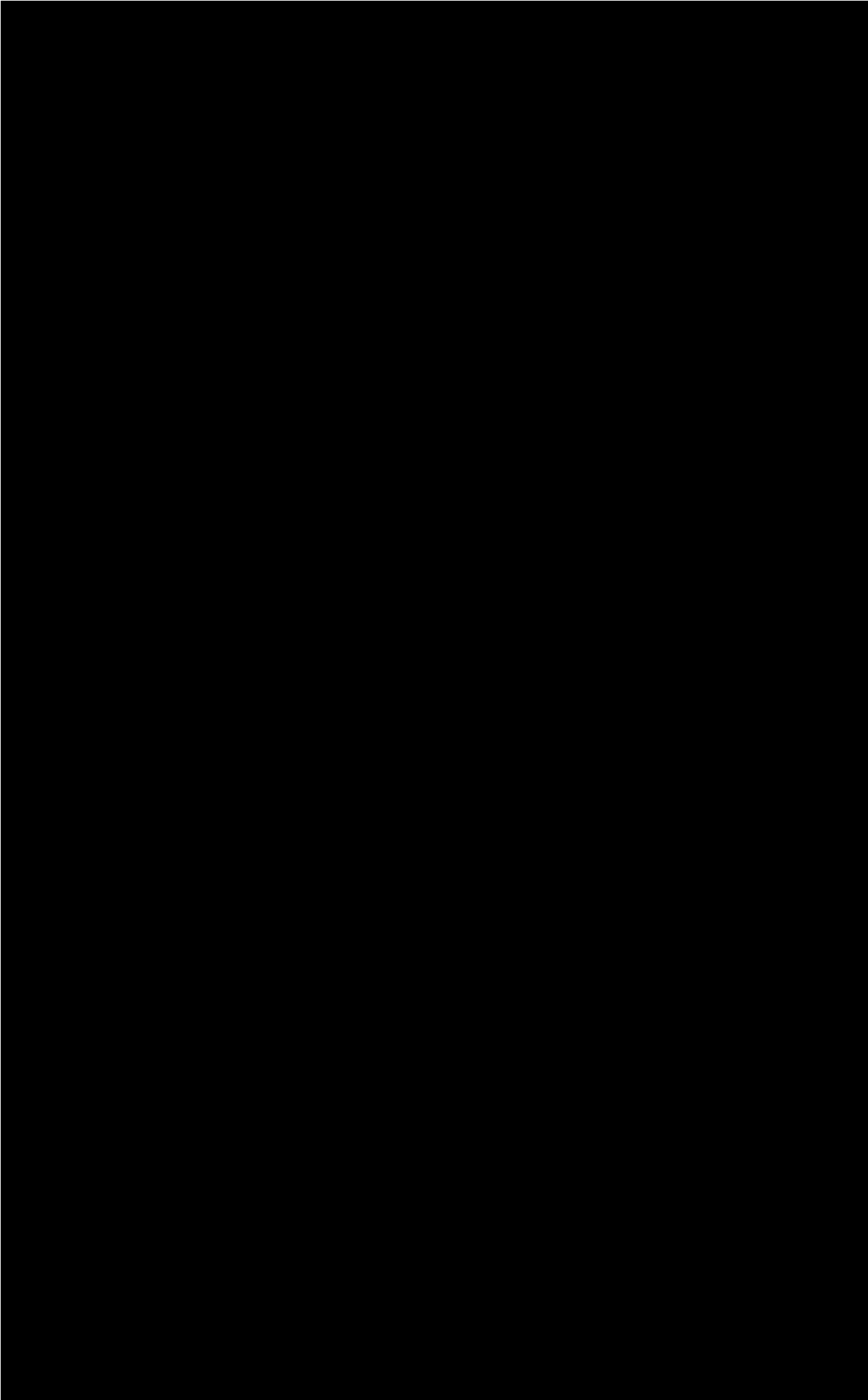


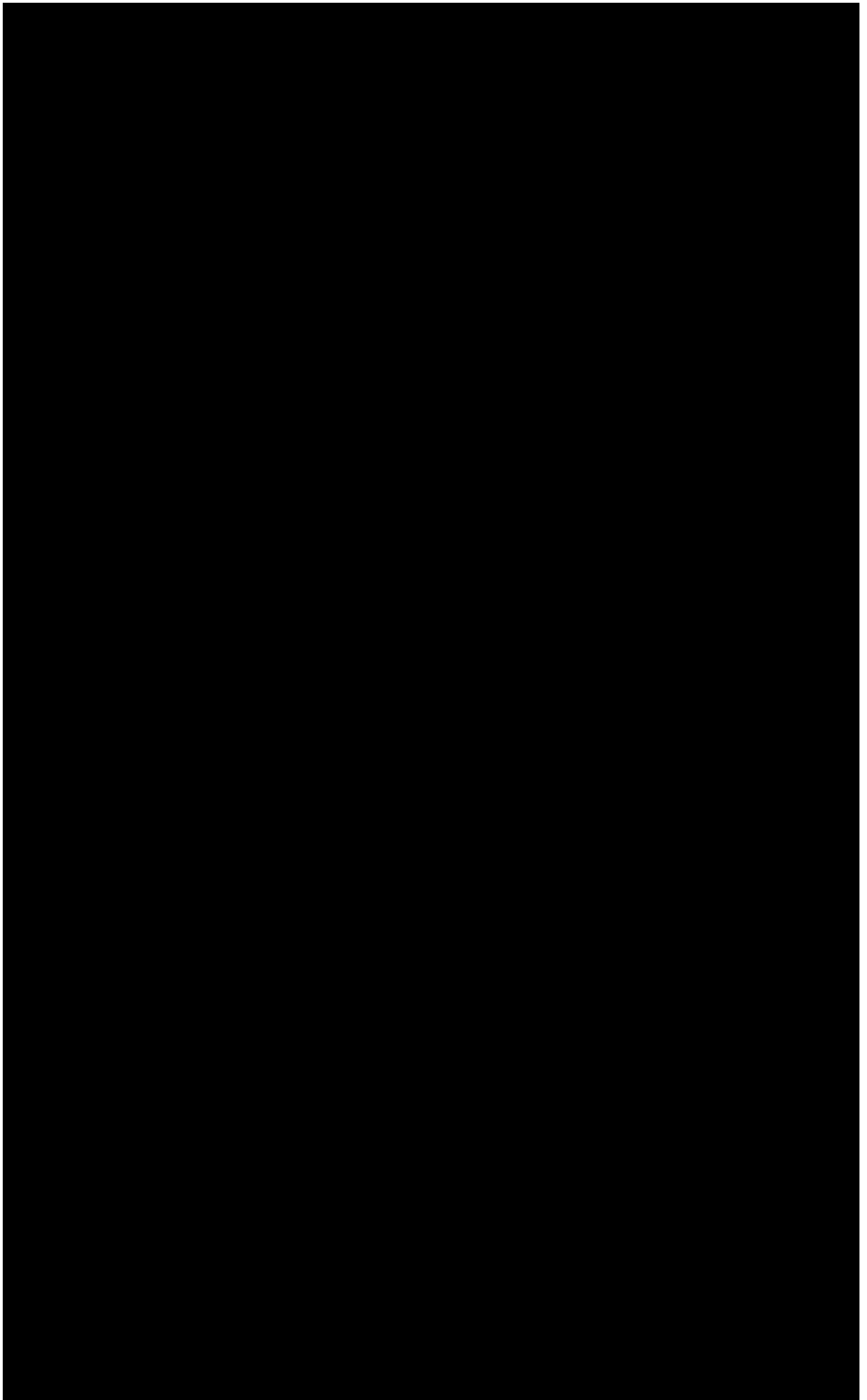
Fig 1 LAQUA Protocol

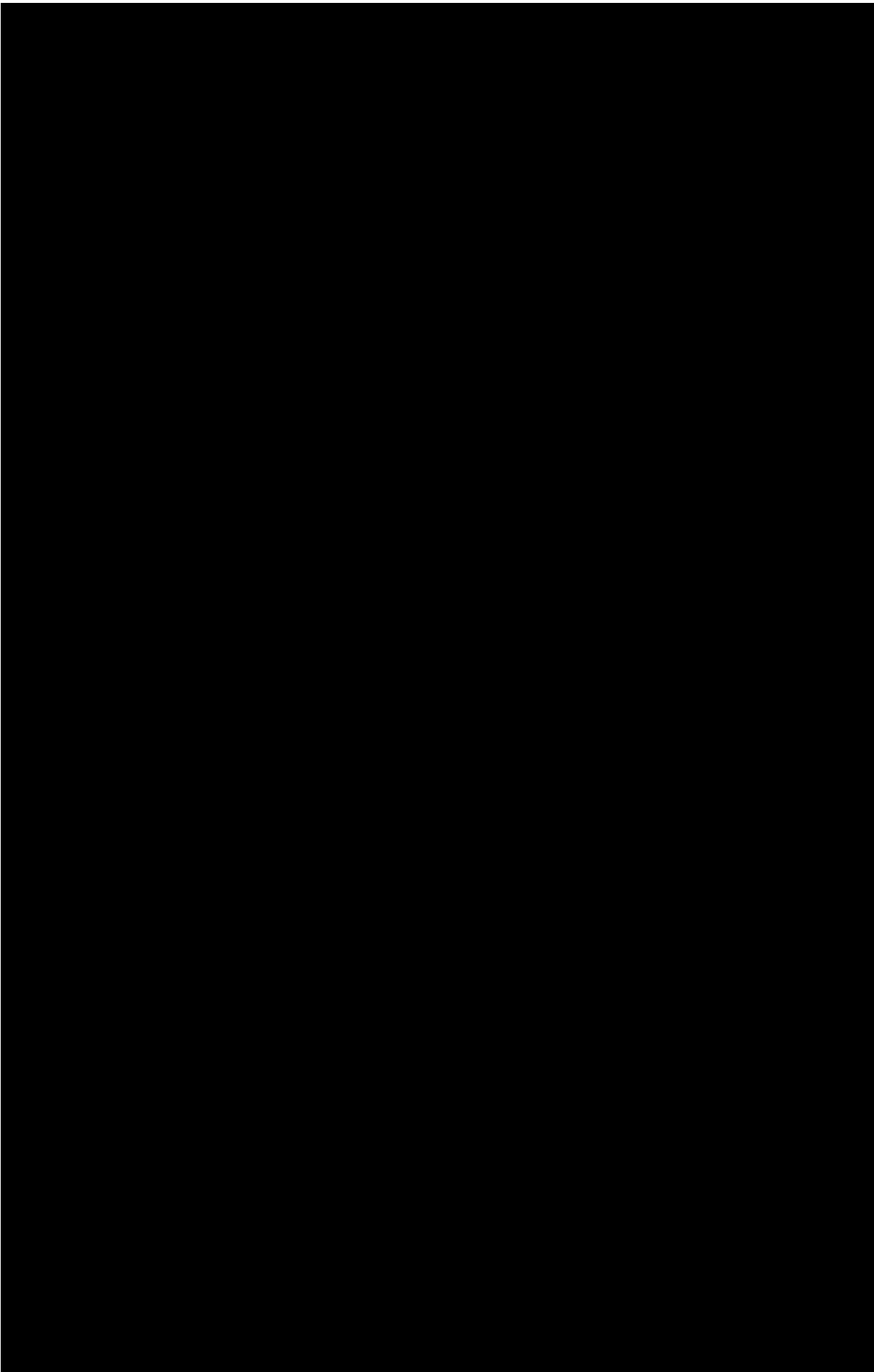


Fig 2 – The Column testing equipment testing continual leachate application









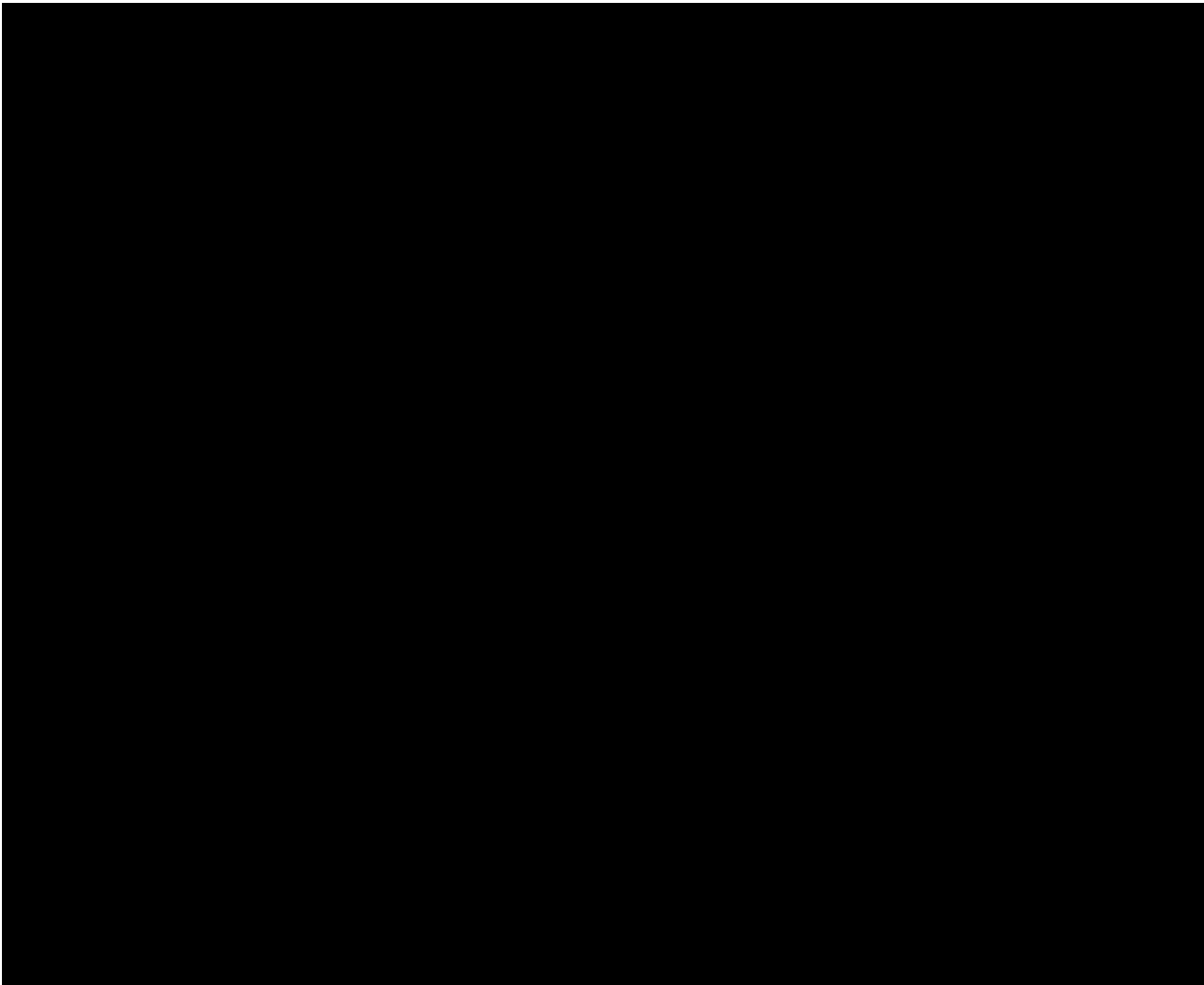


Fig.7. Full scale treatment filters showing surface spray irrigation and construction

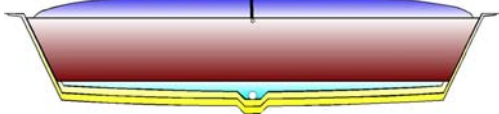


Fig.8. Filter construction

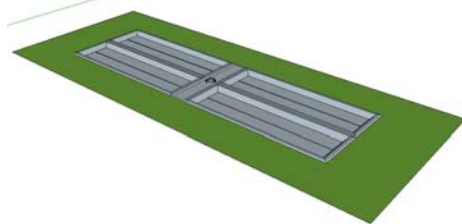


Fig 9 Design of a 1000m2 Filter (4x9x35m)

Appendix – “Exploration & Evaluation of Filter Material for Treatment of Leachate”

Log-in Date	ID (year+00-99)	Type	Supplier
06/12/2016	1601	Ash	Laqua AB
06/12/2016	1602	Peat	Laqua AB
06/12/2016	1603	slag	Tyrone energy
06/12/2016	1604	Peat	Bord na Mona
06/12/2016	1605	Ash	Froling / Biokompakt
06/12/2016	1606	others	Bord na Mona
06/12/2016	1607	Peat	Drumman
06/12/2016	1608	Biochar	AFBI
06/12/2016	1609	Coir	Bord na Mona
06/12/2016	1610	Coir	Bord na Mona
06/12/2016	1611	Peat	Bord na Mona
06/12/2016	1612	Peat	Gilltown
06/12/2016	1613	Peat	Bord na Mona
13/12/2016	1614	Grate/Clinker Ash	Invista
13/12/2016	1615	Fly Ash	Invista
13/12/2016	1616	Ash	Kilroot
13/12/2016	1617	Ash	Kilroot
13/12/2016	1618	Ash	Kilroot
11/01/2017	1701	Ash+ Peat	Laqua AB
11/01/2017	1702	Ash	Laqua AB
11/01/2017	1703	Peat	Laqua AB
25/01/2017	1709	Biochar	AFBI
30/01/2017	1710	Ash	EOW solutions
07/02/2017	1711	Peat	Cuil na Mona (Hort)
07/02/2017	1712	Peat	Cuil na Mona (Hort)

Table 1: - Peat and ash materials Investigated

sample ID	Collection point	colour	0.7µm filtered	Unfiltered sample		0.7µm filtered sample		Toxicity	
			colour	pH	Conductivity (mS/cm)	NO2 + NO3-N (mg/l)	NH4-N (mg/l)	immobility%	
								71% leachate	95% leachate
1600	Ballynacarrick Tank (semi-treated)	Pale brown suspension	pale brown clear	7.46	1618	90.4	5.28	20	94
1704	Ballynacarrick pump1	Pale brown clear	pale brown clear	7.54	4590	2.50	211.77	100	100
1705	Ballynacarrick pump5	Red brown suspension	no colour clear	7.18	1825	3.77	81	69	100

Table 2. Leachates - Toxicity Analysis and Inorganic Parameters

