

PROJECT LIFE HEATLAND

(LIFE16 CCA/ES/000077)



COOL PAVEMENTS FOR FUTURE CITIES. RESULTS FROM LIFE HEATLAND (SPAIN)



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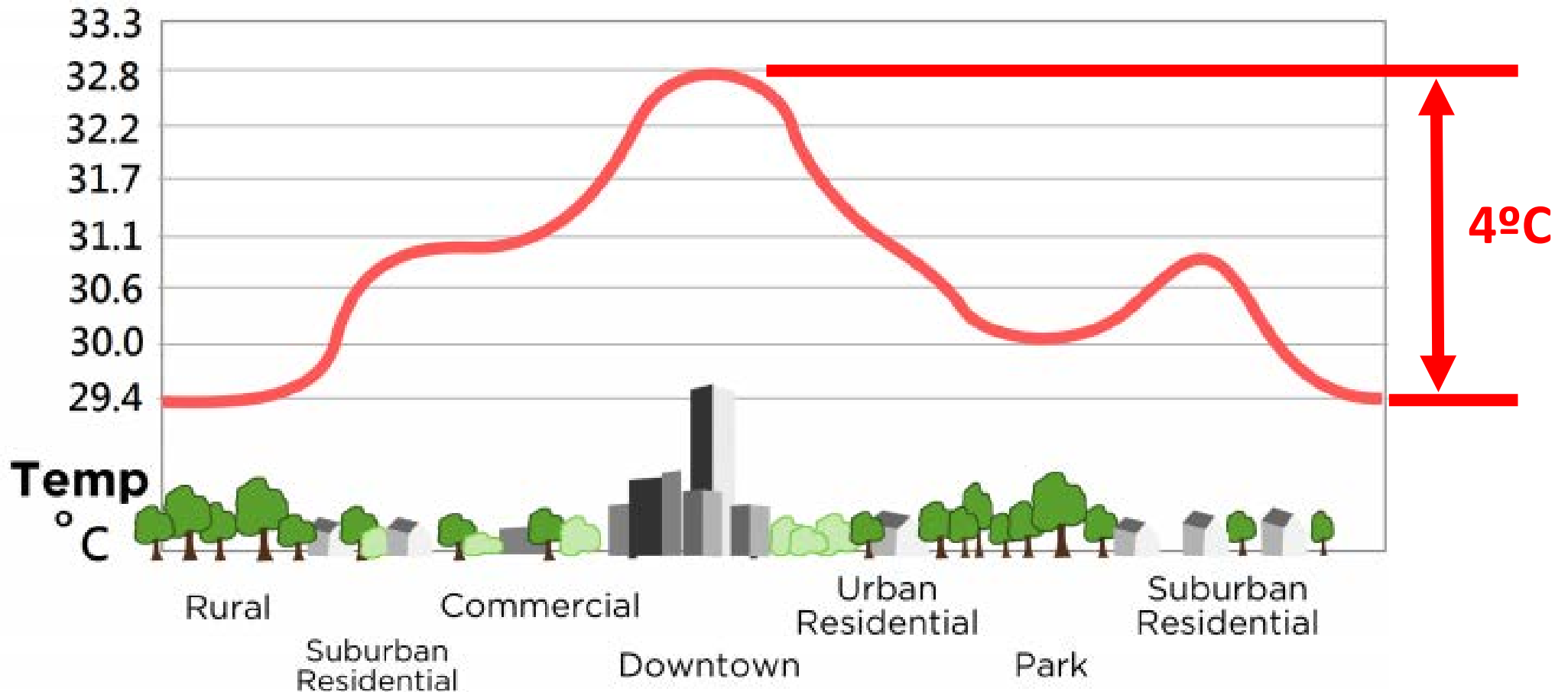
<https://heatlandlife.eu/>





1. COOL PAVEMENTS

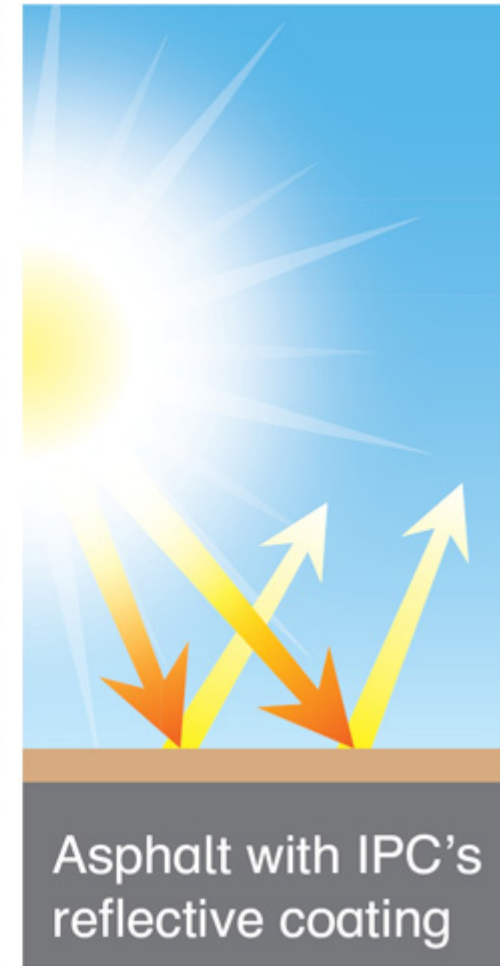
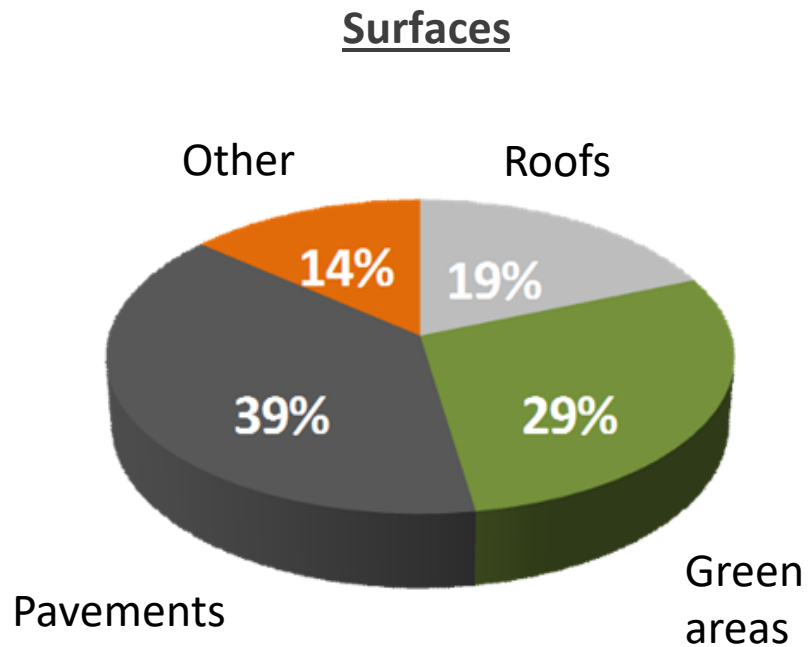
URBAN HEAT ISLAND PROFILE





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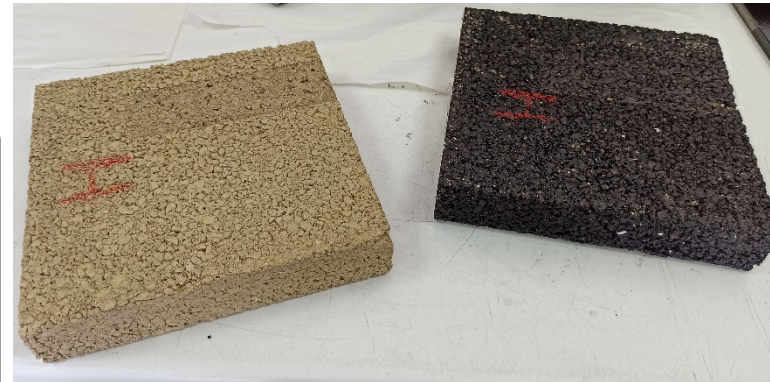
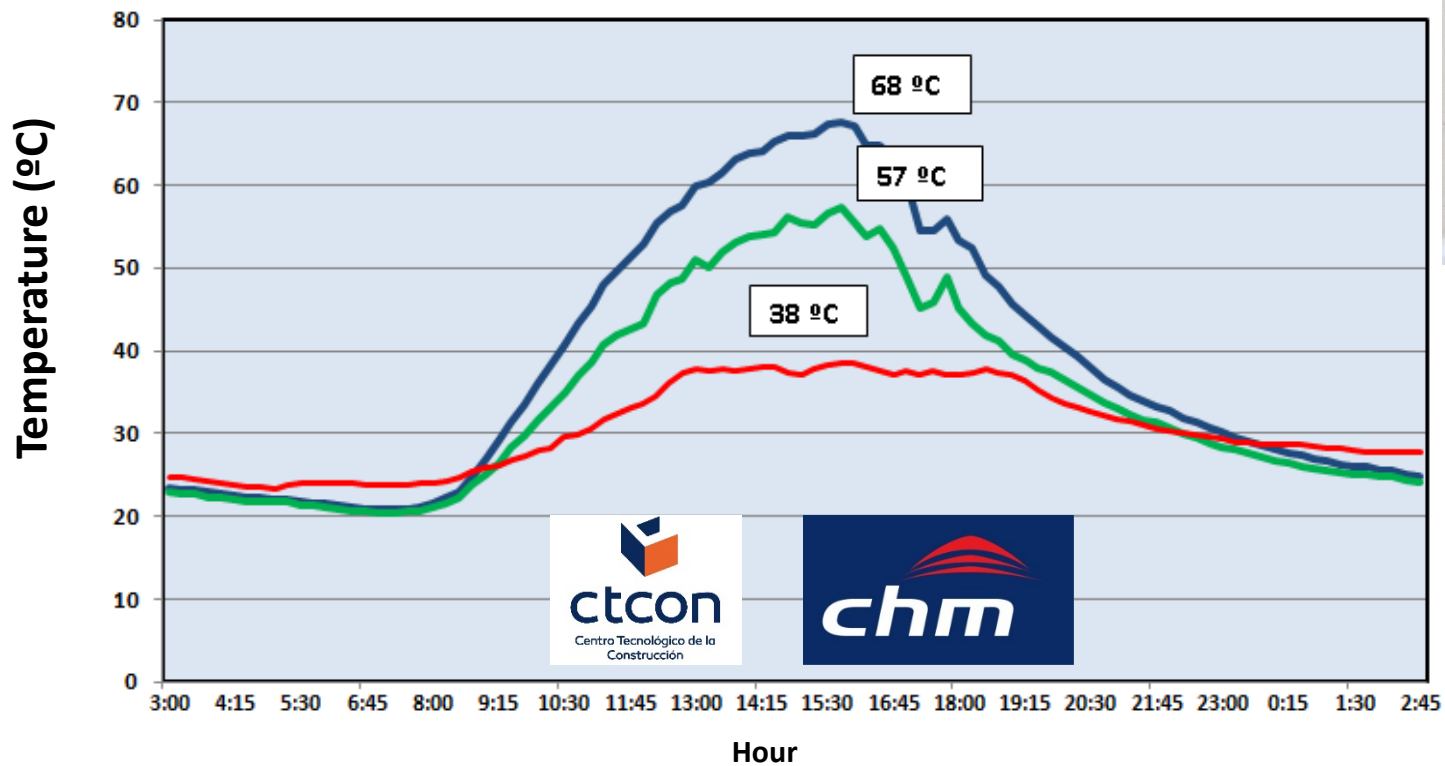
1. COOL PAVEMENTS



1. COOL PAVEMENTS



EVOLUTION OF SURFACE TEMPERATURE 2016-07-30



- Traditional pavement
- Cool pavement
- Air temperature

1. COOL PAVEMENTS



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2. PROJECT OBJECTIVES

- To mitigate Urban Heat Island (UHI) effect
- To reduce the surface and environmental temperature of the area, which will contribute to a better quality of life and people's well-being
- To achieve energy savings in the urban environment
- To reduce air pollution
- To develop a tool to assess the impact of the implementation of cool pavement in any city



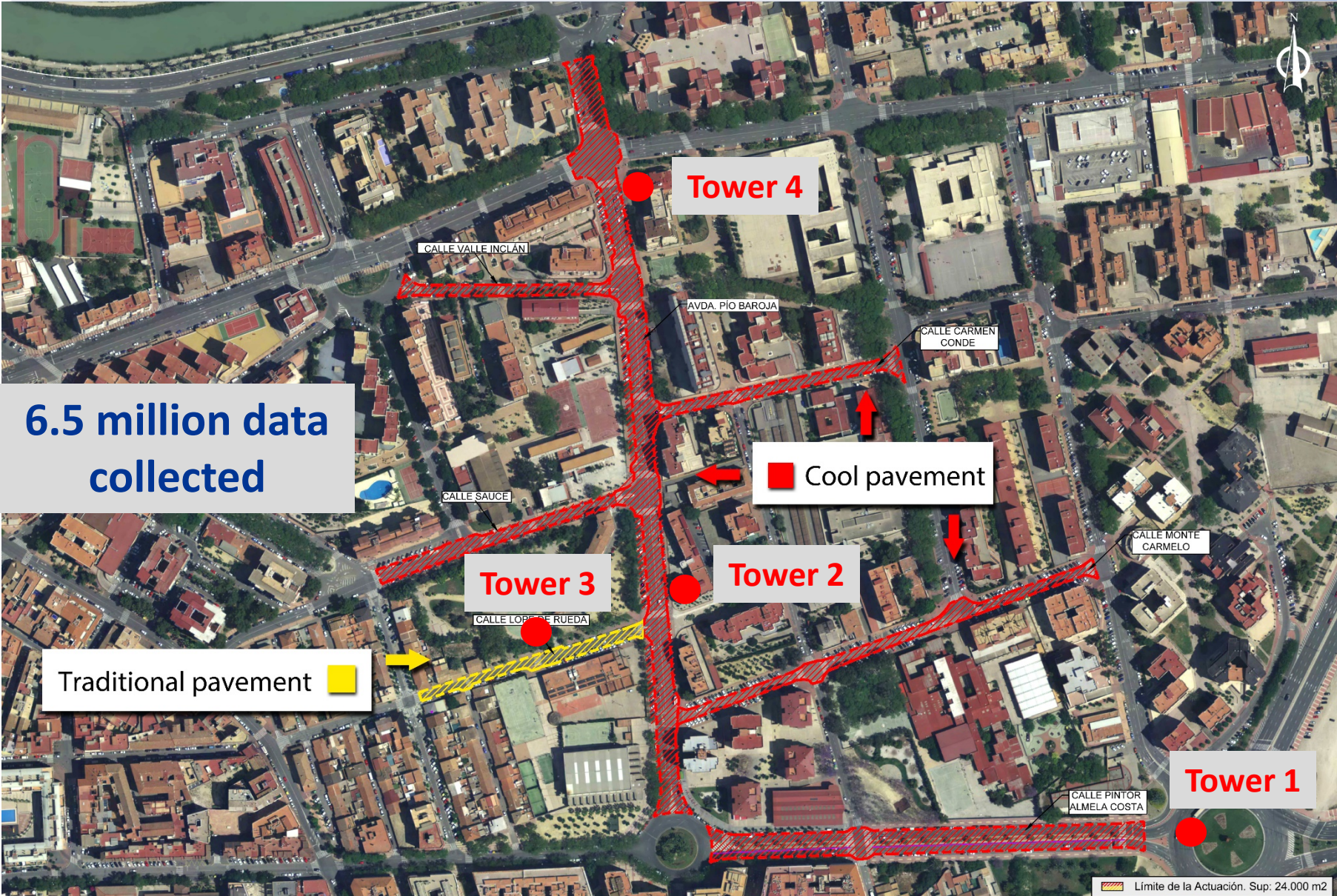
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3. PROJECT DEVELOPMENT

Full video: <https://youtu.be/5u8RSCsleuw>




3. PROJECT DEVELOPMENT



6.5 million data collected

Traditional pavement 

 Cool pavement

4. RESULTS: VISUAL IMPACT



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4. RESULTS: VISUAL IMPACT



life

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150 % more luminance

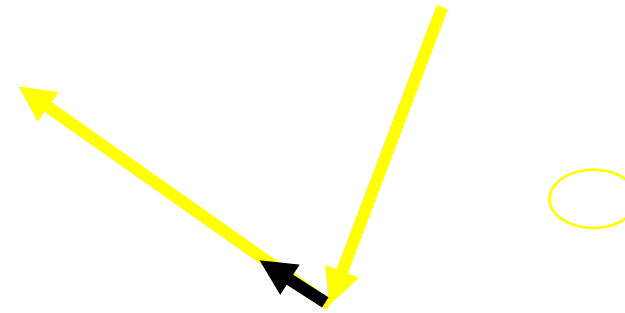


4. RESULTS: VISUAL IMPACT



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0 DAYS AFTER IMPLEMENTATION



150 % more luminance

~ 15 % decreased after 1 year,
stabilized



365 DAYS AFTER IMPLEMENTATION

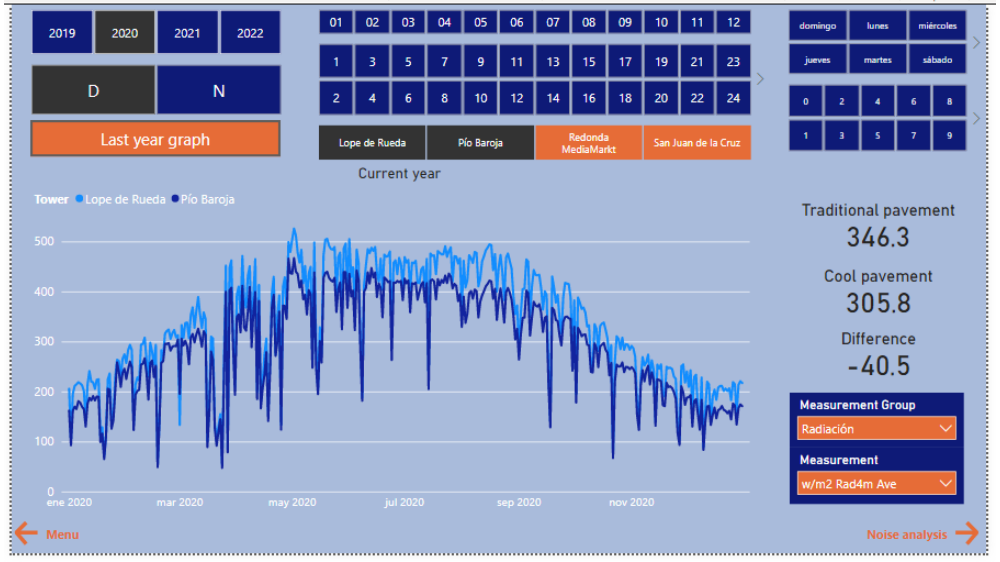
4. RESULTS: BI TOOL



DATA ANALYSIS PROGRAM V1

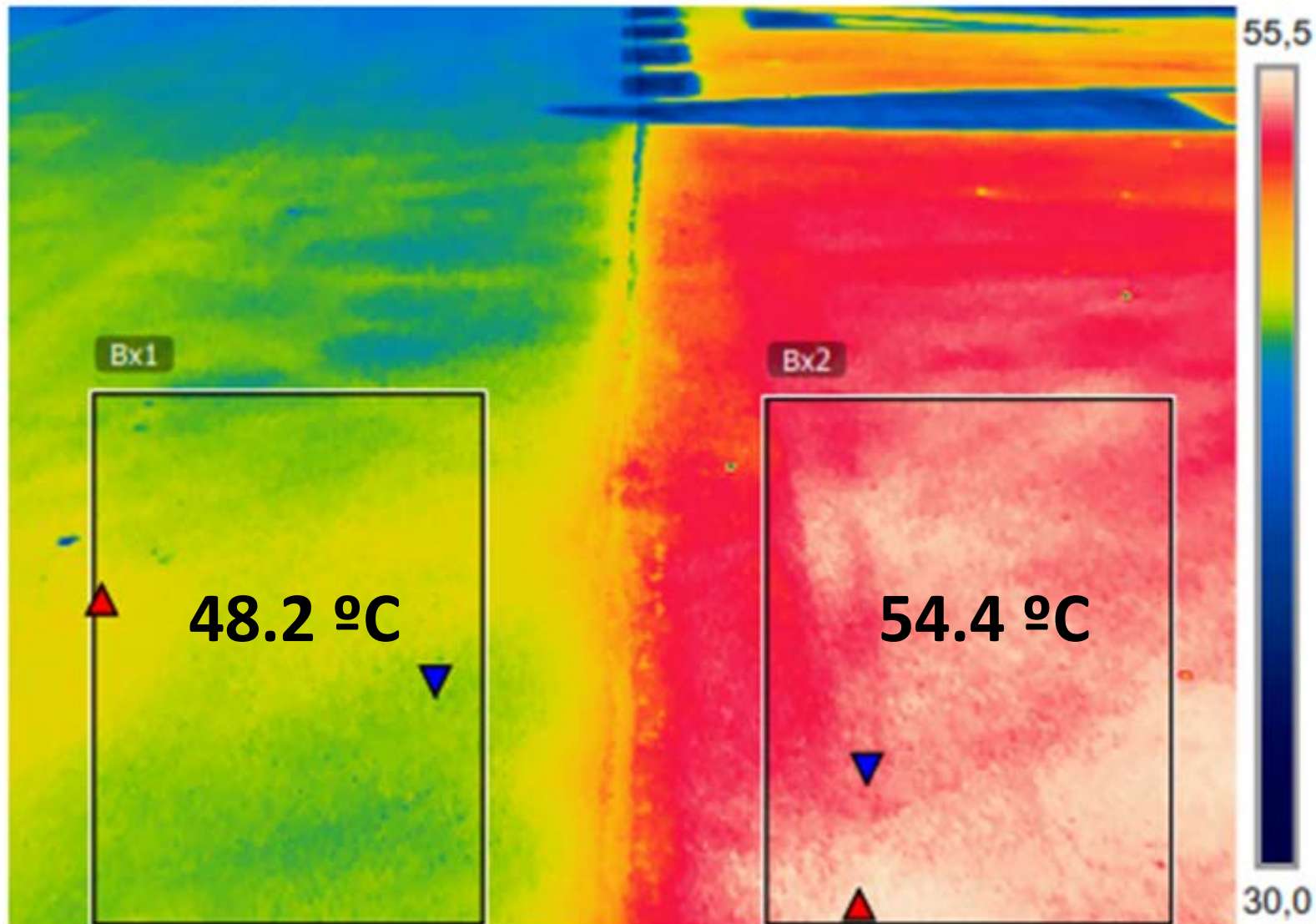
- Normal analysis
- Noise analysis
- Pollutants analysis
- Data export

Project LIFE16 CEA/ES/000077 co-funded by the LIFE Programme of the European Union





4. RESULTS: THERMAL IMPACT



May 6th 2020
6.2 °C difference in the most unfavorable conditions



4. RESULTS: THERMAL IMPACT

CLEAN COOL PAVEMENT

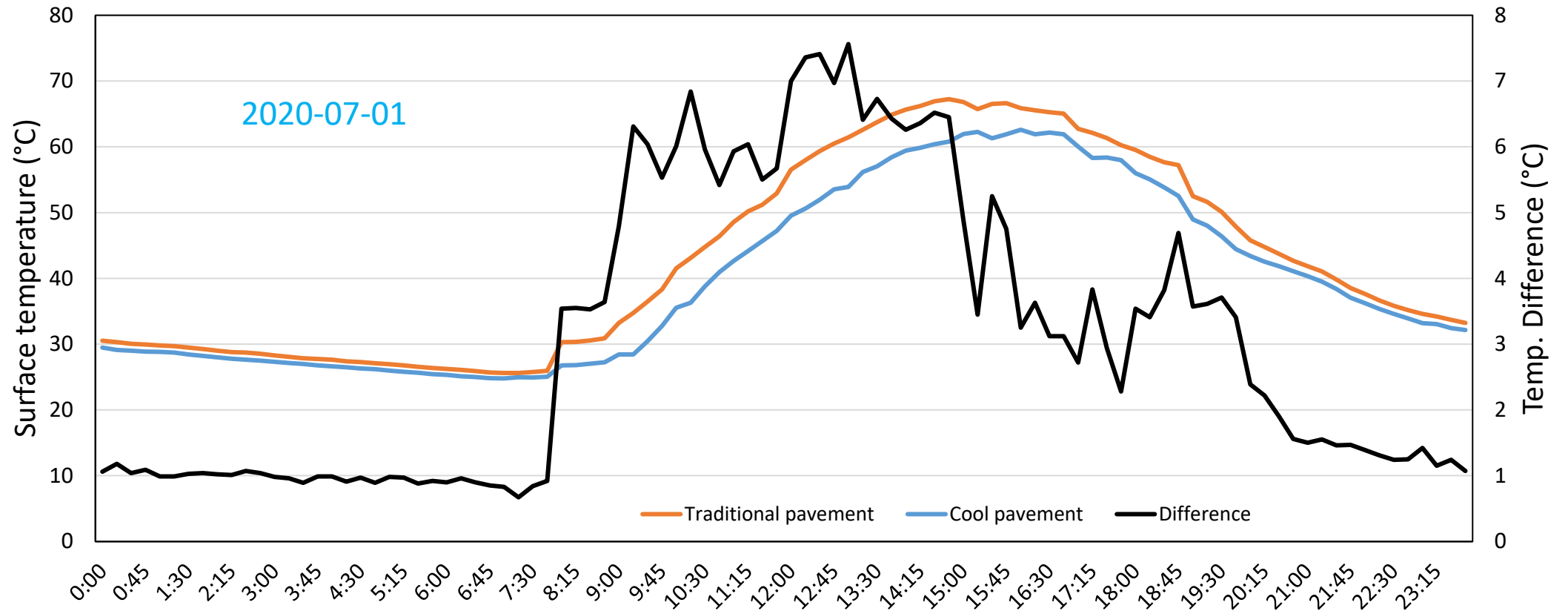
DARK COOL PAVEMENT

TRADITIONAL PAVEMENT

Dark-Clean Temperature Diff = 4.7 °C

Trad-Ccool Temperature Diff = 13.1 °C

4. RESULTS: THERMAL IMPACT



General performance

Surface temperature decreased between 7 °C - 11 °C

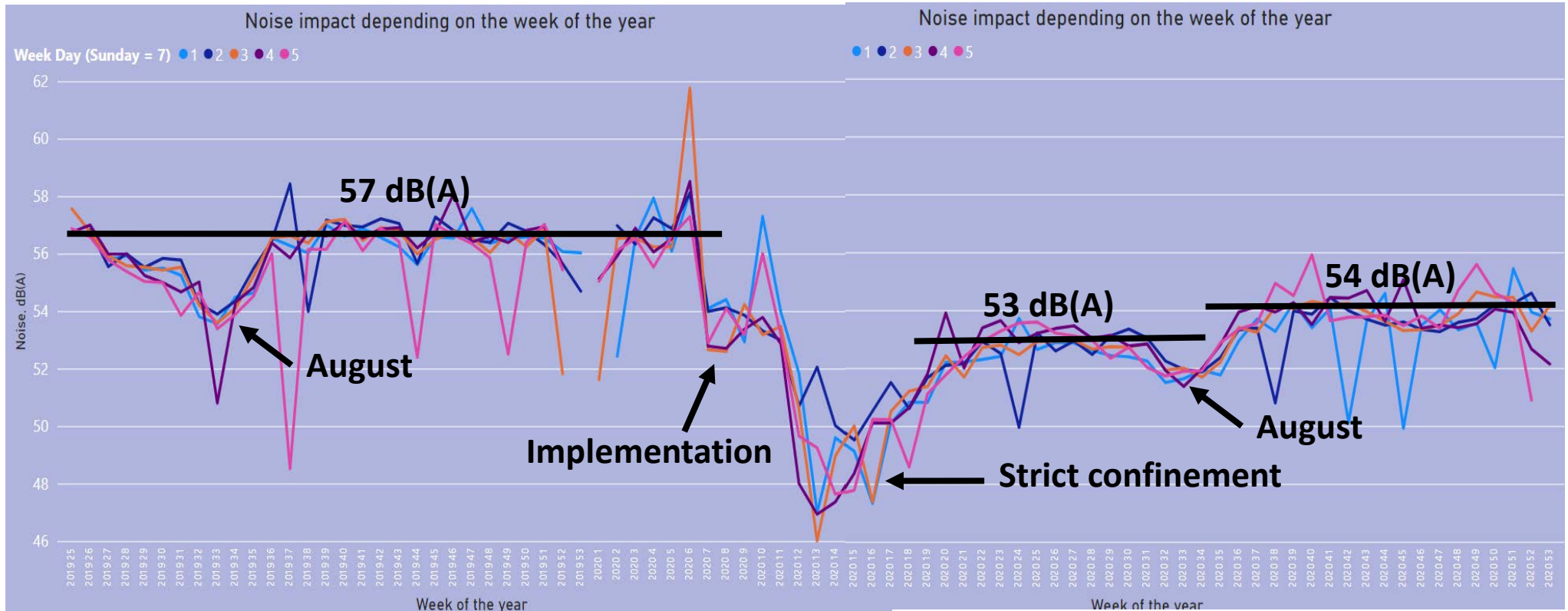
Maximum 15 °C



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4. RESULTS: ACOUSTIC IMPACT

Noise decreased by 3 dB(A)

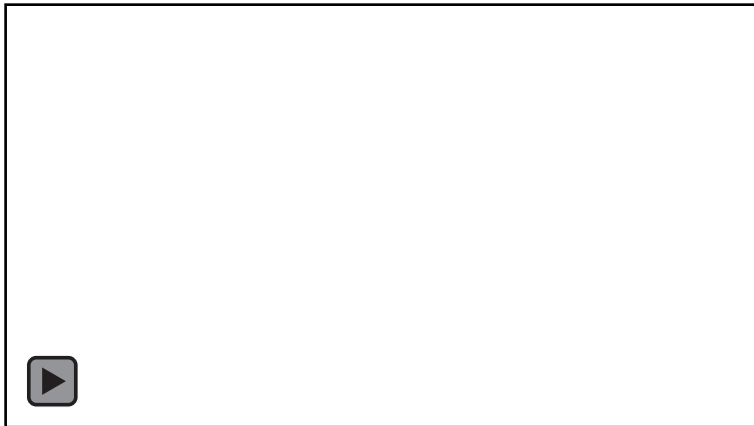


4. RESULTS: ACOUSTIC IMPACT

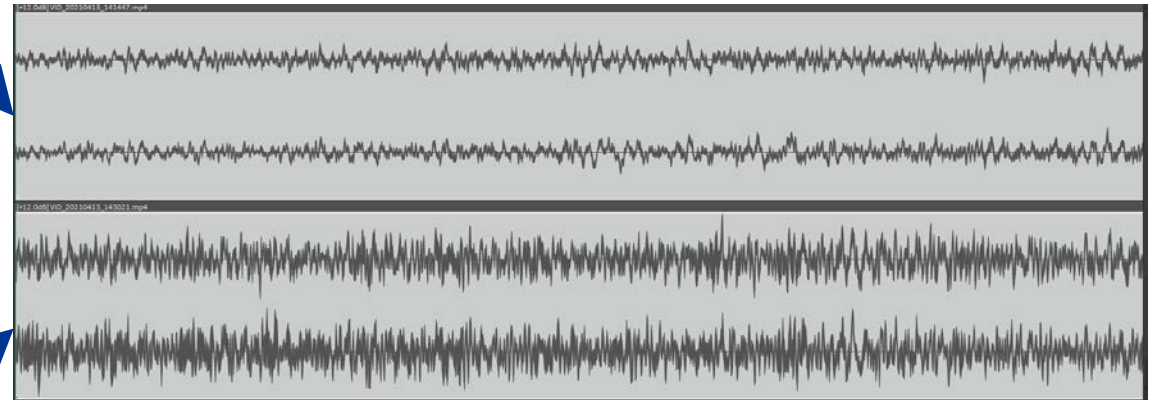


Noise decreased by 3 dB(A)

COOL PAVEMENT



TRADITIONAL PAVEMENT





4. RESULTS: SUMMARY

365 DAYS AFTER IMPLEMENTATION	PRE	POST		
	CONVENTIONAL	CONVENTIONAL	COOL	
AVG DIFFERENCE	-	7 – 11 °C		
MAX DIFFERENCE	-	15 °C		
SOLAR REFLECTANCE	-	8 %	23 %	+ 170 %
LUMINANCE	2 cd/m ²	1 cd/m ²	2 cd/m ²	+ 100 %
SOUND PRESSURE LEVEL	57 dB(A)	54 dB(A)	54 dB(A)	- 3 dB(A)
POLLUTANTS	-	-	-	Not relevant

Update: 2020/03/31



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KEEP IN TOUCH

First workshop of the LIFE HEATLAND project

(First workshop in Spanish but soon more in English)



Preparing our cities for climate challenges
and improving the quality of life.
The role of the European Union as promoter of change.

#EarthDay

22nd april



info@heatlandlife.eu



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<https://www.linkedin.com/company/heatland-life/>

UPCOMING

- Workshops
- Meetings
- Training courses
- Socio-economic study
- Newsletters

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