

# More Positive Action for a Cleaner Solway

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## Final Report

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Figure 1: More Positive Action for a Cleaner Solway results

## INTRODUCTION

The broad aim of the More Positive Action for a Cleaner Solway Project was to build on the previous Positive Action for a Cleaner Solway project to engage with a wider audience and encourage positive action contributing to over 200 miles of cleaner coast in Dumfries and Galloway. The project was supported by the Scottish Government's Marine Fund Scotland.

The objectives of the project were to:

- Remove waste from the marine environment with volunteers.
- Improve data collection of marine litter removed by volunteers and analyse data to understand type and sources of marine litter.
- Collect and analyse data impacts of beach clean volunteering by individuals.
- Survey coast to monitor change since SCRAPbook survey 2018 – 2019.
- Raise awareness of marine environmental issues with beach clean campaigns to inspire action and a better understanding of waste sources.
- Stage further Solway Hoard from the Plastic Age exhibitions aimed both at local communities and visitors to the area.
- Develop a mobile Solway Hoard from the Plastic Age mobile exhibition for use at workshops and educational sessions.



Figure 2: Beach clean, Mac-can, Cairndoon

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*“First time beach cleaning – a real eye opener”*

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## REMOVE MARINE & COASTAL WASTE WITH VOLUNTEER GROUPS AND IMPROVE DATA COLLECTION.

*Environment Focussed Outcomes (Criteria 3B: Reduce, recycle, reuse waste products)*

*Social Focussed Outcomes (Criteria 4B Developing & improving community)*



Figure 3: Beach clean, Eco Warriors, Southernness

Solway Firth Partnership (SFP) worked with existing volunteer and community groups to provide practical support and equipment, promote their beach cleans, work on access arrangements, advise on fundraising, and gather data (number of volunteers / amount of litter collected / length of beach cleaned). Skips were provided for groups where particularly large quantities of marine litter needed to be collected.

These and other beach cleans have been publicised through a diary in the home page of the Solway Firth Partnership website. Three groups have been helped to set up their own space within this calendar of events. Beach cleans are also mapped on an interactive map <https://www.solwayfirthpartnership.co.uk/environment/beach-clean-map-2/>. This map has been refined to provide information of areas recently cleaned as well as providing information about volunteer effort and data on what has been collected.

Volunteer groups involved and their beach cleans promoted included Captain Paul Watson Foundation, D&G College, D&G Eco Warriors, Kirkcudbright canoe club, Mac-can, Nith Inshore Rescue, ONUS SW Scotland, Rotary clubs, RSPB Mersehead, Wigtown Bay Rowing Club and WWT Caerlaverock beach clean groups, as well as one corporate event.

Volunteer group beach cleans supported or attended by SFP include events at Auchenmalg, Cairndoon, Float Bay, Glencaple, Isle of Whithorn, Larbrax, Mersehead, Monreith, Newbie, Port Logan, Port William, Powillimount, Rascarrel, Sandeel Bay, Sandhead, Southernness and Stranraer.



Figure 4: Where litter comes from and what happens next, Whithorn

Actions such as providing refreshments for those taking part in beach cleans greatly help to increase the positive social aspects of the events. These have been appreciated by all taking part. The attendance of SFP staff at events has strengthened links with beach cleaning groups and allowed them to discuss their need, frustrations and aspirations.

Beach cleaners have been involved in discussing where litter comes from and what happens to the waste they collect. Collaboration with local fishermen, harbour masters, Dumfries & Galloway Council waste department and private waste contractors have all been very positive. Although only at the discussion stage, it is hoped that a trial of separating litter materials can be taken forward to provide circular economy options for the waste recovered from the coast. This has been an empowering experience for all those involved.

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*“It was very interesting, lots to think about too .... about how we can all do better.”*

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**During the 10-month project, 49 beach cleans were undertaken by organised groups in Dumfries and Galloway involving 1,216 volunteer hours (608 volunteers x 2 hours).**

**Debris removed from beaches weighed 5,681kg.**

**Length of beach cleaned 36km (22.3 miles).**

An average of 157kg per km was removed (the density of debris on individual cleans ranged enormously - from 3,260kg to 10kg per km).

Further details on beach cleans can be found in [Appendix 1](#)

## COLLECT AND ANALYSE DATA ON PLASTIC POLLUTION.

*Social Focussed Outcomes (Criteria 4A: Measurable social benefits)*



Figure 5: SFP conference display – where does marine litter come from?

The effort put into beach cleaning in Dumfries and Galloway in the 2023/4 project was similar to the previous PACS project (49 / 45 beach cleans, 608 / 613 volunteers, 22.3 miles / 21 miles). However, a much lower weight of debris has been removed (5.6 tonnes / 10 tonnes). With one exception, the previously inaccessible Clanyard Bay, beaches targeted had less debris to be removed. This positive outcome shows that the effort made by volunteers has reduced the amount of marine litter encountered.

[A report \(available online\) identifying the source of debris was produced](#) to help build a picture of the origin of marine litter. Most identifiable items were drinks containers such as milk bottles and bottled water. Many of these originate from Ireland, although the recently implemented bottle return scheme will hopefully have a positive impact. Creel fishing parts from N. America provide evidence of debris travelling long distances, include top entrances from Florida, ownership tags (North Carolina), buoys (Massachusetts), escape hatches (Maine) and bait jars (Nova Scotia).

We used questionnaires to collect data on what motivated both individuals and groups to clean beaches and its effect on their health and well-being and community cohesion. This is summarised in a report ([Appendix 2](#)). Engaging with individual beach cleaners proved a difficult task. Anecdotal evidence suggested that many individuals/couples undertake beach cleans during regular walks. In depth conversations with 5 individuals was used to compliment the surveys. The evaluation showed that almost all volunteers are motivated by the desire to improve the health of the environment. However, other top reasons for taking part were supporting and being part of a local community, getting outside and improving mental health and relaxation. Over 80% found beach cleans a fulfilling activity and it allows them to make a positive contribution to the wider community (90%). Compared to those beach cleaning in organised events those who clean as individuals are less motivated by meeting up with friends or meeting new people whilst they are more likely to be using it to keep active. Although most (83%) felt useful this was not reflected in their optimism for the future.

## SURVEY COAST TO MONITOR CHANGE

*Environment Focussed Outcomes (Criteria 1A: Innovative techniques)*



Figure 6: Drone image of Slouchnamorrach Bay

During 2018, the SCRAPbook Project took action to map and monitor litter on Scotland's coast. Aerial photography collected by light aircraft allowed us to find large items of litter on our rugged coasts and produced a 'snapshot' of macro litter distribution. It highlighted the problem of larger commercial fishing debris such as fishboxes as well as historic litter sinks consisting of dense accumulations of debris collecting in remote locations. These marine litter sinks are the buildup of buoyant plastics driven by winds, tides and currents into south-west facing gullies, bays and beaches. Groups of beach clean volunteers, with encouragement of Solway Firth Partnership, targeted many of the beaches where marine litter had accumulated. Debris removed by volunteers is usually taken by the Local Authority to be repurposed in the Ecodeco plant.

Five beaches were selected to be revisited and drone images taken to compare the past survey result with current amounts of debris. Many of the historic litter sinks have been successfully tackled by volunteer groups and can be cleaned when debris builds up. Other litter sinks remain difficult to access and continued partnership working with volunteers, Local Authority and land managers will be required to find solutions. Most south-west facing bays will require continued cleans to remove plastics that wash up.

A separate Beach Survey Report has been produced and is available on the [website](#).

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*"ONUS did a huge clean at Port Gill a while back and I'm pleased to say it still looks not too bad. Plenty of small bits but not the hellish state it was."*

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## RAISE AWARENESS WITH BEACH CLEAN CAMPAIGNS

*Social Focussed Outcomes (Criteria 4B: Developing and improving community)*



Figure 7: Lobster Pot Luck event, Whithorn

A range of organised events have helped unite communities, improve ocean literacy, given an understanding of the problems faced and a pride in the environment. Positive stories have appeared on SFP social media including Facebook page, Instagram, Twitter and LinkedIn, website news and e-newsletters. Features appeared in the Winter 2023 and Spring 2024 editions SFP Tidelines magazine also available on the website. SFP attended local events to promote beach cleans including Newton Stewart Green Fayre, Stranraer Oyster festival and the Wild Goose Festival in Dumfries.

SFP continued its role as 'project client' along with Dumfries Devorgilla Rotary Club and Glasgow University Waste Stories for the visual communication students at Dumfries and Galloway College, Dumfries. After taking part in a beach clean and Waste Stories workshop they develop stories inspired by beach plastics for an animation project.

SFP organised a visit for beach cleaners to the Local Authority Ecodeco repurposing plant in Dumfries to see what happens to marine litter. The visit raised many questions and conversations are being held to find positive solutions so that beach clean plastics being reused or recycled rather than repurposed for fuel.

In partnership with D&G Climate Hub a 'Lobster Pot Luck' was held in Whithorn to engage with beach cleaners and launch a project to return creel parts for reuse by local fishers.

In partnership with Dumfries Devorgilla Rotary Club and Dumfries Galloway College a Reduce – Reuse – Replace Plastics conference was held with speakers showcasing initiatives within Dumfries and Galloway to reduce plastic pollution and showcase students work.

## STAGE FURTHER SOLWAY HOARD EXHIBITIONS

*Environment Focussed Outcomes (Criteria 1A: Innovative techniques; Criteria 3B: Reduce, recycle, reuse waste products)*



Figure 8: Solway Hoard from the Plastic Age exhibition, Gracefield, Dumfries.

The Solway Hoard from the Plastic Age exhibition and accompanying booklet offers a fresh perspective on the future of plastic and the careless use of a material that is so useful to us today but litters our shoreline. Designed by Museums of the FutureNow, the exhibition first held at Kirkcudbright Galleries consisted of panels and artefacts in cabinets as if in a museum 1,000 years in the future and received many positive reviews. The touring exhibition was subsequently staged at three venues across the region appearing at Gracefield Arts Centre in Dumfries (22<sup>nd</sup> Aug – 2<sup>nd</sup> Sept 2023), Devil’s Porridge Museum in Gretna (2<sup>nd</sup> Oct – 11<sup>th</sup> Dec 2023) and Creative Stranraer Hub (18<sup>th</sup> Jan – 3<sup>rd</sup> Feb 2024). The Solway Hoard exhibition was promoted through printed fliers and posters, social media and online FOCUS arts magazine.

The exhibition artefacts and booklet are available on the Solway Hoard webpage hosted by Museums of the FutureNow. <https://museumsofthefuturenow.org/the-solway-hoard/>

Interest in holding the exhibition in venues further afield was beyond the geographical remit of SFP. To enable the exhibition to reach wider audiences the responsibility for the display has been passed to EcoArt Charity who has been successful in securing support for the touring exhibition to continue beyond the current project. East Lothian Council will host the exhibition at Dunbar for six weeks and it will then be staged at the Fisheries Museum in Anstruther.

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*“Thought provoking and emotive exhibition. Brilliantly done.”*

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## DEVELOP A MOBILE SOLWAY HOARD EXHIBITION

*Environment Focussed Outcomes (Criteria 1A: Innovative techniques; Criteria 3B: Reduce, recycle, reuse waste products)*



Figure 9: Mobile hoard exhibition at Storytelling for the Planet event

SFP and Glasgow University Waste Stories developed the concept of the Solway Hoard and developed this approach to create a mobile display case as a resource to help us take a fresh look at the role plastic plays in our everyday lives and why it ends up on our beaches.

Waste Stories workshops facilitated by Anna Wilson from Glasgow University occurred at a variety of venues. They were held at Devil's Porridge Museum in Eastriggs (19<sup>th</sup> October 2023), Solway Firth Partnership Conference in Carlisle (17<sup>th</sup> November 2023), Better Lives Partnership in Stranraer (25<sup>th</sup> January 2024), D&G College in Dumfries (1<sup>st</sup> February 2024) and Lobster Pot Luck event in Whithorn (9<sup>th</sup> March 2024).

The mobile hoard exhibition was also used for workshops facilitated by Mónica Ramírez López from Devil's Porridge Museum at a Storytelling for the Planet event delivered by the Natural History Museum in partnership with National Museums Scotland and Museums Galleries Scotland.

SFP continues to provide their beach cleaning *Solway Sea Chest Resource Box* with activity booklets and this year more books for teachers were added to the boxes. These resource boxes have been used at 3 events as well as by 2 organisations working with schools and youth groups, by D&G college, 3 secondary schools, and 10 primary schools. There have been recent requests for boxes from 2 schools and 2 organisations. Currently 10 boxes are out on loan.

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*“The Waste Stories workshop was the most fun and practical .... loved it!”*

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## PROJECT SUMMARY

*(Criteria 5: Quality Projects) Economic Focused Outcomes (Criteria 1B: Economic Benefits)*

SFP has successfully collaborated with beach clean groups to remove marine debris, gather data, and worked with partners to promote positive action by volunteers and raise awareness of plastic pollution. Building new relationships and strengthening existing partnerships has benefitted the project with everyone involved having incredibly encouraging responses. In many instances we managed to expand the planned experiences achieving additional constructive and collaborative outcomes.

All of the project activities add value to the region as a visitor destination and have a positive contribution to the economy. The Solway Hoard touring exhibition will now go on to promote the region around the rest of Scotland.

## FUTURE PROJECTS?



Figure 10: Beach clean volunteers visit Ecodeco plant, Dumfries

Future projects will build on the achievements of More Positive Action for a Cleaner Solway. Future activities include:

- Strengthen partnership working with volunteer groups by encouraging them to tackle difficult to reach beaches and assist in finding solutions to overcome physical and logistical barriers.
- Assist beach clean groups by providing advice, resources and training.
- Raise awareness and facilitate partnership between coastal communities, volunteers, Local Authority, land managers and businesses to improve marine waste management.
- Monitor beaches where historic litter sinks have been removed and encourage beach clean volunteers to revisit with when debris begins to build up.
- Promote the value of clean beaches including a Good Beach & Marine Litter Guide.
- Develop events and resources to improve understanding of the link between climate change and marine debris and explore place-based resilience needs.

## APPENDIX 1

- Beach Clean Activity Data

Date of clean	Place of clean	Group	Vols	Bags	Kg	Length cleaned (m)	Density kg/km	Record
08/05/23	Portyerrock	Rowing club	18	12	60	1000	0.06	FB
12/05/23	Clanyard	ONUS	17	skip	1630	500	3.26	FB
04/06/23	Port Logan	ONUS	12	8	40	700	0.05	FB
10/06/23	Isle of Whithorn	Rowing club	8	5	25	500	0.05	FB
12/06/23	Borness Bay	Kbt canoe club	11	15	75	800	0.09	FB
17/06/23	Cockleshore	ONUS	12	7	35	500	0.07	FB
11/07/23	Abbeyburnfoot	Ecowarriors	8	5	25	600	0.04	FB
28/07/23	Isle of Whithorn	Rowing club	6	1	5	500	0.01	FB
13/08/23	Monreith	Maccan	19	9	45	700	0.06	FB
25/08/23	Isle of Whithorn	Rowing club	4	1	5	500	0.01	FB
27/08/23	Port Logan	ONUS	9	9	45	900	0.05	FB
10/09/23	Isle of Whithorn	Rowing club	4	1	5	500	0.01	FB
10/09/23	Larbrax	ONUS	5	8	40	800	0.05	FB
24/09/23	Calliness	ONUS	2	1	5	300	0.02	FB
25/09/23	Mersehead	RSPB vols	35	15	75	1500	0.05	FB
01/10/23	Southerness	Ecowarriors	12	15	75	1350	0.0	FB
07/10/23	Isle of Whithorn	Rowing club	3	1	5	500	0.01	FB
08/10/23	Float Bay	ONUS	10	25	125	500	0.25	FB
22/10/23	Isle of Whithorn	Rowing club	7	1	5	500	0.01	FB
28/10/23	Powillemount	Supercontrol	13	3	15	300	0.05	Photo
30/10/23	Rascarrel	Ecowarriors	17	skip	360	1400	0.25	FB
05/11/23	Cockleshore	ONUS	16	9	45	1200	0.03	FB
19/11/23	Port William	Capt Paul Watson	20	15	75	700	0.18	FB
20/11/23	Isle of Whithorn	Rowing club	7	1	5	500	0.01	FB
02/12/23	Cairndoon	Maccan	22	skip	720	700	1.02	FB
12/12/23	Mersehead	RSPB volunteers	13	5	25	1500	0.02	FB
04/01/24	Isle of Whithorn	Rowing club	10	2	10	500	0.02	FB
07/01/24	Stranraer	ONUS	17	4	20	900	0.02	FB
18/01/24	Newbie	D&G College	8	12	60	1200	0.05	Photo
28/01/24	Port Logan	ONUS	16	24	120	900	0.13	FB
28/01/24	Southerness	Ecowarriors	25	20	100	1200	0.08	FB
02/02/24	Monreith	Capt Paul Watson	9		42	700	0.06	FB
02/02/24	Sandhead	ONUS	20	14	70	200	0.35	FB
04/02/24	Port William	Capt Paul Watson	11		31	700	0.04	FB
18/02/24	Sandeel Bay	ONUS	17	15	75	400	0.18	FB
03/03/24	Float	ONUS	20	30	150	500	0.3	FB

05/03/24	Auchenmalg	Capt Paul Watson	12		158	500	0.3	FB
08/03/24	Caerlaverock	Corporate volunteers	18	skip	270	1000	0.27	email
12/03/24	Caerlaverock	WWT	11	skip	150	1000	0.15	photo
16/03/24	Isle of Whithorn	Rowing club	5	1	5	500	0.01	FB
17/03/24	Glencaple	Nith Inshore	14	skip	340	1000	0.34	FB
17/03/24	Larbrax	ONUS	17	13	65	800	0.08	FB
19/03/24	Mersehead	RSPB vols	7	10	50	500	0.1	FB
20/03/24	Isle of Whithorn	Rowing club	9	7	35	700	0.05	FB
22/03/24	Ardwell	ONUS	5	5	25	500	0.05	FB
23/03/24	Carsethorn	Community Dev	12	12	60	800	0.07	FB
24/03/24	Port Logan	ONUS	13	30	150	900	0.16	FB
26/03/24	Mersehead	RSPB volunteers	8	16	80	500	0.16	email
31/03/24	Powillemount	Ecowarriors	25	9	45	600	0.07	photo
<b>TOTALS</b>			<b>608</b>		<b>5681kg (5.681 tonne)</b>	<b>36km</b>	<b>157kg/km for whole project</b>	

APPENDIX 2

# Volunteer Beach Cleaning Survey Report

- Beach Clean Volunteer Health & Well-being Questionnaire Data

March 2024

## Methodology

Beach clean surveys were carried out using both paper surveys and an online survey. Paper copies were given out at beach cleans, as well as to known individuals who undertake solo cleans. The online version was available on the Solway Firth Partnership website and was promoted through social media.

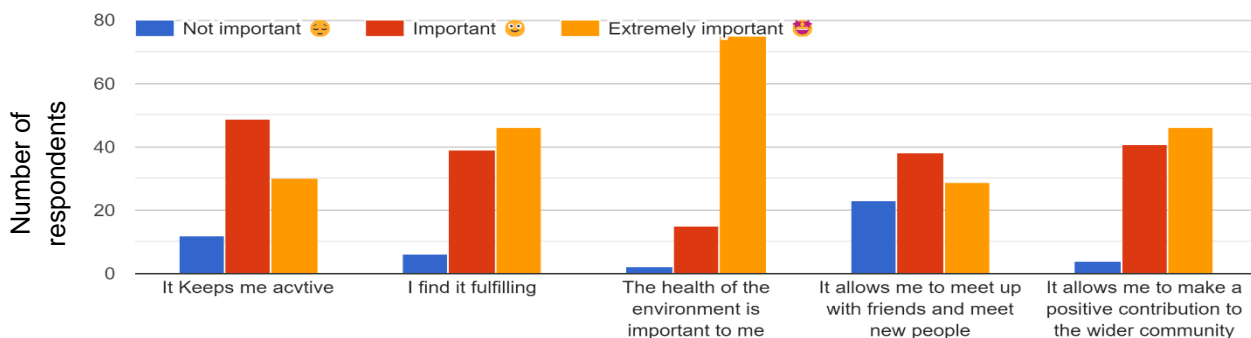
In addition, more in depth conversations were held with five local individuals and one family of tourist who carry out solo beach cleaning.

*It gets me outside – I feel so much better feeling I am doing something to support our local community.*

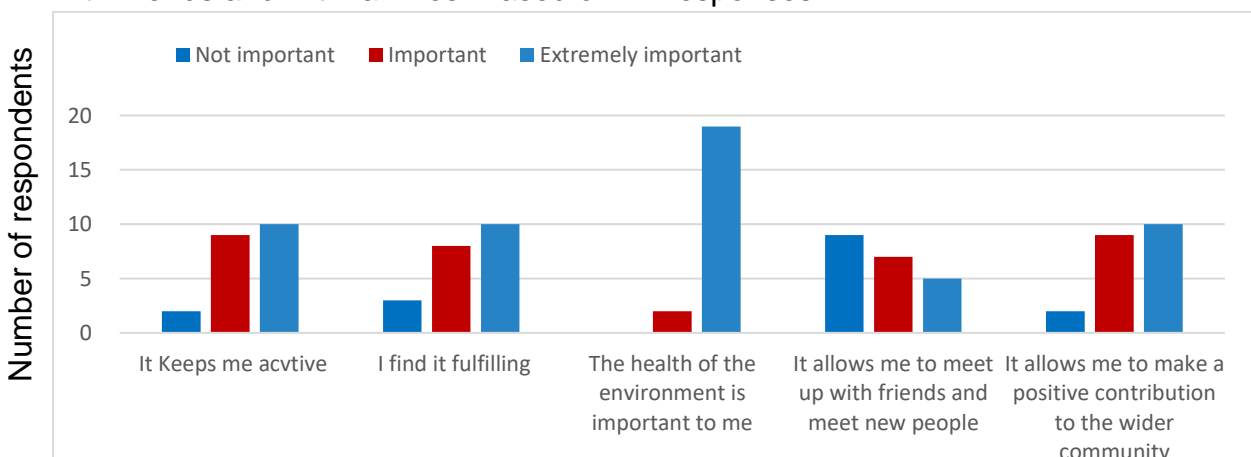
## Results

The following data is based on 95 responses from a range of beach cleaners including organised cleans, school and college students, community groups and individuals and families.

What factors are important in your decision to keep taking part in beach cleans?



Factors that are important for those that take part in beach cleans as individuals or with friends and with families. Based on 21 responses.

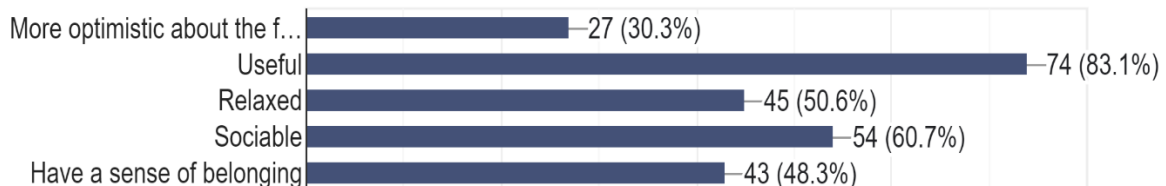


This would appear to show that compared to those beach cleaning in organised events either regular or one off those who clean as individuals are less motivate by meeting up with friends or meeting new people whilst they are more likely to be using it to keep active. However, more responses are needed to make statistically valid comparisons.

It can however be seen that in almost all cases the health of the environment is the most important factor for people to undertake beach cleans. Only 2 respondents suggested this was unimportant to them – one who was part of a school group, the other was filled in online and given their other responses it is likely due to user error.

Think back to a recent beach clean. How did you feel at the end? (Tick all that apply)

89 responses



Those who beach cleaned as individuals did not show signs of feeling less sociable than those in groups. Although the data set for this was small no apparent differences could be identified in how those beach cleaning felt at the end.

Other feelings for all those responding included negative feelings such as:

Frustrated/ sad/ depressed/dismayed/ disappointed (7)

Whilst more positive ones were:

Enthused to do it again (3)

Making a difference /knowing we have helped (4)

Part of a group – not just me that cares (3)

A chance to enjoy nature and visit new places (3)

Work with a diverse group of people.

Fulfilled / Energised / Tired but mentally happy.

None of the negative feelings were connected to the activity – they all related to feelings towards those who are the cause of the problem. All those stating these feelings had positive feelings towards the actual beach cleaning activity.

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### *First time beach cleaning – a real eye opener*

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**Reasons to keep taking part in beach cleaning are many and varied but the following themes are the most common:**

1. Doing the “right” thing and making a difference / positive contribution/ net positive impact
2. Protect wildlife
3. Supporting and being part of the local community
4. Get outside onto the coast / in the fresh air with a chance to see wildlife
5. Education for all taking part – making more aware of the problem (plastics / microplastics / need for more recycling)
6. Good for mental health and relaxation
7. Safety for people and dogs
8. Having pride in the local area / hate the look of the mess

## Top 10 items volunteers least liked to find on beach cleans

1. Balloons / curling ribbon/ string (20%)
2. Fishing Gear / ropes / net (18%)
3. Sewage related products (including wet wipes & nappies) (15%)
4. Bottles (14%)
5. All of it (especially single use / disposable items)(10%)
6. Fishing Line (6%)
7. Small bits entangled in the strand line (5%)
8. Barrels & oil containers (4%)
9. Nurdles (3%)
10. Polystyrene (2%)

This year disposable vapes appeared for the first time as a least favourite item found. It was felt by several that the number of plastic bottles being found is reducing.

No significant differences were found between those cleaning as part of groups or on their own for either reasons for taking part or least favourite items.

Five individuals from across the length of the Solway Coast were spoken to about their solo beach cleaning in greater depth. Their experiences highlighted the views expressed in the surveys with their concern for the damage that litter was doing to both the local and wider environment and the damaging effect on wildlife. The view that although the litter itself was depressing the ability to get out and do something about it was very positive both for the environment and their own mental and physical health. Two expressed the view that although they were out on their own it was very sociable as people would stop and chat. This also gave them the opportunity to discuss the problems of ocean plastic with a wide range of individuals.

A family group of tourists were also spoken to in depth. They highlighted the issue that they found it very difficult to locate someplace to dispose of the litter that they had collected. They suggested that there might be some way of working with small local shops to provide litter sacks and a place to leave the rubbish.

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*I just want to keep going picking more litter – it is very addictive!*

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Reviews of social media groups has also shown that people are undertaking significant beach cleaning on their own, as well as with friends and family. This is taking place the entire length of the coast, mostly at popular, easy to access destinations. It has proved particularly useful in beach cleaners being able to highlight potential material that can be re-used by others. This cleaning effort is difficult to quantify as many are cleaning their local area on a daily or weekly basis. It is likely that the positive effect they are having would only be recognised if they were to stop.

We did a clean up at West Tarbet beach on Sunday. Pleasantly surprised by the lack of big stuff but managed 3 bags of the usual small plastics and copious amount of fishing line, hooks, etc. We left the bags beside the bins at the picnic site on Cailiness Road, Drummore. Hopefully the bin men will uplift them on Wednesday. Perhaps someone could let me know if I need to notify them. If so, tel. number would be required please. Thank you.



Facebook Post from a volunteer