**Explanatory note:** The purpose of this hypothetical marine biosecurity plan is to help stimulate ideas and provide examples that could be incorporated into real biosecurity plans. This plan contains a range of scenarios and risks from activities including potential events - therefore not all the content will be applicable to all sites. The level of detail required will also vary depending on requirements. Likewise, there will be additional measures and risks that are not included in this example plan. For instance, in an alternative site where there is freshwater input, the potential risks will vary but there will also be additional/alternative mitigation options.

**MARINE BIOSECURITY PLAN FOR REACH POINT MARINA**

1. **Introduction**

* **Site Name:** Reach Point Marina, Hobble-Beyond-Reach, Darnestershire
* **Brief Description of Site:** 450 berth marina and boat yard. Regular visiting yachts from Europe and beyond. Some use by SCV > 24m commercial craft.
* **Site Location:** 3Nm east of Cannick Castle, adjacent to Swanlake container terminal, south coast of the UK.
* **Plan period: March 2015 – April 2017**
* **Biosecurity Manager/Officer:** Marina Manager (MM), Sam McKintyre

**2. Relevant environmental information about the site**

|  |  |
| --- | --- |
| **Environmental Information** | *Notes* |
| **Salinity**  **30ppt** (sources from the Swanlake container port authority)  Our marina sits in a bit of a tidal lagoon so our salinity might be a bit higher than at the container port.  No significant local freshwater input. | ***Action*** *– Marina Manager (MM) to invite local University marine Dept. to take samples and measure the salinity of the marina. NB the external reaches of the marina may receive more salt water so there may be a salinity variation within the site.* |
| **Tidal Influences**  Reach Point marina has a range of between 2-3m rise and fall of tide depending on atmospheric pressure etc.  A storm overflow from the local sewage works round the point, many years ago, saw the marina flooded by debris so we can assume there is a significant movement of water from there into the marina.  The marina entrance is dredged every third year to maintain depth. Spoil is dumped under license at the Sinclair Deep grounds (Grid ref 52 06 49N 06 43 04W)  The innermost pontoons sit in 1m of water at low tide. The outer trot has 4m and the average throughout the site is 2m. | *Due to the lack of depth in the marina and in order to ensure that seabed is not fouled by pontoon debris and potential Non Native Species (NNS) spread, pontoons should not be scrubbed or scrapped unless the majority of the material is collected. Heavy fouling seasons can be dealt with using a bucket to collect scrapings in the water. Additional time should be allocated if MM or yard staff recommend this work.* |
| **Underwater structures/features**  The marina has 1000m of walkway and 210 finger pontoons. Pontoons are held in place by chains and blocks on the seabed. The haul out area is covered by sheet steel bracing to the seabed.  The breakwater is faced with local stone in 0.5-1 tonne blocks infilled with gravel and covered with concrete in places.  The seabed is mostly mud, gravel patch towards the end of the dinghy slipway.  During the period of this plan 20 of the pontoon and finger sections will be sold on and replaced with newer second hand pontoons from the boat show. | *MM to ensure that all contracts for the sale and supply of pontoons include a cleaning clause so that all pontoons leave clean and arrive clean. Hire of a hot water jet wash may be necessary.*  *Annual inspection of the gravel area recommended.* |
| **Non-native species known to be present**  In 2014 the MBA used the marina as a study site for a MSc student – they recorded the following during a ‘rapid survey’  A bryozoan (no common name), *Tricelleria inopinata*  A hydroid (no common name), *Cordylophora caspia*  \* Acorn barnacle, *Elminius modestus*  An orange sheath tunicate (no common name), *Botrylloides violaceus*  Carpet sea squirt, *Didemnum vexillum*  Common cord-grass, *Spartina anglica*  Green sea fingers, *Codium fragile*  \*Japanese skeleton shrimp, *Caprella mutica*  \*Leathery sea squirt *Styela clava*  Orange tipped sea squirt, *Corella eumyota*  \*Wireweed, *Sargassum muticum* | *Yard staff have been given training to help with identifying the easier to recognize sepecies (highlighted with a \*). Waterproof posters are up in the tea room and cards are planned for the next FY.* |

1. **Simple biosecurity risk assessment of vessels using the site**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Vessel type**  e.g. Barge, Jack-up rig, yachts etc. | **Vessel name**  (for regular use/high risk vessels) | **Photo reference Y/N**  (images to be inserted in appendix) | **Risk factors**  e.g. Pathway (route), speed, biofouling control, inspection  history, internal treatment history,  See IMO Biofouling Guidance\* | **Risk Assessment** High/Med/Low |
| **Main Vessel Classes** | | | | |
| Resident yachts – average 40ft, range 13ft to 67ft |  |  | Mostly yachts are used locally within a 50 mile radius | Low |
| Small motor boats and jet skis |  |  | Due to space constraints all vessels in this class are kept in the dry-rack storage facility | Low |
| Visiting vessels (UK) |  |  | Around 120 UK–based vessels visit each season, the vast majority from within a 75 mile radius | Low |
| Visiting Vessels (International) |  |  | Each summer around 20 vessels visit from mainland Europe and a handful from further, usually the US | High |
| Neglected Vessels (‘*Dead Boats’*) |  |  | Marina has a very small number (0-4) of vessels which have been abandoned by their owners although fees are still paid- owners been notified of biosecurity plan and response requested. | High |
| **Individual Vessels** | | | | |
| Live aboard vessel | Cradle Cap of Stanford | Y in file | Not been hauled out for cleaning for 5+ years – owner been notified of biosecurity plan and response requested. | High – hull is a substrate for NNS to re-infect other vessels |
| Local ferry | For and Aft | Y | Well used and maintained | Low |
| Local mooring contractor/jobbing barge | ‘Shifty’s’ boat | Y | Not so well used or maintained but doesn’t go far. | Medium |
| Dredgers | Puddle Duck of Antwerp and  Cradle  Cap | Y | Vessels coming to site to dredge main channel (see \*\*\* below in 3.2) . Known to work in Holland, France and UK | High |

**3.1. Deployment & Port Visit History of High Risk Vessels**

|  |  |  |  |
| --- | --- | --- | --- |
| **Vessel name and date of entry** | **Port of origin, date of departure** | **Ports visited and length of stay** | **Any increased risk? Details\*** |
| Puddle Duck of Antwerp | Antwerp, April 2012 | Multiple European destinations, 1st PoC in UK (Reach Point marina) | We were the 1st PoC after a long duration trip around Europe. |
| Cradle Cap | Lonne Marina, Brittany, circa 2010 | Unknown | Lonne marina and that area of Brittany is known for the trumpet worm infestation. |

**\*Information related to any slow or stationary periods, events or climatic conditions that may increase biosecurity risk.**

**3.2 Site Activities which have a significant risk of introducing or spreading non-native species**

|  |  |  |  |
| --- | --- | --- | --- |
| **Activity** | **Timing and Site Lead** | **Scale of Works** | **Risk Factors and Biosecurity Actions\*** |
| **Ongoing and Recurring Activities** | | | |
| Cleaning pontoon floats | Annual  (Marina staff) | Sides of pontoons scraped to maintain tidy appearance and remove food source (including native mussels) which attracts gulls | Due to the lack of depth in the marina and in order to ensure that seabed is not fouled by pontoon debris and potential Non Native Species (NNS) spread, pontoons should not be scrubbed or scrapped unless the majority of the material is collected. Heavy fouling seasons can be dealt with using a bucket to collect scrapings in the water. Additional time should be allocated if MM or yard staff recommend this work |
| Temporary pontoons installed for regatta/summer season | April to July | 7 pontoons | a) Notify contractor that the pontoons will be refused if carrying any fouling  b) Check, clean, dry on receipt of pontoons.  c) Notify regatta organisers that a ‘clean hull’ policy is in place and we hope they will respect it. Heavily fouled vessels may be refused entry. |
| Use of wash-down and facility | Continuous  (Boatyard staff and boat owners) | Wash down of vessels in slings with pressure washer | Renew existing closed loop system which is failing to deal with daily volume with upgraded system. All material from filters and sediment tanks to landfill. Aim to have replacement in place by the end of the plan period. |
| Existing permanent pontoons removed for sale and newer second hand installed | March 2016 | 20 pontoons | a) Notify staff that pontoons should be pressure washed using hot water on site before sale or storage.  b) Notify contractors that purchased pontoons need to arrive clean or the wash will be at their cost.  c) Check to see if new pontoons are epoxy coated (to discourage fouling and increase resilience to damage from cleaning), if not ask contractor for a cost for coating. |

|  |  |  |  |
| --- | --- | --- | --- |
| **One-off activities/operations** | | | |
| Dredge channel | Summer 2016  (Contractor) | Xx cubic metres of sediment to be dredged | a) Check deployment, vessel history, hull condition of vessels concerned.  b) Ensure systems are cleaned and flushed before vessel leaves Port of Origin |

\***Details of how activities have the potential to increase the risk of introducing or spreading marine non-native species.**

**5. Additional Biosecurity Control Measures – Instructions for staff/contractors/site users**

|  |  |  |  |
| --- | --- | --- | --- |
| **Who** | **What** | **Where** | **When** |
| Marina staff/berthing manager | Be aware of long distance or slow moving craft and take steps to assess risk. Make a note in the Biosecurity Log of any vessels of concern. | In the marina | Ongoing |
| Marina Manager | Establish a ‘Clean Hull’ ethos in the marina and amongst berth holders and users (‘arrive with a clean hull-leave with a clean hull’). Use events, marina handbook, socials, The Green Blue award and TYHA standards to encourage this. | In the marina | Ongoing |
| Marina Manager/Admin team | Ensure all relevant contracts include biosecurity clauses e.g. the contractor will be responsible for ensuring the goods/vessels supplied are cleaned and inspected before arrival on site or removal/cleaning costs will be their responsibility. | On site | Ongoing |
| Events Manager | Ensure that all regatta or event organisers are aware of Clean Hull policy. Vessels not meeting this standard (2 or less using the scale in the biosecurity planning guidance) will be refused entry until their vessels have been cleaned. | Events | Ongoing |
| Admin team | Ensure that the annual marina handbook includes useful information about marine nonnative species. Place a poster on the marina notice board and check regularly to make sure it is in place and legible. | Marina handbook  Marina noticeboard | Ongoing |
| Yard Staff | Ensure berth holders are aware of the marinas clean hull policies and encourage all boat owners and contractors to follow best practice (see The Green Blue) with regards to the use of antifouling paints and annual haul out of boats.  Ask The Green Blue for a site visit and help with awareness raising. | Marina handbook  Marina noticeboard | Ongoing |

**6. Site surveillance and reporting procedures**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Who** | **Where** | **When** | **What** | **Notes** |
| Yard Manager | Exposed rock or seabed. | Low water springs | a) Photograph any unusual species and record in biosecurity log book.  b) Monitor over time and collect samples for analysis or send on photos for identification if concerned. | Invasive species tend to grow quickly so any new plants and animals which suddenly ‘take over’ should be treated with suspicion. |
| Marina Manager | Pontoon floats | Monthly walk round to check for heavy fouling. | Review photos taken by yard manager and report to <http://www.brc.ac.uk/irecord/enter-non-native-records> if suspicious. | Consider practicalities of float cleaning when ordering new pontoons.  Assess/discuss most effective cleaning routine for floats. |
| Marina Manager | Resident yachts | Weekly walk around | Photograph and make a note of heavily fouled boats in biosecurity log book. | Refer to this list before annual invoices are issued –consider including biosecurity information in all or some berthing invoices. |
| Yard Staff | Hauled out boats for wash down | Daily | Rapidly inspect hull for any unusual species (as per training – see above) and take samples/report to manager as needed. |  |

**7. Contingency Plan**

|  |  |  |  |
| --- | --- | --- | --- |
| **Scenario** | **Lead Person** | **Location of Equipment** | **Action** |
| Heavily fouled boat arrives from high risk location | Marina Manager | Biosecurity literature in marina office.  Biosecurity email group. | a) Provide literature and encourage haul out and  wash down. If owner refuses politely encourage them to leave.  b) Make a note in the Biosecurity Logbook.  c) Circulate a note to adjacent marina managers about the vessel. |
| A new highly invasive species has been found for the first time locally and you are the first to hear about it. | All staff – alert marina manager at team meeting. | Biosecurity email group | a) Alert local harbours about the new species and any available information about it.  b) Make a note in the Biosecurity Logbook. |

**8. Location of biosecurity logbook**

**Marina Office**

**9. Plan Review Date – March 2017**