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Plymouth River Keepers – data driven community action

DATA DRIVEN COMMUNITY ACTION

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Interreg 
France (Channel Manche) England
European Regional Development Fund



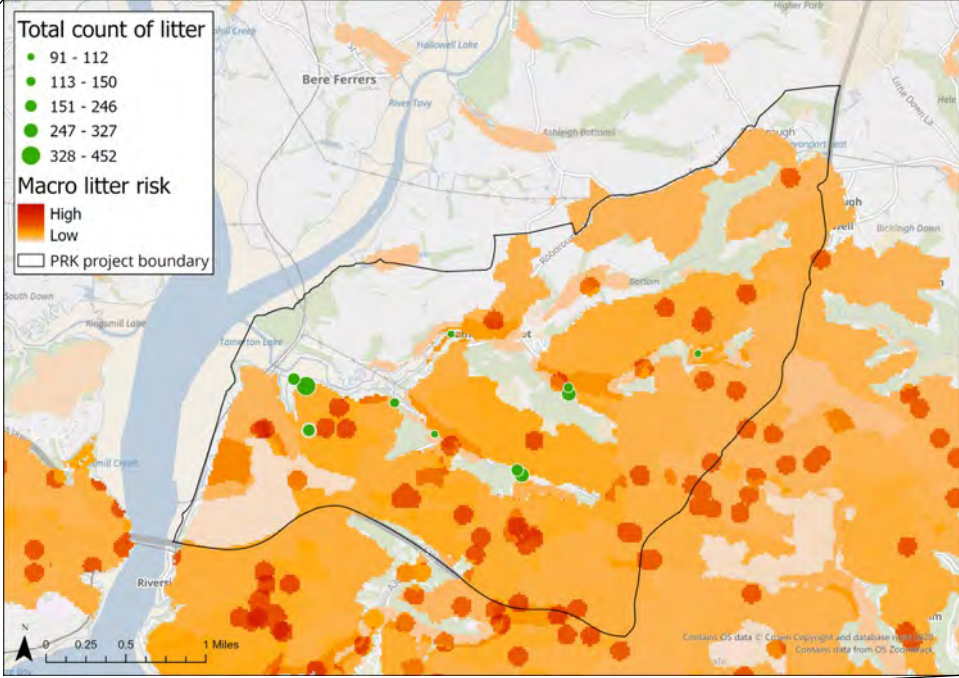
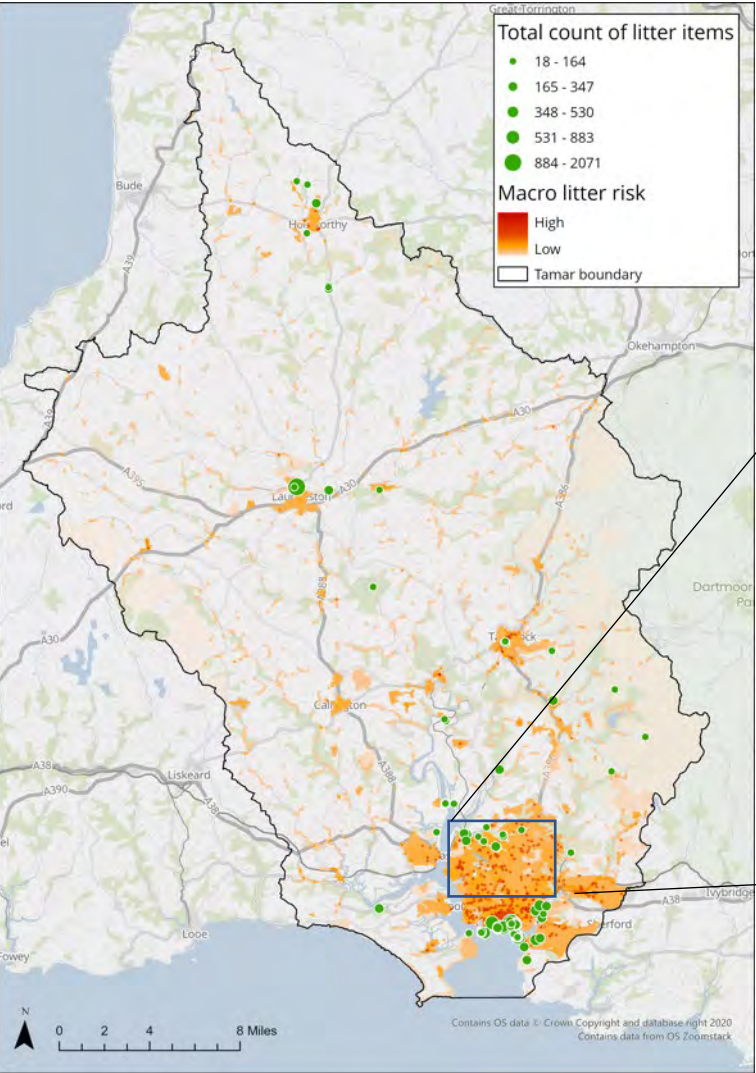
PREVENTING PLASTIC POLLUTION



The Issues



Macro-Plastic Pollution Risk Mapping



Macro-Plastic Litter Surveys



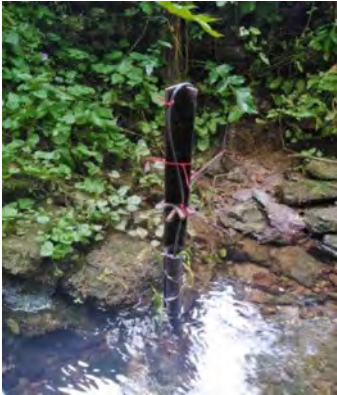
Understanding Water Quality



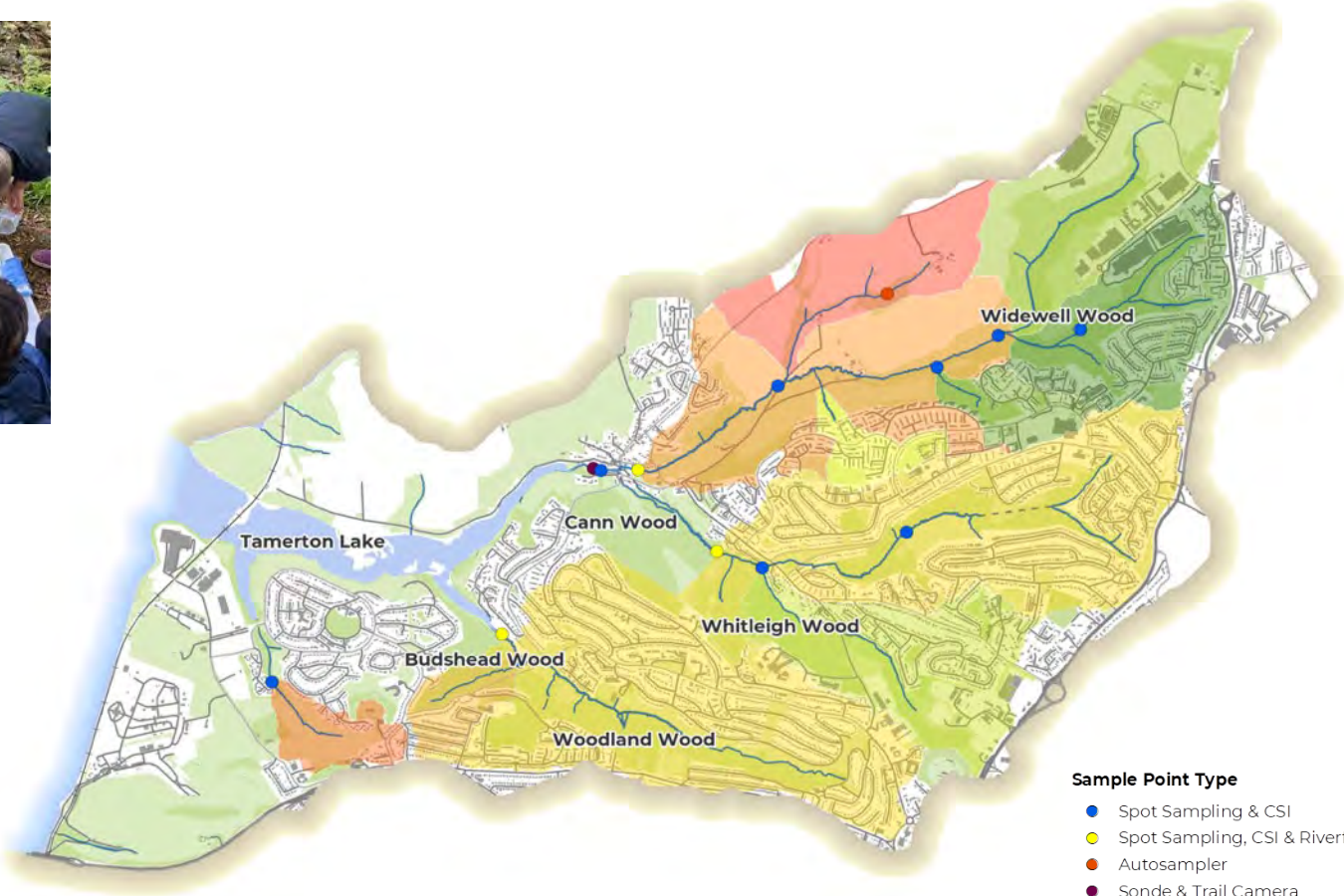
Riverfly



Spot sampling



AT200 probe & trail cam



- Sample Point Type**
- Spot Sampling & CSI
 - Spot Sampling, CSI & Riverfly
 - Autosampler
 - Sonde & Trail Camera

Overall Water Quality Score (November 2020 - October 2021)

Higher water quality

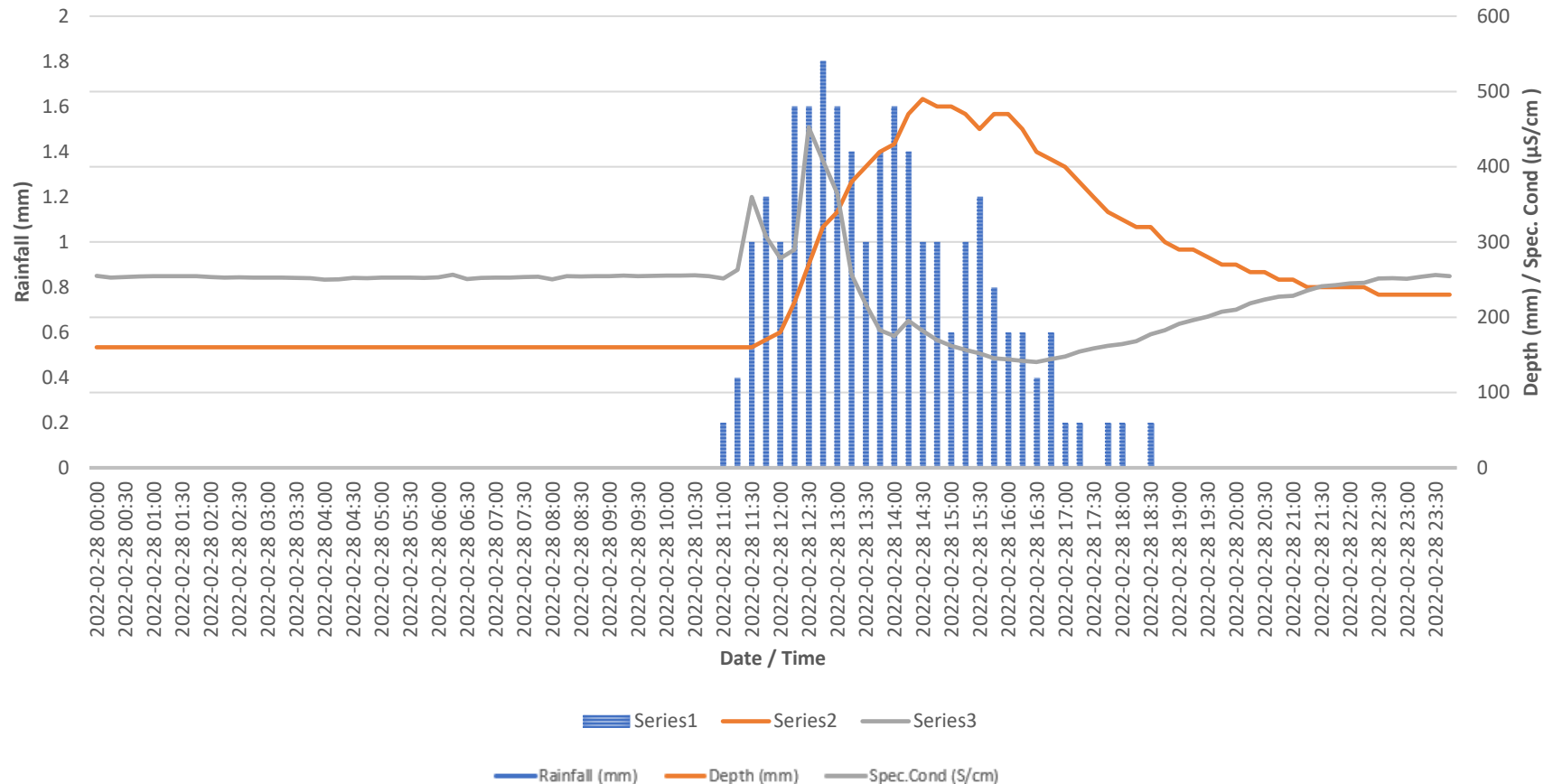
Lower water quality



Westcountry CSI

Run-off Pollution Events – WQ Probe

28th February 2022 Event



Rainfall started on Friday 28th February at 11:00 and continued almost consistently until 18:30 (26mm).

The first rise in specific conductivity was seen at 11:30 to 360.07 µS/cm. The previous reading at 11:15 was 263.22µS/cm.

The specific conductivity peaked at 12:30 at 452.64 µS/cm.

Spring tides were on Sunday 20th February and Saturday 5th March. On 28th February high tide was at 03:46 (4.96m) and 16.27 (4.93m).

Trail camera photographs for this time period are on the following slide.

Run-off Pollution Events – Trailcam

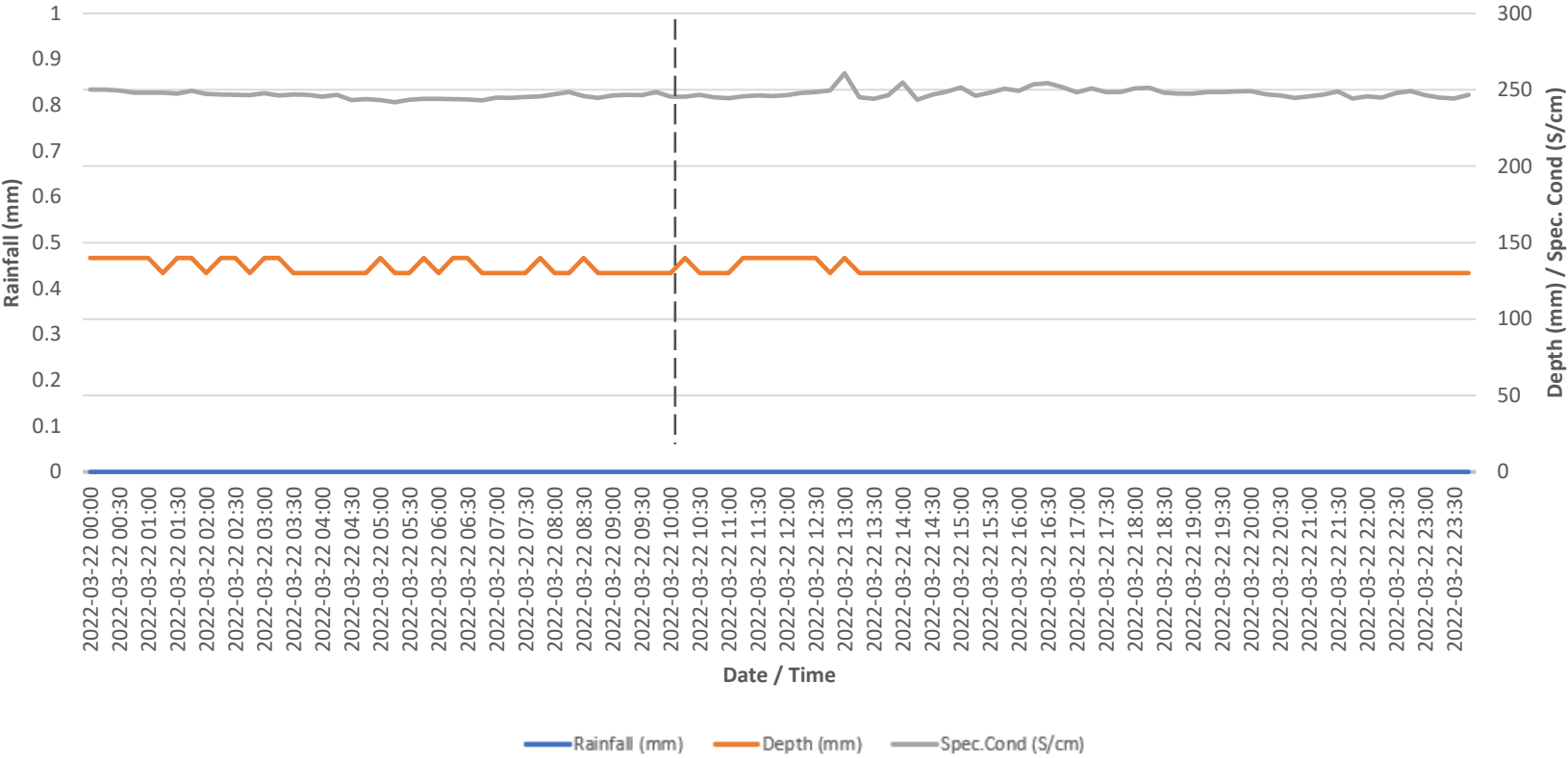


28th February 2022 Event



Other Pollution Events

22nd March 2022 Event



This graph shows data from 22nd March when there was no rainfall event and no notable changes in conductivity.

However, the trail cam showed a plume of grey-ish water passing through at around 10:15 am, marked on the graph by the dotted line.

Other Pollution Events



10:00 – Water is clear



10:15 – Water is cloudy

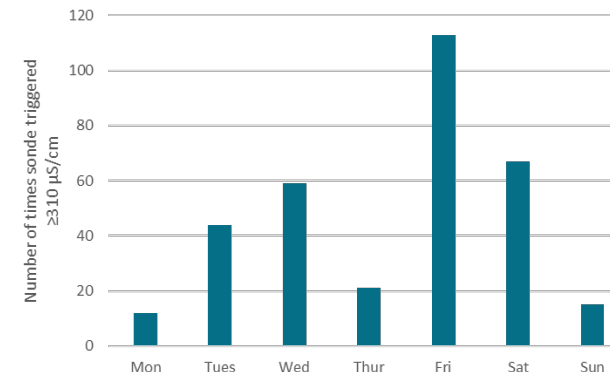


10:30 – Water is clear

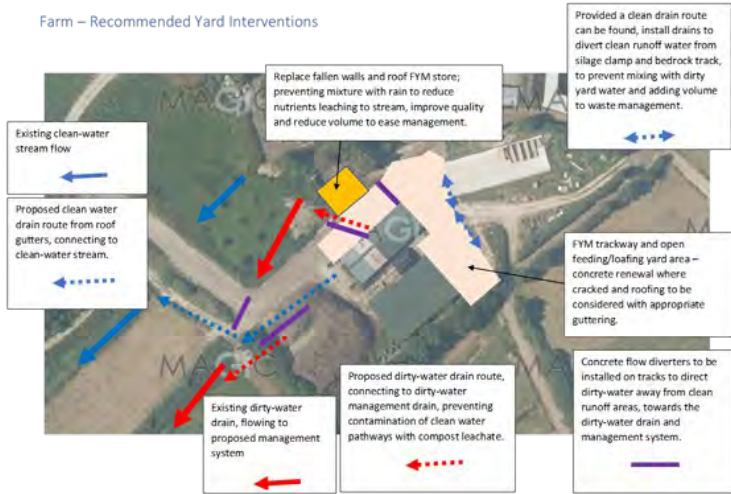
Weekend Issues?

Day	Number of times sonde triggered $\geq 310 \mu\text{S/cm}$	% of times sonde triggered $\geq 310 \mu\text{S/cm}$	Number of days sonde triggered $\geq 310 \mu\text{S/cm}$	% of days sonde triggered $\geq 310 \mu\text{S/cm}$	Number of rain incidents (15 minute Crownhill data)	% of rain incidents (15 minute Crownhill data)
Monday	12	3.63%	3	10.71%	300	15.05%
Tuesday	44	13.29%	4	14.29%	252	12.64%
Wednesday	59	17.83%	2	7.14%	254	12.75%
Thursday	21	6.34%	5	17.86%	338	16.97%
Friday	113	34.14%	4	14.29%	256	12.34%
Saturday	67	20.24%	7	25.00%	329	16.51%
Sunday	15	4.53%	3	10.71%	274	13.75%
Total	331	100.00%	28	100.00%	1993	100.00%

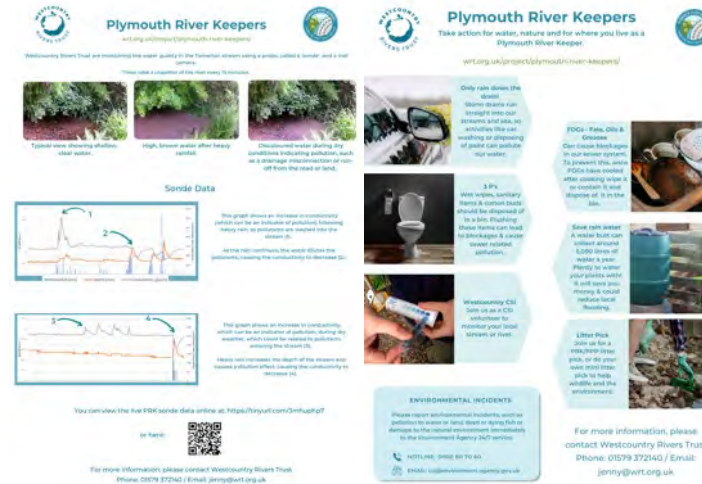
- Conductivity spiked $\geq 310 \mu\text{S/cm}$ most frequently on Friday and Saturday
- However, this was not statistically significantly different to any other day of the week



Community Action



- Farm works:
- Yard improvements for clean and dirty water separation
- Farm waste management
- Land management advice to reduce runoff



Plymouth River Keepers
Take action for water, nature and for where you live as a Plymouth River Keeper.

Water Quality
Monitoring River Trust are monitoring the water quality in the Tamar catchment using a probe called a Sonde, and a data logger.

Sonde Data
The graph shows an increase in conductivity, which can be an indicator of pollution, during the winter, which may be caused by pollution from the road or land.

Environmental Incidents
Please report environmental incidents, such as pollution to water or litter, or anything that is a danger to the environment immediately to the Environment Agency (EA) on 0300 505050.

For more information, please contact Westcountry Rivers Trust
Phone: 01579 372140 / Email: jenny@wrt.org.uk

- Community action:
- River clean-up events
- Westcountry CSI
- Behavior change – FOGS, misconnections, rainwater harvesting.
- Advocacy



Our CHARTER for CHANGE

THIS BUSINESS IS PREVENTING PLASTIC POLLUTION

WE ARE WORKING TOWARDS REDUCING OUR OWN USE OF PLASTIC BY:

- 1 Recycling and reusing more of our plastic rather than letting it become waste and employing alternatives if necessary.
- 2 Working with others to raise awareness and tackle the plastic already blighting our environment.
- 3 Encouraging positive behaviour change and sharing best practice and learning.
- 4 Eliminating one or more items of single-use plastic from our everyday use.
- 5 Making sure plastic does not enter our environment as litter and so reducing the impact on habitats, ocean life and climate change.

We confirm our commitment to free the Tamar Catchment from the impacts of avoidable and unnecessary plastic.

Join us!

For more info, please visit wrt.org.uk/projects/your-business-engagement/ or email Party@partymart.org.uk

For their commitment to reduce Single Use Plastic. DATE: _____

Interreg France | Centre | England | PREVENTING PLASTIC POLLUTION

- Business engagement:
- Plastic Charter for Change
- Plastic waste audit
- Misconnections

Thank You



wrt.org.uk

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