Report of the External Review Group on the Award Standards for the **SOLAS**

Electrical

Apprenticeship Programme

OCTOBER 2014

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1. Introduction

Purpose

The purpose of the investigation carried out by the External Review Group (ERG) was to examine the electrical apprenticeship training programme as proposed by SOLAS and to determine whether, in its view, the minimum learning outcomes outlined in the document were fit for purpose. To this end the ERG was required to answer four questions relating to the position on the programme on the National and European Frameworks of Qualifications (NFQ and EQF) and on the comparability of the programme to similar programmes in Europe and elsewhere (See Appendix B items a) to d).

In addition the ERG was required to provide observations on the entry requirements for the programme, its general effectiveness in enabling learners to reach the minimum intended learning outcomes and the arrangements for progression. (See the second group of items a) to c) in Appendix B)

In essence the ERG was required to position the programme in the NFQ and the EQF and to establish linkages to other elements of the NFQ.

Membership, process, boundaries and limitations

The panel membership included experts on qualifications frameworks and on international comparators. It also included stakeholders from the social partnership and from providers of apprentice training. (See Appendix C)

As part of its deliberations, it met with representatives of SOLAS, with employers and with learners. It also met personnel from Education and Training Board Centres, (which provide phase 2 training), and from Dublin Institute of Technology, (which provides phase 4, and phase 6 training and also has a robust articulation process for craft persons on to level 7 programmes). (See Appendix D)

The review took place over three days. It consisted of sessions with providers, learners and SOLAS, and site visits to training centres and to an ESB network site. (See schedule in Appendix E).

The panel was conscious that the review was not a validation process but one that sought to position the programme outcomes within the Framework. However the panel also felt that it was appropriate to comment on other aspects of the programme and to make suggestions as to issues that may arise if the recommendations are accepted. This was done in the context of the Review of Apprenticeship Training in Ireland[1] and of development in the further and higher education fields.

The report addresses each of the seven questions a separately.

[1] DOES(2013)

2. Level of the Electrical Apprenticeship programme outcomes on the National Framework of Qualifications

Recommendation

1. What is the level on the Irish Framework of the minimum apprenticeship programme learning outcomes for the Craft?

Recommendation

The panel recommends that the Electrical Apprenticeship programme learning outcomes be placed at level 6 on the National Framework of Qualifications. The learning outcomes should be amended as described below and any necessary changes to lower level outcomes made.

Supporting Rationale

SOLAS has organised programme material at three levels of complexity. First of all the overall programme learning outcomes are specified. At this level it was possible to match the outcomes to the NFQ level indicators, allowing the group to complete the NFQ positioning exercise.

Appendix F sets out the statement of minimum programme learning outcomes as described in the programme under review. Each of these statements was examined in light of the NFQ indicators and discussed in terms of the programme learning outcomes and the expected skills and responsibilities of craft persons.

At a second level the various major strands or themes of the programme were described. These were referred to as component standards. The learning outcomes of this level were linked to the overall programme outcomes. These components were expressed over the full length of the programme and did not correspond to a particular phase. There were twelve components; SOLAS did not make any claim as to the level of the component or to the quantum of learning in FET[2] credits. This structure is not unexpected as components stretching over all four years of the programme are delivered at different levels.

The actual delivery of the learning experience was organised into modules. Modules descriptions specified learning outcomes that were linked to the parent component learning outcomes. These were not specified as to NFQ level or credit weighting. As these modules occurred at a particular time in the programme and had specific learning prerequisites and learning outcomes it should be possible to specify the learning involved in terms of NFQ levels and credit weighting.

The modules were further subdivided into learning units. These leaning units have outcomes and learning points associated with them. At this level of granularity the learning outcomes are very narrow and the learning points are very small.

[2] Further Education and Training

Given the level of detail supplied and the complexity involved in linking outcomes from units to modules to components to level indicators, the panel concentrated on broad programme outcomes. The panel did not attempt to forensically analyse the programme. It concentrated on giving broad indications of the level of the programme and its relationships to other elements of the framework.

A far more detailed process would be needed to validate the programme and to place it definitely on the framework. This would involve ensuring that the unit and module outcomes do deliver, in aggregate, the overall programme outcomes. This is of particular importance as the level of programme learning outcomes are considerably higher than those of programmes abroad, but the skill levels as attested to by expert members of the group are comparable.

The panel examined the minimum programme learning outcomes as specified in Curriculum Review Compound and Component Standard against the NFQ level indicators for levels 5, 6 and 7. Although introductory elements of the programme may be at a level below 6, overall the programme learning outcomes most closely match the indicators for a level 6 programme.

The table in Appendix F is the statement of minimum programme learning outcomes as specified in the curriculum document. Each of the statements was examined in light of the NFQ indicators as deemed applicable from the overall programme description and the deliberations and discussions of the ERG.

The outcomes, at present, are not all at Level 6. For example the first competence outcome **C1** is closer to a level 4 outcome. However, as it relates to health and safety competences, it is a necessary programme outcome, and the panel suggests that this be restated as part of the following outcome C2 that is Level 6.

Outcome **C3** is a level 5 outcome. However the language suggests that there are elements of level 7 outcomes, which is not justified by the programme.

Outcome **KS2** suggests that craft persons would “exercise proficiency ... in all electrical services”. The programme does not justify this. Evidence from site visits, meetings with craftspeople and experts reveals that apprentices typically have their work experience in a specialized area and should not be given responsibility without further training or supervised experience in other areas. The related learning outcome must reflect this expectation. The panel suggests that the outcome be rewritten to specify a “range of electrical services”. Alternatively, SOLAS might recognize that the on the job training does produce specialized electricians and formally differentiate the programme with appropriate titles etc.

It would also be useful to specify what was the meaning of “proficiency” used in this context.

Level 6 Major Awards

Advanced Certificate

The programme under review was written to match the requirements of the Common Award System. In particular it is designed to reach the Major Award at level 6; the Advanced Certificate. The award descriptors for the Advanced Certificate combine elements of the level 5 and level 6 NFQ indicators. The Common Awards System specifies that there should be 120 FET credits of learning in all Advanced Certificates. SOLAS did not quantify the credit levels for each component of the programme. It asserted that the overall level of credits was adequate to reach the requirements of the Certificate. SOLAS stated that the overriding requirement was that the programme reached its purpose and that the minimum credit level was reached.

The absence of quantification of the learning in phases 1 through 7 caused some difficulty for the group. It was unable to indicate the quantity of learning at each NFQ level for each phase of the programme and instead had to make broad judgments about the overall level of the programme.

Notwithstanding the comments above, the ERG decided that given the evidence from industry and considerable deliberation and consideration, the programme did fulfil the requirements of an advanced certificate. The group was not involved in a validation process but suggests that such a process would require that the 120 FET NFQ level 6 credits be allocated if the requirements of the Common Award System are to be met.

Higher Certificate

The group also looked at the indicators for the other sister award at level 6 on the NFQ, the Higher Certificate. All of the indicators for this award are at level 6. The group also believes that the programme learning outcomes match the outcome indicators for the Higher Certificate. The 2008 report from the NQAI[3] differentiates between Further and Higher Education awards at level 6 NFQ. The major difference is in the mix of knowledge, skills and competence and the emphasis placed on each. However, broadly stated outcomes can match both the Advanced and Higher Certificate descriptors.

However the Higher Certificate requires 120 HE credits which in learning duration terms equates to 240 FET credits. The group feels that the programme does contain higher education elements and outcomes but that it would require revision to meet the scope of outcomes necessary and adjustment of the delivery style to more equate to higher education norms. The adjustment to entry requirements proposed below equates standard eligibility with those of the Higher Certificate and would facilitate a revision of the programme to meet these requirements.

[3] NQAI, 2008

3. Level of the Electrical Apprentice Programme Learning Outcomes on the European Qualifications Framework

Recommendation

2. What is the level on the European Qualifications Framework (EQF) of the minimum apprenticeship programme learning outcomes for the Craft?

Recommendation

The group recommends that the SOLAS Electrical Apprenticeship training programme be placed at Level 5 on the European Qualifications framework.

Supporting Rationale

In assessing the appropriate level on the EFQ of the Electrical Apprenticeship programme the group examined the National Report Referencing the Irish National Framework of Qualifications to the European Qualifications Framework for Lifelong Learning[4]. The group adopted the approach of "best fit" which was the approach used in reference procedure.

The Referencing exercise placed the Irish NFQ level 6 at EQF level 5. The exercise did distinguish between further and higher education awards but placed both at level 5 EQF. It also made the distinction between the Bologna verifications process, which positioned qualifications within the Bologna cycles, and the EFQ referencing exercise, which was concerned with levels. This effectively leaves the Advanced Certificate outside of the Bologna process and thus not a HE programme but at EQF level 5.

In comparing the programme outcomes with the EQF descriptors the group looked at both level 4 and level 5 descriptors. The "best fit " is at EQF level 5. However this does not imply that the entire programme is at higher education standard. Clearly a four-year programme with a modest entry requirement has a range of levels within it. However, the ERG concluded that the overall learning outcomes are at EFQ level 5.

EQF level 5 is used in the Bologna Cycles to describe a short cycle within the first cycle of higher education. As the programme under review is a further education programme with higher education characteristics and learning outcomes it would be advisable to quantify the extent of learning at NFQ level 6 or EQF level 5. Otherwise the credibility of Irish NFQ level 6 programmes may be compromised.

[4] NQAI, 2009

4. Comparability of Award Standards with other countries

Recommendation

3. How does the proposed Craft Award standard compare with the standards of qualifications from a selection of other countries (e.g. from Europe, America, Asia), which fully or partially overlap with it?

Recommendation

Only a broad judgement can be made in this area. The expert opinion available to the group indicated that Irish electrical craftsmen matched or were more skilled than their peers in other countries but that they do not match the advanced or master craftsman level.

Supporting Rationale

This question is a very open question and it is difficult to make direct comparisons. The opinions expressed by the foreign expert group members and those consulted was that the skill level of Irish Electrical Craft persons was high.

In the case of the UK the opinion was that the extent and quality of training of electrical craft persons exceeded that in England, Wales and Northern Ireland.

The evidence from Alberta in Canada was that the Irish Electrical craft persons employed were all superior in skill and competence than their Canadian peers.

In some countries in mainland Europe there is a system of two or three cycle vocational training with a master crafts person qualification being additional to the standard qualification. These include Austria, Luxembourg, Germany, France and Denmark. These master craft persons can have reserved to them certain regulatory, training and employment functions; this is not the case in Ireland. The Irish craft person's skills do match the standard craft persons in these countries. However they do not match the skills at the Master Craft person level.

The terms of reference for this review suggest that we base our decisions on objective evidence. A comparison of the award standards of a number of countries would require a far more detailed exercise that is possible for this group.

5. Comparable framework levels of similar Craft Awards in other countries

Recommendation

4. At what EQF levels are similar Craft Awards in a selection of other countries (e.g. from Europe, America, Asia)

Recommendation

Although it is difficult to directly compare programmes, typically European countries have placed craft vocational education at EFQ levels 3 and 4 with advanced (Master and technician) craft qualifications placed at levels 4 and 5 with some at 6. Thus the Irish allocation could be seen as an outlier.

Supporting rationale

The only reliable evidence that was quickly to hand was the results of the various referencing exercises across Europe.

These referencing exercises typically compare national frameworks against the EQF. It is a separate exercise to place particular programmes on national framework and thus on the EFQ. In some cases this has been done for classes of qualifications. In a small number of cases particular programme have been definitively placed on the European Frame work.

Comparisons between programmes are difficult. A rigorous process would either be a deductive one where programme outcomes and labour market functions were compared as well as career expectations or an inductive one where specific skills and competencies were compared. Either of these approaches is outside the scope of this process.

Another difficulty is the structure of vocational awards in other countries. Typically vocational training starts immediately after compulsory education. It will involve an introductory or pre-vocational phase that allows learners to enter the labour market with some basic skills. A more specialized phase follows that produces autonomous specialized workers. This phase is closest to the crafts person in Ireland. Some countries have the Master crafts qualification which indicates a higher level of competency and skill than is available in the Irish system.

Finally the range of vocational programmes elsewhere overlaps with the short cycle technician programmes in Irish Institute of Technology. This is particularly true in the new technologies and in administrative areas. Thus what is classed as a vocational programme elsewhere might be placed in Higher Education in Ireland.

The list below gives an indication of the levels where comparable vocational programmes are placed on a best-fit basis. Caution should be exercised in making definitive judgments on the basis of this list.

United Kingdom – England, Wales and Northern Ireland

Basic craftsperson

- Two year programme post GCSE leading to ,QCF L2[5] – EFQ level 4
- One year additional training to ,QCF L3 EQF level 5

United Kingdom – Scotland

- Four year programme to SVQ L, SCQF 7 EQF level 5

Netherlands

There are four levels of VET[6] with duration lasting from 6 months to 4 years. VET level 3 is the closest to Irish craft person and gives access to an advanced VET qualification at VET 4

- VET Level 3 –Independent practitioner EQF level 3
- VET Level 4 – Middle management EQF level 4

Luxembourg

There are four different certificates and Diplomas available to learners. The CCP[7] is designed for those who might struggle in the more advanced DAP programme and is three years in duration. DAP[8] programmes are typically 3 years in duration but can vary depending on specialty. Progression can be to technician DT[9] or master craftsman qualification.

- Certificate de *Capacite Professionelle* EQF level 2
- Diplome d'Aptitude professionelle EQF level 3
- Diplome de *Technicien* EQF level 4
- Brevet de Technicien Supérieur EFQ level 5
- Master Craftsman Diploma EQF level 5

Italy

Professional operator certificate (Attestato di qualifica di operatore professionale) is a three-year VET programme. The more advanced professional technician's diploma (Diploma professionale di tecnico) is a four-year programme.

- Professional Operators Certificate EQF level 3
- Professional Technician Diploma EQF level 4

Denmark

Vocational training stretches over EQF levels 2 to 5 depending on the length of programme and the specialty. The referencing documentation gives examples of functions of vocational trainees. In this case there is a clear distinction between two types of technician.

Certificate for vocational educational and training

[5] General Certificate of Secondary Education
[6] Vocational Education and Training
[7] Certificate de *capacite professionelle*
[8] Diplôme *d'Aptitude Professionnelle*
[9] Diplome *de technicien*

- Industrial assistant EQF level 3
- Industrial technician EQF level 4
- Film and TV production technician EQF level 5

Germany

The German system of dual vocational training and education produces a very large number of apprentice programmes. (See appendix G)

- Skilled Worker, journeyman (2 years post-compulsory) EFQ level 3/4
- (Facharbeiter, geselle)Technician (additional one/two years) EFQ level 4
- Master Craftsman in Industry (*Industriemeister)* EFQ level 6
- Master Craftsman (Handwerksmeister) EFQ level 6

The reference document gives details of programmes in the dual vocational education and training programme for "Industrial Electrical" trainees. This is a two-year programme and it leads to further programmes in electronics e.g. Electronics Technician for Automation Technology.

The skills described (page 133) are similar to the skills that those Irish Electricians who are trained in an industrial environment would have.

Austria

- Apprenticeship Diploma EFQ level 4
- VET College Diploma EFQ level 5
- Master Craftsman's Diploma EFQ level 6

France

- Certificate d'aptitude professionnelle EFQ level 3
- Brevet Technique des Métiers EFQ level 3
- BAC PRO Bachelaureate Professionel EFQ level 3
- Brevet de Technicien Superieur EFQ level 5
- Maitre Artisan EFQ level 5

Poland

- Journeyman craftsperson EFQ level 3
- Master Craftsperson EFQ level 5

6. Prerequisite Learning

Recommendation

5. Is the prerequisite learning for participation in the programme and any other assumptions relating to the programme's target learners specified?

Recommendation

The group agrees that the generic entry requirements for apprenticeship are not suitable for the Electrical Trades. It recommends that the prerequisite learning for the programme should be raised to reflect the achievements of the majority of the entrants to the programme and to allow for the necessary strengthening of the programme**.**

a) It recommends that the standard entry requirement be a Leaving Certificate or an equivalent NFQ level 4 or 5 major award.

b) However, so that this will not restrict entry from others, such as more mature trainees, it recommends that access from Junior Certificate be open to those with substantial work experience and who have gone through either a suitable access programme agreed by SOLAS at levels 4 or 5 or a RPL process**.**

Supporting Rationale

There are two symmetrical issues with regard to prerequisite learning of programmes within a framework. The first is the specified prerequisite learning should be adequate to allow learners to be successful on the programme. The second is that the introductory elements of a programme make full use of the prior learning of its actual entrants.

The entry requirements for all apprenticeship programmes specify an age requirement and a minimum academic achievement. There is no discrimination between different trades that may require differing levels of academic or vocational preparation. The requirements are

a) Minimum age for the employment of an apprentice is 16 years.

b) The minimum educational requirements are: Grade D in five subjects in the Junior Certificate Examination (NFQ level 3 EFQ level 2) or the successful completion of a pre-apprenticeship programme of four modules including Math's, Science and Technical Drawing at Junior Certificate level.

Applicants for apprenticeships normally exceed these requirements. Data supplied by SOLAS indicates that 71% of new entrants in 2013 had Leaving Certificates (NFQ levels 4 and 5- EQF levels 3 and 4) and 28% had Junior Certificates. Only 1% fell into the 'Other ' category. These figures were not disaggregated by trade. However, anecdotally, it is suggested that the electrical trades probably have a greater number of leaving certificate entrants than the average.

An age analysis of the same cohort shows that only 7% were under 18 years of age, and 40% were over 20 years of age. This suggests that most of those with Junior Certificates did not take up apprenticeships from school but had considerable work experience.

The success rate for entrants in the years 2003 to 2007 with **Leaving Certificates was 73%.** The success rate for entrants in the years 2003 to 2007 with **Junior Certificates was 55%.**

Again figures for the electrical trades were not separately available. A more detailed analysis would be required to ascertain the reasons for the unsuccessful entrants leaving the programmes but broadly it would appear that few entrants arrive with the minimum age and academic requirements. It must be said that there are notable exceptions to this where young apprentices have scored well in World Skills Competitions.

Many of the apprentices complained that the phase 2, the introductory parts of the programme in the Training Centres, was too long or was not challenging enough.

The group is of the opinion that the minimum entry requirements and parts of the curriculum are out of line with the capabilities of the actual entrant groups. The entry requirements should be closer to the achievements of the large majority of the second level school population.

There are three leaving certificates, the standard, the applied and the vocational. The standard leaving certificate is further divided into ordinary and higher levels. It is unclear which of these or which elements of these are at level 5 NFQ and which at level 4 NFQ. Given recent trends in the School leaving age and government policy in this regard the group suggests that a level 4 or 5 (NFQ) qualification be the basic requirement. This will allow all those with a leaving certificate or any type or level to be eligible for an electrical apprenticeship. In addition the achievement of a level 4 or level 5 major award through other means. PLC, RPL etc., will also confer eligibility.

The group recognizes that the early school leavers with work experience see apprenticeships as a pathway for advancement. This route should remain open but an RPL process should be put in place for such learners and it should be managed centrally by SOLAS.

7. Achievement of programme learning outcomes

Recommendation

6. Will the programme enable its target learners to attain the minimum intended programme learning outcomes reliably and efficiently (in terms of learner effort)?

Recommendation

a) This is a critical question that, more properly, should be put following a full validation process. It is particularly important as the claims made for the programme can only be ultimately justified by establishing the effectiveness of the programme in delivering the overall programme learning outcomes

b) In the light of the recommendation at 6 above and 8 below, there is scope to look at the duration and content of the programme.

c) In addition, the panel recommends robust evaluation of the 'on-the-job' phase of the apprenticeship programme in terms of monitoring and supervision.

8. Transfer and progression

Recommendation

7. Are the arrangements for transfer between the apprenticeship programme and other programmes, including other apprenticeship programmes, fair on learners (not unduly restrictive)?

Recommendation

a) That SOLAS allocates either credits to elements of the programme or specifies exit awards at levels 4 or 5 for partial completion of the programme.

b) That SOLAS considers strengthening the Math's, Science and IT elements of the curriculum to facilitate progression on to cognate programmes at NFQ level 7 and to career programmes in the Craft area.

Supporting rationale

The group heard evidence of successful transfers of apprentices to programmes that were at a higher level in the framework. These were in allied areas such as NFQ level 7 programmes in Electrical Science or Electronics. These students were welcomed by the receiving institutions and normally successfully completed their studies. However in the case of Electrical Science programmes they had to complete bridging programmes in Science and Math's before receiving 60 HE credits exemption. Given the changes to the entry requirements recommended above it should be possible to strengthen the Science/Math's Basic Engineering component to allow a more generous progression pathway.

Traditionally apprenticeship programmes have been relatively disconnected from other elements of the educational system. Craft qualifications are seen as terminal qualifications and little attention has been given to linkages to other elements of the system. For example there is in the Irish system at present no advanced craft qualification as in other countries and no subsidiary or exit awards are available.

SOLAS personnel indicated that in their view apprenticeship programmes are of a piece and should not be disaggregated. For this reason credits have not been allocated to phases of the programme and exit awards have not been designed. Those who exit early can get transcripts indicating their achievements.

The group is of the view that the purpose of the NFQ and the EQF is to facilitate free movement of labour within the EU. A large numbers of Irish workers seek work abroad and a very large percentage of apprentices do not complete their programmes. It seems strange then that considerable amounts of learning are not quantified and accredited and intermediate exit points not specified which might allow for the making of an award.

The group heard from craftspeople that they faced increased changes in techniques and in technologies, and from employers that the implementation of these was normally managed by craft persons with middle management roles. The group notes the lack of advanced programmes for craft persons and the recommendation by the Review of Apprenticeship report (DEIS 2013) that such programmes should be developed. These programmes could develop those middle management craft skills that are common on master's craftsmen's programmes elsewhere.

To facilitate these it would be desirable that the apprentice programme more adequately prepared learners for level 7 work. This can be achieved by strengthening the theoretical aspects of the programme, by emphasizing the aspect of reflection and by improving the ability to learn.

Ends

Appendix A: Documents consulted by the panel.

European Communities (2008), The European Qualifications Framework for Lifelong Learning (EFQ)

DOES (2013) Review of Apprenticeship Training in Ireland, December 2013

NARC (2009) Assessment in the FÁS Apprenticeship Programme. Dublin: National Apprenticeship Advisory Committee.

NQAI (2008) National Qualifications Authority of Ireland (2008) Background paper on the development, implementation and impact of the National Framework of Qualifications and related policies on access, transfer and progression. Dublin

QQI (2014a) Common Award System, Restatement of Policy and Guidelines 2014 version 4.0

SOLAS (2014a) Awards Standards for Apprenticeship Programmes, Terms of Reference for External Review groups

SOLAS (2014b) Electrical Curriculum, Introduction to Phases 1/3/5/7 On-The-Job

SOLAS (2014c) Electrical Curriculum, Introduction to Phases 2, 4, 6, Off- The- Job

SOLAS (2014d) Electrical: Curriculum Review Compound and Component Standards,

Reports referencing National and Community Frameworks of Qualifications with the European Qualifications Framework from the countries and communities **(Ireland, United Kingdom, France, Germany, Belgium (Flemish community), Netherlands**), available at: http://ec.europa.eu/eqf/documentation_en.htm

Published by the various national Authorities and submitted to the European Community.

Appendix B External Review Group Terms of Reference

SOLAS has prepared in agreement with QQI the following set of documents reporting on the revision of the curriculum for apprentice programmes in [name of the craft].

- Standards
- Curriculum
- Sample Assessment
- NARC Report
- Background to Apprenticeship – to include introductory note on apprenticeship review

The information provided by these documents addresses the following topics (among others):

1. The minimum intended apprenticeship programme learning outcomes in the Craft.
2. Evidence that the minimum intended craft apprenticeship programme learning outcomes (i.e. overall outcomes) are to be assessed validly reliably, fairly and consistently for the purpose of ensuring that award candidates meet the required standard.
3. A detailed specification of the craft apprenticeship programme of education and training that explains how it enables the standard in (1) to be achieved by all who successfully complete the programme.
4. The NAAC Review Group's report for the craft, including conclusions and recommendations.
5. The External Review Group may request additional information it considers necessary for the performance of its functions.
6. The NARC Report.

The review panel is required to meet with participating training providers, participating employers, learners who are involved in the current Craft apprenticeship programme, SOLAS and QQI (on qualifications and quality assurance matters).

Considering the documents provided including the NFQ award-type descriptors and other information gathered, the External Review Panel is required to report on the following:

From the Craft perspective, are the minimum intended Craft apprenticeship programme learning outcomes outlined in the documents fit for purpose?

a) What is the level on the Irish Framework of the minimum apprenticeship programme learning outcomes for the Craft

b) What is the level on the European Qualifications Framework (EQF) of the minimum apprenticeship programme learning outcomes for the Craft

c) How does the proposed Craft award standard compare with the standards of qualifications from a selection of other countries (e.g. from Europe, America, Asia), which fully or partially overlap with it?

d) At what EQF levels are similar Craft Awards in a selection of other countries (e.g. from Europe, America, Asia)

Considering the programme the External Review Panel is requested to provide observations on the following:

a) Is the prerequisite learning for participation in the programme and any other assumptions relating to the programme's target learners specified?

b) Will the programme enable its target learners to attain the minimum intended programme learning outcomes reliably and efficiently (in terms of learner effort)?

c) Are the arrangements for transfer between the apprenticeship programme and other programmes including other apprenticeship programmes fair on learners (not unduly restrictive)?

The members of the External Review Group should base their responses on objective evidence. Members should declare any relevant interests and ensure that their membership of and involvement in the standards Review Group does not give rise to any conflict of interest—if a member is in any doubt about this he or she should consult QQI.

Appendix C Membership of the External Review Group

Chairman – Qualifications Framework Expert	Dr Anne Walsh – Academic Co-ordinator, Adult Training and Education Studies,
Qualifications Framework Specialist:	Trevor Clark, Former Head NQF Wales, International Qualifications Framework expert.
Education & Training Specialist and Qualifications Framework Specialist	Jos Noesen - Pédagogue, Expert for the Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse
Secretary:	Stephan McManus, Former Registrar Dundalk Institute of Technology
Technical Experts Ireland	Michael Hourihan - Head of Department Cork institute of Technology
Technical Experts Ireland	Arthur Hall – Assistant General Secretary TEEU
Technical Experts Overseas	Darcy Tangedal Presiding Officer, Alberta Provincial Apprenticeship Committee, Alberta Canada
Technical Experts Overseas	Martin Wittau Germany
Employer Representative	Paddy Grundy – Mercury Engineering
Learner Representative	Gerard Galligan- Craftsperson and Advanced Learner

Appendix D Persons met by the panel in the course of the review

SOLAS

Chris Feeney,	Apprenticeship Manager
Martin McMahon	Assistant Manager

ESB in Finglas

Patrick Deasy	Technical Services Manager
Eamon Horan	Apprentice Phase 1
Andrew Morrissey	Apprentice Phase 7
Graham Reynolds	Apprentice Phase 7(

Baldoyle Training Centre

Patricia Cassells	Training Centre Manager
Aiden Owens	Assistant Manager Training & Services to Business
Michael Brennan	Senior Service to Business Advisor
Neil Donnelly,	Phase 2 Apprentice
Adam Jordan	Phase 2 Apprentice
Bernard Egan	Phase 2 Instructor

Industry

Mark Buckley	M&B Electric

Dublin Institute of Technology

Keith Sutherland	Assistant Head of Department Electrical Services Engineering

Canadian Industry

Darcy Tangedal	Statoil Canada and Presiding Officer, Alberta Provincial Apprenticeship Committee

Appendix E Schedule Electrical External Review Group

Wednesday April 30th – Friday May 2nd

Day 1

10:00am:	Panel Group discussion gathering feedback on material sent
11:30am:	Clarification Q & A with SOLAS Apprenticeship Managers/Team Leaders/Directors
12:30pm:	Lunch Break
2:00pm:	Employer meeting – ESB in Finglas.
3:30pm:	Baldoyle TC: Meet with Apprentices, Phase 2 Instructors, Centre Manager, Services to Business Manager
5.00pm:	Panel Re-group
5:30pm	Day 1 ends

Day 2

9:15am:	Panel meeting
10:00am:	Electrical Employer 2
11.30am:	Institute of Technology Lecturer Q & A Phase 4 & 6 input
12:30pm:	Lunch
2pm:	Input from Canadian Experts re International frameworks
3.30pm:	Panel reconvenes -Standard issue re language level and other issues arising

Day 3

9:30am:	Panel convenes to finalise Report submissions
11.00am:	Feedback (verbal) to SOLAS Apprenticeship Services

Appendix F Programme learning outcomes

Demonstrate specialist knowledge of a broad range of the theoretical, conceptual and factual components and characteristics of the Electrical Craft.	Knowledge	K1
Demonstrate specialized knowledge and understanding of the principles, practices, tools and equipment necessary for the installation, maintenance, repair, testing and verification of Electrical systems.	Knowledge	K2
Demonstrate a comprehensive range of specialized electrical skills using equipment, test instruments, hand and power tools	Know How and Skill	KS1
Exercise proficiency in the planning, design and installation of all electrical services	Know How and Skill	KS2
Apply theoretical and technical know-how to install, inspect, diagnose, maintain, repair, test and verify electrical and electromechanical systems within the workplace.	Know How and Skill	KS3
Demonstrate an ability to comply with statutory regulations governing the safety of personnel, plant, premises, and the environment.	Competence	C1
Exercise substantial independence in the workplace, taking responsibility for Electrical duties performed by themselves and others, ensuring safe work practices and interacting with a variety of individuals and groups to include customers, colleagues and suppliers.	Competence	C2
Take initiative to identify and address self-development and training needs in both an employment and structured training environments	Competence	C3
Demonstrate an awareness of the function and role of the electrician in society to include an awareness of energy conservation and other relevant ecological concerns	Competence	C4