Cornish
Plastic Pollution
Coalition

The power of the network

Cornwall Wildlife Trust **Isles of Scilly Wildlife Trust**
Surfers Against Sewage National Trust (in Cornwall)
RSPB SouthWest Clean Cornwall **Friends of Fowey Estuary**
Friends of Portheras Cove **Widemouth Task Force**
Helford VMCA **Newquay Marine Group**
Rame Peninsula Beach Care **Looe VMCA**
Cornwall Seal Group Research Trust
Cornish Seal Sanctuary Polzeath BeachCare **Fishing for Litter SW**
Transition Falmouth **St Agnes VMCA** West Cornwall FoE
Transition Truro **Truro Cathedral** Refresh Porthleven
Newquay Crab Newquay Sea Safaris and Fishing
2 Minute Beach Clean **Atlantic Diving**
Prof. Richard Thompson (Plymouth Uni Marine Sciences Dept)
Prof. Brendan J. Godley, Chair in Conservation Science, Exeter University (Penryn)
Fathoms Free Crackington Crew **The Final Straw**
Capturing our Coast **Friends of Polurrian Beach**
Exeter and Falmouth Student's Union **Truro Green Street Volunteers**
British Divers Marine Life Rescue Friends of Poldhu
Falmouth Marine Conservation Gp **Sustainable St Agnes**
Love Porthreath Lizard Peninsula FoE
Mounts Bay Marine Group **The Plastic Movement**

Cornish Plastic Pollution Coalition

Terms of Reference

- to raise awareness of the issue of marine litter and plastic pollution around our coastline by working with community groups, interested schools, and other organisations who wish to engage with the CPPC;

- to informally improve information exchange and coordination between organisations and volunteers involved in marine litter and plastic pollution in Cornwall;

- to specifically highlight the issue of balloon debris in Cornwall;

- to raise the issue of marine litter and plastic pollution with identified businesses and organisations and try to persuade them to change their practices to more environmentally friendly methods / products.

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Strength in the Collaborative Voice

Successes to date:

Pirate FM	Whitbread PLC
Mount's Bay	Limerick FM
Rotary Club	Domino's Pizza
Age Concern	Aspects
Exeter	Holidays
NHS Organ	Harry Ramsdens
Donation	Fishermen's
CEX	Mission

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The 100% Biodegradable fallacy….

Balloon industry claim latex balloons are 100% biodegradable and degrade in 6 months ……

'Like an oak leaf'

We would challenge this claim.

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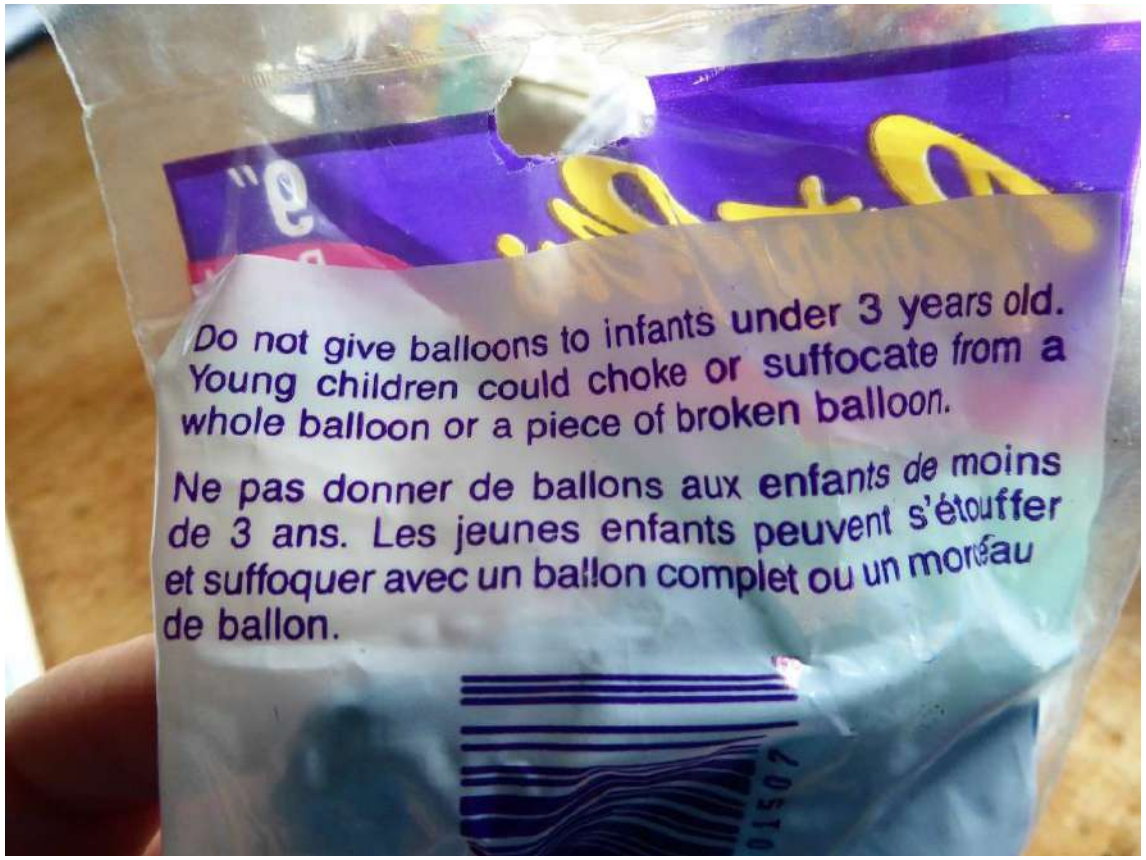
Latex Biodegradability

- 28 year old research study by Burchette in 1989 only conducted trials for a period of six weeks, the rest was supposition.
- Rate of breakdown is reduced in marine environment (low temp, low oxygen, high salinity).
- Rate of breakdown is further reduced by chemical or biological fouling (Andrady, 2000), and encrustation with marine life (e.g. barnacles & seaweeds).
- A Dutch report, (Boukris et al 2016) looked at how long latex balloons may last in a range of environments, with and without oxygen. Results showed that under natural conditions, with oxygen available, complete biodegradation in freshwater and sea water takes approximately two, and two to five years, respectively.

February 2018 – CPPC contacted by Mr George Oustayiannis Chair of NABAS (National Association of Balloon Artists and Suppliers)



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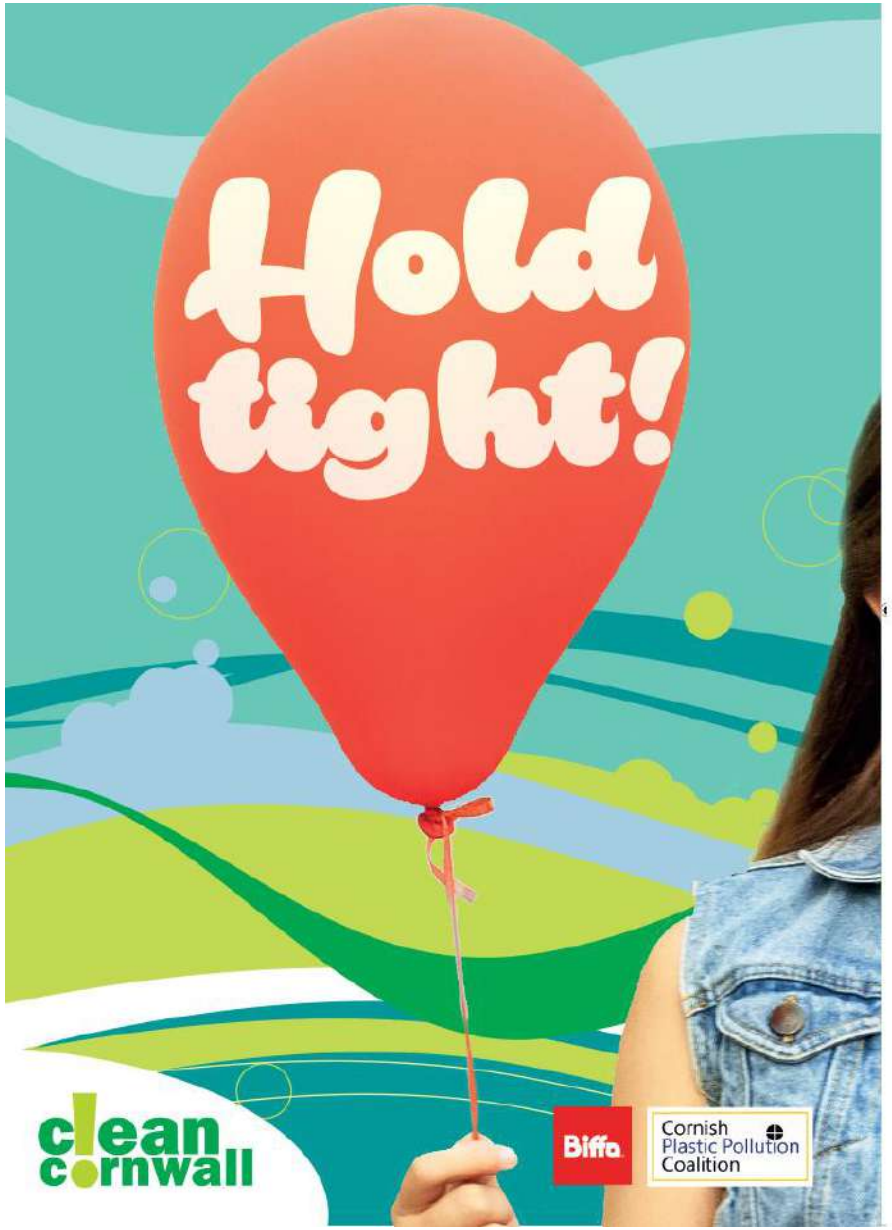
Education Work



This month, in partnership with

clean cornwall

Biffa

The CPPC has launched a FREE education resource pack with everything groups of 5-11 year olds need to learn about and take action against balloon litter, and competition to design graphics for a BIFFA lorry.

www.cleancornwall.org/holdtight

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Plastiglomerates

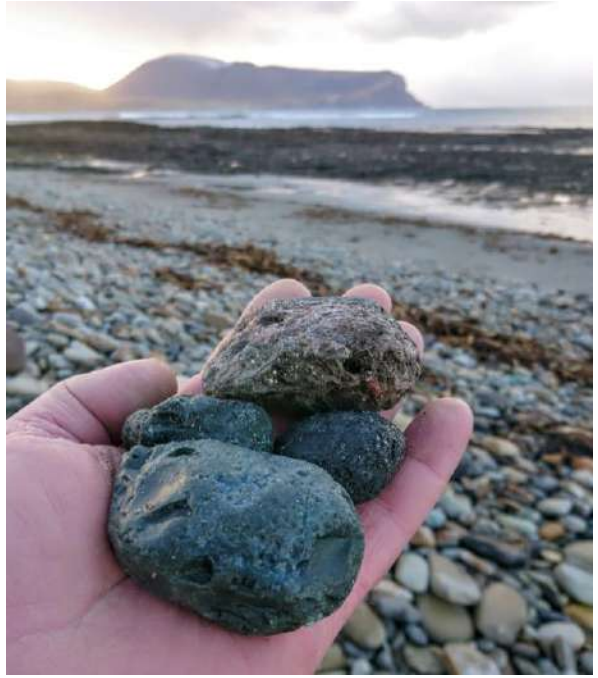
"A marker horizon for human pollution"

Patricia Corcoran, Charles Moore, Kelly Jazvac, Geological Society of America June 2014

- First identified by Dr Patricia Corcoran (University of Western Ontario, Canada) in 2014
- Initial studies were based on specimens from Kamilo Beach, Hawaii
- Formed from incinerated plastic mixing with sediments and other organic materials
- Agglutination of other materials into the molten plastic affects overall density – and buoyancy.

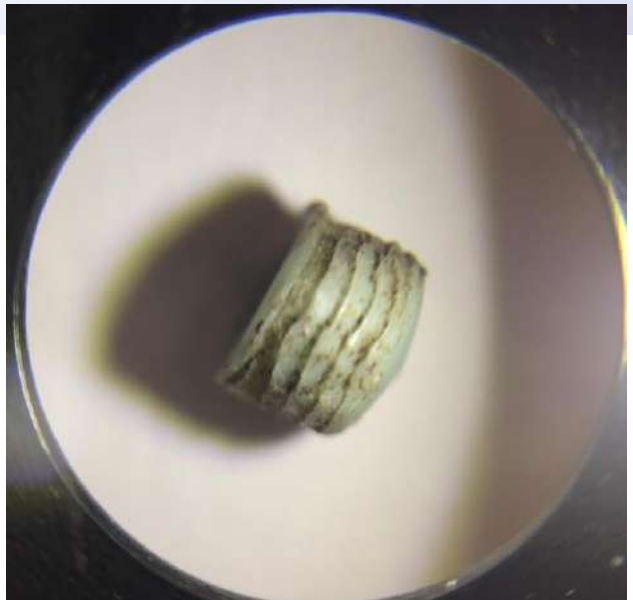
Cornwall

Marazion (South Coast)
Whitsand Bay (South Coast)
Perranporth (North Coast)
Port Gaverne (North coast)
Widemouth Bay (North Coast)



UK and Beyond….

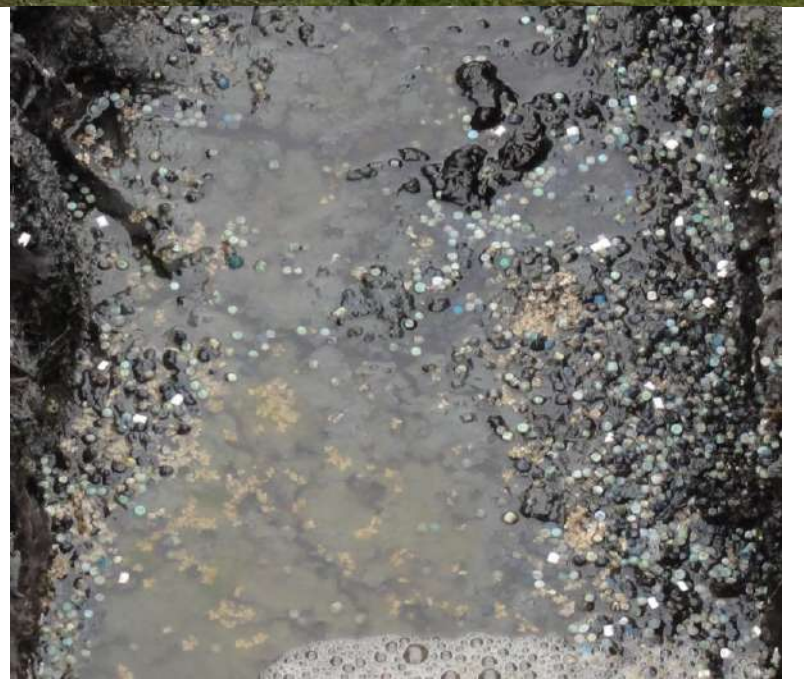
Orkney
Guernsey
Pembrokshire
South Wales
Dorset
Instow Beach, Devon
Vancover Island, Canada
SW Ireland
Azores
Spain/Portugal
Kauia, Hawaii



SWW uses biobeads at 9 out of 650 plants (but serving one-eighth of regional population). Used at 46 other plants in the UK. The scale is enormous.

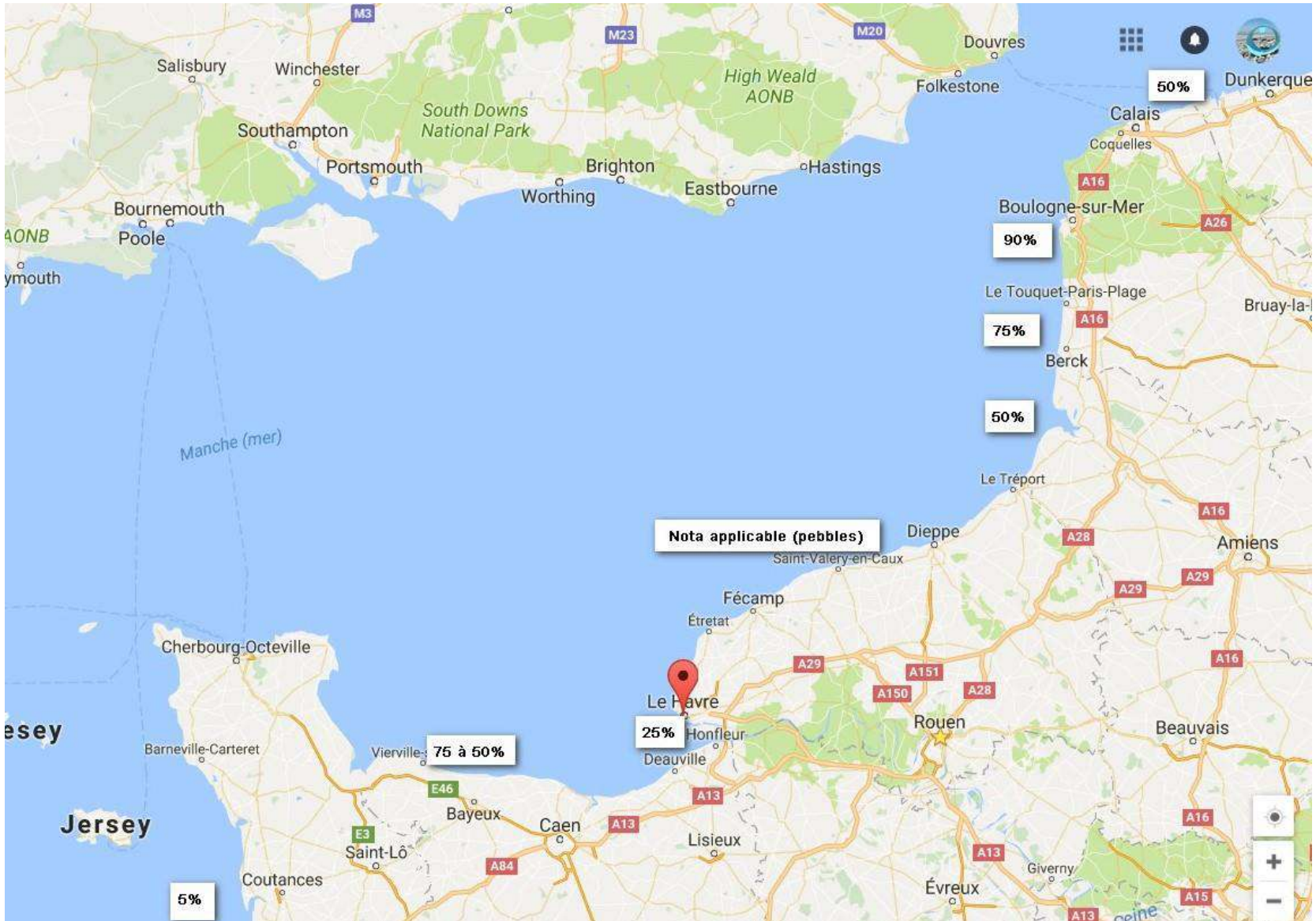
Ongoing losses

Bad housekeeping



Catastrophic spills

Modbury 2009 / Truro 2010….



Thanks to Rob Arnold and his microplastics separation machine…

… we have removed about 10 million pellets and hundreds of thousands of pieces of other microplastics in just 5 sessions in one year on Tregantle beach!

Over 50% of the pellets have consistently been biobeads

A similar picture in many other parts of Cornwall


HUMAN SIZE
COMPARISON
FULMAR

Biobead pollution on our beaches.

What we know so far…

A Cornish Plastic Pollution Coalition report

September 2017

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Plastics

Sewage plants are leaking millions of tiny plastic beads into Britain's seas

The plastic beads used for filtering sewage are hard to spot and pose a risk to wildlife, according to a new report

Matthew Taylor

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SWW: 'All spills have been cleaned up, no biobeads are being lost to the environment'

'No evidence that these aren't just regular recycled plastic pellets'

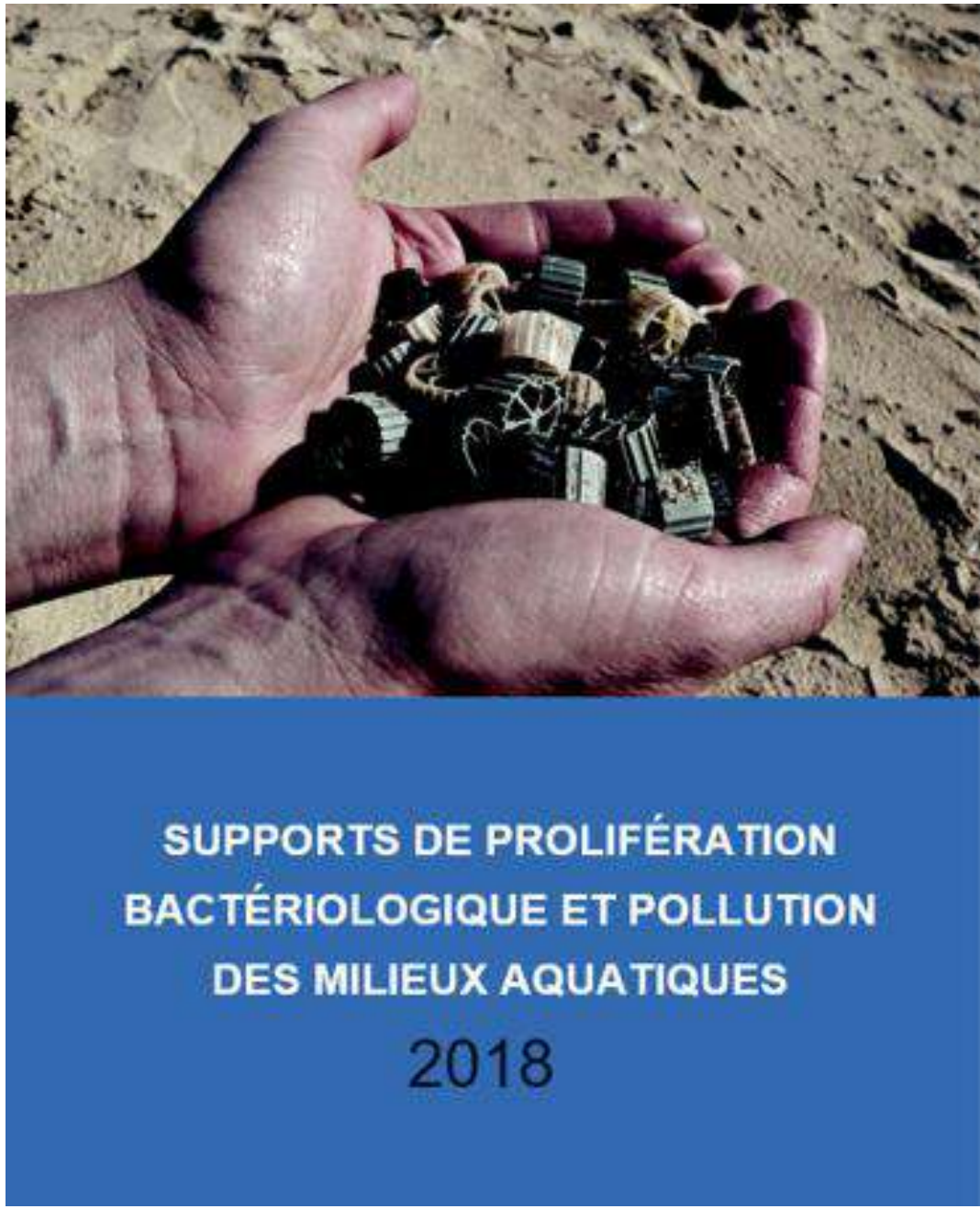
- Plastics industry expert identification
- International Pellet Watch - comparative analysis of biobeads and nurdles taken from same 1m2 area of Tregantle beach
- PCB concentrations similar between pellets (69 ng/g) and biobeads (42 ng/g) (light to moderate pollution).
- Much higher concentration of 16 polycyclic aromatic hydrocarbons (PAHs) – 3 to 4 times higher in biobeads (929 ng/g) than pellets (283 ng/g).
- PAHs are derived from petroleum and petroleum products – exposure to street runoff water in sewage treatment plants.
- Conclusion – (1) biobeads were lost from wastewater treatment plants (not from container ship spills) and (2) are not regular recycled plastic pellets, as SWW has previously suggested

Collaboration locally and further afield…

Ongoing communication and information exchange with Fidra (Great Nurdle Hunt) and UK Pellet Loss Coalition

Presentation in Brussels to European Commission workshop developing EU strategy on microplastics

Contribution of a chapter to the Surfrider Foundation report on biomedia pollution across Europe – soon available in English



Results so far….

- Thanks to the CPPC member organisations who got out on beaches and riverbanks to provide samples and put their names to the report
- SWW actions – working group, improved storage, some test filters installed, technical standard for staff and contractors, possible external auditing.
- EA are investigating this significant contributor to microplastic pollution
- BUT… we want to see a mechanism to trap lost beads – this is the final stage before effluent is discharged to the environment
- Still much we don’t know – alternative sources? Please send sightings!

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Social Media

Cornish Plastic Pollution Coalition
URL @Yourshoreplastic

@Cornish_PPC

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