

General information

Project name	Underground Forest Bergambacht	
Project code	UGF-L-013	
Remover	Underground Forest	
Location	Bergambacht, The Netherlands	
Area	0.77	ha
Start year	2025	
Duration	>1000	years
Holding pool	20%	

Per project

Baseline TEC	0	tCO2
Reference capacity	84	tCO2
LCA emissions	4	tCO2
Storage potential	80	tCO2

Removal certificates

Holding pool	16	
Potential units issued	64	CRCs

icht – 't Hooge Zand

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Estimated permanence of removal and storage
Freed up when project is implemented

Above Ground carbon is not removed for the project
Capacity of CO2 storage
Project related emissions
Projection -/- baseline



Field Code	Field name	Size (ha)	Owner	Notes
001	Bergambacht - "	0.77	De heer Mels R€	Carbon storage rights handed ov

#	Field code	Field	Year	Date	Sample depth	SOC/AGB
001	001	Bergambacht - 't H	2022	1-1-2022	-	AGB
003		#REF!	#REF!			
005		#REF!	#REF!			
006		#REF!	#REF!			
007		#REF!	#REF!			
008						
009						
010						
011						
012						

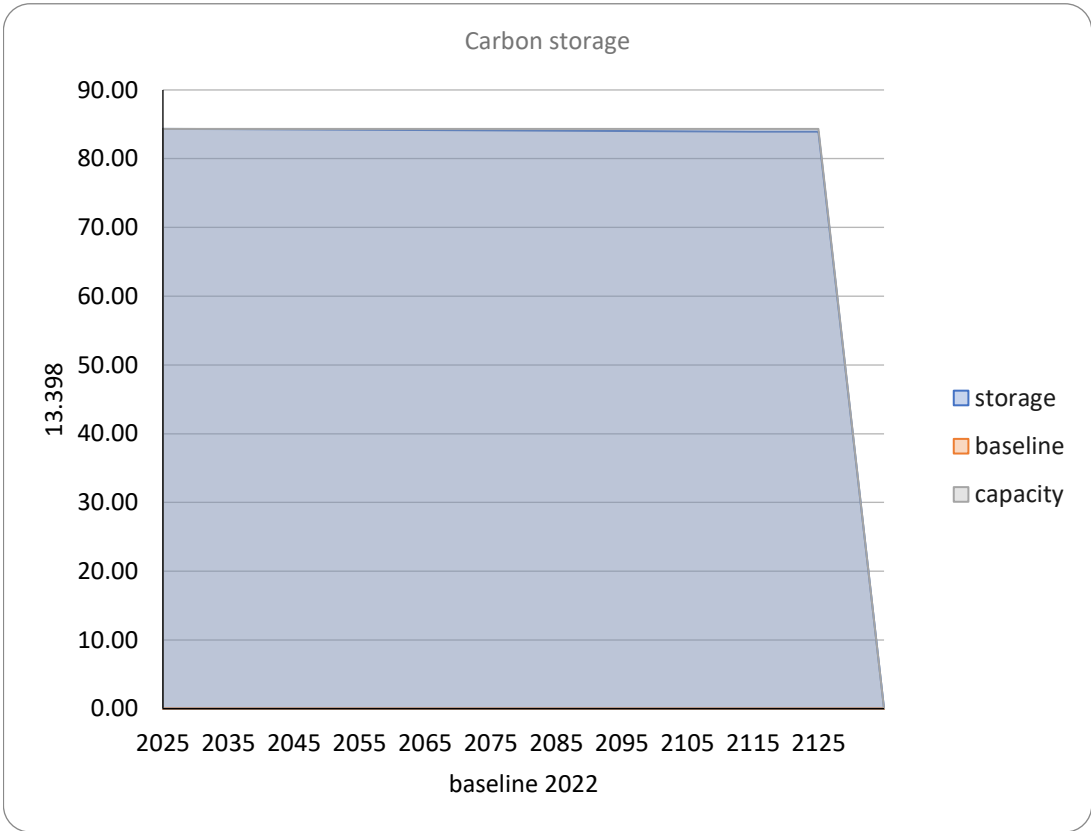
Carbon (g/kg)	AGB (tCO2/ha)	Sample/report nr.	Notes
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-	0.00		No AGB is removed
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Carbon Calculation for UGF-L-013

Surface	0.77 ha	Fields tab
Baseline AGB	0.00 tCO2e/ha	Measurements tab
Capacity Reference	84.33 tCO2e	References tab

	storage	baseline	capacity
2025	84.33	0.00	84
2035	84.29	0.00	84
2045	84.25	0.00	84
2055	84.21	0.00	84
2065	84.16	0.00	84
2075	84.12	0.00	84
2085	84.08	0.00	84
2095	84.04	0.00	84
2105	84.00	0.00	84
2115	83.95	0.00	84
2125	83.91	0.00	84



Sources

value	source	URL	Notes
CEDA aboveground biomass carbon	https://climate	https://dataceda	2010-2020 data
SOC	A critical review of the conventional SOC to SOM conversion factor		
Density	Wageningen L	https://edepot.w	We've added these soil density leve
From C to CO2	3.666666667		

Yearly degradation 0.00005 <https://www.shr> Klaassen, 2015

Variables	Unit	Source
Density of spruce	460 kg/m ³	https://www.wur.nl/upload_mm/e/b/t
Spruce C content	50.35% C content	https://www.sciencedirect.com/science
Wood moisture content	12.70% water content	https://www.sciencedirect.com/science
CO2e per m3	753.54 kgCO2/m ³	formula from:
Total volume of spruce	111.92 m3	
Total Underground CO2	84.33 tCO2	
Total amount of wood	51 t	

Number	Pile length	Pile point (cm)
279	14.0	13.5
-	0.0	0.0
-	0.0	0
-	0.0	0
-	0.0	0
-	0.0	0
-	0.0	0
-	0.0	0
-	0.0	0
-	0.0	0
-	0.0	0
-	0.0	0

Mean point diameter (cm)	13.500	0.000	0.000
Increase per m (cm)	0.800	0.800	0.800
Pile length	14.0	0.0	0.0
Mean measurement point	7.000	0.000	0.000
Mean diameter	0.191	0.000	0.000
Volume pile	0.401	0.000	0.000
Piles per m3	2.493	#DIV/0!	#DIV/0!

Is to the calculation factors tab

Corrections

<https://nmbu.brage.unit.no/nmbu-xmlui/bitst> <https://www.agriculturejournals.cz/pdfs/jfs/2007/03/05.pdf>
a/article/pii/S0378112720310987

[e/article/pii/S0378112720310987](#)

[https://opslagco2inhout.nl/motivatief#:~:text=Hout%2C%20afhankelijk%20van%20de%20soort,stoffen%20\(2%2D15%2](https://opslagco2inhout.nl/motivatief#:~:text=Hout%2C%20afhankelijk%20van%20de%20soort,stoffen%20(2%2D15%2)

[illegible]

0	0
0.800	0.8
0.0	0.0
0.000	0
0	0
0.000	0.000
#DIV/0!	#DIV/0!

Total emissions	3.71 tCO2
emissions forestry	1.24 tCO2
emissions transport	1.13 tCO2
emissions piling	1.33 tCO2
AGB emissions	0 tCO2

Emissions forestry

Wood production emissions: 11.1 kgCO2/m3 <https://www.storaenso.com/-/med>

Emission pile driving

	1333 kgCO2
Hours per day	8 hr/day
Piles per day	110 piles/day
Piles project	279 piles
Days of work	2.54 1.5 days
w2w emissions (diesel)	3.2 kgCo2/l
2t2 bensine	2.7 kgCo2/l

Distance 13 km Zijdepark 10, Ouderk adIJ
Bergambacht, 't_Hooge Zand, 2861 I

Per project

Lowboy	
Lowyboy per km	0.5 l/km
Diesel usage	13 l 83.2 kgCO2

Transport Personnel

Bus per km	0.07 /km
Amount of days	2 days
Bensin usage	3.466666667 l 9.5 kgCO2

Generator AC

Diesel per hour	4 diesel/hour
Per day	32 l/day 259.7 kgCO2

Chainsaw

Petrol usage	1 l/u
Hours per day	1 hr/day
Usage per day	1 hr/day 6.9 kgCO2

Emissions Pile driving

Piles per hour	13.75 piles/hr
Pile driver	15 diesel/hr
Diesel per pile	1.09 diesel/pile 974 kg/CO2
Amount of machines	2 machines

Above ground biomass for

surface site	10,000	m2 removed grassland
surface site	1	hectare
Average Above Ground Biom	1.222	tCO2/ha
compensation for AGB	1.22	tCO2

[ia/documents/download-center/certificates/wood-products-approvals-and-certificates/epd/stora-enso-epd-kvh-](#)

Transport emission 1131 kgCO2

Manhay distance	271 km	Bergambacht, 't Hooge Zand, 2861 EZ
Empty outward trip	1.5 km	
Total	406.5 km	
Usage truck	3.45 km/l	
Usage diesel	118 l/rit	
Amount per trip	38 m ³	
Trips	2.9	
Trip rounded	3.0	
Total usage	353 l diesel	

fixed values

calculated fields

variable Rene

info transporter

info UF

fixed rene

fixed transport