

Project users	Project name	Design name	Tool name		
Mattias Hedstrom	Skellefteå LCA	Skellefteå In-situ IF	BREEAM Infrastructure LCA (CEEQUAL)		
Section	Resource	User input	Unit	Global warm Acidification	
A1-A3-full	Geotextile, generic	23575	m2	15662,35	51,58
A1-A3-full	Aggregate, from sta	36900	ton	95940	738
A1-A3-full	Aggregate, from sta	11916	ton	30981,6	238,32
A1-A3-full	Geotextile, generic	30297	m2	20094,08	65,84
A1-A3-full	Geotextile, generic	30297	m2	20094,08	65,84
A1-A3-full	HDPE flexible water	30297	m2	104188,22	497,98
A1-A3-full	HDPE flexible water	495	m2	1702,25	8,14
A1-A3-full	Geotextile, generic	2875	m2	1910,04	6,29
A1-A3-full	Cement based slurr	3960	m3	2594721,4	12817,92
A1-A3-full	PVC sewage pipe, 3	380	m	2028,45	6,83
A1-A3-full	PVC drainage pipes	66	m	521,51	2,09
A1-A3-full	PVC sewage pipe, 9	180	m	2071,99	7,05
A1-A3-full	PVC resin pipes, for	1116	kg	4129,65	23,17
A1-A3-full	Polyvinyl chloride (	20	m	2243,18	9,54
A1-A3-full	Precast retaining w	66,5	ton	10773	24,87
A1-A3-full	Soil, loose dry dens	56000	ton	920,55	0,757
Subtotal for A1-A3-full:				2907982,4	14564,21
A4b	Soil, loose dry dens	56000	ton	21306,78	141,81
Subtotal for A4b:				21306,78	141,81
A4legs	Geotextile, generic	23575	m2	59,19	0,269
A4legs	Aggregate, from sta	36900	ton	53987,87	245,13
A4legs	Aggregate, from sta	11916	ton	17434,13	79,16
A4legs	Geotextile, generic	30297	m2	39,82	0,183
A4legs	Geotextile, generic	30297	m2	39,82	0,183
A4legs	HDPE flexible water	30297	m2	177,39	0,817
A4legs	HDPE flexible water	495	m2	2,9	0,0133
A4legs	Geotextile, generic	2875	m2	7,22	0,0328
A4legs	Cement based slurr	3960	m3	15922,06	73,33
A4legs	PVC sewage pipe, 3	380	m	6,98	0,0282
A4legs	PVC drainage pipes	66	m	2,53	0,0102
A4legs	PVC sewage pipe, 9	180	m	7,88	0,0319
A4legs	PVC resin pipes, for	1116	kg	5,18	0,0209
A4legs	Polyvinyl chloride (	20	m	3,7	0,015
A4legs	Precast retaining w	66,5	ton	178,25	0,821
Subtotal for A4legs:				87874,9	400,04
A5	Soil waste	5500	ton	53212,15	224,87
A5	Soil waste	9500	ton	91911,89	388,41
A5	Soil waste	40000	ton	386997,44	1635,42
A5	Soil waste	91000	ton	880419,17	3720,59
A5	Geotextile, generic	23575	m2	0	0
A5	Aggregate, from sta	36900	ton	0	0
A5	Aggregate, from sta	11916	ton	0	0
A5	Geotextile, generic	30297	m2	2013,39	6,6
A5	Geotextile, generic	30297	m2	2013,39	6,6
A5	HDPE flexible water	30297	m2	10436,56	49,88
A5	HDPE flexible water	495	m2	170,52	0,815
A5	Geotextile, generic	2875	m2	0	0

A5	Cement based slurr	3960 m3	339383,65	1675,86
A5	PVC sewage pipe, 3	380 m	122,13	0,411
A5	PVC drainage pipes	66 m	0	0
A5	PVC sewage pipe, 9	180 m	124,79	0,425
A5	PVC resin pipes, for	1116 kg	248,09	1,39
A5	Polyvinyl chloride (	20 m	134,81	0,574
A5	Precast retaining w	66,5 ton	0	0
A5	Electricity, Sweden,	100000 kWh	5187,8	53,03
A5	Diesel, 100% fossil,	1381788 MJ	131408,04	0
A5	Diesel, HVO100 (20	1045234 MJ	17141,84	0
Subtotal for A5:			1920925,6	7764,89
Total:			4938089,7	22870,96

Eutrophication	Ozone Depletion	Formation of acid equivalents	Abiotic depletion (fossil fuels)	Abiotic depletion (minerals)	Biogenic carbon	Use of net primary production	Hazardous waste
4,42	0,000118	4,74	0,0425	518077,77	0	153,24	29,42
1476	0,00262	62,73	0,107	1143900	0	206,64	188,19
476,64	0,000846	20,26	0,0346	369396	0	66,73	60,77
5,56	0,000154	6,07	0,0546	655167,92	0	196,93	37,81
5,56	0,000154	6,07	0,0546	655167,92	0	196,93	37,81
266,63	0,00641	139,87	0,266	3337598,4	0	1729,96	3605,34
4,36	0,000105	2,29	0,00434	54530,52	0	28,26	58,9
0,539	0,0000144	0,578	0,00518	63180,22	0	18,69	3,59
2621,06	0,062	57,12	0,681	53813566	0	42372	0,0202
1,17	0,003	0,315	0,0262	52810,92	0	729,32	2,24
0,366	0,0000108	0,131	0,000284	18100,44	0	10,5	0,000858
1,21	0,00314	0,308	0,027	54613,04	0	818,36	2,34
3,37	0,000073	1,02	0,0018	72324,57	0	1677,26	51,21
3,35	0,00147	0,505	0,0541	47297,46	0	12,6	166,54
7,18	0,000112	1,52	0,0116	54596,5	0	14430,5	0,579
0,571	0,0000582	0,0432	0	0	0	0	1,37
4877,99	0,0803	303,57	1,37	60910328	0	62647,92	4246,17
35,59	3,52E-12	15,41	0,00158	291967,79	0	19,05	0,0136
35,59	3,52E-12	15,41	0,00158	291967,79	0	19,05	0,0136
0,0585	0,0000117	0,00381	0,428	1700,78	0	0	0,000231
53,32	0,0107	3,48	390,81	1551335	0	0	0,211
17,22	0,00344	1,12	126,2	500967,71	0	0	0,0681
0,0399	7,86E-06	0,00225	0,288	1135,75	0	0	0,000156
0,0399	7,86E-06	0,00225	0,288	1135,75	0	0	0,000156
0,178	0,000035	0,01	1,28	5059,89	0	0	0,000693
0,00291	5,72E-07	0,000163	0,021	82,67	0	0	0,0000113
0,00713	1,42E-06	0,000465	0,0523	207,41	0	0	0,0000282
15,97	0,00314	0,898	115,34	454170,02	0	0	0,0622
0,00607	1,35E-06	0,000583	0,0493	195,21	0	0	0,0000266
0,0022	4,87E-07	0,000211	0,0179	70,66	0	0	9,63E-06
0,00685	1,52E-06	0,000658	0,0557	220,43	0	0	0,00003
0,0045	9,98E-07	0,000432	0,0366	144,77	0	0	0,0000197
0,00322	7,13E-07	0,000309	0,0262	103,52	0	0	0,0000141
0,179	0,0000352	0,0101	1,29	5084,56	0	0	0,000696
87,04	0,0173	5,53	636,2	2521614,2	0	0	0,343
48,34	0,00767	4,39	365,31	905377		68,9	2,07
83,49	0,0133	7,59	631	1563833		119	3,58
351,54	0,0558	31,96	2656,83	6584560		501,07	15,08
799,76	0,127	72,71	6044,29	14979874		1139,94	34,31
0	0	0	0	0		0	0
0	0	0	0	0		0	0
0	0	0	0	0		0	0
0,56	0,0000162	0,607	0,0343	65630,37		19,69	3,78
0,56	0,0000162	0,607	0,0343	65630,37		19,69	3,78
26,68	0,000644	13,99	0,155	334265,83		173	360,53
0,436	0,0000105	0,229	0,00253	5461,32		2,83	5,89
0	0	0	0	0		0	0

342,81	0,00847	7,54	15,08	7054805,7	5508,36	0,0107
0,0708	0,00018	0,019	0,00453	3180,37	43,76	0,135
0	0	0	0	0	0	0
0,0728	0,000189	0,0185	0,00496	3290,01	49,1	0,141
0,203	4,44E-06	0,0615	0,0023	4348,16	100,64	3,07
0,201	0,0000885	0,0303	0,00482	2844,06	0,756	9,99
0	0	0	0	0	0	0
13,72	0,00019	2,46	0,0912	920830	1079,7	391,45
0	0	0	0	0	0	0
0	0	0	0	0	0	0
1668,45	0,214	142,21	9712,85	32493930	8826,43	833,84
6669,06	0,311	466,71	10350,41	96217840	0	71493,4
						5080,36

Non hazard	Radioactiv	Mass of ra	Question	Comment	Cost item	Service life	CESMM4	Resource s
653,85	0,0781	7355,4	Geotechnic	ALTECH GE		As building	Not selecte	Plastic mer
4428	1,29	36900000	Geotechnic	Bärlager 0-32. Svevia		As building	notSelecte	Sand, soil a
1429,92	0,417	11916000	Geotechnic	Byggande av vallar Bär		As building	notSelecte	Sand, soil a
840,29	0,1	9452,66	Geotechnic	Byggande av vallar Sky	30		notSelecte	Plastic mer
840,29	0,1	9452,66	Geotechnic	Byggande av vallar Sky	30		notSelecte	Plastic mer
11058,4	3,45	42112,83	Geotechnic	Byggande av vallar. Pr	30		notSelecte	Plastic mer
180,67	0,0564	688,05	Geotechnic	VA-Arbeten. Proxy. Ge	30		notSelecte	Plastic mer
79,74	0,00952	897	Geotechnic	VA-Arbeter		As building	Not selecte	Plastic mer
2197,8	653,4	5940000	Geotechnic	Inblandning bindemed	30		notSelecte	Tile adhesi
365,93	0,108	1504,8	Geotechnic	2416008/160/139 PE I	60		notSelecte	Pipes (water
53,58	0,00585	389,07	Geotechnical	structures and founc	35		notSelecte	Water heat
375,67	0,119	1699,2	Geotechnical	structures and founc	60		notSelecte	Pipes (water
131,58	0	1116	Geotechnic	315mm 2350049. Berä	60		notSelecte	Pipes (water
3974,04	0,0624	798	Geotechnical	structures and founc	60		notSelecte	Pipes (water
2739,8	0,672	66500	Geotechnic	L-stöd H=1800, L=200	C	As building	notSelecte	Concrete w
6923,17	16,3	56000000	Masses soil	Muddermassor rena		As building	notSelecte	Sand, soil a
36272,74	676,17	1,11E+08						
44,82	0,363	56000000	Masses soil	Muddermassor rena		As building	notSelecte	Sand, soil a
44,82	0,363	56000000						
0,18	0,0066	7355,4	Geotechnic	ALTECH GE		As building	Not selecte	Plastic mer
164,34	6,02	36900000	Geotechnic	Bärlager 0-32. Svevia		As building	notSelecte	Sand, soil a
53,07	1,94	11916000	Geotechnic	Byggande av vallar Bär		As building	notSelecte	Sand, soil a
0,121	0,00444	9452,66	Geotechnic	Byggande av vallar Sky	30		notSelecte	Plastic mer
0,121	0,00444	9452,66	Geotechnic	Byggande av vallar Sky	30		notSelecte	Plastic mer
0,54	0,0198	42112,83	Geotechnic	Byggande av vallar. Pr	30		notSelecte	Plastic mer
0,00883	0,000324	688,05	Geotechnic	VA-Arbeten. Proxy. Ge	30		notSelecte	Plastic mer
0,022	0,000805	897	Geotechnic	VA-Arbeter		As building	Not selecte	Plastic mer
48,5	1,78	5940000	Geotechnic	Inblandning bindemed	30		notSelecte	Tile adhesi
0,0207	0,00076	1504,8	Geotechnic	2416008/160/139 PE I	60		notSelecte	Pipes (water
0,00751	0,000275	389,07	Geotechnical	structures and founc	35		notSelecte	Water heat
0,0234	0,000858	1699,2	Geotechnical	structures and founc	60		notSelecte	Pipes (water
0,0154	0,000564	1116	Geotechnic	315mm 2350049. Berä	60		notSelecte	Pipes (water
0,011	0,000403	798	Geotechnical	structures and founc	60		notSelecte	Pipes (water
0,543	0,0199	66500	Geotechnic	L-stöd H=1800, L=200	C	As building	notSelecte	Concrete w
267,53	9,8	54897966						
32,15	1,18		Constructic	Stabiliserade muddermassor	Dåva	notSelecte	Mineral wa	
55,54	2,03		Constructic	Stabiliserade muddermassor	Stab	notSelecte	Mineral wa	
233,84	8,55		Constructic	Stabiliserade muddermassor	Robe	notSelecte	Mineral wa	
531,99	19,45		Constructic	Ej stabiliserade Muddermassor		notSelecte	Mineral wa	
0	0		Geotechnic	ALTECH GE		As building	Not selecte	Plastic mer
0	0		Geotechnic	Bärlager 0-32. Svevia		As building	notSelecte	Sand, soil a
0	0		Geotechnic	Byggande av vallar Bär		As building	notSelecte	Sand, soil a
84,04	0,0105		Geotechnic	Byggande av vallar Sky	30		notSelecte	Plastic mer
84,04	0,0105		Geotechnic	Byggande av vallar Sky	30		notSelecte	Plastic mer
1105,89	0,347		Geotechnic	Byggande av vallar. Pr	30		notSelecte	Plastic mer
18,07	0,00568		Geotechnic	VA-Arbeten. Proxy. Ge	30		notSelecte	Plastic mer
0	0		Geotechnic	VA-Arbeter		As building	Not selecte	Plastic mer

292,02	85,17	Geotechnic Inblandning bindemed 30	notSelected	Tile adhesi
21,96	0,00655	Geotechnic 2416008/160/139 PE I 60	notSelected	Pipes (water
0	0	Geotechnical structures and found 35	notSelected	Water heat
22,54	0,00717	Geotechnical structures and found 60	notSelected	Pipes (water
7,9	3,38E-05	Geotechnic 315mm 2350049. Berä 60	notSelected	Pipes (water
238,44	0,00377	Geotechnical structures and found 60	notSelected	Pipes (water
0	0	Geotechnic L-stöd H=1800, L=2000 As building	notSelected	Concrete w
9181,7	17,13	Site electric El totalt	Not selected	Electricity
0	0	Site fuel cost Omräknat 39172.5l Diesel Verkligt	notSelected	Oil based fu
0	0	Site fuel cost Omräknat 31201 l HVO 100 Beslut	notSelected	Oil based fu
11910,12	133,9			
48495,2	820,24	2,22E+08		

Uni class	CSI master Constructi	Occurrence	Original cla	Environme	Resource	Transformation
P7	7				One Click L Geotextile, generic	
P3	31				EPD aggreg Aggregate, from stationary crushir	
P3	31				EPD aggreg Aggregate, from stationary crushir	
P7	7				One Click L Geotextile, generic	
P7	7				One Click L Geotextile, generic	
P7	7				EPD 1m2 o HDPE flexible waterproof membra	
P7	7				EPD 1m2 o HDPE flexible waterproof membra	
P7	7				One Click L Geotextile, generic	
P7	9				EPD WEBEI Cement based slurry, waterprooffir	
P8	33				EPD PVC S€ PVC sewage pipe	
P8	22				EPD Grunn PVC drainage pipes	
P8	33				EPD PVC S€ PVC sewage pipe	
P8	33				EPD Rifeng PVC resin pipes, for sewerage, dra	
P8	33				One Click L Polyvinyl chloride (PVC) pipe for di	
P2	3				EPD RETAIN Precast retaining wall elements	
P3	31				One Click L Soil, loose dry density	
P3	31				One Click L Soil, loose (Barge (average) (+A1)	
P7	7				One Click L Geotextile, Dumper truck, 19 ton c	
P3	31				EPD aggreg Aggregate, Dumper truck, 19 ton c	
P3	31				EPD aggreg Aggregate, Dumper truck, 19 ton c	
P7	7				One Click L Geotextile, Trailer combination, 40	
P7	7				One Click L Geotextile, Trailer combination, 40	
P7	7				EPD 1m2 o HDPE flexik Trailer combination, 40	
P7	7				EPD 1m2 o HDPE flexik Trailer combination, 40	
P7	7				One Click L Geotextile, Dumper truck, 19 ton c	
P7	9				EPD WEBEI Cement ba Trailer combination, 40	
P8	33				EPD PVC S€ PVC sewage Large delivery truck, 9	
P8	22				EPD Grunn PVC draina Large delivery truck, 9	
P8	33				EPD PVC S€ PVC sewage Large delivery truck, 9	
P8	33				EPD Rifeng PVC resin p Large delivery truck, 9	
P8	33				One Click L Polyvinyl cl Large delivery truck, 9	
P2	3				EPD RETAIN Precast ret Trailer combination, 40	
ste					Soil waste	
ste					Soil waste	
ste					Soil waste	
ste					Soil waste	
P7	7				One Click L Geotextile, Dumper truck, 19 ton c	
P3	31				EPD aggreg Aggregate, Dumper truck, 19 ton c	
P3	31				EPD aggreg Aggregate, Dumper truck, 19 ton c	
P7	7				One Click L Geotextile, Trailer combination, 40	
P7	7				One Click L Geotextile, Trailer combination, 40	
P7	7				EPD 1m2 o HDPE flexik Trailer combination, 40	
P7	7				EPD 1m2 o HDPE flexik Trailer combination, 40	
P7	7				One Click L Geotextile, Dumper truck, 19 ton c	

P7	9	EPD WEBER Cement ba Trailer combination, 40
P8	33	EPD PVC S& PVC sewage Large delivery truck, 9
P8	22	EPD Grunn PVC drainage Large delivery truck, 9
P8	33	EPD PVC S& PVC sewage Large delivery truck, 9
P8	33	EPD Rifeng PVC resin p Large delivery truck, 9
P8	33	One Click L Polyvinyl cl Large delivery truck, 9
P2	3	EPD RETAIN Precast ret Trailer combination, 40
P8	1	LCA study f Electricity, Sweden, 2019
P8	1	Boverket, v Diesel, 100% fossil, CO2 only
P8	1	Boverket, v Diesel, HVO100 (2023), CO2 only



) ton capacity, 100% fill rate (+A1&A2)
) ton capacity, 100% fill rate (+A1&A2)
) ton capacity, 100% fill rate (+A1&A2)
) ton capacity, 100% fill rate (+A1&A2)

) ton capacity, 100% fill rate (+A1&A2)
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ton capacity, 100% fill rate (+A1&A2)
ton capacity, 100% fill rate (+A1&A2)
ton capacity, 100% fill rate (+A1&A2)
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ton capacity, 100% fill rate (+A1&A2)
ton capacity, 100% fill rate (+A1&A2)
ton capacity, 100% fill rate (+A1&A2)
) ton capacity, 100% fill rate (+A1&A2)