



# Developing Biosecurity Plans for the Solent

[www.solentforum.org](http://www.solentforum.org)



# Why Develop the Plans?

## 1. Prevention better than Cure

Preventing the introduction of marine invasive species is recognised as the most effective and least environmentally damaging management intervention, especially in the marine environment where eradication and containment are often not possible.

## 2. Solent is a Hotspot

APEM Ltd were commissioned by Natural England to carry out an 'Audit, review and prioritisation for marine invasive non-native species biosecurity planning in England'. The Solent was identified as a 'hot spot risk area with limited biosecurity measures'.

## 3. Impact on Site Condition

Natural England and Marine Biological Association research shows that marine invasive species are impacting on the condition of the Solent's designated sites.

# Plan Development Process

- Developed by the Solent Forum in association with APEM Ltd, Marine Biological Association and Natural England
- Natural England funded
- Two series of workshops held – first set in person, second set online, held at locations for Eastern Harbours, Southampton Water and Isle of Wight
- Purpose was to **raise awareness** of marine invasive species in the Solent and to set out **simple actions** to help prevent further spread or the introduction of new marine invasive species
- Developed as an online web resource with copy/images/videos and links to downloadable templates

# Solent Forum Biosecurity Planning Pages

## THE SOLENT FORUM

Working in partnership for the future

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THE SOLENT

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### SOLENT BIOSECURITY PLANNING

The Solent Forum and partners are developing these webpages to help people working and living in the Solent to find out more about marine invasive species, what they look like and how to prevent and manage them using biosecurity measures. Having measures in place is good practice to protect the natural environment of the Solent, reduce biofouling costs and maintenance for local businesses, fulfil statutory environmental duties and assist with licence and consent applications.

We have focused on three areas in the Solent and for each area we have produced a biosecurity action plan along with Solent specific marine invasive species information, and a range of pathway specific resources. Two workshops were held for each of the three areas in 2023 to get the experience and input of those working in pathways that could lead to marine invasive spread.

#### What are marine invasive species?

Invasive species are those that have been transported outside their natural range and damage our environment, the economy, our health and the way we live. Once established marine invasive species are extremely difficult to eradicate, control and manage. Shipping, ferries and recreational boating are known ways that species travel between areas and the Solent has high volumes of these activities. The risk of successful establishment is also increased by the presence of artificial structures, a factor that is highly relevant to certain areas of the Solent that have been developed.

Marine invasive species pose a threat to the Solent's native biodiversity and recreation and fishery industries, especially shellfisheries, due to their potential to threaten native species, habitats or whole ecosystems. They also interfere with the operation of man-made structures and business interests through increased maintenance and cleaning of vessels and infrastructure.

#### What is biosecurity planning?

Biosecurity planning is developing a set of measures that aim to prevent the introduction and spread of marine invasive species. Our biosecurity resources are based on pathways identified by Solent stakeholders.



#### Quick Links

[Solent Marine invasive species](#)

[Biosecurity Pathways](#)

#### Biosecurity action plans:

[Southampton Water](#)

[Eastern Harbours: Portsmouth, Langstone, Chichester](#)

[Isle of Wight](#)

[National evidence gap/research needs/inf requirements](#)

[Legislation and Policy](#)

[Links & resources](#)

[Stakeholder workshop outputs](#)

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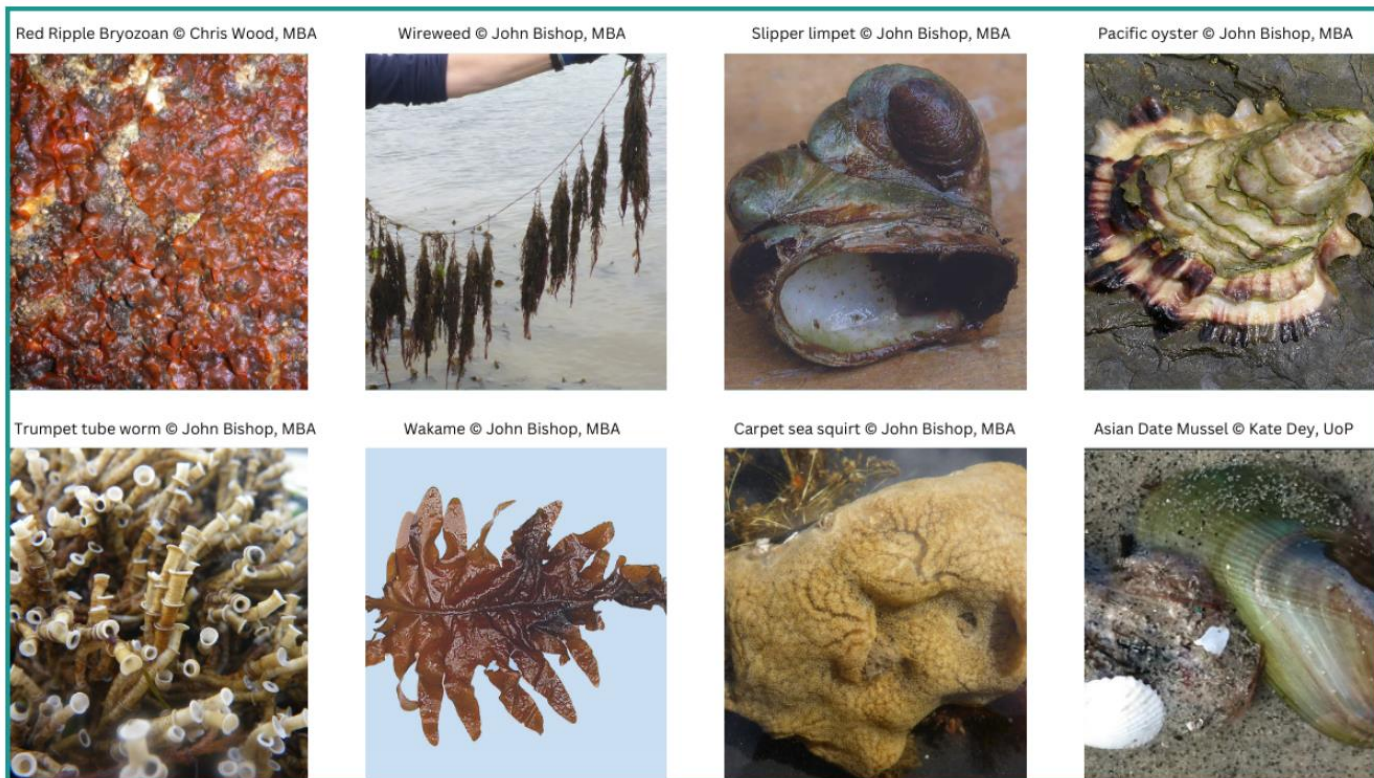
# Webpages Content

1. Solent Marine Invasive Species
2. Biosecurity Pathways
3. Biosecurity Action Plans:
  - Eastern Harbours
  - Southampton Water
  - Isle of Wight
4. National evidence gap/research needs/information requirements
5. Legislation and policy
6. Links and Resources
7. Stakeholder Output Workshops



# Awareness Raising

- Webpage developed that show the main species of concern in the Solent with links to further details.
- Online copy of Marine Invasive Species ID Guide (SF has hard copies).





# Biosecurity Pathways

Stakeholder workshops identified four main pathways relevant to the Solent:

1. [Recreation](#)
2. [Coastal and Marine Infrastructure](#)
3. [Commercial Vessels](#)
4. [Habitat and species restoration](#)

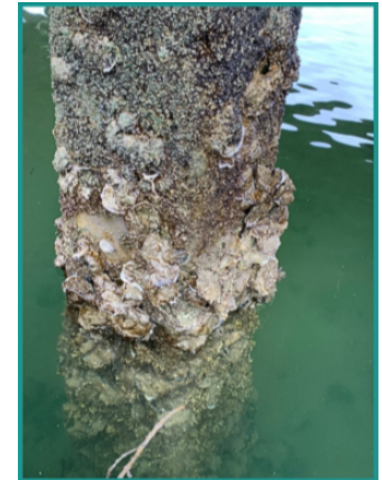
## BIOSECURITY PATHWAY: COASTAL AND MARINE INFRASTRUCTURE

Coastal and marine infrastructure includes facilities such as docks, piers, quays, jetties, seawalls, moorings, pontoons and navigational aids. The RAPID project found that an 'urbanised' marine environment, typified by man-made structures, can favour marine invasives through factors such as:

- Providing stepping stones for rapid spread.
- Providing substrates of a physical and chemical nature that favour invasives over native species.
- Artificial surfaces are often vertically orientated and therefore shaded (favouring non-native fauna) especially those that have arrived on ship's hulls.
- Water movement is often slowed and results in accumulation of invasive larvae or spores.
- Antifouling and polluting heavy metals facilitate invasive dominance over native species.
- Fast-growing or opportunistic invasives will establish on new artificial surfaces faster than native species.
- Lack of natural predators/grazers on artificial substrata encourages invasives dominance.
- Eco-engineering can help to reverse some of these factors by providing more naturalised habitats that encourage the return of native species.

### What Damage can Marine Invasives Cause?

Marine invasive species can cause significant damage to waterside infrastructure by organisms attaching themselves to their surfaces causing erosion, weakening, and as a worse case scenario collapse. They can also cause difficulties with the operational aspect of infrastructure such as hydraulic pumps and rams by blocking intakes and moving parts. The Trumpet tube worm, which is found in the Solent, fouls ships, buoys and other harbour structures by constructing large reef-like structures. Large tubes (twice the size of those found in natural environments) have been recorded causing operational obstructions which can lead to economic losses through cleaning costs and loss of utility.



Pacific Oyster on Infrastructure  
© Jess Taylor, Natural England

#### Case Study: Carpet Sea Squirt in Holyhead Marina

The carpet sea squirt *Didemnum vexillum* was first recorded in north Wales in 2008. Surveys determined it was confined to marina structures. Eradication started in 2009, using isolation and stagnation methods with a chemical accelerant to speed up the process. Further monitoring, eradication and control is still being undertaken and this continued intervention has been successful in containing this species at a low level within the marina. The total cost so far has been approximately £800,000. Although numbers have been reduced, it has taken a significant amount of time and resource and highlights the difficulty of control and eradication from marine infrastructure once a species has been introduced.

# Biosecurity Action Plans

1. Southampton Water
2. Eastern harbours (Portsmouth, Chichester, Langstone)
3. Isle of Wight
  - National evidence gaps/resources/information requirements

1. Local generic actions (short and long term)
2. Pathway actions – recreation, commercial vessels, coastal and marine infrastructure and habitat restoration

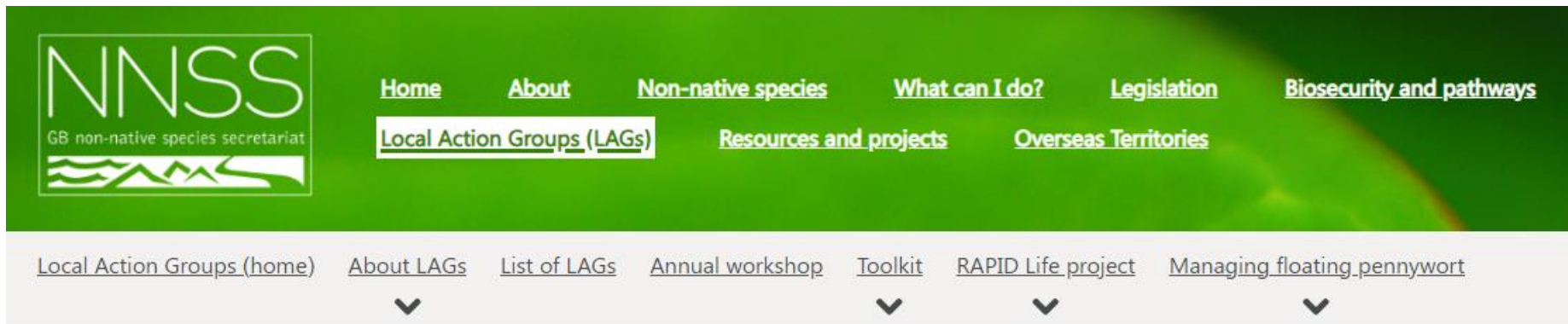
## Local Generic Actions

| Short Terms Actions (by October 2024)                                              |                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.                                                                                 | Support and endorse this plan and utilise its resources to help improve biosecurity throughout your organisation.                                                                                                                                                                                                                                              |
| 2.                                                                                 | Nominate a biosecurity lead in your organisation. Encourage them to educate staff and customers about marine invasives using the resources available on these biosecurity pages.                                                                                                                                                                               |
| 3.                                                                                 | Establish a system such as a hard copy or digital log book to record any marine invasive species found at your location. Ask the biosecurity lead to report <a href="#">species</a> on <a href="#">iRecord</a> and/or email finding details to: <a href="mailto:marineinvasivespecies@naturalengland.org.uk">marineinvasivespecies@naturalengland.org.uk</a> . |
| 4.                                                                                 | Obtain a copy (free from the Solent Forum office) of the 'Identification guide for selected marine non-native species' and leave in a public place for staff/customers to browse. Show and encourage any site contractors to browse through it too. An <a href="#">online copy</a> is available on these pages                                                 |
| Long Term Actions (implement as part of ongoing work programmes/business planning) |                                                                                                                                                                                                                                                                                                                                                                |
| 5.                                                                                 | Educate your staff, customers and contractors by including information on marine invasives and biosecurity in your existing print and online media such as harbour guides and websites. Please use our <a href="#">media pack</a> for copy and images. This pack contains a QR code for where there is limited space.                                          |
| 6.                                                                                 | Support invasive non native species week (every May) with an annual refresh of communications on this issue.                                                                                                                                                                                                                                                   |
| 7.                                                                                 | Consider writing a biosecurity plan for your organisation using the resources on this site. This will help you be prepared if it is asked for as part of a Marine Licence application or other consent. See: <a href="#">Marine Biosecurity Plan Estuary Wide</a> template and <a href="#">Specific Operation/Construction Related Activities</a> template.    |
| 8.                                                                                 | Consider establishing a small working group for the locality, for example to include local estuaries officer, government agencies and local catchment partnership officer, to explore further awareness raising on this topic and partnership action.                                                                                                          |

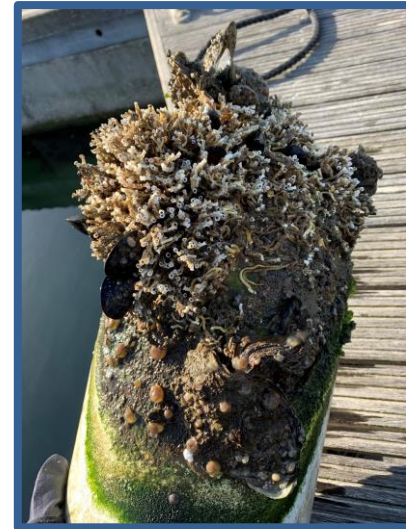
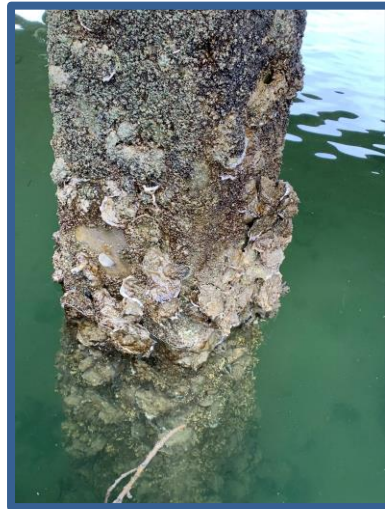
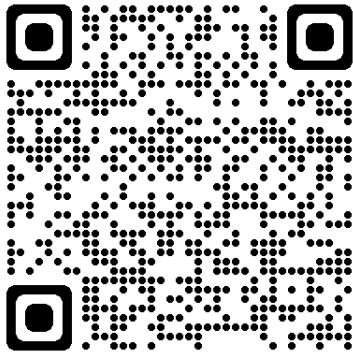
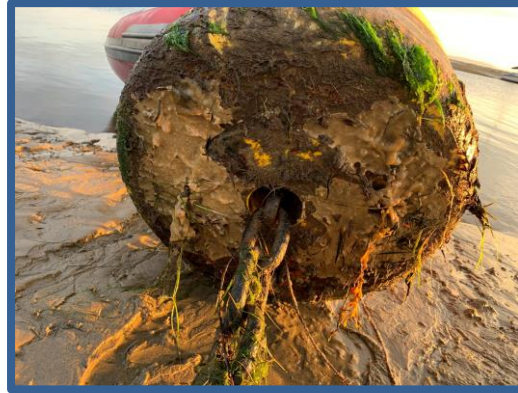
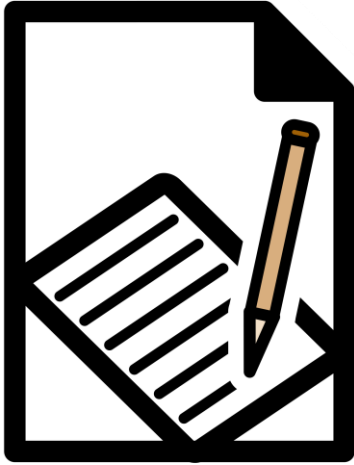


# Solent Forum as Local Action Group

- Animal and Health Plant Agency (APHA) facilitate Local Action Groups.  
*'A Local Action Group (LAG) is a group or project focused on reducing the risks and impacts associated with invasive non-native species in a specific area'.*
- At the workshops we proposed that the Solent Forum act as the LAG for the Solent.
- Role of the LAG is to collate and share information on invasive species and follow APHA work and training on this topic.



# Media Pack



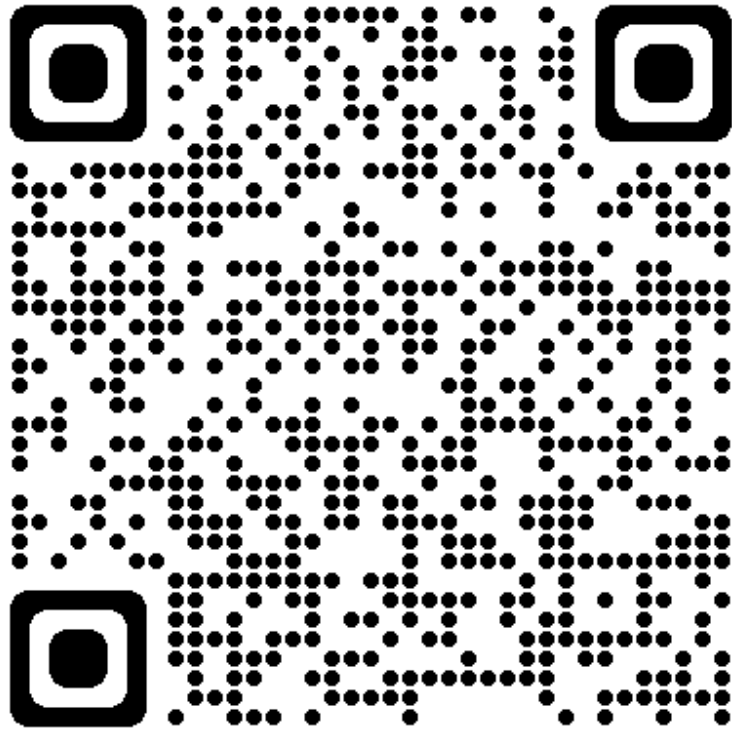
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# What can you do?

1. Use this web resource to increase your awareness of marine invasive species
2. Implement relevant actions set out in the biosecurity action plans
3. Use the media pack to help publicise this work in your area



# Thank you



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