

NORDISK PLASTRØR GRUPPE



Plastrør og den grønne omstilling)

The Nordic Plastic Pipe Association

Min baggrund

- Har arbejdet i plastrørsbranchen siden 1992
- Sekretær i NPG Danmark
- Technical manager i TEPPFA
- Sekretær i Nordic Poly Mark

·DK - VAND·


Nordic Poly Mark



NPG Danmark, medlemmer





TEPPFA

The Plastic Pipes and Fittings Association

TEPPFA Management



xxxx
Appointment at GA 12 May
President



Monica de la Cruz
General Manager AseTUB
Vice-President



Ludo Debever
General Manager



Peter Sejersen
Technical Manager



Vicky Chatzivasileiou
Communications & Administration
Officer



xxx Yyyzzzz
Sustainability Officer

TEPPFA Members 2021



Direct company members (13)



Associated members



Supporting members



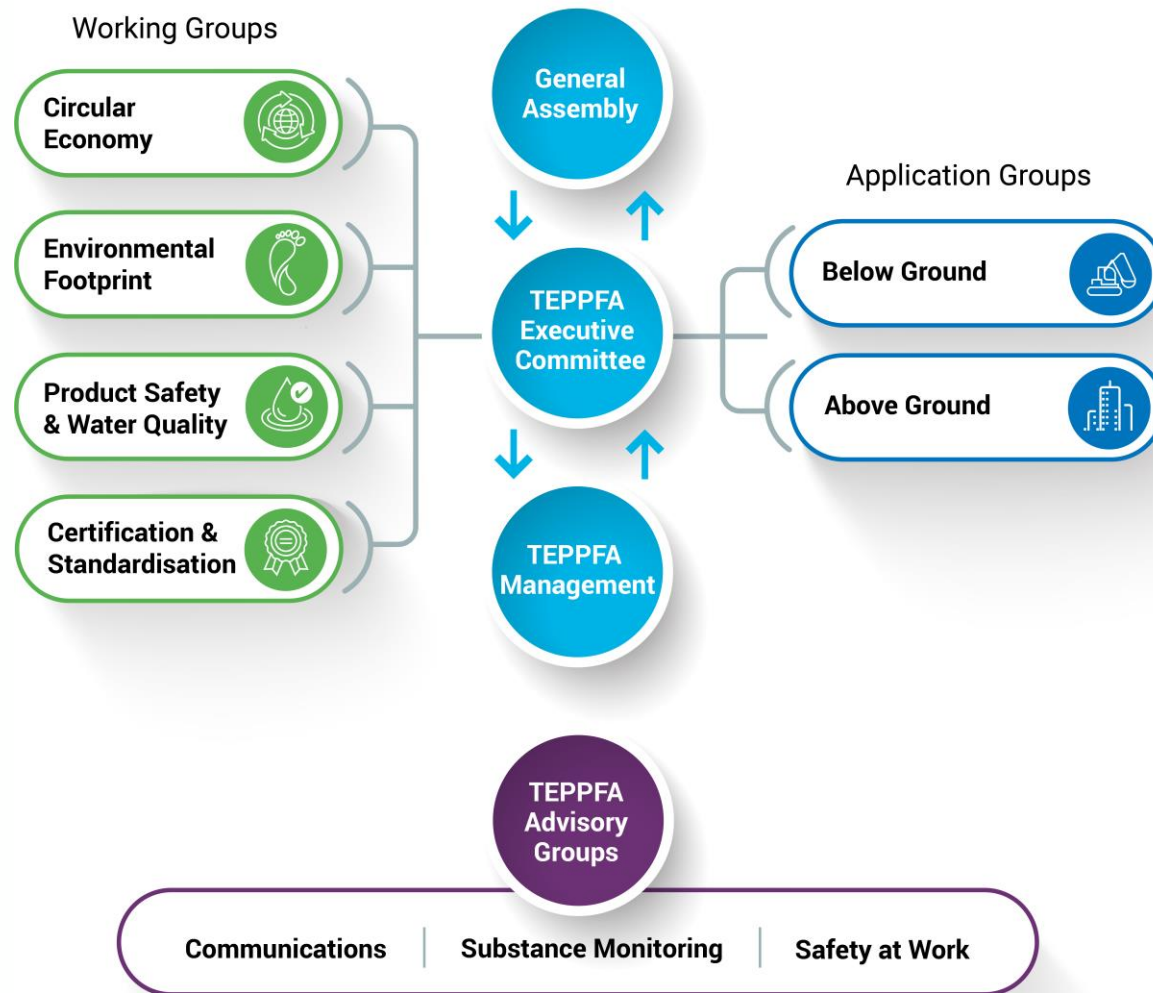
National Association members (15)



Regulations and Initiatives impacting Building and Construction



TEPPFA Governance 2021-2025



European Communication Format – B2B

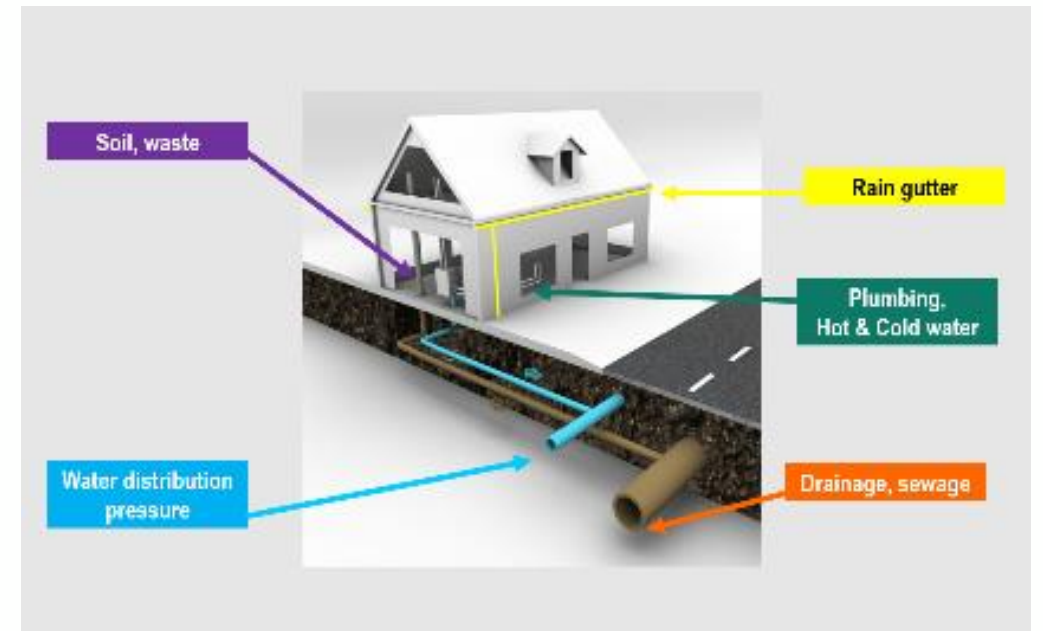
Environmental Product Declaration

POLYETHYLENE (PE) PIPE SYSTEM
FOR WATER SUPPLY, USING HORIZONTAL
DIRECTIONAL DRILLING (HDD)

Environmental Product Declaration



- Det belgiske Institut (VITO) har udarbejdet 21 EPD'er for TEPPFA
- EPD'erne beskriver miljøpåvirkningerne af forskellige plastrørsystemer, baseret på livscyklusvurdering
- Arbejdet blev valideret og kontrolleret af Denkstatt i Østrig
- EPD'erne er baseret på EN 15804
- Dataene for plastsystemerne er leveret af TEPPFAs medlemsvirksomheder
- Der er desuden lavet sammenlignende LCA'er hvor plastsystemer måles op mod traditionelle materialer: Beton, kobber og duktilt støbejern



Functional unit

Typisk directional drilling installation



The functional unit is defined as “the below ground transportation of drinking water, over a distance of 100 m by a typical public European PE pipe water supply system (DN/OD 110 mm) over its complete life cycle of 100 years, calculated per year”

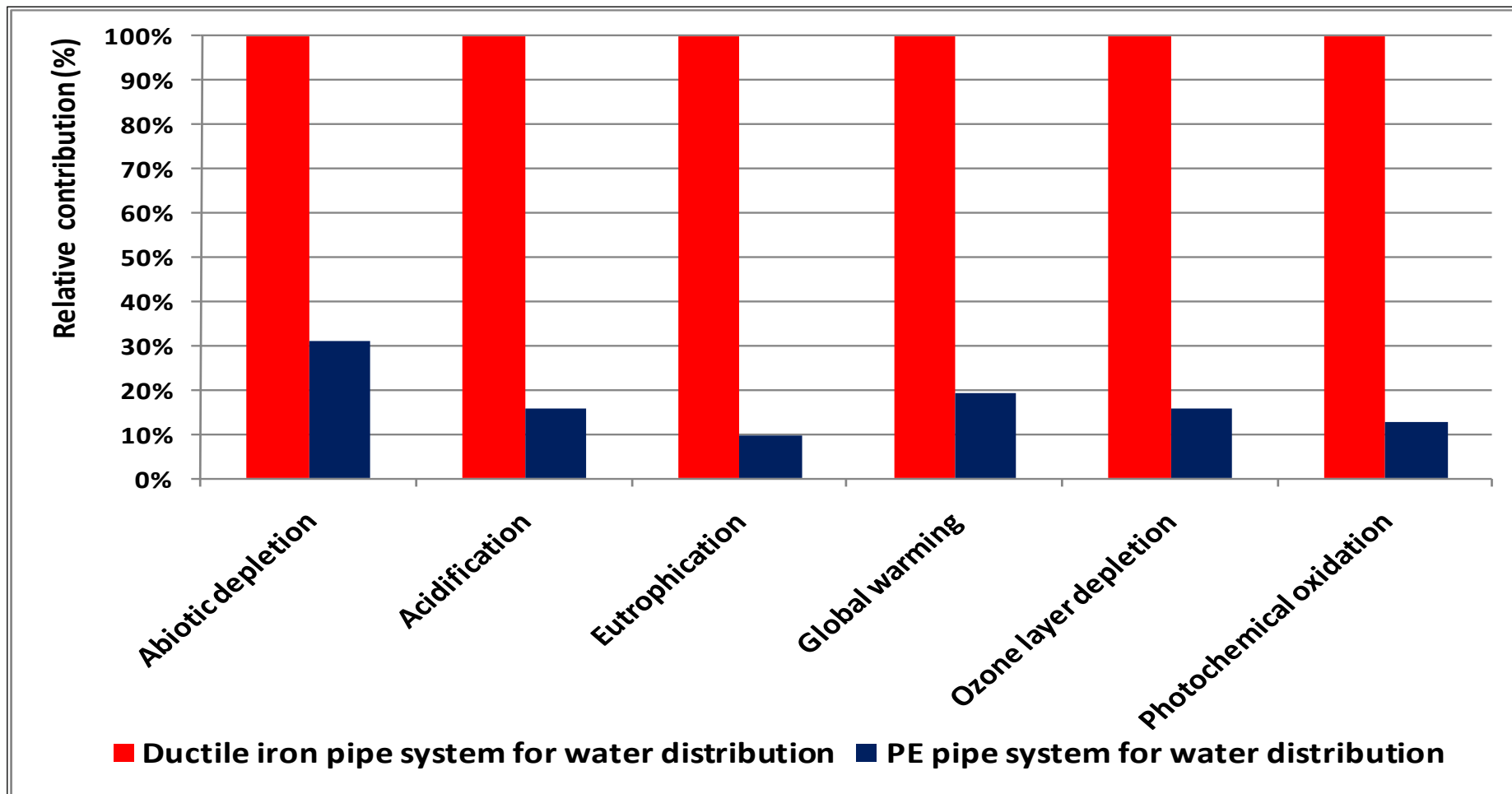
Opgørelse af miljøåvirkningerne

Typisk directional drilling installation

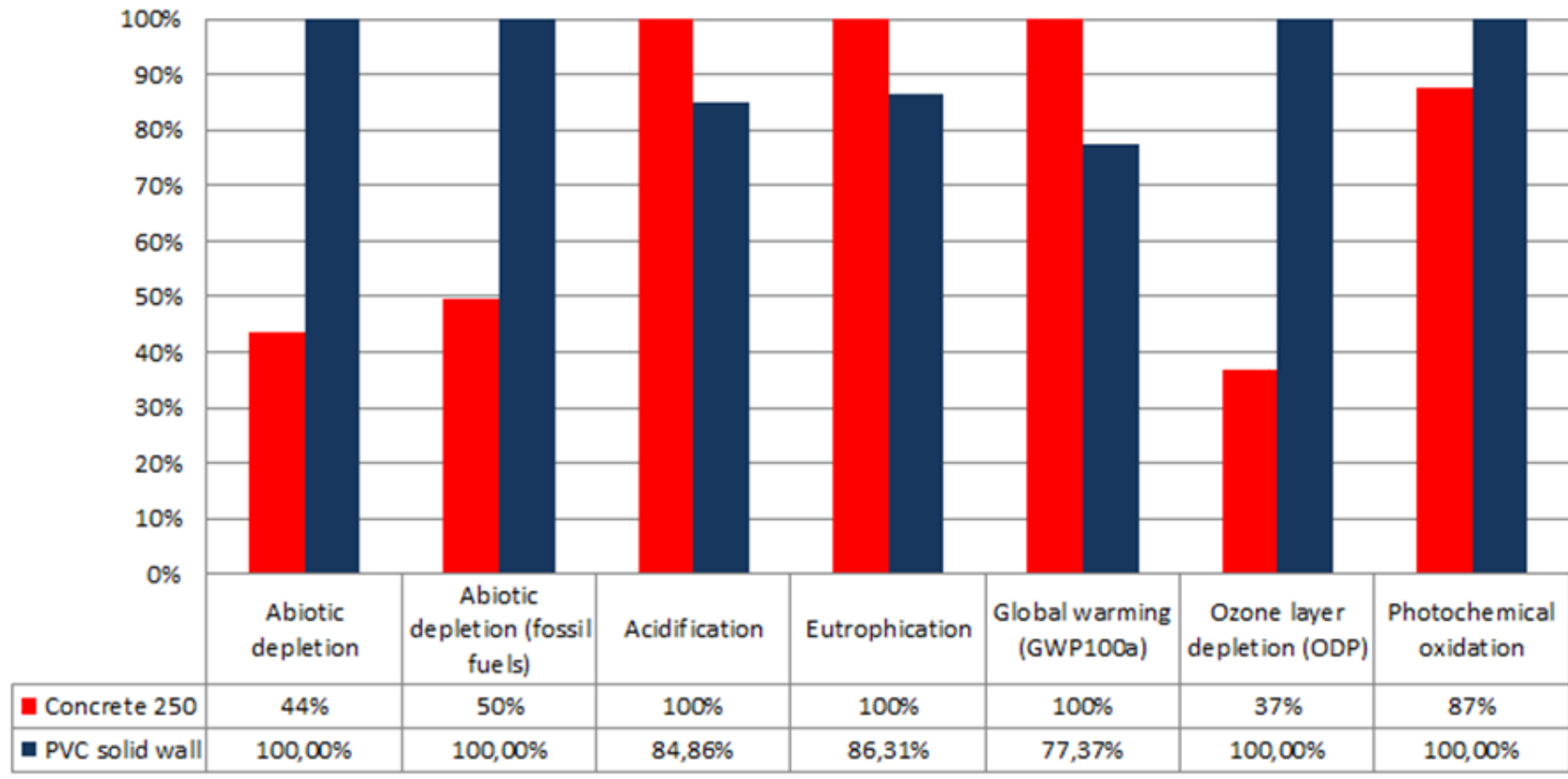


Impact category		Abiotic depletion (non-fossil)	Abiotic depletion (fossil fuels)	Acidification	Eutrophication	Global warming	Ozone layer depletion	Photochemical oxidation
		kg Sb eq	MJ	kg SO2 eq	kg PO4--- eq	kg CO2 eq	kg CFC-11 eq	kg C2H4 eq
Product stage	A1-3	7,66E-06	3,09E+02	2,34E-02	5,80E-03	8,03E+00	4,22E-07	2,52E-03
Transport to installation	A4	8,84E-07	4,74E+00	1,14E-03	2,06E-04	2,92E-01	5,44E-08	4,81E-05
Installation	A5	3,26E-06	3,32E+01	1,48E-02	3,04E-03	1,93E+00	3,67E-07	5,47E-04
Use	B1-B7	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Disassembly	C1	2,36E-08	1,08E+00	5,31E-04	1,15E-04	6,99E-02	1,27E-08	1,40E-05
Transport to end-of-life treatment	C2	2,01E-07	5,73E-01	1,38E-04	2,39E-05	3,64E-02	6,37E-09	6,34E-06
End-of-life treatment	C3-C4	-1,41E-07	-8,71E-01	-3,15E-04	-2,45E-05	2,25E-01	-6,99E-09	-1,50E-05
TOTAL		1,19E-05	3,47E+02	3,97E-02	9,16E-03	1,06E+01	8,56E-07	3,12E-03

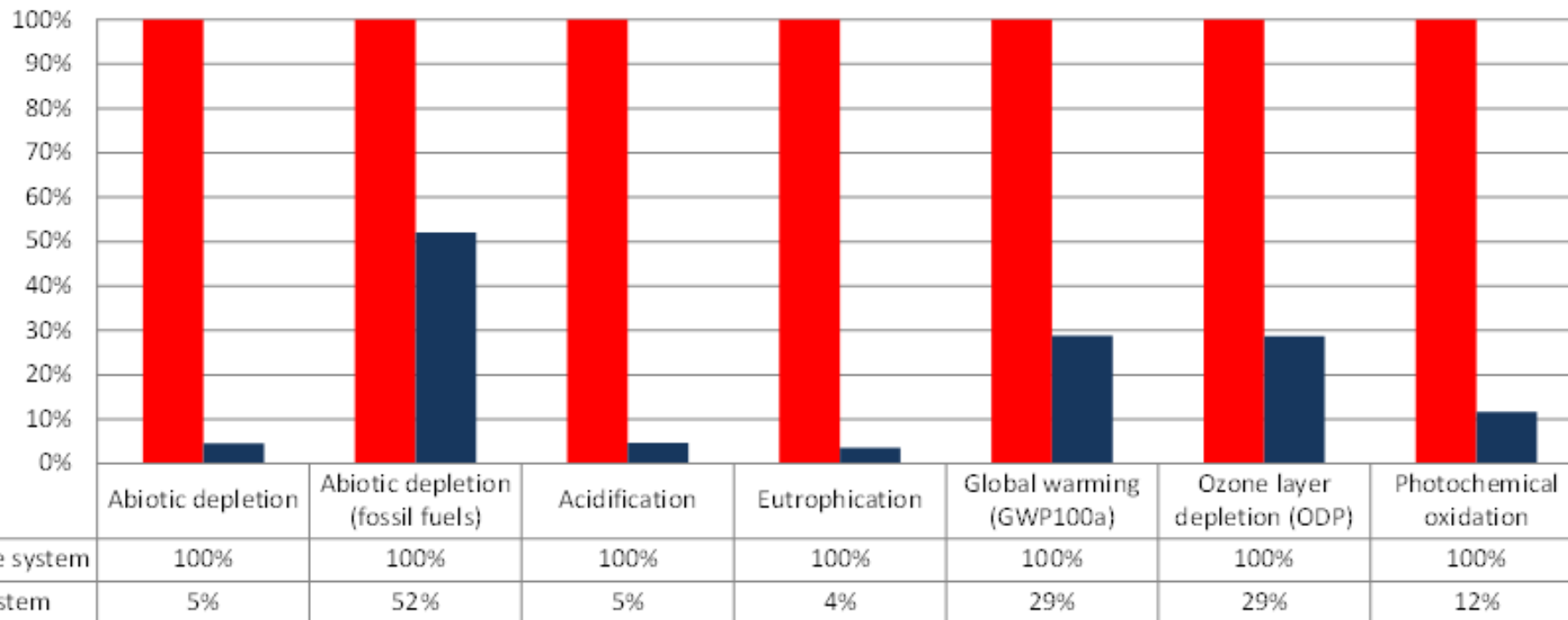
Miljøpåvirkning af rørsystemer, duktile jernrør



Comparative environmental profile from cradle-to-grave between concrete DN 250 mm and PVC-U solid wall sewer pipe systems (Ecoinvent 3.5)



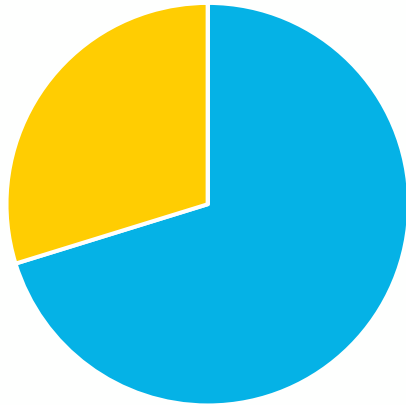
Comparative environmental profile form cradle-to-grave between copper and PEX Hot & Cold water pipe systems



NoDig vs traditional installation

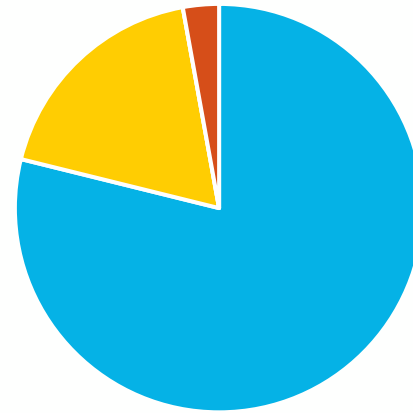


Traditional installation

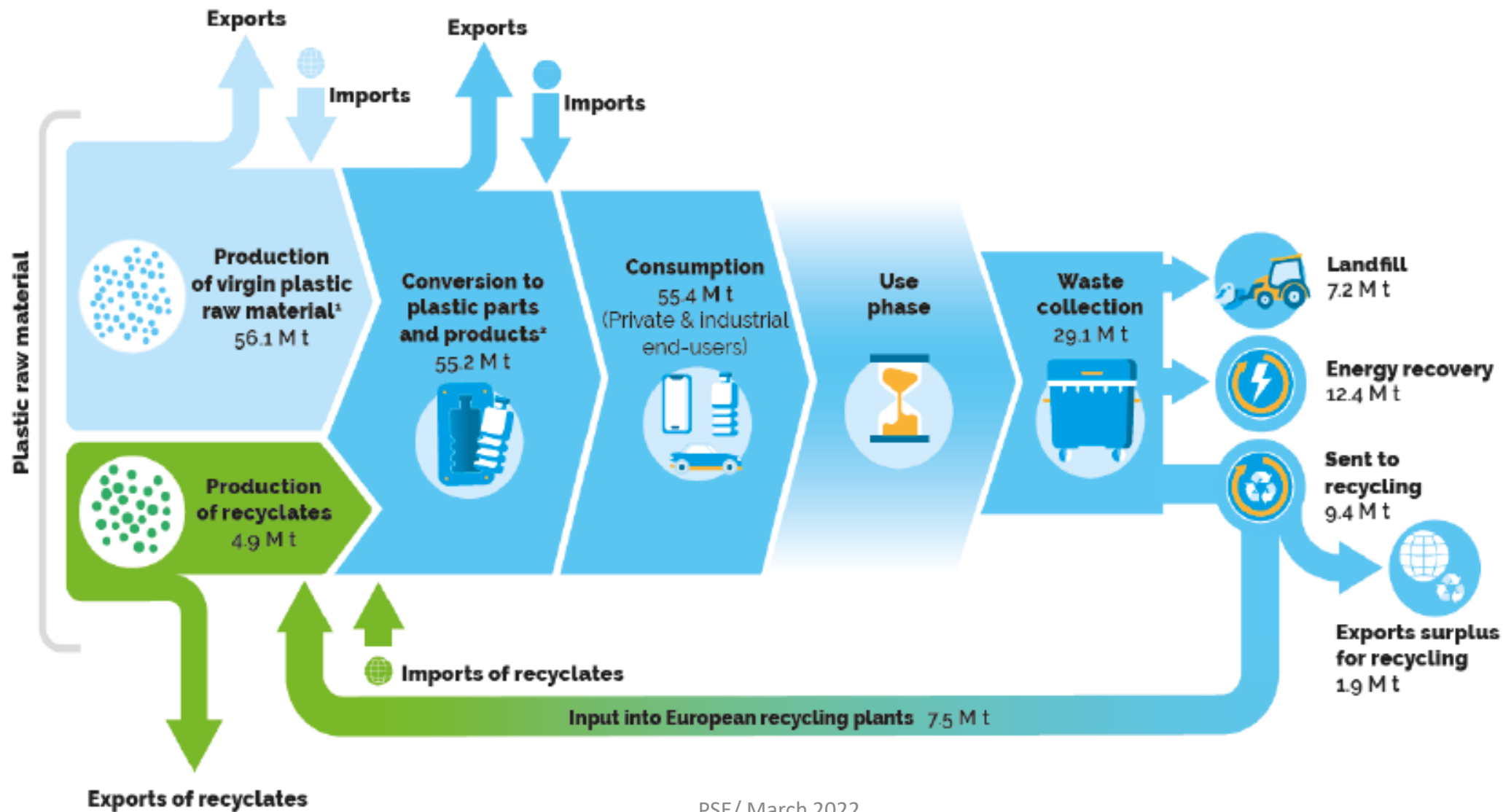


- Product stage
- Construction Process stage
- Use stage
- End of life

NoDig (Directional Drilling)

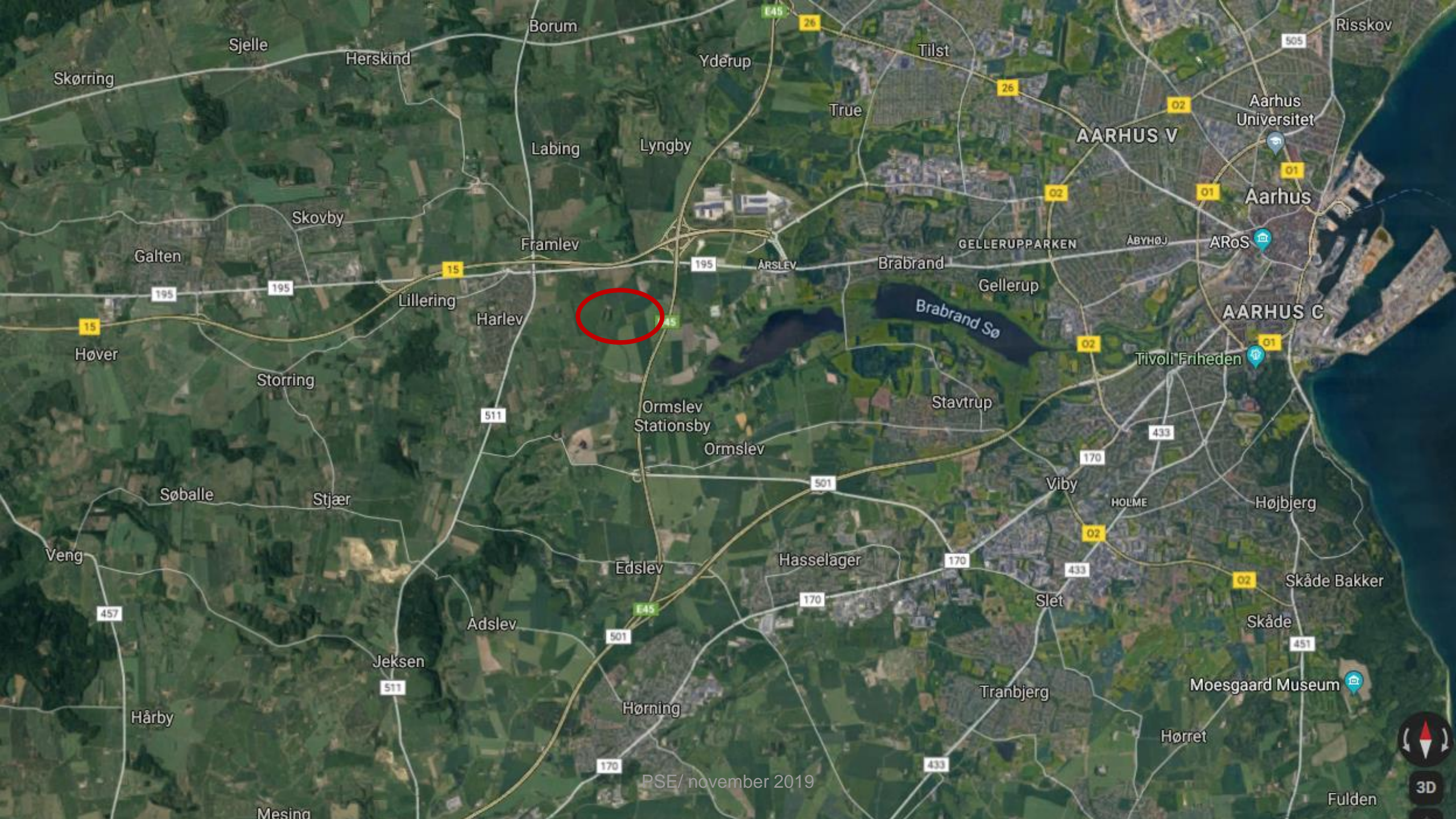


- Product stage
- Construction Process stage
- Use stage
- End of life



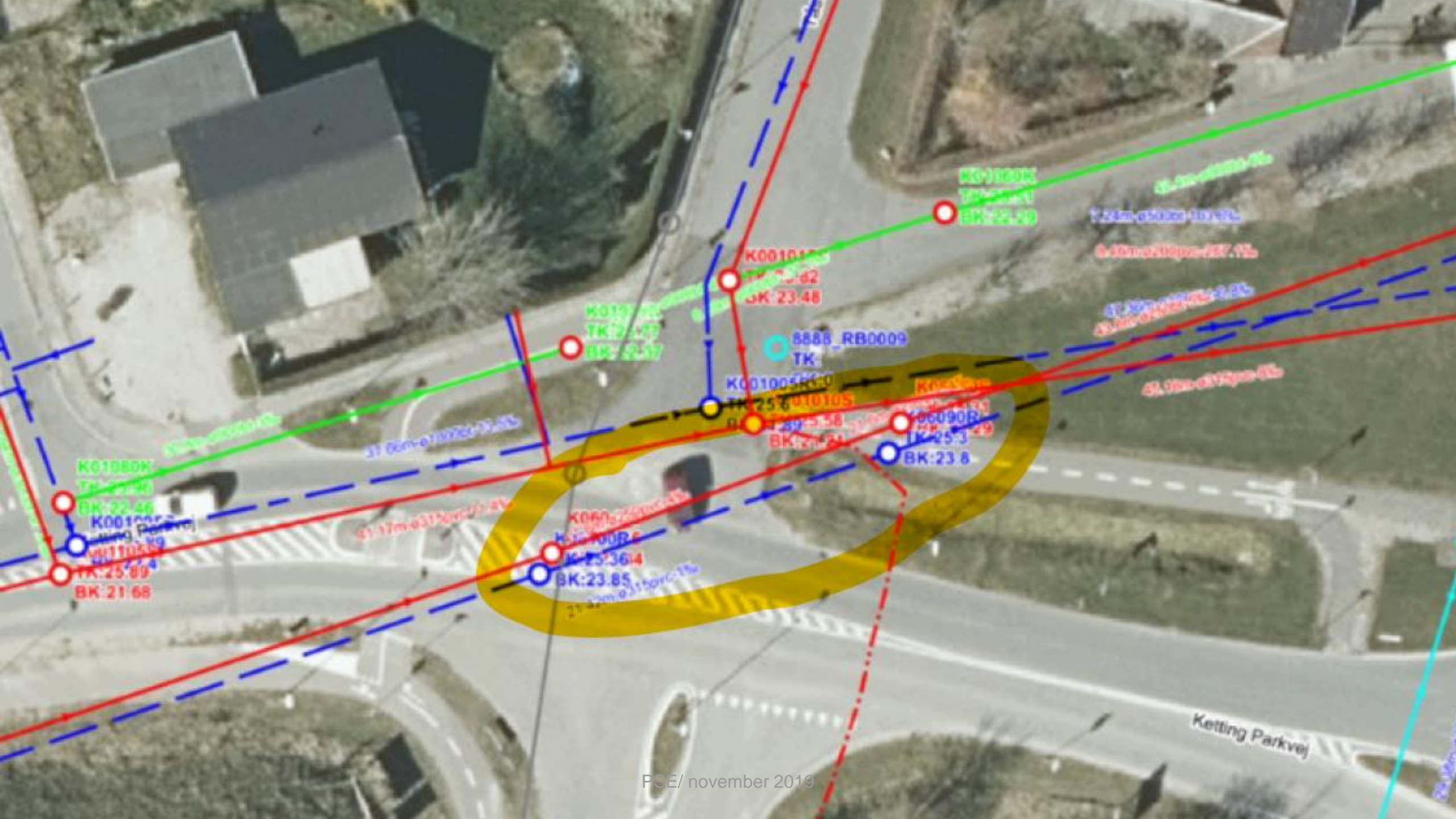
Vi skal have fjernet alle forhindringerne, uden at gå på kompromis med kvalitet og levetid!

- Standarder
- Indgroet vane om at kun nyt materiale kan sikre for god kvalitet
- Innovation og produktudvikling
- Eco-design – design for genanvendelse
- Materiale testmetoder for genanvendt materiale
- Nationale godkendelser, f.eks. Nordic Poly Mark
- Tilgængelighed af materialer i tilstrækkelig mængde og kvalitet



PSE/ november 2019





K01880K
TK:27.96
BK:22.46
K001002
TK:25.89
BK:21.68

31.66m-a10026-05-25

31.17m-a110v00-05-25

K019
TK:24.27
BK:24.37

K001010
TK:23.62
BK:23.48

8888_RB0009
TK:

K001005
TK:25.6
BK:25.58

K00090B
TK:25.3
BK:23.8

K000
TK:25.3614
BK:23.85

K01800K
TK:24.90
BK:24.90

7.24m-a1000-05-25

6.46m-a1000-05-25

47.30m-a1000-05-25

42.10m-a1000-05-25

31.70m-a1000-05-25

Ketting Parkvej

Microplastik

Microplastik fra regnvandrør

To Ø315mm regnvandsrør blev inspiceret af DTI. Et PP rør og et PVC rør. Projektet blev udført i samarbejde med Aarhus Vand

Rørene har ligget hhv. 25 og 30 år i jorden

Results:

Der kan ikke måles slidtage i rørene





DANISH
TECHNOLOGICAL
INSTITUTE

Microplastics investigation

TEPPFA

Avenue de Cortenbergh 71, 7th floor

B-1000 Brussels

PSE/ September 2020

Microplastic

Test Set-up

The setup consists of:

- A pump with a magnetic drive system (to avoid plastics sealing elements)
- A reduction valve to adjust the velocity
- Start/stop device
- A container of 35 litres for buffering
- A cooling system to maintain a constant temperature
- Thermometer, pressure gauge and flowmeter
- Coupling devices and piping for connecting test pipes



PErt	Date	Time	Temperature	Flow		Water meter	Volume	Inlet pressure during flow	Inlet pressure during pause
	DD-MM-YYYY	TT:MM	°C	m ³ /h	m/s	l.		bar	bar
Installation	11-05-2020	11:45	-	-	-	300245	-	-	-
Flushing with demi. Water		13:15	19	2,27	2,0	300559	314	3,95	
Milli Q water for pressing demi.w. out		14:30	20	-	-	300576	17	-	
Milli Q water filling (batch No. 1)						-	45		
Water level in container approx						-	25		
Day 0	11-05-2020	15:00	20.0 - 20.5	1,36	1,2	300630	-	3,97	4,05
		16:05	20.7 - 21.1	1,36	1,2	301380	750	3,97	4,05
Day 1	12-05-2020	08:30	22.8 - 23.2	1,36	1,2	312520	11890	3,96	4,03
		15:50	23.0 - 23.4	1,36	1,2	317490	16860	3,95	4,02
Day 2	13-05-2020	08:00	22.5 - 22.9	1,36	1,2	328490	27860	3,97	4,03
		14:45	22.7 - 23.1	1,36	1,2	333080	32450	3,97	4,04
Day 3	14-05-2020	08:15	22.4 - 22.8	1,36	1,2	344990	44360	3,97	4,04
		15:40	22.8 - 23.2	1,36	1,2	350040	49410	3,97	4,04
Day 4	15-05-2020	10:20	22.8 - 23.2	1,36	1,2	362750	62120	3,97	4,03
Day 5	16-05-2020	Weekend							
Day 6	17-05-2020								
Day 7	18-05-2020	09:10	22.5 - 22.9	1,36	1,2	411020	110390	3,98	4,04
		15:00	23.0 - 23.4	1,36	1,2	415000	114370	3,98	4,04
Notes:	Sets of temperatures (ex 23.4 - 23.8) shows the temperature variation during 1 cycle.								

9. Conclusion

Based on the applied method, no levels of microplastics above the detection limit (2 µg/l) were found in the samples of the tests PE80-2, PEX-A-2, PERT-2 and PVC-U-2.

In the sample of the test Cu-2, a microplastic level of 13 µg/l was found. It is noted that this mass was caused by a single, large polystyrene particle measuring approximately 200x350 µm. The contribution to the total microplastic concentration from the mass of this particle alone accounts for 11.4 µg/l. Aside from this particle, the microplastic level in the test Cu-2 is below the detection limit. For the microplastic measurements, the particle detection limit was 15 µm, and measurements of particle size distributions showed that most of the material present in the investigated samples were above this threshold (Appendix 3, Figure 2).

Links til mere information



- Der er mange flere oplysninger på TEPPFAs hjemmeside: <https://www.teppfa.eu/>
- EPD'er: <https://www.teppfa.eu/sustainability/environmental-footprint/epd/>
- Sammenlignende LCA'er: <https://www.teppfa.eu/sustainability/environmental-footprint/lca/>
- Diverse anvisninger: <https://www.teppfa.eu/media/guides/>
- Online EPD regnemaskine: <https://www.teppfa.eu/sustainability/responsible-consumption-and-production/environmental-footprint/epd/epd-calculator/>
- Position Papers: <https://www.teppfa.eu/media/position-papers/>

Abonner på nyhedsbrevet. Link findes på <https://www.teppfa.eu/>

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