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No Môr Plastic: Museum conservation practise supporting youth led museum environmental activism

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Abstract

Plastic pollution has long been a serious environmental issue, but it is only in recent years we have begun to see a rapid rise in public awareness of the environmental challenges of such pollution. Museums can play a key role in raising awareness of such issues by utilising our collections, spaces, and expertise in novel and creative ways to highlight such environmental issues. In this paper it is shown how static gallery spaces can be utilised in a creative and interventive way by a youth engagement project via their close working with museum conservators and technical staff.

Keywords: Plastic pollution; conservation; exhibitions; engagement

Introduction

Plastic pollution is now so extensive it is having global wide impacts. The United Nations Environment Programme estimates that approximately 7 billion of the 9.2 billion tonnes of plastic produced from 1950-2017 has become plastic waste, ending up in landfills or indiscriminately dumped (Geyer, 2020). Such pollution is not only unsightly but now significantly alters biodiversity, habitats, and natural processes, reducing the ability of ecosystems to adapt to climate change directly affecting millions of people's livelihoods, food production capabilities, social well-being, and human health (Rochman *et al.*, 2013; Eriksen *et al.*, 2014; Gall and Thompson, 2015). These impacts are also contributing to the overall emotional effects associated with climate change that are rapidly appearing across society (e.g., Doherty and Clayton, 2011; Schwartz *et al.*, 2022). Whilst such climate anxiety is driving many people into action, others are experiencing inaction or indecision due to the enormity of the

challenge presented by climate change and associated issues. Museums can play a vital role in turning this complex mix of emotions into action and hope (Janes and Grattan, 2019; Sutton, 2020), especially given that museums have a unique place in society and are places trusted by visitors and non-visitors alike (e.g. Dilenschneider, 2020).

Empowering creative youth engagement is increasingly being seen as an important part of supporting the wider engagement of communities across museology and museum outreach in order to drive forward socially engaged museum practice and create a greater societal impact for museums (e.g. Janes and Sandell, 2019). 'No Môr Plastic' (Amgueddfa Cymru, 2018) is a recent example of such a youth led engagement project, led by the Amgueddfa Cymru - Museum Wales Youth Forum (Amgueddfa Cymru, n.d.), and guided by Sarah Younan from the Museum's Learning Department (Younan and Jenkins, 2020). The project focused at



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looking at the challenge of plastic pollution in the marine environment, and how the marine themed galleries and displays at the Museum could be utilised to highlight this issue. The project title 'No Môr Plastic' was developed as a cultural link being derived from a hybrid of the Welsh and English languages, where the word 'môr' means 'sea' in Welsh giving the 'hashtag' title a take that works well in both languages.

The project was also used as a pilot project for a larger initiative developed by Amgueddfa Cymru called 'Hands on Heritage' (Heritage Fund, 2017), which developed a series of youth led community projects and interventions connecting young people with their history and culture, funded via the National Lottery Heritage Fund's "Kick the Dust" initiative to enable youth-led projects in museums. Projects like this also provide new challenges in developing the way we work, especially in the larger museum institutions as such initiatives need to be faster paced and more reactionary than is usually possible with normal work practises. They are thus an important opportunity to reassess current museum practises to help improve participation and engagement through new innovative approaches.

Conservators and curators play a vitally important role in supporting the development and enabling of such activities through their knowledge of the collections, materials, and the collection spaces we work with. Facilitating such projects and interventions can significantly broaden the remit and impact our collections, and associated spaces can make in supporting a wider awareness on social and environmental issues, further increasing the value of museums to society as a whole (e.g., Machin, 2008; Redler, 2009; Knutson *et al.*, 2016).

Development of the Intervention

Initial Concept

The idea for this project arose out of the enhanced public awareness on plastic pollution that followed from the impact of the acclaimed BBC *Blue Planet* documentary series (Males and Van Aelst, 2020). Whilst concerns on the growing issue of plastic pollution have long been around (e.g. see Law, 2017), *Blue Planet* has been found to have had a notable impact on the wider public's perception of this serious and growing environmental issue (Males and Van Aelst, 2020; Dunn *et al.*, 2020). This raised the question - could the existing gallery spaces be used in a way that engaged the public further, potentially evoking positive behaviours in response?

Studies evaluating the psychological effects on people's behaviour in response to such environmental concerns have been made utilising psychological distancing concepts such as Construal Level Theory (Trope and Liberman, 2010). Such methods consider the way in which our mental representations depend on their closeness to our present situation. This theory posits that a psychologically distant object will be construed in an abstract manner (high construal level), whereas a psychologically closer object will be construed in a more concrete manner (low construal level). Construal levels will thus expand and contract depending on a person's mental horizon.

Such principles have been applied to developing a better understanding of psychological distancing in order to promote pro-environmental behaviours especially in relation to major issues such as climate change (e.g., Griffioen *et al.*, 2016). With more definable environmental issues such as plastic pollution, it has been demonstrated how distinct emotional responses to images on plastic pollution can lead to a differential influence on a person's decision making in reducing their plastic consumption, depending on the response initiated such as "disgust" or "sadness" and the message that is linked to it such as "why" or "how" (Septianto and Lee, 2020).

Overall, such studies conclude that people usually perceive higher risks when psychological distance is small, but that the effect of psychological distance on actual intentions and behaviour is much less clear cut. Whilst such psychological evaluations were beyond the scope and resources of this engagement project, the broader principles from such studies influenced the concept of utilising the Museum's gallery spaces as being a potential means of connecting people to the challenges faced from plastic pollution in the marine environment. By using these spaces in an unexpected way, we have an opportunity to re-engage visitors with previously static or unchanging spaces that potentially enables a reduction of the construal levels that brings individuals closer to the issue and allows them to feel more enabled to enact pro-environmental behaviours (e.g., see Wang *et al.*, 2019). Unfortunately evaluating projects such as this for effects such as changes in construal theory levels is usually out of the scope and available resources but would warrant attention in future projects of this type so that we can better understand the true impact of such initiatives.

Reimagining the Gallery Spaces

Amgueddfa Cymru is a large interdisciplinary museum covering a wide diversity of collections areas across seven museum sites and a dedicated collections centre. The National Museum Cardiff site is the primary focus of the Art and Natural Science collections, housing both significant permanent and temporary gallery spaces and collection stores. Within the natural science dedicated galleries are a number of large, open diorama style displays, many of which are themed around the marine environment (Figure 1). These have remained largely unchanged since their creation in the mid-1990s but continue to remain very popular with visitors and staff alike. On occasions these permanent displays are also used in innovative ways to support various museum events and activities, a prime example being the

'Museum of the Unexpected' event (Doyle, 2016) in support of the children's author Ronald Dahl's anniversary where the dioramas were used in quirky, fun, and unexpected ways to support the event (Figure 2).

Such activities formed the basis of the concept of using these diorama display spaces in a more serious way to highlight challenging issues such as plastic pollution. Discussions with colleagues in the Museum's learning team raised the possibility that utilising these spaces to highlight plastic pollution as a museum activism project could be a pilot idea that the Museum's Youth Forum would potentially like to take on board and develop further. The Youth Forum group is an inclusive social space for young people aged 14-26 that meets regularly to engage with museum projects and are encouraged



Figure 1. An example of the marine themed displays used in the intervention. Seashore and sea cliff Diorama (left); the leatherback turtle display (right) © Amgueddfa Cymru

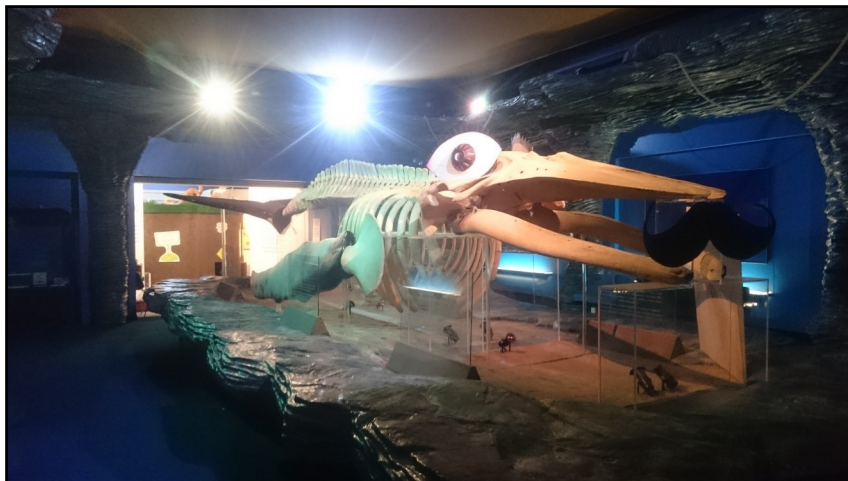


Figure 2: 'Whale with googly eyes and moustache' – dressing up the humpbacked whale skeleton for a 'Museum of the Unexpected' event. © Amgueddfa Cymru

to be partners in decision making and organising activities. The idea was thus presented to the group who responded with great enthusiasm to the concept (Younan and Jenkins, 2020), and from this the idea was embarked upon as a youth led museum activism project.

Museum Conservation Supporting Youth Activism

The Youth Forum wanted to keep with the concept of museums focusing on showing authentic objects and specimens and were keen to use real beach-collected plastic waste to highlight its significant impact on the environment. From the onset of the project the Youth Forum team worked closely with the Natural Science Conservator and other specialist museum staff to explore what the issues would be with the plastic waste and how they could be mitigated so that the beach waste would be safe to handle, enabling it to be used safely in the displays within the Museum's natural science exhibition spaces. Bringing untreated beach waste directly into the museum environment would pose a range of significant issues, particularly around risks to collection care and general health and safety. To enable this idea then a number of challenges had to be considered, such as:

- Storage of the material.
- De-contamination of the plastic waste.
- Removal of hazardous substances and items, such as fishing hooks and syringes from the plastic waste.
- Using waste plastic of different sizes, textures and thickness in the workshops.
- Devising ways of installing plastic in the maritime exhibits that would convey a message to visitors without damaging the displays or present risks to people.

Going through these issues enable protocols to be established that made the use of such plastic waste material feasible within the exhibition spaces. The Youth Forum then reached out to other community groups, particularly 'Surfers Against Sewage' who subsequently worked closely with the Youth Forum to organise plastic waste collections from beach clean ups and shared their hands-on experiences of dealing with the problem of plastic pollution.

The collected plastic waste was then passed through a series of protocols established with the Youth Forum when it arrived at the Museum. This began with the isolation and freeze sterilisation treatment of the material to kill any insect pests using one of the natural science departments dedicated walk-in freezer units. After three weeks in the freezer the material was removed, washed with clean water and detergent, and then dried. The waste was then actively sorted through to remove all the hazardous waste and unpleasant items such as used needles and condoms (Figure 3). All this work was carried out by the Youth Forum with supervision from museum staff.

The cleaning and sorting were a challenging task for youth forum members and the team quickly realised they would need to involve others to be able to move on to the next stages of the project. Additional help was sought from other volunteers and museum assistants which also provided an opportunity to share the project with others across the museum. Going through this process also gave the team involved a practical and positive insight into why museums have to handle collections and materials in the way that we do, preventing insect pests getting into the collections and ensuring no toxic or hazardous materials will affect the collections, displays, or people. Working



Figure 3. Cleaning and sorting the plastic waste.
© Amgueddfa Cymru

through the waste in this way also had a significant impact on the young activists especially around the amount of waste they were handling and the different types of materials in it, such as the excess of small plastic toys or used light sticks.

After the waste had been appropriately treated, cleaned, and sorted the next part of the project was to start devising ways of using this material safely within the exhibition displays that would create the impact the young activists were after using a mix of creativity to make interventions for the exhibition displays from the rubbish, but also to use the rubbish as what it effectively was i.e. as rubbish. The timescale of the project, the large amount of plastic and size of the marine themed displays quickly led the youth forum to realise that they needed further help again in preparing their installations for the galleries from the plastic waste. This provided an opportunity to get further young people and the wider public involved in the project through a series of workshops which included:

- Drop-in workshops for children and parents at the Waterfront Museum in Swansea.
- Targeted workshops with community partners at the National Museum Cardiff.
- Independent off-site workshops by external youth groups, including beach cleans and creative workshops.
- Special needs workshop with Cathays Community Centre Inclusive Youth Provision.
- Individual contributions e.g., stop motion animation by a youth forum member with autism and illustrations by young trans illustration student.

These collaborations had further impact on the young activists as the project progressed as they realised that this material was genuinely going to be used within the Museum's exhibition spaces, and that they were the main drivers and creators of the project giving them a strong sense of ownership and trust with the intervention project (Figure 4).

Finalising the Interventions Design

The project was very much a collaborative effort and roles within the Youth Forum were shared depending on the abilities and talents of those involved. Youth forum members shared what they had produced with each other at their regular meetings and via regular visits to the marine displays to help their ideas take shape and evolve. During these gallery visits they discussed with museum staff the practicalities of installing the intervention, chose spaces for banners and displays, discussed health and safety and risk assessments, and formed a vision of what they wanted their gallery intervention to look like. Such sessions were important because it helped to form a realistic vision of how they were going to do the intervention and how that message would get across to our visitors.

From this a firm plan was drawn up by the Youth Forum, in close collaboration with the Natural Science Conservator and other museum staff, about how the gallery spaces were going to be utilised, and the way all the creative sea creatures and various interventions were going to be pulled together in the various gallery spaces (Figures 5 and 6). In addition, the Youth Forum working closely with their youth engagement coordinator from the Learning department developed their own text and created new videos to be incorporated into the intervention. This enabled them to exhibit further skills and creative talent such as re-imagining aspects of the plastic waste such as the flip flop as some sort of marine creature, with its life history (see figure 6).



Figure 4. Working with the cleaned and sorted plastic waste to create various creative pieces for use in the intervention. © Amgueddfa Cymru

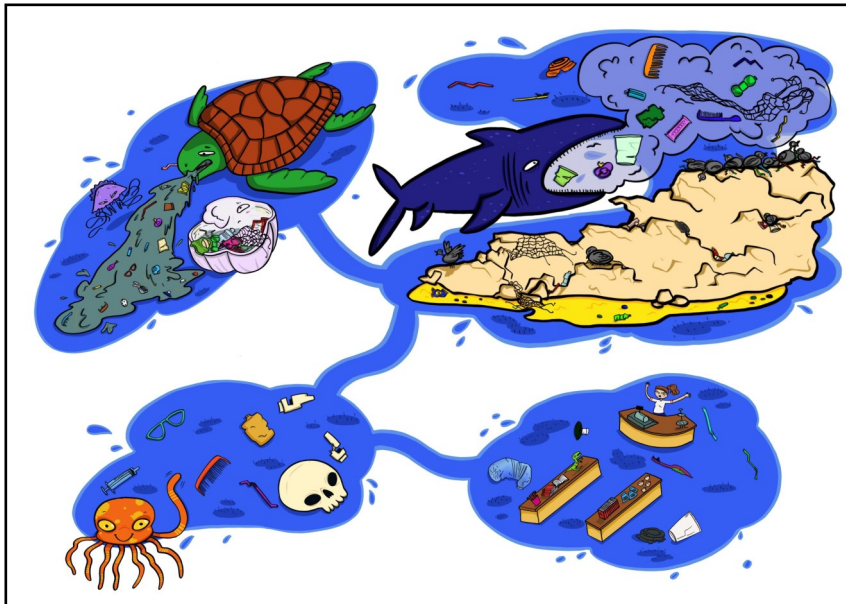


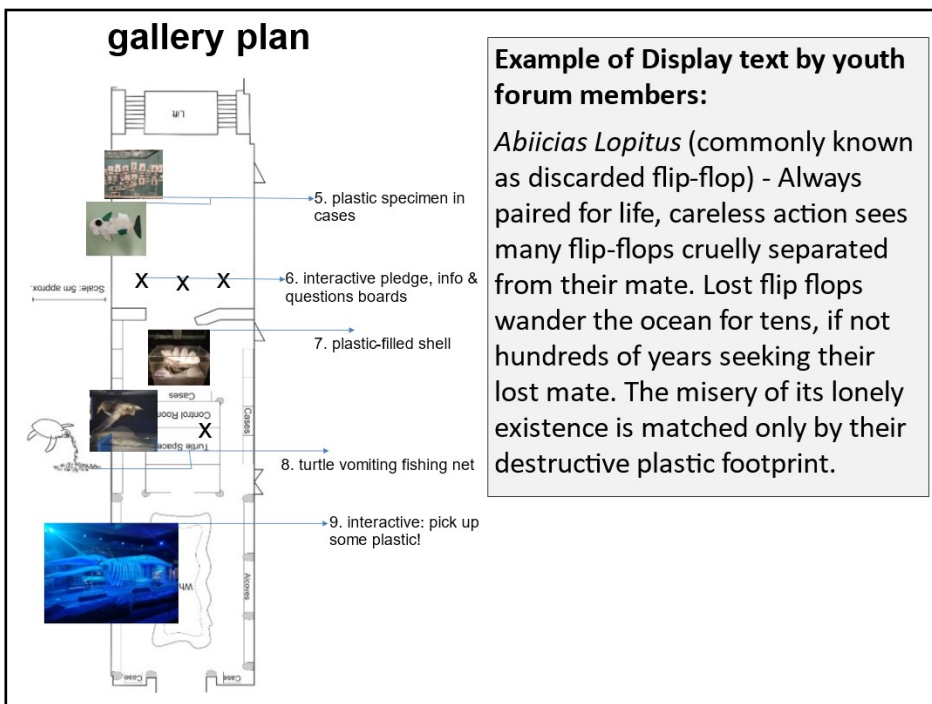
Figure 5. An illustration drawn up by one of the young activists envisioning how all the various activism in this Gallery spaces would be linked together. © Amgueddfa Cymru

Installation

With the mass of rubbish cleaned, treated, turned into numerous creative plastic works, and the design finalised, then the next step was installing the work. Once again, the young activists were very much involved in this process, working closely with specialist staff such as the Natural Science Conservator in enabling the install and arranging the various creations, bringing themed displays together around the dioramas, and scattering the conserved rubbish throughout many of the permanent displays and dioramas (Figure 7). The Youth Forum were supported by the appropriate staff with H&S tasks who used the lift platforms to hang objects from the ceiling and opened display

cases to allow the addition of the rubbish and other creations. Being an active part of the installation process gave the participants both experience and an understanding of the technical side of museum gallery work and the way exhibitions are put together, along with the health and safety issues that need to be considered to ensure we created an impactful but safe intervention for all involved (Figure 8).

The installation process also surprised the young activists around the freedom they were given with the galleries for the intervention. Although the Youth Forum were supervised, this was kept to a minimal level to ensure their activities within the



Example of Display text by youth forum members:

Abiicias Lopitus (commonly known as discarded flip-flop) - Always paired for life, careless action sees many flip-flops cruelly separated from their mate. Lost flip flops wander the ocean for tens, if not hundreds of years seeking their lost mate. The misery of its lonely existence is matched only by their destructive plastic footprint.

Figure 6. Part of the finalised gallery plan with an example of associated display text developed by the youth forum in close collaboration with specialist museum staff such as the Natural Science Conservator. © Amgueddfa Cymru



Figure 7. The young activists took an active part in the gallery install of the intervention, and utilised social media throughout the project to promote their work. © Amgueddfa Cymru

spaces were safe to both themselves and the collections but provided enough freedom for them to make decisions on the various installations. This unprecedented access and trust they were given to intervene and alter the displays had a really positive impact on their own connection with the project and what they were able to achieve, and this was strongly reflected in the comments received for the post intervention evaluation report (Mannay, 2019).

Additional supporting materials were also prepared by the Youth Forum working in close liaison with the Learning team. This included replacing some of the exhibition display videos with animations of their own, and producing pop up banners and display boards introducing the gallery intervention with an explanation of what they had done here working with the actual beach collected plastic, along with the way it had been treated, cleaned, and made safe by working in close liaison with the specialist Natural Science conservator and other colleagues who were supporting them. This brought another window into the behind-the-scenes work of museums that is essential in supporting such outreach activities but often not highlighted. In addition, various social media feeds and blogs were developed to promote and share the intervention project linked by the hashtag #NoMôrPlastic.

national
museum
wales
amgueddfa
cymru

museum activism

safety of participants, volunteers and our collections

The plastic used in this intervention has been cleaned and sorted by the youth forum and museum assistants. Sharps and dangerous substances (such as glow sticks containing corrosive liquids) have been removed. Potentially offensive items (such as syringes and tampon inserters) are not used in public workshops. All plastic has been frozen for two weeks before entering into the gallery environment.

We will work closely with Julian Carter and museum technicians to instruct and supervise installation.



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Figure 8. An example of the materials prepared to introduce what the young activists were doing and why they were doing it that could be shared on social media feeds, on the Museum's website, and as an introduction to the space when the intervention was running. © Amgueddfa Cymru

Opening the Gallery Intervention

At the end of July 2018, coinciding with the start of the busy summer holiday period, the intervention was opened. There was no prior advertising, and most staff were completely unaware of the intervention, and this included the front-of-house museum assistants. The intervention remained in place for a single week and was then completely removed from the gallery spaces as if it had never been there. This had been an intentional approach from the start to create an 'unexpected' experience to the gallery intervention by not preparing visitors for the changes that had been instigated. Feedback received from both staff and visitors supported this approach to have given the gallery intervention and its message greater impact (e.g. see Younan and Jenkins, 2020).

The gallery intervention started in the front downstairs natural science gallery spaces of the National Museum Cardiff amongst the large open diorama displays of the seashore and seacliff (see Figure 9), before moving into the marine themed displays on the following mezzanine level (examples in Figure 10). This part of the exhibition space includes two iconic specimens, a leatherback turtle and humpback whale skeleton which were incorporated into the gallery intervention (Figures 11 and 12). Many of creations constructed in the

intervention were later used in other events and activities.

During the week of the gallery intervention, the young activists ran a series of linked workshops and interactive sessions within the gallery spaces to facilitate engagement with the public. This included various activities and pledge boards which both furthered engagement with visitors and developed the communication skills of the young activists. From a collections care perspective, the open use of marker pens and stickers in the gallery environment did raise concerns but fortunately there were only a few minor instances of stray stickers on displays and offensive phrases on the pledge boards which suggested a high respect for both the intervention and the museum. As it was the summer school holiday period the gallery intervention attracted many families with young children who noticeably engaged with the difficult topic of plastic pollution with each other, and a fuller discourse on the feedback and impacts of the project are discussed in Mannay (2019) and Younan and Jenkins (2020).

The closure and removal of the intervention after only a week surprised many who felt it should have run longer (Mannay, 2019) but was a deliberate choice to give the process a sense of impact and



Figure 9. (a) Looking into the main gallery space with the basking shark and seashore diorama. (b) A close up of the intervention around the cormorant display. © Amgueddfa Cymru

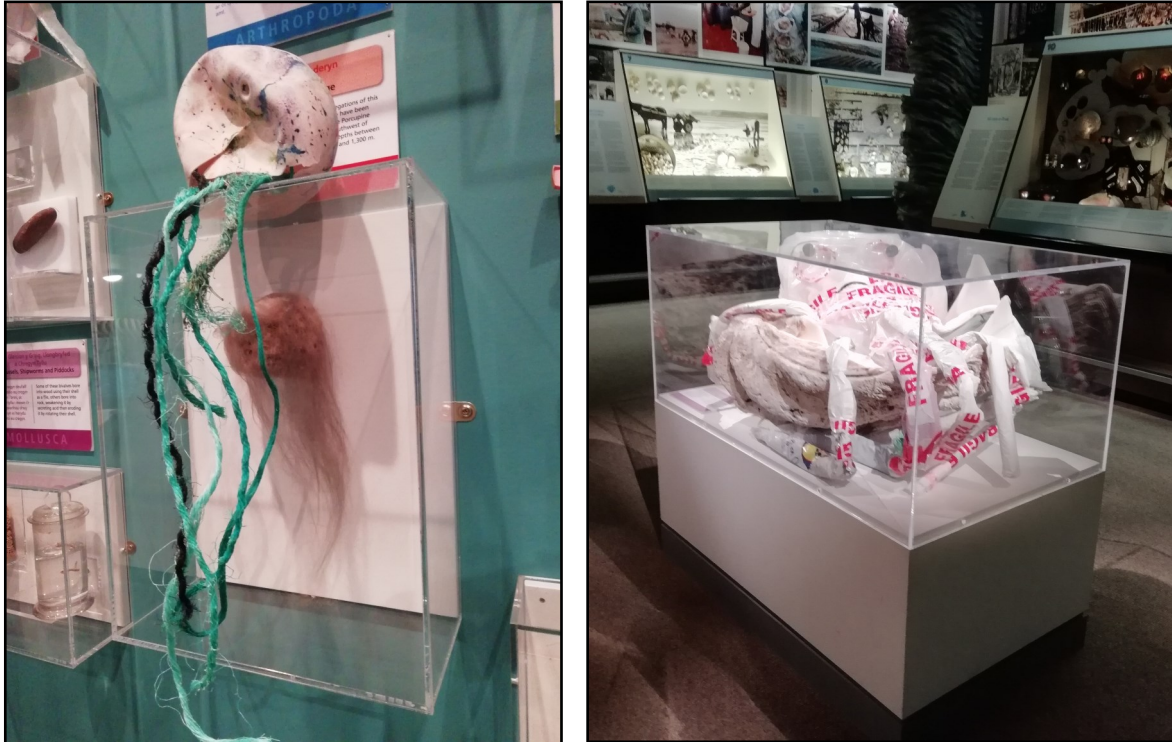


Figure 10 Examples of the creative additions that were placed, along with assorted items of plastic rubbish, into and around the existing displays. © Amgueddfa Cymru



Figure 11. The intervention highlighted the serious threats to species such as leatherback turtles from plastic pollution and ghost fishing gear. © Amgueddfa Cymru



Figure 12. The humpback whale skeleton display received a very liberal coating of the prepared plastic waste. However, this was also added to by visitors during the intervention period. © Amgueddfa Cymru

change in the Museum spaces involved. It was also notable when clearing the intervention from the gallery displays that areas with the plastic rubbish such as around the humpback whale skeleton (Figure 12) had accumulated further rubbish during the intervention from some visitors themselves. This provided an insight into the psychology of some of our visitors in that, for some people at least, rubbish attracts further rubbish (Cialdini *et al.*, 1990). Such rubbish was removed and recycled or disposed of, and the museum has active monitoring in place for potential insect pest issues that may have risen from the untreated rubbish.

Legacy and Sustainability

From the intervention's start, an evaluation was run in collaboration with Cardiff University which is available as part of the wider detailed report on the 'Hands on Heritage' project in Mannay (2019). This research highlighted that the intervention had a significant impact on both visitors and staff alike, particularly from the creative and unexpected way that the project was carried out creating a feeling of surprise that supported active engagement with

the intervention and its message. It was also noted that often the younger family members led their parents into the discussions initiated. The intervention also highlighted how permanent museum displays can be re-envisioned in creative ways that have an impact through the initiated change from what was previously normal.

The work put into this project was also further utilised in a variety of other activities and events. This included some elements being incorporated into a significant exhibition called 'Coast' at one of Amgueddfa Cymru's partnership gallery spaces at Oriol y Parc, St Davids, Pembrokeshire. The exhibition incorporated artworks and natural science items to reflect the coastal environment around Pembrokeshire and included some notable artworks including a piece called 'Calm' by the Dutch master, Jan van de Cappelle (1626-1679). In amongst the artwork was dispersed various birds and marine species from the natural science collections and incorporated amongst the whole exhibition were aspects of the plastics intervention (Figure 13). The display ran for six months and had a significant impact with visitors and school groups



Figure 13. Examples of the plastics intervention being incorporated into the multidisciplinary 2018 exhibition 'Coast' at Oriel y Parc, St Davids. © Amgueddfa Cymru

to the exhibition and received many repeat visits (Oriel y Parc, 2018).

Moving forward, the youth forum also expressed their wish to develop this project into a repeatable format for future youth-led interventions which they want to use for 'activism' to discuss and highlight different social and environmental topics. They were vocal in their own evaluation of this project, actively discussing the strengths of what was achieved along with the areas that need improvement. From this they formulated further ideas for structures and processes which can enable this method of youth-led museum interventions to be taken forward and developed into a formalised museum process via a series of workshops with both staff and community partners, drawing on their expertise on children's and young people's rights and experience in developing democratic youth-led structures (Mannay, 2019).

Summary

The overall impact of this and the other 'Hands on Heritage' associated projects on the young people involved has been extensively reported upon by Manny (2019) and Youan and Jenkins (2020). This review has been focused more at providing an overview of the project and how the knowledge and skills of specialist collection care staff supported the enabling of such an innovative project. This highlights the importance and value of often overlooked behind the scenes specialisms that are fundamental to supporting such outreach activities. The 'No Môr Plastic' project was also noteworthy

because it actively facilitated utilising display space both within and beyond Amgueddfa Cymru, enabling a wider public viewing of the artefacts created and curated by the young activists. The significance of this was recognised by the Youth Forum members involved and the intervention positively demonstrated how youth-led environmental projects can be a dynamic part of the museum environment.

Supporting activities such as this intervention also provided a useful means to allow the re-evaluation of the way we work and how we can be more receptive to communities and the bigger challenges facing our society and the world around us. The young activists were very involved with this project and were notably surprised by how much freedom they were given and how much their creative process was taken on board and utilised. They also appreciated the practical issues around planning, health and safety, and the importance of looking after the collections and display spaces themselves. Overall, it brought the way we work together and actively demonstrated how normally static museum displays can be enhanced to created new impacts (Mannay, 2019, Younan and Jenkins, 2020). Younan and Jenkins (2020) themselves concluded that "*audiences do want to engage with challenging themes in the museum environment, and that concerns around upsetting content should be weighed up against the positive impact that an activist museum environment can have*".

The project also represented a different way of working for an institutional environment such as Amgueddfa Cymru where all activities need to be discussed with, and sanctioned, by members of staff. The youth forum still had to depend on 'gate keepers' (curators, conservators, and other members of staff) to successfully implement the gallery interventions and whilst there were some frustrations between the Youth Forum and navigating institutional processes such issues were resolved by the staff involved supporting the young activists as fully as possible in order to try and ensure they were the core driver and creators of the project.

For the specialist collections staff involved in the project such as the Natural Science Conservator this was a great opportunity to use skills and knowledge to enable using the beach plastic waste in the museum environment demonstrating that challenging materials can be utilised safely in the gallery environment. This reflects on a wider attempt by the museum sector to tackle objects and materials that would have previously been seen as too challenging in order to reflect the effects of human activity on the environment and other social concerns (e.g. see Þórsson, 2018). For other staff such as the Museum Assistants the unexpected nature of the gallery intervention, and the way it engaged visitors, provided diversity and change in the exhibition spaces enhancing their own engagement within their regular workspaces. Other staff were also positively taken by the changes, with one of the directorate reflecting 'I've walked past the dioramas and the turtle for twenty years and have inevitably got used to seeing them the way they've always been. Your work was a real wake-up call and so good to see the museum responding rapidly and boldly to such an important topic.'

Overall, this was found to be a highly positive and engaging project for all involved, providing an opportunity to highlight a critical environmental issue in an innovative way but also to bring young people and their skills into the forefront of museum based activism.

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