**Professional Occupations Research Report**

This document outlines the outcome of research underpinning decisions made by the SOC Revision Working Group for Unit Groups (UGs) or individual occupations that should now code to Major Group 2 (MG2) – Professional Occupations in SOC2020. These decisions are preliminary. Please also refer to the spreadsheet on the GSS website for the proposed new structure.

**Introduction**

Competent performance of the key tasks in many jobs increasingly requires the application of knowledge and skills that are acquired via higher education. For simplicity, these are termed ‘graduate’ jobs in this paper. As a consequence, some jobs within UGs, or even complete UGs, now require the knowledge and skills developed within a degree programme where this was not required in the past.

A review of three separate pieces of research was carried out to determine whether any UGs across the SOC2010 classification should be classed as a ‘graduate’ level group and in turn to decide whether they should be placed in MG2 or MG3.

The three strands of research were:

1. [Green and Henseke’s research](http://www.llakes.ac.uk/sites/default/files/50.%20Green%20and%20Henseke_0.pdf) using quantitative regression analysis methods to identify whether an occupation is graduate or non-graduate
2. [Elias and Purcell’s research](http://www2.warwick.ac.uk/fac/soc/ier/futuretrack/findings/elias_purcell_soche_final.pdf) using qualitative methods of reviewing job descriptions to identify whether an occupation requires a degree or not
3. research using data from the Labour Force Survey (LFS) to predict the future proportion of graduates working in a UG

The LFS research (3 above) highlighted certain groups that based on skill level were not suitable for moving to MG2, an example of this was unit group 9275 (Leisure and theme park attendants). This is because the LFS data available to the Classifications Unit focuses on what qualifications the respondent possesses, rather than what qualifications are required to competently work in their current job.

ONS conducted a 4th strand of research using the Destinations of Leavers from Higher Education (DLHE) survey data (at the 4-digit UG level) which provides information on whether a degree (NQF level 6 qualification) is needed for the job that the respondent has been employed in. The following method was agreed by the working group to decide whether a UG was suitable for moving to MG2.

**Method**

**1:** The percentage of those respondents that said their qualification was a formal requirement to gain employment in their current role was calculated at the UG level.

**2:** Based on the above calculations, UGs outside MG2 were classified into four categories:

* professional: 50% or more of respondents in a UG stated that their qualification was a formal requirement and therefore the whole UG should move to MG2
* associate professional: less than 25% of the respondents in a UG in MG3 stated that their qualification was a formal requirement and therefore the whole UG should remain in MG3
* non-professional: less than 25% of the respondents in a UG in MGs 4 or 6 stated that their qualification was a formal requirement and therefore the whole UG should remain in MG4 or 6
* further research required: 25% to less than 50% of respondents in a UG stated that their qualification was a formal requirement and therefore the UG was identified as requiring further research

The outcome of this classification highlighted 40 UGs in MG3 and 2 UG’s in MG6 as requiring further research:

**3:** Counts by job title were calculated using DLHE, LFS and UK Census data, which consists of over two million unique records. The 10 job titles with the highest counts for each UG were then selected to conduct additional research using on-line job adverts. The aim of which was to research 10 job adverts for each of the top 10 job titles, resulting in 100 on-line job adverts per UG.

**4:** The minimum qualification and previous experience required to be employed in that job was noted with the thresholds below being applied, to consistently determine whether an individual job title was a professional:

* degree level (level 6) was the minimum qualification required to be employed in the role, and/or
* five years or more previous experience was the minimum requirement to be employed in the role

If neither threshold were met then the individual job title was identified as associate professional to remain in MG3 or non-professional to remain in MG6.

**5:** When 10 adverts were found for an individual job title, and 50% or more of those adverts stated a degree level qualification, and/or 5 years or more experience was the minimum requirement, the job title was identified as being suitable to be moved to MG2.

**6:** If there were difficulties in finding 10 adverts for an individual job title, a lower threshold of 75 adverts was agreed and the next in sequence top job titles were used for research. Even by reducing the threshold for the number of job adverts to research, some UG’s did not reach the lower threshold.

**7:** In instances where less than 10 adverts could be found for a job title, and at least 50% or above of those adverts stated that a degree level qualification, and/or 5 years or more experience was the minimum requirement, then the job title was highlighted for further additional research using DLHE data at the *job title* (not UG) level. The qualification required was calculated as a percentage of those respondents that said their qualification was a formal requirement to gain employment in their current role. The thresholds were:

* 50% or higher: professional (suitable for moving to MG2)
* less than 50%:
* associate professional (remain in MG3)
* non-professional (remain in MG6)

**8:** With the combination of the on-line job advert research and the DLHE percentage proportions, the UGs marked for further research were classified into four categories:

1. professional - move whole UG to MG2 (see table 1a)
   * where at least 50% of the job titles in the UG were identified as professional
2. associate professional - UG remains in MG3 (see table 3)
   * where there were no job titles in the UG identified as professional
3. non-professional - UG remains in MG4 or MG6 (see table 3)
   * where there were no job titles in the UG identified as professional
4. index move – move an individual job title to MG2 (see table 2a)
   * where both the job adverts and DLHE data identified an individual job title as professional but overall the UG did not meet criteria 1 above to move the group as a whole to MG2

**Notes on index moves in point 8**

* if a high proportion of job titles within a group were identified for moving to MG2, consideration was taken whether there were enough to form a new unit group and whether those remaining were statistically viable as a group

**Conclusion**

Whilst completing this research c.3100 job adverts were researched to make decisions about the classification of UG’s within MG3 and a small number of UG’s in MG6.

A decision was made by the working group that the on-line job advert research would take precedence over previous classification of professional UG’s research strands. This is because the information contained in the on-line job adverts for the UG’s falling between 25% to less than 50% threshold in the DLHE data is more current than the survey data used in previous research strands, and that the requirements in the on-line adverts are based on what an employer requires rather than what an employee possesses.

Note that further research is being conducted on job titles within selected UG’s to review whether these are suitable for moving to alternative MG’s.

If you have any comments or evidence which supports or refutes any of these proposals, please send them to [socrevision@ons.gov.uk](mailto:socrevision@ons.gov.uk) by **Friday 20 July 2018.** These will be considered before any final decisions are made.

**Information on tables and annex below**

Tables 1a and 2a show unit group and index entry moves that were researched and agreed within this strand of research.

Tables 1b and 2b show unit group and index entry moves that were previously agreed and reported that are outside of the scope of this research strand. They have been included in this report for completeness.

Table 3 shows those unit groups that were researched where the results indicated that they should remain in MG3, 4 or 6.

Annex A shows other amendments that have affected the SOC structure as a result of changes agreed within this research strand and are not shown in the tables 1a, 1b, 2a & 2b below.

**Table 1a: Unit groups recommended for moving to MG2**

|  |  |  |  |
| --- | --- | --- | --- |
| **SOC2010** | **SOC2020** | **SOC2020 Unit Group Title** | **DLHE degree is required for job** |
| 3121 | 2452 | Architectural and town planning technicians will merge with ‘Town planning officers’ | 82% |
| 3213 | 2257 | Paramedics | 67% |
| 3218 | 2254/2255 | Medical and Dental Technicians will be separated into 2 unit groups | 66% |
| 3534 | 2423 | Finance and investment analysts and advisers | 52% |
| 3535 | 2424 | Taxation experts | 61% |
| 6131 | 2242 | Veterinary Nurses | 60% |
|  |  |  |  |
|  | |  |  |

**Table 1b: Previously agreed unit groups recommended for moving to other MG’s**

|  |  |  |  |
| --- | --- | --- | --- |
| **SOC2010** | **SOC2020** | **SOC2020 Unit Group Title** | **Previously agreed** |
| 3315 | 6311 | Police community support officers | Agreed move in MG3 paper 1 |
| 3421 | 2142 | Graphic designers | Agreed move in MG2 paper 1 |
| 6121 | 3232 | Early education and childcare practitioners | Agreed move in MG3 paper 1 |
| 6125 | 3231 | Higher level teaching assistants | Agreed move in MG3 paper 1 |

**Table 2a: Individual job titles identified to move to MG2**

|  |  |  |  |
| --- | --- | --- | --- |
| **SOC2010** | **SOC2020** | **SOC2010 Unit Group Title** | **Recommendations** |
| 3113 | 2126 | Engineering technicians | Aircraft Engineer (licenced) to move to new SOC2020 unit group 2126 'Aerospace Engineer' |
| 3219 | 2259 | Health associate professionals n.e.c. | Clinical Physiologist to move to new SOC2020 unit 2259 ‘Other health professionals n.e.c.’ |
| 3520 | 2419 | Legal Associate Professionals n.e.c | Paralegal, Conveyancer, Legal Executive and Legal Officer to move to SOC2010 unit group 2419 'Legal professionals nec' |
| 3538 | 2422 | Financial accounts managers  SOC2020 - Financial accounts and investment managers | **Create a new UG** in MG2 to include Accounts and Investment Managers from SOC2010 unit group 3538 |
| 3545 | 2432 | Sales accounts and business development managers  SOC2020 - Marketing and commercial managers | **Create a new UG** in MG2 to include Marketing and Commercial Managers from SOC2010 unit group 3545 |
| 3565 | 2454 | Inspectors of standards and regulations | Building Control Surveyor move to SOC2020 unit group 2454 'Chartered Surveyors' |

**Table 2b: Previously agreed individual job titles identified to move to MG2**

|  |  |  |  |
| --- | --- | --- | --- |
| **SOC2010** | **SOC2020** | **Unit Group Title** | **Previously agreed** |
| 3111 | 2116 | Laboratory Professionals | Previously agreed to create a new group from SOC2010 3111 (Laboratory technicians) (MG3 paper1) |
| 3550 | 2152/5119 | Conservation and environmental associate professionals | Previously agreed to move environmental technicians to SOC2020 group 2152 and remainder of group to be combined with SOC2010 group 5119. Group 3550 will be removed (MG2 paper 2) |

**Table 3: Shows UG’s in MG’s 3, 4 and 6, that we propose do not require reclassification and are remaining in their respective major group**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SOC2010** | **Unit Group Title** | **Elias and Purcell (2018)** | **Green and Henseke (2017)** | **Labour Force Survey Research 1** | **DLHE degree is required for job** | **Total number of on-line adverts found** | **Total number of graduate jobs found** |
| 3112 | Electrical and electronics technicians | AP**2** | P **3** | AP | 26% | 79 | 13 |
| 3113 4 | Engineering technicians | AP | P | AP | 37% | 75 | 16 |
| 3114 | Building and civil engineering technicians | AP | P | P | 42% | 75 | 19 |
| 3115 | Quality assurance technicians | AP | P | AP | 34% | 85 | 11 |
| 3116 | Planning, process and production technicians | AP | P | P | 37% | 89 | 13 |
| 3119 | Science, engineering and production technicians n.e.c. | AP | P | AP | 30% | 76 | 1 |
| 3122 | ~~Draughtspersons~~  CAD and drawing technicians | P | P | P | 42% | 94 | 19 |
| 3131 | IT operations technicians | AP | P | P | 29% | 98 | 13 |
| 3132 | IT user support technicians | AP | - | AP | 29% | 100 | 11 |
| 3216 | Dispensing opticians | AP | AP | P | 37% | 75 | 1 |
| 3217 | Pharmaceutical technicians | AP | AP | AP | 21% | n/a | n/a |
| 3219 4 | Health associate professionals n.e.c. | P | P | P | 47% | 94 | 28 |
| 3231 | Youth and community workers | AP | P | P | 20% | n/a | n/a |
| 3233 | Child and early years officers | AP | - | P | 20% | n/a | n/a |
| 3234 | Housing officers | AP | - | P | 18% | n/a | n/a |
| 3235 | Counsellors | AP | - | AP | 42% | 75 | 10 |
| 3239 | Welfare and housing associate professionals n.e.c. | P | P | P | 17% | n/a | n/a |
| 3311 | NCOs and other ranks | AP | AP | AP | 14% | n/a | n/a |
| 3312 | Police officers (sergeant and below) | AP | AP | P | 23% | n/a | n/a |
| 3313 | Fire service officers (watch manager and below) | AP | AP | AP | 14% | n/a | n/a |
| 3314 | Prison service officers (below principal officer) | AP | AP | AP | 8% | n/a | n/a |
| 3319 | Protective Service Associate Professionals n.e.c. | AP | AP | P | 22% | n/a | n/a |
| 3411 | Artists | P | P | P | 23% | n/a | n/a |
| 3412 | Authors, writers and translators | P | P | P | 29% | 80 | 23 |
| 3413 | Actors, entertainers and presenters | P | P | P | 16% | n/a | n/a |
| 3414 | Dancers and choreographers | P |  | AP | 27% | 62 | 19 |
| 3415 | Musicians | P | P | P | 11% | n/a | n/a |
| 3416 | Arts officers, producers and directors | P | P | P | 20% | n/a | n/a |
| 3417 | Photographers, audio-visual and broadcasting equipment operators | P | P | P | 21% | 76 | 12 |
| 3422 | ~~Product, clothing and related designers~~ Design occupations n.e.c | P | P | P | 44% | 100 | 45 |
| 3422 | Interior designers |
| 3422 | Clothing, fashion and accessories designers |
| 3441 | Sports players | AP | AP | AP | 14% | n/a | n/a |
| 3442 | Sports coaches, instructors and officials | AP | AP | AP | 25% | n/a | n/a |
| 3443 | Fitness Instructors | AP | AP | AP | 20% | n/a | n/a |
| 3511 | Air traffic controllers | P | P | AP | 18% | n/a | n/a |
| 3512 | Aircraft pilots and flight engineers | P | P | P | 31% | 18 | 2 |
| 3513 | Ship and hovercraft officers | P | P | P | 47% | 75 | 8 |
| 3520 4 | Legal associate professionals | P | AP | P | 47% | 100 | 44 |
| 3531 | Estimators, valuers and assessors | P | P | AP | 31% | 100 | 17 |
| 3532 | Brokers | P | P | P | 38% | 75 | 11 |
| 3533 | Insurance underwriters | P | P | AP | 37% | 94 | 15 |
| 3536 | Importers and exporters | AP | AP | AP | 25% | 56 | 7 |
| 3537 | Financial and accounting technicians | AP | AP | AP | 45% | 100 | 26 |
| 3538 4 | Financial accounts managers | P | P | AP | 35% | 100 | 32 |
| 3539 | Business ~~and related~~ associate professionals n.e.c. | P | P | P | 40% | 89 | 15 |
| 3541 | Buyers and procurement officers | P | P | P | 44% | 100 | 14 |
| 3542 | Business sales executives | P | P | AP | 36% | 75 | 12 |
| 3543 | Marketing associate professionals | P | P | P | 40% | 90 | 32 |
| 3544 | Estate agents and auctioneers | AP | AP | AP | 16% | n/a | n/a |
| 3545 4 | Sales accounts and business development managers | P | P | P | 34% | 80 | 27 |
| 3546 | Conference and exhibition managers and organisers | P | P | P | 23% | n/a | n/a |
| 3561 5 | Public services associate professionals | P | P | P | 29% | n/a | n/a |
| 3562 | Human resources and industrial relations officers | P | P | P | 32% | 100 | 17 |
| 3563 | Other vocational and industrial trainers ~~and instructors~~ | AP | P | AP | 22% | n/a | n/a |
| 3563 | Information technology trainers |
| 3564 | Careers advisers and vocational guidance specialists | P | P | P | 38% | 84 | 15 |
| 3565 4 | Inspectors of standards and regulations | P | P | P | 32% | 75 | 16 |
| 1259/3567 | Health and safety managers and officers | P | P | P | 27% | 92 | 34 |
| 4112 | National government administrative occupations | NP **6** | NP | NP | 12% | n/a | n/a |
| 4113 | Local government administrative occupations | NP | NP | NP | 9% | n/a | n/a |
| 4114 | Officers of non-governmental organisations | NP | NP | P | 17% | n/a | n/a |
| 4121 | Credit controllers | NP | NP | NP | 15% | n/a | n/a |
| 4122 | Book-keepers, payroll managers and wages clerks | NP | NP | NP | 23% | n/a | n/a |
| 4123 | Bank and post office clerks | NP | NP | NP | 7% | n/a | n/a |
| 4124 | Finance officers | NP | NP | NP | 23% | n/a | n/a |
| 4129 | Financial administrative occupations n.e.c. | NP | NP | NP | 17% | n/a | n/a |
| 4131 | Records clerks and assistants | NP | NP | NP | 12% | n/a | n/a |
| 4132 | Pensions and insurance clerks and assistants | NP | NP | NP | 12% | n/a | n/a |
| 4133 | Stock control clerks and assistants | NP | NP | NP | 9% | n/a | n/a |
| 4134 | Transport and distribution clerks and assistants | NP | NP | NP | 12% | n/a | n/a |
| 4135 | Library clerks and assistants | NP | NP | P | 7% | n/a | n/a |
| 4138 | Human resources administrative occupations | NP | NP | NP | 16% | n/a | n/a |

**Table 3 cont.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SOC2010** | **Unit Group Title** | **Elias and Purcell (2018)** | **Green and Henseke (2017)** | **Labour Force Survey Research 1** | **DLHE degree is required for job** | **Total number of on-line adverts found** | **Total number of graduate jobs found** |
| 4151 | Sales administrators | NP | NP | NP | 18% | n/a | n/a |
| 4159 | Other administrative occupations n.e.c. | NP | NP | NP | 10% | n/a | n/a |
| 4161 | Office managers | NP | NP | NP | 10% | n/a | n/a |
| 4162 | Office supervisors | NP | NP | NP | 7% | n/a | n/a |
| 4211 | Medical secretaries | NP | NP | NP | 5% | n/a | n/a |
| 4212 | Legal secretaries | NP | NP | NP | 15% | n/a | n/a |
| 4213 | School secretaries | NP | NP | NP | 8% | n/a | n/a |
| 4214 | Company secretaries and administrators | NP | NP | NP | 9% | n/a | n/a |
| 4215 | Personal assistants and other secretaries | NP | NP | NP | 12% | n/a | n/a |
| 4216 | Receptionists | NP | NP | NP | 4% | n/a | n/a |
| 4217 | Typists and related keyboard occupations | NP | NP | NP | 7% | n/a | n/a |
| 6121 4 | ~~Nursery nurses and assistants~~ Early ~~years~~ education and childcare assistants | NP (2013) **7** | - | NP | 16% | n/a | n/a |
| 6125 4 | Teaching assistants | NP | - | NP | 18% | n/a | n/a |
| 6139 | Animal Care Services Occupations n.e.c | NP (2013) | - | NP | 38% | 76 | 3 |
| 6132 | Pest control officers | NP (2013) | - | NP | 11% | n/a | n/a |
| 6142 | Ambulance staff (excluding paramedics) | NP (2013) | - | NP | 48% | 46 | 2 |
| 6143 | Dental nurses | NP (2013) | - | NP | 17% | n/a | n/a |
| 6146 | Senior care workers | P | NP | NP | 17% | n/a | n/a |

1 Research focused on what qualifications the person possessed, not on what qualifications were required to competently work in that role

2 AP – Associate professional

3 P – Professional

4 Unit group appears in multiple tables

5 The top 10 job titles were very generic (administrator, executive officer and team leader) and specific to the civil service, and therefore difficult to research

6 NP – Non-professional

7 [Elias and Purcell (2013)](https://warwick.ac.uk/fac/soc/ier/futuretrack/findings/elias_purcell_soche_final.pdf)

n/a - where threshold percentage was less than 25% in the DLHE data, therefore no additional research was conducted

- not included as part of Green & Henseke research

**Annex A – list of other amendments to the SOC2010 structure as a result of changes agreed within this strand of research and not shown in tables 1a, 1b, 2a & 2b** **above.**

Note numbers in green refer to SOC2020 groups. In black they refer to SOC2010 groups.

**Renamed unit and minor groups**

* unit group 2452 ‘Town planning officers’ is renamed:
  + **‘Architectural planning officers and consultants’** because it has been merged with:
    - 3121 ‘Architectural and town planning technicians’
    - 2435 ‘Chartered architectural technologists’
* minor group 312 ‘CAD, Drawing and Related Architectural Technicians’ is renamed
  + **‘CAD and Drawing Technicians’** because:
    - ‘Architectural and town planning technicians’ (3121) is moving out of minor group 312 and has been merged with ‘Architectural planning officers and consultants’ (2452)

**Creation of new SOC2020 minor groups**

* 224 ‘Veterinary Professionals’ to include:
  + 2241 Veterinarians
  + 2242 Veterinary nurses
* 225 ‘Other Health Professionals’ to include:
  + 2251 Pharmacists
  + 2252 Ophthalmic opticians
  + 2253 Dental practitioners
  + 2254 Dental technicians
  + 2255 Medical technicians
  + 2256 Medical radiographers
  + 2257 Paramedics
  + 2258 Podiatrists
  + 2259 Other health professionals n.e.c.
* 242 ‘Finance Professionals’ to include:
  + 2421 Chartered and certified accountants
  + 2422 Financial accounts and investment managers
  + 2423 Finance and investment analysts and advisers
  + 2424 Taxation experts
* 244 ‘Business and Financial Project Management Professionals’ to include:
  + 2440 Business and financial project management professionals

**Deletion of new SOC2020 minor groups**

* 233 ‘Early Education and Childcare Services Managers’
  + The new SOC2020 unit group ‘Early education and childcare services managers; (2330) has been moved to new SOC2020 minor group 232 ‘Other Educational Professionals’