

**Uncovering Wales Studies**  
**A Report on REF2014 Impact Case Studies from Welsh HEIs**



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## Executive Summary

1. This study examined all 273 Impact Case Studies that were submitted by Welsh HEIs to REF2014 in order to assess the extent to which 'Wales-facing' research material underpinned each Impact Case Study.
2. 75 Impact Case Studies (27.5%) were identified which built on underpinning research that displayed at least some element of Wales-facing material.
3. Impact Case Studies which built on research that displayed at least some Wales-facing element were submitted across all REF2014 Welsh HEIs. However, a particular concentration was found in 5 Welsh HEIs: Aberystwyth University, Bangor University, Cardiff University, University of South Wales, and Swansea University.
4. REF2014 Impact Case Studies displaying Wales-facing research were present in all 4 main REF2014 subject Panels, and in 21 of the 36 REF2014 Units of Assessment – indicating that Wales Studies should be understood as a broad category of enquiry, covering multiple and highly diverse research areas and disciplines.
5. REF2014 Impact Case Studies displaying Wales-facing research were not necessarily distributed evenly across the Welsh HE sector for individual research areas.
6. There were notable Wales-facing research strengths in Impact Case Studies for: Modern Languages and Linguistics (which included the Welsh language); Business and Management Studies; History; Music, Drama, Dance and Performing Arts; Law; and English Language and Literature.
7. REF2014 Panel D (substantially arts and humanities) displayed the highest concentration of Wales-facing work by percentage of Impact Case Study submissions.
8. In terms of Units of Assessments to which Welsh HEIs actually made submissions, REF2014 Panel C (substantially social sciences) returned the lowest number of Units of Assessment that displayed no Wales-facing underpinning research.
9. Excluding the Unit of Assessment for Allied Health Professions, Dentistry, Nursing and Pharmacy, Units of Assessment in REF2014 Panels A (Life sciences) and B (Physical sciences, mathematical and computer sciences, engineering) typically returned low levels of Wales-facing underpinning research, both in numeric and percentage-of-submissions terms.
10. Impact submissions that included Wales-facing research returned a lower percentage at the top (4\*) grading category than REF2014 UK-wide averages.
11. Impact submissions that included Wales-facing research returned a significantly lower percentage at the top (4\*) grading category than REF2014 Wales-wide averages.
12. The primary challenge for developing and safeguarding Wales Studies will be to foster the notion that it is a broad-based area of enquiry, covering multiple disciplines.

## A. Background

In October 2016, the Learned Society of Wales (LSW) formally commissioned this study in an attempt to capture the range and volume of ‘Wales-facing research’ from Welsh HEIs within REF2014 Impact Case Studies.

All published REF2014 Impact Case Studies are available from <http://impact.ref.ac.uk/CaseStudies/>.

Assessment criteria for Impact Case Studies, as used by REF2014 panels, are available at <http://www.ref.ac.uk/panels/assessmentcriteriaandleveldefinitions/>. The two key ‘criteria for assessing impacts were “reach” and “significance”’.

A November 2012 attempt by HEFCW to survey the current position of ‘the study of Welsh history and literature, culture, society and politics in both languages’ had invited Welsh HEIs to identify specific modules which featured Welsh Studies content and also to provide a narrative outlining ‘the place which Welsh Studies has in the curriculum of various disciplines and subject areas’. FEIs ‘with directly-funded higher education provision’ were invited to provide similar information.<sup>1</sup> However, the varying interpretations of the definition and scope provided produced somewhat problematic data, as a 2014 HEFCW Circular subsequently made clear:

one institution report[ed] that 18.5% of their module portfolio included a Welsh Studies component, where as another institution reported only 0.5% included this component. This makes the analysis of the data much more complex as the guidance given by HEFCW at this early stage was inevitably fairly open and it is therefore sometimes unclear on what rationale institutions based their return of data.<sup>2</sup>

Furthermore, as the same Circular also indicated, ‘upon discussion with the sector it [was] apparent that due to the broad nature of the concept and different interpretations [placed on it] it would be a highly bureaucratic, time consuming and complex task for institutions’ to undertake a second data collection exercise. **Therefore, for the purposes of this study, REF2014 Impact Case Studies were identified by the LSW as an appropriate, robust, and accessible dataset to map some of the recent activity in the field of what is now called ‘Wales Studies’.**

## B. Defining ‘Wales-Facing Research’

The key concept underlying this research project was the notion of what constitutes ‘Wales-facing research’. For each Impact Case Study, this involved asking whether the underpinning research, as described in the Case Study documentation, was directly concerned with matters such as (and to give just some examples amongst many possibilities): Welsh cultural history; Welsh life in the present; the development of creative writing practice in Wales; Welsh land and environment; and administrative systems operating within Wales. It was this notion of ‘Wales-facing research’ that provided the operational definition of ‘Wales Studies’ for the purposes of the project, rather than

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<sup>1</sup> See HEFCW, ‘Cylchlythyr | Circular: Welsh Studies’, 12 November 2012, for details of the survey exercise: [http://www.hefcw.ac.uk/documents/publications/circulars/circulars\\_2012/W12%2035HE%20Welsh%20Studies.pdf](http://www.hefcw.ac.uk/documents/publications/circulars/circulars_2012/W12%2035HE%20Welsh%20Studies.pdf).

<sup>2</sup> See HEFCW, ‘Cylchlythyr | Circular’, 18 July 2014, for the outcomes of the 2012/13 survey: [http://www.hefcw.ac.uk/documents/publications/circulars/circulars\\_2014/W14%2029HE%20Welsh%20Studies.pdf](http://www.hefcw.ac.uk/documents/publications/circulars/circulars_2014/W14%2029HE%20Welsh%20Studies.pdf).

the more restrictive concept of whether any given research actually drew conclusions about either Wales itself or specific Welsh issues.

This distinction was important when addressing Impact Case Studies from the sciences, where research could be specifically Wales-facing but final conclusions might address more general principles. An example of this was CS3141, Cardiff University, 'Delivering UK policy for river conservation and management', Unit of Assessment (UOA) Biological Sciences. Regarding its underpinning research, this Impact Case Study states:

Throughout the REF period, Ormerod's methods were used to carry out long-term observations from the Llyn Brianne Stream Observatory to deliver the world's first data revealing climate-change effects on upland river ecosystems. (p. 1)

In terms of applying the operational definition, then, even though the conclusions of the research in CS3141 were framed in generalised terms ('climate-change effects on upland river ecosystems'), the specific focus on the Llyn Brianne catchment area constituted 'Wales-facing research' – as is made clear in the paper cited as CS3141 research reference 3.2 (Ormerod, S. J., Durance, I. (2009), 'Restoration and recovery from acidification in upland Welsh streams over 25 years', *Journal of Applied Ecology*, 46, 164-74, <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2664.2008.01587.x/full>).

By contrast, research that can be described as 'Wales-based by happenstance' was not defined in this report as Wales-facing. Thus, for example, using clinical-trial cohorts from Wales does not mean that the research involved is necessarily Wales-facing. (See, for example, CS2727, Cardiff University, 'Cardiff-led research underpins new UK and International clinical treatment guidelines for the management of acquired haemophilia A', UOA Clinical Medicine and CS2933, Cardiff University, 'The Dermatology Life Quality Index: the leading patient-orientated dermatology outcome measure used worldwide', UOA Clinical Medicine.)

The concept of 'Wales-facing research' does not mean that all the underpinning research for any given Impact Case Study had to be Wales-facing to be classified as Wales Studies relevant. There were clearly Impact Case Studies where only limited elements of underpinning research were Wales-facing. However, where underpinning research was judged to be Wales-facing – even if only in small part – then an Impact Case Study was defined as having Wales Studies relevance.

## C. Scope

According to [impact.ref.ac.uk/CaseStudies/](http://impact.ref.ac.uk/CaseStudies/) there are **272** downloadable Impact Case Studies from Welsh HEIs. These are distributed amongst individual Welsh HEIs as follows:

- Aberystwyth University: 55
- Bangor University: 44
- Cardiff University: 90
- Cardiff Metropolitan University: 11
- Glyndŵr University: 8
- University of South Wales: 26

- Swansea University: 54
- University of Wales: 2
- University of Wales Trinity Saint David: 12

These figures – which total 302 submissions – include joint submissions, which are thus counted more than once. (Joint submissions were individual Impact Case Studies that resulted from inter-HEI collaborative work, and that were thus submitted by 2 or more HEIs in combination.) This does not alter the headline figure of 272 individual downloadable Impact Case Studies from Welsh HEIs.

Following the link provided at <http://impact.ref.ac.uk/CaseStudies/> to Impact Case Studies submitted by the University of South Wales only provides for 22 Impact Case Studies in total, rather than the 26 specified. 1 further University of South Wales Impact Case Study was found that was not retrieved via this link ('Safety in numbers: towards reducing global medication dosage calculation problem-solving (MDC-PS) error through the design and application of virtual authentic learning and assessment environments', from the University of South Wales's submission for the 'Allied Health Professions, Dentistry, Nursing and Pharmacy' REF2014 UOA). The further missing 3 Impact Case Studies for the University of South Wales were all listed under 'Wales Institute for Research in Art & Design (Cardiff Met, USW and UWTSD)' as the submitting institution. These latter Impact Case Studies had been counted in the University of South Wales headline total but were not universally retrievable as University of South Wales Impact Case Studies from the REF2014 results site (<http://results.ref.ac.uk/>).

The 1 missing University of South Wales Impact Case Study initially mentioned above was excluded from the overall download count of 272 Impact Case Studies from Welsh HEIs. When this is added to the total, the overall count of individual Impact Case Studies from Welsh HEIs rises to **273**.

## D. Data Creation and Analytical Approach

The primary dataset for Impact Case Studies submitted by Welsh HEIs was downloaded directly from the REF2014 Impact database. For each Impact Case Study, this dataset included fields for: 'Case Study ID'; 'Institution'; 'Unit of Assessment'; and 'Title'.

For each Impact Case Study, and on the basis set out in Section B above, a qualitative assessment was made as to whether the underpinning research was Wales-facing or not ('Y' or 'N'). There was 1 Impact Case Study for which a clear Y/N determination was ultimately not possible. This Case Study was defined as 'Maybe', and appears as such in Table 1 below. This Case Study was not counted as a Wales-facing positive result for the purposes of Tables 2–4.

In order to create the data for Section I below, each Impact Case Study was, further, associated with the score for the REF2014 impact submission of which it was a constituent part. (Scores for individual Case Studies were not made available in REF2014 results; rather, impact scores given were for the combined Impact Case Studies and Impact Template for each submitting UOA from each HEI.)

## E. Results by REF2014 UOA and Panel

The following results show the extent of Wales-facing research for Impact Case Studies submitted for each REF2014 UOA and Panel. Please note: (a) that Welsh HEIs did not make REF2014 submissions to all UOAs, so there are areas in Table 1 which are thus categorised N/A; and (b) all percentages are offered to one decimal place.

**Table 1: Results by UOA, from Welsh HEIs**

Panel A	Submissions from Welsh HEIs	Wales Studies Relevant	% Wales Studies Relevant	Additional 'Maybe' Count
1. Clinical Medicine	7	0	0.0%	0
2. Public Health, Health Services and Primary Care	3	0	0.0%	0
3. Allied Health Professions, Dentistry, Nursing and Pharmacy	21	4	19.0%	0
4. Psychology, Psychiatry and Neuroscience	17	0	0.0%	0
5. Biological Sciences	5	1	20.0%	0
6. Agriculture, Veterinary and Food Science	10	1	10.0%	0
Panel B	Submissions from Welsh HEIs	Wales Studies Relevant	% Wales Studies Relevant	Additional 'Maybe' Count
7. Earth Systems and Environmental Sciences	9	1	11.1%	0
8. Chemistry	4	0	0.0%	0
9. Physics	8	0	0.0%	0
10. Mathematical Sciences	9	2	22.2%	0
11. Computer Science and Informatics	14	1	7.1%	0
12. Aeronautical, Mechanical, Chemical and Manufacturing Engineering	0	0	N/A	N/A
13. Electrical and Electronic Engineering, Metallurgy and Materials	4	0	0.0%	0
14. Civil and Construction Engineering	2	1	50.0%	0
15. General Engineering	16	0	0.0%	0



<b>Panel C</b>	<b>Submissions from Welsh HEIs</b>	<b>Wales Studies Relevant</b>	<b>% Wales Studies Relevant</b>	<b>Additional 'Maybe' Count</b>
16. Architecture, Built Environment and Planning	6	2	33.3%	0
17. Geography, Environmental Studies and Archaeology	13	5	38.5%	0
18. Economics and Econometrics	0	0	N/A	N/A
19. Business and Management Studies	21	9	42.9%	0
20. Law	11	6	54.5%	0
21. Politics and International Studies	8	2	25.0%	0
22. Social Work and Social Policy	4	1	25.0%	0
23. Sociology	4	1	25.0%	0
24. Anthropology and Development Studies	0	0	N/A	N/A
25. Education	3	0	0.0%	0
26. Sport and Exercise Sciences, Leisure and Tourism	9	2	22.2%	0

<b>Panel D</b>	<b>Submissions from Welsh HEIs</b>	<b>Wales Studies Relevant</b>	<b>% Wales Studies Relevant</b>	<b>Additional 'Maybe' Count</b>
27. Area Studies	0	0	N/A	N/A
28. Modern Languages and Linguistics	15	11	73.3%	0
29. English Language and Literature	12	6	50.0%	1
30. History	11	8	72.7%	0
31. Classics	2	0	0.0%	0
32. Philosophy	2	0	0.0%	0
33. Theology and Religious Studies	1	0	0.0%	0
34. Art and Design: History, Practice and Theory	5	1	20.0%	0
35. Music, Drama, Dance and Performing Arts	11	8	72.7%	0
36. Communication, Cultural and Media Studies, Library and Information Management	6	2	33.3%	0

**Table 2: Results by Panels, from Welsh HEIs**

Panel	Submissions from Welsh HEIs	Wales Studies Relevant	% Wales Studies Relevant
Panel A	63	6	9.5%
Panel B	66	5	7.6%
Panel C	79	28	35.4%
Panel D	65	36	55.4%
<b>Overall totals</b>	<b>273</b>	<b>75</b>	<b>27.5%</b>

**Panel A:** ‘life sciences’ (Panel A Overview report, paragraph 1, <http://www.ref.ac.uk/media/ref/content/expanel/member/Main%20Panel%20A%20overview%20report.pdf>)

**Panel B:** ‘physical, mathematical and computer sciences, and [...] engineering’ (Panel B Overview report, paragraph 2, <http://www.ref.ac.uk/media/ref/content/expanel/member/Main%20Panel%20B%20overview%20report.pdf>)

**Panel C:** ‘In addition to those disciplines conventionally regarded as core social sciences, it included sub-panels whose reach stretched through design and engineering (for example UOA 16 (Architecture, Planning and Built Environment)), physical sciences (for example UOA 17 (Geography and Archaeology)), humanities (for example UOA 20 (Law)) or biomechanics and medicine (for example UOA 26 (Sport and Exercise Sciences, Leisure and Tourism)).’ (Panel C overview report, paragraph 3, <http://www.ref.ac.uk/media/ref/content/expanel/member/Main%20Panel%20C%20overview%20report.pdf>)

**Panel D:** ‘spanned the breadth of arts and humanities research, as well as covering some fields with a strong social sciences element’ (Panel D overview report, paragraph 2, <http://www.ref.ac.uk/media/ref/content/expanel/member/Main%20Panel%20D%20overview%20report.pdf>)

**Table 3: Results by UOA in Numeric Order for Wales-Facing Returns**

Rank	UOA	Submissions from Welsh HEIs	Wales Studies Relevant
1	Modern Languages and Linguistics	15	11
2	Business and Management Studies	21	9
3=	History	11	8
3=	Music, Drama, Dance and Performing Arts	11	8
5	Law	11	6
6	English Language and Literature	12	6
7	Geography, Environmental Studies and Archaeology	13	5
8	Allied Health Professions, Dentistry, Nursing and Pharmacy	21	4
9=	Architecture, Built Environment and Planning	6	2
9=	Communication, Cultural and Media Studies, Library and Information Management	6	2
11	Politics and International Studies	8	2
12=	Mathematical Sciences	9	2
12=	Sport and Exercise Sciences, Leisure and Tourism	9	2
14	Civil and Construction Engineering	2	1
15=	Social Work and Social Policy	4	1
15=	Sociology	4	1
17=	Art and Design: History, Practice and Theory	5	1
17=	Biological Sciences	5	1
19	Earth Systems and Environmental Sciences	9	1
20	Agriculture, Veterinary and Food Science	10	1
21	Computer Science and Informatics	14	1
22	Theology and Religious Studies	1	0
23=	Classics	2	0
23=	Philosophy	2	0
25=	Education	3	0
25=	Public Health, Health Services and Primary Care	3	0

27=	Chemistry	4	0
27=	Electrical and Electronic Engineering, Metallurgy and Materials	4	0
29	Clinical Medicine	7	0
30	Physics	8	0
31	General Engineering	16	0
32	Psychology, Psychiatry and Neuroscience	17	0
N/A	Aeronautical, Mechanical, Chemical and Manufacturing Engineering	0	N/A
N/A	Anthropology and Development Studies	0	N/A
N/A	Area Studies	0	N/A
N/A	Economics and Econometrics	0	N/A

## F. Results by HEI

The following table shows overall totals of Impact Case Studies data by HEI (joint submissions are counted for all HEIs involved, meaning that some Impact Case Studies are counted more than once).

**Table 4: Distribution by HEI**

HEI	Submissions from Welsh HEIs	Wales Studies Relevant	% Wales Studies Relevant
Aberystwyth University	55	18	32.7%
Bangor University	44	13	29.5%
Cardiff University	90	15	16.7%
Cardiff Metropolitan University	11	2	18.2%
Glyndŵr University	8	1	12.5%
University of South Wales	26	10	38.5%
Swansea University	54	14	25.9%
University of Wales	2	2	100.0%
University of Wales Trinity Saint David	12	4	33.3%

## G. Main Analysis

The headline findings of this study are that: (a) slightly more than one quarter (27.5%) of all REF2014 Impact Case Studies from Welsh HEIs involved a Wales-facing element in their underpinning research (Table 2); and (b) all REF2014 Welsh HEIs submitted at least 1 Impact Case Study that displayed a Wales-facing element in its underpinning research (Table 4). Taken together, these findings suggest that **Wales-facing research is clearly identifiable across the Welsh HE sector**. Moreover, the spread of Wales-facing underpinning research in Impact Case Studies across all 4 REF2014 panels indicates that **Wales Studies needs to be understood as a broad category of enquiry**, and not one restricted to the traditional disciplines of humanities, arts, and social sciences (Tables 1 and 2).

**UOAs displaying the highest percentages of Impact Case Studies with a Wales-facing element in their underpinning research are to be found in humanities and arts areas** within Panel D. The highest-scoring UOAs by percentage of submissions were:

- UOA28 Modern Languages and Linguistics: 73.3% (including Welsh language)
- UOA30 History: 72.7%
- UOA35 Music, Drama, Dance and Performing Arts: 72.7%

However, Panel D also contains 3 out of 9 relevant UOAs (i.e. UOAs to which Welsh HEIs made submissions) that returned a zero Wales-facing count.

By contrast, across the social sciences-oriented Panel C only 1 relevant UOA returned a zero Wales-facing count. **There is thus a case to be made that Wales-facing material is more consistently identifiable across the breadth of work in research areas that cluster around the social sciences than it is across the breadth of work in research areas that cluster around the arts and humanities**. Moreover, as Table 3 indicates, the UOA with **the second-highest numeric return of Wales-positive results was from Panel C (Business and Management Studies)**, whilst Panel C UOA Law and UOA Geography, Environmental Studies and Archaeology were also within the top 8 numeric Wales-positive returns. Panel C thus displays notable Wales Studies strengths.

It remains clear that **Panel D shows the highest concentration of Wales-facing work by percentage of submissions**: 55.4% of all Impact Case Studies from Welsh HEIs. This suggests that Wales-facing research in this broad humanities/arts grouping is in a healthy state, even if gaps can be identified. **Panel C also contains a notably strong return of Wales-facing Impact Case Studies by percentage of submissions**, with more than one third of the overall Panel C total building on at least an element of Wales-facing work. This suggests that research in this broad social sciences-centred grouping also has a notably Wales-facing character in Welsh HEIs.

Panel A ('life sciences') and Panel B ('physical, mathematical and computer sciences, and [...] engineering') demonstrated a far lower incidence of specifically Wales-facing research in Impact Case Studies. However, **the fact that 7 out of 14 relevant UOAs from these 2 Panels included some Wales-facing underpinning research is an important counter to any assumption that Wales Studies should be seen restrictively as a purely arts/humanities/social sciences phenomenon**.

Out of the 32 UOAs to which Welsh HEIs submitted REF2014 Impact Case Studies, **21 UOAs (65.6%) contained submissions with some Wales-facing element to their underpinning research** (this figure of 21 UOAs is 58.3% of all 36 REF2014 UOAs). This suggests strength in breadth.

As illustrated by Table 4, it is clear that **Wales-facing research that underpinned REF2014 Impact Case Studies is concentrated in 5 Welsh HEIs**: Aberystwyth University, Bangor University, Cardiff University, University of South Wales, and Swansea University. Numerically, Aberystwyth University is the most substantial contributor of such work to this grouping. However, whilst this concentration suggests **some overall unevenness of distribution across the Welsh HE sector as a whole**, it is important to note that there are no zero-count HEIs.

Fine-grained analysis of the results in terms of the engagement of different HEIs with individual subject areas indicates that **REF2014 Impact Case Studies displaying Wales-facing research are not distributed evenly across the Welsh HE sector in all UOAs**.

- For example, for UOA English Language and Literature, the dominant institution was Swansea University (3 Wales-positive Impact Case Studies), with the University of South Wales (2 Wales-positive Impact Case Studies) and Bangor University (1 Wales-positive Impact Case Study) being the only other 2 institutions represented (out of 5 HEIs submitting in this UOA).
- By contrast, UOA History had Wales-positive returns from all the HEIs that submitted in this UOA – Universities of Aberystwyth, Bangor, Cardiff, South Wales, and Swansea, each with either 2 or 1 positive returns.
- In some cases, apparent unevenness of distribution across the Welsh HE sector was primarily to do with limited numbers of HEIs submitting in a given UOA. For example, UOA Politics and International Studies saw submissions from just 3 Welsh HEIs: Aberystwyth, Cardiff, and Swansea. Of these, 2 saw Wales-positive returns (Aberystwyth and Cardiff, at 1 apiece).
- For 2 of the 3 UOAs with the most significant Wales-facing returns by percentage of submissions, reach across Welsh HEIs was encouraging: UOA Modern Languages and Linguistics saw Wales-positive returns from Aberystwyth, Bangor, Cardiff, Swansea, University of Wales, and University of Wales Trinity Saint David; as noted above, UOA History had Wales-positive returns from Aberystwyth, Bangor, Cardiff, South Wales, and Swansea. However, for the third of these high percentage-scoring UOAs (UOA Music, Drama, Dance and Performing Arts), only 4 Welsh HEIs made Impact Case Study submissions, of which 3 saw Wales-positive returns (Aberystwyth, Bangor, and South Wales).
- UOA Business and Management Studies is another key UOA, given its high-ranking numeric return of Wales-positive materials. This UOA saw Wales-facing underpinning research from all 5 of the Welsh HEIs that made submissions in this area (Aberystwyth, Bangor, Cardiff, South Wales, and Swansea).

## H. Observations on Individual UOAs

Based on percentages of Impact Case Studies displaying Wales-facing underpinning research, quantity of Impact Case Studies displaying Wales-facing research, and distribution across at least 5 Welsh HEIs in each case, UOA Modern Languages and Linguistics (including Welsh language) and UOA History **appear to have been in a robust state in terms of Wales-facing research in recent years** (at least as far as material chosen for REF2014 Impact Case Studies is concerned).

**Equally strong in terms of both overall percentage and quantity is UOA Music, Drama, Dance and Performing Arts.** As such, disciplines in this UOA manifestly constitute a key target area for involvement in the LSW's development of a Wales Studies agenda. However, it must be noted that distribution of Wales-positive results across Welsh HEIs for UOA Music, Drama, Dance and Performing Arts was not as wide as for UOA Modern Languages and Linguistics and UOA History. As such, Wales-facing research work in this UOA is perhaps less securely embedded in the Welsh HEI system as a whole than the other 2 UOAs cited here – again, at least as far as material chosen for REF2014 Impact Case Studies is concerned.

**Wales-facing returns for UOA English Language and Literature were dominated by a single HEI** (Swansea, which was responsible for 3 out of the 6 Wales Studies-relevant Impact Case Studies in this UOA). This suggests that **Wales Studies may not be embedded entirely securely in English-language literary studies across Welsh HEIs as a whole.**

**UOA Law registered the same number of Wales-positive results as UOA English Language and Literature** (see Table 3), **and a higher percentage of Wales-positive results.** As such, UOA Law is clearly an area that the LSW needs to target for inclusion in its developing Wales Studies agenda.

Other UOAs with Wales-positive percentage results of between 30% and 50% of Impact Case Study submissions were: Architecture, Built Environment and Planning; Geography, Environmental Studies and Archaeology; Business and Management Studies; Communication, Cultural and Media Studies, Library and Information Management; Civil and Construction Engineering. In 2 of these cases, however, the numeric count was very low: (a) UOA Architecture, Built Environment and Planning, with 2 Wales-positive Impact Case Studies out of 6; (b) UOA Civil and Construction Engineering, with 1 Wales-positive Impact Case Study out of 2. However, in the case of UOA Business and Management Studies, 9 Wales-positive Impact Case Studies (out of 21 submitted) make **UOA Business and Management Studies the second-most numerically significant UOA for Wales-positive results.** (Numerically, the most substantial result is UOA Modern Languages and Linguistics, with 11 Wales-positive Impact Case Studies, out of 15.) Moreover, given the distribution of Wales-positive results from UOA Business and Management Studies across all 5 of the Welsh HEIs by which submissions were made (see Section G above), this is clearly another important subject-area for the LSW to target for inclusion in its ongoing Wales Studies work.

Numeric volumes of Wales-positive returns are detailed in Table 3. These figures are important in their own right, but are also significant as correctives to the skewing that can occur if attention is paid merely to percentages of Wales-positive returns for UOAs. On these raw numerical terms, Table 4 brings out the significance of the non-humanities, non-social science UOA Allied Health Professions, Dentistry, Nursing and Pharmacy. The Wales-positive percentage for this UOA is relatively low (19%); however, **in terms of raw numbers of Wales-positive Impact Case Studies,**

**UOA Allied Health Professions, Dentistry, Nursing and Pharmacy ranks eighth** – with its 4 Wales-positive count not far behind the 6 of UOA English Language and Literature. Again, this marks **UOA Allied Health Professions, Dentistry, Nursing and Pharmacy** as a potentially fruitful target for inclusion in future LSW Wales Studies work.

Excluding UOA Allied Health Professions, Dentistry, Nursing and Pharmacy, UOAs in Panels A and B generally returned a low Wales-positive count, both in raw numeric and percentage terms. Nonetheless, the existence of Wales-positive research material here is important (a) for making the vital argument that **Wales Studies should not be seen as an area of study that is restricted to the humanities, arts, and social sciences** and (b) for identifying individuals with Wales-focused research interests in life sciences, physical sciences, mathematical and computer sciences, and engineering. Moreover, it is worth noting that 3 Aberystwyth University submissions across UOA Mathematical Sciences and UOA Physics are crucially and deliberately Wales-facing in their impact – although their underpinning research appears to have no specifically Wales-facing content. (As such, none of these 3 Impact Case Studies register in this report as Wales-facing – an inevitable consequence of the focus here on Wales-facing research, rather than on the very different question of Wales-facing impact.) **Whether such Wales-facing social engagements arising from non-Wales-facing research can provide the LSW with another route into subject-areas for which research is apparently less frequently Wales-specific is certainly an issue that the Society needs to consider in its ongoing Wales Studies work.** (See, variously: CS42092, Aberystwyth University, ‘Impact of research on coloured glass on the social enterprise Ten Green Bottles’, UOA Physics; CS42093, Aberystwyth University, ‘Impact of physics and astronomy research on the work of the Urdd National Eisteddfod’, UOA Physics; and CS42095, Aberystwyth University, ‘Optimal geometry of soap films’, UOA Mathematical Sciences.)

## I. Grading of Impact Case Studies with Wales-Positive Results

Gradings for individual Impact Case Studies were not released as part of the REF2014 results. Instead, as explained in Section D above, combined gradings were released for an HEI’s overall impact submission in any given UOA. The overall impact submission included (a) all Impact Case Studies submitted by an HEI in a given UOA plus (b) the Impact Template submitted by an HEI for the same UOA.

REF2014 impact scores were published on a percentage distribution between 5 categories: 4\*/3\*/2\*/1\*/Unclassified. Assessments for Impact were made on the following basis (table copied from <http://www.ref.ac.uk/panels/assessmentcriteriaandleveldefinitions/>):

Four star	Outstanding impacts in terms of their reach and significance.
Three star	Very considerable impacts in terms of their reach and significance.
Two star	Considerable impacts in terms of their reach and significance.
One star	Recognised but modest impacts in terms of their reach and significance.
Unclassified	The impact is of little or no reach and significance; or the impact was not eligible; or the impact was not underpinned by excellent research produced by the submitted unit.



Impact Case Studies identified by this study as displaying some Wales-facing element in their underpinning research made contributions to a wide range of scores for impact submissions. Notably, a few such scores reached a full 100% at the highest 4\* rating (100/0/0/0/0) – in the case (to choose two examples) of Swansea University’s UOA English Language and Literature impact submission, and Cardiff’s UOA Modern Languages and Linguistics impact submission.

Two Wales-positive results were part of an impact submission for which no result was published on the REF results website. As such, 73 impact scores can be associated with Wales-positive REF2014 Impact Case Studies. **The arithmetic mean of these 73 scores is: 38/46/12/4/0**

According to the REF2014 Key Facts sheet (<http://www.ref.ac.uk/media/ref/content/pub/%20Brief%20Guide%202014.pdf>), **the UK-wide averages for Impact Case Studies for REF2014 as a whole were: 44/40/13/2/1**. According to the document *Impacts of Academic Research from Welsh Universities* (<https://www.learnedsociety.wales/wp-content/uploads/2017/06/The-impacts-of-academic-research-from-Welsh-universities.pdf>), **Wales-wide averages for Impact Case Studies for REF2014 were: 49/37/10/3/1**.

The percentage of Wales-positive impact submissions from Welsh HEIs shows 84% of work graded at 3\* and above. This is strikingly similar to both UK-wide (84%) and Wales-wide (86%) averages for 3\* and above. However, taking the top (4\*) category alone:

- By comparison with the REF2014 UK-wide average of 44% at 4\*, **Wales-facing material was associated with impact submissions that returned a lower proportion in the 4\* category (38%)**.
- By comparison with the REF2014 Wales-wide average of 49% at 4\*, **Wales-facing material was associated with impact submissions that returned a significantly lower proportion in the 4\* category (38%)**.

## J. Potential Effects of REF2014 Impact Criteria

According to the official REF2014 website, as noted in Section A above, ‘The criteria for assessing impacts were “reach” and “significance”’ (<http://www.ref.ac.uk/panels/assessmentcriteriaandleveldefinitions/>)

This raises the concern that ‘reach’ – interpreted in terms of REF2014’s geographically-oriented terminology of ‘world-leading’, ‘internationally excellent’, ‘recognised internationally’, ‘recognised nationally’, and ‘falls below the standard of nationally recognised work’ (<http://www.ref.ac.uk/panels/assessmentcriteriaandleveldefinitions/>) – may have impacted negatively on the very possibility of Wales-focused Impact Case Studies being submitted to REF2014. Analysis of research strength by Impact Case Study may thus give insufficient recognition to Wales-focused research in Welsh HEIs, in the sense that individual HEIs may have concluded that impact from such work might be considered too localised (if the impact in question was predominantly Wales-located) to constitute viable Impact Case Studies.

There is, in short, a concern about **potential under-representation of Wales Studies in Impact Case Studies because of the geographical-reach-signalling of REF2014 terminology**.

## K. Conclusions

In terms of the Impact Case Studies submitted by Welsh HEIs to REF2014:

1. Operationally, 'Wales Studies' must be understood as a broad-based area of enquiry, covering multiple disciplines (see <https://www.learnedsociety.wales/our-projects/welsh-studies/what-is-wales-studies/>).
2. Wales-facing research is concentrated in 5 HEIs within the Welsh HE sector (Aberystwyth University, Bangor University, Cardiff University, University of South Wales, Swansea University).
3. Wales-facing research is identifiable across a significant proportion of academic subject areas (65.6% of REF2014 UOAs to which Welsh HEIs made submissions/58.3% of all REF2014 UOAs). This can be seen as an encouraging degree of strength in breadth.
4. REF2014 Impact Case Studies displaying Wales-facing research are not necessarily distributed evenly across the Welsh HE sector in individual UOAs.
5. Particular Wales-facing research strengths are apparent in REF2014 Panels C and D.
6. There are clearly identifiable areas of existing Wales Studies strength at the level of individual UOAs – measured variously by percentage, raw numeric count, or both (Modern Languages and Linguistics; Business and Management Studies; History; Music, Drama, Dance and Performing Arts; Law; English Language and Literature).
7. Other UOAs demonstrate Wales Studies engagements that are less extensive than those listed in Paragraph K6 above, but which are nonetheless clear (Geography, Environmental Studies and Archaeology; Allied Health Professions, Dentistry, Nursing and Pharmacy).
8. Wales-facing material is associated with impact submissions that had: (a) a lower proportion in the highest grading category (4\*) than REF2014 UK-wide impact averages; and (b) a significantly lower proportion in the highest grading category (4\*) than REF2014 Wales-wide impact averages.

## L. Future Challenges

1. The main challenge for the ongoing Wales Studies agenda is to bring together the diverse range of subject-area staff whose disciplines are identified in this analysis as displaying existing Wales Studies research engagement. Harnessing this various expertise under the collective Wales Studies banner is fundamental to building resilience across the field as a whole.
2. As such, the LSW should rightly foster the notion of Wales Studies as a broad-based area of enquiry, covering multiple disciplines.
3. In terms of a gap analysis, there are a number of research areas where there is currently little or no Wales Studies engagement (see the concluding paragraph of Section H above) that could be explored in terms of development. In practical terms, this may mean: (a) Wales Studies pump-priming; and (b) encouraging individual researchers to see that their work relates to the category of Wales Studies.
4. The LSW needs to help Welsh HEIs develop strategies to ensure that future impact submissions which contain a basis in Wales-facing research material reach UK-wide REF averages for 4\* impact submissions.