



Arrangements for:

**National Progression Award in Fish
Husbandry at SCQF level 5**

Group Award Code: GE4N 45

**National Progression Award in Fish
Health and Nutrition at SCQF Level 5**

Group Award Code: GE4M 45

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1 Introduction

This is the Arrangements Document for the new National Progression Awards (NPA) in Fish Husbandry at SCQF level 5 and Fish Health and Nutrition at SCQF level 5, which were validated in September 2011. This document includes: background information on the development of the Group Awards, their aims, guidance on access, details of the Group Award structures, and guidance on delivery.

The Group Awards will provide candidates with nationally recognised qualifications that provide the knowledge and practical competences in key areas of fish production. The skills and knowledge content of the qualifications meet an existing demand identified by the Scottish aquaculture industry for the uptake of short programmes of study which are flexible and accessible to employees. The National Progression Awards are also suitable for mature candidates wishing to undertake a short course to find out more about Fish Health and/or Fish Production.

2 Rationale for the development of the National Progression Awards

2.1 Background to the Development

Scottish Aquaculture Industry

The Strategic Framework for Scottish Aquaculture (2003) identified that as the aquaculture industry grew there was a clear need for training that should not only train, but retain staff in rural communities. This document was revised in A Fresh Start — The Renewed Strategic Framework for Scottish Aquaculture (2009). This again highlighted the need for education and training that expands opportunities to succeed and promotes aquaculture as a viable and rewarding career.

A survey of Training Needs of the Salmon Industry (Glenarder Ltd, 2008) commissioned by the SSPO and Lantra identified a need for good quality and relevant training that could be delivered using a distance and flexible learning format. The National Progression Awards in Fish Husbandry (GE4N 45) and Fish Health and Nutrition (GE4M 45) are designed to enable delivery in this format. The survey also identified a need for better access to Modern Apprenticeships (MA), which suggests issues regarding geographic location. As both NPAs have been created using National Units that have been mapped to the National Occupational Standards (NOS), the NPAs complement the work-based SVQ/MA qualification pathway. They offer candidates an opportunity to achieve a single National Qualification in a short time scale, providing them with the confidence boost and encouragement to continue to attain larger qualifications, such as the SVQ2/MA level 2.

The QDT recognised this and designed the NPAs at SCQF Level 5 to ensure that these qualifications meet the current and future training and education needs of the Scottish aquaculture industry and the staff employed in that industry, including new recruits and established employees and supervisors.

2.2 The Development Process

Initial consultations were informal, involving several major organisations from the salmon and trout farming sectors during 2008. It was clear that reviews of staff development policies were taking place, and some of those surveyed perceived substantial value in nationally recognised qualifications as a route to skills and knowledge attainment, as well as in fostering staff motivation and providing evidence of robust quality assurance methodologies, to satisfy buyers' audit requirements.

More formal, comprehensive consultations were carried out using face-to-face interviews, and an online survey was conducted.

A Qualifications Design Team was appointed and comprised of education and industry representatives. The Qualifications Design Team met regularly to design and develop the qualifications in line with industry priorities.

The consultations provided evidence that the NPAs were relevant and appropriate to the needs of the individual companies and the aquaculture industry in Scotland.

2.3 Summary of Consultations and Market Research

Research confirmed that the NPA in Fish Husbandry (GE4N 45) will provide:

- 1 candidates with a clear understanding of fish husbandry and water quality
- 2 valuable opportunities for Core Skills development
- 3 a suitable induction programme for new employees
- 4 progression opportunities to SVQ 2/MA2 in Aquaculture and National Certificate level programmes.

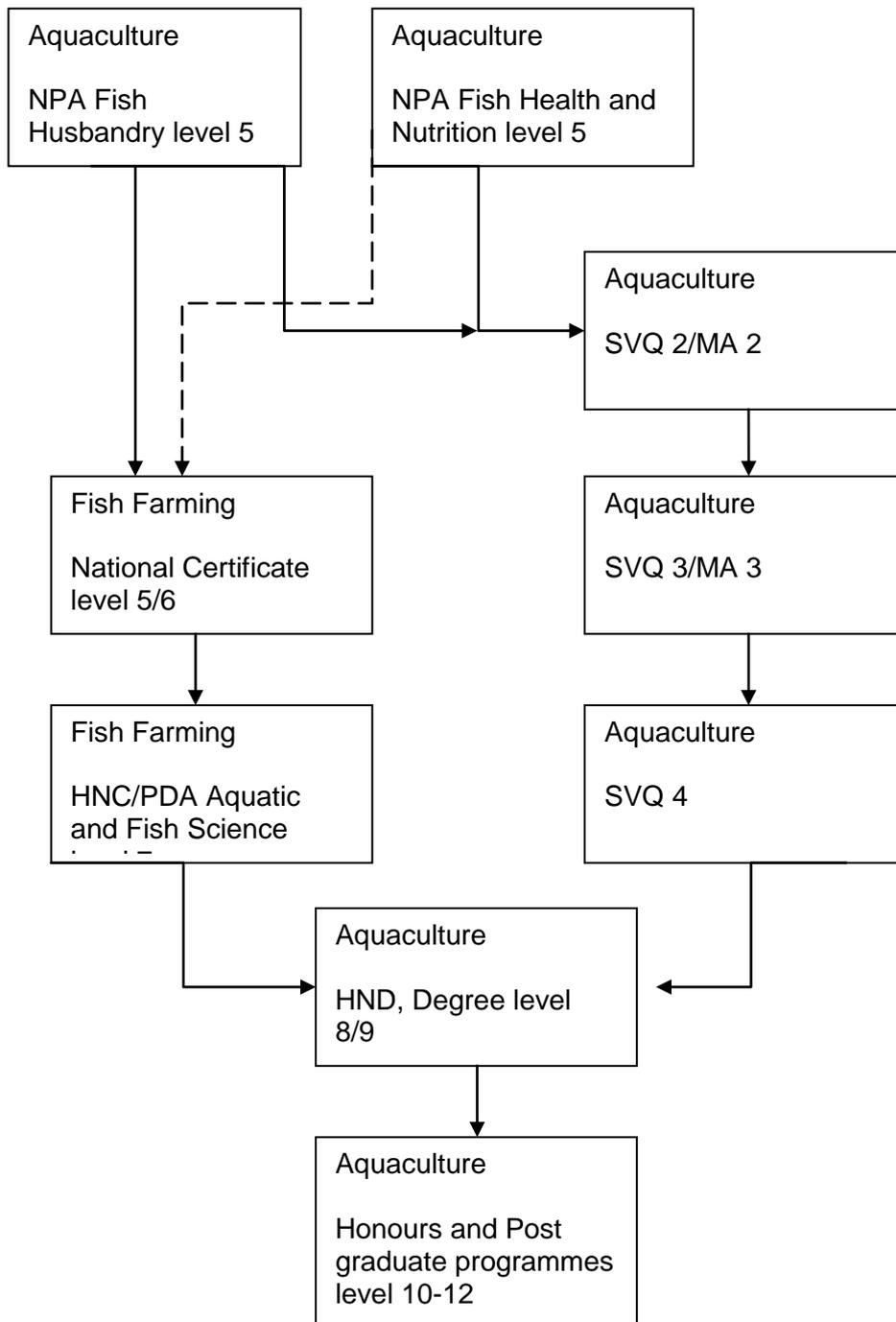
Research confirmed that the NPA in Fish Health and Nutrition (GE4M 45) will provide:

1. candidates with a clearer understanding of fish nutrition and health issues
2. valuable opportunities for Core Skills development
3. a suitable induction programme for new employees
4. opportunities for candidates to specialise in specific areas
5. progression opportunities to SVQ 2 in/MA2 Aquaculture and National Certificate level programmes.

2.5 Progression pathways

The NPA in Fish Husbandry (GE4N 45) and the NPA in Fish Health and Nutrition (GE4M 45) provide a progression route to the SVQ 2/MA2 Aquaculture, National Certificate (NC) level programmes and potentially to higher education. Successful completion of the NPAs will facilitate progression to NC programmes because both consist of National Units. Accreditation of Prior Learning (APL) credit may be given towards partial completion of an NC, upon completion of the NPAs.

Progression Pathways



3 Aims of the Group Awards

3.1 Principal aims of the Group Awards

3.1.1 NPA in Fish Husbandry (GE4N 45)

The NPA in Fish Husbandry will:

- 1 provide candidates with a clear understanding of fish husbandry and welfare issues that relate to current industry codes of good practice and quality assurance systems.
- 2 provide opportunities for the development of the following Core Skills: Communication, Numeracy, Information Technology, Problem Solving and Working with Others.
- 3 support employers' induction programmes for new employees through the incentive of gaining a national qualification.
- 4 provide a progression route to the SVQ 2/MA level 2 in Aquaculture and National Certificate level programmes.
- 5 prepare candidates for employment in aquaculture, shortening their initial training and induction period once employed.

The aims of the NPA in Fish Husbandry are met mostly within the mandatory Units. Candidates have an opportunity to select Units from the optional section which relate to their job or allow them to specialise in a specific area.

The mapping of individual aims to Units is shown in Appendix 1.

3.1.2 NPA in Fish Health and Nutrition (GE4M 45)

The NPA in Fish Health and Nutrition will:

- 1 improve candidate understanding of fish health and nutrition and their importance in ensuring that fish welfare standards are maintained in accordance with current industry codes of good practice and quality assurance systems.
- 2 provide opportunities for the development of the following Core Skills; Communication, Numeracy, Information Technology, Problem Solving and Working with Others.
- 3 provide employers with an induction programme of training for new employees that will lead to a national qualification.
- 4 provide a progression route to the SVQ 2/MA level 2 in Aquaculture and National Certificate level programmes.
- 5 prepare college graduates for employment in aquaculture, shortening their initial training and induction period once employed.

The aims of the NPA in Fish Health and Nutrition are met mostly within the mandatory Units. Candidates have an opportunity to select Units from the optional section which relate to their job or allow them to specialise in a specific area. The mapping of individual aims to Units is shown in Appendix 1.

3.2 General aims of the Group Awards

The NPA in Fish Husbandry and the NPA in Fish Health and Nutrition will enable candidates to make informed decisions about their future career and about their continued learning and development.

3.3 Target groups

Both NPAs are suitable for:

- ◆ staff currently employed in aquaculture who wish to enhance their career prospects
- ◆ new recruits to the aquaculture industry who require induction training
- ◆ candidates who would prefer the traditional route for education and training, through a college based course
- ◆ distance learners undertaking work experience on a fish farm wishing to gain a National Progression Award, prior to full time employment or progression to a full time college course

The NPAs are designed primarily for delivery to candidates already employed in the aquaculture industry or as part of an induction programme for any new employees. The NPAs are flexible enough to be used for delivery to college candidates, provided that there is access to an aquaculture site.

3.4 Employment opportunities

The predicted growth rate of aquaculture will lead to an increased demand for suitably qualified staff.

Both Group Awards provide candidates with the knowledge and practical skills necessary to compete confidently for employment opportunities available within the industry. They will provide induction and CPD opportunities for new and existing staff and encourage upskilling in the industry.

4 Recommended Access

Access to the awards will be at the discretion of the delivering centre.

It is advised that candidates undertaking either of the NPAs ensure, where they are employees in the industry, that their employer is receptive to site visits by assessors and verifiers.

Where employer/centre partnerships are used, it may be beneficial to co-ordinate applications through the employer in the first instance.

All candidates for either NPA may be interviewed by the delivering centre and may also be asked to undertake Core Skills screening.

4.1 Formal Qualifications

No specific formal qualifications are required although details of the preferred Core Skills entry profile are given in Section 4.3.

4.2 Work Experience

To undertake these NPAs, applicants who are already in suitable aquaculture employment will be accepted after satisfying the delivering centre's Core Skills entry requirements (which may include Core Skills profiling and interview). Other applicants with relevant work experience should be considered, provided that access to a suitable aquaculture site whilst undertaking either award, can be guaranteed.

4.3 Recommended Core Skills Entry Profile

A suggested entry level is provided in the tables below.

4.3.1 NPA in Fish Husbandry (GE4N 45)/NPA in Fish Health & Nutrition (GE4M 45)

Core Skill	SCQF Level
Communication	4
Numeracy	4
IT	3
Problem Solving	3
Working with Others	3

5 Qualification structures

5.1 National Progression Award in Fish Husbandry (GE4N 45)

To obtain an NPA in Fish Husbandry at SCQF Level 5 a candidate must achieve the three mandatory Units totalling three SQA credits (18 SCQF credit points), plus one further SQA credit (6 SCQF credit points).

Mandatory Units — 3 credits required

Unit Title	Code	SCQF Credit points	SCQF level	SQA Credit Value
Aquaculture: Fish Husbandry	H03C 11	6	5	1
Aquaculture: Water Quality	H03G 11	6	5	1
Aquaculture: Live Fish Handling	H03D 11	6	5	1
Total		18		3

Optional Units — 1 credit required

Unit Title	Code	SCQF Credit points	SCQF level	SQA Credit Value
Aquaculture: Aquatic Environments	H036 11	6	5	1
Aquaculture: Fin Fish Biology	H038 12	6	6	1
Aquaculture: Cage Operations	H037 11	6	5	1
Aquaculture: Salmonid Hatchery Operations	H03F 11	6	5	1

5.2 National Progression Award in Fish Health & Nutrition (GE4M 45)

To obtain an NPA in Fish Health and Nutrition at SCQF Level 5 a candidate must achieve the three mandatory Units totalling three SQA credits (18 SCQF credit points), and one further SQA credit (6 SCQF credit points).

Mandatory Units — 3 credits required

Unit Title	Code	SCQF Credit points	SCQF level	SQA Credit Value
Aquaculture: Fish Health	H039 11	6	5	1
Aquaculture: Fish Nutrition & Feeding	H03A 11	6	5	1
Aquaculture: Fin Fish Biology	H038 12	6	6	1
Total		18		3

Optional Units — 1 credit required

Unit Title	Code	SCQF Credit points	SCQF level	SQA Credit Value
Aquaculture: Aquatic Environments	H036 11	6	5	1
Aquaculture: Water Quality	H03G 11	6	5	1
Aquaculture: Cage Operations	H037 11	6	5	1
Aquaculture: Salmonid Hatchery Operations	H03F 11	6	5	1

5.3 Opportunities to Achieve Core Skills

Entry and exit levels of Core Skills for the National Progression Awards in Fish Husbandry and Fish Health and Nutrition will be set by individual centres.

The Core Skills component of Critical Thinking is embedded at SCQF level 4 in some Units, as noted in Appendix 2.

5.3.1 NPA in Fish Husbandry (GE4N 45)

It is anticipated that successful candidates will exit from the award with the following Core Skills profile, based on both mandatory and optional Units.

Core Skills	Recommended Entry Level	Anticipated Exit Level
Communication	4	Signposted at SCQF Level 5
Numeracy	4	Signposted at SCQF Level 5
IT	3	Signposted at SCQF level 4
Problem Solving	3	Signposted at SCQF level 4
Working with Others	3	Signposted at SCQF level 4

5.3.2 NPA in Fish Health and Nutrition (GE4M 45)

It is anticipated that successful candidates will exit from the award with the following Core Skills profile, based both mandatory and optional Units.

Core Skills	Recommended Entry Level	Anticipated Exit Level
Communication	4	Signposted at SCQF level 5
Numeracy	4	Signposted at SCQF level 5
IT	3	Signposted at SCQF level 4
Problem Solving	3	Signposted at SCQF level 4
Working with Others	3	Signposted at SCQF level 4

The Core Skills mapping for individual Units is given in Appendix 2.

5.4 National Occupational Standards

The NPA Units have been mapped to the National Occupational Standards for Aquaculture.

Candidates are not expected to achieve full occupational competence in the areas of fish husbandry or fish health through either NPA. However, there are some Units in both NPAs that map comprehensively to the knowledge and competence requirement of their corresponding NOS Units. More detail how on the National Units are mapped to the NOS, is given in Appendix 4.

A list of the SVQ qualifications appropriate to these NPAs is given in Appendix 3.

5.5 Articulation, professional recognition and credit transfer

While there is no formal professional recognition and credit transfer for the NPAs in Fish Health and Nutrition and Fish Husbandry, the Units in both NPAs have been closely aligned to appropriate Aquaculture sector NOS. The NPAs open pathways to higher level qualifications such as SVQ/MA Level 2 Aquaculture and other Fisheries and Aquaculture Programmes at SCQF Level 6.

6 Approaches to delivery and assessment

6.1 Content and Context

The Fish Husbandry (GE4N 45) and Fish Health and Nutrition (GE4M 45) NPAs each consist of three mandatory National Units, plus one further Unit from a choice of four options, to accommodate a specific job role or employee/employer interest.

The NPA in Fish Husbandry offers a programme that will assist employers in standardising fish husbandry knowledge and skills within the industry, establishing a platform to support further training and workforce development. The NPA will provide candidates with a nationally recognised qualification that will enhance their knowledge of fish husbandry, fish handling, water quality, fish welfare standards, and of how all these key subjects relate to the success of an organisation. As aquaculture uses water that ranges from fresh to marine and all variations between, it is essential that any Unit which focuses on water quality ensures that a range of water types and sources is considered. Depending on which of the optional Units is selected, candidates will be able to specialise, customising their personal development to suit their specific role.

The NPA in Fish Health and Nutrition offers a programme that will assist employers in implementing Standard Operating Procedures (SOPS) to drive fish production efficiencies for core husbandry activities, fish feeding and fish health management. By developing the skills and knowledge of their employees, national standards can be consistently met. The NPA will provide candidates with a nationally recognised qualification that will demonstrate their knowledge of fish nutrition and health. Through undertaking the qualification, the relationships between feeding and its impact on the economic success of an organisation will be illustrated to candidates.

The NPAs in Fish Husbandry and Fish Health and Nutrition are particularly suitable for delivery as work based learning qualifications. The NPAs can be delivered using a blended learning approach that will utilise online, paper based and multimedia modes of delivery.

6.2 Mode of Delivery

The NPAs are particularly suitable for work based delivery. Delivering centres may develop learning resources which aquaculture employers and employees can use. Centre staff can support the delivery and the development of work-based mentors.

It is envisaged that the NPA delivery system will be developed utilising a variety of delivery methods, but more specifically centred around a Virtual Learning Environment (VLE).

Candidates with little or no access to ICT will have the opportunity to undertake either of the awards using paper based workbooks to ensure that there are no barriers to learning. Online materials may be supported by online video clips of lectures and practical demonstrations, weblinks to

relevant sites or areas of interest and candidate forums/social networking, administered through the centre VLE.

Where available to candidates, ICT will play an active role in the delivery and assessment of both NPAs and will include the use of computers, handheld devices, smart phone technology and smart technology. For example, smart boards could be utilised to link lectures in real time through a web camera or video conference facilities.

Where possible, electronic methods should enable delivering centres to engage fully with candidates in remote rural areas who may otherwise have restricted opportunities.

Where the use of e-learning and e-assessment is adopted, collaboration between centres and aquaculture employers will be important for the success of this delivery model. Collaboration between employers and centres will foster a cost effective shared delivery model which is sustainable and ensure that the delivery and assessment of a work based learning package offers candidates the best opportunity to develop their knowledge and skills, while minimising the need to leave the site. A more conventional college-based delivery model is also possible, but access to an aquaculture facility is essential.

6.3 Sequence of Delivery

6.3.1 NPA in Fish Husbandry (GE4N 45)

It is recommended that the three mandatory Units are delivered first to establish a basic understanding of aquaculture operations.

Subsequently, candidates will be more familiar with the principles of aquaculture and the conditions and challenges of the aquatic working environment, providing a good platform for the delivery of the chosen optional Unit. At this stage, candidates should be fully aware of the importance of ensuring high standards of fish welfare are constantly maintained. This will reinforce the competences and knowledge already gained in the context of current legislation and industry codes of good practice. This should ensure that candidates have the knowledge to comply with the quality assurance systems relevant to their site.

6.3.2 NPA in Fish Health and Nutrition (GE4M 45)

It is recommended that the mandatory Aquaculture: Fish Nutrition and Feeding Unit (H03A 11) is delivered first, to complete the package of knowledge and practical skills required by husbandry staff for all basic aquaculture operations.

The next recommended Unit is Aquaculture: Fin Fish Biology (H038 12) to ensure that candidates have an understanding of the internal and external anatomy and physiology of fish species prior to undertaking Aquaculture: Fish Health (H039 11).

6.4 Delivery Methods

For both NPAs, delivery approaches could include:

- ◆ Tutor-led delivery using combinations of centre based delivery and ICT, to facilitate access by remote learners and work-based teaching and mentoring
- ◆ Facilitated candidate enquiry (including the use of maps, internet and virtual learning environment (VLE) based resources and learning packs)
- ◆ Experiential learning through employment or work placement (guided and supervised by an employer)
- ◆ Learner-centred field work and local investigation of an aquaculture site.

The learning required to achieve each NPA can be suited to a candidate's own pace. This is particularly appropriate for those employed in the aquaculture industry. The NPAs have been designed so that each could reasonably be completed within a four month timescale, by candidates employed in the aquaculture industry.

The combination of a short timescale and a flexible approach to learning and assessment should build up the confidence of candidates who may have otherwise seen learning and training as unachievable.

6.5 Assessment Strategy

For both NPAs, the use of a wide range of assessment methods has been proposed within the Units, including open and closed-book tests, multiple choice questions, short reports, portfolios (e-portfolio) and the observation of practical tasks and diary records. Candidate knowledge may be assessed through a VLE, using techniques such as online timed multiple choice questions, drag and drop assessments, discussion forums and the submission of online reports. Reports may centre around online research and research from a working environment. Candidates will maintain a portfolio that will be monitored by the assessor before final submission as a completed portfolio.

Practical assessments within the component aquaculture Units are designed so that they can be completed on a commercial fish farm or within a training facility. Candidates employed in the aquaculture industry will be able to gain credit for their experience and abilities using an Accredited Prior Learning (APL) or Recognised Prior Learning (RPL) process, which should enable a suitable candidate to fast-track through elements of both NPAs. Personal statements and witness testimonies from employers will play a key role in the APL process.

To ensure the evidence generated from APL is robust, candidates may be required to undertake an assessment process to support their statements and testimonies. This could take the form of a summative checklist that can be used to assess the practical areas where credit is required. An option could be to use a summative knowledge assessment in relation to the topics. This process would allow experienced candidates to fast-track through parts of the NPAs. This may inspire learners to seek work based progression opportunities, either in education and training establishments or within their own organisation.

6.6 Guidance on Open Learning

Learners will have access to VLE based resources and/or paper-based learning packs as appropriate. Corresponding tutor packs supporting parts of the delivery will be available to tutors and work-based mentors.

7 General information for centres

Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

Internal and external verification

All instruments of assessment used within this/these Group Award(s) will be internally verified, using the appropriate policy within the centre and the guidelines set by SQA.

External verification will be carried out by SQA to ensure that internal assessment is within the national guidelines for these qualifications.

Further information on internal and external verification can be found in *SQA's Guide to Assessment* (www.sqa.org.uk).

8 General information for candidates

These National Progression Awards in Fish Husbandry (GE4N 45) and Fish Health & Nutrition (GE4M 45) have been devised to enhance career opportunities, and develop knowledge and skills in aquaculture.

Both NPAs are set at SCQF level 5, and each consists of four SQA credits. Each NPA has a mandatory section and a section which allows delivering centres to choose from a set of topic areas.

Both NPAs have a very practical and vocational approach. Much of the delivery will take place at aquaculture sites where you will carry out practical tasks and collect information to allow you to develop a portfolio of assessment evidence. There will be opportunities for you to develop Core Skills in *Numeracy, Communication, Information and Communication Technology, Problem Solving and Working with Others*, to enhance your employability.

Assessment will take place at various stages during the programme. There will be some closed-book assessments, usually taken at the end of the Unit delivery.

Both NPAs open up pathways to higher level qualifications in aquaculture and to further training and employment opportunities in this increasingly specialised sector.

8.1 National Progression Award in Fish Husbandry (GE4N 45)

This qualification offers opportunities for you to develop your knowledge and understanding of fish husbandry, welfare, live handling and water quality. It will also give you opportunities to improve your practical performance in these areas.

The optional Units allow you to develop knowledge and understanding of one of the following key areas:

- ◆ Fin Fish Biology
- ◆ Salmon Hatchery Operations (salmon/trout hatchery operations)
- ◆ Aquatic Environments (your local aquatic environments)
- ◆ Cage Operations (specialised ongrowing cage operations)

On successful completion of this NPA, you could go on to undertake:

- ◆ National Progression Award in Fish Health & Nutrition (GE4M 45) with transferred credit for any Units common to both awards
- ◆ work based SVQ/Modern Apprenticeship at level 2
- ◆ a college based National Certificate programme in aquaculture.

8.2 National Progression Award in Fish Health & Nutrition at SCQF level 5 (GE4M 45)

This qualification offers you the opportunity to develop your knowledge and understanding of fish health, feeding, nutrition biology and improve your practical performance in these areas.

The optional Units allow you to develop knowledge and understanding of one of the following key areas:

- ◆ Water Quality
- ◆ Salmonid Hatchery Operations (salmon/trout hatchery operations)
- ◆ Aquatic Environments (your local aquatic environment)
- ◆ Cage Operations (specialised cage ongrowing operations).

On successful completion of this NPA, you could undertake:

- ◆ National Progression Award in Fish Husbandry (GE4N 45) with transferred credit for any Units common to both awards
- ◆ employment and progress to the work based SVQ/Modern Apprenticeship at levels 2 and 3 in Aquaculture
- ◆ a college based National Certificate programme in aquaculture.

9 Glossary of terms

SCQF: This stands for the Scottish Credit and Qualification Framework, which is a new way of speaking about qualifications and how they inter-relate. We use SCQF terminology throughout this guide to refer to credits and levels. For further information on the SCQF visit the SCQF website at www.scqf.org.uk

SCQF credit points: One SCQF credit point equates to 10 hours of learning. NQ Units at SCQF levels 2–6 are worth 6 SCQF credit points, NQ Units at level 7 are worth 8 SCQF points.

SCQF levels: The SCQF covers 12 levels of learning. National Qualification Group Awards are available at SCQF levels 2-6 and will normally be made up of National Units which are available from SCQF levels 2–7.

Dedicated Unit to cover Core Skills: This is a non-subject Unit that is written to cover one or more particular Core Skills.

Embedded Core Skills: This is where the development of a Core Skill is incorporated into the Unit and where the Unit assessment also covers the requirements of Core Skills assessment at a particular level.

Signposted Core Skills: This refers to the opportunities to develop a particular Core Skill at a specified level that lie outwith automatic certification.

Qualification Design Team: The QDT works in conjunction with a Qualification Manager/Development Manager to steer the development of the National Certificate/National Progression Award from its inception/revision through to validation. The group is made up of key stakeholders representing the interests of centres, employers, universities and other relevant organisations.

Consortium-devised National Certificates/National Progression Awards are those developments or revisions undertaken by a group of centres in partnership with SQA.

10 Appendices

Appendix 1: Mapping of Aims to Units

Appendix 2: Mapping of Core Skills

Appendix 3: National Occupational Standards Relevant to the NPAs

Appendix 4: Mapping of National Occupational Standards to Units

Appendix 1: Mapping of Aims to Units

NPA in Fish Husbandry (GE4N 45)

Unit Code	Unit Name	Aim 1	Aim 2	Aim 3	Aim 4	Aim 5
H03C 11	Aquaculture: Fish Husbandry	✓	✓	✓	✓	✓
H03D 11	Aquaculture: Live Fish Handling	✓	✓	✓	✓	✓
H03D 11	Aquaculture: Water Quality	✓	✓	✓	✓	✓
H036 11	Aquaculture: Aquatic Environments		✓	✓	✓	✓
H037 11	Aquaculture: Cage Operations		✓	✓	✓	✓
H038 11	Aquaculture: Salmonid Hatchery Operations		✓	✓	✓	✓
H038 12	Aquaculture: Fin Fish Biology		✓	✓	✓	✓

NPA in Fish Health & Nutrition (GE4M 45)

Unit Code	Unit Name	Aim 1	Aim 2	Aim 3	Aim 4	Aim 5
H039 11	Aquaculture: Fish Health	✓	✓	✓	✓	✓
H03A 11	Aquaculture: Fish Nutrition and Feeding	✓	✓	✓	✓	✓
H038 12	Aquaculture: Fin Fish Biology	✓	✓	✓	✓	✓
H036 11	Aquaculture: Aquatic Environments		✓	✓	✓	✓
H03D 11	Aquaculture: Water Quality		✓	✓	✓	✓
H037 11	Aquaculture: Cage Operations		✓	✓	✓	✓
H03F 11	Aquaculture: Salmonid Hatchery Operations		✓	✓	✓	✓

Appendix 2: Mapping of Core Skills

NPA in Fish Husbandry (GE4N 45)

The table shows signposted SCQF levels, except where 'E' denotes an embedded component.

		Communication		Numeracy		ICT	Problem Solving			Working with Others
Unit Code	Unit title	Oral	Written	Using Graphical Info	Using Number		Critical Thinking	Planning & Organising	Reviewing & Evaluating	
H03C 11	Aquaculture: Fish Husbandry	4	5	4	5	4	4 (E)	4	5	4
H03D 11	Aquaculture: Live Fish Handling	4	5	4	4	4	4 (E)	4	4	4
H03G 11	Aquaculture: Water Quality	4	5	5	4	4	4	4	5	4
H036 11	Aquaculture: Aquatic Environment	4	5	5	4	4	4	4	5	4
H037 11	Aquaculture: Cage Operations	4	4	-	4	4	4 (E)	4	5	4
H03F 11	Aquaculture: Salmonid Hatchery Operations	4	4	4	4	4	4	4	5	4
H038 12	Aquaculture: Fin Fish Biology	-	4	-	-	-	5	4	4	-

NPA in Fish Health & Nutrition (GE4M 45)

The table shows signposted SCQF levels, except where **(E)** denotes an embedded component.

		Communication		Numeracy		ICT	Problem Solving			Working with Others
Unit Code	Unit title	Oral	Written	Using Graphical Info	Using Number		Critical Thinking	Planning & Organising	Reviewing & Evaluating	
H039 11	Aquaculture: Fish Health	5	5	-	5	4	4 (E)	4	5	4
H03A 11	Aquaculture: Fish Nutrition and Feeding	4	5	4	5	4	4 (E)	4	5	4
H038 12	Aquaculture: Fin Fish Biology	-	4	-	-	-	5	4	4	-
H036 11	Aquaculture: Aquatic Environments	4	5	5	4	4	4	4	5	4
H03G 11	Aquaculture: Water Quality	4	5	5	4	4	4	4	5	4
H037 11	Aquaculture: Cage Operations	4	4	-	4	4	4	4	5	4
H03F 11	Aquaculture: Salmonid Hatchery Operations	4	4	4	4	4	4	4	5	4

Appendix 3: National Occupational Standards Relevant to the NPAs

The following National Qualifications derived from the National Occupational Standards relate to the NPA in Fish Husbandry & Fish Health & Nutrition (SCQF Levels 5).

- N/SVQ2 Aquaculture (Cod)
- N/SVQ2 Aquaculture (Cyprinid)
- N/SVQ2 Aquaculture (Halibut)
- N/SVQ2 Aquaculture (Salmon — Freshwater)
- N/SVQ2 Aquaculture (Salmon — Sea)
- N/SVQ2 Aquaculture (Trout)

Appendix 4: Mapping of National Occupational Standards to Units

NPA in Fish Husbandry (GE4N 45)

Note: M indicates mandatory Unit; O indicates options Unit.

National Unit title	Credit Value	M/O	NOS Unit title and code
H03C 11 Aquaculture: Fish Husbandry	1	M	Aqu 1 Prepare holding Units to receive fish Aqu 3 Gather fish Aqu 4 Grade fish Aqu 6 Prepare to and feed fish Aqu 7 Collect information of fish growth and development Aqu 11 Carry out routine maintenance and repairs on aquaculture facilities Aqu 12 Monitor the aquatic production environment Aqu 13 Maintain environmental conditions within holding Units Aqu 14 Treat health problems in fish Aqu 15 Spawn fish and fertilise fish eggs Aqu 16 Establish and maintain green egg incubation Aqu 17 Prepare to and maintain fish eggs in a hatchery Aqu 18 Care for juvenile fish Aqu 19 Prepare for the transport of live fish Aqu 20 Transport live fish Aqu 37 Work safely in an aquatic environment CU 46 Control vertebrate pests and predators using traps CU 47 Control vertebrate pests and predators by shooting
H03D 11 Aquaculture: Live Fish Handling	1	M	Aqu 1 Prepare holding Units to receive fish Aqu 2 Stock fish into holding Units Aqu 3 Gather fish Aqu 4 Grade fish Aqu 5 Harvest fish Aqu 6 Prepare to and feed fish Aqu 7 Collect information of fish growth and development Aqu 12 Monitor the aquatic production environment Aqu 13 Maintain environmental conditions within holding Units Aqu 14 Treat health problems in fish Aqu 15 Spawn fish and fertilise fish eggs Aqu 16 Establish and maintain green egg incubation Aqu 17 Prepare to and maintain fish eggs in a hatchery Aqu 18 Care for juvenile fish Aqu 19 Prepare for the transport of live fish Aqu 20 Transport live fish Aqu 37 Work safely in an aquatic environment

H03G 11 Aquaculture: Water Quality	1	M	<p>Aqu 1 Prepare holding Units to receive fish</p> <p>Aqu 12 Monitor the aquatic production environment</p> <p>Aqu 13 Maintain environmental conditions within holding Units</p> <p>Aqu 16 Establish and maintain green egg incubation</p> <p>Aqu 17 Prepare to and maintain fish eggs in a hatchery</p> <p>Aqu 37 Work safely in an aquatic environment</p>
H036 11 Aquaculture: Aquatic Environments	1	O	<p>Aqu 12 Monitor the aquatic production environment</p> <p>Aqu 13 Maintain environmental conditions within holding Units</p> <p>Aqu 37 Work safely in an aquatic environment</p>
H038 12 Aquaculture: Fin Fish Biology	1	O	<p>Aqu 4 Grade fish</p> <p>Aqu 7 Collect information of fish growth and development</p> <p>Aqu 12 Monitor the aquatic production environment</p> <p>Aqu 37 Work safely in an aquatic environment</p>
H037 11 Aquaculture: Cage Operations	1	O	<p>Aqu 1 Prepare holding Units to receive fish</p> <p>Aqu 2 Stock fish into holding Units</p> <p>Aqu 3 Gather fish</p> <p>Aqu 6 Prepare to and feed fish</p> <p>Aqu 7 Collect information of fish growth and development</p> <p>Aqu 11 Carry out routine maintenance and repairs on aquaculture facilities</p> <p>Aqu 12 Monitor the aquatic production environment</p> <p>Aqu 13 Maintain environmental conditions within holding Units</p> <p>Aqu 19 Prepare for the transport of live fish</p> <p>Aqu 20 Transport live fish</p> <p>Aqu 37 Work safely in an aquatic environment</p>
H03F 11 Aquaculture: Salmonid Hatchery Operations	1	O	<p>Aqu 1 Prepare holding Units to receive fish</p> <p>Aqu 2 Stock fish into holding Units</p> <p>Aqu 3 Gather fish</p> <p>Aqu 4 Grade fish</p> <p>Aqu 6 Prepare to and feed fish</p> <p>Aqu 7 Collect information of fish growth and development</p> <p>Aqu 12 Monitor the aquatic production environment</p> <p>Aqu 13 Maintain environmental conditions within holding Units</p> <p>Aqu 14 Treat health problems in fish</p> <p>Aqu 17 Prepare to and maintain fish eggs in a hatchery</p> <p>Aqu 18 Care for juvenile fish</p> <p>Aqu 19 Prepare for the transport of live fish</p> <p>Aqu 20 Transport live fish</p> <p>Aqu 37 Work safely in an aquatic environment</p>

NPA in Fish Health and Nutrition (GE4M 45)

Note: M indicates mandatory Unit; O indicates options Unit.

National Unit title	Credit Value	M/O	NOS Unit title and code
H039 11 Aquaculture: Fish Health	1	M	Aqu 1 Prepare holding Units to receive fish Aqu 2 Stock fish into holding Units Aqu 3 Gather fish Aqu 4 Grade fish Aqu 6 Prepare to and feed fish Aqu 7 Collect information of fish growth and development Aqu 12 Monitor the aquatic production environment Aqu 13 Maintain environmental conditions within holding Units Aqu 14 Treat health problems in fish Aqu 15 Spawn fish and fertilise fish eggs Aqu 17 Prepare to and maintain fish eggs in a hatchery Aqu 18 Care for juvenile fish Aqu 19 Prepare for the transport of live fish Aqu 20 Transport live fish Aqu 37 Work safely in an aquatic environment
H03A 11 Aquaculture: Fish Nutrition and Feeding	1	M	Aqu 6 Prepare to and feed fish Aqu 18 Care for juvenile fish Aqu 37 Work safely in an aquatic environment
H038 12 Aquaculture: Fin Fish Biology	1	M	Aqu 4 Grade fish Aqu 7 Collect information of fish growth and development Aqu 12 Monitor the aquatic production environment Aqu 37 Work safely in an aquatic environment
H036 11 Aquaculture: Aquatic Environments	1	O	Aqu 12 Monitor the aquatic production environment Aqu 13 Maintain environmental conditions within holding Units Aqu 37 Work safely in an aquatic environment
H03G 11 Aquaculture: Water Quality	1	O	Aqu 1 Prepare holding Units to receive fish Aqu 12 Monitor the aquatic production environment Aqu 13 Maintain environmental conditions within holding Units Aqu 16 Establish and maintain green egg incubation Aqu 17 Prepare to and maintain fish eggs in a hatchery Aqu 37 Work safely in an aquatic environment
H037 11 Aquaculture: Cage Operations	1	O	Aqu 1 Prepare holding Units to receive fish Aqu 2 Stock fish into holding Units Aqu 3 Gather fish Aqu 6 Prepare to and feed fish Aqu 7 Collect information of fish growth and development Aqu 11 Carry out routine maintenance and repairs on aquaculture facilities

National Unit title	Credit Value	M/O	NOS Unit title and code
			Aqu 12 Monitor the aquatic production environment Aqu 13 Maintain environmental conditions within holding Units Aqu 19 Prepare for the transport of live fish Aqu 20 Transport live fish Aqu 37 Work safely in an aquatic environment
H03F 11 Aquaculture: Salmonid Hatchery Operations	1	O	Aqu 1 Prepare holding Units to receive fish Aqu 2 Stock fish into holding Units Aqu 3 Gather fish Aqu 4 Grade fish Aqu 6 Prepare to and feed fish Aqu 7 Collect information of fish growth and development Aqu 12 Monitor the aquatic production environment Aqu 13 Maintain environmental conditions within holding Units Aqu 14 Treat health problems in fish Aqu 17 Prepare to and maintain fish eggs in a hatchery Aqu 18 Care for juvenile fish Aqu 19 Prepare for the transport of live fish Aqu 20 Transport live fish Aqu 37 Work safely in an aquatic environment