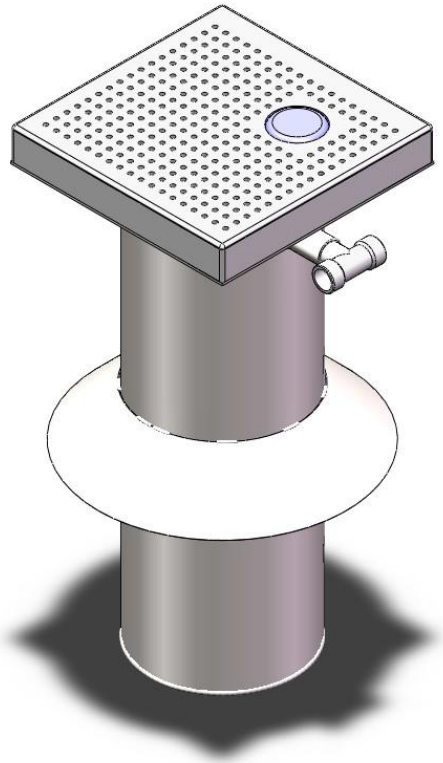
ECO TUBE

B.HOFSTEDE

25-01-2024

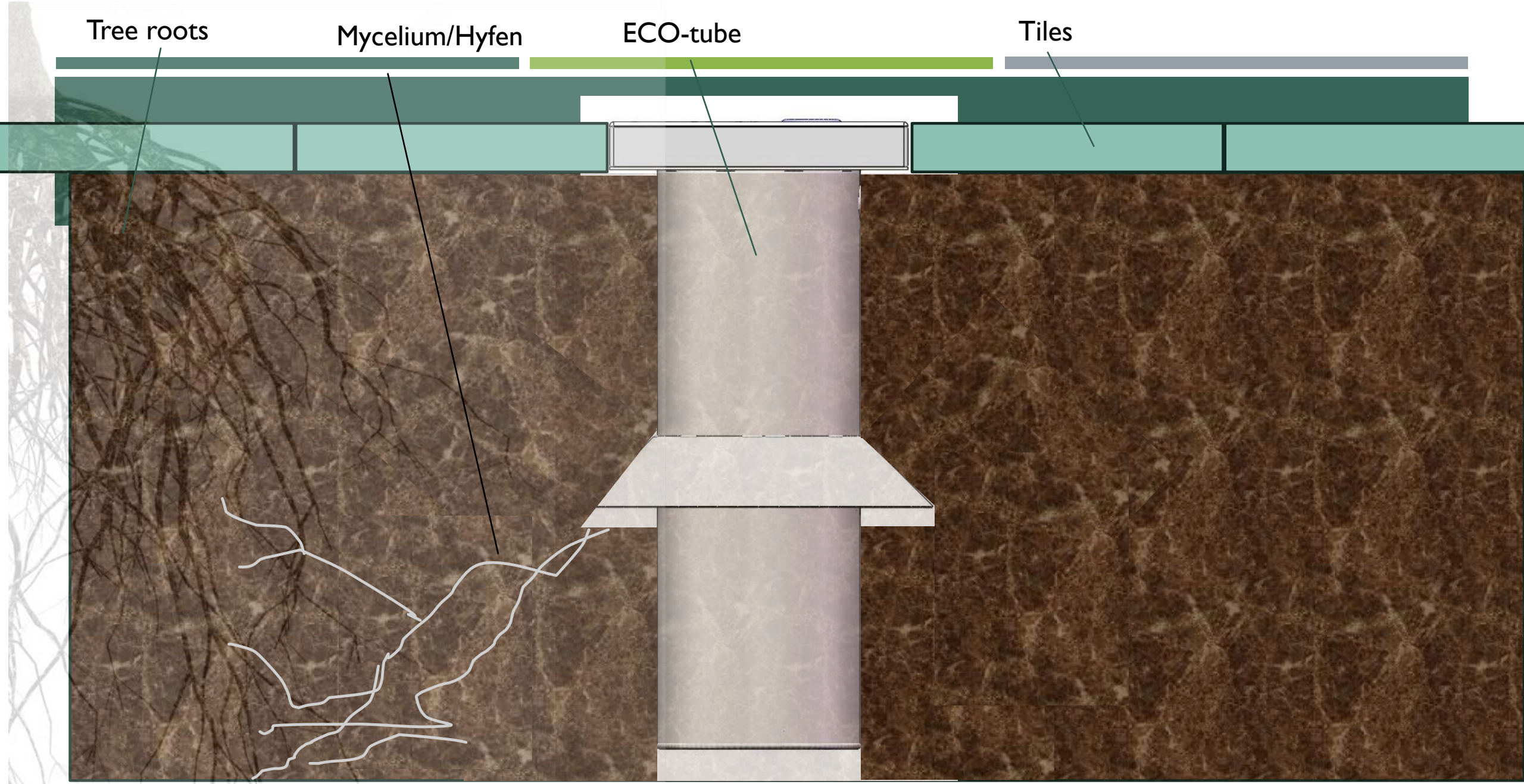
ECO TUBE PROJECT



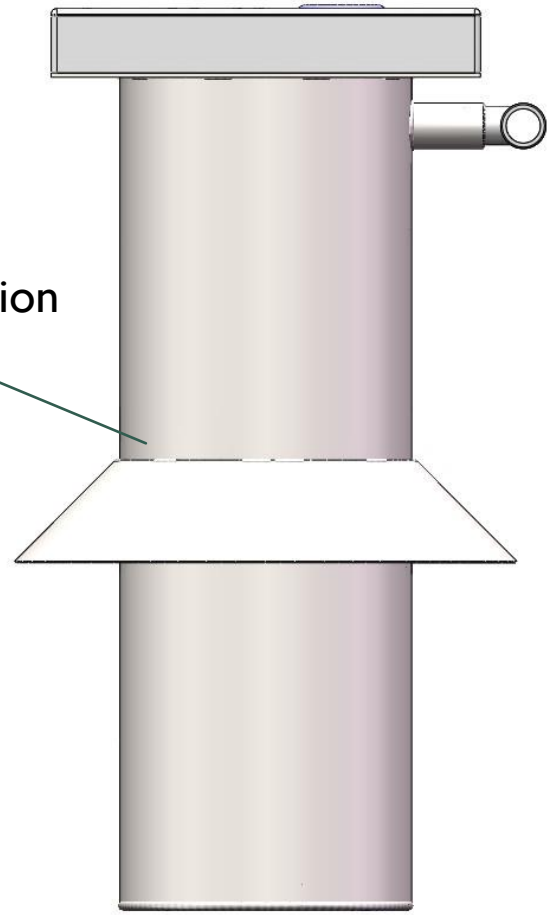
WHY AN ECO-TUBE

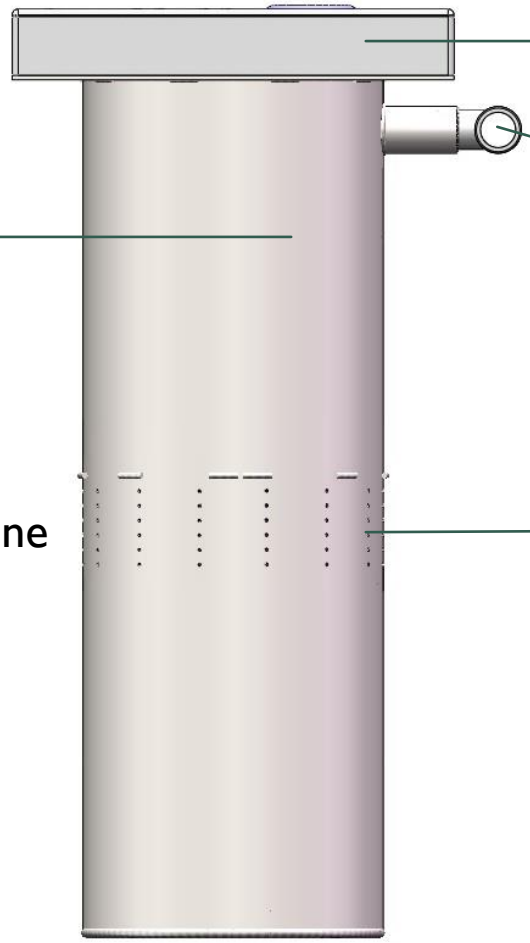
The trees in cities and villages are not doing well. caused by human actions, such as removing leaves that are essential as a source of nutrition. By removing the nutrients, there is hardly any soil life around the tree, which are necessary for breaking down the fallen leaves. Bacteria and fungi convert this humus into minerals and other substances that the tree needs to function. This is partly why it can convert NOx and CO2 into oxygen via photosynthesis.

The function of the tree also ensures, among other things, filtration of N2. If the tree is not healthy, this N2 center will increase because the tree gives priority to other essential minerals and elements.



DESIGN MODEL





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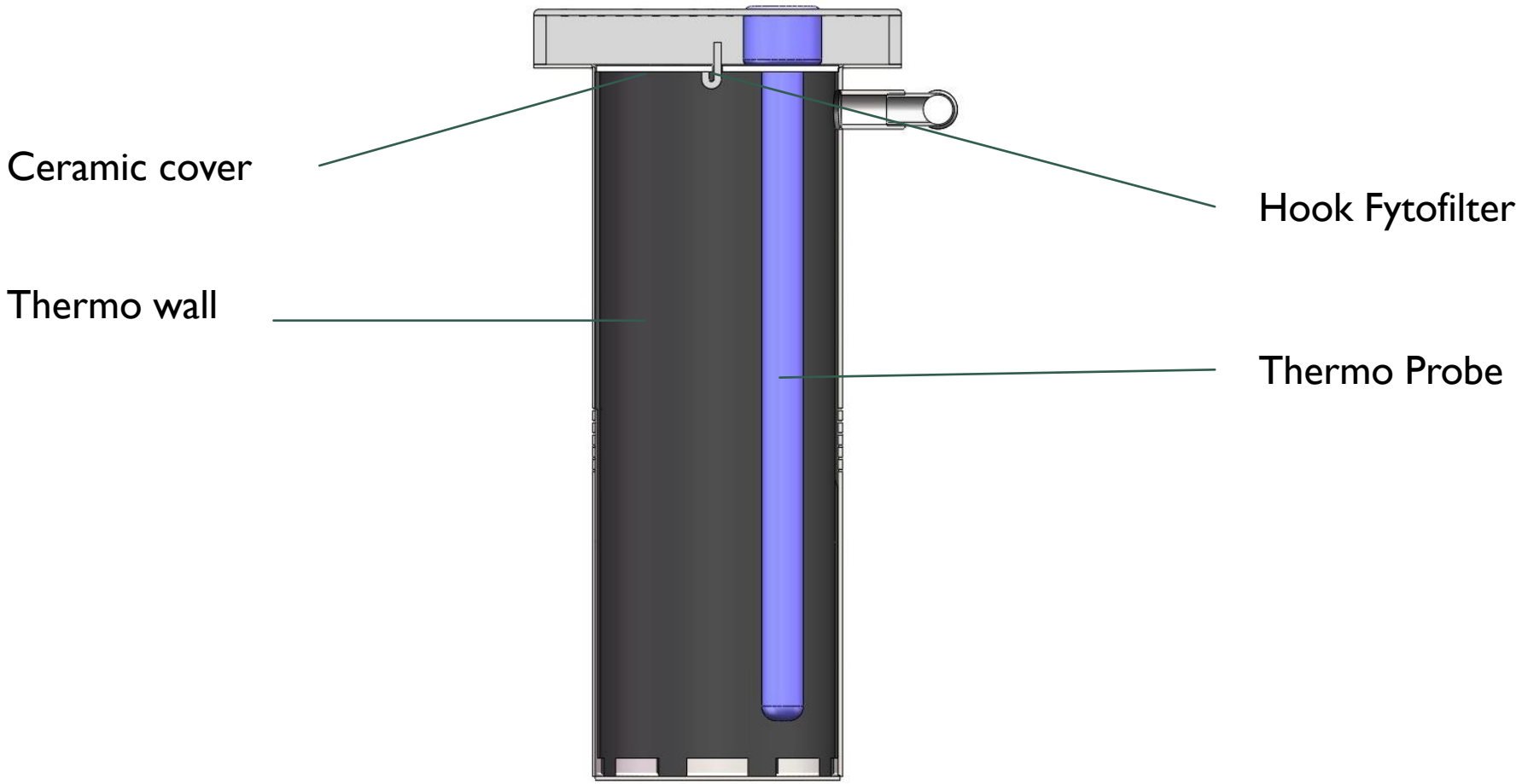
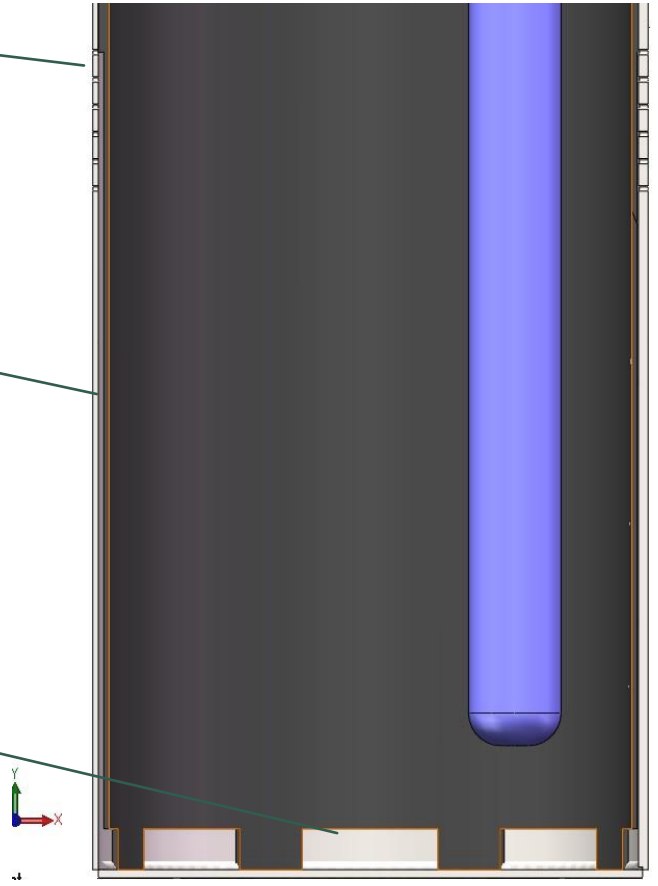


DESIGN MODEL

Drain holes

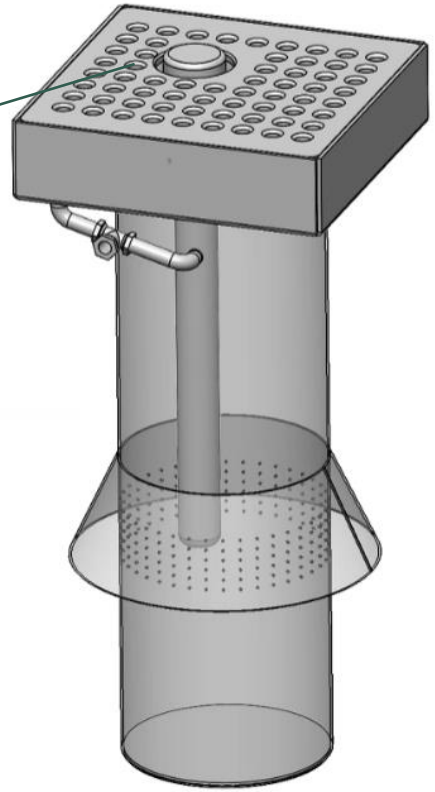
Capillary function

Pressure distribution

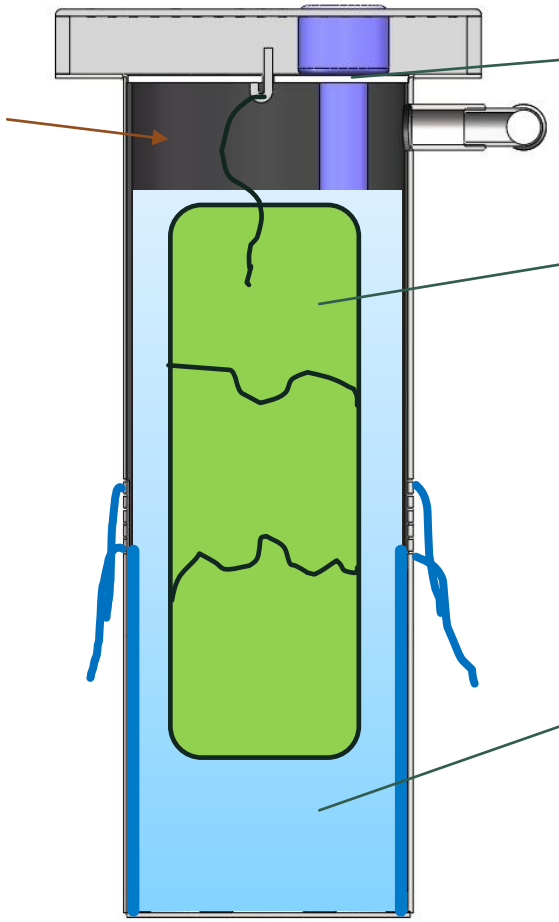


PRINCIPLE

Filter rainwater



Overpressure chamber



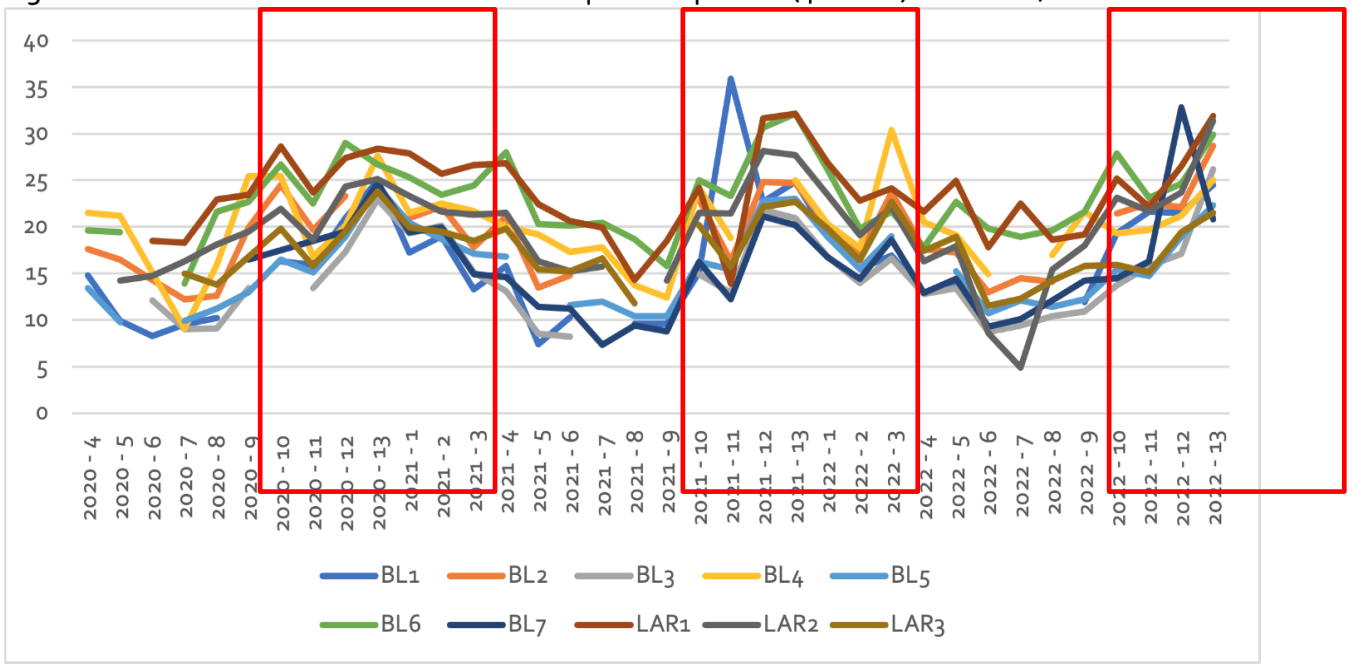
Removable tile and ceramic cover

Fytofilter with raw materials

Water fill by rain

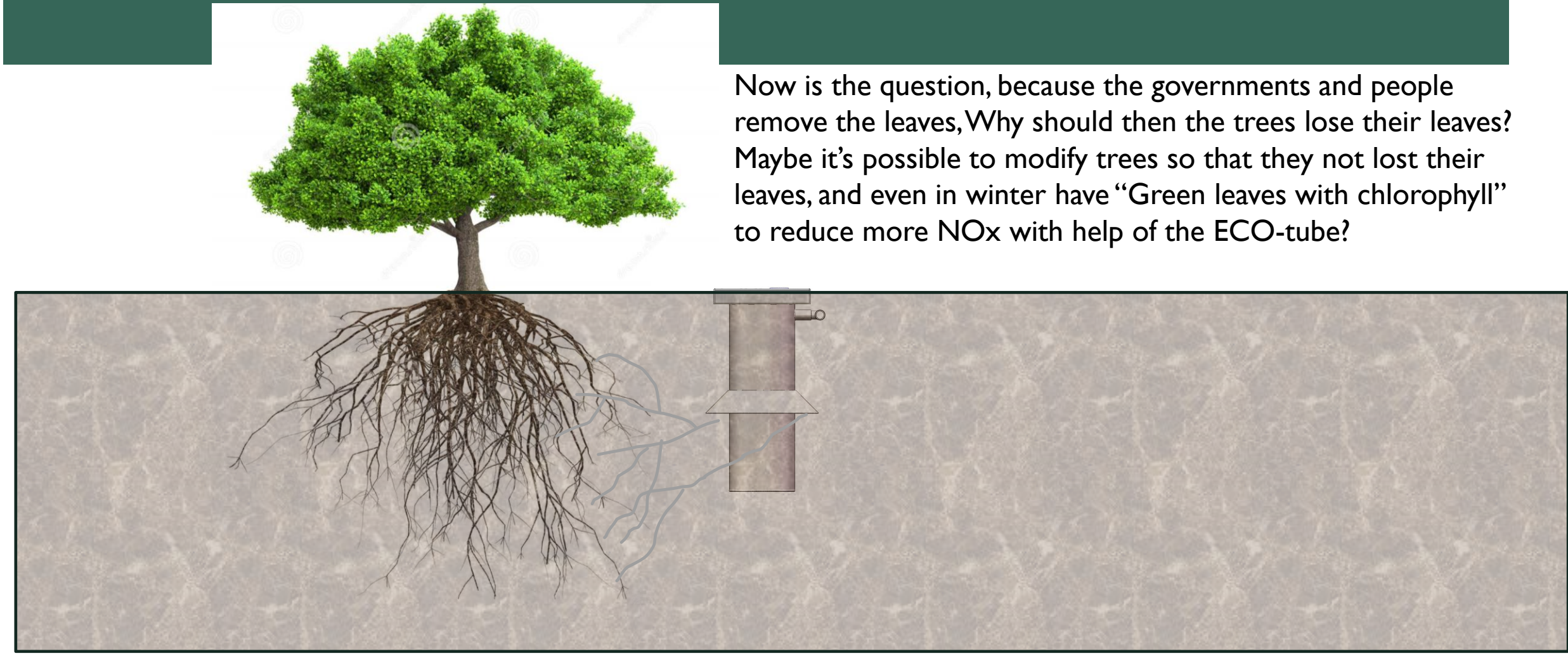
END GOAL

Figuur 2. Gemeten concentraties stikstofdioxide per meetperiode (4 weken) van 2020 t/m 2022.



To reduce NO2, the tree needs to have chlorophyll (Photosynthesis). The picture show measurements of NOx concentrate eats month. In the winter months the NOx concentration is the highest. Because the trees have no leaf's, people drive more cars, instead bicycles . Gas consumption is higher ….etc.

END GOAL



Now is the question, because the governments and people remove the leaves, Why should then the trees lose their leaves? Maybe it's possible to modify trees so that they not lost their leaves, and even in winter have "Green leaves with chlorophyll" to reduce more NOx with help of the ECO-tube?

NEEDS FOR THE TEST

- **Test location:**
- Test location : City .
- Test Location: Gardener.
- Test location : Forests

- **Test needs:**
- Trees with ECO-tube, and the same tree species without ECO- tube
- Do the test with young trees and with same old tree species

- **The goal for the test is,**
- To investigate if the mycelium grows and connect with the tree.
- To investigate healthy of the trees.
- To investigate if the mycelium is also active in winter.

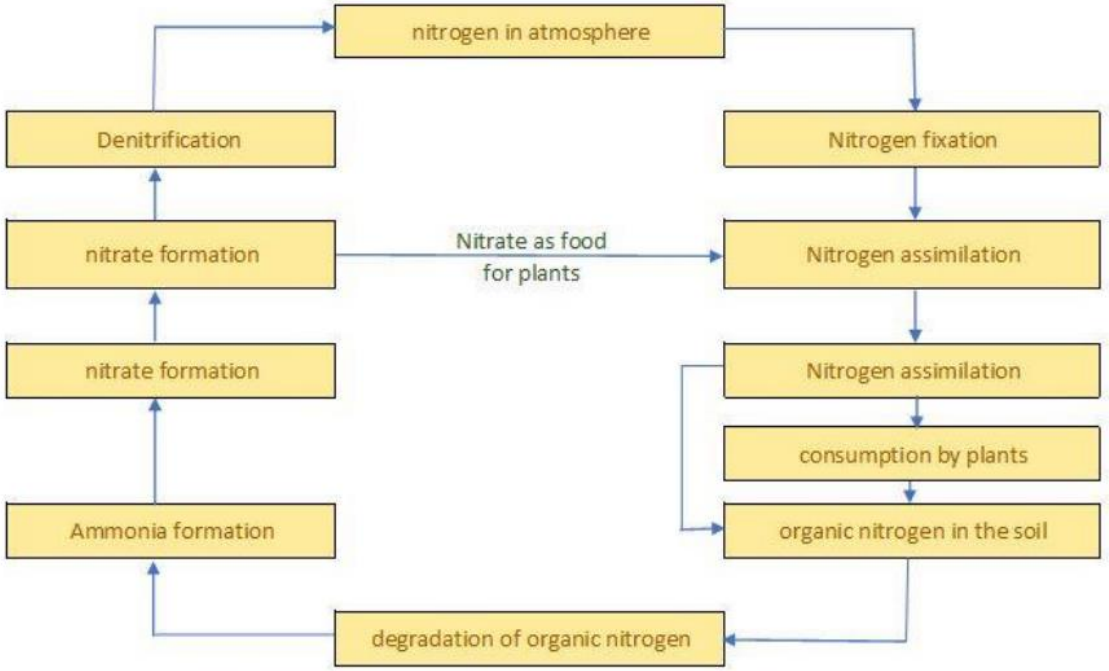
Fytofliters

- Raw materials
- Mycelium/Hyfen
- Humitine
- Other materials

RISK

- The test shows other results as wish.
- Waterlogging. (is not a problem for the ECO-tube, but speeding up the delivery of raw materials)
- Thermal management does not give the desired effect.
- The Fytofliters rot.

NO_x CYCLE



HUMITINE

Use Humitine for:
Regenerate used substrate for a new growth and flowering cycle;
Provides an improved soil structure;
Upgrading new or used soil;
Optimization of water availability for the plant;
An increased buffering capacity of the soil;
A reduction in nutrient leaching;
Neutralization of the soil pH value back to 6.5;
Improving the absorption of nutrients by the root system;
Stimulation of growth, enzymes and cell division in the plant;
Improvement of yield and quality;

Tree spices vs type of Mushroom

	Gr.Oet	Tr.Oet	Bl.Oet	S	N	F	kl.Bu	Pop	Pr	EH
berk	x	x		x	x	X	x		x	
beuk	X	X	X	x	X	x	X		x	X
eik (inlandse)				X	X		X			X
els				x	x	x	x		x	
es					x	x	X			
esdoorn						x				
fruitsoorten										
haagbeuk	x			x	x	x				
hazelaar	x	x		x						
iep		X				x				
linde	x		x			x				
paardenkastanje	x				x	x			x	
plataan									x	
populier	X	X	X		x	X		X		
robinia				x		X			x	
tamme kastanje				x					x	
walnoot				x		x			x	
wilg	X	X	X		X	X	X			
zoete kers	x			x					x	

Toelichting

X – Goed

x – Redelijk

Gr.Oet – Grijze Oesterzwam

Tr.Oet – Trechter oesterzwam

Bl.Oet – Bleke Oesterzwam

S – Shii-take

N – Nameko

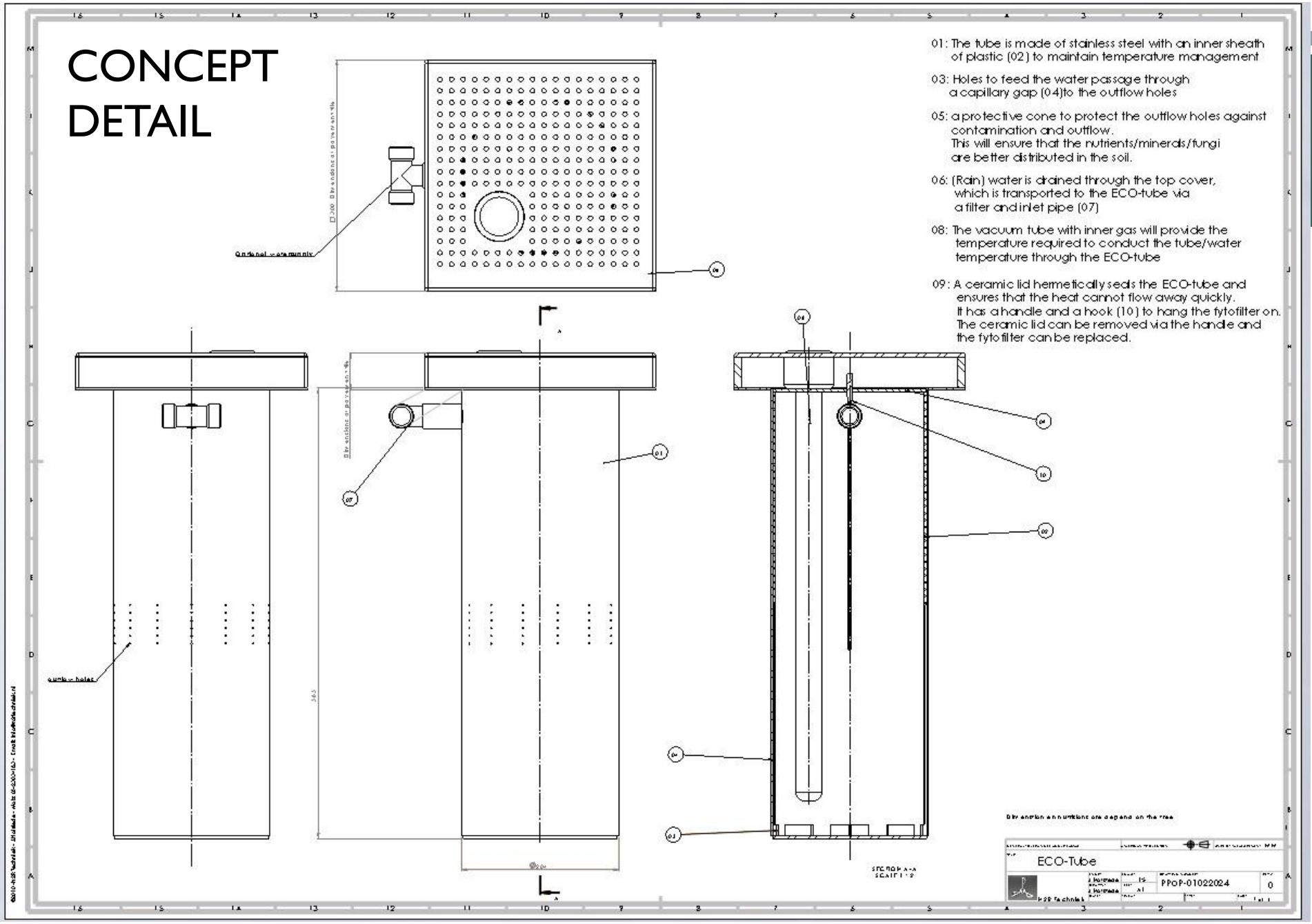
F – Fluweelpootje

Kl.Bu – Kleine bundelzwam

Pop – Populierenleemhoed

Pr – Pruikzwam

CONCEPT DETAIL



BOIP Benelux Office for Intellectual Property

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J.B.Hofstede