



Arrangements for:

**National Progression Award in
Aquaculture at SCQF level 4**

Group Award Code: G9D8 44

**National Progression Award in
Aquaculture at SCQF level 5**

Group Award Code: G9D9 45

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1 Introduction

This is the Arrangements Document for the new National Progression Awards (NPAs) in Aquaculture, at SCQF levels 4 and 5, which were validated in April 2009. This document includes: background information on the development of the Group Award, its aims, guidance on access, details of the Group Award structure, and guidance on delivery.

2 Rationale for the development of the NPAs in Aquaculture

2.1 Background to the development

There are two main target audiences for these NPA Aquaculture qualifications: secondary school learners and recently recruited fish farm staff.

2.1.1 Schools strategy

For several years, Scottish colleges have been delivering programmes to secondary schools in response to Scottish Funding Council (SFC) policy and ring fenced core funding incentives. To date, various courses have been provided in Scotland with the 14 to 16 year old (S3/S4) age group being the main audience. Some programmes have also been offered to S5/6 pupils to enrich their school experience through vocational learning to complement their academic qualifications.

The qualifications that have been made available have included:

- ◆ Scottish Progression Awards (SPAs)
- ◆ Skills for Work programmes
- ◆ Programmes comprising collections of individual National Units
- ◆ Locally certificated programmes

Where Local Education Authorities and their schools have encouraged access to college vocational programmes, many 14 to 16 year olds have had the opportunity to develop their employability skills and gain an insight into a vocation that interests them, thereby leading to better informed career choices.

Most courses have been offered at Scottish Credit and Qualifications Framework (SCQF) levels 4 and 5, equivalent to Intermediate 1/Standard Grade General level and Intermediate 2/Standard Grade Credit level, respectively. However, some colleges have recognised the need to rationalise schools programmes and qualifications offered nationally, in order to clarify progression routes and achieve parity with Intermediate and Standard Grade courses through vocationally based National Awards.

2.1.2 Salmon Farming Industry

Research into the salmon farming industry's training needs, undertaken by the Sector Skills Council for the Environmental and Land-Based Sector (LANTRA) and the Scottish Salmon Producers' Organisation (SSPO), published in February 2008, indicated that husbandry courses were needed for many local recruits lacking the relevant qualifications and experience upon arrival. These NPAs in Aquaculture are to support the requirements of recent recruits to the salmon farming industry.

2.2 Current development

These four credit NPAs have been designed so that they can be completed within one academic year, and are offered at two levels, SCQF level 4 and SCQF level 5.

The SCQF level 4 qualification introduces learners to local aquatic environments and aquaculture activities, and provides the flexibility to study and experience finfish and/or shellfish production. Parts of the programme could be delivered in school, supported by college tutors. Access to a finfish or shellfish facility under the instruction of college tutors is highly recommended for the practical parts of the programme.

The SCQF level 5 qualification offers a programme that assists employers with the introduction of new recruits to the industry. The qualification also meets the requirement of S5/6 learners seeking a vocational programme to enrich their school education, providing an insight into aquaculture and enabling them to confirm their interest in the sector as a career or pathway to further study.

2.3 Initial review phase

An initial review of the SPA in Aquaculture was undertaken prior to the development of the NPAs. Subsequent consultation with aquaculture producer organisations, LANTRA and all schools involved with SPA provision demonstrated support for the proposed NPAs in Aquaculture.

Reference was made at the outset to the National Occupational Standards (NOS) for Aquaculture.

2.4 Summary of consultations and market research

The NPA at SCQF level 4 was deemed appropriate by all of the key stakeholders, including employers, secondary schools and college teaching staff. The research confirmed that the NPA will provide:

- ◆ S3/4 learners with an insight into local aquatic environments and aquaculture enterprises
- ◆ valuable practical experience
- ◆ valuable opportunities for Core Skills development
- ◆ a suitable progression route to initial employment
- ◆ progression to NPA in Aquaculture at SCQF level 5
- ◆ progression opportunities to SVQ 2 in Aquaculture and relevant locally devised FE programmes at SCQF levels 4–6

The NPA at SCQF level 5 will:

- ◆ support fish farm husbandry recruits undergoing introduction to the industry
- ◆ provide a programme that gives an insight into global aquaculture
- ◆ allow S5/6 learners to make well informed career choices

3 Aims of the Group Awards

The aims of each qualification are given below and are classified as principal aims and general aims.

3.1 Principal aims of the Group Awards

3.1.1 NPA in Aquaculture at SCQF level 4

The principal aims of the SCQF level 4 award are as follows.

- 1 To provide S3/4 learners with an insight into their local aquatic environments and aquaculture enterprises.
- 2 To provide opportunities for development of transferable and Core Skills.
- 3 To prepare learners for employment in aquaculture, shortening their initial training and induction period once employed.
- 4 To provide a progression route to the NPA in Aquaculture at SCQF level 5.
- 5 To provide a progression route to the SVQ 2 in Aquaculture and relevant locally devised FE programmes at SCQF levels 4–6.

3.1.2 NPA in Aquaculture at SCQF level 5

The principal aims of the NPA in Aquaculture at SCQF level 5 are as follows.

- 1 To provide a programme suitable for salmonid fish farm husbandry recruits undergoing introduction to the industry.
- 2 To provide S5/6 learners with the opportunity to make a well informed career choice on completion of the programme.
- 3 To provide learners with an insight into aquaculture practices around the globe, by investigating temperate and tropical aquaculture.
- 4 To provide opportunities for development of transferable and Core Skills, including Communication, Numeracy and Working with Others.
- 5 To provide an articulation route to the SVQ 2 in Aquaculture and relevant locally devised FE programmes at SCQF levels 5–6.
- 6 To provide a progression route from the NPA in Aquaculture at SCQF level 4.

3.2 General aims of the Group Awards

3.2.1 NPA in Aquaculture at SCQF level 4

The general aims of the NPA in Aquaculture at SCQF level 4 include the following.

- 1 To enable progression within the SCQF.
- 2 To provide the opportunity to develop employability skills through work experience.

The aims of the NPA in Aquaculture at SCQF level 4 are met mostly within the mandatory Units. Due to the restricted range of options, candidates will choose either the Shellfish Unit or the Finfish Unit in order to meet the four credit requirement.

3.2.2 NPA in Aquaculture at SCQF level 5

The general aims of the NPA in Aquaculture at SCQF level 5 include the following.

- 1 To enable progression within the SCQF.
- 2 To provide the opportunity to develop employability skills through work experience.

The aims of the NPA in Aquaculture at SCQF level 5 are met mostly within the mandatory Units.

3.3 Target groups

There are no unnecessary barriers to entry. Further details of entry requirements are given in Section 4—Access.

The target client group for the NPA in Aquaculture at SCQF level 4 is the secondary school S3/4 learners with a genuine interest in the aquatic environment and aquaculture.

In addition to school learners, there are two further client groups for the NPA in Aquaculture SCQF level 5:

- ◆ Secondary school S5/6 learners wishing an insight into global aquaculture complemented by practical work experience and skills development
- ◆ Recent fish farm husbandry recruits undergoing induction
- ◆ Unemployed and other individuals seeking a career change

3.4 Employment opportunities

The NPA in Aquaculture at SCQF level 4 provides a suitable progression route to the work-based SVQ 2 in Aquaculture and to relevant locally devised FE programmes at SCQF levels 4–6.

The NPA in Aquaculture at SCQF level 5 provides a progression route to the SVQ 2 in Aquaculture, relevant locally devised FE programmes and, potentially, higher education. For example, with the appropriate educational profile, candidates could progress to the PDA in Fish and Aquatic Science or to the HNC in Fish Farming.

Potential progression pathways to further and higher education, vocational training and employment are given in Appendix 1.

4 Access to Group Awards

Access is at the discretion of the centre. A genuine interest in aquaculture is highly desirable.

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

For the NPA in Aquaculture at SCQF level 4, it would be beneficial if candidates possessed a minimum Core Skills entry profile as listed below.

Core Skill	SCQF level
Communication	3
Numeracy	3
Information and Communication Technology	3
Problem Solving	3
Working with Others	3

For the NPA in Aquaculture at SCQF level 5, it would be beneficial if candidates possessed a minimum Core Skills entry profile as listed below.

Core Skill	SCQF level
Communication	4
Numeracy	4
Information and Communication Technology	4
Problem Solving	4
Working with Others	4

5 Group Awards structure

5.1 Framework

5.1.1 NPA in Aquaculture at SCQF level 4

There are two possible routes to obtaining the NPA in Aquaculture at SCQF level 4 (24 SCQF credit points).

Route 1 — the candidate must achieve:

- ◆ two mandatory Units totalling one SQA credit (6 SCQF credit points)
- ◆ one SQA credit (6 SCQF credit points) from the restricted options Units
- ◆ two SQA credits (12 SCQF credit points) from the options Units.

Route 2 — the candidate must achieve:

- ◆ two mandatory Units totalling one SQA credit (6 SCQF credit points)
- ◆ two SQA credits (12 SCQF credit points) from the restricted options Units
- ◆ one SQA credit (6 SCQF credit points) from the options Units

Mandatory Units

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
North European Aquaculture: An Introduction	F6T9 10	3	4	0.5
Aquatic Environment: Local Investigation	F6TA 10	3	4	0.5
Total		6		1

Restricted options Units

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
Aquaculture: An Introduction to Finfish Production	F6TB 10	6	4	1
Aquaculture: An Introduction to Shellfish Production	F6TC 10	6	4	1
Total		12		2

Optional Units

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
Aquaculture: Basic Seamanship	F6TD 10	3	4	0.5
Scottish Sea Fisheries: An Introduction	F6TE 10	3	4	0.5
Establishing a Business Identity	F5GA 10	1.5	4	0.25
Business and Finance: An Introduction	F5G8 10	1.5	4	0.25
Business and Marketing: An Introduction	F5G9 10	1.5	4	0.25
Business and E-Commerce: An Introduction	F9G7 10	1.5	4	0.25
Work Placement	HF88 43*	6	3	1
Work Placement	HF88 44*	6	4	1
Total		18		3

5.1.2 NPA in Aquaculture at SCQF level 5

There are two possible routes to obtaining the NPA in Aquaculture at SCQF level 5 (24 SCQF credit points).

Route 1 — the candidate must achieve:

- ◆ two mandatory Units totalling two SQA credits (12 SCQF credit points)
- ◆ one SQA credit (6 SCQF credit points) from the restricted options Units
- ◆ one SQA credit (6 SCQF credit points) from the options Units.

Route 2 — the candidate must achieve:

- ◆ two mandatory Units totalling two SQA credits (12 SCQF credit points)
- ◆ two SQA credit (12 SCQF credit points) from the restricted options Units

Mandatory Units

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
Global Aquaculture	F6TF 11	6	5	1
Aquatic Environments for Aquaculture	F6TG 11	6	5	1
Total		12		2

Restricted options Units

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
Aquaculture: Salmonid Ova Production	F6TH 11	6	5	1
Aquaculture: Floating Cage Fish Farm Operations	F6TJ 11	6	5	1
Total		12		2

Optional Units

Unit title	Code	SCQF credit points	SCQF level	SQA credit value
Aquaculture: An Introduction to Finfish Production	F6TB 10	6	4	1
Aquaculture: An Introduction to Shellfish Production	F6TC 10	6	4	1
Starting in Business	DK2P 11	6	5	1
Work Placement	*HF88 45	6	5	1
Total		24		4

5.2 Articulation, professional recognition and credit transfer

A list of the vocational qualifications appropriate to these NPAs is given in Appendix 4.

The knowledge-based components of the NPAs have been mapped to the National Occupational Standards (NOS) for Aquaculture.

Candidates are not expected to achieve full occupational competence in fish husbandry within a four credit qualification at either NPA level. There are some Units in the SCQF level 5 NPA that do map to the knowledge and competence requirement of their corresponding NOS Units, comprehensively.

However, the Units in the SCQF level 4 NPA provide knowledge and understanding underpinning some of the Aquaculture knowledge requirement providing partial coverage only of the corresponding NOS Units. This is by design as the NPA at SCQF level 4 is designed to suit the requirements of 14–16 year old S3/4 school pupils.

The Work Experience Unit in the NPA at SCQF level 4 provides the opportunity to assist with husbandry tasks, developing confidence and preparing candidates for husbandry level employment. They will subsequently reach full occupational competence more quickly as a result of attaining this NPA.

Details of the NOS mapping are given in Appendix 5.

6 Approaches to delivery and assessment

6.1 Content and context

The NPAs in Aquaculture are best delivered and assessed through collaboration between colleges, schools and aquaculture employers. This will lead to a more cost effective shared delivery mode which will be sustainable and available across Scotland, including areas without a local FE College provider. Through an effective tripartite delivery model, candidates will have the best opportunity to develop the mix of employability skills and knowledge needed in order to build confidence and progress to employment in the aquaculture sector.

6.2 Mode of delivery

The NPAs in Aquaculture are designed primarily for delivery to school pupils who are at S3 stage and upwards. As such, delivery will be part-time as part of the full-time school programme. A significant proportion of the delivery will be on a flexible, open-learning basis and this proportion will increase gradually as suitable materials become available. However, the design of the qualifications will certainly not preclude full-time delivery to, for example, the recent recruits to the aquaculture sector if this mode of delivery is preferred by particular employers.

6.2.1 NPA in Aquaculture at SCQF level 4

This Group Award is designed for college or school based delivery to S3/4 pupils. It is envisaged that a collaborative delivery system will be developed in the longer term, enabling colleges' specialist aquaculture departments to develop aquaculture learning resources for schools and to support the development of appropriate school staff.

At this level, it is possible to complete the Work Experience Unit by undertaking a work placement, developing generic employability skills and attitudes and satisfying the Unit Outcomes. Whilst recognising that a relevant aquaculture work placement is preferable, the QDT is aware that many employers are currently not prepared to supervise 14–16 year old school pupils on many marine facilities due to the high risk and insurance implications. The risks associated with a land based hatchery are considerably lower, and these facilities may provide opportunities for relevant work experience in the short term.

6.2.2 NPA in Aquaculture at SCQF level 5

This Group Award is designed for college based delivery in collaboration with a school, or for work based delivery in collaboration with a school and college. The colleges' specialist aquaculture departments will develop learning resources for schools and aquaculture employers to use. College staff will support the delivery and the development of school staff and work based mentors, as well as delivering parts of the NPA to candidates.

6.3 Sequence of delivery

Several models are possible and some are listed below (6.3.1 and 6.3.2). Some models allow more integration of delivery of content across Units than others, but opportunities for integration are recommended wherever possible.

6.3.1 NPA in Aquaculture at SCQF level 4

It is recommended that the mandatory half credit Units, North European Aquaculture: an Introduction and Aquatic Environment: Local Investigation are delivered first to establish a basic understanding of aquaculture and the aquatic environment.

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 optional Units.

The following combinations of optional Units are recommended, but do not need to be delivered sequentially.

- ◆ *Aquaculture: an Introduction to Finfish Production* with *Aquaculture: an Introduction to Shellfish Production*.

These two Units provide an overview of the husbandry principles of the two main categories of aquatic organisms that are cultured in Northern Europe. Both Units are knowledge based and do not require access to an aquaculture facility.

- ◆ *Aquaculture: an Introduction to Finfish Production* or *Aquaculture: an Introduction to Shellfish Production* with *Aquaculture: Basic Seamanship* and *Scottish Sea Fisheries: an Introduction*.

The addition of *Aquaculture: Basic Seamanship* introduces a practical boat handling element which complements the other knowledge based Units in this collection. Candidates can choose between *Aquaculture: an Introduction to Finfish Production* and *Aquaculture: an Introduction to Shellfish Production* according to their interests.

- ◆ *Aquaculture: an Introduction to Finfish Production* or *Aquaculture: an Introduction to Shellfish Production* with four 0.25 credit Business Units.

This selection allows the candidate to study the business aspects of either finfish or shellfish production, alongside the husbandry principles.

- ◆ *Aquaculture: an Introduction to Finfish Production* or *Aquaculture: an Introduction to Shellfish Production* with *Aquaculture: Basic Seamanship* or *Scottish Sea Fisheries: an Introduction* and two 0.25 credit Business Units.

This selection represents a hybrid of previously listed options.

6.3.2 NPA in Aquaculture at SCQF level 5

It is recommended that the mandatory Units, *Global Aquaculture* and *Aquatic Environments for Aquaculture* are delivered first to establish a good understanding of aquaculture systems employed in temperate and tropical conditions and the characteristics of suitable aquatic environments.

Subsequently, the 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 specialist aquaculture Units in the restricted options and optional sections.

The *Work Experience* Unit is recommended particularly for unemployed and other candidates seeking a career change. A relevant placement in an aquaculture facility will further develop the practical skills developed in the other Units contributing to the award.

6.4 Delivery methods

The collaborative nature of the delivery mode envisaged (see Section 6.2) will determine the 'blend' of delivery approaches. This is likely to include:

- ◆ tutor-led delivery (combinations of school, college or work-based teaching and mentoring)
- ◆ facilitated student enquiry (including the use of maps, internet and virtual learning environment (VLE) based resources and learning packs)
- ◆ experiential learning through work placement (guided and supervised by an employer)
- ◆ learner-centred field work and local investigation of an aquatic site

6.5 Assessment strategy

The use of a wide range of assessment methods has been proposed within the Units, including multiple choice questions, short reports, portfolios and the observation of practical tasks.

The assessments requiring a written report are all designed to be completed to a given structure for SCQF level 4, ensuring that the challenge presented is appropriate to the level. The use of on-line multiple choice questions is recommended for assessing factual knowledge thus allowing more schools to access the qualification and limiting college delivery time.

Practical assessments within the aquaculture Units are designed so that they can be completed on a fish farm or within a college training facility.

Every opportunity for integration of assessment should be taken, although the limited number of Units in the Group Awards and the delivery modes envisaged may limit the number of opportunities for integration.

6.6 Core Skills

All of the subject specific Units in these qualifications have been newly written according to the current prescribed format and, as such, include full details of opportunities for the development of Core Skills. These Units do not carry Core Skills certification. There are opportunities to develop Core Skills in all of the Units and two of the Units have the *Problem Solving* components Critical Thinking and Planning and Organising certificated.

In broad terms, all Units with Evidence Requirements associated with practical activities have opportunities for the development of *Problem Solving* and *Working with Others*. Several Units require investigation and the production of reports and therefore have opportunities for the development of *Problem Solving* and for *Communication and Information and Communication Technology* depending on how the evidence is presented. For more detailed information, see individual Unit descriptors.

The *Work Experience* Units have *Problem Solving* and *Working with Others* embedded. The Units relating to business have limited opportunities for the development of Core Skills.

Details of the Core Skills mapping for these qualifications are given in Appendix 3.

6.6.1 NPA in Aquaculture at SCQF level 4

Problem Solving and *Working with Others* are embedded and certificated at SCQF level 4 in the *Work Experience* Unit included in the framework.

The Critical Thinking component at SCQF level 3 is certificated in the Unit *Aquaculture: An Introduction to Shellfish Production*. The Planning and Organising component at SCQF level 4 is certificated in the optional Unit *Aquaculture: Basic Seamanship*. For all other Units in this qualification, Core Skills are signposted (see Appendix 3).

6.6.2 NPA in Aquaculture at SCQF level 5

Problem Solving and *Working with Others* are embedded and certificated at SCQF level 5 in the *Work Experience* Unit included in the framework. For all other Units in this qualification, Core Skills are signposted (see Appendix 3).

6.7 Guidance on Open Learning

Learners will have access to paper-based learning packs and VLE based resources. Corresponding tutor packs will be provided to school teachers and work-based mentors supporting the delivery.

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 these Group Award(s) should 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 and Quality Assurance for Colleges of Further Education* (www.sqa.org.uk).

8 General information for candidates

These two NPAs have been devised to develop your interest in aquaculture. Both qualifications, one at Intermediate 1 (SCQF level 4) and the other at Intermediate 2 (SCQF level 5), consist of four SQA credits. Each NPA has a mandatory section and a section with some choice of topics.

Both NPAs have a very practical and vocational approach. Where available, 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 all of your Core Skills and increase employability skills.

Most of the learning will be tailored to suit your needs and assessment will take place at various points during your programme. There will be no closed-book end of Unit tests.

Both NPAs open up pathways to higher level qualifications in aquaculture and to further training and employment opportunities in this increasingly specialised sector. For further details, see Appendix 1.

8.1 NPA in Aquaculture at SCQF level 4

This qualification offers opportunities to S3/4 learners to develop knowledge and understanding of local aquatic environments and aquaculture enterprises.

For the mandatory Units, you will develop an understanding of the scope of the aquaculture industries in NW Europe. You will also develop your knowledge by carrying out an investigation of a local aquatic environment and producing a report based on your findings.

The optional Units allow you to develop knowledge and understanding of either salmon/trout production or shellfish production. It is possible to include both of these aspects of aquaculture but you would then have a reduced opportunity to incorporate other optional Units in work experience, sea fisheries, seamanship and business topics into your programme.

From this NPA, you could progress to the SCQF level 5 NPA, to SVQ2 Aquaculture, to locally devised SCQF level 5/6 programmes or to employment.

8.2 NPA in Aquaculture at SCQF level 5

This qualification offers opportunities to S5/6 learners to develop knowledge and understanding of aquaculture so that well informed career choices may be made. It is also suitable for employees who have recently entered the industry and require relevant knowledge to consolidate and progress their careers.

In one of the mandatory Units of this qualification, you will develop an understanding of aquaculture in a global context. The second mandatory Unit involves a detailed investigation of a particular local environment in which you will investigate a number of factors and determine its suitability for a particular aquaculture enterprise.

The optional Units allow you to develop more specialised knowledge of either hatcheries or floating cage operations. It is even possible to study both of these topics if you do not require knowledge of other topics (finfish production, shellfish production and business) or work experience.

It is possible to select appropriate topics to allow you to progress to further or higher education, to kick-start your career in aquaculture or to consolidate your position if you are already employed and wish to progress in the sector.

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 Skill 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 centers, employers, universities and other relevant organisations.

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

10 Appendices

Appendix 1: Progression pathways

Appendix 2: Mapping information —award aims mapped to NPA Units

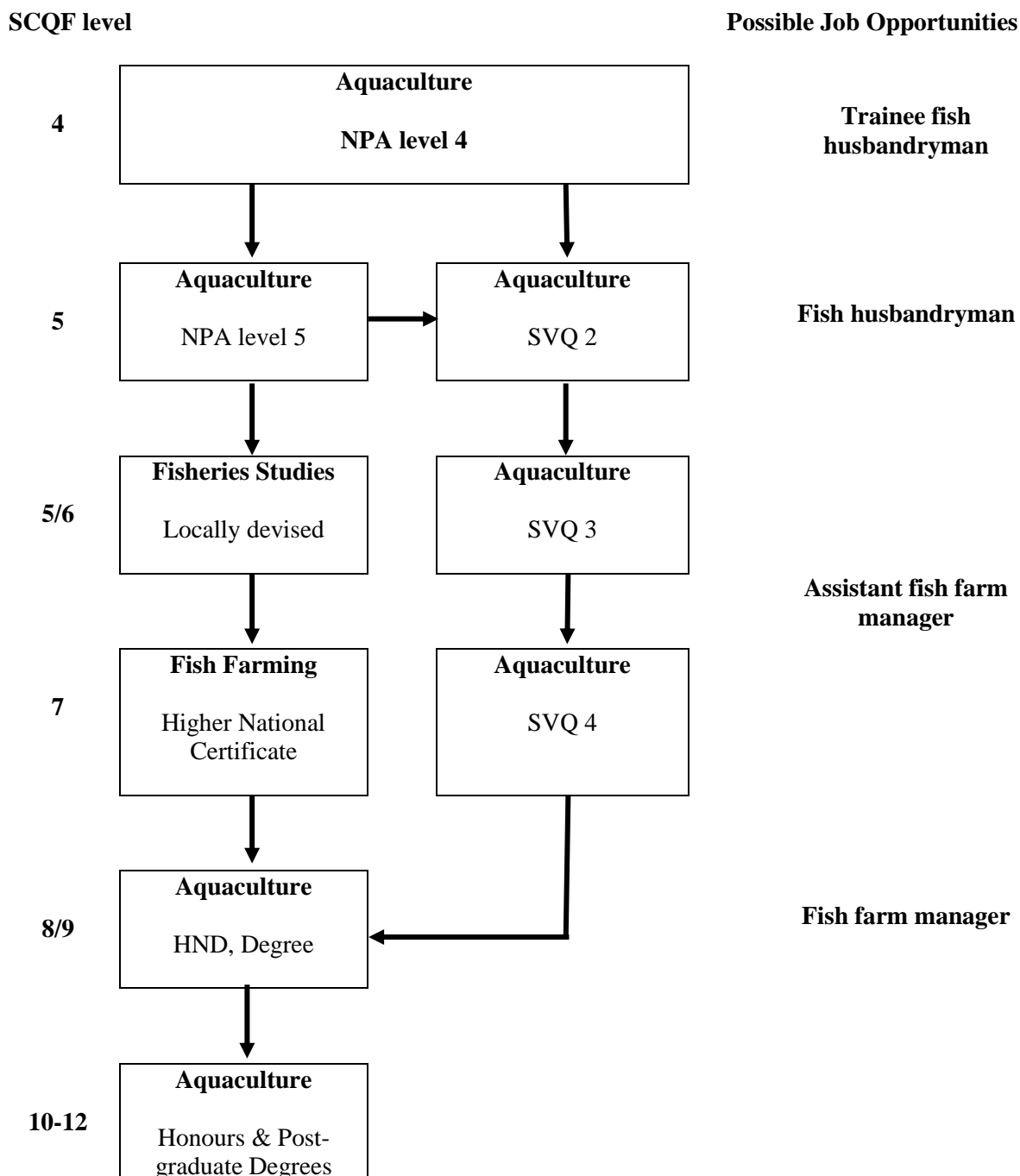
Appendix 3: Core Skills mapping of the awards

Appendix 4: National Occupational Standards relevant to these awards

Appendix 5: Mapping of National Occupational Standards to Units

Appendix 1 Progression pathways

The NPAs in Aquaculture at SCQF levels 4 and 5 provide platforms for progression to work-based training (SVQ Aquaculture qualifications) and to full-time college-based locally devised programmes. The Fisheries Studies programme referred to below is an example of a locally devised FE programme. Although this programme has not been SCQF levelled, it comprises 3 Unit credits at SCQF level 6, 9.5 Unit credits at SCQF level 5, 3 Unit credits at SCQF level 4 and 2.5 unlevelled Unit credits.



Appendix 2 Mapping information — award aims mapped to NPA Units

NPA in Aquaculture at SCQF level 4

PA1. To provide S3/4 learners with an insight into their local aquatic environments and aquaculture enterprises.

This NPA includes two mandatory Units that provide candidates with this insight: 'Aquatic Environment: Local Investigation' and 'North European Aquaculture: an Introduction'. Both Units are undertaken in the context of their local environment.

PA2. To provide opportunities for development of transferable and Core Skills.

This NPA includes opportunities for the development of these skills, as specified above, in the mandatory Units. There are further opportunities in the optional Units.

PA3. To prepare learners for employment in aquaculture, shortening their initial training and induction period once employed.

This NPA allows candidates to undertake 'Aquaculture: an Introduction to Shellfish Production' and/or 'Aquaculture: an Introduction to Finfish Production' from the optional Units, developing the ability to assist with husbandry tasks. In addition, through completing the two mandatory Units, candidates develop a basic understanding of some of the key principles of aquaculture, enabling them to 'fast track' through an employment induction.

PA4. To provide a progression route to the NPA in Aquaculture at SCQF level 5.

These two NPAs have been developed to complement each other and to facilitate a natural progression from SCQF level 4 to SCQF level 5.

PA5. To provide a progression route to the SVQ 2 in Aquaculture and relevant locally devised FE programmes at SCQF level 4–6.

This NPA qualification carries 24 SCQF credit points at level 4 and provides an adequate knowledge and experience of aquaculture and opportunities for Core Skills development, enabling candidates to cope with SVQ 2 and FE programmes at SCQF levels 4-6 on successful completion.

GA1. To enable progression within the SCQF

This NPA has been developed with complete benchmarking to SCQF.

GA2. To provide the opportunity to develop employability skills through work experience.

This NPA includes a Work Experience Unit which could provide the opportunity to develop generic employability skills such as communication, problem solving, team work, time keeping and initiative.

NPA in Aquaculture at SCQF level 5

PA1. To provide a programme suitable for salmonid fish farm husbandry recruits undergoing introduction to the industry.

This NPA includes a range of specialist salmonid production Units in the options, allowing the appropriate Units to be selected, according to candidates' requirements. Candidates' needs are determined by whether they are working in the hatchery or on-growing phase and both are catered for.

PA2. To provide S5/6 learners with the opportunity to make a well informed career choice on completion of the programme.

This NPA includes mandatory Units that provide an insight into global aquaculture and the aquatic environment. In addition, candidates undertake practical husbandry training and the knowledge and experience gained provides them with the opportunity to make well informed career choices.

PA3. To provide learners with an insight into aquaculture practices around the globe, by investigating temperate and tropical aquaculture.

This NPA includes the Unit 'Global Aquaculture' that allows candidates to study temperate and tropical farming systems and draw appropriate comparisons, leading to an understanding of the benefits and impacts of aquaculture on communities.

PA4. To provide opportunities for development of transferable and Core Skills, including *Communication, Numeracy and Working with Others*.

This NPA includes opportunities for development of transferable and Core Skills in the areas above within the mandatory Units. The optional Units provide further opportunities for the development of these skills.

Opportunities for developing Core Skills within Units are recorded in Appendix 3.

PA5. To provide an articulation route to the SVQ 2 in Aquaculture and relevant locally devised FE programmes at SCQF levels 5–6.

This NPA qualification carries 24 SCQF credit points at level 5 and provides an adequate knowledge and experience of aquaculture and opportunities for Core Skills development, enabling candidates to cope with SVQ 2 and FE programmes at SCQF levels 5–6 on successful completion.

PA6. To provide a progression route from the NPA in Aquaculture at SCQF level 4.

These two NPAs have been developed to complement each other and to facilitate a natural progression from SCQF level 4 to SCQF level 5.

GA1. To enable progression within the SCQF.

This NPA has been developed with complete benchmarking to SCQF.

GA2. To provide the opportunity to develop employability skills through work experience.

This NPA includes a Work Experience Unit which could provide the opportunity to develop generic employability skills such as communication, problem solving, team work, time keeping and initiative.

Appendix 3 Core Skills mapping of the awards

NPA in Aquaculture at SCQF level 4

Note: the table shows SCQF level; S indicates signposted and C indicates certificated.

		Communication		Numeracy		Information Technology	Problem Solving			Working with Others
Unit No	Unit Name	Oral	Written	Using Graphical Info	Using Number	Using IT	Critical Thinking	Planning & Organising	Reviewing & Evaluating	WVO
F6T9 10	North European Aquaculture: An Introduction	4 / S	4 / S	3 / S	3 / S	-	-	-	-	3 / S
F6TA 10	Aquatic Environment: Local Investigation	3 / S	4 / S	4 / S	4 / S	-	-	-	-	4 / S
F6TB 10	Aquaculture: An Introduction to Finfish Production	-	3 / S	-	4 / S	4 / S	-	-	-	4 / S
F6TC 10	Aquaculture: An Introduction to Shellfish Production	-	4 / S	-	-	-	3 / C	-	3 / S	
F6TD 10	Aquaculture: Basic Seamanship	3 / S	3 / S	-	4 / S	-	3 / S	4 / C	3/S	4 / S
F6TE 10	Scottish Sea Fisheries: an Introduction	-	3 / S	-			3 / S			
F5GA 10	Establishing a Business Identity	-	-	-	-	-	-	-	-	4 / S
F5G8 10	Business and Finance: An Introduction	-	-	-	-	-	-	-	-	4 / S
F5G9 10	Business and Marketing: An Introduction	-		-	-	-	-	-	-	4 / S

		Communications		Numeracy		Information Technology	Problem Solving			Working with Others
Unit No	Unit Name	Oral	Written	Using Graphical Info	Using Number	Using IT	Critical Thinking	Planning & Organising	Reviewing & Evaluating	WWO
F9G7 10	Business and E-Commerce: An Introduction	-	-	-	-	-	-	-	-	4 / S
D36H 10	Work Experience	-	-	-	-	-	4 / C	4 / C	4 / C	4 / C

NPA in Aquaculture at SCQF level 5

Note: the table shows SCQF level; S indicates signposted and C indicates certificated.

		Communications		Numeracy		Information Technology	Problem Solving			Working with Others
Unit No	Unit Name	Oral	Written	Using Graphical Info	Using Number	Using IT	Critical Thinking	Planning & Organising	Reviewing & Evaluating	WWO
F6TF 11	Global Aquaculture	4 / S	5 / S	4 / S	4 / S	4 / S	-	-	-	-
F6T9 11	Aquatic Environments for Aquaculture	4 / S	4 / S	4 / S	4 / S	4 / S	-	-	-	
F6TH 11	Aquaculture: Salmonid Ova Production	-	4 / S	-	4 / S	4 / S	4 / S	4 / S		4 / S
F6TJ 11	Aquaculture: Floating Cage Fish Farm Operations	-	4 / S	-		4 / S		4 / S		4 / S
F6TB 10	Aquaculture: An Introduction to Finfish Production	-	3 / S	-	4 / S	4 / S	-	-	-	4 / S
F6TC 10	Aquaculture: An Introduction to Shellfish Production	-	4 / S	-	-	3 / C	-	-	3 / S	
DK2P 11	Starting in Business	-	-	-	-	-	-	-	-	-
D36H 11	Work Experience	-	-	-	-	-	5 / C	5 / C	5 / C	5 / C

Appendix 4 National Occupational Standards Relevant to these qualifications

The following National Qualifications derived from the National Occupational Standards relate to the NPAs in Aquaculture at SCQF levels 4 and 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 5 Mapping of National Occupational Standards to Units

NPA in Aquaculture at SCQF level 4

Note: M indicates mandatory Unit; O indicates options Unit and RO indicates restricted options Unit.

NPA Unit and code	Credit value	M/O	NOS Title and code	Comments on NPA Unit aims in relation to NOS
North European Aquaculture: An Introduction (F6T9 10)	0.5	M	N/a	An entirely knowledge based Unit, providing an appreciation of the North European Aquaculture industry.
Aquatic Environment: Local Investigation (F6TA 10)	0.5	M	Maintain the Aquatic Production Environment (CU 52)	Provides some understanding of the tolerance limits of farmed species as a partial preparation for later attainment of CU 52
Aquaculture: An Introduction to Finfish Production (F6TB 10)	1.0	O	Prepare and stock fish holding Units (Aqc 1) Grade live fish (Aqc 2) Maintain the aquatic production environment (CU 52) Harvest fish for human consumption (Aqc 3) Feed finfish (Aqc 4)	An mainly knowledge based Unit. Some of the knowledge and understanding required for the NOS Units listed will be gained, facilitating later transition and induction to a salmonid husbandry role.
Aquaculture: An Introduction to Shellfish Production (F6TC 10)	1.0	O	Conduct shellfish depuration operations (Aqc 5) Collect wild shellfish spat (Aqc 6) Transport live fish (CU 56)	An entirely knowledge based Unit. Some of the knowledge and understanding required for the NOS Units listed will be gained, facilitating later transition and induction to a salmonid husbandry role.

NPA Unit and code	Credit value	M/O	NOS Title and code	Comments on NPA Unit aims in relation to NOS
Aquaculture: Basic Seamanship (F6TD 10)	0.5	O	Prepare and operate small craft (CU 13)	Provides some of the knowledge and understanding and practical skill development in small craft operation and ropework skills. This would partially prepare a candidate for entering a marine shellfish or salmonid farm operation, where boat handling was a requirement, assisting their induction.
Scottish Sea Fisheries: An Introduction (F6TE 10)	0.5	O	N/a	An entirely knowledge based Unit. The Unit does not map to the NOS, but has been added to broaden the appeal of the NPA.
Establishing a Business Identity (F5GA 10)	0.25	O	N/a	Included to develop an appreciation of Aquaculture as a business, for wider educational benefit.
Business and Finance: An Introduction (F5G8 10)	0.25	O	N/a	Included to develop an appreciation of Aquaculture as a business, for wider educational benefit.
Business and Marketing: An Introduction (F5G9 10)	0.25	O	N/a	Included to develop an appreciation of Aquaculture as a business, for wider educational benefit.
Business and E-Commerce: An Introduction (F5G7 10)	0.25	O	N/a	Included to develop an appreciation of Aquaculture as a business, for wider educational benefit.
Work Experience (D36H 10)	1.0	O	N/a	Provides the opportunity to develop generic employability skills, and gain, some experience of fish farm operations, through assisting. This experience would raise industrial awareness, and ease the candidate's progression to employment in the sector.

NPA in Aquaculture at SCQF level 5

Note: M indicates mandatory Unit; O indicates options Unit and RO indicates restricted options Unit.

NPA Unit and code	Credit value	M/O	NOS Title and code	Comments on NPA Unit aims in relation to NOS
Global Aquaculture (F6TF 11)	1.0	M	N/a	An entirely knowledge based Unit, providing an appreciation of the Aquaculture industry globally, through comparison of temperate and tropical production systems.
Aquatic Environments for Aquaculture (F6T9 11)	1.0	M	Maintain the Aquatic Production Environment (CU 52)	Provides an understanding of the tolerance limits of farmed species acting as a preparation for later attainment of CU 52
Aquaculture: Salmonid Ova Production (F6TH 11)	1.0	RO	Produce eyed fish eggs (CU 54)	Provides the underpinning knowledge and skill development required to satisfy the NOS Unit CU 54 in full.
Aquaculture: Floating Cage Fish Farm Operations (F6TJ 11)	1.0	RO	Prepare and stock fish holding Units (Aqc 1) Grade live fish (Aqc 2) Harvest fish for human consumption (Aqc 3)	Some of the knowledge and understanding required for the NOS Units listed will be gained, easing later transition and induction to a salmonid husbandry role.
Aquaculture: An Introduction to Finfish Production (F6TB 10)	1.0	O	Prepare and stock fish holding Units (Aqc 1) Grade live fish (Aqc 2) Maintain the aquatic production environment (CU 52) Harvest fish for human consumption (Aqc 3)	An entirely knowledge based Unit. Some of the knowledge and understanding required for the NOS Units listed will be gained, facilitating later transition and induction to a salmonid husbandry role.

NPA Unit and code	Credit value	M/O	NOS Title and code	Comments on NPA Unit aims in relation to NOS
Aquaculture: An Introduction to Shellfish Production (F6TC 10)	1.0	O	Feed finfish (Aqc 4) Conduct shellfish depuration operations (Aqc 5) Collect wild shellfish spat (Aqc 6) Transport live fish (CU 56)	An entirely knowledge based Unit. Some of the knowledge and understanding required for the NOS Units listed will be gained, facilitating later transition and induction to a salmonid husbandry role.
Starting in Business (DK2P 11)	1.0	O	N/a	Included to develop basic business planning skills and an appreciation of Aquaculture as a business, for wider educational benefit.
Work Experience (D36H 11)	1.0	O	N/a	Provides the opportunity to develop generic employability skills, and gain, some experience of fish farm operations, through assisting. Most of this experience would raise awareness, and ease progression to later employment in the sector.