

Skills Shortages
in the UK
Construction
Industry 2008

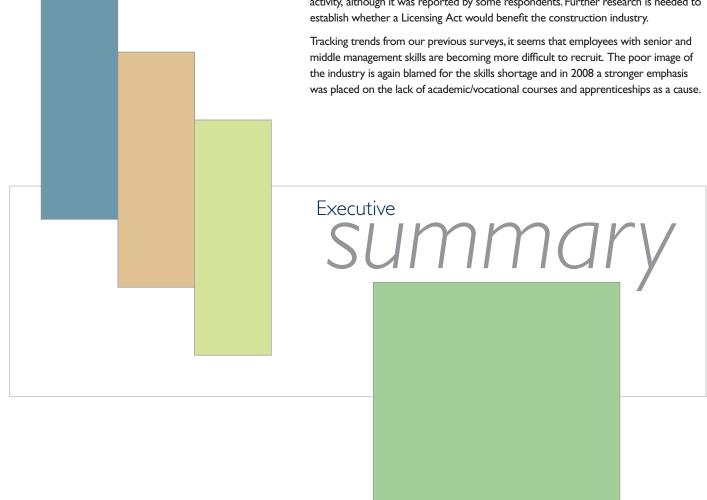
"Employees with senior and middle management skills are becoming more difficult to recruit."

#### Skills Shortages in the UK Construction Industry

The findings of this Chartered Institute of Building survey indicate that a shortage of skills continues to be a challenge for the industry. It is predicted that this issue is likely to worsen as the demand for construction increases. This is supported by a review of previous research which shows that the UK construction industry is suffering from a significant skills shortage. Construction output is predicted to grow by around 11% by 2011, led by a surge in the building of schools, ambitious housing targets and developments for the London Olympics.

The CIOB findings indicate that people possessing crafts/trades and senior/middle management skills are highly sought after. Labouring positions are filled mainly by migrant workers, despite a recent reduction in the numbers of migrant workers coming to the UK. The results further suggest that even if migrant workers do hold management skills, they are often not recruited due to poor English language competence. These are trends that will need to be addressed by the construction industry if it is to meet its increasing demand.

The survey found that organisations are more likely to recruit migrant workers who are already based in the UK. The survey did not reveal a high level of illegal gangmaster activity, although it was reported by some respondents. Further research is needed to establish whether a Licensing Act would benefit the construction industry.



#### Purpose

In 2005, The CIOB carried out a pilot skills shortages survey. This was followed by a larger scale survey in 2006. Both surveys concluded that respondents believed there to be a skills shortage in the UK construction industry. Crafts/trades and management positions were highlighted as the hardest jobs to recruit for in 2006. The purpose of this research was to map any trends from our previous surveys.

Migrant workers in the UK construction industry were also investigated, along with recommendations from the 2006 survey, to examine the perceived level of skill of migrant workers.

#### Background Research

A great deal of research has been undertaken on the level of skill within the UK construction industry. A joint report from the Construction Confederation and Construction Products Association<sup>1</sup> found improvements in recruiting plasterers and carpenters, but plumbers and steel benders were the hardest professions to recruit for. They found the general skills shortage led to 27% of contractors turning down work and 29% reporting a late completion of projects.

The Association for Consultancy and Engineering (ACE)<sup>2</sup> surveyed 26 consultancy and engineering firms in the construction sector, investigating skills shortages and recruitment agency behaviours. A skills shortage was reported and predicted to worsen by 2012.

80% of their respondents rated the service of recruitment consultants as average to poor. Recruitment consultants were said to poach staff, have excessive fee levels and in some cases fail to follow relevant codes of conduct. The Federation of Master Builders<sup>3</sup> surveyed 275 of its members. 48% claimed that they had labour supply difficulties and 34% had difficulty hiring skilled tradesmen to work as subcontractors. The London Annual Business Survey<sup>4</sup> found in both 2005 and 2006 that a lack of skills was the biggest factor affecting the performance of businesses in London.

The Institution of Civil Engineers (ICE)<sup>5</sup> has explored the health, safety and welfare of migrant construction workers in the South East of England. Detailed interviews were conducted with 54 migrant workers and seven employers. Only 30% of these workers had prior experience in the construction industry. They reported earning around six times more in the UK compared to in their home country. Half were employed in unskilled work and one third in trades such as bricklaying. Workers generally claimed that they did not move to more skilled areas of work over time, and even those with relevant qualifications were employed in unskilled work. Employers felt that communication with migrant workers was problematic; however none provided any English language training.

This report aims to add to the findings of previous research and track any possible trends. The survey offers a unique insight into the views and opinions of our members, who are professionals working across the construction industry.

# introduction

- <sup>1</sup> Construction Confederation and Construction Products Association Construction: Industry Trade Surveys: November 2007. Viewed 11 March 2008 www.thecc.org.uk/downloads/Trade Survey Q3 2007 report.pdf
- <sup>2</sup> Association for Consultancy and Engineering Skills Shortages and Recruitment Agency Behaviours. Viewed 11 March 2008 www.acenet.co.uk/documents/ACE Skills Report 2007.pdf 3 Federation of Master Builders - FMB State of Trade Survey Third Quarter of 2007.Viewed 11 March 2008
- www.fmb.org.uk/pdf\_pub/sotsurvey/fmb307.pdf
- London Development Agency- London Annual Business Surveys 2005 and 2006. Viewed 11 March 2008 www.lda.gov.uk/upload/pdf/London\_Annual\_Business\_Survey\_2006.pdf www.lda.gov.uk/upload/pdf/London Annual Business Survey 2005.pdf
- 5 Institution of Civil Engineers Health, Safety and Welfare of Migrant Construction Workers in the South East of England. Viewed 11 March 2008 www.ice.org.uk/downloads/HSW migrant workers report final 261107.pdf

Around 88,000 people are required annually to add to the existing workforce."

#### Background Research (continued)

#### **Construction Demand**

Skills shortages raise concern especially when considering the ambitious government targets that have been set for the industry. A total of three million new houses are to be built by 2020. This means that annually, 240,000 new homes must be built in England from 2016. Additionally, homes built from 2016 must be zero-carbon.

Building Schools for the Future, the £2bn national programme to modernise school buildings is underway, as is the £8.3bn Crossrail transport project in London.

The demand for construction personnel will also be increased due to the developments for the 2012 Olympics. The construction of the Olympic Park, Olympic Village and the Stratford City development will employ around 20,000 workers.

Around 88,000 people  $^{6}$  are required annually to add to the existing workforce.

### Strategies for Addressing Skills Shortages

The 2012 Olympic developments will create opportunities for many people. Focusing on skills, at least 2,000 people will be granted trainee apprenticeships and work placements; 1,000 job placements will be offered to those who require on-site experience after completing further education construction courses; 1,000 training placements will be available for local people aged over 21; training will be offered to 500 people to upgrade their skills to NVQ level 2 and above; and 50 undergraduates will be sponsored to complete a construction degree.

ConstructionSkills are offering incentives of £1,000 in an attempt to attract more employers to provide apprenticeship schemes.

The incentive will apply to the new programme-led scheme, where trainees spend two years attending college on a full time basis. After this period, a site placement of up to 12 months is provided by employers. Trainees will be qualified to NVQ level 2 and employers will gain an extra £1,000 in addition to the usual £2,000 payment. Employers will receive more benefits if they support their trainee to NVQ level 3.

Businesses are also addressing skills shortages in the industry. It has been reported that large bonuses have been offered by some businesses to attract workers with the required key skills.

Government initiatives such as the extension of compulsory education, aim to increase skills in the UK. By 2015 it will be compulsory for young people to stay in education or training until the age of 18, and we can expect to see an increase in apprenticeships to accommodate this. It is also predicted that by 2013 those who would like an apprenticeship will be guaranteed a placement.

A report from Lord Leitch<sup>7</sup> suggests that this initiative will lead to the creation of 400,000 apprenticeships in England by 2020. It is also suggests that 14-19 year-olds enrolled on the new diploma schemes, such as the construction and built environment diploma, will be able to move onto apprenticeships more easily following this training. Advice and support will also be widely available in order to provide young people with a more informed choice for their future educational and career paths.

Further government initiatives plan to offer free English language lessons to migrants. However, as the initiative is aimed at the integration of long-term migrants, economic migrants (who are typically short-term) will not be entitled to this funding.

#### **Apprenticeships**

Currently apprenticeship demand outstrips supply, with only 10% of employers in England currently offering apprenticeships. It is estimated that around 50,000 people apply for apprenticeships each year yet ConstructionSkills were only able to place around 8,500 of these into suitable schemes in 2007. This lack of apprenticeships will have long-term impact on the skills base of the future. Migrant workers can be seen as a solution to skills shortages, however this may only be short-term. There are reports that average wages are rising in Eastern Europe, and in turn, levels of Eastern European migrants coming to work in the UK are declining.

#### The 2007 Credit Crunch

The effects of the credit crunch have caused uncertainty in the construction industry.

Office building and fit-out markets are predicted to be affected by the credit crunch. It may become harder to obtain loans from banks to fund large private projects, and so there may be difficulties in getting the credit needed for developments.

This year, house builders have already reported a fall in prices, completion and advance sales. However, it is predicted that the housing market will not crash.

The Government's projects and commitments such as new social housing will ensure a level of public sector demand within the industry. House builders believe that Britain suffers from a shortage of accommodation and this sets a long term confidence in this market.

Despite the credit crunch, there is optimism in engineering and infrastructure projects. Rail sector programmes announced last year will continue, mainly funded by public spending. continued over...

#### References

- $^{\rm 6}$  ConstructionSkills Skills Update. Viewed 31 March 2008
- www.constructionskills.net/news/skillsupdate/20080330-olympics.asp
- <sup>7</sup> Leitch Review of Skills Prosperity For All in the Global Economy World Class Skills. December 2006. Viewed 11 March 2008 http://www.hm-treasury.gov.uk/media/6/4/leitch\_finalreport051206.pdf

#### continued...

However, it is also predicted that government spending may decrease and some infrastructure projects will be cut.

SMEs (small and medium enterprises) will be faced with larger costs and longer payment periods due to the credit crunch. Getting credit will become more difficult and more expensive. Subcontractors will also encounter problems. The outlook is more hopeful for those who do not work as specialists but are able to work in a wide range of areas.

#### **Migrant Workers**

Numbers of Polish workers applying to work in the UK has fallen for the first time since 2004 according to the Border and Immigration Agency. In the third quarter of 2007, 38,680 Poles signed up to the Government register of migrant workers. This is an 18% decrease from the previous year. Polish workers are attracted home by higher salaries, a stronger economy, the numerous job opportunities - particularly work for the 2012 European Football Championships, and the decreasing value of the pound.

#### **Gangmasters in the UK Construction Industry**

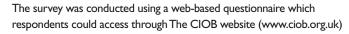
Gangmasters can be defined as those recruiting temporary workers or agencies providing labour (labour providers). The Gangmasters Licensing Act was applied to those operating in the horticulture, agriculture, food processing and shellfish gathering sectors from October 2006. Gangmasters working in these sectors must become licensed under the law, in an attempt to stamp out the exploitation of workers. This exploitation can include illegal activities such as low pay, long working hours, unfair deductions from wages, unsafe and illegal accommodation and transport, an unsafe working environment, and violence and intimidation. Workers should have the right to withdraw from the services of agencies without suffering any loss. The protection of vulnerable workers is considered in many respects, and not just from a health and safety position. Members of the Recruitment and Employment Confederation (REC) comply with high standards and best practice. REC's membership currently includes over 8,000 recruitment agencies and 6,000 recruitment professionals.

This law has not been extended to the construction industry. Gangmasters can act in an unregulated manner and may consequently exploit vulnerable workers such as migrants. It has been reported that gangmasters who choose to operate illegally may move into the unregulated sectors such as the construction industry.

Business Secretary John Hutton has expressed public opposition to extending the Gangmasters Licensing Act to the construction industry, stating that the Construction Design and Management Regulations 2007 (CDM) are sufficient to protect vulnerable workers. Conversely, the Union of Construction, Allied Trades and Technicians (UCATT) claim that whilst the CDM regulations ensure adequate health and safety in construction projects, they do not appear to protect other areas from exploitation. However, CDM regulations do cover the health and safety of everyone involved in the design, construction and management of projects, as well as considering the welfare and facilities for workers on site.

If the Act did cover the construction industry, the majority of vulnerable workers who are employed by agencies would be represented by a licensed body. However, those who are employed directly by a construction company may not be protected from such illegal activities described above. It should be noted that all workers in the UK are entitled to basic rights, including a national minimum wage, paid holiday, entitlement to work no more than an average of 48 hours per week and only authorised deductions from wages.

It has been reported that gangmasters who choose to operate illegally may move into the unregulated sectors such as the construction industry.



An email was sent to 14,525 CIOB members inviting them to take part in the survey. The survey was also open to the general public.

Respondents were asked general questions such as location, position in organisation and size of organisation, in order to explore diversity between organisations. For the purposes of the report, small organisations are those who employ up to 20 people, and large organisations are those who employ more than 500.

The survey questions were based largely upon the 2006 Skills Shortages in the UK Construction Industry survey, to enable analysis to track trends on these issues

Additional questions were added to the survey in order to investigate wider concerns relating to migrant workers in the industry, such as recruitment issues.

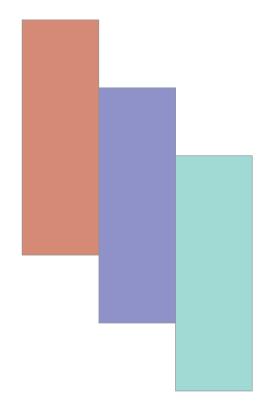
#### The Sample

1,243 CIOB members completed the survey. 37% of the respondents were based in London or the South East of England.

76% of the overall sample were in either management or director positions, and were largely from a construction discipline.

42% of respondents came from large companies employing more than 500 people.

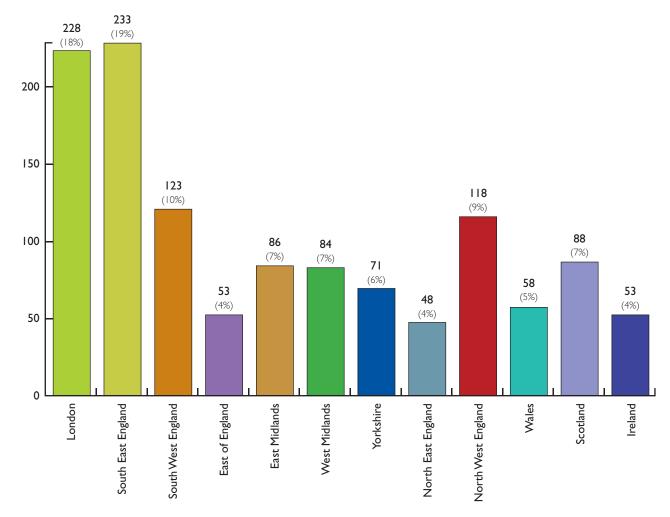
17% of respondents came from small organisations employing up to 20 employees.

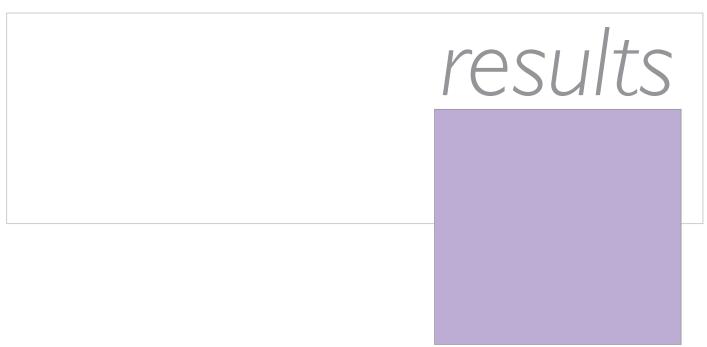


# methodology

### Demographic Questions

#### QI Where are you located?

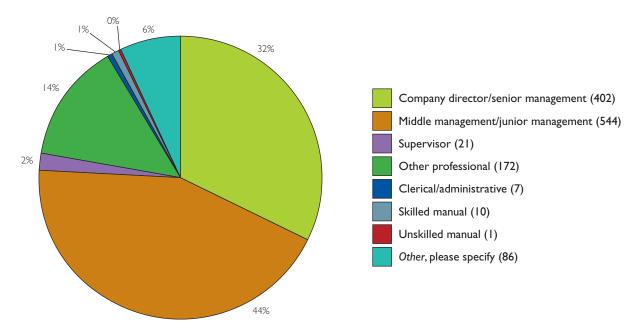




### Q2 Which description best suits your position in the organisation where you work?

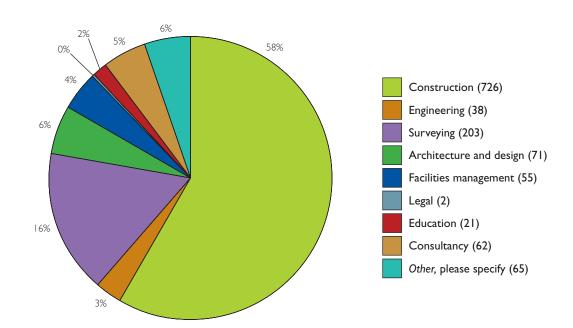
44% of respondents work in middle management/junior management positions and 32% work in company director/senior management positions.

Other answers included: student, trainee, academic, self employed.

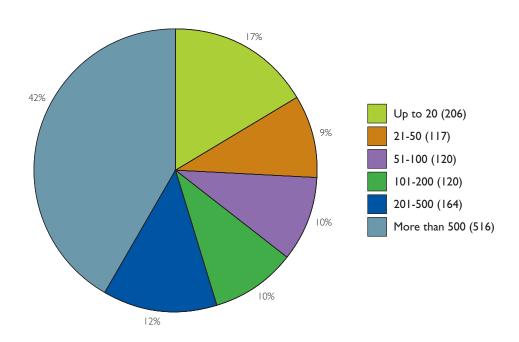


## Q3 Which of the following disciplines are you most closely involved with?

Other answers included: project management, social housing, maintenance.

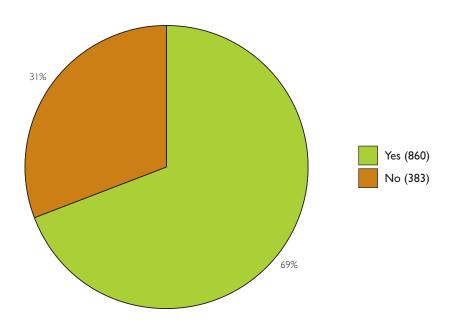


#### Q4 How many people are employed by your organisation?

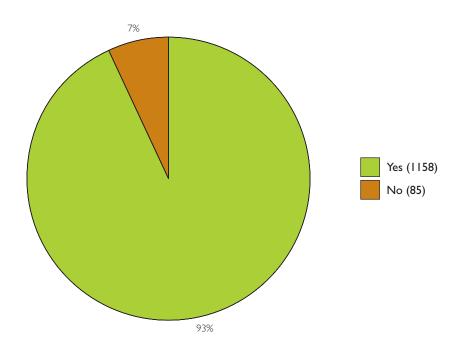


### Skills Shortages

Q5 Do you expect to see an increase in construction demand in 2008?

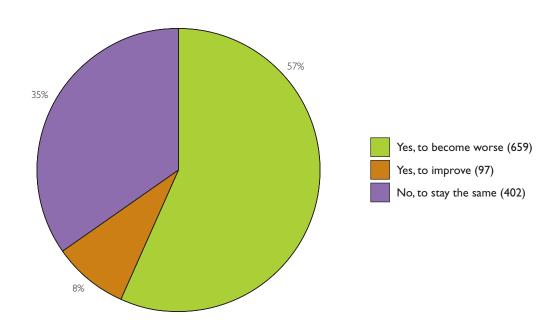


## Q6 Do you believe that there is a skills shortage in the UK construction industry?



## Q7 Do you expect the shortage of construction personnel to change in 2008?

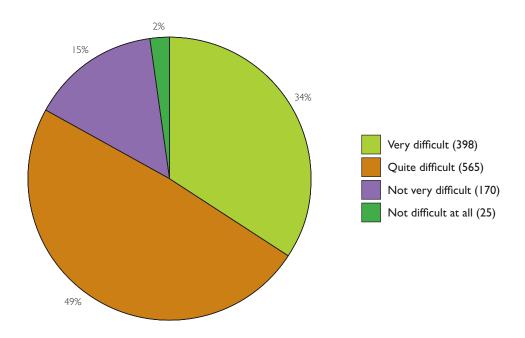
This question was asked to those respondents who believed that there is a skills shortage in the UK construction industry.



## Please rate the difficulty of recruiting workers at the following levels:

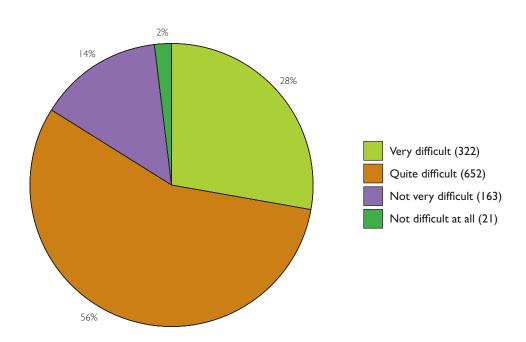
### Q8.1 Senior management

83% of respondents stated that senior managers were difficult to recruit. This compares to 76% in the 2006 survey.

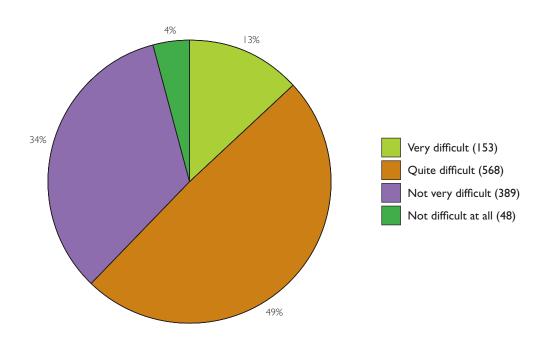


### Q8.2 Middle management

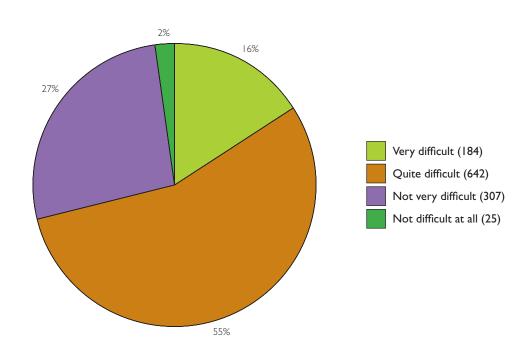
84% of respondents stated that middle management members of staff were difficult to recruit. This compares to 75% in 2006.



### Q8.3 Junior management

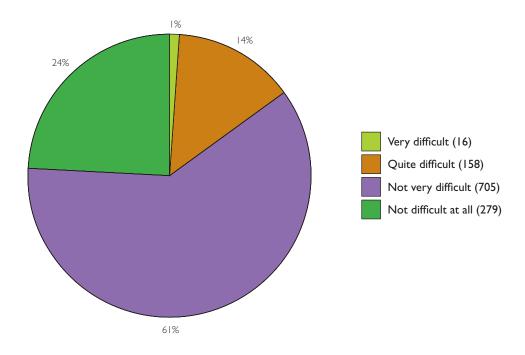


### Q8.4 Supervisors



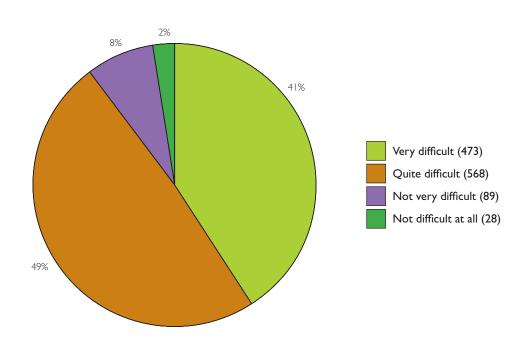
#### Q8.5 Admin and clerical

Admin and clerical positions were seen as the easiest positions to recruit for. 85% felt that these positions were not difficult to recruit for:

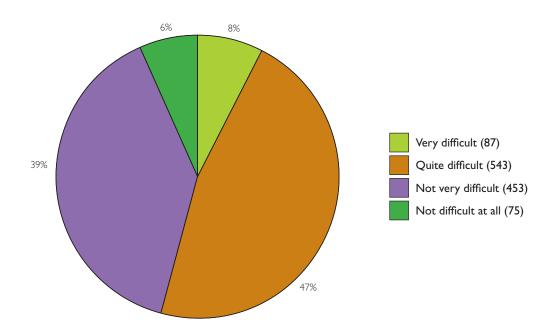


#### Q8.6 Crafts and trades

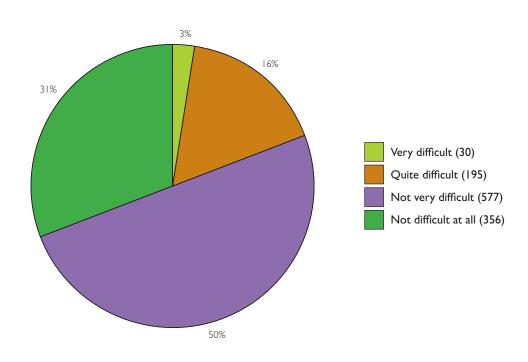
Craft and trade positions were the hardest to recruit for: 90% stated that these positions were difficult to recruit for:



#### Q8.7 Semi-skilled workers



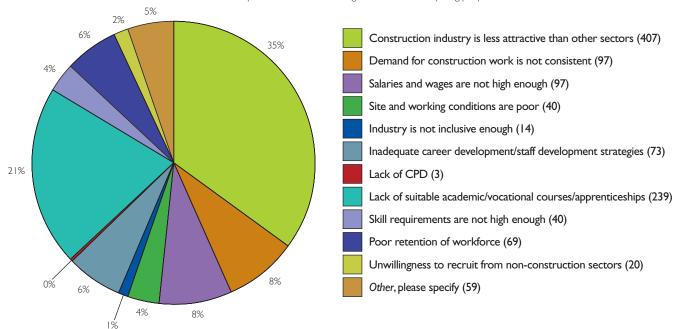
#### Q8.8 Labourers



### Q9 What do you see as being the main reason for the shortage in skilled workers?

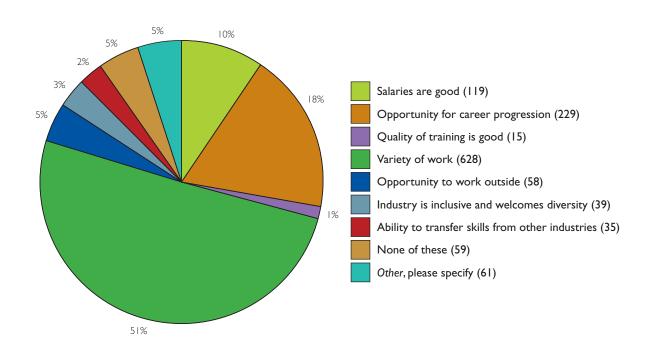
35% of respondents thought that the shortage of skilled workers in the construction industry is because it is less attractive than other sectors. This was also highly stated in the 2006 survey. 21% of respondents stated that the lack of suitable academic/vocational courses and apprenticeships was the main reason for the shortage of skilled workers in 2008. This was highlighted more frequently in the 2008 survey than in the 2006 survey, where low incomes were stated by respondents.

Other answers included: mixture/all of above, lack of promotion in schools/colleges, no investment in young people.



#### Q10 What is the biggest attraction for choosing construction as a career?

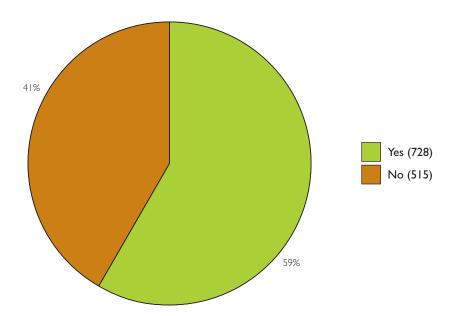
Other answers included: sense of achievement, creativity, challenges and rewards.



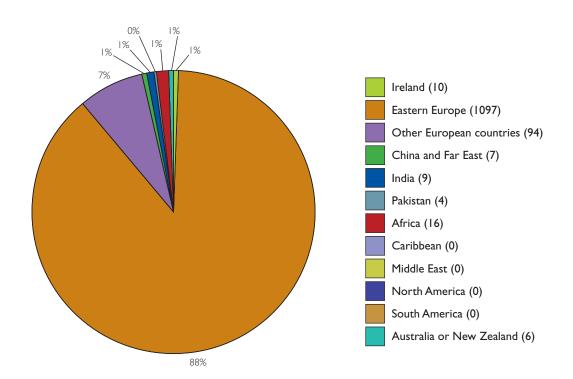
### Migrant Workers

## Q11 In 2007 did your organisation see an increase in the number of construction workers it employed from outside the UK?

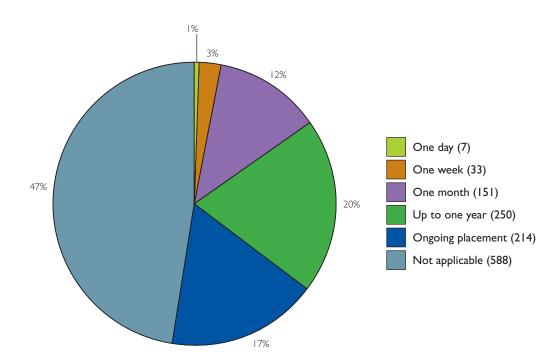
70% of respondents from large organisations reported an increase in the number of construction workers that their organisation employed from outside the UK in 2007. 32% of small organisations reported this.



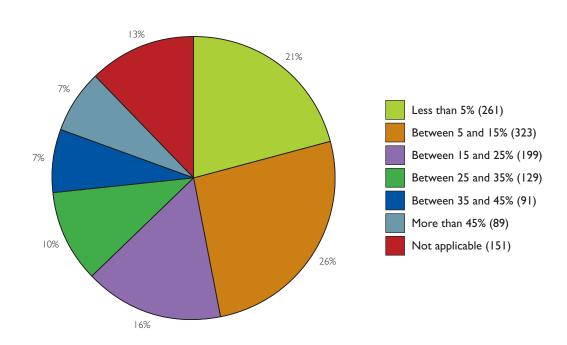
## Q12 Which of the following areas do you think migrant workers are most likely to come from?



## Q13 What is the average length of time in a work placement within your organisation for a typical migrant worker?



Q14 What percentage of workers do you believe are migrant workers on sites you are associated with?

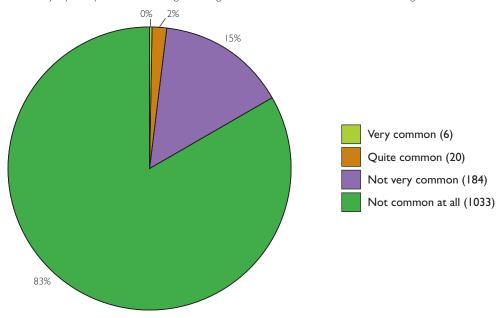


### The Position of Migrant Workers

In your organisation, how common are migrant workers in the following fields:

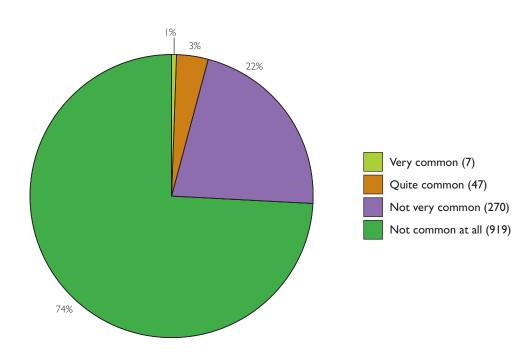
### Q15.1 Senior management

The majority of respondents, 98%, thought that migrant workers were not common as senior managers.

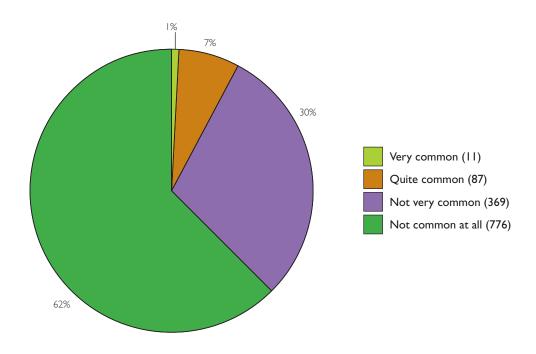


#### Q15.2 Middle management

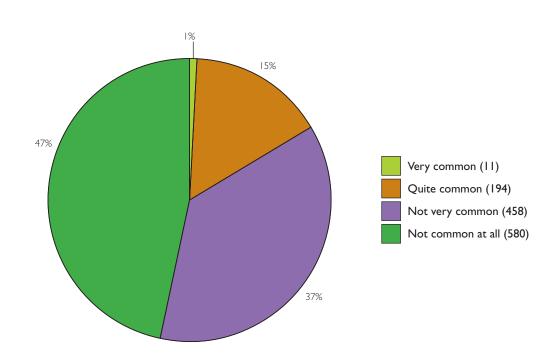
96% of respondents thought that migrant workers were not common as middle managers.



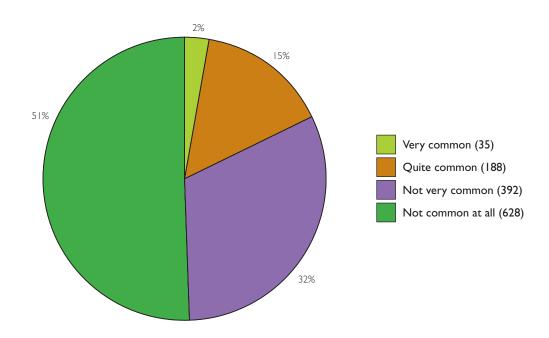
### Q15.3 Junior management



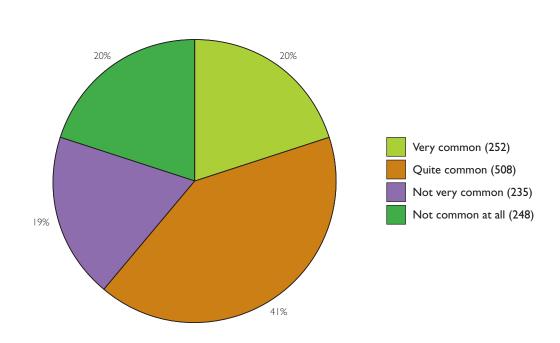
### Q15.4 Supervisors



#### Q15.5 Admin/ Clerical staff

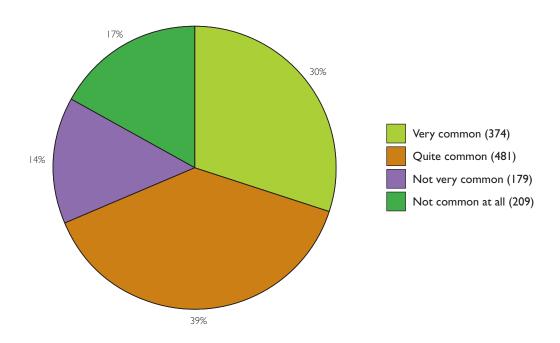


#### Q15.6 Crafts/Trades



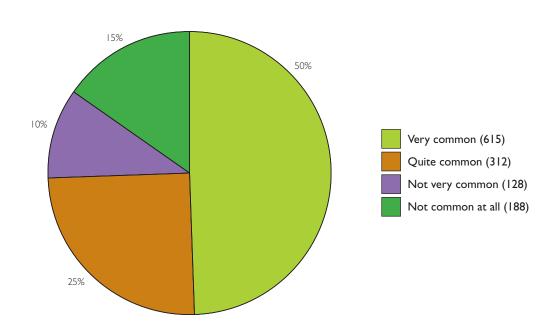
#### Q15.7 Semi skilled workers

75% of large organisations, compared to 57% of small organisations, thought that migrant workers were common as semi-skilled workers.

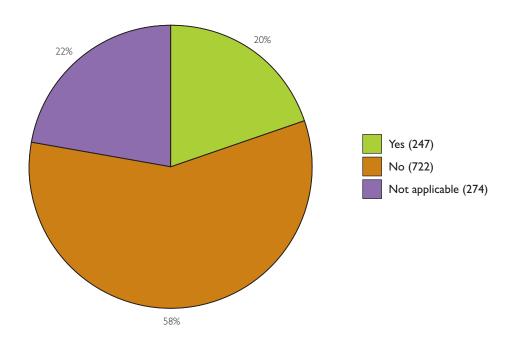


#### Q15.8 Labourers

75% stated that migrant workers were common as labourers. In the 2006 survey, 92% of respondents thought this.

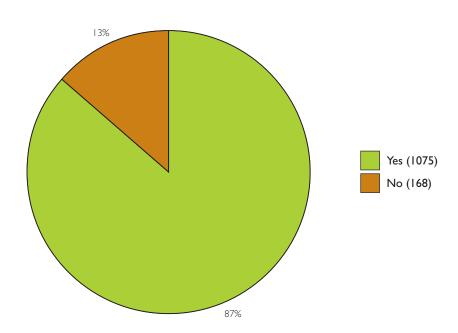


## Q16 From your experience, do migrant workers have sufficient skills for management positions?

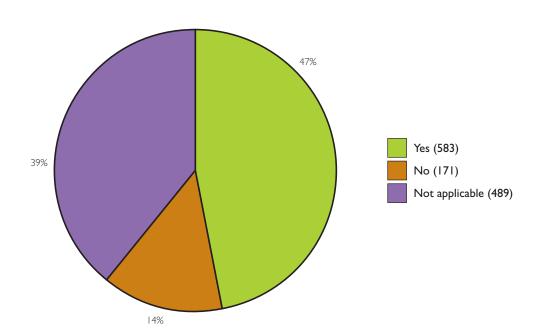


### Q17 Would they be recruited for these positions if they were qualified?

13% believed that migrant workers would not be recruited for management positions even if they were qualified, stating that language barriers would prevent recruitment.



## Q18 Does your organisation include migrant workers in training initiatives?



## Q19 What measures could be taken by the construction industry to include migrant workers in training initiatives?

Top three answers were:

- To provide English language training.
- To provide health and safety training.
- To employ migrant workers directly, and on a full time basis, in order to qualify for training.

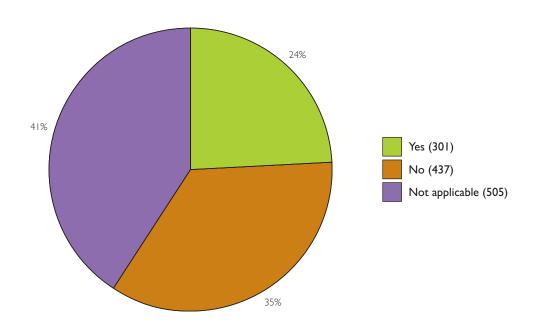
## Q20 What measures is your business taking to include migrant workers in training initiatives?

Top three answers were:

- To follow an equal opportunity policy; hence all workers, regardless of background would be included in training initiatives.
- To provide English language training for migrant workers.
- To include migrant workers in health and safety training.

### The Recruitment of Migrant Workers

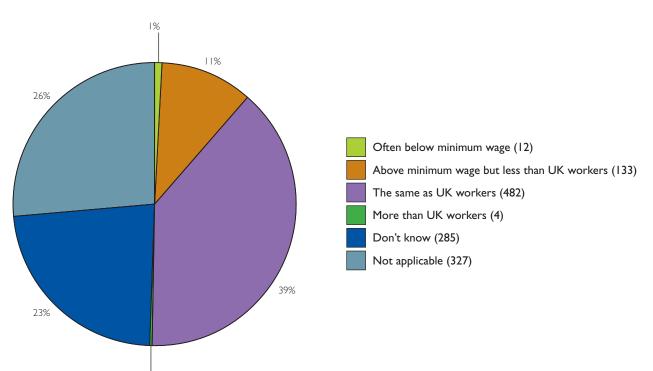
## Q21 Are the majority of migrant workers in your organisation self employed?



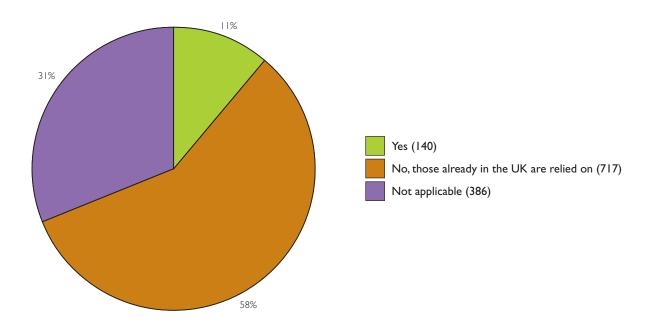
### Q22 In your organisation, do migrant workers get paid less than UK workers?

39% stated that migrant workers were paid the same amount as UK workers. 23% did not know.

0%

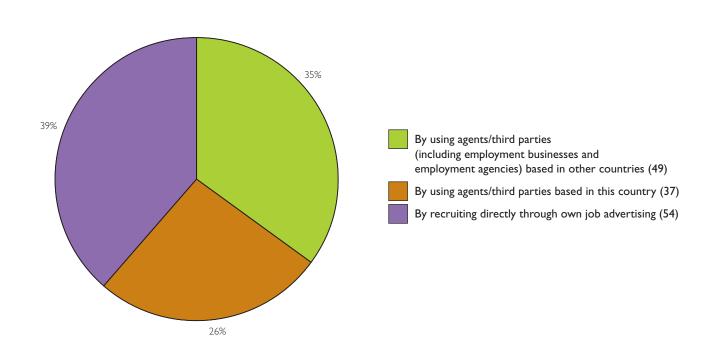


#### Q23 Does your organisation actively source workers from overseas?



#### Q24 How are these workers recruited?

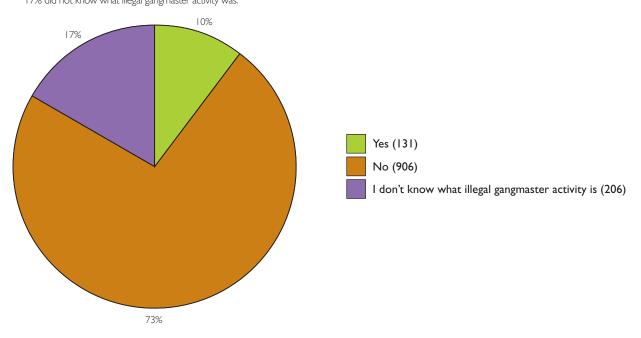
This question was asked to the 11% of respondents who stated that their organisation did actively source workers from overseas.



### Gangmasters in the UK Construction Industry

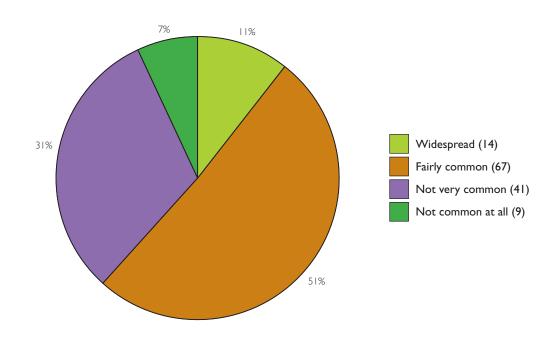
## Q25 Are you aware of any illegal activities undertaken by gangmasters in construction?

73% of respondents were not aware of any illegal activities undertaken by gangmasters in construction. 17% did not know what illegal gangmaster activity was.



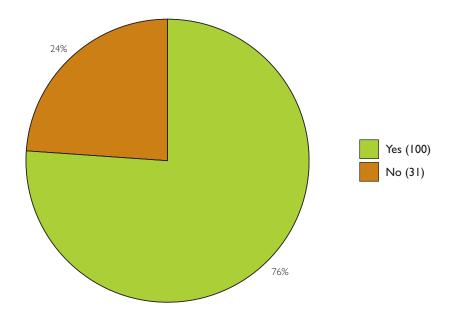
### Q26 How prevalent is it?

This question was asked to the 11% of respondents who were aware of illegal activities undertaken by gangmasters in construction. 70% of small organisations thought that this was either widespread or fairly common, compared to 58% of large organisations.

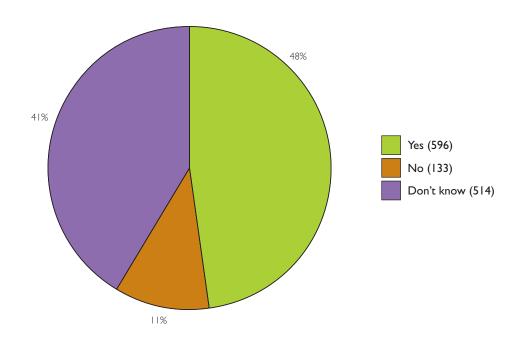


## Q27 Do you think there has been an increase over the last 3 years of illegal gangmaster activity?

This question was asked to the 11% of respondents who were aware of illegal activities undertaken by gangmasters in construction. 76% believed that these activities had increased over the last three years. 91% of small organisations reported this compared to just 69% of large organisations.



# Q28 Do you think the construction industry would benefit from a licensing system similar to the Gangmaster Licensing Authority scheme in agriculture and the food sectors?



93% of respondents believe that there is a skills shortage in the UK construction industry."

#### Skills Shortages

The results of this survey clearly point to a shortage of skills in the UK construction industry. 93% of respondents believed this to be the case.

Of those respondents who believe there is a skills shortage, 57% thought that the shortage of construction personnel would become worse in 2008. Crafts and trades people were viewed as the most difficult people to recruit, closely followed by senior and middle management. Conversely, admin/clerical workers and labourers were viewed as the least difficult to recruit. The industry's image and the lack of suitable academic/vocational courses and apprenticeships were quoted as the main reasons for this shortage.

Despite the current credit crunch, the majority of the respondents, 70%, believe that there would be an increase in construction demand in 2008.

#### Migrant Workers

The survey also aimed to examine the degree and recruitment of migrant workers in the UK construction industry. 59% of respondents said that their organisation saw an increase in the number of construction workers it employed from outside the



### The Position of Migrant Workers

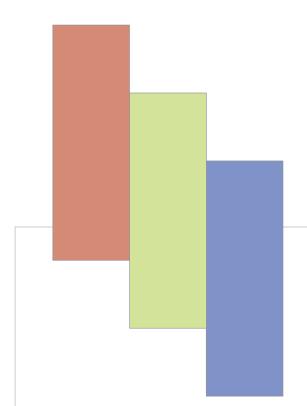
The results indicated that migrant workers are found most commonly as labourers, as stated by 75% of the respondents. This appears to suggest that migrant workers are not currently filling the skills gap within the industry. This is also implied by respondents who claimed that migrant workers were "not very common", or "not at all common" in senior management (98%) or middle management (96%). This raises concern, particularly considering the ambitious targets that have been set for the industry. When asked if migrant workers had sufficient skills for management positions, the majority of respondents thought that they did not. 13% of respondents thought that even if a migrant worker did have sufficient skills for a management position, they would not be recruited for this position anyway. This was mainly due to language barriers. Migrant workers appear to be included on training initiatives, according to this sample. Many respondents stated that company equal opportunity policies ensured that migrant workers were included in training initiatives. 14% said that they did not include migrant workers on training initiatives.

### The Recruitment of Migrant Workers

In terms of the recruitment process, the majority of respondents said that their organisation relied on those migrant workers who are already in the UK. Of those who claimed to source workers from outside the UK, 39% used their own recruitment advertising, 35% used agents/third parties based in other countries and 26% used agents/ third parties based in the UK. 35% of respondents said that the majority of migrant workers on sites that they were associated with were not self employed. 24% said that they were self employed; it was not applicable to 41% of respondents.

# Gangmasters in the UK Construction Industry

73% were not aware of any illegal activities undertaken by gangmasters in construction. However, 17% stated that they did not know what illegal gangmaster activity is. Of the 131 respondents who were aware of such activity, 51% claimed that this activity was fairly common and 76% thought that there has been an increase in the last 3 years. However, the results are inconclusive as to whether a licensing system would benefit the UK construction industry. 48% believed that the industry would benefit, whereas 41% did not know.



Migrant workers are not currently filling the skills gap within the industry."

"The lack of apprenticeships was highlighted more frequently in the 2008 survey."

# 2006 Skills Shortages Survey

#### Skills Shortages

Both the 2006 and 2008 datasets indicate an expected increase in construction demand for the following years. Both surveys concluded that crafts/trades people are the most difficult to recruit, closely followed by senior and middle management. However, it appears that senior and middle management are becoming increasingly difficult to recruit. In the 2006 survey, 76% of respondents stated that senior management was "very difficult" to recruit, with 75% putting the level of middle management at "quite difficult". In 2008, 84% of respondents thought that this difficulty level applied to both groups. Admin/clerical workers and labourers both remain the easiest positions to fill.

The industry's poor image was cited in both surveys as the main reason for the skills shortage. Low incomes were also highly stated by respondents in the 2006 survey. However, the lack of academic/ vocational courses and apprenticeships were highlighted more frequently in the 2008 survey. The 2012 Olympic development training opportunities and ConstructionSkills apprentice schemes aim to increase training opportunities. Government initiatives to extend compulsory education aim to widen the skills base in the UK.

The variety of work that a construction career has to offer was quoted as the biggest attraction for choosing a construction career by both sets of respondents.

#### The Position of Migrant Workers

Both sets of respondents believed that migrant workers are most likely to originate from Eastern Europe. These workers are still most commonly found to be working as labourers, semi-skilled workers and working in crafts/trades. However, respondents from the 2008 survey claim that migrant workers are less common than those in the preceding survey. For example, migrants working as labourers were stated as being "very common" and "quite common" by 92% of the respondents in 2006, whereas this was cited by only 75% of the respondents in 2008. This appears to support Border and Immigration Agency findings that numbers of Polish workers applying to work in the UK has fallen for the first time since 2004 and puts further concerns on industry targets such as the Olympics and Crossrail.

### Recommendations

The findings of this research highlight key issues surrounding skills shortages in the UK construction industry.

The CIOB will continue to promote apprenticeships as a means to close the skills gap that appears to be present, especially at crafts and trades levels. The CIOB will also continue to promote careers in construction management, which was also reported as suffering shortages. Attention needs to be given to raising the profile of the construction industry to young people.

The CIOB believes that the industry should also be attracting graduates of non-cognate disciplines into construction. Graduates should also be offered the appropriate professional development to achieve their potential for management careers in construction. These activities are vital in order to keep up with current and future construction demand and the shortages of construction managers.

The CIOB supports the ConstructionSkills Sector Skills Agreement (SSA). Published in January 2008, the SSA aims to recruit qualified new entrants, qualify the existing workforce, support lifelong learning and develop the skills culture and infrastructure to ensure the needs of the industry are met.

In order for the industry to utilise migrant workers to their full potential, English language training must be considered. This is essential if a migrant worker has experience in management, but may have been overlooked due to language barriers.

Further research is needed to investigate the benefits of a Licensing Act in the construction industry. However it seems unlikely that the act would benefit the industry. The survey results indicated that not all organisations recruited migrant workers via agencies or third parties. A Licensing Act would only protect vulnerable workers who have been employed from an agency, and so would not protect those who are employed by a company directly. With respondents claiming that illegal activity from gangmasters is fairly common and has risen in the past 3 years, this should be explored further.

Future research should consider other aspects of skills shortages. As government targets require all homes built from 2016 to be zero-carbon, the level of skills and expertise in particular areas such as sustainability should be investigated.

### Resources

www.acenet.co.uk Association for Consultancy and Engineering

www.acenet.co.uk/documents/ACE Skills Report 2007.pdf Skills Shortages and Recruitment Agency Behaviours

www.berr.gov.uk Department for Business, Enterprise and Regulatory Reform

www.building.co.uk Building Magazine

www.cic.org.uk/cascade Construction Industry Council

www.cnplus.co.uk Construction News

www.constructionproducts.org.uk Construction Products Association

Construction Products Association/Construction News (2008) Construction Forecast 2008

www.constructionskills.net ConstructionSkills

www.direct.gov.uk Website of the UK Government

www.dius.gov.uk Department for Innovation, Universities and Skills

#### www.dius.gov.uk/publications/world\_class\_apprenticeships.pdf

World-class Apprenticeships: Unlocking Talent, Building Skills for All. The Government's Strategy for the Future of Apprenticeships in England

www.fmb.org.uk Federation of Master Builders

www.fmb.org.uk/pdf\_pub/sotsurvey/fmb307.pdf FMB State of Trade Survey Third Quarter of 2007

www.gla.gov.uk Gangmasters Licensing Authority

#### www.hm-treasury.gov.uk/media/6/4/leitch\_finalreport051206.pdf

Leitch Review of Skills; Prosperity for All in the Global Economy – World Class Skills. December 2006

www.hse.gov.uk Health and Safety Executive

www.ice.org.uk Institution of Civil Engineers

#### www.ice.org.uk/downloads//HSW migrant workers report final 261107.pdf

Health, Safety and Welfare of Migrant Construction Workers in the South East of England

www.lda.gov.uk London Development Agency

www.lda.gov.uk/upload/pdf/London\_Annual\_Business\_Survey\_2006.pdf London Annual Business Survey 2006

www.lda.gov.uk/upload/pdf/London\_Annual\_Business\_Survey\_2005.pdf London Annual Business Survey 2005

www.london2012.com The Official Site of the London 2012 Olympic and Paralympic Games

#### http://www.london2012.com/documents/oda-publications/employment-and-skills-strategy-feb-08-low-res.pdf

Olympic Delivery Authority, Employment and Skills Strategy: Jobs Skills Futures. February 2008

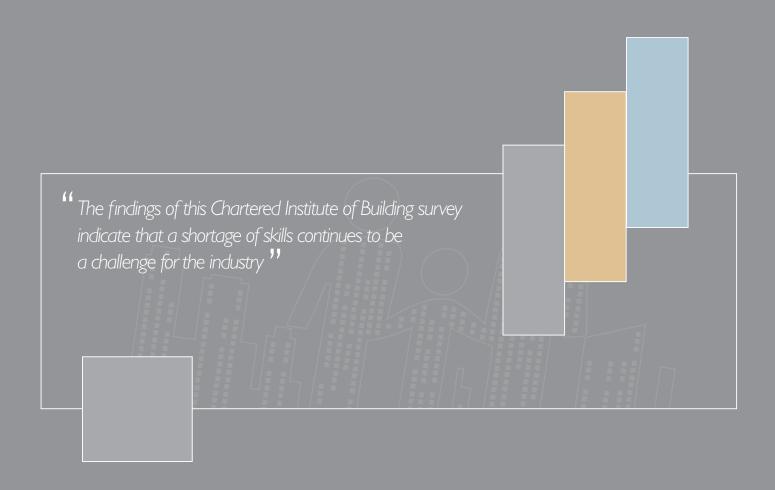
www.news.bbc.co.uk BBC News

www.rec.uk.com The Recruitment and Employment Confederation

www.thecc.org.uk Construction Confederation

#### www.thecc.org.uk/downloads/Trade\_Survey - Q3 2007 report.pdf

Construction Confederation and Construction Products Association Construction: Industry Trade Surveys: November 2007





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I he paper used in the production of this documen is made from pulps harvested from sustainable forests, also using sawmill residues and forest thinnings. It is elemental chlorine-free.