



## CONTEXTUAL INFORMATION

This Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO/CEPES.

The purpose of the supplement is to provide sufficient independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

*Swansea University's Diploma Supplement carries the title Higher Education Achievement Report (Diploma Supplement), conforming to both UK practices and those of the bodies listed above. It is produced in a digital format. Only HEARs accessed via gradintel.com can be considered valid and verified.*

## 1. INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

|   |               |
|---|---------------|
| 1.1 Family name                           | Penny         |
| 1.2 Given name(s)                         | William Peter |
| 1.3 Date of birth (day/month/year)        | 07/07/1981    |
| 1.4 Student identification number or code | 0600331       |
| HESA identification number                | 0590006003311 |

HUSID (HESA Unique Student Identifier) is the unique national identifying number for students registered at a UK university. It is defined by HESA, the UK's Higher Education Statistics Agency.

## 2. INFORMATION IDENTIFYING THE QUALIFICATION

|   |   |
|---|---|
| 2.1 Name of qualification and (if applicable) title conferred   | Doctor of Philosophy  |
| 2.2 Main field(s) of study for the qualification  | Geographical Techniques   |
| 2.3 Name and status of awarding institution   | Swansea University - is a recognised body for awarding's degrees. The power to award degrees is regulated by law in the UK. |
| 2.4 Name and status of institution (if different from 2.3) administering studies (in original language) | As awarding institution   |
| 2.5 Language(s) of instruction/examination  | English   |



### 3. INFORMATION ON THE LEVEL OF THE QUALIFICATION

- 3.1 Level of qualification** Doctorate Degree mainly by research - FHEQ 8
- 3.2 Official length of programme** 3 years or PT equivalent
- 3.3 Access requirement(s)** BSc, MSc

### 4. INFORMATION ON THE CONTENTS AND RESULTS GAINED

#### 4.1 Mode of study

##### Enrolment History and Mode of Study by Academic Year

|        |           |   |
|--------|-----------|---|
| 2011/2 | Full time | Research undertaken at Swansea University |
| 2012/3 | Full time | Research undertaken at Swansea University |
| 2013/4 | Full time | Research undertaken at Swansea University |
| 2014/5 | Full time | Writing up period                         |

#### 4.2 Programme requirements

The degree of Doctor of Philosophy is awarded to candidates who;

- Have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field;
- Have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity;
- Have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which would merit national or international refereed publication;
- Are capable of critical analysis, evaluation and synthesis of new and complex ideas;
- Can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise;
- Can be expected to be able to promote within academic and professional contexts, intellectual, technological, social or cultural advancements.

##### Key techniques

- Primarily laboratory based. Specific training in a range of sedimentological and geochemical analytical techniques e.g. electron microprobe, Laser Ablation ICP-MS. Training in CT scanning and its application in geology
- Critical quantitative and interpretive analysis of a range of scientific and geological data
- Using a variety of software packages i.e. Grapher, Adobe Illustrator to aid analysis and illustration of work

#### 4.3 Programme details, and the individual grades/marks/credits obtained

|                                      |                                 |
|--------------------------------------|---------------------------------|
| <b>Programme start date</b>          | 18/09/2011                      |
| <b>Programme end date</b>            | 16/06/2014                      |
| <b>Status of research candidate:</b> | Staff member/Research assistant |



#### 4.3.1 Thesis title:

Reconstructing rapid climatic events in the North Atlantic using tephrochronology

#### 4.3.2 Summary of research thesis:

Humans always have inhabited two worlds: one of nature and another of human society and technology. Environmental science is the systematic study of the intersection of these worlds. An interdisciplinary field, environmental science draws from many areas of inquiry to help us understand the worlds in which we live and our proper role in them.

The most amazing features of our planet may be the self-sustaining ecological systems that make life possible and the rich diversity of life that is part of, and dependent upon, those ecological processes. In spite of the many problems that beset us, the earth is wonderfully bountiful and beautiful.

Concerns about pollution and land degradation date back at least 2,500 years. Clearly, we have pragmatic interests in conserving resources and preserving a habitable environment. There also are ethical reasons to believe that nature has a right to continue to exist for its own sake. Unprecedented population growth, food shortages, scarce energy supplies, air and water pollution, and destruction of habitats and biological resources are all serious threats to our environment and our way of life.

#### 4.3.3 Supervisory team:

Supervisor - Professor Brian Stilton

Assistant Supervisor - Professor Joan Carmichael

Examiner - Professor Mark Deakin

#### 4.4 Nature of the programme

Doctoral degree, mainly by research.

#### 4.5 Grading scheme and, if available, grade distribution guidance

Not applicable

#### 4.6 Overall classification of the qualification (in original language)

Qualification is not classified

## 5. RESEARCH ACHIEVEMENT PROFILE

#### 5.1 Publications:

Gibbs, A., Davies, S., Abbott, P., Rasmussen, T. & Palmer, A. (2014). Optimising the use of marine tephrochronology in the North Atlantic: a detailed investigation of the Faroe Marine Ash Zones II, III and IV. *Quaternary Science Reviews*

Gibbs, A., Coleman, M., Davies, S., Abbott, P., Johnston, R., Rasmussen, T. & Palmer, A. (2014). Examining the application of X-ray microtomography within marine tephrochronology. In preparation.

#### 5.2 Conference presentations:

Poster presentations

- Summer School on dating methods. Potsdam, Germany (specifically for ECR) 09/12
- Quaternary Research Association (QRA) excursion to Iceland 09/12
- Quaternary Research Association Annual Discussion Meeting, Newcastle, UK 01/13
- Integrating Ice, Marine and Terrestrial records (INTIMATE) EU COST Action, Annual meeting, Blair Atholl, UK 04/13



- Quaternary Research Association, Annual Discussion Meeting, 50th anniversary, Royal Geographical Society, London 01/14
- Integrating Ice, Marine and Terrestrial records (INTIMATE) Tephra workshop, Pisa, Italy: 04/14

#### Oral presentations

- Quaternary Research Association, Southampton, post-graduate symposium 09/13
- International Union for Quaternary Science, ECR conference, Wollongong, Australia: 12/13
- Integrating Ice, Marine and Terrestrial records (INTIMATE) EU COST Action Final workshop, Zaragoza, Spain 06/14

### 5.3 Supplementary experiences (for example -Industry/Mobility/fieldwork/lab work/Summer schools):

#### External laboratory work

- Tromso University: Norway 5 days 2012
- Cardiff University: UK 1 day 2012
- Copenhagen Centre for Ice and Climate, Denmark: 1 week 2012
- Southampton Oceanography Centre, UK: 2 days 2013
- Edinburgh University, 2 weeks: 2013/2014
- Royal Holloway, UK: 1 week 2013

#### Summer School

- Potsdam/Gliwice, Germany/Poland: INTIMATE summer school on dating methods

### 5.4 Research grants and awards:

- 1/10/2011 - 1/03/2014 ERC (European Research Council) Fully-funded PhD stipend via TRACE project
- 08/2012 INTIMATE EU COST Action Summer School on Dating Methods funding: £750
- 1/03/2013 - 14/03/2013 Quaternary Research Association Young Researchers Award £800 for laboratory analysis
- 4/2014 EU COST Action funding to attend INTIMATE final workshop at Zaragosa (£350)

### 5.5 Engagement with the academy:

No submissions

## 6. PERSONAL AND PROFESSIONAL DEVELOPMENT

### 6.1 Professional Development & Training; Candidate's Achievements

This section contains evidence of how candidates have acquired and demonstrated knowledge, skills and personal competencies. All claims will be verified by the University, in accordance with agreed QA mechanisms and procedures. Such achievements could be organised with reference to the four domains described in the Vitae Researcher Development Framework i.e. knowledge and intellectual abilities; personal effectiveness; research governance and administration; and engagement, influence and impact. If it was wished to structure material and thinking even more precisely the RDF sub-domains may serve for this purpose see <https://www.vitae.ac.uk/vitae-publications/rdf-related/introducing-the-vitae-researcher-development-framework-rdf-to-employers-2011.pdf>.



### 6.1.1 Training and Skills

Awarded the Research Skills Award by the Swansea University's training department and validated by the vitae UK (transcript available)

### 6.1.2 Placements (Industrial and Overseas)

This candidate's research and experiences have been informed by placements overseas and within research institutions in the UK. These are listed in section 5.3 above.

### 6.1.3 Teaching Experience

Employed at Swansea University as a Tutor on a 8 hr a week contract. Conducted Laboratory Demonstrations to undergraduate students

Led an annual undergraduate Field Trip to the Gower Peninsula

### 6.1.4 Teaching or other qualifications

Teaching Certificate of Swansea University April 2014

### 6.1.5 Other achievements (Prizes and Awards)

Swansea University's Ambassador Award (In recognition of the promotion of Welsh-medium provision)

### 6.2 Further information sources

Further information can be found at [www.swansea.ac.uk/postgraduate-hear](http://www.swansea.ac.uk/postgraduate-hear)

## 7. CERTIFICATION OF THE HEAR (DIPLOMA SUPPLEMENT)

### 7.1 Date

19/07/2015

### 7.2 Signature

Huw Morris

### 7.3 Capacity

Academic Registrar

### 7.4 Official stamp or seal





## 8. INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

### Description of Higher Education in England, Wales and Northern Ireland

In England, Wales and Northern Ireland<sup>1</sup>, higher education institutions are independent, self-governing bodies active in teaching, research and scholarship. They are established by Royal Charter or legislation and most are part-funded by government. Higher education (HE) is provided by many different types of institution. In addition to universities and university colleges, whose charters and statutes are made through the Privy Council which advises the Queen on the granting of Royal Charters and incorporation of universities, there are a number of publicly-designated and autonomous institutions within the higher education sector. Publicly funded higher education provision is available in some colleges of further education by the authority of another duly empowered institution. Teaching to prepare students for the award of higher education qualifications can be conducted in any higher education institution and in some further education colleges.

#### Degree awarding powers and the title 'university'

All universities and many higher education colleges have the legal power to develop their own courses and award their own degrees, as well as determine the conditions on which they are awarded. Some HE colleges and specialist institutions without these powers offer programmes, with varying extents of devolved authority, leading to the degrees of an institution which does have them. All universities in existence before 2005 have the power to award degrees on the basis of completion of taught courses and the power to award research degrees. From 2005, institutions in England and Wales that award only taught degrees ('first' and 'second cycle') and which meet certain numerical criteria, may also be permitted to use the title 'university'. Higher education institutions that award only taught degrees but which do not meet the numerical criteria may apply to use the title 'university college', although not all choose to do so. All of these institutions are subject to the same regulatory quality assurance and funding requirements as universities; and all institutions decide for themselves which students to admit and which staff to appoint. Degrees and other higher education qualifications are legally owned by the awarding institution, not by the state. The names of institutions with their own degree awarding powers ("Recognised Bodies") are available for download at: <http://www.bis.gov.uk/policies/higher-education/recognised-uk-degrees/recognised-bodies>

Higher education institutions, further education colleges and other organisations able to offer courses leading to a degree of a Recognised Body are listed by the English, Welsh and Northern Irish authorities, and are known as "Listed Bodies". View the list at: <http://www.bis.gov.uk/policies/higher-education/recognised-uk-degrees/listed-bodies>

#### Qualifications

The types of qualifications awarded by higher education institutions at sub-degree and undergraduate (first cycle) and postgraduate level (second and third cycles) are described in the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (FHEQ). This also includes qualification descriptors that were developed with the HE sector by the Quality Assurance Agency for Higher Education (QAA - established in 1997 as an independent UK-wide body to monitor the standard of higher education provision - [www.qaa.ac.uk](http://www.qaa.ac.uk)). The FHEQ was self-certified as compatible with the Framework for Qualifications of the European Higher Education Area, the qualifications framework adopted as part of the Bologna Process, in February 2009. Foundation degrees, designed to create intermediate awards strongly oriented towards specific employment opportunities, were introduced in 2001. In terms of the European Higher Education Area they are "short cycle" qualifications within the first cycle. The FHEQ is one component of the Credit and Qualifications Framework for Wales (CQFW). The Qualifications and Curriculum Authority (QCA), the Department for Children, Education, Lifelong Learning and Skills, Wales (DCELLS) and the Council for Curriculum Examination and Assessment, Northern Ireland (CCEA) have established the Qualifications and Credit Framework (to replace, in time, the National Qualifications Framework (NQF)). These authorities regulate

a number of professional, statutory and other awarding bodies which control VET and general qualifications at all levels. The QCF is also incorporated into the CQFW. There is a close association between the levels of the FHEQ and the NQF (as shown overleaf), and other frameworks of the UK and Ireland (see 'Qualifications can cross Boundaries' <http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/qualifications-can-cross-boundaries.aspx>)

#### Quality Assurance

Academic standards are established and maintained by higher education institutions themselves using an extensive and sophisticated range of shared quality assurance approaches and structures. Standards and quality in institutions are underpinned by the universal use of external examiners, a standard set of indicators and other reports, by the activities of the QAA, and in professional areas by relevant professional, statutory and regulatory bodies. This ensures that institutions meet national expectations described in the FHEQ: subject benchmark statements, the Code of Practice and programme specifications. QAA conducts peer-review based audits and reviews of higher education institutions with the opportunity for subject-based review as the need arises. The accuracy and adequacy of quality-related information published by the higher education institutions is also reviewed. QAA also reviews publicly funded higher education provision in further education colleges.

#### Credit System

Most higher education institutions in England and Northern Ireland belong to one of several credit consortia and some operate local credit accumulation and transfer systems for students moving between programmes and/or institutions. A framework of national guidelines, the Higher Education Credit Framework for England, was launched in 2008. Credit is also an integral part of the CQFW and the QCF. It may be possible for credit awarded in one framework to be recognised by education providers whose qualifications sit within a different framework. HE credit systems in use in England, Wales and Northern Ireland are compatible with the European Credit Transfer System (ECTS) for accumulation and transfers within the European Higher Education Area, and are used to recognise learning gained by students in institutions elsewhere in Europe.

#### Admissions

The most common qualification for entry to higher education is the General Certificate of Education at 'Advanced' (A) level. Other appropriate NQF level 3 qualifications and the kite-marked Access to HE Diploma may also provide entry to HE. Level 3 qualifications in the CQFW, including the Welsh Baccalaureate, also provide entry, as do Scottish Highers, Advanced Highers or qualifications at the same levels of the Scottish Credit and Qualifications Framework. Part-time and mature students may enter HE with these qualifications or alternatives with evidenced equivalent prior formal and/or experiential learning. Institutions will admit students whom they believe to have the potential to complete their programmes successfully.

<sup>1</sup> The UK has a system of devolved government, including for higher education, to Scotland, to Wales and to Northern Ireland. This description is approved by the High Level Policy Forum which includes representatives of the Department for Business, Innovation and Skills, the Scottish Government, the Welsh Assembly Government, the Higher Education Funding Councils for England, Scotland and Wales, the Quality Assurance Agency (QAA), Universities UK (UUK), GuildHE and the National Recognition Information Centre for the UK (UK NARIC)

# Diagram of higher education qualification levels in England, Wales and Northern Ireland

| Framework for Higher Education Qualifications (FHEQ) <sup>5</sup>   |       | FQ-<br>EHEA<br>cycle                    | Credit                                     |                        | Progression for selection of students<br>(FHEQ levels) | National Qualifications Framework for England,<br>Wales and Northern Ireland <sup>6</sup>                                |  |
|---|-------|---|--|------------------------|--|--|--|
| Typical Qualifications  | Level | Typical UK<br>credit rated <sup>1</sup> | Typical ECTS<br>credit ranges <sup>2</sup> | Typical Qualifications |  | Level  |  |
| Doctoral Degrees (eg PhD, DPhil, EdD)   | 8     | Typically not credit rated <sup>1</sup> | Typically not credit rated                 |                        | 8  | Vocational Qualifications Level 8  |  |
| Masters Degrees<br>Integrated Masters Degrees<br>Postgraduate Diplomas<br>Postgraduate Certificate of Education<br>Postgraduate Certificates        | 7     | 180                                     | 60-120 <sup>2</sup>                        |                        | 7  | Fellowships<br>NVQ Level 5<br>Vocational Qualifications Level 7  |  |
| Bachelors Degrees with Honours<br>Bachelors Degrees<br>Professional Graduate Certificate in Education<br>Graduate Diplomas<br>Graduate Certificates | 6     | 360                                     | 180-240                                    |                        | 6  | Vocational Qualifications Level 6  |  |
| Foundation Degrees<br>Diplomas of Higher Education<br>Higher National Diplomas  | 5     | 240                                     | 120  |                        | 5  | NVQ Level 4<br>Higher National Diplomas (HND)<br>Higher National Certificates (HNC)<br>Vocational Qualifications Level 5 |  |
| Higher National Certificates<br>Certificates of Higher Education  | 4     | 120                                     |  |                        | 4  | Vocational Qualifications Level 4  |  |
| Entry to HE via equivalent experiential or prior learning   |       |   |  |                        |  | 3  | National Vocational Qualification (NVQ)<br>Level 3<br>Vocational Qualifications Level 3<br>GCE AS and A Level<br>Advanced Diploma<br>Welsh Baccalaureate Advanced <sup>4</sup> |

<sup>5</sup>For students with the necessary prerequisites, entry to each FHEQ level is possible from the next lower level in the NQF or Framework for Higher Education Qualifications.  
<sup>6</sup>These levels will also apply to the Qualifications and Credit Framework (QCF). The QCF will eventually replace the National Qualifications Framework (NQF)

<sup>1</sup>PhD and DPhil qualifications are typically not credit-rated. Newer doctoral degrees, such as the Professional Doctorate, are sometimes credit rated, typically 540 UK credits.  
<sup>2</sup>A range of 90-120 ECTS is typical of most awards  
<sup>3</sup>1 ECTS credit is typically worth 2 UK credits  
<sup>4</sup>The Welsh Baccalaureate Qualification is part of the Credit and Qualifications Framework for Wales (CQFW)



