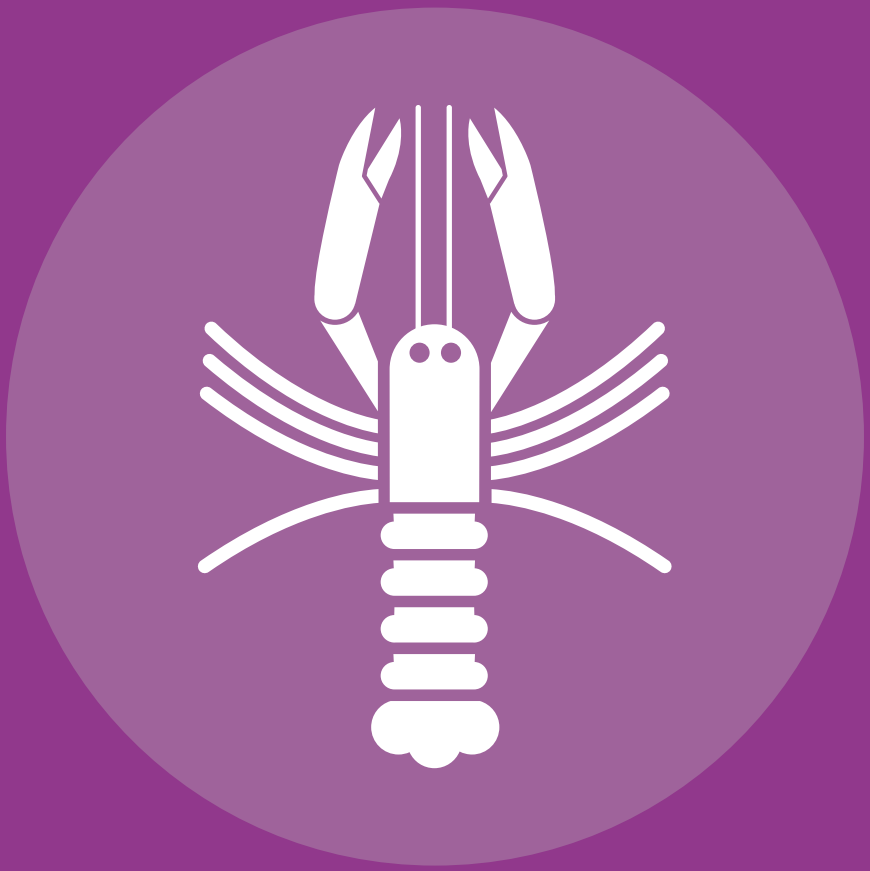
COMPLIANCE SUPPORT GUIDE



# NEPHROPS

SEAFISH

RESPONSIBLE FISHING SCHEME Certification Mark

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# 1 / INTRODUCTION

## 1.1 The Responsible Fishing Scheme

The Seafish Responsible Fishing Scheme (RFS) is a voluntary vessel-based programme certifying high standards of crew welfare and responsible catching practices on board fishing vessels.

The RFS is open to all types of fishing vessels and fisheries, and is a 'business-to-business' tool that helps fishermen showcase best practice through independent, third-party auditing. To become certified, applicants must meet the requirements of the RFS Standard. A vessel and its skipper is the 'unit' audited against the Standard.

Certification to the scheme demonstrates that the skipper and vessel operate to best practice in five core areas:

### Core Principle1: Safety, health and welfare

- A commitment to generating a culture of integrity and respect (e.g. no forced labour) will be demonstrated.
- Best practice drawn from other relevant safety management and ethical and welfare initiatives to improve safety of the crew and promote decent working conditions.

### Core Principle 2: Training and professional development

- Access to training for the key priority areas, especially safety.
- Focus on improving skills, knowledge and understanding.
- Commitment to raise standards, open up new opportunities and cooperate with management authorities.

### Core Principle 3: The vessel and its mission

- The vessel and its gear are in compliance with all current legislation.
- The vessel operates within the legal framework with the right documentation in place.
- Full cooperation with Voluntary Agreements in existence in the fisheries within which they operate.

### Core Principle 4: Care of the catch

- Focus on supplying safe, high quality, wholesome product with known provenance.
- Hygienic handling and storage at appropriate temperatures.
- Full traceability from catch to quayside.
- Responsible capture and landing of live products.
- Commitment to maintaining the value of the catch.

### Core Principle 5: Care for the environment

- Responsible practice with respect for the environment (management of litter, lost fishing gear recovery, wildlife interaction records).
- Supporting fishery science (e.g. observers, science partnerships, etc).
- Tie-in with other voluntary schemes.

# 1 / INTRODUCTION

## 1.2 RFS Compliance Support Guides

The RFS Compliance Support Guides (CSGs) underpin the RFS Standard and assist the skipper in understanding all areas that need to be complied with to successfully achieve RFS certification.

There are six CSGs in total - five sector-specific guides that the applicant will work through as appropriate to their own operations, and one cross sector guide that applies to all sectors. Applicants should read all the applicable CSGs before submitting their RFS application forms.

### Sector specific CSGs (applicants must read any which cover their type of fishing operations)

- Demersal
- Shellfish
- Nephrops
- Pelagic
- Scallops

### General Cross Sector CSG (all applicants must read this guide)

- Health and Safety
- Welfare
- Catch safety and traceability
- Onboard food preparation
- The environment

The legal requirements that apply to the operation of a fishing vessel cover basic issues of food safety, fish marketing, fishery controls and health and safety, most of which meet requirements set by the EU. **It is the responsibility of the skipper to ensure that the vessel is operating and catching within the appropriate legal framework.**

The CSGs provide information and support to assist applicants in meeting the conditions of the RFS Standard, and help them prepare for the RFS certification audit. These guides include support on general fishing operations as well as sector specific practices. The Guides direct RFS applicants to relevant documents and explain the conditions which underpin the Scheme, and help in the application and preparation process before a vessel undertakes its certification audit.

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## 2.1 Fishing practices

The type and size of vessels targeting Nephrops varies widely across the fleet. Capture methods typically fall into two categories, active towing of nets or passive setting of creels or pots. Both are equally effective dependent upon the areas fished and types of presentations required for sale (live, whole or tailed).

For towed gear, tow times can affect the quality of the catch and the length of tows should be balanced between commercial viability and catch quality. Length of trip can also affect the catch quality, particularly Nephrops caught at the beginning of trips, so again a balance needs to be reached where the benefits of extending trips to capture more Nephrops are not offset by poorer prices at point of sale due to loss of quality.

Fisheries prosecuted by towed gear operators are often mixed fisheries as whitefish species and Nephrops populate common grounds. Therefore, gear should be designed to maximise retention of target species with non-target and/or juvenile animals escaping or being excluded prior to gear being boarded.

## 2.2 Catch handling

Irrespective of fishing method the vessel areas used to receive the catch should offer maximum protection from the elements and any other possible sources of contamination.

In addition to vessels being free from sources of contamination it is also important that catch handling equipment and crew members handling the catch remain as clean as practically possible. Any equipment which comes into contact with the catch, and all protective equipment worn by the crew, should be in good condition and cleaned on a regular basis.

As far as practically possible when boarding towed gear the catch should be lowered onto the deck or released into hoppers from the lowest height possible as this will minimise the potential for damage or crushing. Similarly, gentle handling when sorting and grading will ensure that unwanted damage is minimised.

## 2.3 Grading and processing

The diversity of catch methods results in various grading and processing activities generating the following types of potential market presentation:

- Whole live Nephrops.
- Whole dead Nephrops treated with melanosis inhibitors.
- Whole dead untreated Nephrops.
- Tailed Nephrops treated with melanosis inhibitors.
- Tailed untreated Nephrops.
- Whole frozen Nephrops treated with melanosis inhibitors.
- Tailed frozen Nephrops treated with melanosis inhibitors.

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Irrespective of the required final presentation, grading must ensure that all undersized, soft, excessively damaged or diseased animals are not selected, such animals being returned to sea, alive where possible. It is important therefore to ensure that all crew members engaged in grading activities are effectively trained in grading and selection criteria.

### Melanosis inhibitors

Where contractual commitments require it, or where trip lengths are likely to exceed 48 hours, catch can be treated with melanosis or black spot inhibitors, a process known as 'dipping'.

There are various 'dipping' treatments available for preventing melanosis onset. All treatments used should be used in accordance with the manufacturers' recommended guidelines which should include mixing ratios or dilution rates, treatment times, replacement/effective life advice and COSHH procedures concerning safe handling and correct storage and disposal. Skippers should therefore ensure that only fully trained crew members engage in treatment preparation and procedures. As a demonstrable measure of due diligence it is also recommended that skippers or owners of vessels record details of trained crew, inclusive of when and how training was given.

For further guidance on chemical treatments of Nephrops please refer to the 'Using Chemical Additives on Whole Langoustine at Sea' brochure from Seafood Scotland.

## 2.4 Catch quality

The following fish quality specification is required for all Nephrops at the point of landing:

### Required quality specifications

| Parameter whole Nephrops | Specification |
|---|---|
| Eyes | Shiny black and bright. |
| Inner crescent of eye | Inner rim bright orange. |
| Eye stalk | Eye stalk is translucent. |
| Gills | Translucent. |
| Damage limbs | Less than 1%. |
| Melanosis | No Melanosis or black spot. |
| Shell texture | Firm and hard to the touch. |
| EU Grade Size 1 | 20 or less per kg. |
| EU Grade Size 2 | 21 to 30 per kg. |
| EU Grade Size 3 | 31 to 40 per kg. |
| EU Grade Size 4 | Over 40 per kg. |

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## 2.5 Onboard storage (live)

Due to the diversity and range of market requirements there are several different storage techniques employed. The method chosen will depend upon customer requirements, vessel capabilities and routes and time to market.

### Live storage

The various methods employed to maintain catch in a live state are detailed below. Each has its own merits and usage will depend upon the facilities on board individual vessels, the capture methods and the time between capture and first sale. Irrespective of live storage method the following should be taken into consideration:

- Keeping Nephrops moist and cool during live storage will reduce their metabolic rate and allow them to gradually excrete waste through their gills. This will reduce the stress load on the animals which should reduce their mortality rate.
- Live Nephrops should not be directly iced – the direct impact of the cold will tend to kill them. Indirect icing, such as floating seawater ice in a vivier tank or using slush ice is more advisable.
- Live Nephrops should never be subjected to melanosis inhibition treatments as the chemicals contained within the treatments will tend to kill them.

### Storage in tubes

Nephrops can often be stored in a complex of individual chambers or tubes, which when full are placed into vivier containment. Depending upon tube array construction, care must be taken when filling the tubes so as to avoid unnecessarily damaging the catch which may cause increased mortality or reduced value. If there is a gap between the end of the tube array and the tray that forms the base of the complex, the tail of an animal may become caught under the end of the tube, and will be damaged as the top tray is put in place and the complex tied tightly shut.

As smaller Nephrops are usually more prevalent, the tubes containing these animals are quickly filled and placed into containment whereas tubes for the larger grades may take longer to fill. Inadvertently, the larger animals might therefore be exposed to the air for much longer, risking a poorer survival rate during storage and subsequent transport. Drying wind, cold or heat will also reduce survival rates so these risks should be taken into account. Where space and facilities allow it may be beneficial to provide a seawater sprinkler arrangement over the tubes as they are being filled or to put partially filled tubes into a vivier tank between hauls.

### Vivier tank requirements

Where onboard vivier containment is practiced it is important that the system is suitably designed so as to ensure sufficient rates of seawater circulation, with seawater that is both free from contamination and supplied to the tanks at temperatures as near to ambient seawater temperatures as possible. Typically these requirements are addressed at vessel design stage but need to be considered where vessels are to be converted or changes are made to existing systems. In order to assess efficiencies of tanks it is recommended that skippers maintain accurate records of mortality rates of catches as this will enable trends or issues to be identified leading to early corrective actions where necessary.

### Live well and keep pot storage

In certain circumstances it may be both beneficial and practical to live hold Nephrops in on board communal live wells filled by a continuous supply of clean seawater. However, care should be taken to turn off the seawater feeds prior to returning to port or berthing.

This will reduce the possibility of contamination, or subjection to low salinity and/or higher seawater temperatures which may adversely affect mortality rates and catch quality.

Where live catch is to be aggregated prior to sale it can be maintained in 'at sea' keep or store pots but this may expose stored catch to risks as mentioned above. However, a good working knowledge of local conditions almost always held by skippers operating such systems will prevent excess mortality and losses in value.

### Dry storage

Nephrops are not suited to dry holding and this method of storage is not recommended. However, if unavoidable, it is recommended animals are tubed and that the tubes are orientated so that the animals remain in a head up position therefore retaining any water in their gill chambers. Mortality rates can be reduced by covering tubes with damp sacks or carpet which should be soaked on a regular basis.

### Separation of female and male Nephrops

As female Nephrops sexually mature their ovaries turn dark green just prior to the eggs being spawned. This is known in the industry as 'green head'. A number of markets do not accept these 'green head' Nephrops so consideration should be given to separating the males from the females and tailing the females for the tail market.

## 2.6 Onboard storage (dead)

The following points are recommended to ensure maintenance of catch quality:

### Direct icing

- In order to improve shelf life and quality it is important to reduce the core temperature of the catch to that approaching melting ice as soon as possible. Where practical this should be done by firstly immersing the catch into a slush ice mixture or chilled seawater before laying the catch into containers as described below.
- Containers used for storing the catch need to be fit for the purpose of holding product hygienically and capable of being maintained in a clean condition. They should be constructed with an adequate number of drain holes of a large enough size to allow the free drainage of melt water from the catch.
- To maximise the shelf life of the stored catch there should be a layer of ice placed in the bottom of the container before catch is added, with alternate layers being added until the box is full and topped off with ice.
- The ice must be made from clean seawater or potable fresh water and stowed in conditions that will prevent it from being potentially contaminated by other waste material such as whitefish offal or cleaning chemicals, etc.
- The top level of ice should not stand proud of the upper rim of the container, as this may cause crushing damage to the stowed catch when additional boxes are stacked above.
- The volume of ice should be sufficient to maintain the product at a temperature of between 0°C to +2°C.
- To maximise the quality of the catch the core temperature should be reduced to below +5°C within a time period of four hours from the point the catch is first handled on board.
- The ice-to-fish ratio should approximately consist of one part ice to three parts Nephrops.

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- To assist further with the cooling effect it is advisable to place boxes partially filled with ice at the bottom of each stack of boxes, as this will raise the bottom box of stowed catch off the floor, which will not only keep the catch free of melt water, it will also allow cooling air to circulate around the stack much more efficiently.
- The placing of non-permeable papers between the ice and stowed catch can reduce the effectiveness of chilling by preventing the ice melt water from draining through the catch; therefore only permeable papers should be used.
- Any ice left at the end of a trip should be discarded and replaced with new. This will reduce the likelihood of contamination damage, as old ice is likely to be hard and lumpy

## Slush icing

The following points are recommended to optimise quality preservation within slush ice containment systems:

- Containers used for storing fish need to be fit for the purpose of holding product hygienically and be capable of being maintained in a clean condition.
- Containers used for storing fish should be insulated.
- Slush ice containers should be lidded to prevent potential contamination from bird faeces, foreign bodies, etc.

## Freezing

When freezing Nephrops at sea it is recommended that, after grading and washing, whole Nephrops are pre-chilled in refrigerated or ice water prior to blast freezing. Nephrops should be handled and frozen in rigid containers to prevent the shedding of limbs or subsequent damage when handling frozen. It is recommended that core temperatures be reduced to -25°C within four hours with subsequent holding at temperatures below -18°C.

Where catch is stowed frozen on board, the temperatures of freezers should be monitored to ensure that the catch is maintained at or below -18ºC for the entire duration of the fishing trip. Freezing is deemed as secondary processing and skippers and/or owners should comply with local authority requirements to get vessels registered as food production Authorised Establishments.

## Fishroom structural condition

- If the vessel is large enough and has a fish hold, construction should be such that it aids cleaning and does not pose any contamination risk to the stowed catch.
- It should be well insulated to minimise the effect of outside temperature influence and it is usually recommended to have at least 50mm of insulation in the walls and 100mm on the bulkheads that separate engine rooms spaces from the fish hold.
- It is recommended to install and use insulated floor base panels directly over the hold floor. This can provide additional insulation protection on concrete floors where heat ingress may conduct into the hold from other areas of the vessel such as the engine room.
- In addition, mechanical refrigeration is advisable for trip boats that wish to undertake trips of more than three days as this will prolong ice life and allow for a reduction in the amount of ice needing to be taken to sea.
- For day boats with no dedicated fishroom, Nephrops should be placed into insulated containers to help preserve ice and maintain catch temperatures within the required range.

## 2.7 Temperature monitoring and control

As with any protein-based foods and food ingredients, effective temperature monitoring and control are an essential part in ensuring that a safe, quality product is purchased by vessel customers or final consumers.

It is required to systematically monitor catch temperatures throughout all fishing trips of more than four hours duration to ensure that the catch is suitably chilled and maintained at appropriate temperatures. Where present, holds may have 'hot' and 'cold' locations within them, depending on their design. It is advisable to ensure that any temperature sensors or display devices are located in areas where the warmest temperatures are likely to be found. Sensors should not be located in close proximity to the entry hatch to the hold, as this will cause temperature fluctuation whenever catch is taken into the hold over the duration of the trip.

For vessels with fish holds it is recommended that systems are fitted to relay the hold temperature information to the wheelhouse as this will maximise the likelihood of being alerted to problems early. Damped temperature sensors should be used. These types of sensors are designed to react less sensitively to fluctuations in temperature, rather than react to variations quickly as would be the case upon the addition of more catch to tanks or holds.

The development of documented temperature monitoring and control procedures (inclusive of temperature control recovery procedures and what happens to the catch during the period of unacceptable temperature control) should be built into vessel food safety management systems.

For vessels where deck storage is the only option it is essential that, if trips are likely to be of four or more hours duration, sufficient ice is taken to chill the maximum amount of anticipated catch. Even if trips are expected to be of less than four hours duration it is recommended that ice is taken as smaller vessels tend to offer less shade and temperatures in summer can cause increased rates of quality loss.

Vessels with no dedicated holding facilities should hold their catch in insulated, lidded containers. These will assist in prolonging the ice taken to sea and will maintain appropriate catch temperatures if immersed in ice and lids are placed back on the containers. Where catch is not automatically deposited into containers, regular breaks in fishing must be taken to gather, wash and ice the catch to minimise the length of time catch is not stored in appropriately chilled conditions.

## 2.8 Weighing, labelling and boxing at sea

Where possible, size grading, weighing and boxing of Nephrops at sea is most desirable as it eliminates the need for de-icing, re-weighing and re-boxing before sale. Ideally the catch should be weighed and labelled in the fish hold as this will minimise the risk of contamination and, where holds are refrigerated, place the catch under temperature control sooner.

Some key factors for weighing the catch are listed as follows:

- Ensure that crew working the scales are fully trained in their operation.
- Ensure the scales are correctly tared for the container used to weigh the catch.
- Keep a calibration weight on board and check the scales daily for accuracy. It is advisable to have a written policy confirming the frequency of checks and actions to be taken in the event that the scale readings deviate from those expected.
- Allow the catch to stand for a suitable time before weighing to allow excess wash water to drain off.

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- Target weights must include a drip loss allowance.
- Care must be taken not to make up boxes which are significantly heavier than the desired minimum target weight, as the consequence will be an excessively high give-away of catch and potential for increased quality loss due to crushing damage when boxes are stacked.

## Recommended labelling practice

As an aid to compliance with traceability regulations it is required that landings are identifiable with documentation that records the following information:

- Boat identification.
- Species (both common and scientific name).
- Size grade (where applicable).
- Date of capture: this may include several days or a period of time corresponding to several dates of catches.
- Unit weight.
- Area of capture: For the North East Atlantic the FAO sub area or code.
- Production method (e.g. caught at sea).
- Fishing method.

Any additional information such as haul number and fish code may be applied at the discretion of the individual vessel but this is not a mandatory requirement.

Labels should be attached or displayed on each container in such a way that all fish label data is clearly visible to the buyer in the marketplace.

## Box weight declaration

It is not recommended that labelling statements give any reference to a 'guaranteed' weight. This is due to the fact that the pre-mentioned factors, which have an effect on drip loss, mean that it is not possible to predict accurately box weights eight to ten days in advance.

There are two methods of declaring box weights currently in use:

**Method 1:**
Box labels published with the actual weighed at sea weight.

Each box label displays the actual weight of fish contained in the box at the time it was weighed and packed at sea. When displaying fish weights in this way the label must incorporate a fixed statement, which clearly indicates that:

i) The weight relates to the weight of fish when it was weighed at sea.
ii) That it will be subject to a degree of drip loss.

**Method 2:**
Box labels published with the predicted weight of fish offered for sale.

The label displays the weight of fish that is estimated to be in the box after a drip loss factor has been taken into account (as illustrated above).

Weighing systems displaying label information in this way should incorporate a fixed statement that says that the published weight on the label is the 'Target Weight'.

## 2.9 Vessel hygiene and cleaning schedules

The use of a simple cleaning schedule can act as a straightforward tool to improve and maintain a high standard of hygiene on board any type of fishing vessel. The use of a cleaning schedule is good practice as it provides a step-by-step instruction as to the systematic cleaning of the working areas to ensure that they are effectively maintained to help preserve the catch and to provide a safe working environment.

A good cleaning schedule should detail:

- What is to be cleaned.
- How often it should be cleaned.
- Any chemicals to be applied, together with their dilutions and contact time.
- The method of cleaning.
- Details of any Chemical Safety Data sheets.

### Vessel cleaning guidelines

Crews must be made aware that good basic hygiene practices will ensure the overall quality of the catch is maximized and maintained It is important to make crew members aware of this, as there will be no visible evidence at sea if fish has been excessively contaminated through poor hygiene standards. This set of guidelines explains why certain hygiene practices are important to the fisherman. If crew understand what can spoil the catch, then they will be in a better position to prevent this occurring in the first instance.

### Working areas

An effective 'clean-as-you-go' policy throughout the trip, and once fishing has been completed, will keep the areas in a suitably clean condition. Nets can be stowed, and fish can be gutted, graded and washed within an environment with minimal bacterial contamination.

### Equipment

The variety of equipment held on board for the handling of the fish can on some vessels be quite extensive. All equipment that comes into direct contact with Nephrops during the handling process should be given particular attention when cleaning as each piece of equipment is a potential source of contamination to the catch if it is not maintained in a clean condition.

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## Receiving hopper or pound, conveyors, elevators and chutes

Equipment will become coated with fish and aquatic debris. If not kept in a good state of cleanliness such debris will build up and dry on to the equipment, making future effective cleaning much more difficult to achieve.

## Gutting tables, boards, knives, grading bins

This is the most intensive work area on the vessel, where the crew are separating fish guts from the body cavity. Fish entrails and organs have high contents of bacteria and enzymes, which will rapidly contribute to fish spoilage, if not removed thoroughly. Equipment too can become badly soiled.

- Tables, boards and knives should be cleaned regularly and effectively to prevent excessive build-up of residues.
- It is recommended that gutting boards should be made from a non-porous, readily cleanable material such as polypropylene. Wooden boards in time become waterlogged thus harbouring bacteria, and making them difficult to clean effectively. They are also prone to splintering through wear, which in turn is a potential foreign body risk to the catch; as such they should not be used.
- It is also recommended that plastic-handled knives are used for similar reasons.

## Washing machines

- Clean off scum and other residues from around the edge of the washer.

## Baskets and scales

- Catch in baskets will generally be un-iced. Therefore, given that there is no temperature control, it is essential that they are kept as clean as possible to minimise the effect of contact contamination.
- Vessels with weighing systems on board should not overlook the cleaning of their scales.
- If electronic scales and labelling systems are used on board, care should be taken in ensuring that the button interface is not water or chemically-damaged.
- Operate a ‘clean-as-you-go’ system with these items of equipment, cleaning frequently when in continuous use.

## Storage containers

Whether owned and cleaned by vessels themselves, or hired from box provision companies, boxes or insulated bins should be checked prior to use to ensure they are both clean and in good condition. Any cracked or broken boxes or bins should be rejected as these cannot be cleaned thoroughly and may contaminate the catch if used. Any dirty boxes or bins should be re-cleaned prior to use.

Boxes and bins should be made of durable materials that are easy to keep clean and cleaned in accordance with vessel cleaning schedules. Where fishroom stowage is not possible boxes should be taken on board prior to sailing and re-washed before use. Where bins are used these should remain lidded to prevent contamination by birds or from other sources of contamination.

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## Hold

The catch may be stowed in the fishroom from anywhere between one to eight or more days at a time. The conditions under which catch are maintained in the fishroom are essential in preserving catch quality throughout the trip. The fishroom must be well insulated; it must have good drainage; all contact surfaces must be easily washable and it must be free from taints and odours.

- Ensure that the hold is thoroughly cleaned and rinsed at the end of every trip.

## Cleaning chemicals

It is essential that the correct food safe approved chemicals are used for the applications outlined above.

Vessels are strongly advised to take professional advice when selecting chemicals, for a number of reasons:

- It can make a significant improvement to the boat's hygiene standard, even if the effects of this are not visible.
- Some chemicals may react with certain metals such as aluminium, which may be present in equipment on board.
- The use of the wrong chemical such as an engine room degreasant does not provide any sanitising effect on work contact surfaces.
- The correct dilution rates and application methods will be advised.
- Chemicals that have a strong residual taint such as bleach will more than likely taint some fish on board the boat.
- Always ensure that your supplier provides you with the relevant chemical data sheets for the products you use.

In addition, persons involved in the application of cleaning products must be fully instructed in their safe and correct application. Chemicals must be correctly stored away from working areas.

## Records

As part of a well-managed cleaning schedule, boats should keep a record of the cleaning activity that takes place onboard. This provides a record of the 'due diligence' the boat has undertaken to ensure that the catch landed is from a vessel which is operating a regular cleaning programme. The record then forms part of the traceable quality history of the fish landed by the boat.

The record should also incorporate a check on the working and storage areas and equipment of the boat to ensure that once the cleaning activity has taken place that the work has been done to a satisfactory level.

## Methods of application and frequency

The method by which areas and equipment of a vessel should be cleaned will depend upon their use, and how heavily soiled they becomes during use.

- In many cases simple hosing down of work areas at regular intervals to prevent build-up of fish and marine debris is sufficient.
- When it comes to thorough clean-downs, a number of applications can be used: areas can be manually scrubbed down with cleaning solutions, or vessels may utilise the use of a power hose to apply high pressure cleaning with built-in chemical applicators.
- Some items of equipment can be soaked in sanitising dips; rinsing off should be carried out with either clean seawater or fresh water.
- A thorough clean-down at the end of a trip is essential. Failure to clean effectively at this time will result in a high build-up of bacteria.

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It is recommended that a refresh clean is carried out on a vessel before fishing starts at the beginning of the next trip. It is essential that the correct chemicals are used for the various jobs. There are differences between the function of each chemical that can be used to properly clean a fishing vessel.

## Detergent

These are chemicals that are designed to remove organic matter e.g. fish oil, flesh and inorganic matter, e.g. engine oil, dirt, etc. from items of equipment or surfaces. They can be either alkaline or acid based and will have differing characteristics and abilities to remove materials. A very common detergent is soap.

## Disinfectant

These are chemicals that are designed to kill bacteria and some also kill viruses which create biologically clean surfaces that they are applied to. They cannot clean the surface of dirt and should be used after the surface has been cleaned with a detergent, if not the disinfectant properties will tend to be compromised.

## Sanitiser

This is a range of chemicals that have both detergent and disinfectant properties.

Other points skippers may wish to consider include:

- Chemicals that have a strong residual taint such as bleach can, if not rinsed off correctly, inadvertently taint the catch, which could have a detrimental impact on catch quality, value, safety or marketability.
- Always ensure the crew involved in the application of these products during cleaning are instructed in their correct method of application and have the correct suitable protective equipment available and in place, prior to use.
- Always keep chemicals correctly stored away from working areas. Chemicals should never be placed in containers originally used for other chemicals, as this will compromise the safety instructions on the container which could have a potentially harmful effect on the catch and the crew member handling the product.

## Cleaning policy records

In order to approach the cleaning of the vessel and its equipment in a systematic way it is recommended that vessels develop policies, inclusive of cleaning schedules that clearly document activities and responsibilities. As well as ensuring a hygienic vessel it also gives the added benefit of being able to demonstrate commitments to high standards and provides a record of due diligence should issues arise with respect to catch safety and quality. These cleaning policies can additionally form part of a traceable quality history of the fish landed by the vessel.

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### An example of a cleaning schedule for use on Nephrops fishing vessels*

| Area or item of equipment | Recommended frequency of clean | Method of application |
|---|---|---|
| Net pounds | When nets are shot away from stowage area.<br>One full clean per trip. | Hose down.<br>Wash down, hose rinse. |
| Fish working deck area | As necessary.<br>Significant breaks in fishing.<br>End of trip. | Hose down.<br>Chemical clean, hose down.<br>Chemical clean, soak, rinse. |
| Fish hopper or pound | Between hauls.<br>Significant breaks in fishing.<br>End of trip. | Hose down.<br>Chemical clean, hose down.<br>Chemical clean, soak, rinse. |
| Fish conveyor/elevator | Between hauls.<br>Significant breaks in fishing.<br>End of trip. | Hose down.<br>Chemical clean, hose down.<br>Chemical clean, soak, rinse. |
| Gutting tables/boards | As necessary.<br>Significant breaks in fishing/when not in use.<br>End of trip. | Rinse.<br>Chemical clean, hose down.<br>Chemical clean, leave in sanitising dip till next trip. |
| Grading bins | Between hauls.<br>Significant breaks in fishing. End of trip. | Hose down.<br>Chemical clean, hose down.<br>Chemical clean, soak, rinse. |
| Gutting machine | As necessary.<br>Significant breaks in fishing. End of trip. | Hose down.<br>Chemical clean, hose down.<br>Chemical clean, soak, rinse. |
| Fish washer | Between hauls.<br>Significant breaks in fishing. End of trip. | Hose down.<br>Chemical clean, hose down.<br>Chemical clean, soak, rinse. |
| Baskets | Between hauls.<br>Significant breaks in fishing. End of trip. | Rinse platform.<br>Chemical clean and rinse platform, and wipe down keypad. |
| Scales | As necessary.<br>End of trip. | Rinse platform.<br>Chemical clean and rinse platform, and wipe down keypad. |
| Hold | As necessary.<br>End of trip. | Chemical clean for all surfaces; soak, and rinse off. Ensure no residual taint – use fresh water to rinse. |

* Not all areas shown above will be present on all vessels.

- When commencing a trip; any exposed fish handling areas and containers especially on open decked boats, should be re-cleaned before the first haul is taken on board.
- Note that in reference to applications referring to a hose and/or rinse down, clean seawater or, if in harbour, fresh water, should be used.
- Never use harbour water for cleaning applications.

# 3 / GLOSSARY

ABC

| | |
|---|---|
| **Ambient** | The temperature of the surrounding environment. |
| **Bacteria** | A group of single-cell living organisms. Some may spoil food and some may actually cause illness. |
| **Clean seawater** | Natural, artificial or purified seawater or brackish water that does not contain micro-organisms, harmful substances or marine plankton in quantities capable of directly or indirectly affecting the health quality of food. |
| **Clean water** | Means clean seawater and fresh water of a similar quality. |
| **Cleaning** | The removal of food residues, dirt, grease and other undesirable debris. |
| **Cleaning schedule** | Written document setting out how a boat is to be kept clean. It will detail each area and piece of equipment to be cleaned; the cleaning product to be used; person/s with responsibility for carrying out cleaning; standard of cleanliness required; frequency; and Health and Safety precautions to be taken. All persons concerned must be aware of their individual responsibilities. A supervisor is responsible for checking the total cleaning process. |
| **Cold store or freezer** | Equipment for keeping food at frozen temperatures. Usually set around -18°C. |
| **Compliance** | Actions that satisfy the legal requirements. |
| **Contact surface** | Any surface which comes, or may come, into contact with fish, either directly or in such close proximity that it could contaminate the food if dirty. Includes work surfaces, containers and equipment. |
| **Contamination** | The introduction or occurrence in food of any microbial pathogens, chemicals, foreign material, spoilage agents, taints, unwanted or diseased matter, which may compromise its safety or wholesomeness. |
| **Core temperature** | The temperature at the centre of a mass or piece of food. |
| **Disinfection** | Reduction in levels of contamination on food equipment or in food premises, normally by the use of chemicals to kill micro-organisms. Disinfectants used must be suitable for use in food premises. |
| **Hygiene** | Measures to ensure the safety and wholesomeness of food. |
| **Infestation** | Entry and survival of pest animals and insects on board the boat or within equipment or products. |
| **Packaging** | Means the placing of one or more wrapped foodstuffs in a second container, and the latter container itself. |
| **Personal cleanliness** | Measures taken by food handlers to protect food from contamination. |
| **Pest** | Animal life unwelcome in food premises, especially insects, birds, rats, mice and other rodents capable of contaminating food directly or indirectly. |
| **Potable water** | Means water meeting the minimum requirements laid down in Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption. |
| **Primary products** | Products of primary production including products of the soil, of stock farming, of hunting and fishing. (EU Definition as 852/2004). |

# 3 / GLOSSARY

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| **Processed products** | Foodstuffs resulting from the processing of unprocessed products. These products may contain ingredients that are necessary for their manufacture or to give them specific characteristics. |
| **Protective clothing** | Clothing – hats, boots, waterproofs – worn by the crew when handling fish to prevent contamination of fish by the individual. |
| **Refrigerated hold** | Area of the boat fitted with equipment to keep product cold. Normally between 0ºC and 2ºC. |
| **Spoilage** | Fish deterioration resulting in off flavours, odours and possibly appearance indicating products are unsuitable for sale or to eat. |
| **Taint** | Contamination of food with undesirable flavours or odours. |
| **Unprocessed products** | Foodstuffs that have not undergone processing, and includes products that have been divided, parted, severed, sliced, boned, minced, skinned, ground, cut, cleaned, trimmed, husked, milled, chilled, frozen, deep frozen or thawed. |

**Did you find the information in this guide useful?**
**Is there anything we could have done better?**

We would love to hear your feedback so please contact Mick Bacon on **michael.bacon@seafish.co.uk** with your comments.

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