



1. Requirement overview:

Requirements	Improve the understanding of the impacts of all forms of marine litter on the marine environment.
Requirement detail	<p>Litter has become a recognised issue within the marine environment. However there are still many questions regarding the types of litter that occur and their impacts.</p> <p>Marine litter is consistently highlighted as an issue in marine planning and though there has been work covering the intertidal area, there remains a large gap in knowledge in understanding litter as an issue in the seas beyond the intertidal.</p> <p>At present, the Marine Management Organisation has very little information on the potential nature, sources and type of impacts of different types of marine litter as it is a relatively new area of research. Though the role of plastic in the seas has been covered in the press, work on this subject is still relatively undeveloped. Any improvements to this evidence base will help to deliver improved sustainable development, through providing more information to help improve marine management. There are drivers for doing this, through OSPAR requirements and to support good environmental status through the UK Marine Strategy.</p> <p>This requirement will catalogue the different types of marine litter, sources and identify their impacts on the marine environment. It will look at spatial distribution of different types of marine litter and if possible link impacts spatially too. Suggestions for appropriate management responses should also form part of this work.</p>
MMO use	<p>Marine Planning:</p> <ul style="list-style-type: none"> Improve the consideration of and approach to marine litter in marine plans and contribute to the delivery of marine planning and potentially leading to more specific plan policies.
External interest	Natural England, JNCC, Cefas
Delivery target	2018, Q4

2. Aims and objectives

Aim:

Improve understanding of types of marine litter, its distribution, sources and impacts, as well as suggesting management responses.

Objectives:

- develop a catalogue of types of marine litter and identify the range of impacts for each type of litter
- improve understanding of the distribution of marine litter in English waters
- map the distribution of marine litter against its impacts and develop understanding of areas sensitive to those impacts, to identify high risk areas where possible
- identify possible responses for managing marine litter

3. Existing evidence

MMO	The MMO has no existing work in this area, though was involved in the work undertaken at Newcastle University mentioned under 4. below.
Academic	In a UK context, Nelms et al (2017) present the findings of a 10 year, citizen science-based survey of marine litter at beaches around the UK. This shows regional variations and increases over the 10-year period in some types of litter. Hastings and Potts (2013) introduce the types of litter found in marine areas, as well as outlining some of the challenges associated with it, including from a policy context (though they focus on Scottish policy). Unger and Harrison (2016) look at the incidence of litter from fishing activity and find this correlates more with proximity to fishing grounds rather than fishing ports, whilst Rech et al (2016) highlight the role of litter as a vector for non-native species.
Other	This area is one that many groups are interested in. Press coverage of marine litter has highlighted the role of microplastics in potentially disrupting marine microfauna. The Environmental Audit Committee recently addressed this area of concern in a report on microplastics . Defra has responded to this by instigating a consultation on a ban of Microbeads used in cosmetics . Surfers against Sewage released a report with a series of recommendations from personal behavioural change through to legislation covering all types of marine litter.

4. Current activity

There is currently no activity underway that the MMO is aware of, but there has been a recently completed study by a student at Newcastle University which is of relevance.

5. Associated evidence requirements

This evidence requirement is not associated with any other MMO evidence requirements. More information on the full list of evidence requirements is available [here](#)

6. Potential delivery route

The MMO will look to partner with organisations of relevance to widen the potential impact of any work undertaken in this area. Similarly, where appropriate, the MMO will explore opportunities to influence the research of others to gather evidence that can be applied within a marine management context. As work progresses it is implicit that knowledge exchange is required throughout the duration of this requirement and not limited to when delivery is complete.

Partnering

Delivery window: Q1, 2017 to Q4, 2018

The interest from other organisations in this area detailed above suggests that there is a high level of potential to partner on this work. Partnering with interested organisations gives the opportunity of pooling resources and using experience from across a range of organisations in order to maximise the utility of work on this requirement.

Influencing the research of others

Delivery window: Q1, 2017 to Q4, 2018

There is the opportunity for the MMO to support/influence the research of others in this field. Scientific research in this field has the opportunity to have high impact and be directly applied within marine management decision making. Opportunities and discussions are welcomed in this area.

See table 1 for timescales.

7. Contact

For more information or to add further research to the existing evidence list please email evidence@marinemanagement.org.uk

Table 1: Delivery timescales 2017 to 2020

Delivery Route	2017				2018				2019				2020			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Partnering																
Influencing the research of others																