

Introducing market restrictions on single-use plastic items in Scotland

Strategic Environmental Assessment

Post Adoption Statement

November 2021

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1. Introduction to market restrictions on problematic single-use plastic items

1.1 The single-use plastics directive and market restrictions

- 1.1.1 The Scottish Government is introducing market restrictions to restrict the supply of eight single-use plastic items in Scotland, with the intended effect of reducing the volume and impact of plastic pollution within terrestrial and marine environments. The items in scope are amongst those most commonly found items on beaches throughout the European Union; a recent study¹ published by the Pew Charitable Trusts states that, without considerable action to address plastic pollution, the flow of plastic into the ocean is projected to nearly triple by 2040 (compared to 2016 levels), equivalent to 50kg of plastic entering the ocean for every metre of coastline worldwide. As ocean currents are not constrained by national boundaries, the measures being taken in Scotland will not only assist in reducing plastic pollution domestically but also mitigate Scotland's contribution to plastic pollution internationally.
- 1.1.2 The market restrictions will also stimulate a shift towards less harmful alternatives such as paper and cardboard products, which are readily available in the domestic marketplace. Demonstrating this more responsible choice of resources is a vital element in building a more sustainable, circular Scotland.
- 1.1.3 The market restrictions will implement the objectives of Article 5 of the European Union's Single-Use Plastics Directive, adopted by the European Parliament and European Council on 5 June 2019.² The Directive is hereafter referred to as the "SUP Directive".
- 1.1.4 The SUP Directive seeks to respond to the steady increase in plastic waste generation. The SUP Directive recognises that the growing use of short-lived and single-use plastics, which do not lend themselves to cost effective recycling, has led to a casual approach to their disposal and excessively wasteful consumption models. The prevalence of such products is directly linked to pollution of oceans, rivers, and land ecosystems, representing a significant global challenge.
- 1.1.5 The SUP Directive applies to identified single-use plastic products, including products made from oxo-degradable plastic and fishing gear containing plastic. The SUP Directive covers single-use plastic products that are fossil-based and bio-based, regardless of whether they are recyclable, biodegradable, or compostable. All products made from oxo-degradable plastic, and fishing gear containing plastic, are also within the scope of the SUP Directive. Single-use plastic products made of multi-layered or composite materials, such as plastic-coated paper or plastic-lined cartons, are also within scope.

¹ https://www.pewtrusts.org/-/media/assets/2020/07/breakingtheplasticwave_summary.pdf

² European Union (2019) [Directive \(EU\) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment, Article 3\(3\)](https://eur-lex.europa.eu/) [Online]. Available at: <https://eur-lex.europa.eu/>

- 1.1.6 The SUP Directive targets a set range of single-use plastic products including cutlery, plates, straws and beverage stirrers, among other items. The Scottish Government has reviewed the range of single-use plastics products within the SUP Directive to determine the items to be within the scope of Scotland's market restrictions.
- 1.1.7 The Scottish Government has considered the introduction of market restrictions for the following items:
- Single-use plastic cutlery (forks, knives, spoons, chopsticks).
 - Single-use plastic plates, bowls, trays and platters.
 - Single-use plastic straws.
 - Single-use plastic beverage stirrers.
 - Single-use plastic balloon sticks.
 - Single-use food containers made of expanded polystyrene.³
 - Single-use cups and other beverage containers made of expanded polystyrene, including their caps, covers and lids.⁴
 - All oxo-degradable products.
- 1.1.8 Following on from stakeholder feedback from consultations, the Scottish Government has decided not to include bowls, trays and platters as well as plates within the restrictions. These products were found to be better suited to considerations for the remaining Articles of the SUP Directive. These regulations do however go further than Article 5 of the SUP Directive by banning the manufacture and supply of single-use plastic plates.
- 1.1.9 Oxo-degradable plastics are also not included within the restrictions at this point in time. This is an area of significant complexity and rapid change and Scottish Government is currently collecting further information on this area.
- 1.1.10 With the exception of plastic straws and balloon sticks, the manufacture of the restricted items will also be prohibited.
- 1.1.11 The SUP Directive also prohibits the placing of single-use cotton bud sticks onto the market. From 12th October 2019, the Scottish Government introduced a ban on the supply and manufacture of plastic stemmed cotton buds sticks in Scotland, under The Environmental Protection (Cotton Buds) (Scotland) Regulations 2019.⁵ As a result, single-use cotton buds were not included within this consultation.
- 1.1.12 The Scottish Government has committed to meeting, or exceeding, the standards set out in the SUP Directive; to tackle pollution from single-use plastics, these

³ Market restrictions will only apply to food containers (including their caps and lids) made of expanded polystyrene (EPS) and extruded polystyrene (XPS) which is considered a subset of EPS.

⁴ Market restrictions will only apply to cups for beverages (including their covers and lids) that are made of expanded polystyrene (EPS) and extruded polystyrene (XPS) which is considered a subset of EPS.

⁵ Scottish Government (2019) [The Environmental Protection \(Cotton Buds\) \(Scotland\) Regulations 2019](https://www.legislation.gov.uk/ssi/2019/271/made) [online] Available at: <https://www.legislation.gov.uk/ssi/2019/271/made>

being the items most commonly found on European beaches, and to promote the transition to a circular economy.

- 1.1.13 This commitment led the Scottish Government to undertake a consultation exercise to inform the options to introduce market restrictions on single-use plastic and oxo-degradable plastic products. The consultation exercise compared the impact of the market restrictions, against the current practice where no market restrictions are introduced, and where Scotland continues on a “Business-as-Usual” approach.
- 1.1.14 A “Business-as-Usual” approach would see no market restrictions introduced. Single-use plastic items would remain in our society, in our terrestrial and marine environments. This would hinder Scotland’s progress toward tackling onshore and marine litter. A Business-as-Usual approach would also hamper progress toward the adoption of a circular economy.
- 1.1.15 To help inform the Scottish Government’s decisions on the introduction of market restrictions on single-use plastic items in Scotland, the proposals were screened against the requirements of the Environmental Assessment (Scotland) Act 2005 (the ‘2005 Act’) and this identified that, as they are likely to have significant environmental effects, a Strategic Environmental Assessment (SEA) was required. The SEA was carried out to assess the likely significant environmental effects of the market restrictions of the selected problematic single-use plastic products and to identify ways in which adverse effects could be avoided, minimised or mitigated. The SEA also explored how any positive effects could be enhanced.
- 1.1.16 To assess the impact of the market restrictions, market research was used to identify the most common alternative products that could provide an alternative to each single-use plastic item to be phased out. For example, the use of wooden cutlery in place of plastic cutlery, or the use of wax-line paper straws in place of plastic straws. Alternative products were identified for each item within the scope of the market restriction and the effects of adopting the alternative were identified, evaluated and assessed against the Business-as-Usual baseline.
- 1.1.17 Modelling was completed to support analysis of the market restrictions against Business-as-Usual, where no market restrictions are introduced. The findings were presented in an Environmental Report⁶ (ER).
- 1.1.18 The results, and supporting assessments were issued for a 3-month public consultation, from 12th October 2020 to 4th January 2021.⁷
- 1.1.19 Considering the consultation responses and further modelling and analysis, the Scottish Government has identified a final policy position which it is now adopting. The Scottish Government is making the Environmental Protection (Single-use Plastic Products) (Scotland) Regulations 2021. The regulations will mean that, from 1st June 2022, it will be an offence to supply the items in the course of business in Scotland. The supply restriction will apply regardless of the channel

⁶ The Scottish Government (2020) Introducing Market Restrictions on Problematic Single-Use Plastic Items in Scotland - Strategic Environmental Assessment Environmental Report. Available at:

<https://www.gov.scot/publications/environmental-report-consultation-eu-sup-directive/>

⁷ [Consultation: Introducing market restrictions on single-use plastic items in Scotland](#)

of distribution (whether physical or online). With the exception of plastic straws and balloon sticks, it will be an offence to manufacture the items in question.

- 1.1.20 The Scottish Government recognises that some single-use items, made of plastic or other material, perform a vital function which cannot be easily replaced with a more sustainable alternative, or are essential as they can support independent living and social inclusion for disabled people, this is particularly true for straws. In consequence, specific exemptions will be stipulated for medical and independent living requirements.

1.2 Consultation

- 1.2.1 The SEA was undertaken to both inform the decision-making process in the development of the market restrictions on the selected single-use plastics, and also to engage with the statutory consultees,⁸ other stakeholders and interested parties via the statutory public consultation process set out in the 2005 Act.

- 1.2.2 Consultation was first undertaken with the statutory consultees on the proposed scope of SEA for a 4-week consultation ending on 21st September 2020. Each statutory consultee was provided with the SEA Screening and Scoping Report issued by the Scottish Government and comments invited. Consultation responses were received from all 3 statutory consultees to determine the final scope of the Environmental Report and assessments. This is discussed further in Section 4 of this PAS.

- 1.2.3 Public consultation was then held, from 12th October 2020 to 4th January 2021⁹ to obtain the opinion of individuals and organisations on the proposed approach to the market restrictions on selected single-use plastic items and the possible impacts. Views on the consultation were obtained through the completion of an online questionnaire hosted on the Scottish Government's Consultation Hub¹⁰ or via email submissions. This is discussed further in Section 4 of this PAS. The consultation documentation also included the Environmental Report (containing the findings of the SEA) along with online links to a Partial Business Regulatory Impact Assessment, the Islands Communities Screening Assessment, a Fairer Scotland Scoping Assessment and a Partial Equality Impact Assessment.

- 1.2.4 **Table 1.1** details the timeline of the consultation documents for the market restrictions on selected single-use plastic items.

⁸ Section 3 of the Environmental Assessment (Scotland) Act 2005 defines the consultation authorities as Scottish Environmental Protection Agency (SEPA), Scottish Natural Heritage (SNH) and Historic Scotland (HS)

⁹ [Consultation: Introducing market restrictions on single-use plastic items in Scotland](#)

¹⁰ [Consultation: Introducing market restrictions on single-use plastic items in Scotland](#)

Table 1.1 Consultation stages and timeline for the market restrictions on selected single-use plastic items

Stage	Date of Publication/Period
Scoping Report	24 th August to 21 st September
Environmental Report	12 th October 2020
Consultation period	12 th October 2020 to 4 th January 2021
Consultation on draft regulations	17 th March 2021 to 13 th April 2021
Publication of adopted approach	11 November 2021

1.3 Purpose of this Post Adoption Statement

1.2.5 In accordance with Section 17 of the 2005 Act, the Scottish Government has taken into account findings of the Environmental Report and the consultation responses to the report in coming to its decision on the preferred approach for the implementation of the market restrictions on selected single-use plastics.

1.2.6 Section 18 of the 2005 Act requires that when a plan or programme is adopted (in this case, the market restrictions), the consultation bodies and the public are informed, and the following specific information is made available:

- the plan as adopted.
- a statement summarising:
 - (i) how environmental considerations have been integrated into the design of the market restrictions on selected single-use plastics (Section 18(3)a of the 2005 Act).
 - (ii) how the Environmental Report has been taken into account (Section 18(3)b).
 - (iii) how consultees opinions have been taken into account (Section 18(3)c and d).
 - (iv) the reasons for choosing the market restrictions on selected single-use plastics, as adopted (Section 18(3)e); and
 - (v) the measures to be used to monitor the significant environmental effects of the implementation of the market restrictions on single-use plastics (Section 18(3)f).

1.2.7 The purpose of this Post Adoption Statement is to provide the specific information outlined under each of the points listed (i) to (v) above and which is presented in the following sections of this statement.

2. How environmental considerations have been integrated into the market restrictions on problematic single-use plastic items

2.1 Environmental considerations in the chosen market restrictions on problematic single-use plastic items

2.1.1 The design, development, and implementation of the market restrictions on problematic single-use plastic items has been led by environmental considerations, reflecting key Scottish Government commitments and ambitions:

- To contribute to meeting the recycling target of ensuring 70% of all waste recycled by 2025, as set out in the *Zero Waste Plan*¹¹ as part of a clear strategy to make the most of resources and to reduce, reuse and recycle more materials in Scotland.
- To embed circular economy principles into the design of packaging materials for reuse, recycling and recovery in partnership with packaging industries, as part of the transformation led by the Scottish Government's *Making Things Last – A Circular Economy Strategy*¹² and the *Safeguarding Scotland's Resources: Blueprint for a more Resource Efficient and Circular Economy (SSR)*¹³.
- To enable the public to adopt alternative behaviours to waste management, through access to improved recycling opportunities, improved product design, awareness campaigns and targeted exploration to tackle litter on beaches (as part *Towards a Litter Free Scotland: A strategic Approach to Higher Quality Local Environments*¹⁴ and the *A Marine Litter Strategy for Scotland*.¹⁵
- The 2020-21 *Programme for Scotland*¹⁶ incorporated plans for the Scottish Government to meet, or exceed, the standards laid out in the SUP Directive stating that “*We will consult on banning a number of problematic plastic items identified in the EU’s Single Use Plastics Directive, and outline how we will give effect to the wider requirements of the Directive before the end of 2020.*”

¹¹ The Scottish Government (2010) Scotland's Zero Waste Plan [online] Available at: <http://www.gov.scot/Publications/2010/06/08092645/0>

¹² The Scottish Government (2016) Making Things Last – A Circular Economy Strategy for Scotland [online] Available at: <http://www.gov.scot/Resource/0049/00494471.pdf>

¹³ The Scottish Government (2012) Safeguarding Scotland's Resources - A Programme for the Efficient Use of Our Materials [online] Available at: <http://www.gov.scot/Publications/2012/06/4215>

¹⁴ The Scottish Government (2014) Towards a Litter Free Scotland: A Strategic Approach to Higher Quality Local Environments [online] Available at: <http://www.gov.scot/Resource/0045/00452542.pdf>

¹⁵ The Scottish government (2014) A Marine Litter Strategy for Scotland [online] Available at: <http://www.gov.scot/Publications/2014/09/4891/downloads>

¹⁶ The Scottish Government (2020). Protecting Scotland, Renewing Scotland: The Government's Programme for Scotland 2020-2021 [online] Available at: <https://www.gov.scot/publications/protecting-scotland-renewing-scotland-governments-programme-scotland-2020-2021/>

- The Scottish Government is a signatory to the New Plastics Economy Global Commitment¹⁷ committing to embed “*ambitious policies and measurable targets in place well ahead of 2025*” which target key areas, including “*Stimulating the elimination of problematic or unnecessary plastic packaging and/or products*”.
- The Scottish Government is a signatory to the UK Plastics Pact, led by WRAP, a collaborative initiative that seeks to create a circular economy for plastics¹⁸.

2.1.2 The principles, aims and objectives of the market restrictions on problematic single-use plastic items are:

- To prohibit, by law, the supply of certain single-use plastic items in Scotland.
- To reduce plastic and microplastic waste and resultant pollution within the landscape, ecosystems and habitats of Scotland.
- To support a shift away from our throwaway culture by making more efficient use of materials as well as reusable and recyclable alternatives.
- To support the transition to a circular economy.
- To reduce Scotland’s demand for plastic materials.

2.1.3 The market restriction will seek to eliminate over 749 million single-use plastic items, per annum, that fall within the scope of the market restriction (totalling 1,860 tonnes of plastic, per annum, according to the assessments within the Environmental Report). Collectively, these items are responsible for 9,700 tonnes of CO₂ equivalent, per annum, based upon the findings of the whole life carbon impacts. The items within the scope of this restriction account for approximately 4.4% of single-use plastic items that are littered in Scotland per annum.¹⁹

2.1.4 The introduction of market restrictions can reduce embedded carbon impacts associated with the target items. The policy may also reduce material consumption used to generate single-use items if reusable or recyclable alternative items are used, whilst reducing the impacts of litter in our onshore and marine environments and preventing plastic from entering these ecosystems to the detriment of local biodiversity.

2.1.5 The Scottish Government recognises the uncertainty around the potential impact the United Kingdom Internal Market Act 2020 could have on the effect of these regulations, if lower standards are applied elsewhere in the UK.

2.1.6 Due to the uncertainty of the impact of the United Kingdom Internal Market Act 2020 the assessments carried out in this document assume that the Regulations are fully effective.

¹⁷ Ellen MacArthur Foundation (2020) New Plastics Economy Global Commitment [online] Available at: https://www.newplasticseconomy.org/assets/doc/Global-Commitment_Definitions_2020-1.pdf

¹⁸ WRAP (2018) The UK Plastics Pact [Online]. Available at: <http://wrap.org.uk/>

¹⁹ A top-down carbon assessment was carried out by Zero Waste Scotland for the purposes of the SUPD SEA Environmental Report. The carbon assessment was conducted in order to assess the marginal difference in carbon impacts of the ‘Business-as-Usual’ and proposed scenarios. The assessment has been updated to reflect the items now in scope.

2.2 Environmental considerations through the SEA

- 2.2.1 The SEA has played an integral role in highlighting the environmental factors to be considered in the development of the market restrictions on problematic single-use plastic items.
- 2.2.2 Initially, the 12 topics²⁰ covered by Schedule 3 (6) of the 2005 Act were reviewed, with 5 relevant topics scoped into the assessment (confirmed through scoping consultation). **Table 2.1** details the topics included in the SEA (and the justification for each).

Table 2.1 SEA topics scoped into the SEA

SEA Topic	Justification
Biodiversity, Flora and Fauna	A driving objective of the restriction on single-use plastic items is reducing single-use plastic pollution and litter in both terrestrial and marine environments of Scotland. The end goal of this objective is to protect, improve and assure the continued abundance and diversity of the flora and fauna of Scotland. By restricting the sale of certain single-use plastic products, plastic waste levels are expected to decrease, with an attendant decrease in harmful microplastics, that are known to leak into the environment, causing significant harm to the wildlife and flora of Scotland. For this reason, it was considered necessary to scope biodiversity into the SEA. This decision was welcomed and reiterated by statutory consultees.
Soil	Single-use plastic items, and specifically those oxo-degradable products used within the context of agriculture, are designed to degrade in situ. Owing to this there is the potential for fragmentation of this material (into micro-fragments or to chemical decomposition) to have an impact on soil quality as they leak into that soil, decreasing its purity and subsequent utility as a growing medium and habitat. With the market restrictions, the extent to which such materials leak into the soil will be significantly curtailed, with a resultant improvement to the overall purity and quality of soil in Scotland. In consequence, the topic of soil was scoped into the SEA.
Climatic Factors	One of the key objectives of the introducing market restrictions on problematic single-use items is to eliminate fossil-based plastic and support the switch to low-carbon alternatives. Therefore, the adoption of market restrictions will help enable the reduction of greenhouse gases and tackle climate change. In consequence, the topic of climatic factors was scoped into the SEA.
Material Assets	The introduction of market restrictions on the in-scope single-use plastic items will lead to a switch from lightweight single-use plastic items to other non-plastic alternatives which are generally heavier (e.g., wood, paper). This will ultimately have an impact on the amount

²⁰ The topics are biodiversity; population; human health; fauna; flora; soil; water; air; climatic factors; material assets; cultural heritage, including architectural and archaeological heritage; landscape; and the inter-relationship between them.

SEA Topic	Justification
	of waste generated and the corresponding infrastructure used in the recycling process. As such, introducing market restrictions on single-use plastics items is expected to have impacts related to material assets. In consequence, the topic of material assets was scoped into the SEA.
Landscape and Visual Impacts	One of the key objectives of the market restrictions is to reduce single-use plastic pollution and litter in both terrestrial and marine environments of Scotland. As such the market restrictions will have a material impact on the volume of such waste found within Scotland, and the extent to which long-lasting plastic litter pollutes the Scotland's scenery. It is also likely that any replacement products that come to prevalence after the restriction may have less-damaging characteristics i.e. a shorter degradation period than plastic waste, which again would impact the Scottish landscape and its beauty significantly. In consequence, the topic of landscape and visual impacts was scoped into the SEA.

- 2.2.3 As part of the SEA, and consistent with the requirements of Schedule 3 (1) and (5) of the 2005 Act, the SEA identified and reviewed other relevant plans, programmes and strategies (PPS) which could influence the development and objectives of market restrictions on problematic single-use plastic items. These included PPS at an international/European, national, regional or local level, commensurate with the scope of the plan. The review identified the relationships between the plan and these other documents i.e. how the market interventions could be affected by the other plans' and programmes' aims, objectives and/or targets, or how it could contribute to the achievement of their environmental and sustainability objectives.
- 2.2.4 For each SEA topic, baseline information was also provided for the current receptors which could be impacted by introduction of the market restrictions. The baseline provided information against which key metrics for the market restrictions (such as tonnes of material avoided and carbon emissions) were assessed to determine the impact of the market restrictions throughout its operation. The evolution of this baseline was taken to be the Business-as-Usual option.
- 2.2.5 To identify the impact of the market restrictions, the effects of adopting alternative single-use items that are expected to replace the banned single-use plastic items, were analysed and assessed against this Business-as-Usual baseline. This analysis determined the impacts, positive or negative, that the market restrictions could deliver, however it is noted that any increase in sustainable behaviours – such as an increase in the reuse of items – will provide yet greater results.
- 2.2.6 An assessment of the market restrictions was undertaken in relation to the SEA topics: biodiversity, flora and fauna; soil; climatic factors; material assets and landscape and visual impacts. **Table 2.2** sets out the assessment framework, which contains the question used for each topic to undertake the assessment of the effects from the market restrictions.

Table 2.2 SEA Assessment Framework

SEA Topic Area	Question
Biodiversity, Flora and Fauna	<p>Will it protect and/or enhance designated nature conservation sites e.g., Special Areas of Conservation, Special Protection Areas, Sites of Special Scientific Importance, Ancient Woodlands, Marine Protected Areas and Ramsar Sites?</p> <p>Will it support the protection and enhancement of terrestrial, marine and coastal ecosystems, including species and habitats, and their interactions?</p> <p>Will it help avoid pollution of the terrestrial, coastal and marine environments?</p>
Climatic Factors	Will the alternative option contribute to the reduction of greenhouse gas (GHG) emissions generated in Scotland?
Material Assets	<p>Will it contribute towards achieving Scotland’s waste targets?</p> <p>Will it increase the economic value and utility of affected materials?</p> <p>Will it reduce ‘leakage’ of material to landfill or energy recovery or as litter?</p>
Soil	Will the proposal contribute to reducing levels of soil contamination?
Landscape and Visual Impacts	Will the alternative option reduce the visual effects from littering of materials into terrestrial and marine environments and improve their scenic qualities?

2.2.7 The potential effects of the market restrictions were examined to identify, detail and evaluate (where possible) the likely significant effects that could arise drawing on the following to inform the assessment:

- consultation with statutory consultees and other stakeholders;
- the contextual information including a review of PPS, the regulatory framework and baseline;
- the nature of the potential effect (what is expected to happen);
- the timing and duration of the potential effect (e.g., short, medium or long term);
- the geographic scale of the potential effect (e.g., local, regional, national);
- the location of the potential effect (e.g., rural or urban communities);
- the potential effect on vulnerable communities or sensitive habitats;
- the reasons for whether the effect is considered significant;

- the reasons for any uncertainty, where this is identified; and
- the potential to avoid, minimise, reduce, mitigate, or compensate for the identified effect(s) with evidence (where available).

3. How the Environmental Report has been taken into account

- 3.1.1 The market restrictions on the identified single-use plastic items would lead to changes in the products that consumers use; certain single-use plastic items, which have little to no opportunity to be reused or recycled will be phased out and replaced with single-use items made from recyclable, non-plastic materials. The market restrictions may also lead to an increase in the use of products that can be reused, further improving the impact from the market restrictions. The market restrictions may also provide an opportunity to adopt innovative solutions, or alternative materials, that reduce the demand for virgin fossil-based plastic.
- 3.1.2 The assessments analysed the impact of replacing each single-use plastic item (the Business-as-Usual baseline) with an alternative single-use item, manufactured using non-plastic (for most of them) and recyclable materials.
- 3.1.3 The market restrictions are expected to provide fewer negative impacts to the quality of Scotland's biodiversity. The elimination of the targeted single-use plastic items will remove these from local terrestrial and marine ecosystems. Whilst littering of alternative items may occur, these are expected to have fewer negative environmental effects on biodiversity at terrestrial sites of importance for nature conservation, including in particular those sites protected for their importance to wild birds which are particularly vulnerable to the effects of litter.
- 3.1.4 The Environmental Report has explored the impact of the market restrictions upon Scotland's soils. Oxo-degradable plastics are predominantly used as a mulch film within agriculture.²¹ The fragmentation of this material into microplastics or to chemical decomposition may lead to their presence within the immediate and surrounding soil as well as other environments when washed from fields into local waterways. The assessment explored the impact of market restrictions of oxo-degradable plastics as well as single-use plastic items. The assessment shows that the restrictions – and adoption of items made from alternative materials – are expected to reduce the risks to soil quality which exist because of single-use plastic items and oxo-degradable plastics. The Scottish Government is collecting further evidence before taking action on oxo-degradable plastics.
- 3.1.5 A climatic and carbon assessment, which compared the targeted single-use plastic items, against the alternative items, demonstrated that a change in consumer behaviour, to adopt alternative items, would lead to a 59% reduction in carbon impacts, equating to carbon savings of 6,188 tonnes CO₂e per annum, due to the shift from high-carbon fossil-based materials to low-carbon materials (e.g., paper).²² It is noted that any increase in the use of reusable items, opposed to

²¹ European Commission (2018) Report from the Commission to the European Parliament and the Council on the impact of the use of oxo-degradable plastic, including oxo-degradable plastic carrier bags, on the environment [online] Available at: <https://ec.europa.eu/environment/circular-economy/pdf/oxo-plastics.pdf>

²² These figures are based on the original range of items proposed for restrictions. Please see section 5 for updated figures.

alternative single-use items, may generate further carbon improvements dependent upon the reusable item and its usage.

- 3.1.6 The market restrictions are expected to remove the targeted single-use plastics from use in Scotland. These materials are lightweight and contribute an insignificant volume, by weight, to waste streams. The use of alternative products will lead to a slight increase in the tonnage of wastes if single-use plastic items are replaced by products of heavier, alternative materials. It is anticipated that the waste tonnage may increase by 1,440 tonnes per annum however this can be addressed through greater application of multi-use items.²³
- 3.1.7 The Environmental Report assessed the impacts of the market restrictions, and the alternative materials that would likely be used to replace the single-use plastic items, against landscape and visual impacts. The introduction of market restrictions, against all items within the scope of the market restriction, are expected to provide positive impacts by reducing plastic litter in the marine and terrestrial environments.
- 3.1.8 The assessment included consideration of the cumulative impacts of the market restrictions, when compared to the alternative materials. The assessments show that the measures will generate cumulative positive effects in respect of climatic factors, landscape/visual impacts and biodiversity related to reduced littering.
- 3.1.9 No cumulative significant negative effects have been identified during the assessments.
- 3.1.10 The assessment of the market restrictions presented in the Environmental Report has identified opportunities to mitigate potential negative effects and enhance positive effects associated with their implementation. Following assessment of the impacts of the market restrictions, the Environmental Report recommended that any chosen market restriction exhibits the following characteristics:
- That the restrictions are implemented to reduce Scotland's reliance upon single-use plastic items.
 - That the market restrictions extend to the list of items outlined in the Environmental Report and consultation exercise.
 - That ongoing monitoring is implemented to assess the impact of the restrictions, on aspects such as litter, and identify any issues where further interventions are needed to address litter.
- 3.1.11 How has the assessments in the ER altered the shape of the final approach?
- 3.1.12 The preferred option is to adopt the market restrictions, with the exception of bowls, trays and platters and oxo-degradable plastics.
- 3.1.13 Proposed mitigation measures of relevance to all example schemes identified in the Environmental Report are summarised in **Table 3.1**.

²³ These figures are based on the original range of items proposed for restrictions.

Table 3.1 Mitigation of environmental effects

Environmental Effect	Proposed mitigation effort
<p>Increased waste tonnages through the adoption of alternative single-use items</p>	<p>The Scottish Government will monitor the response to these restrictions and assess what more needs to be done to address our throwaway culture.</p> <p>Section 5.4 of the Environmental Report states: “Other recyclable alternatives, primarily made of wood or fibre, can be composted and so it would be imperative to increase access to and use of appropriate recycling infrastructure to ensure the capture of these materials for recycling.”</p> <p>The Non-Technical Summary to the Environmental Report also states as a key recommendation “Ensure recycling infrastructure is available to capture and recycle non-plastic alternatives”.</p> <p>Section 7.5 of the Environmental Report states: “...it would be imperative to design a clear and targeted awareness campaign to ensure that citizens are well informed about the new measure and the best disposal route for alternative material in order to avoid unnecessary landfilling and to ensure that material value is preserved into any secondary use phase.”</p>
<p>The actual impact upon Scotland’s Greenhouse Gas emissions is dependent upon the alternative single-use items, or reusable items, used to replace the banned single-use plastic items.</p>	<p>The Scottish Government can continue to monitor the emissions associated with the market restrictions.</p> <p>Section 4.4 of the Environmental Report states: “The majority of single-use non-plastic items that would likely replace single-use plastic products are expected to achieve a reduction in greenhouse gas emissions. This intervention should not however undermine the substantial carbon savings attributed to shifting from single-use to multi-use items, such as replacing single-use plastic-coated paper cups with reusable cups...</p> <p>Replacing single-use plastic products with reusable, non-plastic alternatives will hold obvious emissions benefits. If no product were required at all (single-use plastic or otherwise), this would ultimately achieve the highest carbon saving.”</p>
<p>A potential increase in material demand to manufacture single-use, or reusable items, made from alternative materials.</p>	<p>Section 5.4 of the Environmental Report states: “Single-use plastic items targeted by market restrictions are expected to be replaced by heavier single-use items made of paper or wood. This will</p>

Environmental Effect	Proposed mitigation effort
	<p>lead to a shift in materials used from fossil-based materials to wood or paper which will require additional land and water resources.... This can be best addressed through greater application of multi-use items and particularly for frequently used items such as plates and cups....</p> <p>More importantly, additional measures should be considered in order to reduce the generation of non-plastic single-use items and incentivise behavioural change towards the adoption of multi-use alternatives.”</p>

3.1.14

In refining and developing the preferred option, where relevant, Scottish Government has taken into account the above proposed mitigation measures.

4. How opinions expressed on the consultation have been taken into account

4.1 Overview

4.1.1 Consultation lies at the heart of any meaningful assessment or appraisal process and is based on the key principle that plan and programme making is better where it is transparent, inclusive and uses information that has been subject to public scrutiny. In this context the Scottish Government, has sought to ensure that those with an interest in, or who will be affected by, the market restrictions should have the opportunity to present their views on the consultation documentation.

4.2 Public consultation

4.2.1 Public consultation was held, from 12th October 2020 to 4th January 2021²⁴ to obtain the opinion of public individuals and organisations on the proposed policy, and the possible impacts of such an approach. Views were obtained through two channels; through the completion of a questionnaire hosted on the Scottish Government's Consultation Hub²⁵ or by completing a Respondent Information Form and emailing this to the Scottish Government team.²⁶ The consultation documentation also included the Environmental Report along with online links to a Partial Business Regulatory Impact Assessment, the Islands Communities Screening Assessment, Fairer Scotland Duty Scoping Assessment and a Partial Equality Impact Assessment.

4.2.2 A detailed analysis of the completed public consultation was published by the Scottish Government on 17th March 2021.²⁷

4.3 Consultation on the Environmental Report

4.3.1 The Environmental Report was published to accompany the public consultation documentation on the market restrictions on problematic single-use plastic items.

4.3.2 To direct consultee responses, the Environmental Report included the following 5 questions:

1. To what extent does the Environmental Report set out an accurate description of the current baseline and the business-as-usual scenario? (Please give details of additional relevant sources)
2. Do you think that the Environmental Report has correctly identified the likely significant effects of the proposed restriction on single-use and oxo-degradable plastics placed on the market in Scotland?

²⁴ [Consultation: Introducing market restrictions on single-use plastic items in Scotland](#)

²⁵ [Consultation: Introducing market restrictions on single-use plastic items in Scotland](#)

²⁶ Completed Respondent Information Forms could be sent to SUPD@gov.scot

²⁷ [Market restrictions on single-use plastic items: consultation analysis](#)

3. Do you agree with the recommendations and proposals for mitigation and enhancement of the environmental effects set out in the Environmental Report? (If not, what do you think should be the key recommendations and why?)
4. Are you aware of any further information that will help to inform the findings of the assessment? (Please give details of additional relevant sources)
5. Do you agree with the proposed arrangements for monitoring the significant effects of the proposed restriction? (If not, what measures do you propose?)

4.3.3 A sixth question (from the public consultation) was also considered relevant to the analysis:

6. Taking into account the accompanying Impact Assessments, can you identify any environmental, economic or social impacts we have not identified when developing the proposals contained in this consultation? Please give reasons.²⁸

4.3.4 A total of 766 responses were received to the consultation on the Environmental Report. A total of 692 individuals and 74 organisations provided a response. These included responses from the statutory consultees (2 in total; 3% of responses from organisations), other public bodies (10 in total; 14% of responses from organisations), industry (38 in total; 51% of responses from organisations), the waste sector (1 in total; 1% of responses from organisations), environmental interest groups (18 in total; 24% of responses from organisations), health interest groups (3 in total; 4% of responses from organisations) and 1 other that could not be categorised (1% of responses from organisations).

4.4 Statutory consultees responses

4.4.1 Consultation responses to the Environmental Report were received from two²⁹ of the three statutory consultees (Historic Environment Scotland (HES) and NatureScot (NS)):

- **Historic Environment Scotland (HES)** are supportive of the approach which will catalyse progress towards sustainable tourism, mitigate climate change and reduce environmental pollution. HES are content that the historic environment is scoped out of the assessment and have no further comments, concerns or recommendations to be addressed in the final design of the policy, nor in this PAS.
- **NatureScot (NS)** largely agree with the findings of the Environmental Report and assessment. NS state that “While the alternative options are likely to lessen the negative effects of the single-use plastics, they in themselves are not free from impacts. There are a number of assumptions made in reaching the conclusion of positive effects which will need to be further monitored to establish their effectiveness.... It will be important to put in place robust monitoring to identify the effects of the alternatives, to be able to action

²⁸ More details about the responses to this question can be found in the consultation analysis ([Market restrictions on single-use plastic items: consultation analysis](#))

²⁹ For this consultation, no response was received from the Scottish Environment Protection Agency (SEPA).

remedial measures to address impacts that cannot be predicted as part of this assessment.”

NS also welcome the recommendation that additional measures are considered to reduce the generation of non-plastic single-use items and that Scotland “incentivise behavioural change towards the adoption of multi-use alternatives “

NS echo the comments from HES in raising a concern that the impact of alternative materials e.g., wooden and paper alternatives; “there is the assumption that wooden and paper alternatives will not have a negative effect on biodiversity. While these alternatives may not cause the same level of harm, it is not clear that they will have no negative effects. It will be helpful to ensure robust monitoring measures are in place to further address impacts if these are found to be more significant than the report initially concludes. Monitoring the environmental effects arising from the plan are an integral part of the assessment process and while we welcome the specific nature of the monitoring proposals, these need to be firmer commitments. This is particularly important since the findings from the assessment are often based on assumptions resulting from activities that are out with the control of the plan, such as behavioural change of the public, or composting of wooden and paper alternatives”.

NS agree that “Targeted single-use plastic products are expected to be replaced with alternatives made from shorter lived, largely biodegradable (wood, paper etc.) materials. This material shift will not only reduce microplastics entering the soil but will {with} the degradation of littered items, thereby reducing the ‘litter begets litter’ behavioural effect which occurs when litter accumulates over time”. This observation is applicable to all of the topic areas and in particular the landscape section.”

- 4.4.2 The comments from the statutory consultees are addressed in the final, chosen design of the policy as well as future monitoring initiatives (see Section 5 and Section 6 of this PAS).

4.5 Public consultees responses

- 4.5.1 The key findings from the analysis of the public consultation to the questions in the Environmental Report are as follows.

Question 1: To what extent does the Environmental Report set out an accurate description of the current baseline and the Business-as-Usual scenario? - SEA Q1

- 4.5.2 A total of 284 responses were received for question 1. A total of 211 respondents read the Environmental Report and provided a response³⁰. Of these 211, 85% believe the Environmental Report set out an accurate description of the current baseline and the Business-as-Usual scenario. A total of 15% of respondents did not agree.

³⁰ A further 32 did not read the Environmental Report and a further 41 felt they could not give an opinion.

Question 2: Do you think that the Environmental Report has correctly identified the likely significant effects of the proposed restriction on single-use and oxo-degradable plastics placed on the market in Scotland? - SEA Q2

4.5.3 A total of 19 responses were received for question 2. A total of 16 respondents were able to provide a response. Of the 17 respondents, 71% think that the Environmental Report has correctly identified the likely significant effects of the proposed restriction on single-use plastic items and oxo-degradable products placed on the market in Scotland. A total of 19% of respondents did not agree.

Question 3: Do you agree with the recommendations and proposals for mitigation and enhancement of the environmental effects set out in the Environmental Report? (If not, what do you think should be the key recommendations and why?) - SEA Q3

4.5.4 A total of 494 responses were received for question 3, of which 91% of respondents agree with the recommendations and proposals for mitigation and enhancement of the environmental effects set out in the Environmental Report. A total of 9% of respondents did not agree.

Question 4: Are you aware of any further information that will help to inform the findings of the assessment? (Please give details of additional relevant sources) - SEA Q4

4.5.5 In response to question 4, respondents referenced a range of additional information sources that could help inform the findings of the assessment. Respondents highlighted sources of information but not specific reports. **Appendix A** lists the common data sources recommended by respondents.

Question 5: Do you agree with the proposed arrangements for monitoring the significant effects of the proposed restriction? (If not, what measures do you propose?) - SEA Q5

4.5.6 A total of 495 responses were received for question 5, of which 93% of respondents agree with the arrangements for monitoring the significant effects of the proposed restriction. A total of 8% of respondents did not agree.

Question 6: Taking into account the accompanying Impact Assessments, can you identify any environmental, economic or social impacts we have not identified when developing the proposals contained in this consultation? Please give reasons. - Question 6

4.5.7 In response to question 6, a total of 183 respondents said they had identified environmental, economic or social impacts which they felt the Scottish Government had not identified when developing the proposals contained in the consultation. Comments of relevance to the SEA include:

Environmental impacts

- That the restrictions may lead to tourism benefits. It is assumed that this refers to reduced litter.
- That the adoption of alternative materials e.g., plant-based alternatives, may lead to negative impacts including habitat devastation and biodiversity loss increased through land use.

- That environmental benefits must be measured by conducting life cycle assessments (including the propensity to litter) otherwise the ban may result in a negative environmental impact.
- That the focus should remain on providing replacements that fit into the circular economy rather than linear solutions.

Economic impacts

- That the increased use of reusable items, and recycling of alternative materials, may create additional employment opportunities in new manufacturing and reprocessing facilities.
- That there may be an adverse impact upon hospitality business who rely on take away food and drink.
- That the restrictions will introduce additional burdens for UK-wide suppliers and caterers.
- That the new restrictions may require subsidies for businesses to adapt to the requirements.

Social impacts

- That the market restrictions could lead to safer uses of open spaces. It is assumed that this refers to a reduced risk of injury from sharp single-use items littered in open spaces.
- That the proposed ban will bring about healthier, happier communities who can better enjoy their natural environment.
- That the restrictions can lead to an improvement in human mental health as residents enjoy the environment to de-stress.

4.5.8 The main **opportunities** identified by respondents are summarised as follows:

- That the market interventions can reduce litter across Scotland's onshore and marine environments.
- That the restriction could improve the quality of Scotland's soils and ecosystems.
- That the restrictions can support the adoption of a circular economy in Scotland.
- That the restrictions may lead to new industries and employment opportunities.
- That the restrictions can support Scotland's efforts to tackle climate change.

4.5.9 The main **risks** of concern which could jeopardise the success of restrictions, by number of respondents, are:

- That the restrictions may lead to an increased use of alternative materials where the full impact of these are not fully understood.
- That alternative materials may become prevalent in litter across our marine and onshore environments.

- That businesses may face additional burdens (financial and administrative) in having to adopt new materials.

4.5.10 The main **recommendations** proposed by respondents include:

- The Scottish Government should remain focussed on promoting sustainable replacements to single-use items, that fit into the adoption of a circular economy across society.
- That subsidies may be necessary to support businesses to adapt to the market restrictions.
- That ongoing investigations continue to understand the environmental impact of the alternative materials.

4.6 Responding to the consultation

4.6.1 The high number of responses to the consultation is welcomed by the Scottish Government. It is evident that market restrictions on single-use plastic items is a topic that has attracted considerable public interest and that overall, the majority of respondents appear to view market restrictions on single-use plastic items as an opportunity to achieve positive outcomes including a reduction in litter, carbon emissions and material demand.

4.6.2 The introduction of market restrictions on the specific single-use plastic items identified will be taken forward as outlined in the Environmental Report, with the exception of bowls, trays and platters, and oxo-degradable plastics which are not being included. Specific exemptions will be stipulated for plastic straws to allow medical and independent living requirements, and balloon sticks for professional uses will also be exempted. Other than this, the range of materials will remain unchanged; all other items outlined in the Environmental Report will be within the scope of the market restrictions.

5. The reasons for choosing the market restriction, with amendments from the proposals as detailed in the SEA Consultation

5.1.1 The adopted approach to the market restrictions reflects the evidence gathered, the assessments undertaken, the results of modelling and the consultation findings. The outcome has shown that the market restrictions can provide positive outcomes for Scotland.

5.1 Reasons for choosing the market restriction, with amendments from the proposals as detailed, in the SEA Consultation

5.1.1 Market restriction is the most effective policy measure to limit plastic litter, as it eradicates the presence of the targeted items from the Scottish market, therefore from terrestrial and marine environments, whilst supporting the transition to a circular economy.

5.1.2 The market restrictions for the targeted single-use plastics have been chosen where suitable alternatives are readily available and following balanced consideration of the environmental benefits, commercial viability, technical practicalities and the views of consultees.

5.1.3 Following on from stakeholder feedback from consultations, the Scottish Government has decided not to include bowls, trays and platters as well as plates within the restrictions. These products were found to be better suited to considerations for the remaining Articles of the SUP Directive. These regulations do however go further than Article 5 of the SUP Directive by banning the manufacture and supply of single-use plastic plates.

5.1.4 Oxo-degradable plastics are also not included within the restrictions at this point in time. This is an area of significant complexity and rapid change and Scottish Government is currently collecting further information on this area.

5.1.5 Features of the selected approach include:

- A market restriction on the supply of specific single-use plastic items.
- An anticipated elimination of 749 million single-use plastic items per annum.
- A potential reduction of up to 57% in carbon impacts³¹, equating to carbon savings of approximately 5,500 tonnes CO₂e, per annum, due to the shift from high-carbon fossil-based materials to low-carbon materials (e.g., paper).

5.1.6 Following the publication of the Environmental Report, the Scottish Government facilitated an online public consultation exercise with both statutory consultees and the public.

³¹ Based on the results of a sensitivity analysis covering three options for replacing EPS food containers by fibre-based alternatives using.

- 5.1.7 The consultation exercise found overwhelming support for the introduction of the market restrictions.
- 5.1.8 Responses across the full consultation exercise, from the Scoping and Screening report, as well as the Environmental Report, indicated widespread support of the market restrictions.
- 5.1.9 The majority of respondents agree that the Environmental Report has correctly identified the likely significant effects of the market restriction on the specific single-use plastic items and oxo-degradable products and are supportive of the recommendations for mitigation and enhancement of the environmental effects set out in the Environmental Report.
- 5.1.10 Whilst the majority of public respondents (93%) agree with the arrangements for monitoring the significant effects of the market restriction, the statutory consultees have raised recommendations that monitoring proposals be strengthened to ensure that the environmental impacts of replacement items are monitored to prevent environmental degradation from alternative materials.
- 5.1.11 Discussion on the proposals for monitoring measures is provided in Section 6 of this PAS.

5.2 Reasons for the rejection of a Business-as-Usual approach with no market restrictions

- 5.2.1 The 2005 Act requires that the likely significant environmental effects associated with reasonable alternatives to the plan or programme to be adopted (in this case, the market restrictions on selected single-use plastic) are assessed as part of the SEA process. Within this context, reasonable alternatives are defined in reference to the objectives and geographic scope of the plan or programme.
- 5.2.2 The Environmental Report has explored the potential impact of the market restrictions by considering the alternative products that consumers may use, once the restrictions are in place and the single-use plastic items are no longer available. In this respect, discussion regarding any “reasonable alternative” has looked at the alternative single-use items that would increase in demand, under the implementation of the market restriction.
- 5.2.3 For each of the restricted single-use plastic items, market research was conducted to identify the most common and likely product alternative. Each alternative has been assessed in turn to identify, describe and evaluate (where possible) the likely significant environmental effects that could arise from its implementation. It is those materials that are considered as the “reasonable alternatives” across the assessments undertaken to understand the impact of the market restrictions. The alternative items available are numerous, the assessments explored common alternative items:
- Wooden cutlery was considered as a reasonable alternative to plastic cutlery.
 - Paper plates were considered as a reasonable alternative to plastic plates.
 - Wooden stirrers were considered as a reasonable alternative to plastic beverage stirrers.

- Wax-lined paper straws were considered as a reasonable alternative to plastic straws.
- Cardboard balloon sticks were considered as a reasonable alternative to plastic balloon sticks.
- Fibre-based food containers³² were considered as a reasonable alternative to food containers made from expanded polystyrene.
- Plastic-lined paper cups were considered as a reasonable alternative to cups made from expanded polystyrene.

5.2.4 The impact analysis assumes that target items removed from the market are likely to be displaced by an equal number of alternative single-use items in a worst-case scenario. As previously noted, one of the aims of aligning with Article 5 of the SUP Directive is to reduce the amount of plastic waste leakage both within and out with the Scottish ecosystem. To that end, the alternative products identified are generally constructed of materials which have a reduced impact on marine environments and biodiversity, and which will likely have shorter degradation periods. These considerations and others were noted within the analysis.

5.2.5 It is possible however, that some items may be prevented through avoided consumption or reuse, which would result in greater environmental benefits. The extent of reuse and avoided consumption will depend in large part on supporting measures put in place.

5.2.6 The policy of the market restrictions has been subject to a range of analyses. The alternative materials have been shown to demonstrate a positive environmental effect across all topic areas assessed, against the Business-as-Usual baseline, where single-use plastic items would be used. alternative single-use items are expected to have a less negative impact on the quality of Scotland's biodiversity, soils, climate and carbon emissions, material demand and landscape compared to the use of the targeted single-use plastic items.

5.2.7 The Scottish Government understands the problems caused by single-use items cannot be solved by replacing them with alternative single-use items made with different materials. While the focus is on the items listed in the Environmental Report and the public consultation exercise, the Scottish Government wishes to see innovative solutions towards more sustainable business models and reuse alternatives prioritised over substitution of materials.

5.2.8 The introduction of market restrictions forms part of a package of wider measures being taken forward by Scottish Ministers to address marine litter and support a shift away from our throwaway culture, as outlined on page 6 of the Consultation Paper³³ including market restrictions on microbeads and plastic-stemmed cotton buds which came into force on 19th June and 12th October respectively, as well as a 10p levy on single-use carrier bags. The Scottish Government is now proceeding to establish a deposit return scheme for drinks containers, including PET plastic bottles.

³² The environmental assessment investigated two options: wax-coated cardboard boxes and fibre-based food containers. We carried out the assessment considering a number of scenarios.

³³ [Consultation: Introducing market restrictions on single-use plastic items in Scotland](#)

5.2.9

The Scottish Government is committed to monitoring closely the response to these restrictions and assess what more needs to be done to address our throwaway culture (see Section 6 of this PAS). The intention is also to consider market restrictions for other items in the future and this is explored further in the consultation.

6. The measures decided concerning monitoring

6.1.1 Section 19 of the 2005 Act requires the Scottish Government, as the responsible authority, to monitor significant environmental effects of the implementation of the Plan.

6.1.2 It is not necessary to monitor everything or monitor an effect indefinitely. Instead, as noted in the SEA guidance³⁴, it is “practical to make a clear link between the significant effects predicted within an assessment and the indicators selected to monitor the likely environmental effects”.

6.1.3 The Environmental Report identified several significant positive effects of the adopted market restrictions. These include:

- The eradication of the targeted single-use plastic items will provide a positive impact on the quality of Scotland’s biodiversity, soils, climate and carbon emissions, material demand and landscape.
- The market restrictions will reduce the volumes of plastic entering Scotland’s environments. They will reduce the volume of plastics degrading and entering soils and local environments. The restrictions will also reduce embedded carbon that is associated with the target single-use plastic items.
- Implementation of the market restrictions may lead to carbon savings of up to 5,500 tonnes CO₂e, per annum if the alternative materials are adopted in place of the single-use plastic items within the scope of the restrictions. Further savings can also be achieved through the adoption of behaviours that reuse items.
- The market restriction will eliminate 749 million single-use plastic items, per annum, that fall within the scope of the market restrictions (totalling 1,860 tonnes per annum).
- The market restrictions will tackle the increase in plastic waste generation and the leakage of this waste into the terrestrial and marine environments.
- The market restrictions will support ambitions to change the throwaway culture by facilitating a move to reusable alternative items.

6.1.4 The market restrictions will remove the targeted single-use plastic items from Scottish society, it is expected that alternative recyclable single-use items may replace those removed from the market. Whilst the market restrictions are expected to deliver significant positive impacts, the Scottish Government should undertake ongoing monitoring exercises to assess how society responds to the restrictions and whether alternative single-use items replace those under the ban, or if alternative behaviours – such as increased re-use of items – emerge across society

³⁴ Scottish Government (2013) [Strategic Environmental Assessment: guidance](https://www.gov.scot/publications/strategic-environmental-assessment-guidance/) [online] Available at: <https://www.gov.scot/publications/strategic-environmental-assessment-guidance/>

- 6.1.5 Monitoring of these aspects can help to answer questions such as:
- Were the Environmental Report assessments of effects accurate?
 - Are the restrictions contributing to the achievement of the Scottish Government objectives?
 - Are mitigation measures performing as well as expected?
 - Are there any unforeseen adverse effects? Are these within acceptable limits, or is remedial action desirable?
- 6.1.6 For the five environmental topics considered, monitoring of the aspects will be beneficial to assess the success of the market restrictions, and, to allow for the identification of unexpected challenges that require further intervention to ensure the effective realisation of the aims and objectives of the restrictions. The monitoring exercise can also be used to identify opportunities for the Scottish Government to provide further support, or incentive, to adopt alternative and more circular behaviours such as the increased reuse of items.
- 6.1.7 The Environmental Report proposed a series of measures to monitor the prevalence of the target single-use plastic items within terrestrial and marine environments. The Environmental Report reflected the understanding of the proposed policy at the point of consultation. The market restrictions to be implemented will lead to the cessation of the target items appearing within the environment and, in consequence, the proposed monitoring measures have been revised.
- 6.1.8 In order to ensure that the market responds to the introduction of the restrictions, and to permit the Scottish Government to respond over time, the following monitoring measures will be used:
- **Monitoring of market practices** through existing public sector, business and retailer engagement channels, or surveys, to identify whether the volume of single-use items are changing. Monitoring of these elements will identify how businesses are responding to the market restrictions; are they substituting the banned single-use items for alternative materials or adopting new behaviours. This exercise will also show whether demand for the alternative products is increasing which may suggest that the public requires further encouragement to adopt reusable items.
- 6.1.9 The Scottish Government will implement these measures as part of a monitoring framework for the market restrictions that will include reference to a roadmap of actions and progress indicators.

Appendix A: Data sources recommended by respondents to Question 4 of the SEA consultation

- Where appropriate, the Scottish Government will consider the additional information proposed to respondents to Q4 when monitoring the implementation of the market restrictions: Lynas (2007) Six degrees
- Beaumont, N.J., Aanesen, M., Austen, M.C., Börger, T., Clark, J.R., Cole, M., Hooper, T., Lindeque, P.K., Pascoe, C. and Wyles, K.J. (2019) Global ecological, social and economic impacts of marine plastic. *Marine Pollution Bulletin*, 142, pp. 189-195.
- Hidalgo-Ruz, V. and Thiel, M. Abstract only. doi: 10.1007/978-3-319-16510-3_16 Available: https://explore.openaire.eu/search/other?orpld=core_ac_uk__::6c9c11665bd2c7e956b4b308325962af
- Nelms, S.E., Eyles, L., Godley, B.J., Richardson, P.B., Selley, H., Solandt, J. and Witt, M.J. (2020) Investigating the distribution and regional occurrence of anthropogenic litter in English marine protected areas using 25 years of citizen-science beach clean data. *Environmental Pollution* (1987), 263 (Pt B), pp. 114365.
- Nelms, S., Coombes, C., Foster, L., Galloway, T., Godley, B., Lindeque, P. and Witt, M. (2017) Marine anthropogenic litter on British beaches: A 10-year nationwide assessment using citizen science data. *The Science of the Total Environment*, 579, pp. 1399-1409.
- Portman, M.E. and Behar, D. (2020) Influencing beach littering behaviours through infrastructure design: An in situ experimentation case study. *Marine Pollution Bulletin*, 156, pp. 111277.
- Watts, A.J.R., Porter, A., Hembrow, N., Sharpe, J., Galloway, T.S. and Lewis, C. (2017) Through the sands of time: Beach litter trends from nine cleaned north cornish beaches. *Environmental Pollution* (1987), 228, pp. 416-424.
- Hartley, B.L., Pahl, S., Veiga, J., Vlachogianni, T., Vasconcelos, L., Maes, T., Doyle, T., d'Arcy Metcalfe, R., Öztürk, A.A., Di Berardo, M. and Thompson, R.C. (2018) Exploring public views on marine litter in Europe: Perceived causes, consequences and pathways to change. *Marine Pollution Bulletin*, 133, pp. 945-955.
- Jefferson, R.L., Bailey, I., Laffoley, D.d., Richards, J.P. and Attrill, M.J. (2014) Public perceptions of the UK marine environment. *Marine Policy*, 43, pp. 327-337.
- Lavers, J.L., Opper, S. and Bond, A.L. (2016) Factors influencing the detection of beach plastic debris. *Marine Environmental Research*, 119, pp. 245-251.

- Papathanasopoulou, E., White, M.P., Hattam, C., Lannin, A., Harvey, A. and Spencer, A. (2016) Valuing the health benefits of physical activities in the marine environment and their importance for marine spatial planning. *Marine Policy*, 63, pp. 144-152.
- Portman, M.E., Pasternak, G., Yotam, Y., Nusbaum, R. and Behar, D. (2019) Beachgoer participation in prevention of marine litter: Using design for behaviour change. *Marine Pollution Bulletin*, 144, pp. 1-10.
- Somerville, S.E., Miller, K.L. and Mair, J.M. (2003) Assessment of the aesthetic quality of a selection of beaches in the Firth of Forth, Scotland. *Marine Pollution Bulletin*, 46 (9), pp. 1184-1190.
- Tudor, D.T. and Williams, A.T. (2006) A rationale for beach selection by the public on the coast of Wales, UK. *Area (London 1969)*, 38 (2), pp. 153-164.
- Wyles, K.J., Pahl, S., Thomas, K. and Thompson, R.C. (2016) Factors that can undermine the psychological benefits of coastal environments: Exploring the effect of tidal state, presence, and type of litter.

Websites:

- <https://www2.gov.scot/Topics/marine/marine-environment/litter/littersinks>
- <https://ipen.org/documents/plastics-edcs-health>
- <https://www.mcsuk.org/media/joint-statement-cigarettes.pdf>
- <https://www.fidra.org.uk/wp-content/uploads/Packaging-Position-Paper-1.pdf> and <https://www.fidra.org.uk/wp-content/uploads/Summary-of-results.pdf>
- <https://www.ellenmacarthurfoundation.org/publications/reuse>



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