Explanatory note

The current version of the RSPCA welfare standards for farmed rainbow trout that RSPCA Assured members are required to implement is dated March 2020. As part of the on-going process of reviewing the welfare standards, they have now been amended and updates, which includes the addition of a number of new standards and guidance (information boxes).

The review process, which is undertaken in consultation with the farming industry, veterinary profession and welfare research sector, is necessary to ensure that the standards take proper account of the latest scientific research, veterinary knowledge and practical developments, and therefore continue to represent 'good practice' in farm animal care.

These changes will be incorporated into a revised edition of the RSPCA welfare standards for farmed rainbow trout to be issued in July 2025.

All the amendments made to the March 2020 version of the standards are listed below and have been marked with NEW or REVISED.

RSPCA Assured scheme members have three months from the date of this letter to fully implement these changes (i.e. by 23rd July 2025) unless otherwise stated by the standard.

Please note:

All standards in the March 2020 edition that are not shown below or are shown but do not have a NEW or REVISED next to them remain unchanged in the new edition. Due to the amendment process, some existing standards have been re-ordered and therefore re-numbered.

RSPCA Farm Animals Department

23rd April 2025

Freshwater

Alevins

FW 3.1 REVISED All alevins must be inspected daily to ensure good health and development.

Management

M 3.6 REVISED Removal of dead fish must occur as frequently as is necessary and without undue delay and, in any case:

a) at least four times a week in pen systems

b) at least daily for land-based systems.

NEW **Regarding standard M 3.6, instances where removal of dead fish might occur more frequently include, but are not limited to, increased mortality due to an infectious disease or a predator interaction.**

The RSPCA strongly recommends daily removal of all dead fish and will consider making this a requirement in future publications of this standard.

M 3.8 NEW Tanks/enclosures must be inspected at least daily for the presence of moribund (dying) fish.

M 3.9 NEW Whenever identified, moribund (dying) fish must be:

a) removed promptly

b) humanely culled without delay according to standard H 2.2.

NEW **The RSPCA strongly supports and encourages further research and development of technologies that help to identify moribund fish at an early stage and enable efficient removal of such fish from enclosures. Where such technology is being considered, please contact the RSPCA Farm Animals Department.**

NEW Use of Artificial Intelligence

NEW **The RSPCA is reviewing the role of Artificial Intelligence and the wide-ranging benefits it can bring to fish welfare, particularly in the areas of welfare outcome assessment, health inspection and lice checks.**

It is strongly recommended that producers investigate the feasibility of such technology to further safeguard and advance fish welfare.

Where such technology is being considered, please contact the RSPCA Farm Animals Department.

Husbandry practices

NEW Crowding

NEW These standards apply to all crowding operations, regardless of location or situation.

HP 2.1 NEW All personnel working with, or handling, the fish must be:

a) trained and fully competent to carry out their duties

b) aware of the needs of the fish

c) aware of any risks to the welfare of the fish and the procedures to address those risks.

HP 2.2 REVISED Sweep nets must be:

a) of knotless construction

b) optimal for the enclosure where it's being used (e.g. appropriate size and design)

c) of an appropriate mesh size for the fish to prevent them getting trapped in the mesh gaps.

HP 2.6 NEW Fish must be monitored throughout the crowding operation by a designated person whose responsibility it is to recognise welfare issues and can take appropriate action if necessary.

HP 2.10 NEW As soon as possible after crowding, any dead fish must be:

a) removed

b) recorded, including classification of the cause (see standard M 3.7).

Grading

HP 3.5 REVISED A written grading plan must be:

a) agreed between the farm management and site staff and/or grading operator prior to operations commencing

b) included within the VHWP (see standard H 1.1).

HP 3.8 REVISED The grader must be appropriate for the size of fish to be graded.

Protection from other animals

HP 6.1 NEW All producers must abide by the mandatory standards set out in the Aquaculture Code of Practice - Containment of and Prevention of Escape of Fish on Fish Farms in relation to Marine Mammal Interactions.

NEW **In relation to standard HP 6.1, the Code sets out the standards expected from Aquaculture Production Businesses in order to provide for the containment of fish on fish farms and to prevent their escape in relation to marine mammal interactions.**

It is a legal requirement in Scotland for Scottish producers to adhere to the mandatory requirements.

However, under these RSPCA standards, producers that are not operating in Scotland are also required to abide by the mandatory standards set out in the Code, but are not required to report to the Scottish Government (Marine Scotland) where required under the Code.

The Code is available at: https://www.gov.scot/publications/aquaculture-code-practice-containment-prevention-escape-fish-fish-farms-relation-marine-mammal-interactions-2/

NEW **Successful containment at fish farms is essential for minimising the risk of escape of farmed fish.**

The Aquaculture Code sets out standards expected from aquaculture production businesses to provide for the containment of fish on fish farms and to prevent their escape in relation to marine mammal interactions.

For the purposes of the Code, a containment measure is any measure used to prevent or mitigate against interactions between farmed fish and marine mammals. Examples include anti-predator nets, and measures that actively deter seals such as ADDs.

HP 6.10 NEW LEGAL Acoustic Deterrent Devices/Acoustic Startle Devices (ADDs/ASDs) may only be used in accordance with any required licensing requirements, legislation, codes and/or guidelines.

HP 6.11 NEW If ADDs/ASDs are used they must be:

a) models that do not negatively impact the welfare of non-target species

b) models that have been accepted for use by the Scottish Government

c) effective in deterring seal depredation

d) regularly serviced and maintained to ensure that they are in full working order.

HP 6.12 REVISED To ensure all ADDs/ASDs are in full working order they must be:

a) checked daily (weather permitting)

b) regularly serviced (as per the manufacturer's guidelines)

c) well maintained at all times.

HP 6.12.1 NEW Records relating to standard HP 6.12 must be kept.

HP 6.13 REVISED If a predator attack has taken place, the fish must be checked for signs of any injury as a result of the attack without delay from the time the attack became apparent.

HP 6.14.1.1 NEW Producers in Scotland must not kill seals that may present a predatory threat to the fish, as this is prohibited by law.

NEW Non-medicinal treatments for sea lice and amoebic gill disease – general

NEW Non-medicinal treatments for the control of sea lice and gill disease (including amoebic gill disease) are treatments that do not require a veterinary prescription during the seawater phase of on-growing. These treatments include, but are not limited to, delousing techniques, such as thermal and mechanical delousing, and freshwater bathing treatments for gill pathogens and sea lice.

HP 8.1 NEW Any new non-medicinal treatment or technology for the control of sea lice and amoebic gill disease, or development to existing treatments/technology that could negatively impact on the welfare of the fish, must be referred to the RSPCA Farm Animals Department for review and decision before it can be used.

NEW The use of non-medicinal treatments is relatively new and as such, technology is developing at a rapid pace and the scientific knowledge, particularly in regard to the welfare impacts, is often behind industry application.

NEW Non-medicinal treatments for sea lice and amoebic gill disease – vessels

HP 9.1 NEW All vessels used for administering non-medicinal treatments must be approved for use by the farm assurance scheme assessing against these *RSPCA Welfare standards for farmed rainbow trout*.

HP 9.2 NEW Vessels arriving into the United Kingdom (UK) to work within UK waters must carry a valid certificate of disinfection from their country of origin.

HP 9.3 NEW Fish counting equipment must:

a) be installed and used at all times

b) be positioned according to manufacturer's guidelines

c) be fully maintained in good working order

d) be calibrated according to the manufacturer's guidelines

e) not cause damage or injury to the fish.

NEW Non-medicinal treatments for sea lice and amoebic gill disease – pre-treatment

HP 10.1 NEW Non-medicinal treatments must only be performed under veterinary advice.

HP 10.2 REVISED Prior to each use of the technology, non-medicinal treatments must be risk assessed against the impact they may have on the welfare of the fish.

HP 10.2.1 NEW Non-medicinal treatments must only be carried out where it is in the best welfare interests of the fish (as determined by the risk assessment).

The Farmed Fish Welfare Risk Assessment template in Appendix 3 can be used to record the activity outlined in standard HP 11.2.

HP 10.3 NEW The non-medicinal treatment risk assessment (standard HP 10.2) must be:

a) included in the VHWP

b) made available on request.

HP 10.4 NEW The choice of treatment must be appropriate for the i) health status and ii) size of the fish as evidenced in the non-medicinal treatment risk assessment (standard HP 10.2).

HP 10.5 NEW A written treatment plan must be:

a) agreed between farm management (including site staff), a veterinarian or health manager and the treatment leader/operator prior to operations commencing

b) implemented

c) kept on farm for 2 years

d) made available on request.

HP 10.6 NEW The treatment plan must include:

a) the reason for the need to treat the fish

b) a pre-treatment risk assessment (see standard HP 10.2)

c) the average weight and number of fish to be treated, both for the site and for each enclosure

d) the location of fish populations both pre- and post-treatment

e) the pre-treatment fasting period

f) the health status of the fish

g) the non-medicinal treatment to be used

h) any relevant contingency plans (see standard HP 10.7)

i) the named person responsible for the treatment (see standard HP 10.9)

j) the agreement and signatures of the site manager, veterinarian, health manager and the person in charge of the treatment.

HP 10.7 NEW A written contingency plan(s) must be in place to detail courses of action to be undertaken should any unexpected issues arise that compromise the welfare of the fish.

HP 10.7.1 NEW The contingency plan must include the:

a) potential impacts on the fish

b) actions that can be taken to address the issues identified.

HP 10.8 NEW Fish must not be subjected to more than one non-medicinal treatment within a 28 day period unless approved by a veterinarian.

HP 10.9 NEW There must be a designated person responsible for the welfare of the fish during the non-medicinal treatment process.

HP 10.10 NEW All personnel involved in the handling of fish during a non-medicinal treatment must:

a) have access to a digital or paper copy of the current version of the *RSPCA Welfare standards for farmed rainbow trout*

b) be familiar with the relevant content

c) understand and be able to apply the relevant content

d) have completed a recognised fish welfare course

e) understand the likely stress factors or welfare risks fish may be subjected to

f) understand the times and circumstances where fish are prone to welfare problems during the treatment event

g) be able to recognise signs of normal and abnormal behaviour.

NEW Examples of recognised courses include, the University of the Highlands and Islands (UHI) Shetland Fish Welfare Training Course and the Pharmaq Analytiq Fish Welfare Training Course.

HP 10.11 NEW Prior to treatment, the fasting period must be as short as possible and, in any case, not exceed the following:

a) 54 degree days for physical delousing

b) 70 degree days for freshwater bathing.

NEW The fasting period may only be extended if this is beneficial to the welfare of the fish and on the written advice of the veterinary surgeon or health manager.

HP 10.12 NEW Thermal delousers must adhere to the following limits:

a) maximum water temperature must not exceed 34^{o}C

b) maximum delta temperature must not exceed 22^{o}C

c) maximum length of time in thermal delouser must not exceed 35 seconds.

HP 10.13 NEW When fish are bathed in freshwater on a wellboat, the maximum stocking density in the well must be based on the liveweight of the fish as follows:

Liveweight (kg)	Maximum stocking density (kg/m^3)
5.0	125
4.0	110
3.5	100
3	90
2	75
1	60
0.1	45

HP 10.14 NEW A full welfare outcome assessment of the fish treated on the site must be performed:

a) within seven days of a non-medicinal treatment commencing

b) again, within 14 days of the treatment completing, unless this may have a detrimental impact on the welfare of the fish and on the written advice of the veterinarian or health manager

c) by a suitable competent person who has received fish welfare training.

NEW Non-medicinal treatments for sea lice and amoebic gill disease – during treatment

HP 11.1 NEW Water flow throughout the entire process must:

a) be sufficient to facilitate constant movement of the fish

b) not be so strong as to cause the fish injury.

HP 11.2 NEW Pumps and pipes must be installed and positioned to minimise the height and distance that the fish have to be pumped and/or discharged.

HP 11.3 NEW During physical delousing events, checks of the fish to examine i) lice numbers and ii) welfare outcome indicators, must:

a) take place regularly, at least hourly, and each time operating parameters are changed, and

b) be recorded.

HP 11.4 NEW In relation to standard HP 12.3 the following welfare indicators must be scored, as a minimum

a) skin damage

b) scale loss

c) eye damage

d) gill bleeding.

ⓘ **NEW These regular checks are to be used to ensure that the treatment is achieving the desired lice clearance whilst not causing undue negative welfare impacts to the fish.**

HP 11.5 NEW In the event of obvious and serious welfare concerns being identified during the treatment, the treatment must be stopped.

HP 11.6 NEW Operating parameters, including the starting parameters and any changes made during the procedure, must be recorded throughout the treatment process.

HP 11.7 NEW For freshwater bathing, the following water quality parameters must be complied with and action taken if the limits are breached:

Parameter	
Min Oxygen (O_2) mg/l	7
Carbon dioxide (CO_2) mg/l	<20
pH	>6.8

HP 11.8 NEW All crowding of fish must be clearly recorded using CCTV.

HP 11.9 NEW Footage relating to standard HP 11.8 must be kept for at least 14 days.

NEW Non-medicinal treatments for sea lice and amoebic gill disease – post-treatment

HP 12.1 NEW After the completion of the treatment for a site, a post-treatment report must:

a) be completed within 14 days

b) form part of the VHWP.

HP 12.2 NEW The post-treatment report in standard HP 12.1 must include details of the following:

a) mortality for each enclosure and for the site as a whole

b) efficacy of lice removal (where applicable)

c) results of welfare outcome assessments (showing a comparison for pre- and post-treatment)

d) where any issues have been identified relating to increased mortality, less than expected lice removal, and/or increased welfare scores, an action plan developed to avoid/improve on the issue/s in the future.

HP 12.3 NEW The following records must be kept of all treatments:

a) dates of treatments

b) enclosures treatment

c) treatment method used

d) number of fish treated

e) average weight of fish treated.

HP 12.4 NEW Vessels must be thoroughly examined and disinfected after completion of treatments and before moving to a new site.

HP 12.5 NEW Disinfection logs must be:

a) completed

b) made available on request.

NEW **Every effort should be made to continuously improve non-medicinal treatments to minimise the welfare impact on fish. Challenges and recorded issues should be documented and rectified. Outdated technology should not be used where possible.**

NEW Enrichment

NEW **Some forms of environmental enrichment have been shown to improve the health and welfare of captive fish. As this area of knowledge is still relatively new and developing, particularly in commercial farming systems, the RSPCA strongly encourages further trial work to determine appropriate forms of enrichment in all rainbow trout farming enclosures.**

We will be looking to update the standards in future publications, as knowledge develops in this important area.

Equipment and environmental quality

Climate change and animal welfare

REVISED **Changing weather patterns attributable to climate change are affecting all farmed species. These include high temperatures, rapid and unpredictable temperature fluctuations, high and low rainfall, strong winds, and increased sunlight and humidity.**

Climate change will likely lead to increased water temperatures in both fresh and sea water environments which can have negative welfare impacts, including reduced availability of oxygen, increased pathogen and water-borne insult pressure and increased acidification. Sustained and/or sudden rainfall can lead to run-off events into water sources, increasing turbidity and suspended solid loads as well as potentially introducing nutrients like phosphorus and nitrogen to the environment. More extreme weather events may also become more common, which could impact and/or damage enclosures and increase the risk of escape events and/or injury to trout.

Producers need to react to, think ahead, and consider what can reasonably be done to mitigate any negative effects that adverse weather conditions may have/be having on the welfare of farm animals now, and in the future.

Future planning - including the development of contingency plans - needs to take the above scenarios into account to safeguard welfare against these more extreme weather events.

Feeding

Fasting/food withdrawal

F 4.1.1 REVISED With regards to standard F4.1, if the maximum feed withdrawal period permitted must be extended for any reason then this must be:

a) signed off by a veterinary health professional

b) subject to a welfare risk assessment (see Appendix 3), which concludes that this is in the best welfare interest of the fish

c) recorded in the VHWP, including full details of why this was necessary, along with the welfare risk assessment.

Health

H 1.3 NEW The VHWP must be treated as a live document.

H 1.4 REVISED After a fish health and welfare event, the VHWP (see standard H1.1) must:

a) be updated accordingly as soon as is practically possible

b) include a programme of remedial action if appropriate.

NEW In relation to standard H 1.4, the term 'as soon as practically possible' means that the VHWP is to be updated as soon as the event has been investigated and identified. Therefore, it is acknowledged that there may be a period of time before the VHWP is updated following an event to allow for any investigation required. However, if the time to investigate the event is likely to extend beyond two days, this is to be noted in the VHWP along with an estimated time for completion, and the VHWP updated as the investigation proceeds and is concluded.

H 1.9 REVISED Where the level of fish mortality exceeds the threshold figures shown below, this must be:

a) recorded

b) investigated

c) reported to the farm assurance scheme responsible for the assessment of these standards within 72 hours of the end of the reporting period.

Freshwater:

Stage	**Max. Weekly mortality (%)**
Egg to first feed	6
First feed to 5g	3
Over 5g	1.5

Seawater:

Site average weight (g)	**Max. Weekly mortality (%)**	**Max. 5 week rolling mortality (%)**
Under 750	1.5	6
750+	1.0	4

Casualty killing

H 2.2 REVISED Fish must only be culled using the following methods:

a) anaesthetic overdose (as specified in the VHWP) by immersion in a solution of the agent, under veterinary prescription

b) electrical stun-to-kill

c) a non-recoverable percussive blow to the head, using a priest or mechanical percussive device, of sufficient force to render the fish immediately unconscious, for fish over 5 grams only.

H 2.3 NEW Where an electrical stun-to-kill system is used in regard to standard H 2.2 (b):

a) the electrical parameters must be set to ensure fish are rendered unconscious immediately (within 1 second)

b) there must be no pre-stun shocks

c) post stunning, the fish must remain unconscious until death supervenes

d) visual inspection must take place on a regular basis to establish that fish have been effectively killed. Fish must have:

i. no eye movement

ii. no rhythmic opercular movement

iii. only mild short term involuntary muscular twitches

iv. no reaction to tail pinch.

Medicinal products

H 3.5 REVISED Any veterinary medicines used must be in accordance with current UK legislation for the species.

H 3.7 REVISED The potential for therapeutic agents to affect the environment, both locally and more widely, must be given full consideration.

H 3.9 NEW All relevant legislation and Codes of Practice must be adhered to when using medicinal products.

H 3.12 NEW The use of antibiotics on-farm must be reviewed annually or at the end of a production cycle.

H 3.12.1 NEW This review (standard H 3.12) must form part of the VHWP.

H 3.13 NEW When reviewing the use of antibiotics on-farm, the following should be considered:

a) the different classes of antibiotic drug used

b) the health condition(s) treated

c) the species treated

d) the number of fish treated

e) which group/s of fish were treated

f) the average weight of the fish or the stage within the production cycle

g) the total amount of each individual drug that was used (in mg/kg) per occasion

h) the method in which the fish were treated.

H 3.14 NEW In light of the findings of the antibiotic use review (see standard H 3.12), a written action plan aimed at reducing the use of antibiotics on the farm through improvements in animal husbandry must be developed and implemented.

Sea lice

NEW **The RSPCA strongly supports and encourages research into new sea lice prevention tools and equipment.**

If you would like to trial such technology, or are considering the possibility of implementing it, please contact the RSPCA Farm Animals Department.

Welfare Outcome Assessment

NEW **To ensure we are improving farm animal welfare we need to be able to measure it. Measuring welfare enables us to know what level is being achieved and therefore better understand what impact the resources being provided and management practices being implemented are having on the animals. Measuring welfare in this way is known as Welfare Outcome Assessment (WOA). This information is only useful if it is used to improve fish welfare via the Veterinary Health and Welfare Plan.**

This section focuses on WOA for implementation on farm. However, we are currently investigating the potential to develop WOA for implementation at the time of slaughter/killing. This will be considered for inclusion into the next publication of the standards, following further investigation. Meanwhile, we strongly encourage producers to use the requirements set out under Appendix 2.

H 6.1 NEW Welfare Outcome Assessments must include scoring of the following indicators, as a minimum:

a) fin malformation – worst fin to be scored

b) eye loss/damage

c) jaw deformity

d) spine deformity

e) snout injury

f) scale loss, skin damage

g) physical wounds and lesions

h) operculum damage

i) sea lice damage (in seawater only).

NEW The fin damage assessment guide in Appendix 1 is the suggested scoring system for fins. However, producers may use other system/s, as long as the indicators in standard H 6.1 are assessed.

It is strongly recommended that all fins are scored during welfare outcome assessments, and this will be considered for implementation in the next publication of the standards.

H 6.2 NEW Welfare Outcome Assessments must be conducted:

a) in both freshwater and seawater

b) by a suitable competent person who has received fish welfare training

c) according to the following methods:

   i. in freshwater, on at least four occasions (approximately evenly spread) throughout this stage. Each assessment must be undertaken on 30% of, or five (whichever is higher), enclosures and a minimum of ten fish per sampled enclosure

   ii. in seawater, at least once every month, on a minimum of 50% of enclosures and a minimum of ten fish per sampled enclosure.

NEW During the freshwater stage, if fish are moved between sites, any previous welfare outcome assessment results should be passed onto the receiving site.

The minimum of four assessments during the freshwater stage can happen across different sites.

NEW It is preferable that Welfare Outcome Assessments are completed at the time of other handling events to minimise the number of times fish are handled.

In freshwater, this could include during grading and vaccination. For seawater, this could include during lice/gill checks.

H 6.3 NEW A record, either paper or digital, of the results of the Welfare Outcome Assessment must be kept:

a) on farm

b) for a minimum of two cycles or three years, whichever is longer

c) must be made available on request.

H 6.4 NEW With regard to standard H 6.3, the Welfare Outcome Assessment documentation left on farm must include the following information:

a) the date of the assessment

b) site name and enclosure ID

c) the name of the competent person who undertook the assessment

d) the average weight of the fish at the time of the assessment

e) any action to be taken (see standard H 6.5).

H 6.5 NEW Any health/welfare issue(s) identified as an area of concern must:

a) be recorded in the VHWP

b) investigated to establish the cause of the issue

c) be prevented from reoccurring by implementing effective prevention strategies.

NEW The Welfare Outcome Assessment may not always provide a definitive farm level prevalence of welfare for the measures assessed. The assessment should help to identify areas of welfare concern that are likely to be more wide-spread on the farm and therefore warrant further investigation and careful monitoring.

NEW The RSPCA recognises the limitations of current Welfare Outcome Assessment protocols in gaining a fuller representation of the farmed fish population. The RSPCA encourages further research and trials into developments and advances in technology that might overcome these issues.

Transport

T 1.3 NEW There must be a named and agreed person/s present that is responsible for overseeing the transport operations.

T 1.5 NEW Pipes used for moving fish must be an appropriate diameter for the size of the fish to ensure the fish can flow through the pipe with ease.

NEW For clarity, regarding standard T 1.5, the fish should flow freely through the pipes without frequently contacting the side, should not form blockages at any time and should not easily be able to turn to swim against the flow of water. This is all to minimise the potential for injury and harm to the fish and to minimise the time spent in the pipe.

Juvenile transport

Wellboat transport

Below JT 4.5.1

REVISED With reference to standard JT 4.5, examples of recognised courses include, the University of the Highlands and Islands (UHI) Shetland Fish Welfare Training Course and the Pharmaq Analytiq Fish Welfare Training Course.

JT 4.13.3 REVISED Carbon dioxide levels of the water must not be detrimental to fish welfare and, in any case, never exceed 20mg/l.

JT 4.21 REVISED Records of all dead and moribund fish must:

a) be kept for at least one year

b) include the cause of death where possible and any other information relating to the health and welfare of the fish

c) be made available upon request.

Stunning beyond recovery/killing

NEW Please refer to the section on fasting/food withdrawal for permitted feed withdrawal times.

S 1.3.1 NEW The following killing methods are inhumane and must not be used:

a) bleeding (exsanguination) or decapitation without prior stunning

b) asphyxia

c) evisceration

d) live chilling

e) ice slurry or bath

f) carbon dioxide narcosis.

S 1.3.2 REVISED Trout must be stunned/killed using one of the following methods:

a) an effectively applied automated, mechanical percussive blow, followed by bleeding

b) electronarcosis followed by bleeding

c) electronarcosis followed by an effectively applied automated, mechanical percussive blow, followed by bleeding

d) electrical stun-to-kill.

S 1.4 NEW The flow of fish into the percussive stunning system must be of an appropriate speed so that:

a) fish are not out of water for longer than is necessary

b) only one fish enters the stunning system at a time

c) operators have sufficient time to handle individual fish with care to, for example, carefully reposition any fish that have entered the system in any way that could impact the effectiveness of the stun (e.g. upside down or the wrong way around).

S 1.5 REVISED When applying a percussive blow, each fish must receive a percussive blow:

a) to the top of the head, just behind the eyes

b) of sufficient force to kill the individual, or cause immediate loss of consciousness that lasts until death.

S 1.6 NEW When receiving a percussive blow, the head of the fish must be free to move up and down to ensure an effective stun.

S 1.7 NEW There must be sufficient time after stunning, and safeguards in place, to:

a) assess the effectiveness of the stun in all fish

b) ensure all fish that have not been effectively stunned are re-stunned immediately.

S 1.11 NEW During the slaughter/killing process, if poor welfare for whatever reason is suspected then:

a) the slaughter/killing process must be stopped immediately

b) the issue/s must be rectified prior to re-starting the slaughter/killing process.

S 1.11.1 NEW If the slaughter/killing process is stopped, a record must be kept that:

a) includes details of:

i. the issue/s

ii. the number of fish affected

iii. the action taken to rectify the issue/s

iv. the date of the event

v. the time of the event

vi. the name of the person responsible for overseeing the issue

b) is made available on request.

S 1.12 NEW The number of fish that have not been effectively stunned must be recorded.

S 1.13 NEW Where fish have not been effectively stunned:

a) they must be effectively restunned immediately

b) this must be reported without delay to the named person responsible for fish welfare (standard S1.8), and the stunning/killing operator/s

c) action must be taken immediately to rectify the issue/s as necessary

d) the action taken to rectify the issue must be recorded.

S 1.14 NEW A Standard Operating Procedure must be in place to detail the procedure for dealing with fish that have not been effectively stunned.

S 1.15 NEW Where the stun and/or bleed has not been effective, equipment and procedures must be:

a) checked immediately

b) adjusted to correct the fault before any further fish are slaughtered/killed.

Below S 1.19

NEW The RSPCA strongly recommends that all trout are electrically stunned, which is then followed by a percussive blow to the head and bleeding for larger trout. We believe that this approach currently offers the best method to safeguard trout welfare at the time of killing.

We acknowledge that there are some issues to be addressed in the short-term with electrical stunning, and we strongly support and encourage further research and work to address these issues as soon as possible.

We will be monitoring this research with the intention of requiring electrical stunning to be incorporated into the killing process under these standards within the next five years.

We strongly encourage the adoption of this killing process as soon as possible.

S 1.20 NEW Producers must:

a) humanely cull any extraneous/non-target fish that are present

b) be aware of, and adhere to, any legislation relating to protected species.

Electronarcosis followed by bleeding/electrocution

NEW Electricity can be used within the stunning and slaughter process in two distinct ways, i.e. to stun (electronarcosis) and then to kill (electrocution). In order to have a humane process set up to safeguard fish welfare, it is important that these differences are understood.

Electronarcosis is the process of *stunning* with electricity, to result in an immediate loss of consciousness but not cause death, and is a reversible process. As such, it requires a separate, humane, killing method to be applied before consciousness is regained.

Electrocution is the process of *killing* with electricity, which results in cardiac arrest and/or the loss of the breathing reflex. When done effectively, it does not require a separate killing method. Electrocution without pre-stunning is painful, so it is critical that fish are humanely rendered unconscious immediately prior to electrocution (and remain so until death supervenes), which is usually achieved via electronarcosis. This process, whereby the fish are electrically stunned first and then killed using electricity, is called a stun-to-kill process.

S 2.1 REVISED Whatever electrical stunning/killing process is used (batch, continuous flow etc.):

a) insensibility of the fish must be immediate (within one second)

b) there must be no pre-stun shocks

c) fish must remain unconscious until death

d) fish must be assessed on a regular basis to ensure they have been effectively stunned and demonstrate the following:

   i. no eye movement

   ii. no rhythmic opercular movement

   iii. only mild short term involuntary muscular twitches

   iv. no reaction to tail pinch

   v. fish turn over and remain upside down (if in water).

S 2.2 REVISED Fish must be presented to the stunner in a way that prevents:

a) mis-stunning

b) fish missing the stunner, e.g. falling from the stun table to the floor.

NEW Slaughter/killing including cage-side harvesting – Closed Circuit Television (CCTV)

NEW The use of Closed Circuit Television (CCTV) in areas where live animals are present can assist those responsible for monitoring and enforcing animal welfare in ensuring that standards are maintained. It is strongly recommended that CCTV footage is also used for in-house training programmes.

S(TV) 1.1 NEW A functional CCTV system must be installed and operational to clearly monitor fish undergoing the following processes:

a) initial tank/dewaterer entry and exit

b) stunning, including entry and exit

c) killing

d) passing through the post-stun assessment area.

S(TV) 1.2 NEW CCTV cameras must be positioned to ensure a clear view of the processes being monitored is achieved at all times.

S(TV) 1.3 NEW It must be possible to observe clearly the view from each camera at all times via one or more monitors.

S(TV) 1.4 NEW CCTV footage must be recorded at all times where animals are undergoing any of the processes listed under standard S(TV) 1.1.

S(TV) 1.5 NEW The recorded CCTV footage must be:

a) retained for a period of at least three months

b) available for viewing upon request.