



# GUIDELINES FOR DIVING SERVICE PROVIDERS inspecting vessels arriving to New Zealand

## Overview

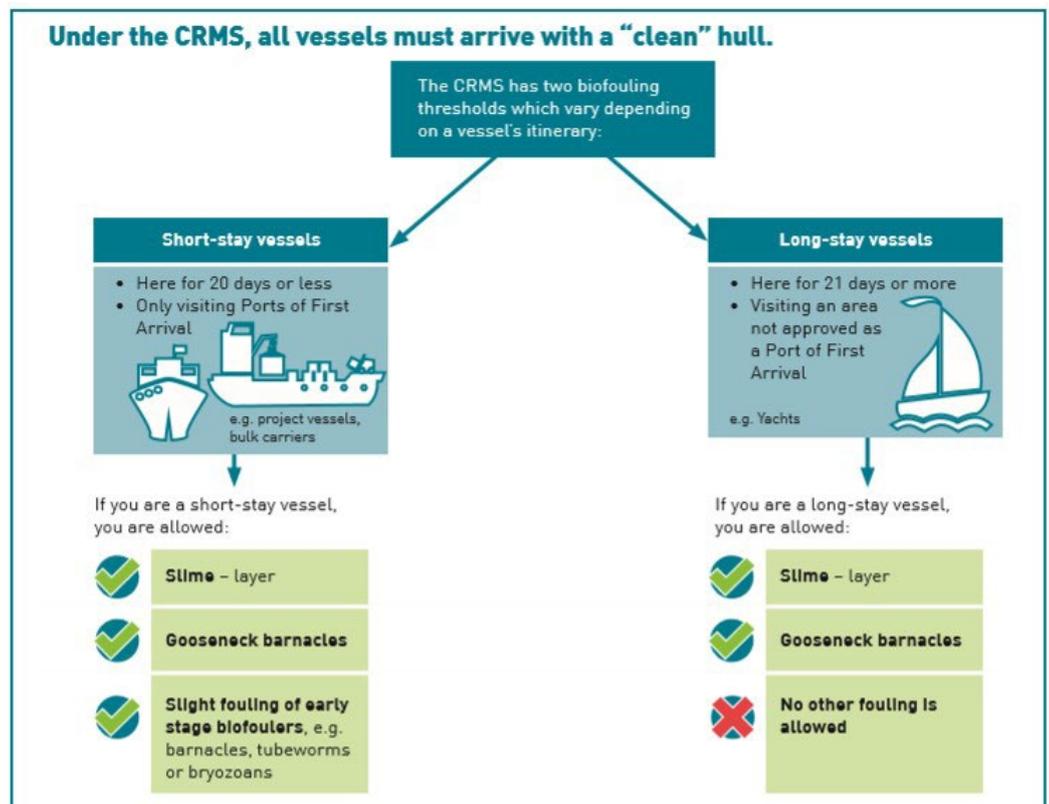
As a provider of diving services, you may be contracted to inspect, clean, or maintain the hulls of vessels intending to visit New Zealand. Beginning in May 2018, the Ministry for Primary Industries (MPI) will require all vessels arriving in New Zealand to arrive with a “clean hull”. Vessel masters and owners often defer to divers’ assessments of the level of fouling found on their hull, and the reports compiled by dive companies will often be used as proof of compliance with the new biofouling standard. As such, MPI feels it is important to notify dive providers of the thresholds it will use to assess the cleanliness of a vessel once the new standard is enforced, so that they may give accurate advice to vessels planning to visit New Zealand.

## The New Rules – The Craft Risk Management Standard (CRMS) for Biofouling on Vessels arriving to New Zealand

The Craft Risk Management Standard for Biofouling on Vessels Arriving to New Zealand (CRMS) goes into force in May 2018, and requires all vessels arriving to New Zealand to do so with a “clean hull”.

The definition of “clean hull” depends on the vessel’s itinerary, which sorts vessels into two categories:

- **Short-stay vessels** are those vessels intending to stay in New Zealand for 20 days or less, and to only visit ports designated as Places of First Arrival. These vessels are allowed a slime layer and gooseneck barnacles, plus small amounts of other fouling organisms on hull (<1% coverage) and niche areas (<5% coverage).
- **Long-stay vessels** are those vessels intending to stay in New Zealand for 21 days or more, and/or to visit ports not designated as Places of First Arrival. These vessels are only allowed a slime layer and gooseneck barnacles; no other fouling will be allowed on hull or niche areas.



Vessels must comply with the standard by showing evidence of one of the following:

- Maintain a clean hull through best practice maintenance – **Recommended for short stay vessels.**
- Clean/treat the hull less than 30 days prior to arrival to New Zealand Territory – **Recommended for long stay vessels.**
- Clean/treat the hull within 24 hours of arrival to New Zealand Territory.
- Through the development of a MPI-approved Craft Risk Management Plan.

Part of “best practice maintenance” includes regular hull inspection, proactive cleaning (i.e. slime layer grooming), and reactive cleaning (i.e. macrofouling), if needed. Therefore, vessels will rely on the expertise of dive providers to ensure they meet the thresholds of the standard and have sufficient evidence to prove compliance upon arrival to New Zealand. Vessels that cannot provide evidence of a clean hull upon arrival will be subjected to compliance actions upon arrival, such as a dive inspection, or a direction to leave New Zealand Territory until the biofouling has been managed.

## The role of dive providers – An important resource for advice to vessel owners and operators

Divers provide valuable advice. In the four years leading up to the implementation of the CRMS, MPI has noted that vessel masters value divers’ assessments of biofouling, and often defer to divers’ assessments. However, the thresholds for what constitutes a “clean hull” for vessels arriving in New Zealand after May 2018 are likely more strict than some vessel masters and dive providers are used to. Photographs from inspection reports submitted to MPI indicate that sometimes a diver’s assessment of “typical” or “light” fouling would not meet the thresholds of the CRMS.

Once the CRMS goes live in May 2018, vessels will need to provide proof that they are adequately managing biofouling. Hull inspection or cleaning reports, photos, and video provided by dive providers are an important piece of evidence that vessels can provide to MPI to prove compliance. Thorough, clear reports that include photos and/or video of all hull and niche areas are the best way for vessels to prove compliance. Vessels intending to visit New Zealand may require more thorough reports than vessels visiting countries without similar biofouling rules.

## Reporting guidelines

The below table outlines guidelines regarding the type of information that MPI prefers be included in hull inspection reports. Vessels with detailed reports following the guidelines in the “Preferred” column will have an easier time proving compliance with the CRMS (provided the vessel is clean to the appropriate threshold).

Preferred 	Not preferred 
<b>Quantitative</b> assessments of biofouling cover (i.e. estimates of percent cover).	<b>Qualitative</b> descriptions of biofouling cover (i.e. “typical”, “moderate”, “light”, etc.).
<b>Photos or video</b> evidence of biofouling cover.	<b>Written</b> description of biofouling cover.
<b>All hull and niche areas</b> specified and documented in report.	<b>Only flat hull surfaces or a subset of niche areas</b> specified and documented in report.
<b>Percent coverage</b> of biofouling organisms present reported.	<b>No indication of percent coverage</b> of biofouling organisms.
<b>All organism types</b> included as biofouling cover (including soft-bodied organisms such as sea squirts, bryozoans, hydroids, etc.).	<b>Only hard fouling organisms</b> included as biofouling cover.
Photos captioned and <b>time/date-stamped</b> to show whether fouling levels in report refer to levels <b>before or after cleaning has taken place.</b>	<b>No indication</b> whether fouling levels detailed in report refer to levels before or after cleaning has taken place.

## Photo and video guidelines

Photos and videos submitted as evidence of hull fouling should be:

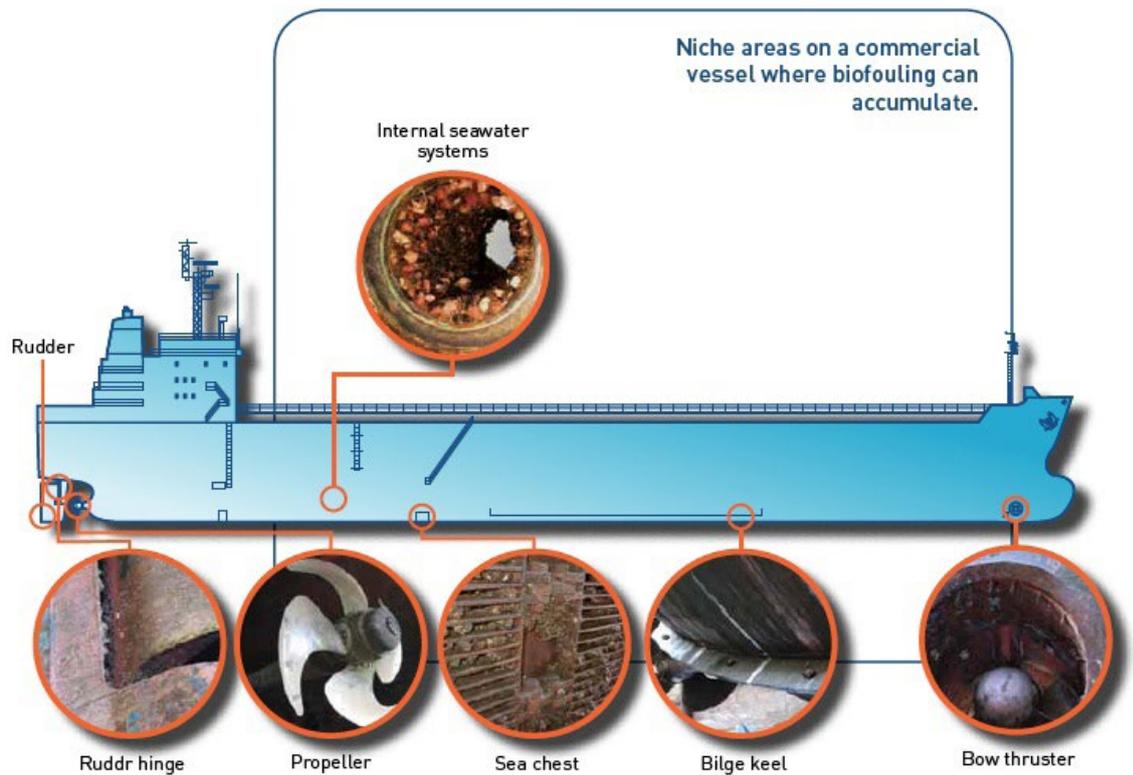
- Clear and in focus.
- High quality (not pixelated).
- Date and time stamped. (Note that newer GoPro camera models do not have a date stamp feature).
- Clearly labelled in the report with the hull location from which the photo was taken. (For video, diver should indicate location on hull in audio communications).
- Video should be as stable/smooth as possible (i.e. not jerky or moving too quickly to identify fouling).

## Niche areas

As most dive providers are likely aware, biofouling tends to accumulate in niche areas, rather than on flat hull surfaces. Vessels arriving to New Zealand will need to provide evidence that they are adequately managing biofouling in niche areas. Therefore, vessels planning to visit New Zealand may require that more attention be paid to cleaning and documenting niche areas when conducting dive inspections and hull cleaning.

Niche areas where biofouling can accumulate, and which are important to document include, but are not limited to:

- Sea chests
- Bilge keels
- Bow/Stern thrusters
- Rudders
- Propellers
- Discharge pipes
- Bulbous bow
- Rope guards
- Sounders/instruments
- Sacrificial anodes, etc.



Vessel diagram provided by the Department of Agriculture and Water Resources

## Representative examples

The following photos are representative of the level of fouling that would be acceptable or unacceptable under the thresholds of the CRMS. Any fouling greater than that shown as "unacceptable" in the following photos should be considered to exceed the thresholds of the CRMS. Fouling that exceeds the thresholds should be cleaned prior to the vessel departing for New Zealand.

## Slime layer

The slime layer should be flush with the hull and should not be filamentous or "roped". Macroalgae such as shown in the bottom, right hand photo does not count as "slime" and coverage greater than 1% on the hull or 5% in niche areas should be cleaned.

Acceptable



Unacceptable



## Gooseneck barnacles

Acceptable



Unacceptable

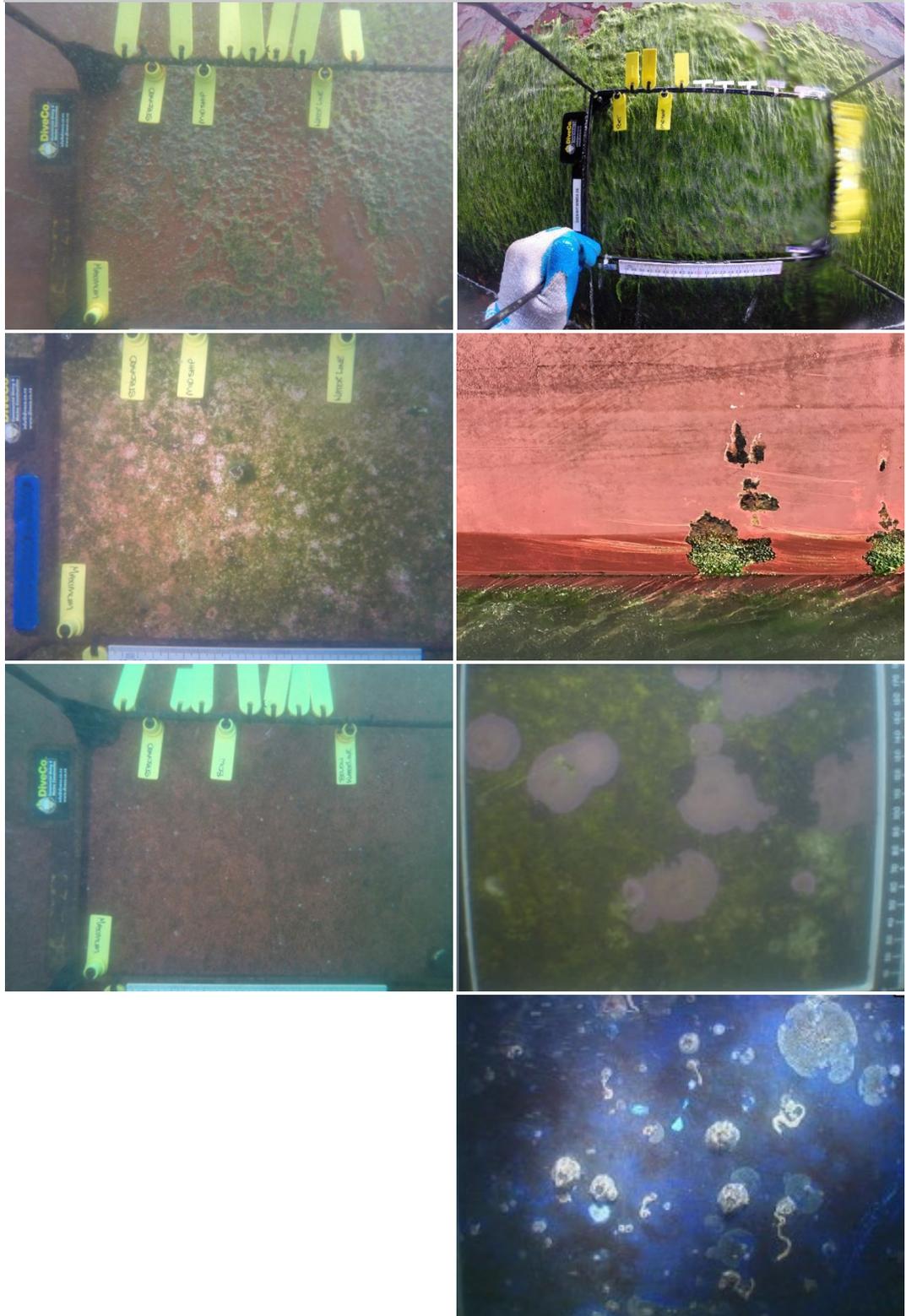
Gooseneck barnacles are always allowed under the CRMS, in any amount, in any location.

## Waterline and flat hull surfaces

The waterline and flat surfaces of the hull should have no more than a slime layer and incidental (1% cover) of macrofouling. Filamentous slime is unacceptable, as are encrusting organisms such as bryozoans. Damage to the antifouling coating should be repaired, as a vessel with a damaged antifouling system is not following best practices for biofouling management. Scattered fouling presents a lower biosecurity risk than clumped fouling. Therefore, clumped biofouling and/or fouling of >1 organism type or species exceeds the thresholds and should be cleaned prior to the vessel's departure for New Zealand.

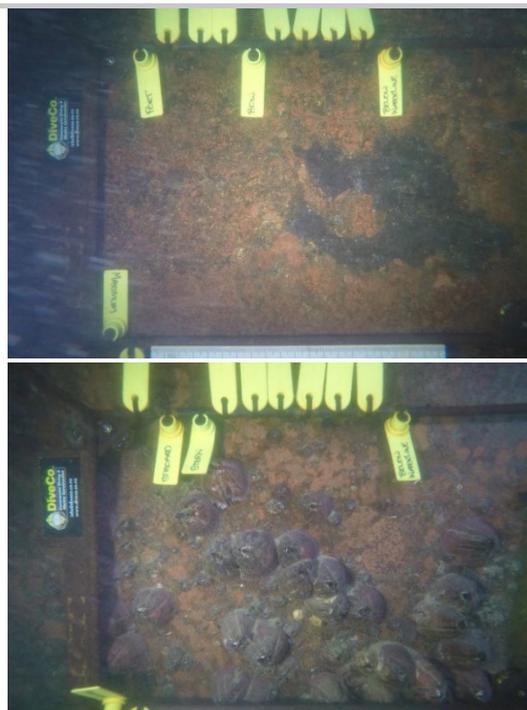
Acceptable 

Unacceptable 



Acceptable ✓

Unacceptable ✗

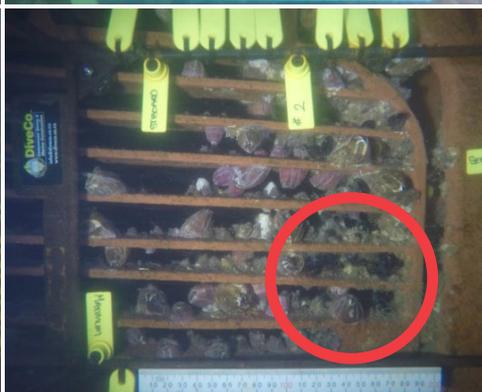


## Sea chests

Sea chests should be unobstructed, with only scattered (<5% cover) macrofouling. Clumped macrofouling presents a higher biosecurity risk than scattered fouling (because the organisms are close enough to reproduce), so dense clumps or cover >5% should be cleaned. Mussels, such as those indicated in the circled portion of the bottom, right photo, are high risk organisms and indicate advanced fouling, and should always be cleaned when present. If possible, the insides of sea chests should also be inspected, documented, and cleaned if necessary.

Acceptable ✓

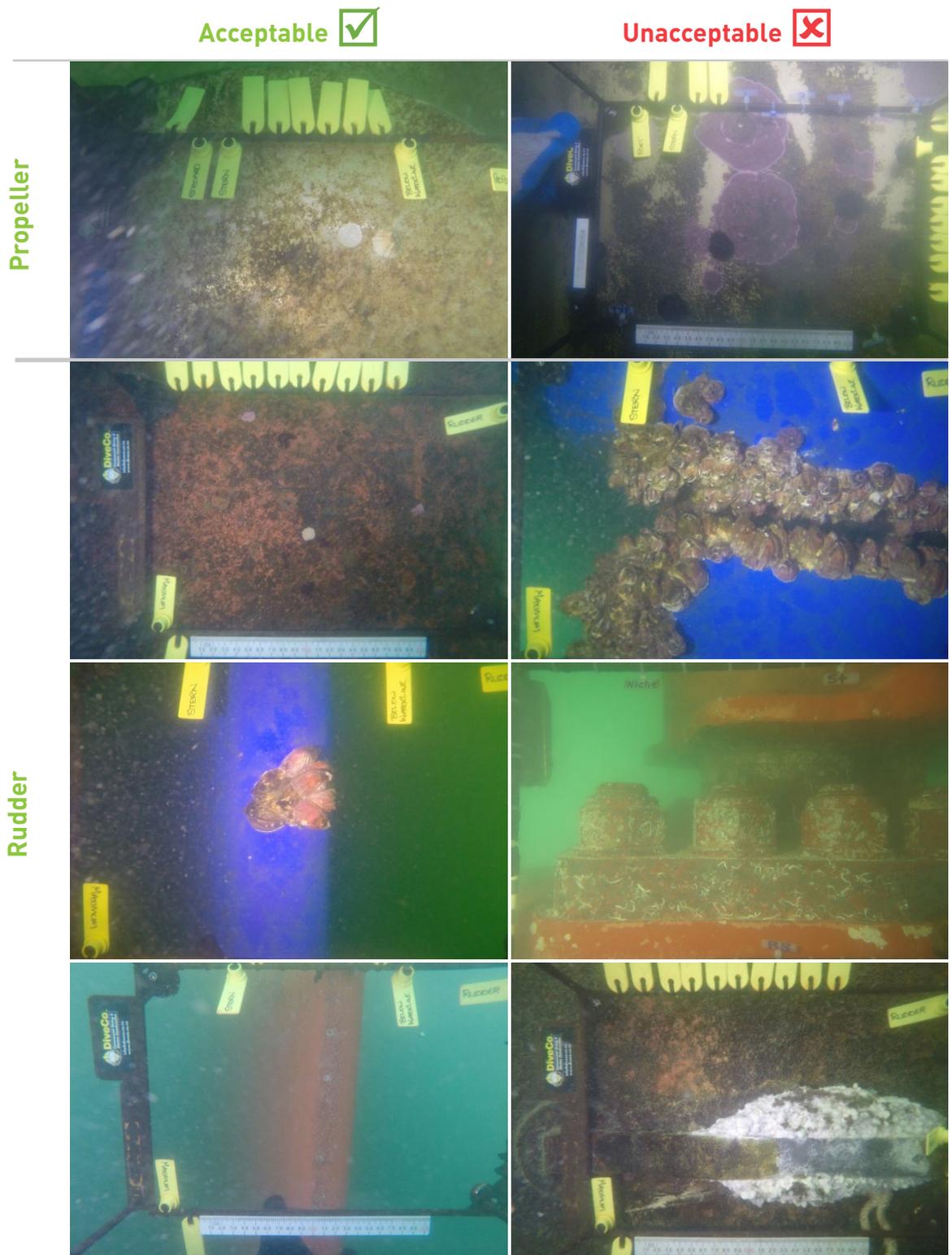
Unacceptable ✗



## Niche areas

Niche areas should have a total biofouling cover of <5%, plus a slime layer and gooseneck barnacles. All fouling organisms, including encrusting and soft-bodied organisms, should be included as part of the total estimate of cover. All niche areas should be thoroughly inspected and photographed, with attention to recesses and other irregularities which may shelter biofouling organisms. All niche areas present on the vessel should be inspected and documented during the hull inspection, if possible (note, the below section is not a comprehensive list of niche areas to be surveyed).

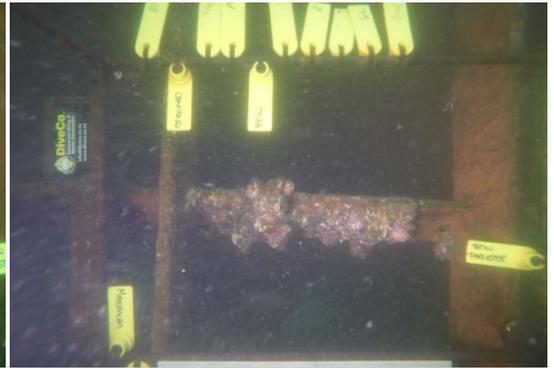
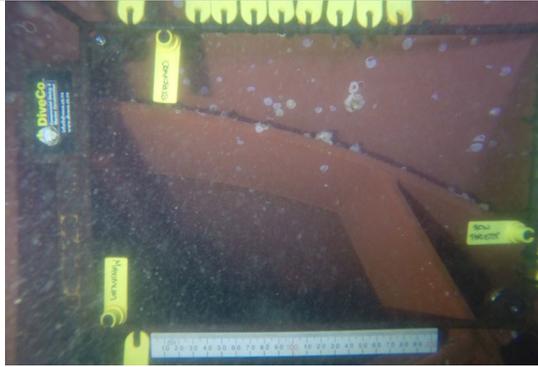
Any biofouling above the 5% cover threshold should be cleaned, with special attention to organisms growing in clumps, or to organisms such as mussels, which indicate advanced levels of hull fouling and present a higher biosecurity risk.



Acceptable 

Unacceptable 

Bow thrusters



Bilge keel



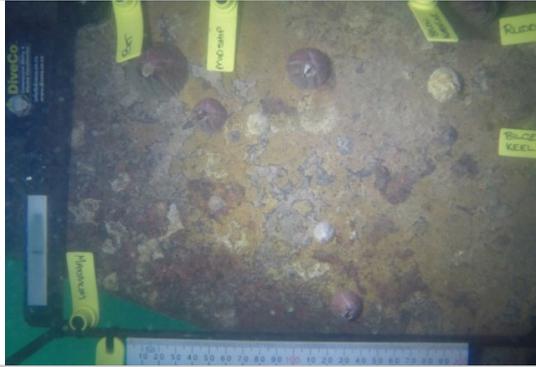
Discharge pipes



Acceptable ✓

Unacceptable ✗

Stabiliser



Bulbous bow

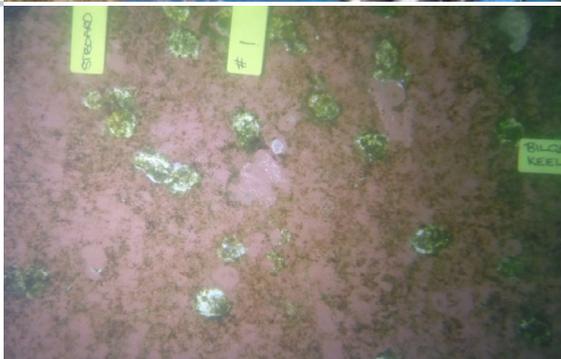


Draft marks



## High Risk Organisms

Although the CRMS thresholds are based on total percent cover, rather than on the species present, some biofouling organisms are indicative of advanced hull fouling, and should always be removed when present. The presence of these organisms not only increases the biosecurity risk associated with the vessel, but also indicates that the vessel has likely not been managing biofouling using best practices. If these organisms are present on the vessel, there is a high possibility that the vessel will be found non-compliant with the CRMS.

<p><b>Mussels</b></p>	
<p><b>Oysters</b></p>	
<p><b>Sea Anemones (and other soft-bodied organisms, i.e. sea squirts)</b></p>	
<p><b>Slime, algae, or barnacles growing on top of other fouling organisms (indicates advanced fouling assemblage)</b></p>	

## Online Resources

More information regarding the CRMS and compliance requirements for vessels visiting New Zealand can be found at the MPI website: <http://www.mpi.govt.nz/importing/border-clearance/vessels/arrival-process-steps/biofouling/biofouling-management/>

This page contains specific advice for different vessel types, as well as links to the standard and guidance documentation, such as:

- **Craft Risk Management Standard for Biofouling (CRMS):** <http://www.mpi.govt.nz/dmsdocument/11668-biofouling-on-vessels-arriving-to-new-zealand-craft-risk-management-standard>
- **Frequently asked questions:** <http://www.mpi.govt.nz/dmsdocument/27444-craft-risk-management-standard-faqs>
- **Draft Guidance for CRMS:** <http://www.mpi.govt.nz/dmsdocument/11671-biofouling-on-vessels-arriving-to-new-zealand-draft-guidance-document-for-the-craft-risk-management-standard>

For more information on best practices for biofouling management, please see the IMO Biofouling Guidelines:

<http://www.imo.org/en/OurWork/Environment/Biofouling/Documents/RESOLUTION%20MEPC.207%5b62%5d.pdf>

Any enquiries regarding the New Zealand's biofouling requirements should be submitted to [standards@mpi.govt.nz](mailto:standards@mpi.govt.nz)