

Skilled, Shortage, Sensible:
Third review of the recommended
shortage occupation lists for the UK
and Scotland: Spring 2010

Migration Advisory Committee Report

March 2010



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The Migration Advisory Committee and secretariat

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Chapter 1

Introduction

1.1 The Migration Advisory Committee

1.1 The Migration Advisory Committee (MAC) was set up by the Government in 2007 as an independent non-departmental public body to provide evidence-based advice to the Government on where shortages of skilled labour can sensibly be filled by immigration from outside the European Economic Area (EEA).

1.2 Our work on shortage occupations

1.2 Our first report in January 2008 set out our preliminary comments on data and methodology in relation to occupation shortages, followed by a fuller report on our methodology one month later (MAC, 2008a and 2008b respectively). We published our first recommended shortage occupation lists (one for the UK and one for Scotland) in autumn 2008 (MAC, 2008c); we completed one partial review of the shortage occupation lists in spring 2009 (MAC, 2009a) and a further one in autumn 2009 (MAC, 2009b).

1.3 We have said that we will, at the request of the Government, regularly review the shortage occupation lists, with a partial review every six months and a full review at least every two years. This report represents the third partial review, and as such it does not cover the whole of the labour market. However, the combined impact of our previous reviews has been to review all of the occupations included on our initial recommended shortage occupation lists at least once.

1.4 It has been our stated intention to conduct a full review of the whole of the labour market in autumn 2010, preceded by a call for evidence. This remains the case. However, a General Election is to be held in the UK by June 2010, and we have considered the implications of this for our work. We make no presumption regarding either the objectives of the Government in the future or whether it will see the continuation of our shortage occupation work as necessary to support those objectives. For this reason, we are not at the present time making an announcement about a review in autumn 2010. As soon as we receive an indication that the Government wishes our shortage occupation work to continue, we will issue an announcement about our call for evidence.

1.5 We said in our autumn 2009 report (MAC, 2009b) that we would next review musicians and fishermen as a result of our receiving evidence relating to those occupations. In addition, the Government asked that we review pharmacists and engineering technicians. These occupations therefore constitute the focus of this review. We also consider metal working production and maintenance fitters, for reasons explained in Chapter 2.

1.3 Policy context

1.6 In addition to our work on the shortage occupation lists, the Government can ask the MAC to provide advice on other immigration issues from time to time. Most recently we have produced a report considering whether there is an economic case for restricting Tier 2 to shortage occupations only, along with our assessment of the economic contribution made by the dependants of Points Based System (PBS) migrants and their role in the labour market (MAC, 2009c), and a report considering what further changes to Tier 1 of the PBS should be made in 2010/11, given the changing economic circumstances (MAC, 2009d).

1.7 The Government has accepted the majority of our recommendations made in the Tier 2 and Tier 1 reports. Details of the Government's acceptance of our recommendations can be found at <http://www.publications.parliament.uk/pa/cm200910/cmhansrd/cm100318/wmstext/100318m0001.htm#10031847000017>

1.8 Our recommendations regarding the PBS reflected a desire to better align the policy with its objectives; in particular, that flows respond to labour market conditions without the need for constant amendments to the system.

1.9 In a speech in November 2009, the Prime Minister asked that we work with the UK Commission for Employment and Skills (UKCES) to consider removing certain occupations from the shortage occupation list, for example engineering roles, skilled chefs and care workers. The Prime Minister asked that we link this to the priorities of the Government's planned investment in the skills of the future and that we consult employers, training providers and other agencies to develop realistic timescales during 2010 for when these occupations will be taken off the list. We have begun working with the UKCES and with other relevant bodies to develop this work. We have fed findings from our work into the UKCES's National Strategic Skills Audit for England (UKCES, 2010), and we have worked closely with the Department for Business, Innovation and Skills and the Prime Minister's Delivery Unit to identify priority cases for action and to ensure that UK skills policy is fully aligned with migration policy.

1.4 Structure of this report

1.10 This report is considerably shorter than our previous reports. Our previous reports have included extensive commentary on the economy and labour market in the UK and on immigration stocks and flows, together with an account of our methodology and how this was applied to the evidence. Because we are considering only a small number of occupations here, this is not a fully stand-alone report. Readers unfamiliar with our previous work on shortage occupations can find more contextual information in MAC (2009b).

1.11 Chapter 2 discusses the individual occupations under review, in the order of pharmacists, engineering occupations, musicians and fishermen.

1.12 Chapter 3 summarises the results of the occupational reviews and presents the revised recommended shortage occupation lists for the UK and Scotland.

1.13 Chapter 4 discusses our current and future work and provides an update on our research programme.

1.5 Thank you

1.14 We are extremely grateful to the organisations and individuals who contributed to this report by giving us their views in person or by submitting evidence to us. We include throughout this report quotes (in boxes) from people and organisations that provided inputs.

1.15 We continue to welcome evidence from stakeholders to inform our work.

Chapter 2

Occupations under review

2.1 Introduction

2.1 This report looks at fewer occupations than did previous reports. Since we published our initial recommended shortage occupation lists in autumn 2008, we have produced a further two reports to update those lists. All of the occupations included on the initial lists have now been reviewed at least once.

2.2 Our autumn 2009 report (MAC, 2009b) stated that we had received significant evidence from representative organisations in regard to fishermen and musicians and that therefore we would be reviewing those occupations in this report.

2.3 In announcing that it accepted the recommendations made in our autumn 2009 report (MAC, 2009b), the Government asked that we also review pharmacists and engineering technicians.

2.4 In considering the evidence, we have followed the general conceptual approach set out in MAC (2008c) and have used the skilled, shortage, sensible methodology outlined in that report. The overall approach mirrored the one set out in our previous shortage reports, using a hybrid method that combined the consistency and comprehensiveness of a 'top-down' approach – using national data including the Labour Force Survey, the Annual Survey of Hours and Earnings (ASHE), the National Employers Skills Survey and Jobcentre Plus claimant count unemployment and vacancy data – with a more granulated 'bottom-up' approach using other evidence submitted to us.

2.5 Bottom-up evidence for this, as for previous reviews, came from an examination of the individual occupations and job titles. Crucially, this was informed by engagement with, and evidence from, stakeholders.

2.6 Because we were reviewing only a small number of occupations, we did not issue a general call for evidence but instead contacted representative organisations working with these occupations and asked them to submit evidence to us. We also had a number of meetings with organisations, government departments and employers.

2.7 We announced on our website which occupations we would be reviewing and also stated that we were reviewing these occupations at the regional stakeholder forums we held in Newcastle, Plymouth, Birmingham and Leeds.

2.8 The rest of this chapter summarises the evidence and our recommendations in relation to those occupations under review.

2.2 Pharmacists

Box 2.1: Pharmacists/pharmacologists

Occupation(s) and SOC code(s): Pharmacists/pharmacologists, 2213

Only the following job titles within this occupation are included on our recommended shortage occupation list: Registered pharmacist and pre-registration pharmacist

Top-down data

2213 Pharmacists/pharmacologists

Skilled		Skilled in top-down analysis (as calculated for our September 2008 report)						
SOC skill level classification		4			Median hourly pay for all employees	£18.01		
Percentage of employees with NVQ3+		92.6						
Shortage		Excluding NESS, occupation passes 4 out of 12 valid indicators						
Indicators	Apr 09	Sept 09	Spring 10	Indicators (continued)	Apr 09	Sept 09	Spring 10	
P1 Annual percentage change of median hourly pay for all employees	2.3	2.3	11.1	V2 Annual percentage change in employment estimates	-10.4	-12.0	-8.6	
P2 Annual percentage change of mean hourly pay for all employees	3.6	3.6	14.8	V3 Annual percentage change of median total paid hours	0.0	0.0	0.0	
P3 Return to occupation, given NQF3, with age and region controls	0.41	0.76	2.09	V4 Absolute change in proportion working for employer under 1 year	-0.02	-0.05	-0.03	
I1 Absolute change in median vacancy duration	2.2	-29.3	-8.3	E1 SSVs as a percentage of all vacancies	18	x	10.7	
I2 Live unfilled vacancies/unemployment by sought occupation	0.36	0.35	1.07	E2 SSVs as a percentage of hard-to-fill vacancies	100	x	55.5	
V1 Annual percentage change in unemployment by sought occupation	17.9	86.8	48.5	E3 SSVs as a percentage of total employment	0.09	x	0.1	
Sensible indicators		Apr 09	Sept 09	Spring 10	Apr 09	Sept 09	Spring 10	
Percentage of workforce born non-EEA		12	13	20	Percentage of workforce trained in past 13 weeks	50	54	62

Stakeholder evidence:

We received written evidence from the NHS Workforce Review Team (WRT), the Department of Health, the Scottish Government and the Company Chemists' Association (CCA), which was also responding on behalf of the Association of Independent Multiple Pharmacies.

2.9 Pharmacists is the only job title that we have included in every review we have conducted so far. It is included in this review at the request of the Government. In our spring 2009 review (MAC, 2009a), we concluded that there was sufficient evidence to include pharmacists working in the NHS and hospitals on our recommended shortage occupation list.

2.10 In our autumn 2009 review (MAC, 2009b), we took a close look at whether this job title should be extended to include community pharmacists and pre-registration pharmacists. Although there was anecdotal evidence of shortage within the community, there appeared to be a large number of locum pharmacists filling positions on a temporary basis. In addition, there was no evidence to suggest that pharmacy outlets were temporarily closing due to a lack of a pharmacist on site. Pharmacies cannot dispense prescriptions or sell pharmacy-only medicine without a registered pharmacist on site.

2.11 Also, the occupation passed none of the nine available top-down shortage indicators at that time. We did, however, continue to accept that there was a shortage of pharmacists working in the NHS and hospitals, where it would be sensible to allow employers to recruit from outside the EEA. We also accepted evidence that pre-registration pharmacists should be recommended for the shortage occupation list, but again only for those working within the NHS or hospitals.

2.12 Subsequently, the Government accepted our recommendations, but asked us to review the occupation again in relation to community pharmacists (i.e. pharmacists working in shops). The occupation of pharmacist covers both those who work in the community and those who work within the NHS and hospitals. All have the same professional requirements, and therefore pharmacists are able to move freely between the NHS and the community. We therefore decided that a thorough review was only possible by looking again at the pharmacist occupation as a whole.

Registered pharmacists

2.13 The register of pharmacists indicates that in 2009 there were 41,309 registered practising pharmacists, with 8,337 on the non-practising register. A census commissioned by the Royal Pharmaceutical Society of Great Britain (RPSGB) in 2008 found that 71 per cent of all registered pharmacists were employed in the community. Over 16 per cent of actively employed pharmacists held more than one job. Thirty-three per cent of the workforce worked part-time. Over 10 per cent were considering leaving the profession altogether.

2.14 As in our previous reviews, we accept that the occupation is skilled. Pharmacists in the UK are required to hold an RPSGB-accredited degree in pharmacy, to undertake one year of pre-registration training, and then to pass the RPSGB's registration examination before qualifying as a pharmacist. The length of training is five years (a four-year degree and one year's pre-registration training).

2.15 Non-EEA overseas pharmacists register through a different route from UK-educated pharmacists. First, they must be approved by the RPSGB in order to be eligible to take a conversion course, the Overseas Pharmacists Assessment Programme (OSPAP), which takes a year to complete. In essence, the OSPAP deals with UK pharmacy practice, including law and

ethics, and therapeutics. After taking the OSPAP, non-EEA pharmacists undertake a year of pre-registration training. EEA pharmacists possessing a European pharmacy qualification can apply for registration with the RPSGB.

2.16 When considering shortage, top-down analysis for our spring 2009 and autumn 2009 reports (MAC, 2009a and 2009b respectively) showed little sign of shortage (1 out of 12 indicators of shortage passed in spring 2009 and 0 out of 9 available indicators passed in autumn 2009). In contrast, the occupation now passes 4 out of 12 shortage indicators. The top-down data for this occupation are considered relevant to the job title of pharmacist.

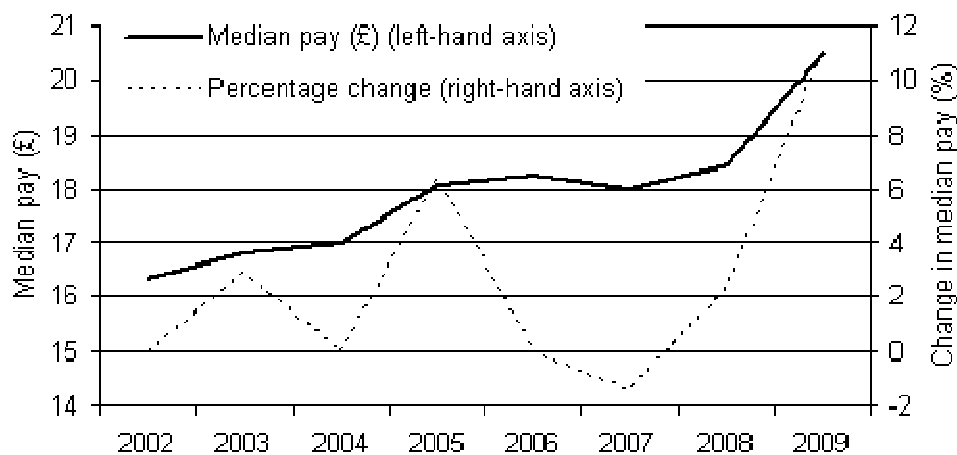
2.17 Three of the four indicators on which the occupation passes as in shortage relate to pay. Median and mean hourly pay have both risen significantly over the past year, by 11.1 per cent and 14.8 per cent respectively. The data are based on a sufficiently large sample to be regarded as reliable. The striking nature of these rises led us to investigate the pay data further.

2.18 The increases reflect an acceleration of an ongoing trend in terms of rising pay in this occupation (Figure 2.1). Looking at the period 2006–09, the increase in median hourly pay averaged 4 per cent per annum, which is a faster annual rate than in most occupations over the same period.

2.19 Also, rises in pay between 2008 and 2009 were greatest at the lower end of the pay distribution (Figure 2.2). We may expect to observe such a pattern if there is difficulty in recruiting labour into an occupation, because labour shortages further up the pay scale can be addressed by promoting people more rapidly, while shortages at the lower end need to be dealt with through the use of higher pay to attract people into the occupation. Indeed, when we checked this point with stakeholders, they told us that there was anecdotal evidence that this was the case. Therefore, the pay data are consistent with the argument that there is a labour shortage in this occupation.

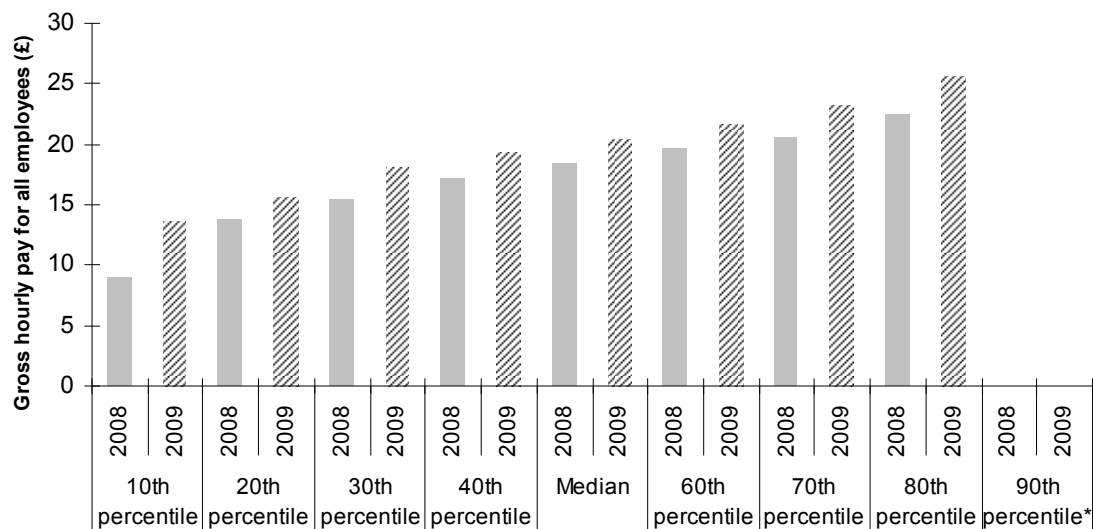
2.20 The top-down data also show significant growth in the relative premium applicable to working in this occupation. This means that employers have increased the pay that they are offering employees, after making allowances for their qualifications, age and location. This may be a response to a shortage in this occupation. The ratio of vacancies to unemployment has also increased to a level that indicates shortage.

Figure 2.1: Median hourly pay for pharmacists/pharmacologists (SOC 2213), 2002–09



Source: ASHE, 2002–09

Figure 2.2: Distribution of gross hourly pay for pharmacists/pharmacologists (SOC 2213), 2008 and 2009



Note: The chart shows the gross hourly nominal pay for all employees. *Data for the 90th percentile are deemed to be insufficiently reliable to report.

Source: ASHE, 2008 and 2009

2.21 Other indicators do not point towards a shortage. Employer-reported skills shortage vacancies are low, and all three indicators based on these data are well below the threshold for shortage. Employment in the occupation has also fallen considerably, and had also fallen in September and April 2009.

2.22 Vacancy rates in the community, according to the CCA, are running at similar levels as they were at the time of our last review and stand at around 15 per cent (although the CCA's sampling was smaller on this occasion). However, temporary locums fill the majority of these positions.

Indeed, community locum pharmacists represent a third of all community pharmacists.

2.23 Locums, we were told, were more likely to be female and to work shorter hours than other pharmacists. It would seem that many choose to take temporary locum positions rather than permanent posts as a lifestyle choice.

2.24 According to the NHS Information Centre census, within the NHS the three-month unfilled vacancy rate for 2009 was 1.5 per cent (up from 1 per cent in 2008). These are funded vacant positions not being filled by locums.

2.25 Evidence received from the Scottish Government shows that the overall vacancy rate for pharmacists in the NHS in Scotland is just over 8 per cent. A large proportion of these vacancies are at the Band 6 entry level.

2.26 Given that a pharmacist is required on site at all times when a pharmacy is dispensing prescriptions or selling pharmacy-only medicine, one of the key pieces of evidence we sought on this occasion was how often pharmacy services closed due to a lack of a pharmacist on site. In our previous review, we found no evidence of this happening. On this occasion the CCA provided some limited information on pharmacy closures in the community, but it indicates that closures are running at a very low level (0.019 per cent of scheduled open days). Thus pharmacy closures occur at a rate of 1 day per 5,000 scheduled open days. The conclusion we draw from this is that, regardless of their chosen working arrangements (temporary locum or permanent post), there are currently sufficient pharmacists to keep community pharmacies open.

2.27 That said, the WRT and the Department of Health told us that locum pharmacists working in the community generally cover only essential contracted services such as dispensing, rather than enhanced and advanced services such as smoking cessation clinics and medicine use reviews. These are the kinds of services pharmacists are increasingly being encouraged to provide.

2.28 The WRT reported anecdotal evidence that NHS pre-registration trainee pharmacists move to community pharmacy on qualification because starting wages are higher. Starting salaries in the community range from £22,500 to £43,000. In the NHS, the starting salary is £24,831 (excluding any high-cost area supplements or on-call payments). This may be exacerbating shortages in the NHS, where pay budgets are likely to be less responsive to shortages.

2.29 On the demand side, pharmacies are increasingly being expected to provide additional services, and the number of pharmacies is also increasing. The CCA told us that there was a 1.8 per cent annual rise in the number of pharmacy outlets to March 2009. There are also more pharmacies opening for longer hours. All of this demands a larger workforce.

“Our member companies continue to invest considerable energies in recruiting pharmacists to what are to them real vacancies, and we will continue to maintain that, in the interests of good patient care, continuity of service from a named health professional remains highly desirable.”

CCA evidence to the MAC

2.30 The number of people entering the profession is responding to these demands. The WRT told us that the register of pharmacists has been increasing annually at a rate of 2 per cent since 1991. The WRT also reported that the pharmacist workforce is becoming increasingly feminised, with a greater trend towards both part-time and portfolio working. As already stated, this is particularly true in community settings. Yet, as described above, overall employment of pharmacists has nonetheless declined over the past 18 months.

2.31 Turning to the ‘sensible’ criterion, the RPSGB reports that there has been a significant expansion in the number of pharmacy undergraduate places (44 per cent since 1998). This can be attributed to an increase in the intakes of established schools of pharmacy and the opening of a number of new schools since 2003/04.

2.32 The RPSGB told us that in 1998 there were 16 schools of pharmacy and approximately 2,000 students per year entered pre-registration training. Currently, there are 21 schools with 2,500 students entering pre-registration training each year. Therefore, there is clearly significant upskilling in progress. Furthermore, the RPSGB told us that this expansion is likely to continue, with an anticipated 24 schools by 2013/14 producing 3,000 students each year.

2.33 The WRT concluded in its evidence to us that pharmacists from all sectors should be placed on the shortage occupation list. It argued that continued non-inclusion of community pharmacists could result in increased competition when recruiting pharmacists trained by the NHS, and that this could place additional pressure on the NHS to increase the financial rewards and benefits offered in an effort to improve retention. We reject this argument: it cannot be right to allow immigration purely to keep pay down in the NHS.

2.34 The Scottish Government has said that work is under way to identify issues in NHS Scotland regarding Band 6 vacancies. Vacancy levels dropped significantly between May 2009 and October 2009 (from 40 per cent to 19 per cent). The Scottish Government Health Directorates are currently taking forward work in partnership with the trade unions to gain a better understanding of the issues involved. In the meantime, they have requested that NHS hospital pharmacists are not included on the shortage occupation list.

“Taking account of the ongoing work to address the current situation in NHS Scotland hospital pharmacies, it is our recommendation that hospital pharmacists are not recommended by the MAC for inclusion in either the national shortage occupation list or the Scottish shortage occupation list.”

Scottish Government evidence to the MAC

2.35 On balance, our top-down indicators have moved towards showing signs of shortage, but they do not strongly suggest a shortage overall. The very large rises in average pay are of particular note. However, bottom-up evidence has changed little since our last report. We acknowledge demand drivers, but we also recognise that there are a large number of temporary pharmacists filling ‘vacant’ positions. There are also rising numbers of trainee pharmacists. We also note that pharmacies virtually never close due to a shortage of pharmacists.

2.36 We do not wish to displace resident workers. However, neither do we want pharmacies to be prevented from offering additional and important health services over and above those they are contracted to provide. On balance we recommend that all pharmacists and pre-registration pharmacists are included on the shortage occupation list. But, given rising numbers of trainees, this should be for only a short time.

2.37 We note the views of the Scottish Government. Although the design of the PBS means that we cannot exclude Scotland from our recommendation, the concern expressed indicates a need to keep a close watching brief on this occupation. Prior to any further review of this occupation, the community sector needs to undertake work to better understand the reasons why such large numbers prefer to work as locums rather than in permanent positions.

Pre-registration pharmacists

2.38 As stated above, following training, pharmacists need to undertake a year of pre-registration training. This is also true for those trained overseas who come to the UK, and who must first complete the OSPAP. The WRT told us that anecdotal evidence suggests that NHS pre-registration trainee pharmacists are moving to community pharmacy once qualified because starting wages are higher.

2.39 Evidence provided by the WRT indicates that retention of pre-registration pharmacists within the NHS ranges widely, from 43 per cent in Yorkshire and the Humberside to 85 per cent in the South West.

2.40 In 2009, NHS Employers undertook an engagement exercise with NHS organisations to understand how recruitment and retention of Band 6 pharmacists could be improved. A range of initiatives has helped in some

areas (including increasing the number of pre-registration placements and funding postgraduate courses).

2.41 Putting any pharmacists on the shortage occupation list requires us also to consider whether we should include the equivalent pre-registration pharmacists. As non-EEA pharmacists must complete a year of pre-registration training before becoming registered, it is sensible to include them on the shortage occupation list. We therefore continue to include pre-registration pharmacists on our list. As we are extending our recommendation to all pharmacists, we are also recommending that all pre-registration pharmacists should be included on the shortage occupation list.

2.3 Engineering technicians

Box 2.2: Engineering technicians

Occupation(s) and SOC code(s): Engineering technicians, 3113

Only the following job title within this occupation is included on our recommended shortage occupation list: Commissioning engineer (not discussed in this report)

Top-down data

3113 Engineering technicians

Skilled Skilled in top-down analysis (as calculated for our September 2008 report)

SOC skill level classification	3	Median hourly pay for all employees	£13.90
Percentage of employees with NVQ3+	60.6		

Shortage Excluding NESS, occupation passes 3 out of 12 valid indicators

Indicators	Apr 09	Sept 09	Spring 10	Indicators (continued)	Apr 09	Sept 09	Spring 10
P1 Annual percentage change of median hourly pay for all employees	4.5	4.5	4.9	V2 Annual percentage change in employment estimates	6.1	1.7	-7.8
P2 Annual percentage change of mean hourly pay for all employees	6.9	6.9	4.2	V3 Annual percentage change of median total paid hours	-0.2	-0.2	-1.3
P3 Return to occupation, given NQF3, with age and region controls	0.91	1.11	1.42	V4 Absolute change in proportion working for employer under 1 year	0.00	-0.01	-0.04
I1 Absolute change in median vacancy duration	26.5	-0.3	-22.3	E1 SSVs as a percentage of all vacancies	36	x	35.1
I2 Live unfilled vacancies/unemployment by sought occupation	1.41	0.78	0.21	E2 SSVs as a percentage of hard-to-fill vacancies	100	x	100
V1 Annual percentage change in unemployment by sought occupation	50.8	185.6	110.6	E3 SSVs as a percentage of total employment	0.37	x	0.13
Sensible indicators	Apr 09	Sept 09	Spring 10		Apr 09	Sept 09	Spring 10
Percentage of workforce born non-EEA	4	3	4	Percentage of workforce trained in past 13 weeks	37	34	31

Stakeholder evidence:

We received written evidence from Marshall Aerospace and AIM Aviation (Henshalls) Ltd. We took evidence when we met with Semta (the Sector Skills Council for Science, Engineering and Manufacturing Technologies).

2.42 In its response to our autumn 2009 shortage report (MAC, 2009b), the Government asked us to look again at engineering technicians, with a particular emphasis on aircraft component manufacturing engineers.

2.43 Having looked at the job description for aircraft component manufacturing engineers, we have concluded that the allocation of this job title to the engineering technician occupation is incorrect and that it should be

bracketed under SOC 5223, the code for metal working production and maintenance fitters.

2.44 Metal working production and maintenance fitters erect, install and repair electrical and mechanical plant and industrial machinery; fit and assemble parts and sub-assemblies in the manufacture of metal products; and test and adjust new motor vehicles and engines. The key abilities and responsibilities in the job description for aircraft component manufacturing engineers, when cross-referenced with the tasks associated with this occupation and with engineering technicians, demonstrate that the level of skill required does not align with SOC 3113 but with SOC 5223.

2.45 We also received evidence from employers of aircraft component manufacturing engineers (Marshall Aerospace and AIM Aviation (Henshalls) Ltd) that SOC 5223 is more appropriate as the key roles and responsibilities are more closely aligned with this SOC code. When we met Semta, it also indicated that it agreed with this view.

2.46 We therefore discuss the evidence received for aircraft component manufacturing engineers under the metal working production and maintenance fitters occupation. Nonetheless, for completeness' sake, we have also reviewed the engineering technicians occupation.

2.47 When we reviewed SOC 3113 (engineering technicians) in our autumn 2009 report (MAC, 2009b), we confirmed that this occupation is skilled. At that time we included commissioning engineers on our recommended shortage occupation list as a subset of this occupation, and we recommended the removal of aircraft component manufacturing engineers from the list (also a subset of this occupation).

2.48 Our analysis of the top-down data indicates that engineering technicians pass on 3 out of 12 shortage indicators, suggesting that there is no shortage overall in this occupation. Pay has increased, and a high proportion of vacancies reported by employers are due to skills shortages. But other labour market indicators suggest a slackening in the labour market in this occupation rather than a shortage. Vacancy durations have fallen, and the ratio of vacancies to the stock of unemployed is low and a fraction of its value a year ago. Unemployment has increased while employment in the occupation has fallen.

2.49 When we wrote to stakeholders we said we would review other engineering technician jobs where the situation had substantially changed since our last call for evidence, or where there was previously an issue. We did not receive any evidence relating to this occupation.

2.50 We will cover engineering technicians again when we review the whole labour market for our autumn 2010 review. In the meantime, we maintain the current position of having the commissioning engineer job title included on the shortage occupation list, having received sufficient evidence regarding this occupation only six months ago.

2.4 Metal working production and maintenance fitters

Box 2.3: Metal working production and maintenance fitters

Occupation(s) and SOC code(s): Metal working production and maintenance fitters, 5223

Only the following job title within this occupation is included on our recommended shortage occupation list: Licensed and military certifying engineer/inspector technician and airframe fitter

Top-down data

5223 Metal working production and maintenance fitters

Skilled Skilled in top-down analysis (as calculated for our September 2008 report)

SOC skill level classification	3	Median hourly pay for all employees	£11.88
Percentage of employees with NVQ3+	43.3		

Shortage Excluding NESS, occupation passes 4 out of 12 valid indicators

Indicators	Apr 09	Sept 09	Spring 10	Indicators (continued)	Apr 09	Sept 09	Spring 10
P1 Annual percentage change of median hourly pay for all employees	2.3	2.3	4.6	V2 Annual percentage change in employment estimates	-5.7	-1.3	-1.3
P2 Annual percentage change of mean hourly pay for all employees	1.4	1.4	3.5	V3 Annual percentage change of median total paid hours	0.6	0.6	-2.1
P3 Return to occupation, given NQF3, with age and region controls	0.86	1.05	1.40	V4 Absolute change in proportion working for employer under 1 year	-0.02	-0.01	-0.01
I1 Absolute change in median vacancy duration	1.4	-3.6	-0.4	E1 SSVs as a percentage of all vacancies	27	x	32.7
I2 Live unfilled vacancies/unemployment by sought occupation	0.48	0.24	0.07	E2 SSVs as a percentage of hard-to-fill vacancies	81	x	86.1
V1 Annual percentage change in unemployment by sought occupation	41.1	164.7	88.3	E3 SSVs as a percentage of total employment	0.71	x	0.32

Sensible indicators	Apr 09	Sept 09	Spring 10		Apr 09	Sept 09	Spring 10
Percentage of workforce born non-EEA	4	3	4	Percentage of workforce trained in past 13 weeks	24	24	18

Stakeholder evidence:

We received written evidence from Marshall Aerospace and AIM Aviation (Henshalls) Ltd.

2.51 We first reviewed this occupation in our autumn 2009 report (MAC, 2009b). We confirmed that metal working production and maintenance fitters are skilled. At the time we included licensed and military certifying engineers/inspector technicians and airframe fitters on our recommended shortage occupation list.

2.52 Our analysis of the top-down data indicates that metal working production and maintenance fitters pass 4 out of 12 of our shortage indicators,

which does not strongly suggest a shortage in this occupation. Employers report a high number of skills shortage vacancies in comparison with all vacancies and also with employment. Pay has also increased, with the change in median pay showing a shortage; mean pay has also increased but not to a sufficient extent to show a shortage. Other indicators do not point to a shortage. Unemployment in the occupation is still increasing, while employment in the occupation continues to fall. Average vacancy durations have fallen and the ratio of vacancies to the stock of unemployed remains low.

2.53 As discussed earlier in this chapter, we are considering this occupation again because the Government asked us to review aircraft component manufacturing engineers, previously reviewed under SOC 3113. In our autumn 2009 shortage report (MAC, 2009b), we recommended that this job title be removed from the shortage occupation list due to insufficient evidence of shortage.

2.54 In terms of our methodology of skilled, shortage, sensible, we received evidence relating only to aircraft component manufacturing engineers. We did not receive evidence for any other job titles within this occupation.

2.55 Semta produces an Engineering Careers Route Planner that provides information on entry standards, qualifications and career progression within engineering. The suggested entry-level qualification for aircraft component manufacturing engineers is an Advanced Apprenticeship (equivalent to NVQ or SVQ Level 3).

2.56 AIM Aviation (Henshalls) Ltd is the only UK manufacturer of bespoke galley units for aircraft. The company told us that it employs 246 aircraft component manufacturing engineers to do this work. Of these, 143 are UK and wider EEA employees, 61 are UK and wider EEA contractors, and 42 are work permit holders.

2.57 AIM Aviation (Henshalls) Ltd has no immediate vacancies, although it could have 16 vacancies if work permits for Filipino employees are not renewed in 2010. We therefore note that the shortage route is not the appropriate mechanism for dealing with the issues faced by AIM Aviation (Henshalls) Ltd. The company's concerns centre on the fact that the allocation of a job title in the SOC affects the UK Border Agency (UKBA) code of practice. In the case of aircraft component manufacturing engineers, the current incorrect allocation to SOC 3113 (engineering technicians) has resulted in a minimum salary level in the current UKBA code of practice which is above the actual pay for aircraft component manufacturing engineers. This therefore makes it difficult for AIM Aviation (Henshalls) Ltd to renew its work permits for Filipino employees.

2.58 We note that there is a longer-term need to meet the forecast retirement of six employees per annum, and that AIM Aviation (Henshalls) Ltd

has sought to fill the potential shortfall with apprentices; however, at present there are no candidates.

“Our ongoing success and current contracts would be compromised by the inability to obtain the renewal of work permits for the 16 Filipino workers in 2010.”

AIM Aviation (Henshalls) Ltd evidence to the MAC

2.59 AIM Aviation (Henshalls) Ltd made progress in addressing the previous shortage of aircraft component manufacturing engineers through the creation and filling of 52 new full-time positions. The company increased turnover and had a continuing need for aircraft component manufacturing engineers to be on the shortage occupation list.

2.60 On the ‘sensible’ test, in November 2008 AIM Aviation (Henshalls) Ltd opened a new manufacturing plant in Wales, which by September 2009 was employing 50 local personnel.

2.61 AIM Aviation (Henshalls) Ltd has set up an internal training programme to promote between five and ten trainees per annum, at a diluted skill status, after the first two years. There has been a 50 per cent attrition rate to date, with five trainees currently in employment, but there is a continuing desire to pursue the employment of trainees as a long-term solution to shortages. Nine of the previous 19 retirees have been retained on flexible work patterns. AIM Aviation (Henshalls) Ltd also continues to use Filipino contractors because of their aircraft degrees and experience.

2.62 The top-down data do not indicate a shortage across this occupation. However, we are looking at only one job title within the occupation and therefore have paid much more attention to the bottom-up evidence we received from the employer. We did not receive evidence to indicate that there is a clear, current shortage of aircraft component manufacturing engineers, and on that basis we do not recommend that the job title is reinstated on the shortage occupation list. We do recommend that UKBA reclassifies the job title under the metal working production and maintenance fitters SOC code.

2.5 Musicians

Box 2.4: Musicians

Occupation(s) and SOC code(s): Musicians, 3415

Only the following job title within this occupation is included on our recommended shortage occupation list: Orchestral musicians who are leaders or principals and who meet the standard required by internationally recognised UK orchestras (including London Symphony Orchestra, London Philharmonic Orchestra, Philharmonia Orchestra and Royal Philharmonic Orchestra)

Top-down data

3415 Musicians

Skilled in top-down analysis (as calculated for our September 2008 report)							
Skilled				Median hourly pay for all employees	£13.95		
SOC skill level classification	3						
Percentage of employees with NVQ3+	68.5						
Shortage Excluding NESS, occupation passes 5 out of 10 valid indicators							
Indicators	Apr 09	Sept 09	Spring 10	Indicators (continued)	Apr 09	Sept 09	Spring 10
P1 Annual percentage change of median hourly pay for all employees	7.4	7.4	26.6	V2 Annual percentage change in employment estimates	-22.4	-6.4	8.1
P2 Annual percentage change of mean hourly pay for all employees	5.6	5.6	8.3	V3 Annual percentage change of median total paid hours	-2.0	-2.0	x
P3 Return to occupation, given NQF3, with age and region controls	1.27	1.03	1.36	V4 Absolute change in proportion working for employer under 1 year	0.04	0.00	-0.07
I1 Absolute change in median vacancy duration	x	-140.4	x	E1 SSVs as a percentage of all vacancies	74	x	43.4
I2 Live unfilled vacancies/unemployment by sought occupation	0.01	0.01	0.01	E2 SSVs as a percentage of hard-to-fill vacancies	100	x	100.0
V1 Annual percentage change in unemployment by sought occupation	-9.8	23.1	38.6	E3 SSVs as a percentage of total employment	0.27	x	0.13
Sensible indicators	Apr 09	Sept 09	Spring 10		Apr 09	Sept 09	Spring 10
Percentage of workforce born non-EEA	11	8	8	Percentage of workforce trained in past 13 weeks	18	9	6

Stakeholder evidence:

We received written evidence from the Association of British Orchestras (ABO), the Incorporated Society of Musicians (ISM), the Society of London Theatre, the Theatrical Management Association and Conservatoires UK. We took evidence when we met with the Musicians' Union (MU) and also when we met with both the ABO and the MU on 2 March 2010.

2.63 We first reviewed this occupation in our spring 2009 report (MAC, 2009a). We confirmed that musicians are skilled and included skilled orchestral musicians on our recommended shortage occupation list as a subset of this occupation.

2.64 Following the inclusion of orchestral musicians on our list, we received representations from the Musicians' Union (MU) that, for the purposes of the shortage occupation list, we had defined orchestral musicians too broadly. The MU was also concerned that we had wrongly stated that it agreed with our decision to include orchestral musicians on the list. We acknowledge this error and have apologised to the MU.

2.65 We informed the MU and the Association of British Orchestras (ABO), which made the original request for orchestral musicians to be included on the shortage occupation list, that we would review the job title again in this report.

2.66 Our analysis of the latest available top-down data indicates that musicians pass on five out of ten shortage indicators, which suggests that this occupation may be suffering from a shortage. The median and mean pay have been increasing, indicating that employers may be responding to a shortage of labour by increasing wages. In addition, the number of skills shortage vacancies as a proportion of all vacancies and as a proportion of hard-to-fill vacancies is high, indicating a shortage. The level of employment in this occupation has also been growing.

2.67 However, other indicators do not show a shortage. Despite the growth in the level of employment for this occupation, the percentage change in unemployment remains high, indicating that there is a strong supply of available labour. Also, the vacancy to unemployment ratio and the change in new hires are both low, showing that there is not a shortage in this occupation.

2.68 Nonetheless, the top-down analysis is only able to examine data for the aggregate four-digit SOC occupation code. The occupational group – musicians – is broad, covering a diverse range of job titles. Furthermore, it is a small group, and consequently the top-down data are not always reliable. This is particularly true for pay data: ASHE is based on a sample of employee jobs taken from HM Revenue and Customs PAYE records. Because many musicians are self-employed, they will not be captured in ASHE, reducing the already small sample size, and its reliability, yet further. As a result of these issues, we have placed greater emphasis on the bottom-up evidence we received for job titles within this occupation.

2.69 For this report we received bottom-up evidence relating only to orchestral musicians, and it is this job title that we consider further here. Orchestras are comprised of leaders, principals or sub-principals and the tutti (also known as the rank and file).

2.70 The ABO provided evidence on vacancies that it had collected from responses to a questionnaire it had sent to 65 orchestras. They received responses from the 20 orchestras that employ full time musicians or regular freelancers. They employ 1,056 people and are carrying, in total, approximately 119 vacancies, which are taking on average 18 to 24 months to

fill. The MU also provided vacancy data for orchestral musicians showing that it can often take as long as 12 to 18 months to fill vacancies by the time the advert has been running and auditions have taken place.

2.71 Jobs within an orchestra are advertised on only one or two orchestral websites and also in the Saturday edition of a national newspaper. All applicants are called to live auditions, after which they are narrowed down to a shortlist of between 6 and 12. The shortlisted applicants are given full orchestral trials, which last from three to six months per person.

2.72 The trial period for each 'vacancy' can last from 18 to 30 months. The ABO counts this extensive period as constituting a vacancy because no one has been permanently appointed to fill the role: what is happening is that the orchestra is trialling a range of prospective appointees. This largely explains the high vacancy rate in this occupation.

2.73 The MU pointed out that freelancers are able to fill vacancies for short periods and offer cover while a permanent orchestral member is found. It claims that there are currently some 1,600 freelance orchestral musicians, compared with around 1,400 permanently employed orchestral musicians. The ABO told us that there are upwards of 3,000 freelance orchestral musicians in the UK. We were told that freelance orchestral musicians tend not to accept permanent positions in an orchestra, preferring to maintain their freelance status, and often combining freelance orchestral work with teaching.

2.74 The Incorporated Society of Musicians (ISM) told us that orchestras will bring in young graduates from conservatoires on internships to fill temporary positions without offering them a permanent position at the end of that period. The nine UK conservatoires, and additional higher education institutions, all contribute performers to the pool of available talent. However, many conservatoire graduates have to seek work in other fields owing to the dearth of permanent positions available to them.

"The pool of talent is sufficient within the UK and EEA to fill any orchestral vacancies."

ISM evidence to the MAC

2.75 The ISM said that reports from its members indicated that, in a particular case study, a vacancy was empty for five years and many musicians 'trially' for the position during this time (including from outside the UK). The case study indicated that musicians would fill the place temporarily without any one of them being selected permanently; this enabled the orchestra to pay less and not make any payments into pension schemes or other benefit schemes.

2.76 The successful orchestral musician, regardless of the position to which he or she was originally recruited, must be able to step up to principal or sub-principal role at some point during their employment. A principal will earn more than the rank and file, but length of service will also push pay up.

2.77 The ABO emphasised the importance of British orchestras maintaining their global competitiveness and establishing themselves as internationally renowned orchestras. It argued that this requires that, in some circumstances, it is necessary to recruit from outside the EEA.

2.78 The MU, however, made the point that the shortage route was not the only route available to orchestras who wanted to bring in foreign talent from outside the EEA. The salary thresholds for the PBS Tier 1 General route would be too high for most orchestral musicians. Nonetheless, some non-EEA students could be trained in the UK and then stay on via, for example, the Tier 1 Post-Study Work route.

2.79 Another potential route available is the Resident Labour Market Test (RLMT) route under Tier 2. The ABO said that this route is not suitable because the UKBA codes of practice state that a certificate of sponsorship must be issued within six months of the position first being advertised. In practice, non-EEA musicians coming for trials come via Tier 5 of the PBS, for temporary workers. As described above, these trials typically last for longer than six months. This means that the RLMT recruitment window will have expired by the time the trial is complete. The MU acknowledged that the RLMT may not be applicable to orchestral musicians, particularly for recruiting at the highest level: the leaders and principals.

2.80 In a discussion with us, the ABO said there is a shortage of orchestral musicians at the very highest level. The MU would only agree that certain orchestras perceive there is a shortage of musicians at the very highest level. Nevertheless, they both accepted that the recruitment process for orchestral musicians is excessively lengthy and we note that they understand the need to examine ways of reducing recruitment times and improving recruitment practices to benefit both employers and employees.

2.81 Opinions were split in the other evidence we received. The ISM considers that orchestral musicians should be removed from the shortage occupation list on the basis that there is no shortage, other than at the very highest level. The Society of London Theatre and the Theatrical Management Association considered that this job title should be on the shortage occupation list as there was sufficient evidence of a shortage. Conservatoires UK did not express a view either way.

2.82 In conclusion, we believe that there is a need to ensure global competitiveness and that it is therefore important to recruit the very best orchestral musicians from the world talent pool. Taking all the evidence into account, we therefore recommend that orchestral musicians who are leaders or principals and who meet the standard required by internationally recognised UK orchestras (including London Symphony Orchestra, London Philharmonic Orchestra, Philharmonia Orchestra and Royal Philharmonic Orchestra) should remain on the shortage occupation list. We also recommend that the tutti (also known as the rank and file) be removed from the shortage occupation list.

2.83 However, we do see how, because the recruitment processes for musicians do not map across to the RLMT, this recommendation could present the industry with difficulties. We therefore recommend further that the industry works with the UKBA to explore the possibility of extending the RLMT time requirement for issuing a certificate of sponsorship to 12 or 18 months in the codes of practice for orchestral musicians. We understand that there is no set criterion for such exceptions. Nevertheless, we believe that any representation to the UKBA may sensibly need to set out: the rationale for why it takes more than six months to fill a vacancy; the adverse consequences of filling vacancies more quickly; what the industry is doing in the longer term to reduce the time it takes to fill its vacancies; and also what the industry is doing to eliminate the possible scope for exploitation of employees kept on temporary contracts for over six months.

2.6 Fishermen

Box 2.5: Fishermen

Occupation(s) and SOC code(s): Agricultural and fishing trades not elsewhere classified, 5119/Fishing and agriculture-related occupations not elsewhere classified, 9119

This occupation is not recommended for inclusion on our recommended shortage occupation list.

Top-down data

The top-down data relating to these SOC codes are not relevant as they indicate that the occupation, as a whole, does not meet our skills criteria.

Stakeholder evidence:

We received written evidence from the Scottish Fishermen’s Federation, Improve Ltd (the Sector Skills Council for the Food and Drink Manufacturing Industry), Seafish, the National Federation of Fishermen’s Organisations, the North East Fishermen’s Training Association Ltd and John Galbraith, and an email of support from Fergus Ewing MSP.

2.84 We understand that a large number of non-EEA fishermen are currently working on fishing vessels under ‘To Join Ship’ visas. These visas are designed to enable foreign national crew to transit the UK to pick up their ship and leave for the next foreign port of call. Those joining vessels that operate in international waters but do not visit a foreign port (for example, deep sea fishing vessels and vessels supplying oil platforms) also currently benefit from these arrangements. UKBA told us that it is concerned to ensure that these arrangements are not used to facilitate the entry of workers who will work solely or largely in territorial waters.

2.85 When the Tier 2 Statement of Intent was published, the Government indicated that it intended to bring crew joining any vessel engaged in a 'one port voyage' within the scope of the PBS. 'One port voyage' means a situation in which a vessel operates from a UK port and travels outside UK waters without visiting a foreign port before returning to the UK port. A timescale for doing this has yet to be determined. However, the UKBA is launching temporary arrangements under which third country national fishermen working in the inshore fleet can obtain permission to work without having to qualify under the PBS. This will involve visas being issued for a limited number of fishermen that will allow them to remain working for up to possibly 18 months.

2.86 The industry had asked us to review the occupation for inclusion on the shortage occupation list, which would be a potential alternative immigration route, during the summer of 2009. We decided that we did not have sufficient time to consider the occupation fully in time for our autumn 2009 report and therefore held it over for this review. In the meantime, the interim arrangements outlined above have, at least temporarily, provided a solution for the sector. Despite this, we completed our review as promised.

2.87 During our review we met with representatives from industry, we requested evidence from relevant stakeholders and we visited a fishing vessel based at Fraserburgh in Scotland.

2.88 This occupation is not currently on the shortage occupation list. The occupation falls under two SOC codes (5119 and 9119). Our analysis of top-down data indicates that neither is skilled. Therefore, we relied on bottom-up evidence to indicate whether the occupation is skilled.

2.89 Within the occupation 'fishermen', there are a number of recognised job titles:

- trainee;
- deckhand;
- mate; and
- skipper.

2.90 There is a recognised training pathway through these levels. New entrants into the occupation begin as trainees and are required to hold the basic level of training needed to go to sea. They must attend and pass the following NQF Level 2 training courses covering the Maritime and Coastguard Agency statutory safety training requirements:

- sea survival;
- health and safety;
- first aid; and
- fire fighting.

2.91 Trainees progress to deckhand through experience and further Level 2 training. It was suggested to us that deckhands should be considered higher than Level 2 because of the nature of the job. We accept that this job,

and indeed all jobs within the fishermen occupation, are at times arduous. But there is insufficient evidence to conclude that the level of skill required for deckhands is at Level 3 or above.

2.92 Formal qualification routes seem to move from deckhand through to skipper of an inshore area vessel, then to mate and then to skipper of a limited area vessel and unlimited area vessel. Mates and skippers have a higher degree of responsibility, including for safety, and will command vessels. There are Level 3 and Level 4 courses for these occupations and we therefore find that they are skilled jobs.

2.93 Although there appears to be no formal job title, some stakeholders told us that there was a further level of fishermen between deckhand and mate/skipper. Some, including the vessel we visited in Fraserburgh, referred to these as trawl masters. These are required to be more experienced than deckhands and would be expected to be able to carry out more duties around the vessel. However, there is no formally recognised qualification for this role and there was insufficient evidence to suggest that this job required skills to Level 3. It was also unclear as to how widely the job title was used.

2.94 Turning to 'shortage', the Scottish Fishermen's Federation told us that there is a lack of new recruits entering the fish catching industry in Scotland. In addition, workers who were already employed in the industry have changed careers and have found jobs elsewhere. We were given various reasons to account for the decline in resident workers, including adverse publicity about the industry, uncertainty about career prospects, and workers finding employment in jobs with more attractive working conditions, hours and pay.

2.95 Seafish is a non-departmental public body, sponsored by the four UK Government fisheries departments and funded by a levy on seafood. It works across all sectors in the seafood industry to promote good-quality, sustainable seafood. It is also responsible for co-ordinating the delivery and certification of mandatory fishermen's safety training. Seafish told us that there has been a steady decline in the number of new entrant fishermen joining formal training programmes. Currently 40 trainee fishermen are working towards Level 2 SVQ or Modern Apprenticeship qualifications in Scotland.

2.96 During 2009, Seafish added over 300 new fishermen from Scotland to its database. It told us that this suggests that there is a reasonable number of new domestic entrants looking for work in the Scottish fishing industry. However, Seafish also recognised that they may not all be competent deckhands and that there may be a high drop-out rate among them.

2.97 We also heard from John Galbraith, skipper of a fishing vessel working out of Campbeltown in Scotland. He told us that Scottish crewman were thin on the ground. He had tried to seek workers through the Campbeltown Jobcentre but had found none that were suitable for his requirements. Mr Galbraith told us that low wages, unsociable hours and

working some weekends were all contributing to recruitment problems. He said that the product being caught was priced the same as it was in the 1970s and so they cannot generate enough money to pay competitive wages.

“The traditional practice of training through the family no longer occurs and the role of fisherman is now very risky in terms of producing a regular income, which has a knock-on effect for other roles in the industry. As a consequence, young people are not entering the industry due to higher career expectations from other sectors.”

Improve Ltd evidence to the MAC

2.98 We received no evidence that there was a shortage of mates or skippers. Any potential shortages appear to be below mate level in jobs that fail our skilled test.

2.99 Finally, we consider whether it is sensible to allow employers to recruit from outside the EEA. It is encouraging that the industry acknowledges that the current shortages must be addressed by a strategy to increase the available resident workforce.

2.100 Seafish told us that the practice of employing non-EEA nationals is masking more serious (mainly financial) problems within the fishing industry. It went on to say that there was undoubtedly over-capacity in fishing fleets, and removing some of this could ease any crew shortages, provided that the vessels remaining became more profitable. Seafish also suggested that any shortfall could be made up from EEA nationals if they were paid a reasonable wage. If low wages are the primary cause of a lack of labour in an occupation, that makes it likely to fail on both our shortage and sensible tests.

“We are willing to help government and the fishing industry to promote, encourage and train domestic new entrants into the fishing industry. We believe that any shortfall can be made up from EEA nationals, providing that the fishing industry is sufficiently profitable to pay them a reasonable wage.”

Seafish evidence to the MAC

2.101 The interim arrangements put in place by UKBA for current non-EEA workers, and outlined earlier, will give the industry some time to adapt and time to encourage more resident labour market workers into the occupation.

2.102 In conclusion, there are no job titles within the fishermen occupation which we have found to be both skilled and in shortage. Therefore, this occupation is not included on our recommended shortage occupation list.

Chapter 3

Results

3.1 Introduction

3.1 Here we draw together the reviews of individual occupations covered in Chapter 2, and combine them with our previous recommended shortage occupation list, to provide our new recommended shortage occupation list for the UK under Tier 2 of the Point Based System (PBS).

3.2 The UK shortage occupation list

3.2 Before providing the full recommended shortage occupation list, we outline the key changes compared with the current list. We recommend that the following **amendments** be made to the shortage occupation list:

- All registered and pre-registration pharmacists within the pharmacists/pharmacologists occupation are included on the list (SOC 2213), replacing registered pharmacists working in the NHS or hospitals (including such pre-registration pharmacists).
- Orchestral musicians included on the list are more narrowly defined by specifying only those orchestral musicians who are orchestra leaders or principals and who meet the standard required by internationally recognised UK orchestras (SOC 3415).

3.3 Incomplete data mean that it is difficult to produce a precise figure, but based on the Labour Force Survey and bottom-up evidence, we estimate that jobs and occupations on the current shortage occupation list employ fewer than 500,000 people in the UK, accounting for less than 2 per cent of total employment in the UK. This estimate relates to the number of people (immigrants and non-immigrants) currently working in these occupations and job titles. It does not indicate potential flows of immigrants into job titles and occupations on the list, nor the number of vacancies currently available. The figure of under 500,000 compares with over 1 million on the original shortage occupation list produced for the old work permit system by the UK Border Agency; 700,000 on our original recommended lists in autumn 2008; and 530,000 on our recommended lists in spring 2009.

3.4 Our present recommendations will, if accepted, result in an increase in the number of pharmacist jobs covered by our list, partially offset by a smaller fall in the number of orchestral musician jobs. Our estimate of the employment coverage of the list remains at approximately 500,000.

3.5 Our updated recommended shortage occupation list for the UK is set out in Table 3.1. The Government will announce in due course whether it accepts our recommendations.

Table 3.1: Recommended UK shortage occupation list for Tier 2 of the Points Based System, March 2010

Related occupation title and SOC code (see notes 1 and 2)	Job titles included on the shortage occupation list	Other information: skill levels and review timescales (see note 3)
Production, works and maintenance managers (1121)	ONLY the following job titles within this occupation: project manager within the electricity transmission and distribution industry.	Review autumn 2010
Managers in mining and energy (1123)	ONLY the following job titles within this occupation: site manager, station manager, shift/group leader within the electricity transmission and distribution and the electricity generation industries.	Review autumn 2010
Civil engineers (2121)	ONLY the following job titles within this occupation: geotechnical engineer, geotechnical design engineer, geotechnical specialist, reservoir panel engineer, rock mechanics engineer, soil mechanics engineer, geomechanics engineer, tunnelling engineer, petroleum engineer, geoenvironmental engineer, contaminated land engineer, drilling engineer, completions engineer, fluids engineer, reservoir engineer, status resource engineer, offshore and subsea engineer, control and instrument engineer, process safety engineer, planning drilling engineer, subsurface engineer, project civil engineer in the electricity generation industry and contaminated land engineer.	Review autumn 2010
Mechanical engineer (2122)	ONLY the following job titles within this occupation: mechanical engineer in the electricity transmission and distribution and the electricity generation industries.	Review autumn 2010
Biological scientists and biochemists (2112);	ONLY the following job titles within this occupation: cardiac physiologist, clinical neurophysiologist, clinical vascular scientist, respiratory physiologist and sleep physiologist.	Review autumn 2010

Physicists, geologists and meteorologists (2113)	ONLY the following job titles within this occupation: engineering geologist, hydro geologist, geophysicist, geoscientist, geophysical specialist, engineering geophysicist, engineering geomorphologist, nuclear medicine scientist and radiotherapy physicist. Also staff working in diagnostic radiology (including magnetic resonance imaging).	Review autumn 2010
Electrical engineers (2123)	ONLY the following job titles within this occupation: electrical engineer in the oil and gas industry, power system engineer, control engineer, protection engineer, project control engineer, control and instrumentation engineer, assistant engineer, and electrical engineer within the electricity transmission and distribution industry.	Review autumn 2010
Chemical engineers (2125)	ALL jobs within this occupation.	Review autumn 2010
Design and development engineers (2126)	ONLY the following job title within this occupation: design engineer within the electricity transmission and distribution industry.	Review autumn 2010
Production and process engineers (2127)	ONLY the following job title within this occupation: plant process engineer within the electricity generation industry.	Review autumn 2010
Planning and quality control engineers (2128)	ONLY the following job titles within this occupation: planning/development engineer, and quality, health, safety and environment engineers within the electricity transmission and distribution industry.	Review autumn 2010
Engineering professionals n.e.c. (2129)	ONLY the following job titles within this occupation: project engineer, and proposals engineer within the electricity transmission and distribution industry.	Review autumn 2010

Medical practitioners (2211)	<p>ONLY the following job titles within this occupation:</p> <p>Consultants within the following specialties: audiological medicine, genitourinary medicine, haematology, medical microbiology and virology, neurology, nuclear medicine, obstetrics and gynaecology, occupational medicine and paediatric surgery.</p> <p>Consultants within the following specialties of psychiatry: forensic psychiatry, general psychiatry, learning disabilities psychiatry and old age psychiatry.</p> <p>Also non-consultant, non-training, medical staff posts in the following specialties: anaesthetics, paediatrics and general medicine specialties delivering acute care services (intensive care medicine, general internal medicine (acute), emergency medicine, general surgery, obstetrics and gynaecology, and trauma and orthopaedic surgery).</p> <p>Also ST4-level trainees in paediatrics.</p>	Review autumn 2010
Pharmacists/pharmacologists (2213)	<p>ONLY the following job titles within this occupation: registered pharmacist and pre-registration pharmacist.</p>	Review autumn 2010
Dental practitioners (2215)	<p>ONLY the following job title within this occupation: consultant in paediatric dentistry.</p>	Review autumn 2010
Veterinarians (2216)	<p>ONLY the following job title within this occupation: veterinary surgeon.</p>	<p>Must be registered as a member of the Royal College of Veterinary Surgeons (RCVS) to work in the UK.</p> <p>Review autumn 2010</p>
Secondary education teaching professionals (2314)	<p>ONLY the following job title within this occupation: secondary education teacher within the subjects of maths or science.</p>	Review autumn 2010
Special needs education teaching professionals (2316)	<p>ONLY the following job title within this occupation: all teaching posts in special schools.</p>	Review autumn 2010
Social workers (2442)	<p>ONLY the following job title within this occupation: social worker working in children's and family services.</p>	Review autumn 2010
Nurses (3211)	<p>ONLY the following job titles within this occupation: specialist nurse working in</p>	Review autumn 2010

	operating theatres, operating department practitioner and specialist nurse working in neonatal intensive care units.	
Engineering technicians (3113)	ONLY the following job title within this occupation: commissioning engineer.	Review autumn 2010
Science and engineering technicians n.e.c. (3119)	ONLY the following job title within this occupation: production controller in the electricity generation industry.	Review autumn 2010
Medical radiographers (3214)	ONLY the following job titles within this occupation: HPC-registered diagnostic radiographer, HPC-registered therapeutic radiographer and sonographer.	Review autumn 2010
Medical and dental technicians (3218)	ONLY the following job titles within this occupation: nuclear medicine technologist and radiotherapy technologist.	Review autumn 2010
Speech and language therapists (3223)	ONLY the following job title within this occupation: speech and language therapist (Agenda for Change bands 7+ or their independent sector equivalents).	Review autumn 2010
Therapists n.e.c. (3229)	ONLY the following job title within this occupation: HPC-registered orthoptist.	Review autumn 2010
Dancers and choreographers (3414)	ONLY the following job titles within this occupation: skilled classical ballet dancer and skilled contemporary dancer.	For this job to be skilled, classical ballet dancers must meet the standard required by internationally recognised UK ballet companies (e.g. Birmingham Royal Ballet, English National Ballet, Northern Ballet Theatre, the Royal Ballet and Scottish Ballet). For operational purposes, the type of factor to be taken into account may include whether the company has performed at or has been invited to perform at venues of the calibre of the Royal Opera House, Sadler's Wells or the

		<p>Barbican, either in the UK or overseas; attracts dancers and/or choreographers and other artists from other countries; and is endorsed as being internationally recognised by a UK industry body such as the Arts Councils (of England, Scotland and/or Wales).</p> <p>Skilled contemporary dancers must meet the standard required by internationally recognised UK contemporary dance companies (e.g. Shobana Jeyasingh Dance Company, Scottish Dance Theatre and Rambert Dance Company). For operational purposes, the type of factor to be taken into account may include whether the company has performed at or has been invited to perform at venues of the calibre of Sadler's Wells, either in the UK or overseas; attracts dancers and/or choreographers and other artists from all over the world; and is endorsed as being internationally recognised by a UK industry body such as the Arts Councils (of Scotland, Wales and/or England).</p>
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		Review autumn 2010
Musicians (3415)	ONLY the following job title within this occupation: orchestral musicians who are orchestra leaders or principals and who meet the standard required by internationally recognised UK orchestras.	For this job, the orchestral musicians who are leaders or principals must meet the standard required by internationally recognised UK orchestras (including London Symphony Orchestra, London Philharmonic Orchestra, Philharmonia Orchestra and Royal Philharmonic Orchestra). Review autumn 2010
Photographers and audio-visual equipment operators (3434)	ONLY the following job titles within this occupation: roles within visual effects and 2D/3D computer animation for film, television or video games: animation supervisor, animator, computer graphics supervisor, technical director, CG supervisor, modeller, rigging supervisor, rigger, matte painter, texture artist, compositing artist, producer, production manager, editor, R&D tools, R&D software, software engineer and system engineer.	Review autumn 2010
Welding trades (5215)	ONLY the following job title within this occupation: high-integrity pipe welder.	Three or more years of documented evidence of related on-the-job experience are required. Review autumn 2010
Metal working production and maintenance fitters (5223)	ONLY the following job titles within this occupation: licensed and military certifying engineer/inspector technician and airframe fitter.	Review autumn 2010
Line repairers and cable jointers (5243)	ONLY the following job title within this occupation: overhead linesworker within the electricity transmission and distribution industry.	Review autumn 2010
Electrical/electronics engineers n.e.c. (5249)	ONLY the following job title within this occupation: site supervisor within the electricity transmission and distribution	Review autumn 2010

	industry.	
Butchers, meat cutters (5431)	ONLY the following job titles within this occupation: skilled meat boner and skilled meat trimmer.	'Skilled' requires that the individual is earning at least £9.00 per hour. Review autumn 2010
Chefs, cooks (5434)	ONLY the following job title within this occupation: skilled chef.	'Skilled' requires that the individual is earning at least £8.45 per hour after deductions for accommodation, meals etc. Also, three years of relevant experience are required. Review autumn 2010
Care assistants and home carers (6115)	ONLY the following job title within this occupation: skilled senior care worker.	'Skilled' requires that the individual is earning at least £7.80 per hour after deductions for accommodation and meals etc, and has a relevant NQF Level 2 qualification and two years of relevant experience, and will have supervisory responsibilities. OR there is a requirement for a senior care worker to be qualified at NQF Level 3 or above (this is currently only the case in Scotland and Wales). Review autumn 2010
Animal care occupations n.e.c. (6139)	ONLY the following job title within this occupation: skilled work rider.	There must be documentary evidence that the individual has at least three years of relevant paid experience (with work responsibilities

		covering those skills acquired in a Level 3 NVQ in horse care and management or racehorse care and management) and the trainer should have submitted a registration form to the British Horseracing Authority for the individual. Review autumn 2010
Fishing and agriculture-related occupations n.e.c. (9119)	ONLY the following job title within this occupation: skilled sheep shearer.	The individual must hold the British Wool Marketing Board bronze medal (or equivalent) or above. Review autumn 2010
Notes: (1) n.e.c. stands for 'not elsewhere classified'. (2) For official job descriptions relating to four-digit occupations in SOC 2000, see www.statistics.gov.uk/methods_quality/ns_sec/downloads/SOC2000_Vol1_V5.pdf . (3) Timings are indicative. We may review any occupation at any time.		

3.3 The Scotland shortage occupation list

3.6 Table 3.2 shows the recommended shortage occupation list for Scotland. This list has not changed in this review.

Table 3.2: Recommended shortage occupation list for Scotland for Tier 2 of the Points Based System, September 2009		
Related occupation title and SOC code	Job titles included on the shortage occupation list	Other information: skill levels and review timescales
Medical practitioners (2211)	ONLY the following job title within this occupation: consultant radiologist.	Review autumn 2010

Chapter 4

Conclusions and next steps

4.1 Updating and reviewing the MAC methodology

4.1 The methodology used to review the five occupations in Chapter 2 is essentially the one we first developed for our first shortage report in autumn 2008 (MAC, 2008c) and used in the partial reviews carried out last year. At that time, we provided a comprehensive description of the approach and methodology we developed and used to justify the inclusion of occupations and job titles on the lists. We committed to evaluate and update this methodology every two years in time for the full review of the whole labour market, the first of which is provisionally planned for autumn 2010.

4.2 We recently published *Skilled, Shortage, Sensible: Review of Methodology* (MAC, 2010), which assesses our methodology and closely considers several areas and issues, including:

- how the shortage occupation lists function within immigration policy and relate to the Government's current objectives;
- the overall top-down approach and the specific methodologies developed for each of the three tests (skilled, shortage and sensible);
- the nature of the bottom-up evidence assembled, and the process for collecting and analysing this; and
- the dovetailing of the top-down data and the bottom-up evidence.

4.3 Although we are content with the principle of retaining an overall hybrid approach, we considered various issues in relation to the bottom-up evidence and, with regard to the top-down approach, a number of specific potential amendments to the shortage test in particular.

4.4 This review has been informed by research projects we commissioned to evaluate specific aspects of our methodology, by feedback received by experts and stakeholders, and by our own analysis. We have decided how we will revise the methodology for some aspects but we are still considering and testing various options. We will finalise the methodology in time for any future full review.

4.2 Updating and reviewing the lists: next steps

4.5 Should the Government confirm that it wishes us to continue, our next review in autumn 2010 will look at all occupations across the whole of the UK labour market. We will issue a general call for evidence at the commencement of this review.

4.6 We may recommend inclusion or removal of any occupation from the list at any time if we believe there is a robust case for doing this. We will maintain a list of occupations that we are actively reviewing and publish it on our website at www.ukba.homeoffice.gov.uk/mac.

4.3 MAC research programme

4.7 We conduct a research programme that has been specifically designed to enrich our understanding and improve the development of our shortage methodology. The following projects have been completed and our findings published alongside this review:

- estimating potential labour shortage and supply in the European Economic Area (EEA);
- a theoretical review of skills shortages and skills needs; and
- refining the top-down methodology to identify shortages in skilled occupations.

4.8 The following research projects on our shortage methodology are currently underway:

- an analysis of employer use of immigrant labour in selected occupations, from an employer and economy-wide perspective;
- an analysis of the relationship between production technology, skills and migration; and
- an analysis of the factors associated with employer use of migrant labour.

4.9 We are also in the process of commissioning research on broader topics in relation to the economic and labour market impacts of immigration. The titles of these research projects are set out below:

- Can a framework for the economic cost-benefit analysis of various immigration policies be developed to inform decision making and, if so, what data are required?
- An analysis of alternatives to immigration as a solution to sub-national and regional labour shortages.

4.10 We will publish the findings of these research projects on our website.

4.4 Stakeholder input

4.11 We are grateful to the stakeholders that have contributed to this review. Stakeholder input is essential to inform our advice to the Government. We will continue to hold our regional stakeholder forum events over the coming months and we have events arranged for London, Nottingham and Liverpool. We also have a Stakeholder Panel that we consult on significant issues.

4.12 We have produced a more detailed guide for stakeholders on how to submit evidence to us in relation to our recommended shortage occupation lists; this can be found on our website.

4.5 Requests for occupation reviews

4.13 A case can be put to us at any time that we should review an occupation. We will announce in our next report an intention to review the occupation if:

- the submission provides good evidence but it has been received too late to be considered for the forthcoming review; or
- the submission provides partial evidence that needs to be corroborated and investigated further.

4.14 In some cases, such as where we have recently reviewed an occupation, or where previous analysis has shown that the occupation is not skilled, we may decline a request to review an occupation.

Annex A Consultation

A.1 List of organisations that submitted evidence

Association of British Orchestras
Company Chemists' Association
Conservatoires UK
Department of Health
Galbraith, John C (fishing vessel owner)
Improve Limited
Incorporated Society of Musicians
Institution of Chemical Engineers (IChemE)
Marshall Aerospace, Aeropeople Ltd and AIM Aviation (Henshalls) Ltd
(combined submission)
Musicians Union
National Federation of Fishermen's Organisations
NHS Workforce Review Team
North East Fishermen's Training Association Ltd
Scottish Fishermen's Federation
Scottish Government
Seafish
Society of London Theatre and Theatrical Management Association

A.2 List of organisations met with

ADS Group Ltd
Aeropeople Ltd
AIM Aviation (Henshalls) Ltd
Association of British Orchestras
Company Chemists' Association
Department for Business, Innovation and Skills
Equality South West
Fraserburgh Inshore Fishermen Ltd
Greater London Authority
Marshall Aerospace
Musicians Union
National Federation of Fishermen's Organisations
NHS Workforce Review Team
Scottish Fishermen's Federation
Scottish Government (Minister for Culture, External Affairs and the
Constitution)
Senta
South West Regional Development Agency
UK Commission for Employment and Skills (UKCES)

A.3 List of stakeholder forum attendees

Scotland (Edinburgh)

Alliance of Sector Skills Councils
Contract Scotland
Convention of Scottish Local Authorities (COSLA)
David Hume Institute
Di Maggio's
Federation of Small Businesses
Financial Services Skills Council
First Permit Ltd
Futureskills Scotland
Harlequin Leisure Group Ltd
Hilton
Lantra
Mother India
National Australia Group (UK) Ltd
Nuffield Health
Oil & Gas UK
Overseas Nurses Network
People 1st
Registered Nursing Home Association
Scotland Office
Scottish Care
Scottish Chambers of Commerce
Scottish Council of Independent Schools
Scottish Enterprise
Scottish Executive
Scottish and Southern Energy
Scottish Tourism Forum
Skills Development Scotland
Talentscotland
Transcal Ltd
UK Border Agency
UNISON
University of Edinburgh
Windows Catering Co (Four) Ltd

Northern Ireland (Belfast)

ABP Lurgan
Anglo Beef Processors
Ango-North Irish Fish Producers Organisation Ltd
Bombardier Aerospace (UK) Ltd
Business in the Community
Carman Leather Ltd
Dunbia
Foyle Food Group
Gangmasters Licensing Authority
GEMS NI

Invest Northern Ireland
Irish Congress of Trade Unions
Lantra
Linden Foods
Northern Ireland Council for Ethnic Minorities
Northern Ireland Fish Producers Organisation Ltd
Northern Ireland Food and Drink Association
Northern Ireland Meat Exporters Association
Office of the First Minister and Deputy First Minister
Queen's University Belfast
S.T.E.P. (South Tyrone Empowerment Programme) NI
University of Ulster

Wales (Cardiff)

AIRBUS
Bronglais General Hospital
Caerphilly County Borough Council
Cardiff and Vale NHS trust
Cardiff University
Care Council for Wales
Care Forum Wales
Cogent
Community Cohesion Unit, Welsh Assembly
CwmTaf NHS Trust
e2e Linkers
Matchworkers International
Panasonic
Periconsultancy
SRK Consulting
Trades Union Congress
UK Border Agency
University of Glamorgan
Uwch Swyddog Ymchwil
Valleys Race Equality Council
Velindre NHS Trust
Wales Strategic Migration Partnership
Welsh Assembly Government
Welsh Local Government Association

North East England (Newcastle)

Eversheds LLP
Health and Safety Executive
International Paint Ltd
Matchworkers International
Newcastle City Council
Newcastle University
Nissan
North East Chamber of Commerce
North East Strategic Migration Partnership
North Tees and Hartlepool NHS Foundation Trust

Northumbria University
OSG Ship Management (UK) Ltd
Premier Care Homes
Recruitment and Employment Confederation
Skills for Care and Development
Southern Cross Healthcare
South Tees Hospitals NHS Foundation Trust
Stockton-on-Tees Borough Council
Tavistock Leisure Ltd
Tee, Esk and Wear Valleys NHS Foundation Trust
UK Border Agency

South West England (Plymouth)

Cornwall Strategic Partnership
COSMO Restaurant Group
e2e Linkers
Equality South West
Federation of Small Businesses
GMB Education Department
GMB Union
Jaipur Palace Ltd
NHS Cornwall and Isles of Scilly
North Bristol NHS Trust
Osborne House Care Home
Pinewood Residential and Nursing Home
Somerset Care Ltd
South Devon Healthcare NHS Foundation Trust
South West Councils
South West Regional Development Agency
Spice Bazaar
Tellus Group Ltd
UK Border Agency
West View Residential Home

West Midlands (Birmingham)

Advantage West Midlands
Barchester Healthcare
Birmingham Chamber of Commerce and Industry
Birmingham Royal Ballet
Davis Langdon LLP
Greenclose Ltd
Ian Henery Solicitors Ltd
Lasan Restaurant
Marblefield Ltd
Marche
Matchworkers International
Recruitment and Employment Confederation
Shahi Masala Restaurant
UK Border Agency
UK Council for International Student Affairs

Wave Training Limited
West Midlands Strategic Migration Partnership
Wright Hassall LLP

Yorkshire and The Humber (Leeds)

Academy of Oriental Cuisine
Bradford District Care Trust NHS
Bradford Teaching Hospitals NHS Trust
Curry Lounge
Environment Agency
Federation of Jewish Services
Global Resources Bureau Ltd
Government Office for Yorkshire and The Humber
Gunay UK Ltd
Harrogate and District NHS Foundation Trust
Henry Hyams Solicitors
Ho's Bakery Bar and Restaurant
Immigration Advisory Service
Leeds Professional College
Matchworkers International
Mid Yorkshire Hospitals NHS Trust
NHS Employers
Northern Ballet Theatre
Paragon Law
Sheffield University
Skills for Care
Mid Yorkshire Hospitals NHS Trust
UK Border Agency

Abbreviations

ABO	Association of British Orchestras
ASHE	Annual Survey of Hours and Earnings
BIS	Department for Business, Innovation and Skills
CCA	Company Chemists' Association
DH	Department of Health
EEA	European Economic Area
HMRC	Her Majesty's Revenue and Customs
ISM	Incorporated Society of Musicians
JCP	Jobcentre Plus
LFS	Labour Force Survey
MAC	Migration Advisory Committee
MU	Musicians' Union
NESS	National Employers Skills Survey
NHS	National Health Service
NPA	National Pharmacy Association
NVQ	National Vocational Qualification
OSPAP	Overseas Pharmacists Assessment Programme
PBS	Points Based System
RLMT	Resident Labour Market Test
RPSGB	Royal Pharmaceutical Society of Great Britain
SOC	Standard Occupational Classification system
UK	United Kingdom
UKBA	UK Border Agency
UKCES	UK Commission for Employment and Skills
WRT	Workforce Review Team (NHS)

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