General information

Project name	Finn's klimaatbomen		
Remover name	Finn Verhoeff		
Project code	FKBL001		
Location	Heeze, NL		
Area	1.53	ha	
Duration	10	years	estimated permanence of removal and storage
Holding pool	20%		freed up when measurements confirm projection pathways
Biodiversity holding	0		40 fruit trees planted / ha
Project emissions	20%		LCA estimate, or specified when >20%

Per hectare

Baseline TEC	218	tCO2/ha	TEC, following CDM AR-ACM0003
Reference capacity	650	tCO2/ha	Using CEDA and Soil sample data
Storage potential	432	tCO2/ha	Projection -/- baseline

Per project

Projected storage	661	tCO2	storage potential per ha x area
LCA emissions	132	tCO2	project related emissions
Net storage potential	529	tCO2	project storage -/- emissions

Removal credits issued

Credits first 10 years	264		10/20 x net storage potential
Biodiversity holding	0	credits	30% of the net storage potential
Holding Pool	53	credits	20% of the net storage potential
Credits issued	212	credits	

Field Code	Field name	Size (ha)	Owner
001- FKBL	Finn Verhoef Paulownia	1.53	Finn Verhoef

#	Field code	Field	Year	Date	Sample depth (cm)	SOC/AGB/REF	Carbon (g/kg)	AGB (tCO2/ha)	Sample/report nr.	Notes
001	001-FKBL	Finn Verhoef Paulo\	2024	1/6/2024	30	SOC	13		773843/006359513	
002	001-FKBL	Finn Verhoef Paulo\	2024	1/6/2024	30	AGB		11.26	ESA Satellite	
003		#N/A	1899							
004		#N/A	1899							
005		#N/A	1899							
006		#N/A	1899							
007		#N/A	1899							
008		#N/A	1899							
009		#N/A	1899							
010		#N/A	1899							
011		#N/A	1899							
012		#N/A	1899							
013		#N/A	1899							
014		#N/A	1899							

Carbon Calculation for		**FKBL001**								
Surface	1.53	ha	Fields tab							
Capacity Reference SOC	350.00	tCO2e/ha	References tab							
Capacity Reference AGB and BGB	299.94	tCO2e/ha	References tab							
	2024		**2027**		**2030**		**2033**		**2036**	
Measurement average	13	SOC g/kg	#DIV/0!	SOC g/kg	#DIV/0!	SOC g/kg	#DIV/0!	SOC g/kg	#DIV/0!	SOC g/kg
Sample depth	30	cm	#DIV/0!	cm	#DIV/0!	cm	#DIV/0!	cm	#DIV/0!	cm
Calculation depth	30	cm	30	cm	30	cm	30	cm	30	cm
Soil density	1.444	g/cm3	#DIV/0!	g/cm3	#DIV/0!	g/cm3	#DIV/0!	g/cm3	#DIV/0!	g/cm3
SOC (soil carbon) / ha	206	tCO2e/ha	#DIV/0!	tCO2e/ha	#DIV/0!	tCO2e/ha	#DIV/0!	tCO2e/ha	#DIV/0!	tCO2e/ha
AGB (above ground) / ha	11.26	tCO2e/ha	#DIV/0!	tCO2e/ha	#DIV/0!	tCO2e/ha	#DIV/0!	tCO2e/ha	#DIV/0!	tCO2e/ha
Storage current	333	tCO2e	#DIV/0!	tCO2e	#DIV/0!	tCO2e	#DIV/0!	tCO2e	#DIV/0!	tCO2e
Storage capacity	994	tCO2e	3,051	tCO2e	3,051	tCO2e	3,051	tCO2e	3,051	tCO2e

Source											
value	**source**	**URL**	Notes								
CEDA aboveground biomass carbon	https://climateesa	https://datacedaa	2018 data								
SOC	A critical review of the conventional SOC to SOM conversion factor (Geoderma,Volume 156, Issues 3–4, 15 May 2010, Pages 75-83)										
Density	Wageningen Uni	https://edepot.wu	We've added these soil density levels to the calculation factors tab								
Paulownia growth	Berg et al (2019)	https://link.springer.com/article/10.1007/s11676-019-01021-9									
Reference data for capacity											
Soil Organic Carbon (SOC)	350.00	tCO2/ha	estimation based on https://esdac.jrc.ec.europa.eu/content/pan-european-soc-stock-agricultural-soils								
Biomass (AGB and BGB)	299.94	tCO2/ha	Aboveground and belowground biomass								
CALCULATION											
Trees per hectare	900.00	trees/ha									
Damage percentage	1%	trees/y	corrected for replant (2% - 1% = 1	https://link.springer.com/article/10.1007/s11676-019-01021-9							
Time first harvest	10	y									
Time successive harvests	10	y									
Harvest per harvest year	900	trees/ha									
Wood volume per tree	1.0	m3									
Density dry	275	kg/m3	https://www.researchgate.net/publication/360278806_The_Influence_of_Age_on_the_Wood_Properties_of_Paulownia_tomentosa_Thunb_Steud								
CO2 stock trees 10 years 900 trees	299.94	tCO2/ha	AGB and BGB								
AGB and BGB CO2 stock	**y**	**#trees**	**vol/tree m3**	**vol/ha**	**% in roots/tops**	**dry matter**	**CO2 stock**				
		trees/ha	**m3**	**m3/ha**	**%**	**tons**	**tCO2/ha**				
	1	900	0	0	30%	0.00	0.00				
	2	891	0.02	17.82	30%	6.37	11.68				
	3	882	0.05	44.10	30%	15.77	28.91				
	4	873	0.09	78.59	30%	28.10	51.51				
	5	865	0.18	155.62	30%	55.63	101.99				
	6	856	0.35	299.56	30%	107.09	196.34				
	7	847	0.50	423.67	30%	151.46	277.68				
	8	839	0.65	545.26	30%	194.93	357.37				
	9	830	0.75	622.85	30%	222.67	408.23				
	10	822	0.85	698.84	30%	249.84	458.03				
	11	814	0.90	732.55	30%	261.89	480.13				
	12	806	0.95	765.51	30%	273.67	501.73				
	13	798	1.00	797.75	30%	285.19	522.86				
	14	790	1.05	829.26	30%	296.46	543.51				
	15	782	1.10	860.06	30%	307.47	563.70				
	16	774	1.15	890.16	30%	318.23	583.43				
	17	766	1.20	919.57	30%	328.75	602.70				
	18	759	1.25	948.31	30%	339.02	621.54				
	19	751	1.30	976.38	30%	349.06	639.94				
	20	744	1.35	1003.79	30%	358.86	657.90				

from C to CO2	3.666666667		
soil density	% organic	% organic	soil density
1.59	0.5	0.25	1.59
1.583	0.6	0.3	1.583
1.576	0.7	0.35	1.576
1.569	0.8	0.4	1.569
1.562	0.9	0.45	1.562
1.555	1	0.5	1.555
1.548	1.1	0.55	1.548
1.541	1.2	0.6	1.541
1.534	1.3	0.65	1.534
1.527	1.4	0.7	1.527
1.52	1.5	0.75	1.52
1.513	1.6	0.8	1.513
1.506	1.7	0.85	1.506
1.499	1.8	0.9	1.499
1.492	1.9	0.95	1.492
1.485	2	1	1.485
1.478	2.1	1.05	1.478
1.471	2.2	1.1	1.471
1.464	2.3	1.15	1.464
1.457	2.4	1.2	1.457
1.45	2.5	1.25	1.45
1.444	2.6	1.3	1.444
1.438	2.7	1.35	1.438
1.432	2.8	1.4	1.432
1.426	2.9	1.45	1.426
1.42	3	1.5	1.42
1.414	3.1	1.55	1.414
1.408	3.2	1.6	1.408
1.402	3.3	1.65	1.402
1.396	3.4	1.7	1.396
1.39	3.5	1.75	1.39
1.385	3.6	1.8	1.385
1.38	3.7	1.85	1.38
1.375	3.8	1.9	1.375
1.37	3.9	1.95	1.37
1.365	4	2	1.365
1.36	4.1	2.05	1.36
1.355	4.2	2.1	1.355
1.35	4.3	2.15	1.35
1.345	4.4	2.2	1.345
1.34	4.5	2.25	1.34
1.335	4.6	2.3	1.335
1.33	4.7	2.35	1.33
1.325	4.8	2.4	1.325
1.32	4.9	2.45	1.32
1.315	5	2.5	1.315
1.31	5.1	2.55	1.31
1.305	5.2	2.6	1.305
1.3	5.3	2.65	1.3
1.295	5.4	2.7	1.295
1.29	5.5	2.75	1.29
1.285	5.6	2.8	1.285
1.28	5.7	2.85	1.28
1.275	5.8	2.9	1.275
1.27	5.9	2.95	1.27
1.265	6	3	1.265
1.26	6.1	3.05	1.26
1.255	6.2	3.1	1.255
1.25	6.3	3.15	1.25
1.245	6.4	3.2	1.245
1.24	6.5	3.25	1.24
1.234	6.6	3.3	1.234
1.228	6.7	3.35	1.228
1.222	6.8	3.4	1.222
1.216	6.9	3.45	1.216
1.21	7	3.5	1.21
1.204	7.1	3.55	1.204
1.198	7.2	3.6	1.198
1.192	7.3	3.65	1.192
1.186	7.4	3.7	1.186
1.18	7.5	3.75	1.18
1.175	7.6	3.8	1.175
1.17	7.7	3.85	1.17
1.165	7.8	3.9	1.165
1.16	7.9	3.95	1.16
1.155	8	4	1.155
1.15	8.1	4.05	1.15
1.145	8.2	4.1	1.145
1.14	8.3	4.15	1.14
1.135	8.4	4.2	1.135
1.13	8.5	4.25	1.13
1.126	8.6	4.3	1.126
1.122	8.7	4.35	1.122
1.118	8.8	4.4	1.118
1.114	8.9	4.45	1.114
1.11	9	4.5	1.11
1.106	9.1	4.55	1.106
1.102	9.2	4.6	1.102
1.098	9.3	4.65	1.098
1.094	9.4	4.7	1.094
1.09	9.5	4.75	1.09
1.086	9.6	4.8	1.086
1.082	9.7	4.85	1.082
1.078	9.8	4.9	1.078
1.074	9.9	4.95	1.074
1.07	10	5	1.07
1.066	10.1	5.05	1.066
1.062	10.2	5.1	1.062
1.058	10.3	5.15	1.058
1.054	10.4	5.2	1.054
1.05	10.5	5.25	1.05
1.046	10.6	5.3	1.046
1.042	10.7	5.35	1.042
1.038	10.8	5.4	1.038
1.034	10.9	5.45	1.034
1.03	11	5.5	1.03
1.026	11.1	5.55	1.026
1.022	11.2	5.6	1.022
1.018	11.3	5.65	1.018
1.014	11.4	5.7	1.014
1.01	11.5	5.75	1.01
1.005	11.6	5.8	1.005
1	11.7	5.85	1
0.995	11.8	5.9	0.995
0.99	11.9	5.95	0.99
0.985	12	6	0.985
0.98	12.1	6.05	0.98
0.975	12.2	6.1	0.975
0.97	12.3	6.15	0.97
0.965	12.4	6.2	0.965
0.96	12.5	6.25	0.96
0.957	12.6	6.3	0.957
0.954	12.7	6.35	0.954
0.951	12.8	6.4	0.951
0.948	12.9	6.45	0.948
0.945	13	6.5	0.945
0.942	13.1	6.55	0.942
0.939	13.2	6.6	0.939
0.936	13.3	6.65	0.936
0.933	13.4	6.7	0.933
0.93	13.5	6.75	0.93
0.927	13.6	6.8	0.927
0.924	13.7	6.85	0.924
0.921	13.8	6.9	0.921
0.918	13.9	6.95	0.918
0.915	14	7	0.915
0.912	14.1	7.05	0.912
0.909	14.2	7.1	0.909
0.906	14.3	7.15	0.906
0.903	14.4	7.2	0.903
0.9	14.5	7.25	0.9
0.897	14.6	7.3	0.897
0.894	14.7	7.35	0.894
0.891	14.8	7.4	0.891
0.888	14.9	7.45	0.888
0.885	15	7.5	0.885
0.882	15.1	7.55	0.882
0.879	15.2	7.6	0.879
0.876	15.3	7.65	0.876
0.873	15.4	7.7	0.873
0.87	15.5	7.75	0.87
0.867	15.6	7.8	0.867
0.864	15.7	7.85	0.864
0.861	15.8	7.9	0.861
0.858	15.9	7.95	0.858
0.855	16	8	0.855
0.852	16.1	8.05	0.852
0.849	16.2	8.1	0.849
0.846	16.3	8.15	0.846
0.843	16.4	8.2	0.843
0.84	16.5	8.25	0.84
0.837	16.6	8.3	0.837
0.834	16.7	8.35	0.834
0.831	16.8	8.4	0.831
0.828	16.9	8.45	0.828

0.825	17	8.5	0.825
0.822	17.1	8.55	0.822
0.819	17.2	8.6	0.819
0.816	17.3	8.65	0.816
0.813	17.4	8.7	0.813
0.81	17.5	8.75	0.81
0.808	17.6	8.8	0.808
0.806	17.7	8.85	0.806
0.804	17.8	8.9	0.804
0.802	17.9	8.95	0.802
0.8	18	9	0.8
0.798	18.1	9.05	0.798
0.796	18.2	9.1	0.796
0.794	18.3	9.15	0.794
0.792	18.4	9.2	0.792
0.79	18.5	9.25	0.79
0.788	18.6	9.3	0.788
0.786	18.7	9.35	0.786
0.784	18.8	9.4	0.784
0.782	18.9	9.45	0.782
0.78	19	9.5	0.78
0.778	19.1	9.55	0.778
0.776	19.2	9.6	0.776
0.774	19.3	9.65	0.774
0.772	19.4	9.7	0.772
0.77	19.5	9.75	0.77
0.768	19.6	9.8	0.768
0.766	19.7	9.85	0.766
0.764	19.8	9.9	0.764
0.762	19.9	9.95	0.762
0.76	20	10	0.76
0.758	20.1	10.05	0.758
0.756	20.2	10.1	0.756
0.754	20.3	10.15	0.754
0.752	20.4	10.2	0.752
0.75	20.5	10.25	0.75
0.748	20.6	10.3	0.748
0.746	20.7	10.35	0.746
0.744	20.8	10.4	0.744
0.742	20.9	10.45	0.742
0.74	21	10.5	0.74
0.738	21.1	10.55	0.738
0.736	21.2	10.6	0.736
0.734	21.3	10.65	0.734
0.732	21.4	10.7	0.732
0.73	21.5	10.75	0.73
0.728	21.6	10.8	0.728
0.726	21.7	10.85	0.726
0.724	21.8	10.9	0.724
0.722	21.9	10.95	0.722
0.72	22	11	0.72
0.718	22.1	11.05	0.718
0.716	22.2	11.1	0.716
0.714	22.3	11.15	0.714
0.712	22.4	11.2	0.712
0.71	22.5	11.25	0.71
0.709	22.6	11.3	0.709
0.708	22.7	11.35	0.708
0.707	22.8	11.4	0.707
0.706	22.9	11.45	0.706
0.705	23	11.5	0.705
0.704	23.1	11.55	0.704
0.703	23.2	11.6	0.703
0.702	23.3	11.65	0.702
0.701	23.4	11.7	0.701
0.7	23.5	11.75	0.7
0.699	23.6	11.8	0.699
0.698	23.7	11.85	0.698
0.697	23.8	11.9	0.697
0.696	23.9	11.95	0.696
0.695	24	12	0.695
0.694	24.1	12.05	0.694
0.693	24.2	12.1	0.693
0.692	24.3	12.15	0.692
0.691	24.4	12.2	0.691
0.69	24.5	12.25	0.69
0.688	24.6	12.3	0.688
0.686	24.7	12.35	0.686
0.684	24.8	12.4	0.684
0.682	24.9	12.45	0.682
0.68	25	12.5	0.68
0.678	25.1	12.55	0.678
0.676	25.2	12.6	0.676
0.674	25.3	12.65	0.674
0.672	25.4	12.7	0.672
0.67	25.5	12.75	0.67
0.668	25.65	12.825	0.668
0.666	25.8	12.9	0.666
0.664	25.95	12.975	0.664
0.662	26.1	13.05	0.662
0.66	26.25	13.125	0.66
0.658	26.4	13.2	0.658
0.656	26.55	13.275	0.656
0.654	26.7	13.35	0.654
0.652	26.85	13.425	0.652
0.65	27	13.5	0.65
0.647	27.2	13.6	0.647
0.644	27.4	13.7	0.644
0.641	27.6	13.8	0.641
0.638	27.8	13.9	0.638
0.635	28	14	0.635
0.632	28.2	14.1	0.632
0.629	28.4	14.2	0.629
0.626	28.6	14.3	0.626
0.623	28.8	14.4	0.623
0.62	29	14.5	0.62
0.618	29.2	14.6	0.618
0.616	29.4	14.7	0.616
0.614	29.6	14.8	0.614
0.612	29.8	14.9	0.612
0.61	30	15	0.61
0.608	30.2	15.1	0.608
0.606	30.4	15.2	0.606
0.604	30.6	15.3	0.604
0.602	30.8	15.4	0.602
0.6	31	15.5	0.6
0.598	31.2	15.6	0.598
0.596	31.4	15.7	0.596
0.594	31.6	15.8	0.594
0.592	31.8	15.9	0.592
0.59	32	16	0.59
0.588	32.2	16.1	0.588
0.586	32.4	16.2	0.586
0.584	32.6	16.3	0.584
0.582	32.8	16.4	0.582
0.58	33	16.5	0.58
0.578	33.2	16.6	0.578
0.576	33.4	16.7	0.576
0.574	33.6	16.8	0.574
0.572	33.8	16.9	0.572
0.57	34	17	0.57
0.568	34.2	17.1	0.568
0.566	34.4	17.2	0.566
0.564	34.6	17.3	0.564
0.562	34.8	17.4	0.562
0.56	35	17.5	0.56
0.558	35.2	17.6	0.558
0.556	35.4	17.7	0.556
0.554	35.6	17.8	0.554
0.552	35.8	17.9	0.552
0.55	36	18	0.55
0.548	36.2	18.1	0.548
0.546	36.4	18.2	0.546
0.544	36.6	18.3	0.544
0.542	36.8	18.4	0.542
0.54	37	18.5	0.54
0.538	37.2	18.6	0.538
0.536	37.4	18.7	0.536
0.534	37.6	18.8	0.534
0.532	37.8	18.9	0.532
0.53	38	19	0.53
0.528	38.2	19.1	0.528
0.526	38.4	19.2	0.526
0.524	38.6	19.3	0.524
0.522	38.8	19.4	0.522
0.52	39	19.5	0.52
0.518	39.2	19.6	0.518
0.516	39.4	19.7	0.516
0.514	39.6	19.8	0.514
0.512	39.8	19.9	0.512
0.51	40	20	0.51
0.508	40.2	20.1	0.508
0.506	40.4	20.2	0.506
0.504	40.6	20.3	0.504
0.502	40.8	20.4	0.502
0.5	41	20.5	0.5
0.499	41.2	20.6	0.499

0.498	41.4	20.7	0.498
0.497	41.6	20.8	0.497
0.496	41.8	20.9	0.496
0.495	42	21	0.495
0.494	42.2	21.1	0.494
0.493	42.4	21.2	0.493
0.492	42.6	21.3	0.492
0.491	42.8	21.4	0.491
0.49	43	21.5	0.49
0.488	43.2	21.6	0.488
0.486	43.4	21.7	0.486
0.484	43.6	21.8	0.484
0.482	43.8	21.9	0.482
0.48	44	22	0.48
0.478	44.2	22.1	0.478
0.476	44.4	22.2	0.476
0.474	44.6	22.3	0.474
0.472	44.8	22.4	0.472
0.47	45	22.5	0.47
0.469	45.2	22.6	0.469
0.468	45.4	22.7	0.468
0.467	45.6	22.8	0.467
0.466	45.8	22.9	0.466
0.465	46	23	0.465
0.464	46.2	23.1	0.464
0.463	46.4	23.2	0.463
0.462	46.6	23.3	0.462
0.461	46.8	23.4	0.461
0.46	47	23.5	0.46
0.458	47.2	23.6	0.458
0.456	47.4	23.7	0.456
0.454	47.6	23.8	0.454
0.452	47.8	23.9	0.452
0.45	48	24	0.45
0.448	48.2	24.1	0.448
0.446	48.4	24.2	0.446
0.444	48.6	24.3	0.444
0.442	48.8	24.4	0.442
0.44	49	24.5	0.44