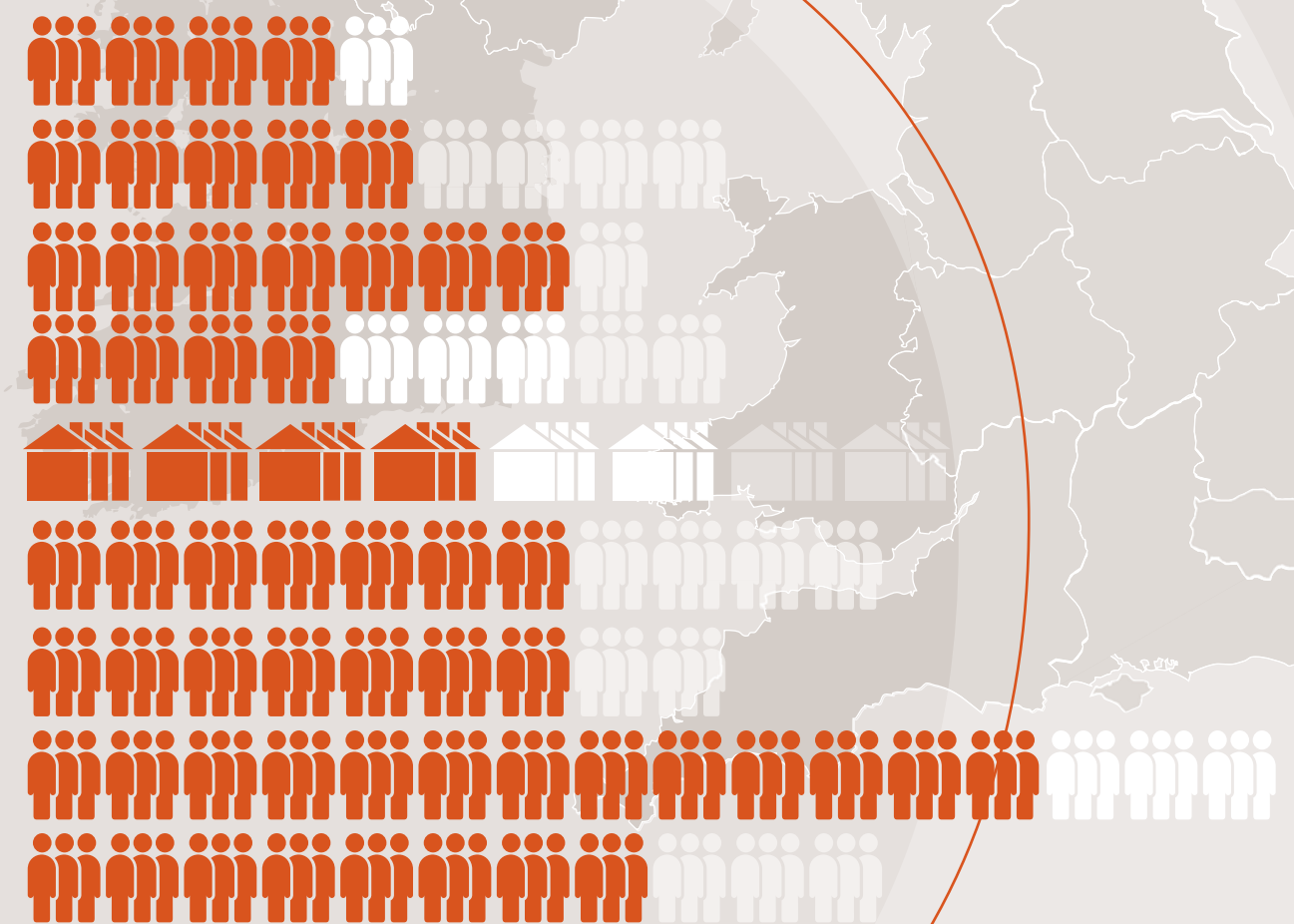


# Construction Skills Network



Chairman’s message



I am proud to have been involved in the development of this invaluable forecasting tool. The involvement and the whole-hearted endorsement of so many industry, education and Government stakeholders, makes the Construction Skills Network a unique resource. It is one to which many other industries would aspire. It provides a firm foundation on which to base the industry’s future skills and training strategies, with more evidence and authority than has ever been possible before.

But we will not rest on our laurels. We must involve more and more individuals and organisations, to expand the Network’s knowledge base and develop its capabilities even further over the next twelve months.

Sir Michael Latham  
Chairman, Construction Skills Network

The Construction Skills Network

The Construction Skills Network, launched in 2005, represents a radical change in the way research, data and information on the future employment, skills and training needs of the construction industry is collected and produced.

Co-ordinated by ConstructionSkills, the Sector Skills Council for Construction, with the technical expertise of Experian and David Langdon, it draws the knowledge on and experience of Government, Sector Skills Councils, construction companies, education and training providers, regional agencies and customers across the UK. This unique collaboration means the Construction Skills Network provides, as near as possible, a consensus view of the current and future skills and training needs of the industry.

The model approach

The conclusions revealed in this report are the results of thorough data analysis backed up by invaluable consultation with a range of experts and practitioners from within the construction industry who kindly gave their experience and knowledge to reality check the assumptions and results.

First a series of Regional Observatory Groups and one National Group, with members drawn from Government, education and the construction industry, reviewed and tested a series of assumptions and forecasts about skills, productivity and capacity based on data, research and intelligence shared by industry bodies, Sector Skills Councils and Government departments.

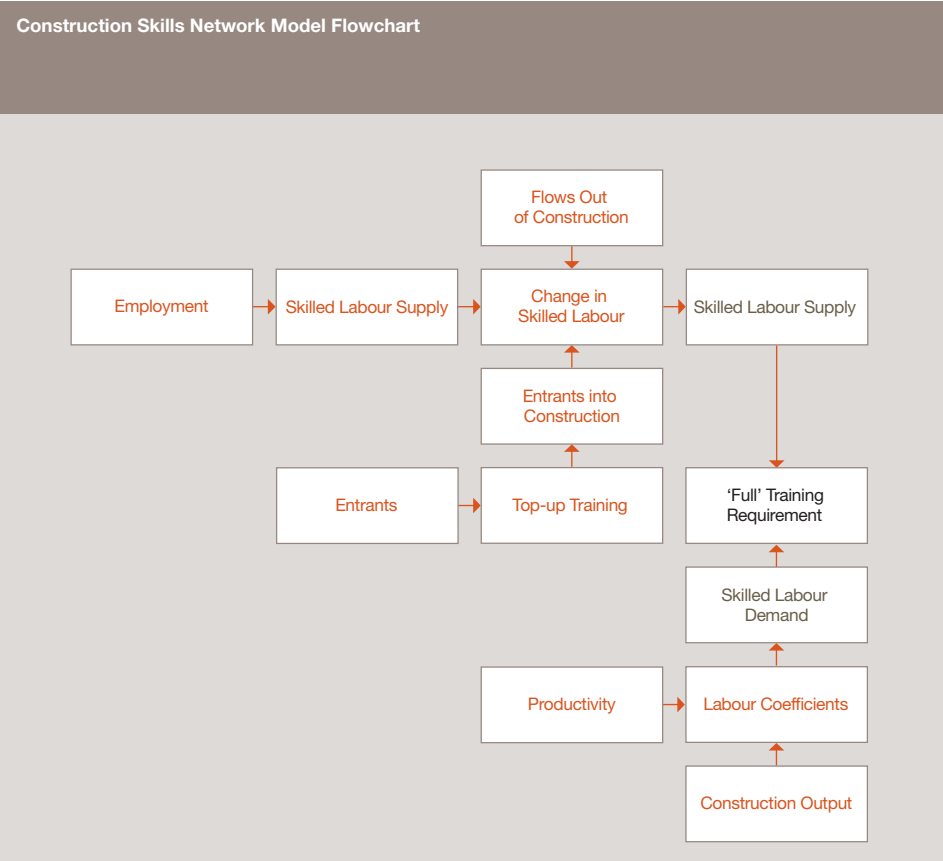
The Observatory Group members fed back their observations, knowledge and insight of what was really happening on the ground in every UK region, and this was used to fine tune the assumptions and data that went into the forecasting programme. Details of specific projects, demand within various types of work and sectors, construction labour supply and the inflows and outflows of employment across the industry, region by region, were all built into the model, and the results were then re-assessed by the Observatory Groups.

Thanks to these people we can place greater confidence in the results produced. The network of Observatory Groups has also meant that we have a precious resource going forward with this project that will help us develop, refine the forecasting and respond to changes far better than would otherwise be the case. The Observatory Groups will continue to throw up the real issues faced by the industry throughout the UK that we can take into account so that we can more efficiently and effectively plan our response to skills needs and target the investment needed at both a national and regional level.

And finally, the Network provides us with an opportunity to share information and best practice with organisations beyond our immediate industry footprint – including our partner Sector Skills Councils and Government departments, to provide them with authoritative data to incorporate into their own capacity and productivity planning.

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# National overview

Never has the construction industry been more dynamic. UK construction output growth is forecast to average 3% annually between 2006 and 2010, following a period of sustained growth that has lasted for over a decade. We are in the throes of delivering some of the most ambitious building projects in recent times – among them, the Glasgow Harbour Development, the Welsh social housing renewal programme, the Thames Gateway, the Government’s massive programme of school and hospital renewal and, of course, the 2012 London Olympics. The work that our industry does and will do is at the heart of our nation’s future.

Now more than ever, ConstructionSkills needs to ensure the industry gets the right people, with the right skills, in the right place at the right time. To make the best decisions about the industry, we need the best, most detailed information. We need to factor in the impact of forthcoming projects on our skills and training needs, the project-based nature of so much of our work, the mobility of our workforce. We have to be able to forecast, region by region, in a way that can adapt to ever changing economic circumstances.

And this is what the Construction Skills Network gives us: an authoritative basis on which to base our plans for recruitment strategies, education and training requirements and funding delivery. The Network’s forecasts are based on a series of assumptions and trends, so what it provides is a picture of what the industry will look like in five year’s time, if current trends continue at the same rate. But one of the key benefits is its use as a scenario planning tool, through a model that can be manipulated and amended in real time to take account of new information.

## The end users?

The Construction Skills Network is a dynamic resource. To make the most of its capabilities, it should be used by the full range of people, organisations and departments involved in and affected by the construction industry, and considered alongside other available research, from ConstructionSkills and other organisations.

The Network gives construction clients insight into what type of buildings are likely to be built, when and where, as well as how to invest training budgets. For contractors and consultants, the data can inform the type of building they should be designing and constructing and how best to avoid regional or occupational skills shortages and high labour costs.

Education and training organisations, including further and higher education and private training providers, can use this tool to get a real sense of what skills employers need, and over what timeframe. It will help them plan with confidence the courses that employers want, and that will fit their students for employment on completion of their studies.

Even employees and prospective new recruits can benefit from the insights produced to learn where in the country they are likely to find consistent work, or what trade or profession offers the best career prospects.

And critically, the Network reports give Government the tools to decide where it needs to focus policies and funding if it wants to avert skills shortages and wage inflation. As the construction industry’s biggest client, it also provides Government with the foresight on which to base its procurement decisions.

The Network provides ConstructionSkills, a Sector Skills Council, with the information it needs to plan initiatives that address the industry’s skills challenges, education and training needs now and in the future, helping meet the objectives set out in our Sector Skills Agreement.

It highlights not only the regions we will target with our forthcoming National Skills Academy for Construction, but, more specifically, which construction sites, would benefit from the project-based, tailor-made approach to training delivery.

It provides insight into which trades are going to see the highest demand – and where this demand will be, region by region, enabling our Apprenticeship Division to direct funding appropriately and work with colleges to ensure the right courses are available in the right places.

## The future...

The Construction Skills Network allows us to adapt the industry’s skills and training initiatives to meet changing circumstances. Take for example migrant labour. Anecdotal evidence suggests that an influx of skilled tradespeople and professionals from the EU accession countries, in particular Poland, has helped to ease labour bottlenecks over the past couple of years. These workers are an essential part of the workforce and are generally highly skilled. However, as EU Structural Funds pour into these countries and their own construction industry starts to grow, there is likely to come a point when it becomes attractive for migrant workers to return to their home countries.

We can now plan for these migration patterns in a way that we never could before, by factoring them into the Construction Skills Network to show us the likely impact on the industry’s labour needs. With such foresight – and hard evidence as opposed to anecdotal – we can work with partners in Government, education and industry to manage these changes so they do not impact on our ability to deliver on the major projects.

Already, a great many industry partners are supporting, using and benefiting from the Construction Skills Network. We are keen to make this resource even more authoritative, even more robust and even more useful, so we call on everyone to read on and learn more.

“Raising skill levels is absolutely essential to sustained economic success. The Construction Skills Network is an excellent example of the sector skills planning we have introduced under our skills strategy. We want industry setting the pace, identifying the skills challenges and opportunities and driving a demand led system which puts the right training provision in place and effectively targets our investment in training.”

Phil Hope MP, Parliamentary Under Secretary of State for Skills

The big picture



UK construction output growth is forecast to average 3% annually between 2006–2010, a little higher than over the 2000–2005 period. Increases in output are expected across all sectors, with public housing, infrastructure and commercial activity likely to see the biggest rises. This compares with private housing and commercial sectors seeing the strongest growth in the previous five years.

- Within this, two main shifts are identified:
1. The first is that private output growth is likely to exceed that of publicly-funded construction between 2006–2010.
    - This is largely the result of a resurgence of the commercial sector (offices and retail), but also due to the completion of some major public projects and programmes toward the latter part of the forecasts.
  - It contrasts with the previous five years (2000–2005) which saw much faster growth in publicly-funded output (91%) than private (52%) for new work, due primarily to large public sector programmes of investment in new infrastructure, health, education, social housing renewal and regeneration.

2. The second is that growth is expected to shift southwards in the next five years, contrasting with 2000–2005, which saw generally much stronger growth in the north of the country than in the south.
  - Apart from Northern Ireland, which will benefit from a large public investment programme over the next 10 years, the strongest growth is predicted for the south-eastern corner of the country, driven forward by some very large projects in the offing – the Olympics, the Kings Cross redevelopment, big ports projects at Shellhaven, Felixstowe and Harwich, the East London Line extension, and the Victoria Station redevelopment, to name a few.

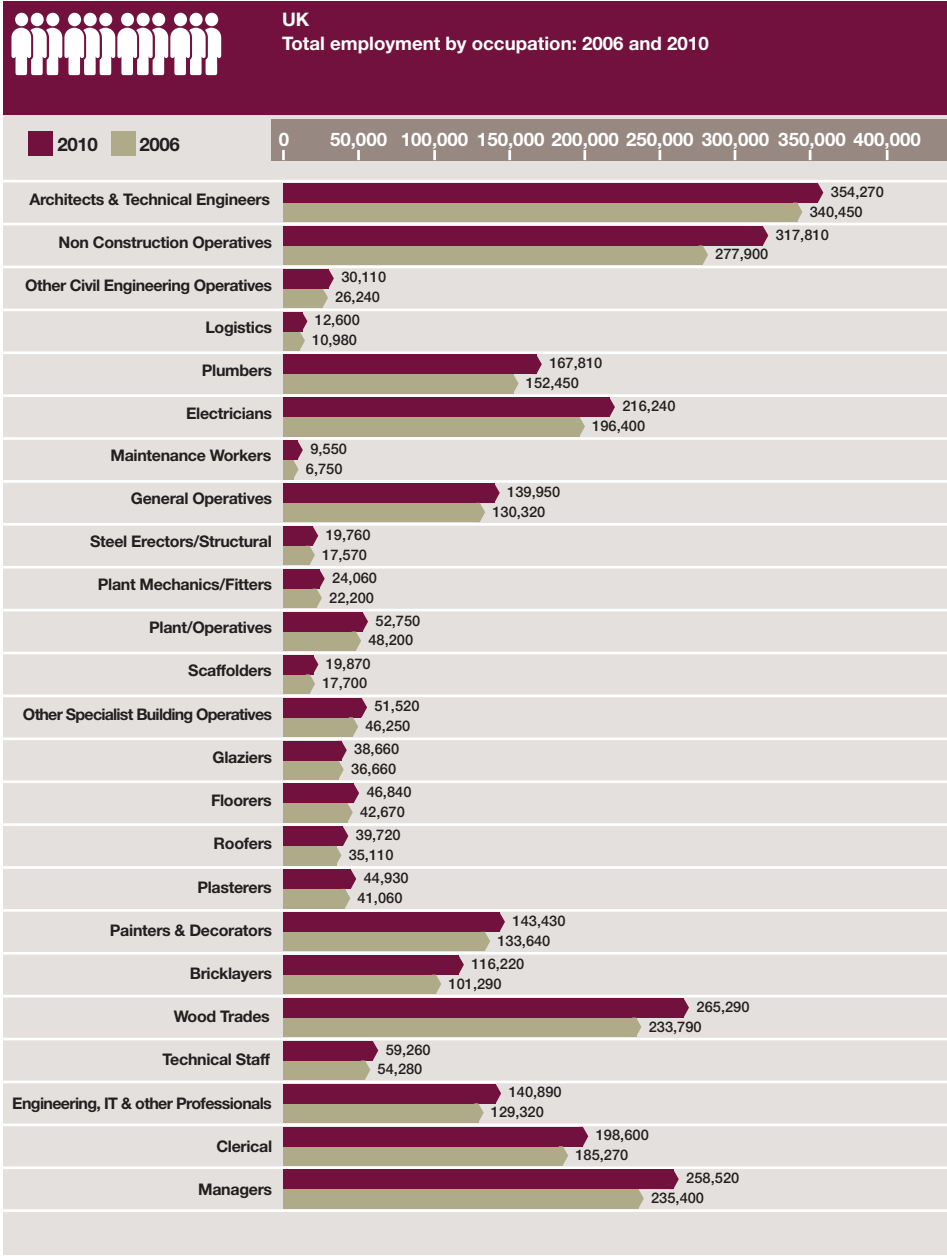
- In 2000–2005, regions in the north of the country generally saw stronger growth than those in the south, particularly the East Midlands, Yorkshire and the Humber and Wales – driven by urban regeneration projects, housing, inward investment and creation/relocation of key Government departments and services.

By the end of 2006, across all occupations, just over 2.5 million people are expected to be employed in construction. To deliver forecast growth between 2006 and 2010, the number of construction workers needed is likely to increase by around 245,000 (roughly 10% above 2006 levels) across the

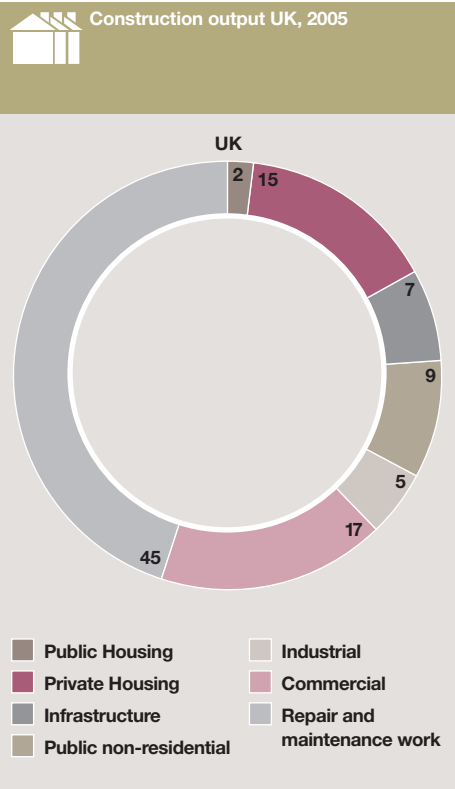
whole of the UK. This translates into a need for an additional 87,000 new recruits a year on average to fulfil the requirement created by additional demand and to take account of those who will leave the industry during the same period.

Within this, we expect to see the following trends:

- The occupations with the greatest number of workers are estimated to be Architects and Technical Engineers, other design and technical professionals, Managers, Wood Trades and Non-construction Operatives.
- Following output trends, employment growth in the south is forecast to outstrip that in both the central and northern parts of the UK to 2010. Total employment in the south is forecast to rise by 12% to 2010, compared to just 6% in the north.
- Demand for Wood Trades workers is forecast to be strong over the coming years, with an annual average requirement of over 11,000 new recruits. This is primarily due to the strength of the housing sector (both new work and Repair and Maintenance), where relatively speaking the need for Wood Trades workers is particularly strong. The demand for Architects and Technical Engineers translates to an annual requirement of over 9,000.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

40%

Over 40% of the annual workforce requirement will be professional workers

UK Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	235,400	258,520	10,530
Clerical	185,270	198,600	8,610
Engineering, IT & other Professionals	129,320	140,890	4,790
Technical Staff	54,280	59,260	3,260
Wood Trades	233,790	265,290	11,090
Bricklayers	101,290	116,220	4,730
Painters & Decorators	133,640	143,430	3,620
Plasterers	41,060	44,930	1,780
Roofers	35,110	39,720	1,750
Floorers	42,670	46,840	1,510
Glaziers	36,660	38,660	990
Other Specialist Building Operatives	46,250	51,520	2,370
Scaffolders	17,700	19,870	900
Plant Operatives	48,200	52,750	1,780
Plant Mechanics/Fitters	22,200	24,060	1,920
Steel Erectors/Structural	17,570	19,760	1,150
General Operatives	130,320	139,950	1,510
Maintenance Workers	6,750	9,550	*
Electricians	196,400	216,240	8,130
Plumbers	152,450	167,810	5,330
Logistics	10,980	12,600	580
Other Civil Engineering Operatives	26,240	30,110	1,390
Non Construction Operatives	277,900	317,810	
Total (SIC 45)	2,181,450	2,414,390	77,720
Architects & Technical Engineers	340,450	354,270	9,280
Total (SIC 45 & 74.2)	2,521,900	2,768,660	87,000

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.  
\*See text for note on Maintenance Workers.

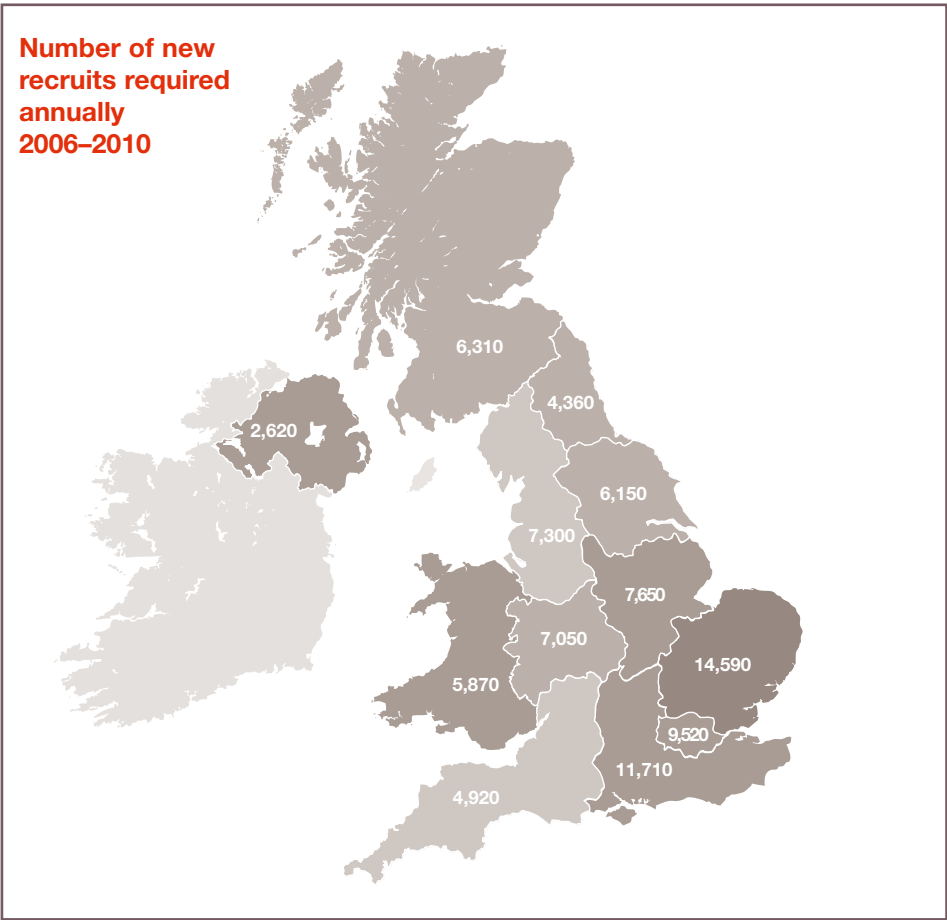
We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.

245,000  
more construction workers  
needed by 2010



# Regional trends

The work that the 12 Regional Observatory Groups have done in feeding in their ‘grass roots’ knowledge and experience has helped ensure the Construction Skills Network regional reports give real insight into what is really likely to happen on the ground.



Construction growth is forecast to shift southwards across the UK 2006–2010.

## Scotland

The greatest average annual requirement for new workers is forecast to come from Wood Trades, where employment is set to rise by 3,380 by 2010. The requirement for Clerical and Architects and Technical Engineers is also expected to be at the higher end of the scale. In total, 6,310 new recruits will be needed every year.

## North East

Construction output is forecast to grow year-on-year to 2010, by an average annual rate of 1.3%, one of the lowest in the UK. This equates to 4,360 new recruits every year. The largest average annual requirement is estimated to come from Plumbers\* (680 per year) and larger than average annual requirements are also forecast for Architects and Technical Engineers, Electricians, Bricklayers and Plant Operatives.

## North West

Total employment in the construction industry is forecast to increase by about 5%. This means the industry will need to attract 7,300 new recruits a year. While construction output is forecast to grow year-on-year to 2010, the rate of increase will be slower than in recent years rising by an annual average of 1.6%.

## Yorkshire and Humber

Construction output is forecast to grow year-on-year to 2010, after an estimated decline in 2005. In annual terms growth should average 1.8%. The strongest year is expected to be 2008, with predicted growth of 3.0%. 6,150 new recruits will be needed on average every year.

## East Midlands

Macro-economic growth prospects for this region remain among the strongest in the UK and total employment in the construction industry is forecast to increase by about 11% between 2006–2010, equating to an annual requirement of 7,650 new recruits. Of these almost a third are expected to be Managers (2,390 employees needed annually) and 14% will be Wood Trades (1,080).

## West Midlands

Macro-economic growth prospects for this region are among the weakest in the UK; however total employment in the construction industry is expected to increase by about 7% between 2006–2010. This means the industry will need to attract 7,050 new recruits a year. The commercial sub-sector is forecast to see the fastest growth, rising by 5.7% on average each year.

## Wales

Total employment is forecast to increase by 12% between 2006–2010 to 112,840, with a need to recruit an average of 5870 new employees annually. The commercial sub-sector is forecast to rise by 5.9% on average each year between 2006–2010 with retail sector projects driving much of that growth. The Repair and Maintenance sector is also expected to perform well, with a 3.9% annual average rise driven in part by the £3.2bn Welsh Quality Standards Scheme social housing programme.

## East of England

Total employment in the East of England construction industry is forecast to increase by 18.6% during the forecast period, one of the highest in the UK. This demand will mean 14,590 new entrants are needed every year. Similarly, the region has one of the UK's highest average annual construction output growth forecasts for the period 2006–2010: 4.5%.

## Greater London

From 2007 double-digit growth is expected as work begins on a number of sizeable road and rail schemes. An additional boost from work directly attributable to the 2012 Olympic Games is also expected post 2007. Total employment in the construction industry is forecast to increase by 11%, equating to an average annual requirement of 9,520 new recruits every year.

## South East

Real construction output in the South East is set to be 18% higher in 2010 than in 2004, making it one of the strongest growing UK regions. In total, 11,710 new recruits will be needed every year across the region. The greatest average annual requirement for workers in the South East is expected to be Managers, with 1,700 additional employees needed every year between 2006 and 2010.

## South West

After an expected decline in 2005, construction output is forecast to grow year-on-year to 2010, by an annual average rate of 2%. Total employment in the South West's construction industry is forecast to increase by about 4.4% during the forecast period. This means the industry will need to attract 4,920 new recruits a year.

## Northern Ireland

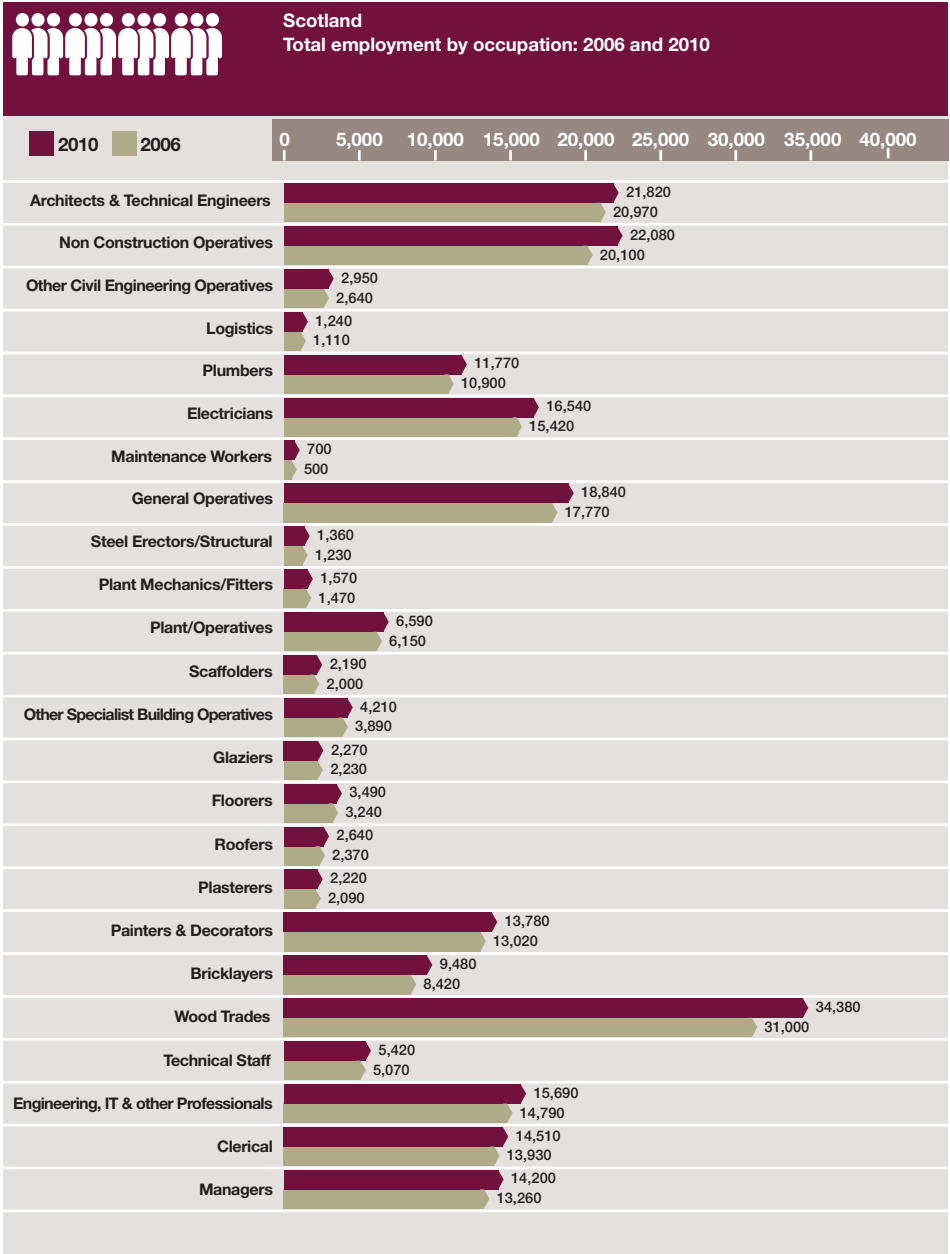
Total employment in the Northern Ireland construction industry is forecast to increase by 13% between 2006–2010, one of the highest growth rates in the UK. To meet this growth in demand, the industry will need to recruit 2,620 new employees each year to 2010.

\*We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.

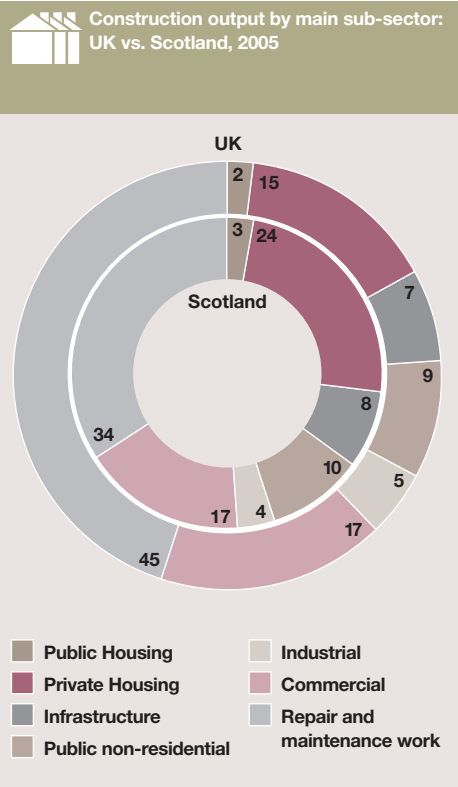
Scotland



In terms of construction output Scotland has been one of the strongest performers in the northern half of the UK over the past few years. However forecast at just 1.9%, Scotland’s average annual construction output growth between 2006–2010 will be one of the lowest in the UK. The national average is 3% and one of the strongest regions, Eastern England, is expected to grow by 5.3% over the same period. The projection reflects the relative weakness of Scotland’s projected macro-economic growth compared with other regions.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

2.2%

Infrastructure is forecast to be the best performing sector, with 2.2% annual average growth

Key findings

- In contrast with the recent past, infrastructure is forecast to be one of the best-performing sub-sectors, with annual average growth of 2.2% being driven by strategic rail projects, including the Stirling-Alloa-Kincardine railway and the first phase of the Edinburgh tram network.
- New work and Repair and Maintenance (R&M) have both contributed to recent overall growth, although up to 2005 new work was by far the stronger component. Projections for the next five years suggest that this is set to change and growth will be higher for

R&M, averaging 3.1% per annum compared with 1.3% for New Work.

- Relative to other parts of the UK, construction in Scotland’s housing sector should fare well in the next five years, with annual growth expected in both public and private sector housing, albeit at a slower rate than in the past (1.5% and 1.4% respectively). However the industrial sector is expected to decline in 2006–2007, due in part to modest manufacturing output and lack of factory construction. The sector is unlikely to return to growth until 2009.

- Total employment in the industry in Scotland is projected to grow by an average of 8%, equating to 6,310 new each year. Of these recruits 1,310 a year (almost 21%) will be for Wood Trades and 760 (12%) will be required for Clerical Work.

Scotland Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	13,260	14,200	230
Clerical	13,930	14,510	760
Engineering, IT & other Professionals	14,790	15,690	330
Technical Staff	5,070	5,420	350
Wood Trades	31,000	34,380	1,310
Bricklayers	8,420	9,480	260
Painters & Decorators	13,020	13,780	410
Plasterers	2,090	2,220	80
Roofers	2,370	2,640	120
Floorers	3,240	3,490	200
Glaziers	2,230	2,270	60
Other Specialist Building Operatives	3,890	4,210	180
Scaffolders	2,000	2,190	110
Plant Operatives	6,150	6,590	130
Plant Mechanics/Fitters	1,470	1,570	180
Steel Erectors/Structural	1,230	1,360	20
General Operatives	17,770	18,840	170
Maintenance Workers	500	700	<10
Electricians	15,420	16,540	420
Plumbers	10,900	11,770	260
Logistics	1,110	1,240	40
Other Civil Engineering Operatives	2,640	2,950	90
Non Construction Operatives	20,100	22,080	
Total (SIC 45)	192,600	208,120	5,710
Architects & Technical Engineers	20,970	21,820	600
Total (SIC 45 & 74.2)	213,570	229,940	6,310

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.



Science Centre, Glasgow.



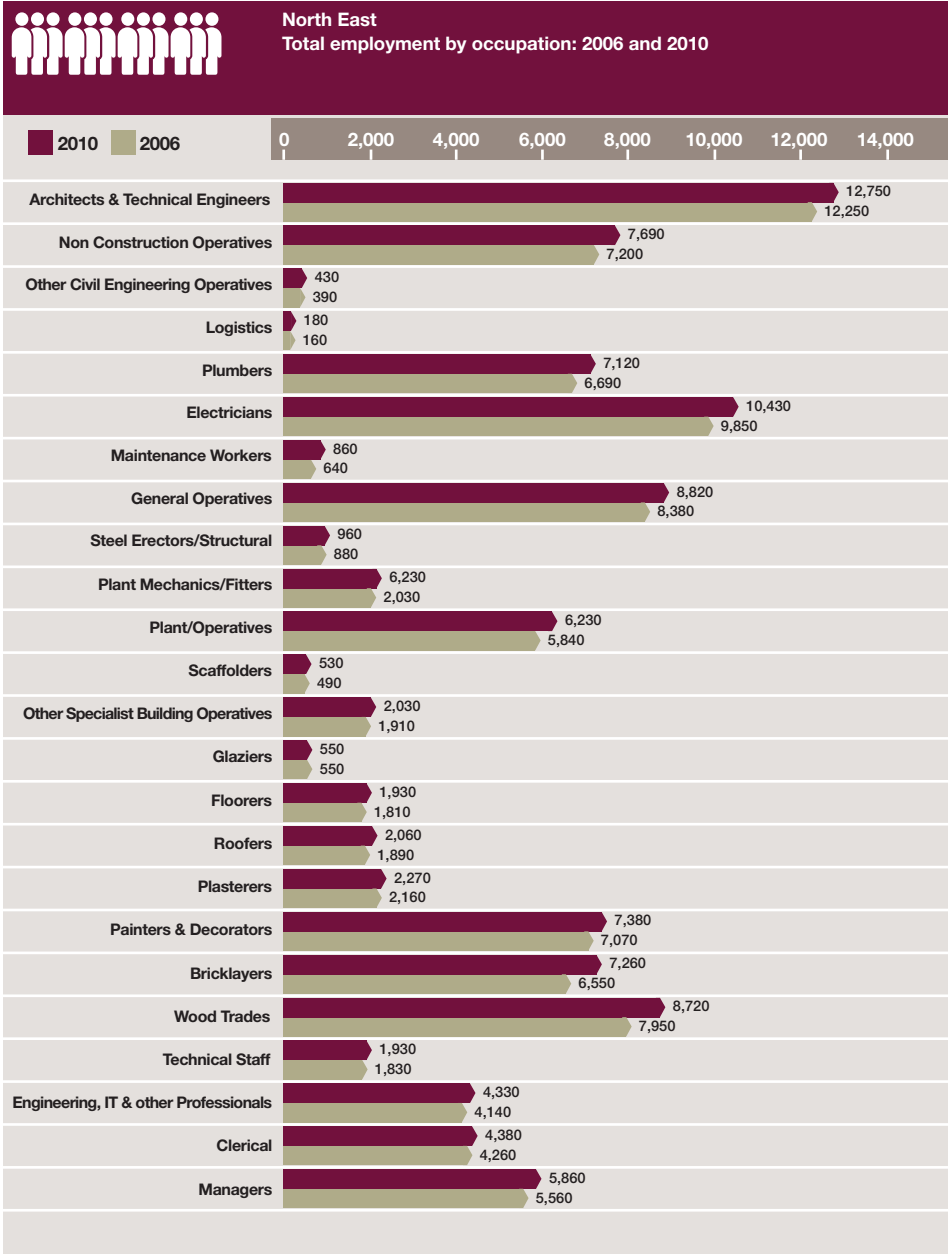
Oran Mor, Glasgow.



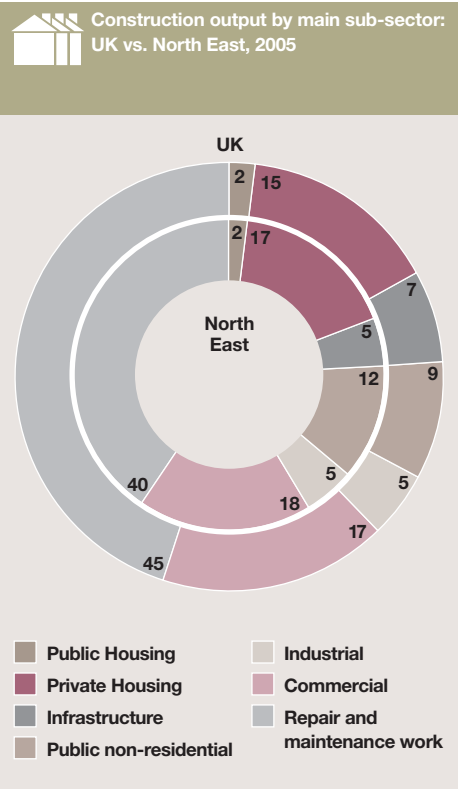
North East



The North East is, geographically, one of the smallest regions in our study. From 2006, while construction output growth in the region is expected to be positive year-on-year to 2010, the rate of increase is forecast to average at 1.3%, one of the lowest in the UK. This growth will peak at just over 4.5% in 2007 when work on such schemes as the redevelopment of Newcastle Great Park and the Middlehaven regeneration scheme in Teesside are at their height.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

4,360  
new recruits will be  
needed annually

Key findings

- Over recent years factory construction in the North East has recorded strong growth against a declining trend in most other regions. The favourable location and wide skill base in the area indicates that this trend is likely to continue over the next few years, driving modest growth in industrial output over the forecast period. However the economy slowed in 2005 to below the national average for the first time in five years. Between 2006 and 2010 the region's macro-economy is forecast to grow by 11%, but this is significantly below the national average increase of 14%.
- Subdued growth in construction output forecast for the next five years can be attributed in the main to the public and private housing sectors both of which are expected to decline by an average of 3% and 2% respectively each year. Growth in Repair and Maintenance, public non housing and infrastructure can only manage to partially compensate for this.
- Total employment in the North East construction industry is forecast to increase by about 6% over the forecast period to a total of 106,860. The industry will need to attract an average of 4,360 new recruits each year between 2006–2010. The largest average annual requirement is expected to come from Plumbers\*, with an estimated requirement of 680, followed by Architects and Technical Engineers (400), and Bricklayers and Electricians (both needing 360 new recruits a year).

North East Total employment and average annual requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	5,560	5,860	240
Clerical	4,260	4,380	300
Engineering, IT & other Professionals	4,410	4,330	170
Technical Staff	1,830	1,930	120
Wood Trades	7,950	8,720	330
Bricklayers	6,550	7,260	360
Painters & Decorators	7,070	7,380	150
Plasterers	2,160	2,270	100
Roofers	1,890	2,060	110
Floorers	1,810	1,930	90
Glaziers	550	550	<10
Other Specialist Building Operatives	1,910	2,030	100
Scaffolders	490	530	20
Plant Operatives	5,840	6,230	340
Plant Mechanics/Fitters	2,030	2,160	150
Steel Erectors/Structural	880	960	100
General Operatives	8,380	8,820	140
Maintenance Workers	640	860	<10
Electricians	9,850	10,430	360
Plumbers	6,690	7,120	680
Logistics	160	180	30
Other Civil Engineering Operatives	390	430	70
Non Construction Operatives	7,200	7,690	
Total (SIC 45)	88,230	94,110	3,960
Architects & Technical Engineers	12,250	12,750	400
Total (SIC 45 & 74.2)	100,480	106,860	4,360

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

\*We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.



Devonshire building, University of Newcastle.

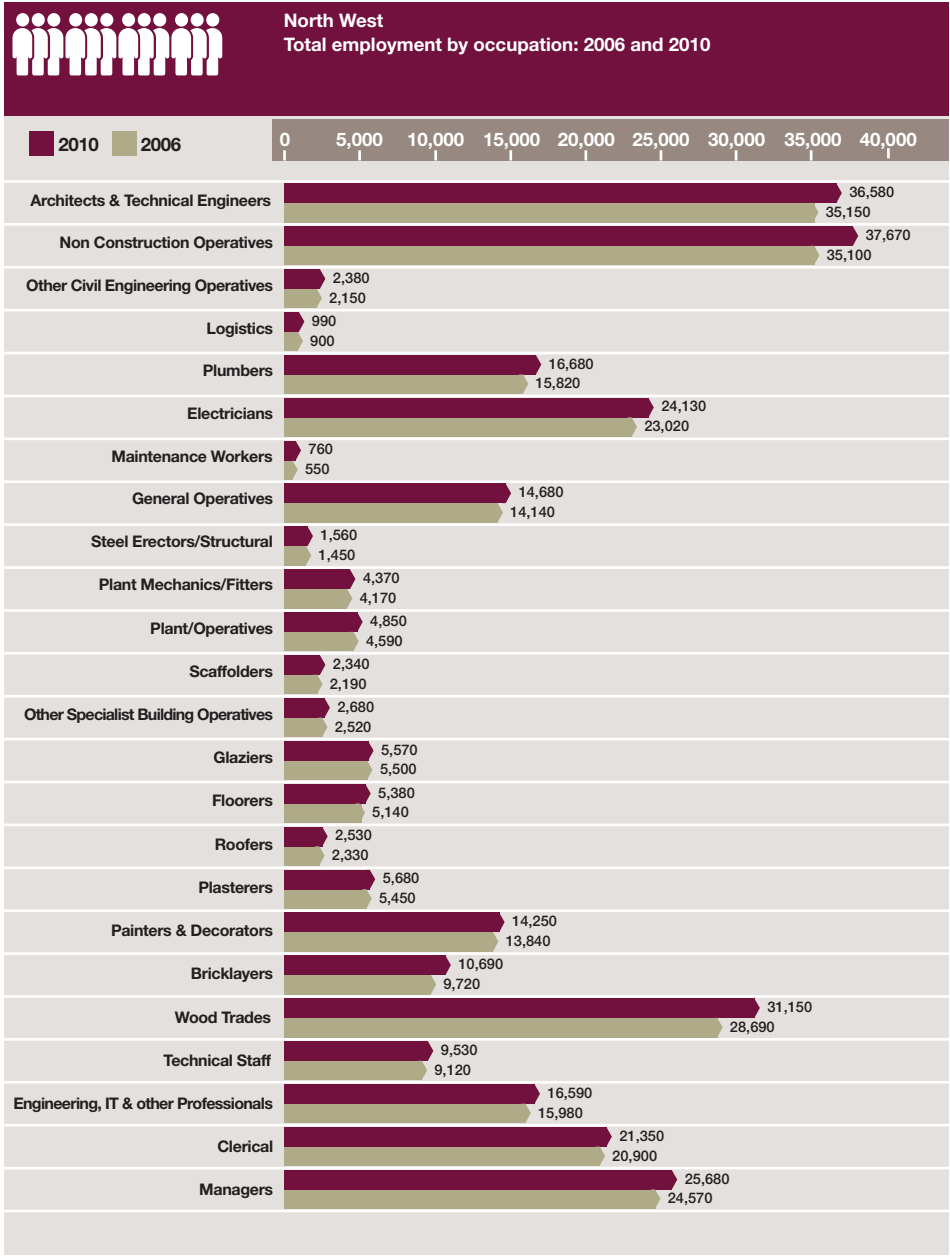


Museum and Winter gardens, Sunderland.

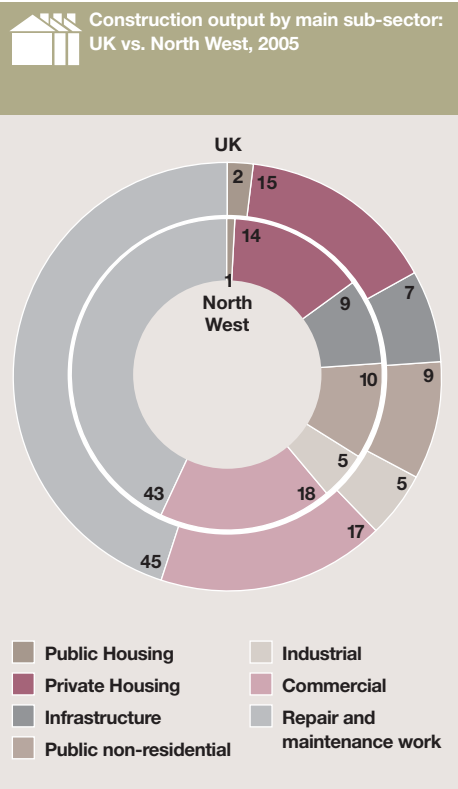
North West



Between now and 2010, the North West’s macro-economy is forecast to underperform the UK average – growing by 12% compared to a national increase of 14%. That said, the region will see some of the UK’s biggest construction projects outside of the South East commence during this period and run on for years to come: £600m will be spent on regeneration in East Lancashire; £300m is to be spent on gas pipeline renewal in Manchester; in Liverpool 75,000 homes will be built in an ongoing £400m project, while £750m will be invested in the Paradise Street development.



Source: Construction Skills Network Model, 2006; Experian.



Source: DTI, DFPNI, Experian.

4.3%  
The commercial sub sector is set for the strongest growth

Key findings

- Despite the large number of flagship projects, construction output is forecast to grow year-on-year to 2010 by an annual average of 1.6%, one of the lowest in the UK.
- The commercial sub-sector is set for the strongest growth, rising by 4.3% on average each year, due in part to Liverpool becoming European Capital of Culture in 2008 and the city's role as a catalyst for regeneration schemes.
- Increased freight at Manchester airport and good transport links to the rest of the county should provide an overall boost to industrial construction (due to rise an average of 2% per year) and, as a continuing Government priority, the public non housing sector is also expected to fare well with average annual growth of 2.7%. In contrast, the outlook for both the public and private housing sub-sectors is less positive with sharp declines expected following a peak in 2007.
- Total employment in the construction industry is forecast to rise 5% between 2006–2010, requiring the industry to attract 7,300 new recruits on average each year. Of these new recruits, the largest annual requirement is for Managers (1,180 per year), Electricians (830), Wood Trades (710), Clerical (630), Architects and Technical Engineers (610) and Plumbers\* (580).

North West Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	24,570	25,860	1,180
Clerical	20,900	21,350	630
Engineering, IT & other Professionals	15,980	16,590	230
Technical Staff	9,120	9,530	140
Wood Trades	28,690	31,150	710
Bricklayers	9,720	10,690	410
Painters & Decorators	13,840	14,250	380
Plasterers	5,450	5,680	180
Roofers	2,330	2,530	100
Floorers	5,140	5,380	200
Glaziers	5,500	5,570	320
Other Specialist Building Operatives	2,520	2,680	150
Scaffolders	2,190	2,340	40
Plant Operatives	4,590	4,850	130
Plant Mechanics/Fitters	4,170	4,370	280
Steel Erectors/Structural	1,450	1,560	<10
General Operatives	14,140	14,680	90
Maintenance Workers	550	760	<10
Electricians	23,020	24,130	830
Plumbers	15,820	16,680	580
Logistics	900	990	30
Other Civil Engineering Operatives	2,150	2,380	80
Non Construction Operatives	35,100	37,670	
Total (SIC 45)	247,840	261,490	6,690
Architects & Technical Engineers	35,150	36,580	610
Total (SIC 45 & 74.2)	282,990	298,070	7,300

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

\*We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.



Exterior of Liver building, Liverpool.



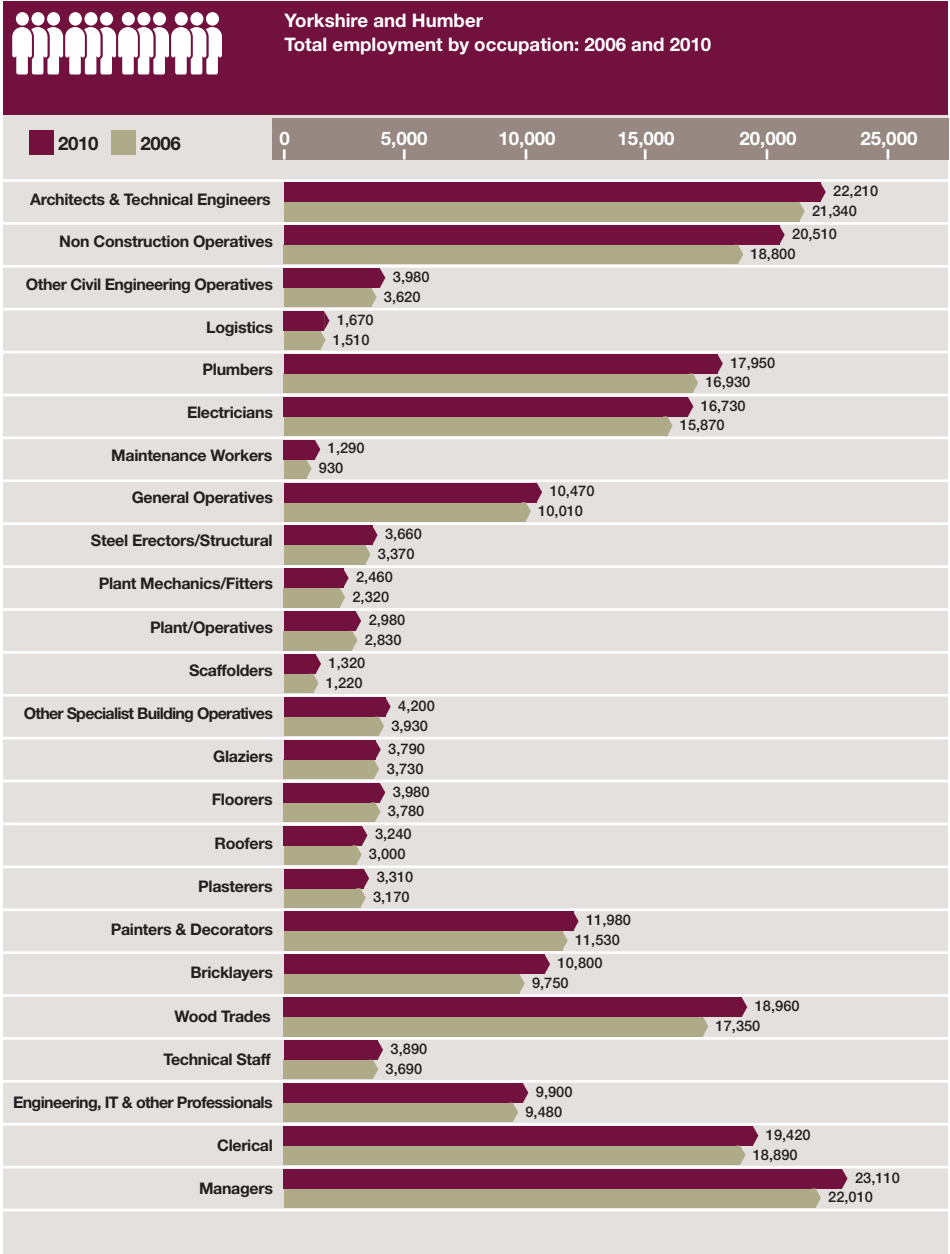
Liverpool South Marriot Hotel, Liverpool.



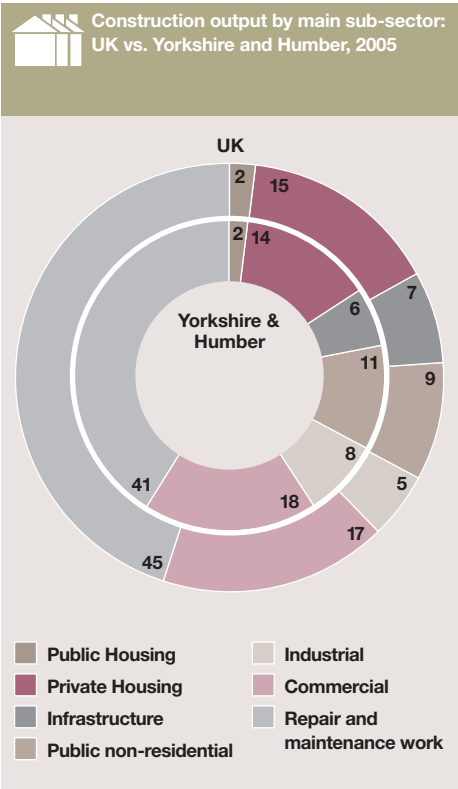
Yorkshire and Humber



Although construction output for Yorkshire and Humber rose by a robust annual average of 7.3% between 2000–2004, such levels cannot be sustained. For the period 2006–2010, output is forecast to grow moderately, but consistently, by an annual average of 1.8% year-on-year.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

3%  
Annual construction growth will peak at 3% in 2008

Key findings

- In the period 2006–2010, the strongest year for growth is expected to be 2008, when major projects such as the major new 1300-apartment residential development in Middleton, Leeds; the redevelopment of Hull Railway Station; and Water improvement works in North and West Yorkshire will help boost annual growth by 3%.
- The commercial sub-sector is forecast to see the strongest growth over the period, rising by 3.7% on average each year to 2010. The Repair and Maintenance sector is expected to expand at an average annual rate of 2.5% with particularly strong growth in 2006 (7%) and 2007 (4%). In contrast, the housing markets – both public and private sector – are predicted to enter an annual average decline to 2010. Public sector housing is expected to show strong growth during 2005–2007 followed by three years of consecutively declining output – with an average annual rate of 1.3% for 2006–2010.
- Total employment in the Yorkshire and Humber construction industry is forecast to increase by about 6% during the next five years taking the total number of employees in the industry to 221,810 by 2010. The industry will need to attract an average of 6,150 new recruits each year, of whom the largest group will be Architects and Technical Engineers (900 new recruits are needed per annum) followed by Wood Trades (640).

Yorkshire and Humber Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	22,010	23,110	440
Clerical	18,890	19,420	510
Engineering, IT & other Professionals	9,480	9,900	260
Technical Staff	3,690	3,890	110
Wood Trades	17,350	18,960	640
Bricklayers	9,750	10,800	420
Painters & Decorators	11,530	11,980	290
Plasterers	3,170	3,310	110
Roofers	3,000	3,240	110
Floorers	3,780	3,980	60
Glaziers	3,730	3,790	70
Other Specialist Building Operatives	3,930	4,200	360
Scaffolders	1,220	1,320	<10
Plant Operatives	2,830	2,980	160
Plant Mechanics/Fitters	2,320	2,460	220
Steel Erectors/Structural	3,370	3,660	350
General Operatives	10,010	10,470	<10
Maintenance Workers	930	1,290	<10
Electricians	15,870	16,730	620
Plumbers	16,930	17,950	310
Logistics	1,510	1,670	60
Other Civil Engineering Operatives	3,620	3,980	150
Non Construction Operatives	18,800	20,510	
Total (SIC 45)	187,720	199,600	5,250
Architects & Technical Engineers	21,340	22,210	900
Total (SIC 45 & 74.2)	209,060	221,810	6,150

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.



Winter Garden, Sheffield.

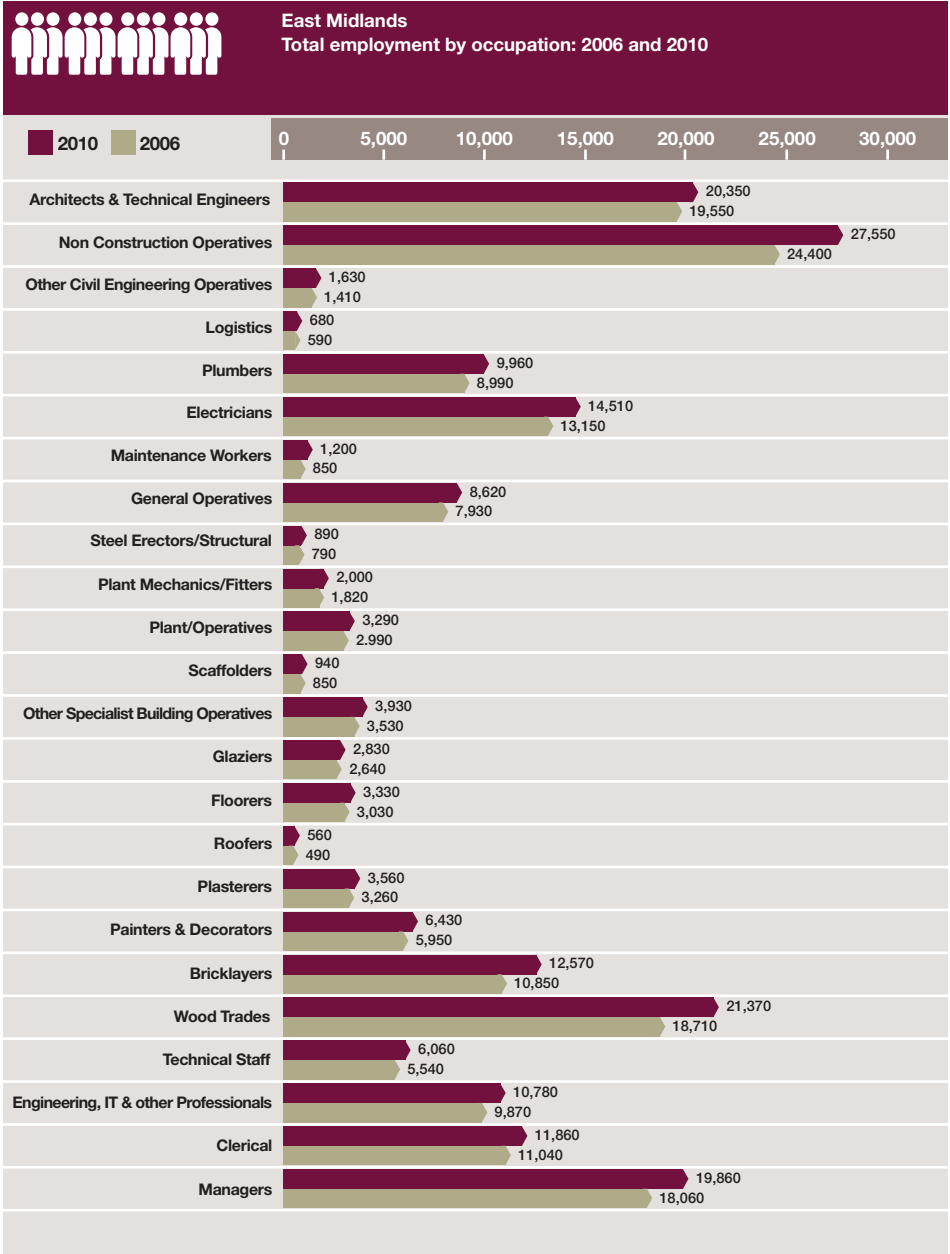


Headingley Cricket Ground, Leeds.

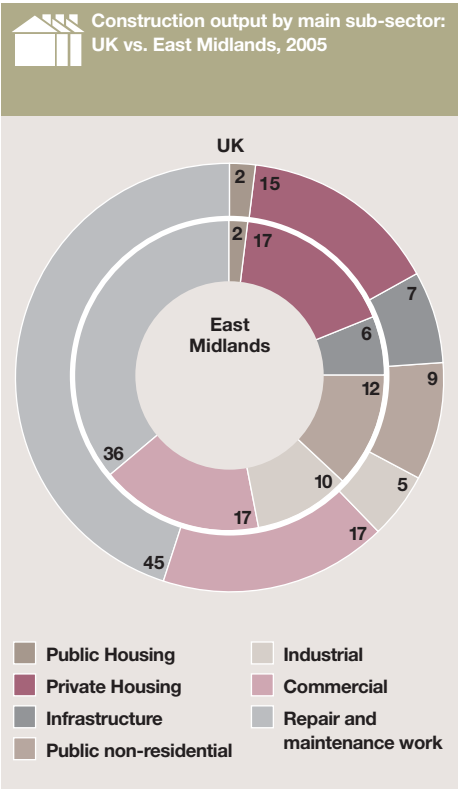
East Midlands



Macro-economic growth prospects for the East Midlands remain among the strongest in the UK and construction output in the region is forecast to grow year-on-year to 2010. However, the rate of increase will decline from recent years, during which time it has recorded almost double digit growth, to grow by a more modest annual average rate of 2.9%. Robust 7% growth is forecast for 2007, mainly due to a strong performance in the commercial sub-sector, but growth trails off to 1% in 2010.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

30%  
Over 30% of new recruits every year need to be Managers

Key findings

- The commercial sector is forecast to see the strongest growth in this region, rising to an average of 7.9% on average each year between now and 2010, with both 2007 and 2008 particularly strong years. A major factor in this growth is the number of major projects expected to come on line in this time, including the £60m redevelopment of Corby town centre, a £180m extension of Shires Shopping Centre in Leicester, and the £600m redevelopment of Silverstone Racing Circuit.
- Infrastructure is expected to enjoy almost 7% average annual growth between 2005–2007, primarily due to the AMP Water and Sewerage programme. However this period of growth is likely to be offset by an increasing decline between 2008–2010, which will reduce the average year-on-year growth for the sector to just 0.7%.
- Reflecting the trend seen across other UK regions, private housing output is likely to be hindered by a slowdown in the housing market while public output is set to moderate after several buoyant years of growth. The public non-housing sector, however, is forecast to expand with average annual growth of about 3.5%, making it the second largest sector in terms of annual growth.
- Between 2006 and 2010, total employment in the East Midlands construction industry is forecast to increase by about 11%. This equates to an average of 7,650 new recruits each year. The greatest demand will be for Managers, where 2,390 new recruits will be needed and Wood Trades (1,080).

East Midlands Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	18,060	19,860	2,390
Clerical	11,040	11,860	410
Engineering, IT & other Professionals	9,870	10,780	430
Technical Staff	5,540	6,060	460
Wood Trades	18,710	21,370	1,080
Bricklayers	10,850	12,570	570
Painters & Decorators	5,950	6,430	160
Plasterers	3,260	3,560	180
Roofers	490	560	50
Floorers	3,030	3,330	70
Glaziers	2,640	2,830	170
Other Specialist Building Operatives	3,530	3,930	220
Scaffolders	850	940	<10
Plant Operatives	2,990	3,290	110
Plant Mechanics/Fitters	1,820	2,000	180
Steel Erectors/Structural	790	890	60
General Operatives	7,930	8,620	60
Maintenance Workers	850	1,200	<10
Electricians	13,150	14,510	570
Plumbers	8,990	9,960	320
Logistics	590	680	50
Other Civil Engineering Operatives	1,410	1,630	110
Non Construction Operatives	24,400	27,550	
Total (SIC 45)	156,740	174,410	7,650
Architects & Technical Engineers	19,550	20,350	<10
Total (SIC 45 & 74.2)	176,290	194,760	7,650

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

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School of Architecture, University of Lincoln.



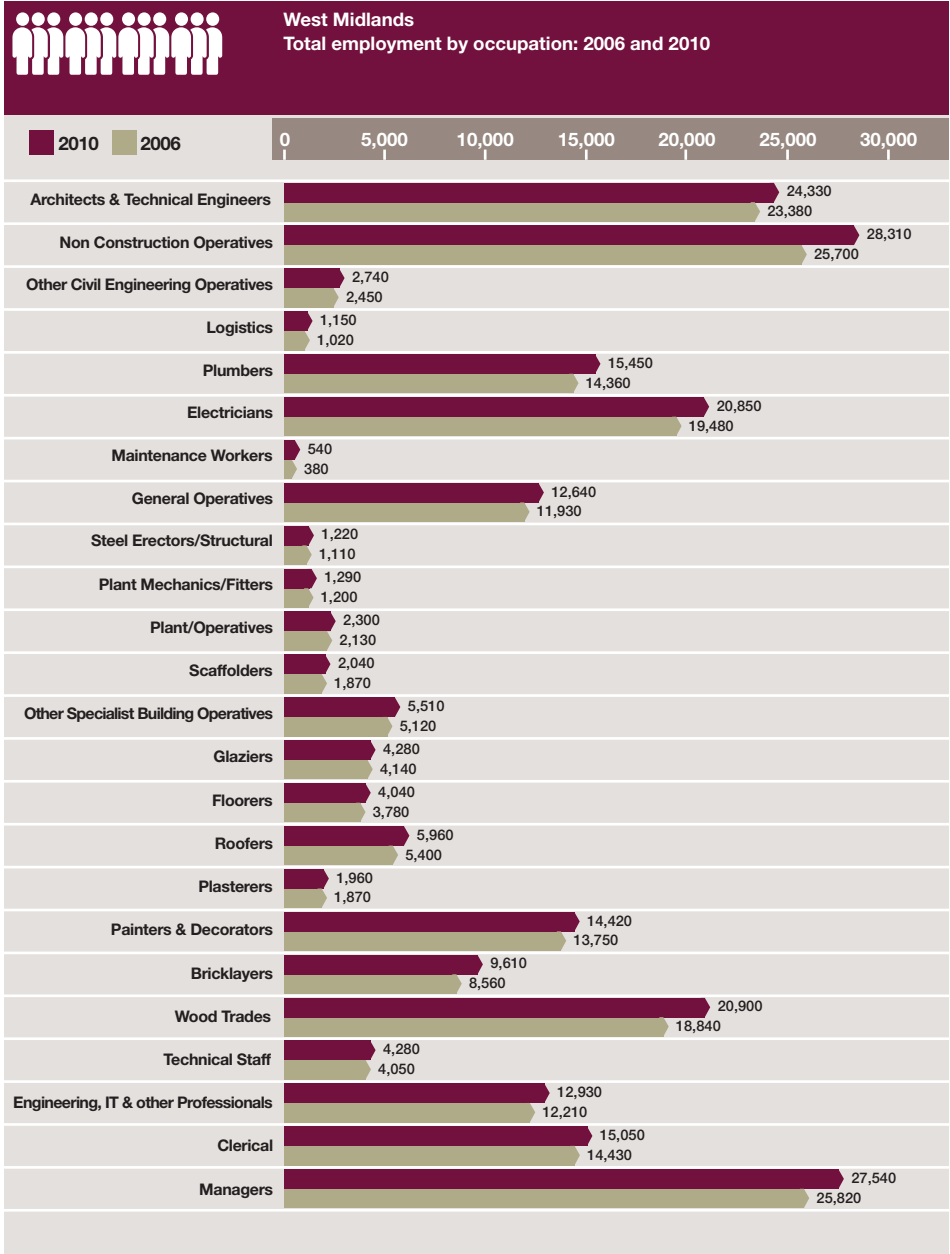
Lincoln Cathedral.



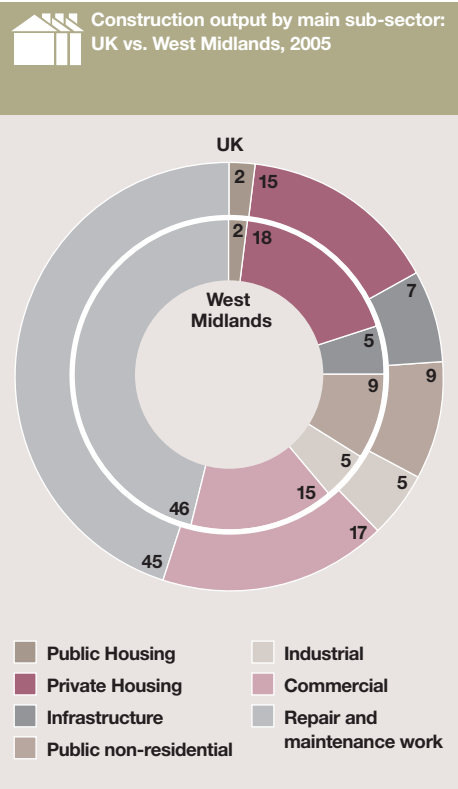
West Midlands



Although macro-economic growth activity in the West Midlands eased in 2005 and is projected to be below the UK average in the next five years, construction output is forecast to grow by an average rate of 1.9% year-on-year from the period 2006–2010, a similar rate to recent years. This places the West Midlands in the bottom third of all UK regions for construction output in the next five years.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

1.9%  
average rate  
of construction  
output growth

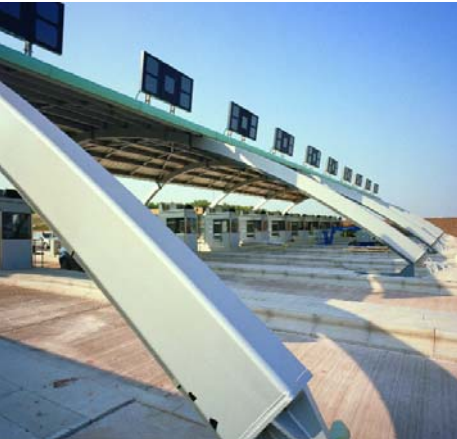
Key findings

- The commercial sub-sector is forecast to see the fastest growth, rising by 5.7% on average each year. 2007 and 2008 will be particularly strong years with growth expected to reach or exceed 7% in both years. The outlook for both public and private housing sub-sectors and for infrastructure is less encouraging, with all expected to decline from 2008.
- 2007 is expected to be the only year in the five year forecast period when the West Midlands construction industry will experience growth across all sectors. This will be driven by the effect of M1 widening and AMP Water and Sewerage programmes coming on top of a number of smaller projects.
- Total employment in the West Midlands construction industry is forecast to increase by 7% for the period 2006–2010 to a total of just under 240,000. This equates to an average requirement for 7,050 new recruits each year.
- Echoing the national trend, the greatest average annual requirement will be for Wood Trades, where 920 new recruits are expected to be needed every year – making up 13% of the total number of employees joining the industry. This is followed closely by Electricians\* with 890 new employees.

West Midlands Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	25,820	27,540	560
Clerical	14,430	15,050	580
Engineering, IT & other Professionals	12,210	12,930	630
Technical Staff	4,050	4,280	300
Wood Trades	18,840	20,900	920
Bricklayers	8,560	9,610	<10
Painters & Decorators	13,750	14,420	380
Plasterers	1,870	1,960	70
Roofers	5,400	5,960	200
Floorers	3,780	4,040	170
Glaziers	4,140	4,280	<10
Other Specialist Building Operatives	5,120	5,510	220
Scaffolders	1,870	2,040	110
Plant Operatives	2,130	2,300	<10
Plant Mechanics/Fitters	1,200	1,290	130
Steel Erectors/Structural	1,110	1,220	30
General Operatives	11,930	12,640	380
Maintenance Workers	380	540	<10
Electricians	19,480	20,850	890
Plumbers	14,360	15,450	480
Logistics	1,020	1,150	50
Other Civil Engineering Operatives	2,450	2,740	120
Non Construction Operatives	25,700	28,310	
Total (SIC 45)	199,600	215,010	6,220
Architects & Technical Engineers	23,380	24,330	830
Total (SIC 45 & 74.2)	222,980	239,340	7,050

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.  
\*See text for note on Maintenance Workers.

\*We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.



M6 Toll Road, Birmingham.



Millenium Place, Coventry.



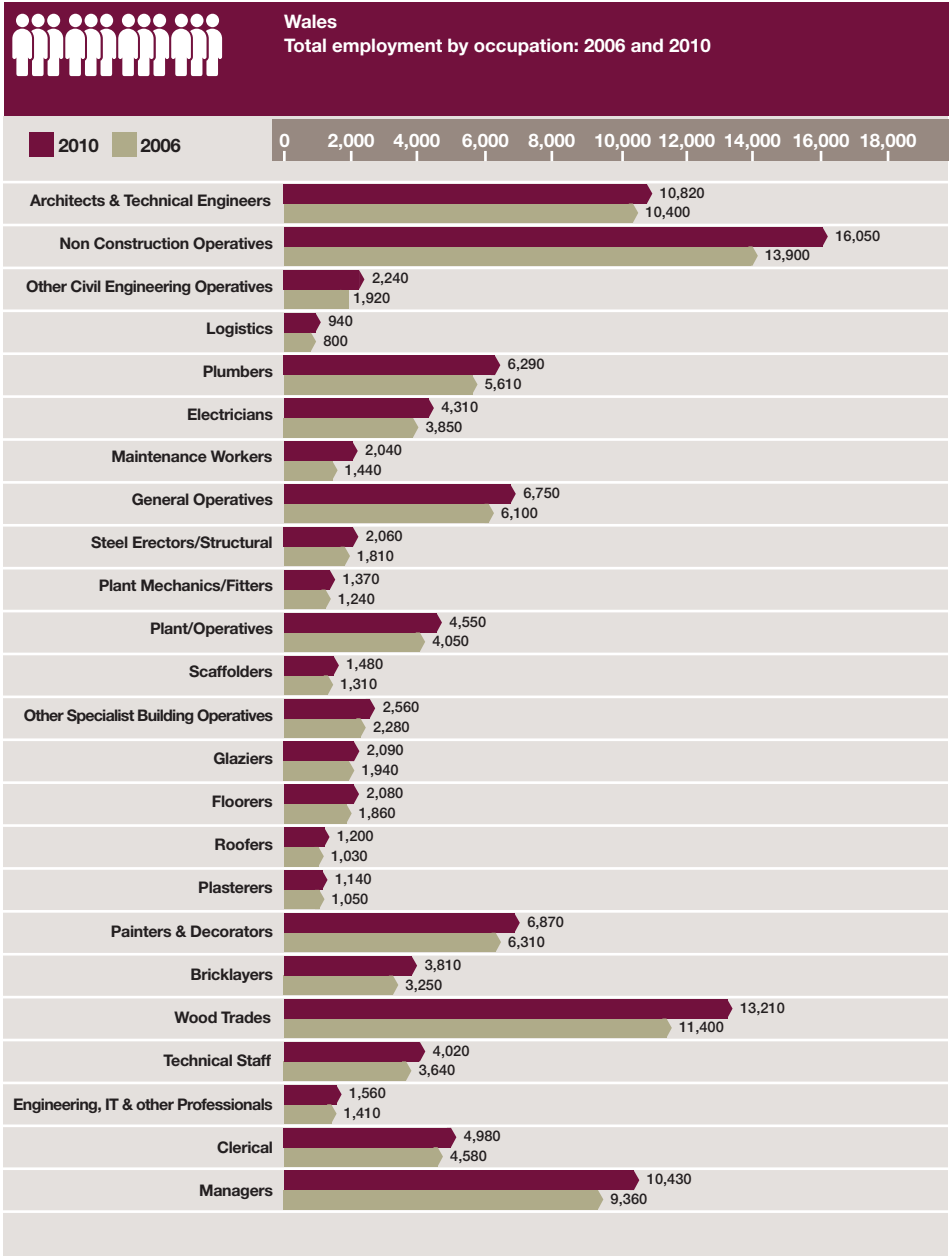
Wales



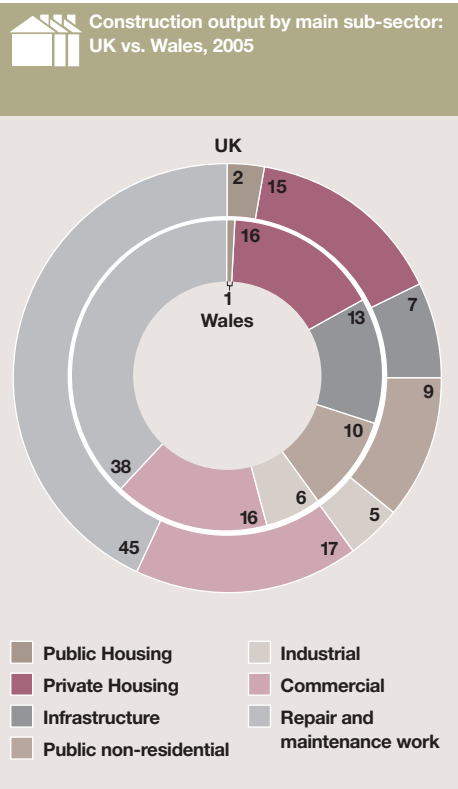
Construction accounts for nearly 10% of direct and indirect employment in Wales, or economic output of £3.8bn a year. Wales is also the home of the construction entrepreneur – small companies dominate the Welsh construction industry, with approximately 94% employing less than 13 employees. Companies that employ more than 80 people account for less than 1% of the total number of firms.

Key findings

- Construction output in Wales has recorded strong growth for the past three years. Between 2006 and 2010 the sector will continue to perform strongly and will experience annual average output growth of 2.7%, driven by a variety of programmes including the £1bn regeneration of the BP refinery in Neath; Newport magistrates courts and international sports village in Cardiff.
- The industry will need to attract almost 23,500 new recruits between 2006–2010 to meet this demand. Of these new recruits, and following the national trend, the largest number will be from Wood Trades (950 new employees a year), followed by Architects and Technical Engineers (640) and Managers (470).
- There will be significant fluctuations in construction output growth levels, year on year. Rapid expected growth in the first part of the forecast period – 5.4% in 2006 and 7.7% in 2007 – will plateau to approximately 1% growth in 2009 and 2010.
- The main growth area between 2006 and 2010 is likely to be the commercial sector, which is forecast to rise by 5.7% on average each year. Major retail projects are planned for Cardiff, Newport, Swansea, and Camarthen and will help drive much of that growth. The Repair and Maintenance sector is also expected to perform well, with a 3.9% annual average increase, thanks to the £3.2bn Welsh Quality Standards social housing scheme.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

3.7%  
annual growth  
expected in the  
Repair and  
Maintenance  
sector

Wales Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	9,360	10,430	470
Clerical	4,580	4,980	380
Engineering, IT & other Professionals	1,410	1,560	290
Technical Staff	3,640	4,020	340
Wood Trades	11,400	13,210	950
Bricklayers	3,250	3,810	260
Painters & Decorators	6,310	6,870	250
Plasterers	1,050	1,140	60
Roofers	1,030	1,200	60
Floorers	1,860	2,080	160
Glaziers	1,940	2,090	50
Other Specialist Building Operatives	2,280	2,560	160
Scaffolders	1,310	1,480	100
Plant Operatives	4,050	4,550	290
Plant Mechanics/Fitters	1,240	1,370	140
Steel Erectors/Structural	1,810	2,060	150
General Operatives	6,100	6,750	290
Maintenance Workers	1,440	2,040	50
Electricians	3,850	4,310	270
Plumbers	5,610	6,290	240
Logistics	800	940	80
Other Civil Engineering Operatives	1,920	2,240	190
Non Construction Operatives	13,900	16,050	
Total (SIC 45)	90,140	102,030	5,230
Architects & Technical Engineers	10,400	10,820	640
Total (SIC 45 & 74.2)	100,540	112,850	5,870

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.



Millenium Stadium, Cardiff.

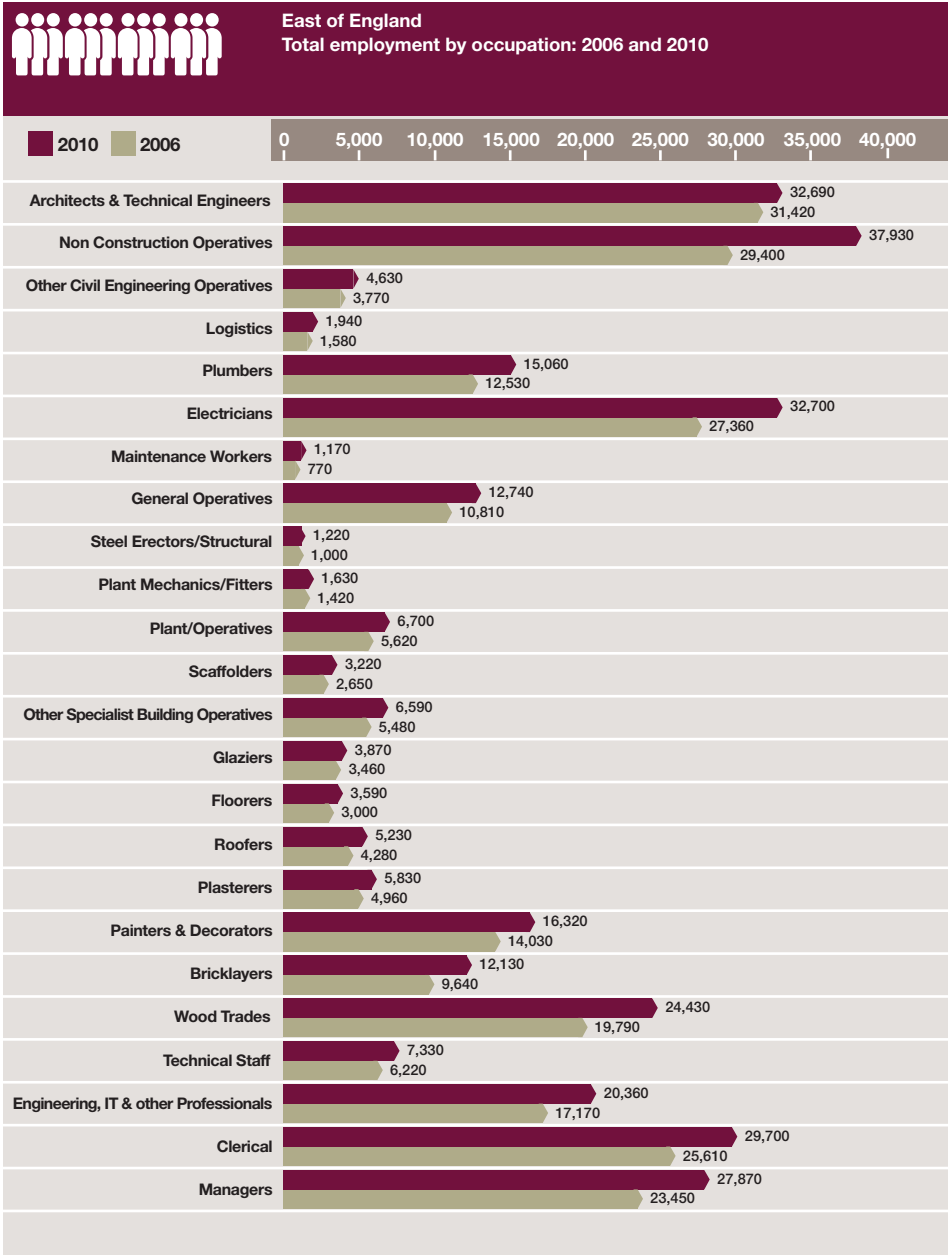


Welsh Assembly Government Building, Cardiff.

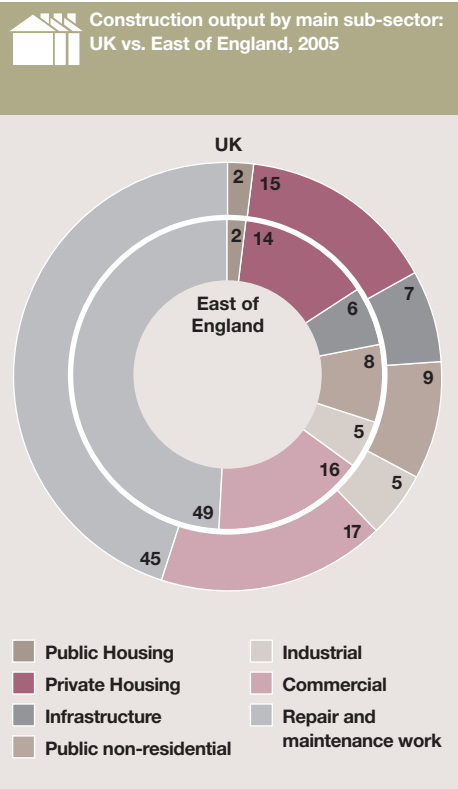
East of England



Between 2005–2010, the East of England macro-economy is expected to increase by 16.4% – above an estimated national increase of 14%. Total employment in the region's construction industry is set to increase by 18.6%, one of the highest percentage rises forecast in the UK. This equates to 14,590 new recruits every year.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

18.6%  
Total employment growth is set to be one of the highest in the UK

Key findings

- The region has one of the UK's highest average annual construction output growth for the period: 4.5%. Robust 7.4% growth is forecast for 2007 mainly due to strong performances in the Commercial, Infrastructure and Repair and Maintenance (R&M) sub-sectors. By 2009 and 2010 growth should dip to around 4%.
- The infrastructure sub-sector is forecast to expand strongly over the forecast period, rising by 12.7% on average each year, fuelled in part by flagship schemes such as the Haven Gateway, and Felixstowe and Harwich ports schemes and the M1 extension programme.
- Public and private housing sectors are also expected to perform strongly, with annual percentage changes of 11% and 8% respectively. The outlook for both the industrial and commercial sub-sectors however is less encouraging, with both expected to have only moderate growth towards the end of the forecast period.
- Of the new jobs that will be created in the region for the construction industry, 14% will be Electricians\* (2,080 new electricians are needed every year), followed by Clerical (1,850), Managers (1,780), Wood Trades (1,610) and Engineering, IT and Other Professions (1,140).

East of England Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	23,450	27,870	1,780
Clerical	25,610	29,700	1,850
Engineering, IT & other Professionals	17,170	20,360	1,140
Technical Staff	6,220	7,330	580
Wood Trades	19,790	24,430	1,610
Bricklayers	9,640	12,130	930
Painters & Decorators	14,030	16,320	530
Plasterers	4,960	5,830	270
Roofers	4,280	5,230	330
Floorers	3,000	3,590	<10
Glaziers	3,460	3,870	140
Other Specialist Building Operatives	5,480	6,590	330
Scaffolders	2,650	3,220	230
Plant Operatives	5,620	6,700	330
Plant Mechanics/Fitters	1,420	1,630	150
Steel Erectors/Structural	1,000	1,220	100
General Operatives	10,810	12,740	550
Maintenance Workers	770	1,170	30
Electricians	27,360	32,700	2,080
Plumbers	12,530	15,060	610
Logistics	1,580	1,940	90
Other Civil Engineering Operatives	3,770	4,630	220
Non Construction Operatives	29,400	37,930	
Total (SIC 45)	234,000	282,190	13,880
Architects & Technical Engineers	31,420	32,690	710
Total (SIC 45 & 74.2)	265,420	314,880	14,590

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

\*We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.



Mathematical Science Centre, Cambridge.



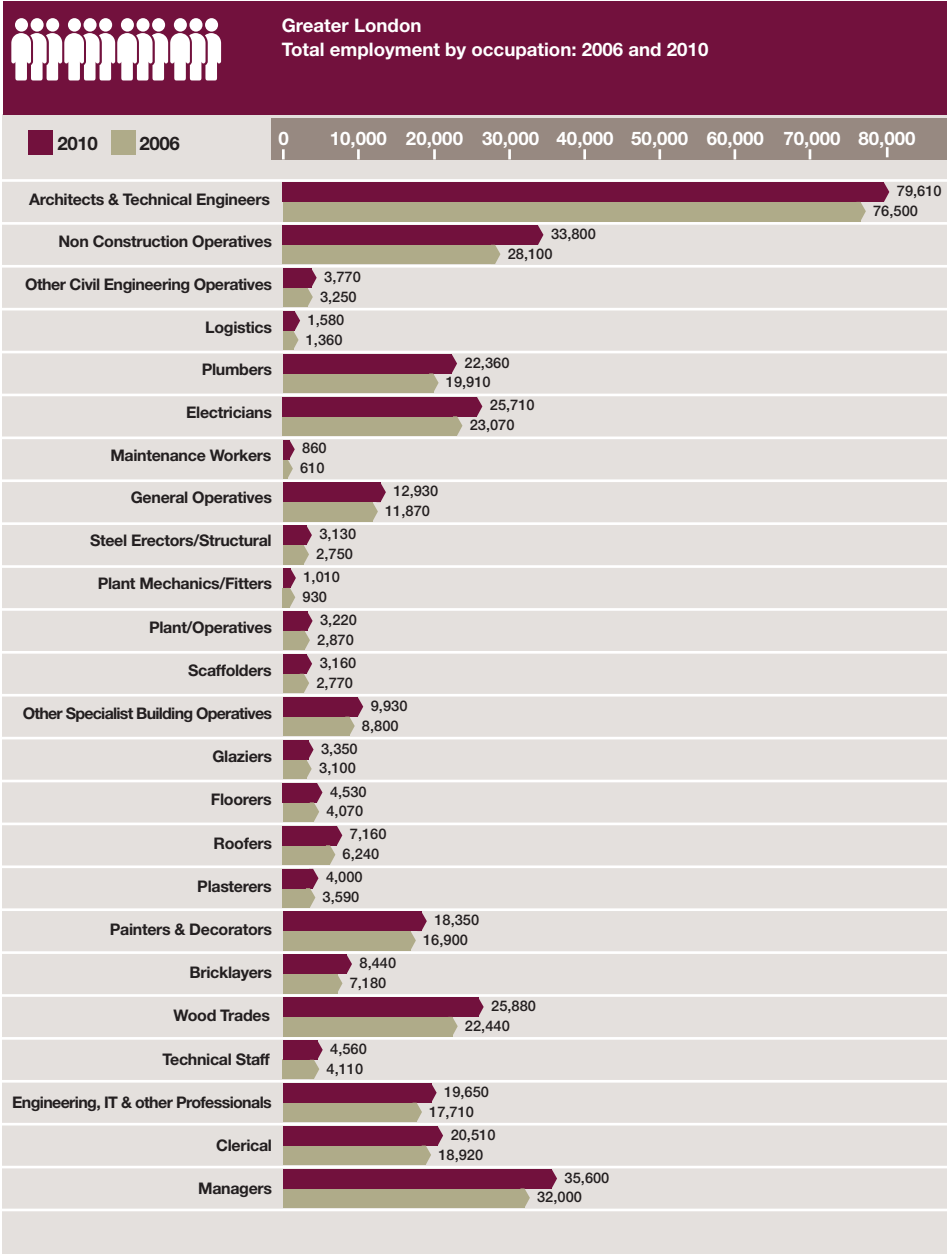
South East Essex College, Southend-on-Sea.



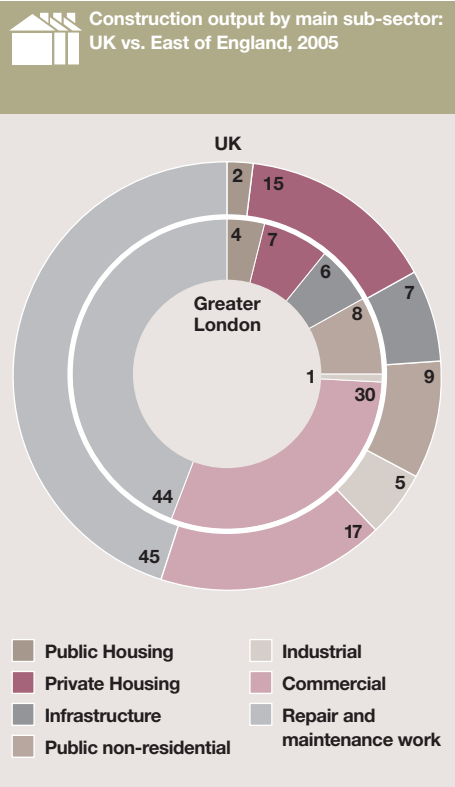
Greater London



Giant infrastructure projects such as the Channel Tunnel rail link and the Olympics, coming on top of major schemes including Wembley stadium, Lewisham and Croydon regeneration projects; the Kings Cross and the Battersea Power Station mixed business/residential initiatives, new hospitals and schools will mean the construction industry in London and the South East is busier than anywhere else in the UK apart from Northern Ireland between 2006–2010. Real construction output in Greater London is set to be 12% higher in 2010 than in 2004.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

11%  
Total construction  
employment  
to increase by 11%

Key findings

- Infrastructure is forecast to be the strongest sub-sector in Greater London in this period. From 2007, double-digit growth is expected as work begins on a number of sizeable road and rail schemes. An additional boost from work directly attributable to the 2012 Olympic Games is also expected after 2007. The rate of growth in this sector is likely to be about 14% each year.
- Although the Olympic building programme is high profile, the amount of output it is expected to generate over the next seven years, at an estimated £2.5bn in 2000 prices, is less, for example, than that produced on Heathrow Terminal 5. In the peak year, 2010, the number of construction workers at all levels from contract managers to craftspeople needed to work on this programme will be around 9,300, which equates to a little over 0.3% of total UK construction employment that year.
- Overall, total employment in Greater London's construction industry is forecast to increase by only about 11%, equating to an average requirement of 9,520 new recruits each year. While the industry will certainly be challenged to meet the needs of these big projects, the relatively low number of new recruits needed reflects the great mobility of the industry's workforce, and the fact that

employees will travel from other regions to work on the London schemes.

- Of the required new recruits, the greatest need is for Architects and Technical Engineers (1,990 new jobs per year), Clerical workers (1,250), Managers (890), Plumbers\* (870) and Wood Trades (800).

Greater London Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	32,000	35,600	890
Clerical	18,920	20,510	1,250
Engineering, IT & other Professionals	17,710	19,650	340
Technical Staff	4,110	4,560	<10
Wood Trades	22,440	25,880	800
Bricklayers	7,180	8,440	220
Painters & Decorators	16,900	18,350	390
Plasterers	3,590	4,000	180
Roofers	6,240	7,160	320
Floorers	4,070	4,530	<10
Glaziers	3,100	3,350	270
Other Specialist Building Operatives	8,800	9,930	620
Scaffolders	2,770	3,160	150
Plant Operatives	2,870	3,220	50
Plant Mechanics/Fitters	930	1,010	120
Steel Erectors/Structural	2,750	3,130	140
General Operatives	11,870	12,930	<10
Maintenance Workers	610	860	<10
Electricians	23,070	25,710	590
Plumbers	19,910	22,360	870
Logistics	1,360	1,580	100
Other Civil Engineering Operatives	3,250	3,770	230
Non Construction Operatives	28,100	33,800	
Total (SIC 45)	242,550	273,490	7,530
Architects & Technical Engineers	76,500	79,610	1,990
Total (SIC 45 & 74.2)	319,050	353,100	9,520

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

\*We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.



Cardinal Place, Victoria Street, London.



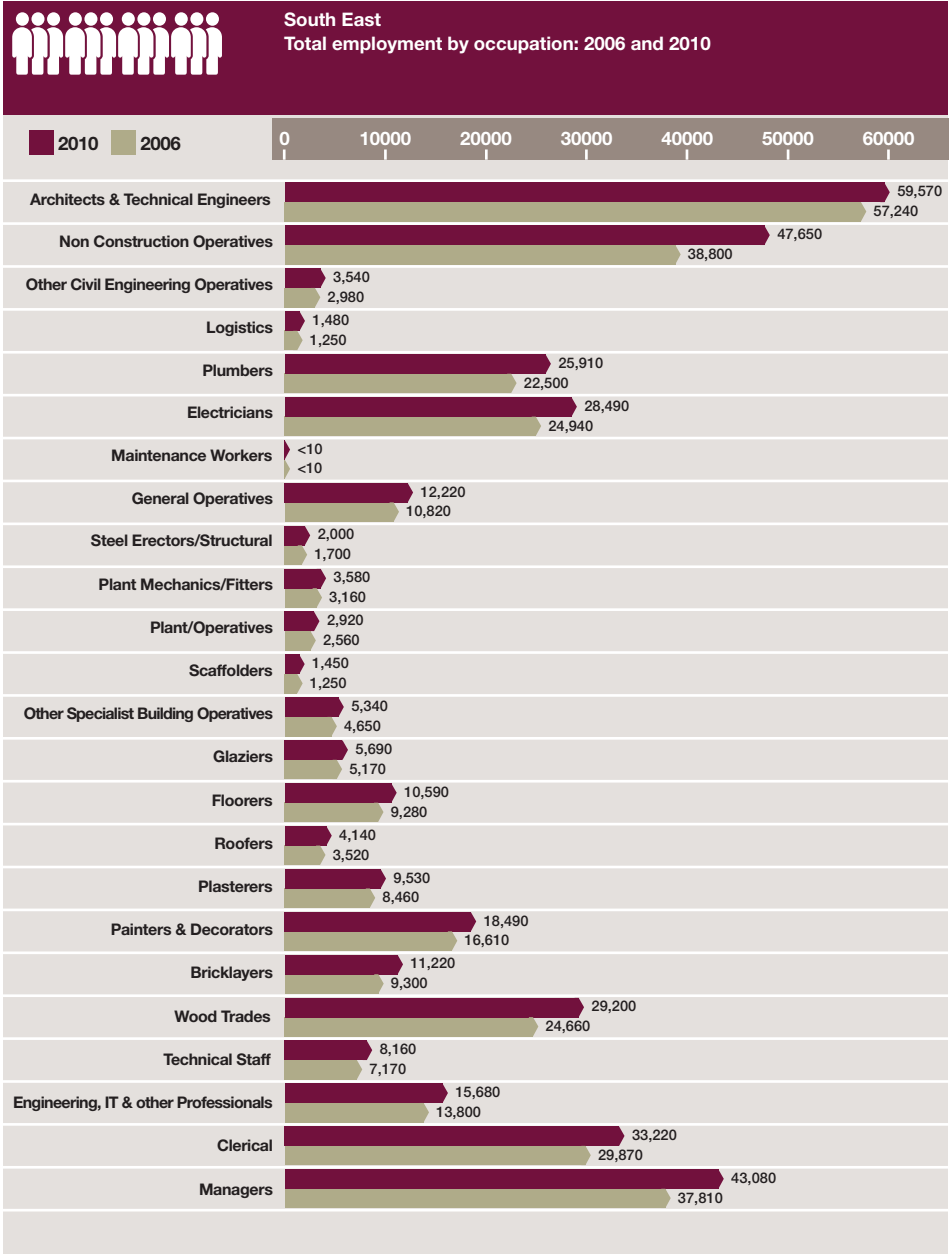
Swiss Re building, City of London.



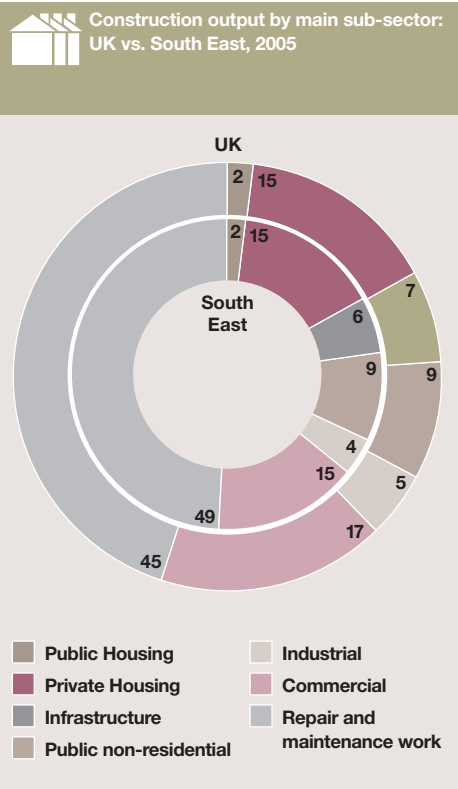
South East



Construction output in the South East has been rising continuously for over a decade and that trend is continuing with construction output expected to be 18% higher in 2010 than in 2004. Average construction output growth across the region between 2006 and 2010 is forecast to be 4.3% per annum. Despite this figure being substantially lower than in the boom years of 2003 and 2004, it still makes the South East the third strongest region for growth in the UK.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

3.6%  
growth forecast for  
the infrastructure  
sub-sector

Key findings

- The housing sectors are forecast to see the strongest growth between 2006–2010, rising by 9.5% on average each year on the private side, and 9.3% in the public sector, largely due to the Thames Gateway developments currently in the pipeline. In contrast, the outlook for the industrial sub-sector is less encouraging. Overall, industrial output growth is likely to be negligible to 2010, after several years of moderate decline between 2005 and 2008.
- The outlook for Infrastructure in the region is considerably brighter than it has been in recent years. An agglomeration of projects such

as the ongoing widening of the M25, a number of flood protection schemes and a £115m gas facility on the Isle of Grain are to come on stream in the next five years and moderate year on year growth of 3.6% is forecast to 2010.

- The commercial sector is expected to flourish between 2006–2010 with estimated average annual growth of 6%. The most buoyant year will be 2007 when output growth of 9% is forecast, driven by redevelopments in Portsmouth and High Wycombe; the £750m Bracknell town centre redevelopment, a £300m PFI hospital in Kent, the £250m+ marina development in Brighton and a retail development in Newbury.

- Total employment in the construction industry across the region is forecast to increase by around 14% – equating to an average of 11,710 new recruits per annum. The greatest employment requirement will be for Managers, with 1,710 needed annually, followed by Architects and Technical Engineers (1,500), Clerical Workers (1,060) and Wood Trades (1,390).

South East Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	37,810	43,080	1,710
Clerical	29,870	33,220	1,060
Engineering, IT & other Professionals	13,800	15,680	890
Technical Staff	7,170	8,160	700
Wood Trades	24,660	29,200	1,390
Bricklayers	9,300	11,220	540
Painters & Decorators	16,610	18,490	360
Plasterers	8,460	9,530	340
Roofers	3,520	4,140	200
Floorers	9,280	10,590	530
Glaziers	5,170	5,690	<10
Other Specialist Building Operatives	4,650	5,340	<10
Scaffolders	1,250	1,450	160
Plant Operatives	2,560	2,920	<10
Plant Mechanics/Fitters	3,160	3,580	230
Steel Erectors/Structural	1,700	2,000	90
General Operatives	10,820	12,220	<10
Maintenance Workers	<10	<10	<10
Electricians	24,940	28,490	1,030
Plumbers	22,500	25,910	710
Logistics	1,250	1,480	80
Other Civil Engineering Operatives	2,980	3,540	190
Non Construction Operatives	38,800	47,650	
Total (SIC 45)	280,260	323,580	10,210
Architects & Technical Engineers	57,240	59,570	1,500
Total (SIC 45 & 74.2)	337,500	383,150	11,710

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.



De La Warr Pavilion, Bexhill-on-Sea.

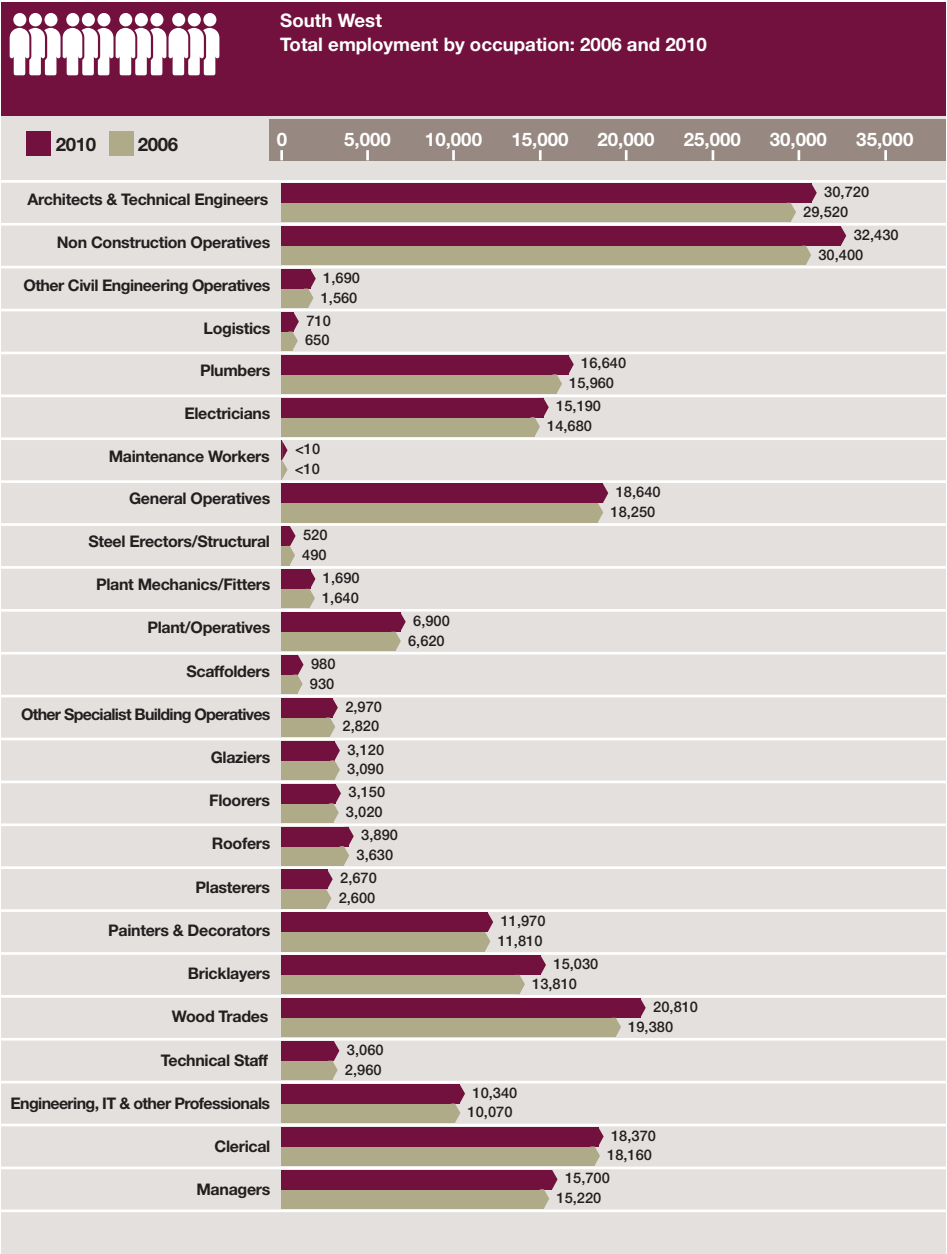


New Meadway Bridge, Kent.

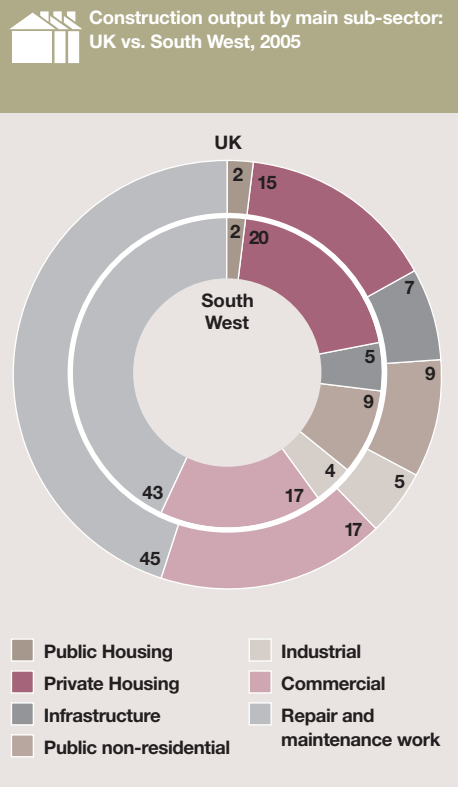
South West



Despite the fact that macro-economic growth prospects for the South West remain among the strongest in the UK and the region has enjoyed annual average growth in construction output of 7.3% since 2000, the period from 2006–2010 will see growth slowdown to just 2% annually, with relatively little fluctuation year-on-year. This follows a nation-wide trend, bucked only by London.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

45% of the annual workforce needed are expected to be professionals

Key findings

- Total employment is projected to grow by an annual average of 4.4% – equating to 4,920 new recruits every year. Of these, the greatest annual requirement will come from Architects and Technical Engineers (estimated annual requirement of 1,080), Wood Trades (660) and Clerical Workers (660). In total, 45% of the region’s average annual workforce requirement is expected to be professional workers, including Managers, Clerical workers, Engineering, Technical, IT and other professionals.
- The commercial sub-sector is forecast to see the strongest growth, rising by almost 6% on average each year to 2010. 2007 and 2008 are forecast to be particularly strong years as the £500m Broadmead and £250m Merchants Quarter developments commence in Bristol on top of regeneration work in Taunton, the Devon Science Park project, Plymouth Derriford Hospital and the £100m redevelopment of Weymouth port.
- The private housing sector is predicted to enter an annual average decline to 2010, hindered by a slowdown in the housing market, while public sector housing will rise by an average of 1.2% over the same period. After a marginal decline in 2006, the Repair and Maintenance sector will recover and consistent growth of between 1% and 2% is predicted for 2008 onwards. Public sector non-housing is also expected to expand, with annual average growth of 2.9% making it the second largest construction sector in the region.

South West Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	15,220	15,700	330
Clerical	18,160	18,370	660
Engineering, IT & other Professionals	10,070	10,340	<10
Technical Staff	2,960	3,060	150
Wood Trades	19,380	20,810	660
Bricklayers	13,810	15,030	530
Painters & Decorators	11,810	11,970	230
Plasterers	2,600	2,670	80
Roofers	3,630	3,890	120
Floorers	3,020	3,150	60
Glaziers	3,090	3,120	40
Other Specialist Building Operatives	2,820	2,970	<10
Scaffolders	930	980	10
Plant Operatives	6,620	6,900	180
Plant Mechanics/Fitters	1,640	1,690	120
Steel Erectors/Structural	490	520	140
General Operatives	18,250	18,640	110
Maintenance Workers	<10	<10	<10
Electricians	14,680	15,190	240
Plumbers	15,960	16,640	180
Logistics	650	710	<10
Other Civil Engineering Operatives	1,560	1,690	<10
Non Construction Operatives	30,400	32,430	
Total (SIC 45)	197,750	206,470	3,840
Architects & Technical Engineers	29,520	30,720	1,080
Total (SIC 45 & 74.2)	227,270	237,190	4,920

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

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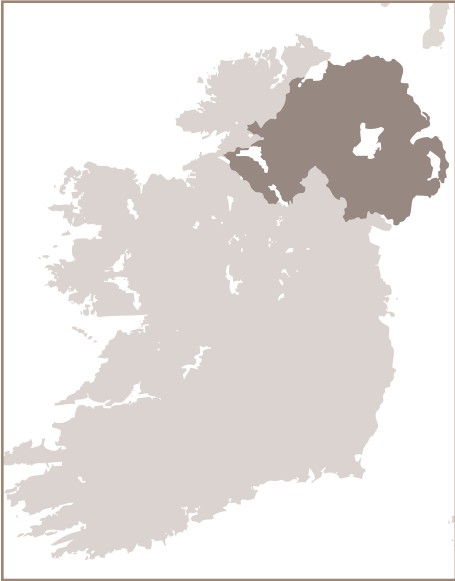
Eden project, Cornwall.



Bristol Harbourside Marina, Bristol.



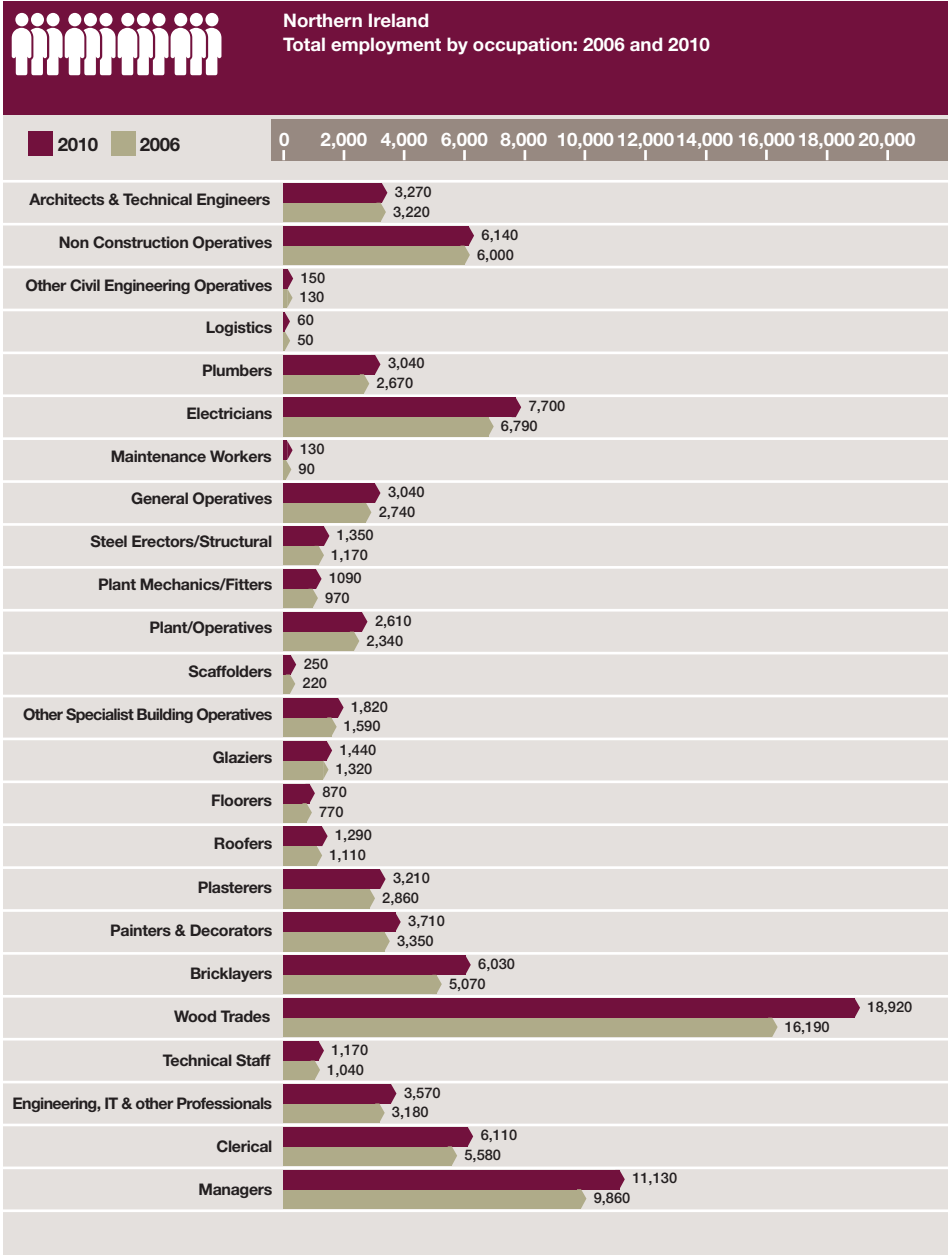
Northern Ireland



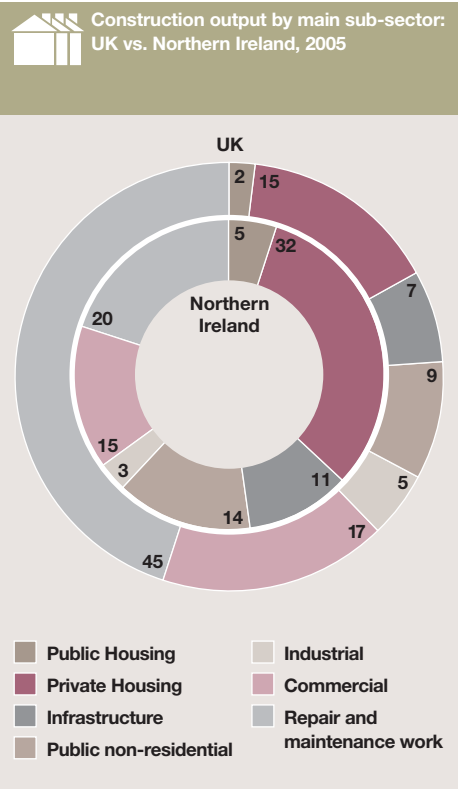
As the Northern Irish macro-economy looks likely to outperform the UK as a whole in the period to 2010, so its construction industry is forecast to boom. To meet this growth in demand, construction industry employment needs to grow by 13% over the period and take on over 12,000 new industry recruits between 2006 and 2010. This is the second highest employment growth rate in the UK, behind the East of England which has a growth rate of 18.6%, and is fuelled by significant public investment in schools (£3bn), health and social services (£2.9bn) transport (£2.25bn) and social housing (£2bn).

Key findings

- Of these new recruits, the greatest annual requirement, in line with the UK as a whole, will come from Wood Trades, with an estimated requirement of 730 a year. Employment in Wood Trades is forecast to rise by 17% over the next five years, to a total of 18,920. One of the lowest requirements is for Architects and Technical Engineers, of which just 30 new recruits are expected to be needed each year.
- However, the number of professional workers (including Managers, Clerical Workers, Technical, Engineering and other professionals) the industry needs to attract every year to 2010 is forecast to be over 700. This is over one quarter of the Province's total annual workforce requirement.
- Although construction output fell in the first part of the decade to stand at just over £2bn in 2004 (in 2000 prices), it is projected to rise between 2006–2010 by an average annual rate of 4.4% – a major turnaround for the Province. This growth will be driven largely by the public sectors, with social housing, infrastructure and public non-residential activity all forecast to increase by over 5% year-on-year.



Source: Construction Skills Network Model, 2006: Experian.



Source: DTI, DFPNI, Experian.

13%  
employment in  
the construction  
industry needs  
to grow by 13%  
to meet demand

Northern Ireland Total employment and Average Annual Requirement by occupation: 2006-2010	Employment		Average Annual Requirement
	2006	2010	2006-2010
Managers	9,860	11,130	340
Clerical	5,580	6,110	200
Engineering, IT & other Professionals	3,180	3,570	110
Technical Staff	1,040	1,170	60
Wood Trades	16,190	18,920	730
Bricklayers	5,070	6,030	260
Painters & Decorators	3,350	3,710	90
Plasterers	2,860	3,210	120
Roofers	1,110	1,290	60
Floorers	770	870	20
Glaziers	1,320	1,440	30
Other Specialist Building Operatives	1,590	1,820	70
Scaffolders	220	250	<10
Plant Operatives	2,340	2,610	50
Plant Mechanics/Fitters	970	1,090	20
Steel Erectors/Structural	1,170	1,350	50
General Operatives	2,740	3,040	30
Maintenance Workers	90	130	<10
Electricians	6,790	7,700	250
Plumbers	2,670	3,040	100
Logistics	50	60	<10
Other Civil Engineering Operatives	130	150	<10
Non Construction Operatives	6,000	6,140	
Total (SIC 45)	75,090	84,830	2,590
Architects & Technical Engineers	3,220	3,270	30
Total (SIC 45 & 74.2)	78,310	88,100	2,620

Source: Construction Skills Network Model, 2006; Experian.  
Note: Numbers are rounded to the nearest 10 and may not sum to the total.

We are grateful to SummitSkills for allowing us to include data on plumbers and electricians (SIC45 codes 45.31 and 45.33) to ensure that this report provides a comprehensive analysis of the challenges facing the construction industry.



Royal Victoria Hospital, Belfast.



Lagan Valley Island, Lisburn City.



# Explanation of terms

## Average annual requirement

The average annual requirement for new workers in the construction industry is calculated taking into account demand, plus the inflows and outflows of labour in the market. For this reason it cannot be calculated by simply taking the difference between 2006 and 2010 employment figures and dividing them by five (the number of years).

## Numbers of new entrants/new recruits

The numbers of new entrants or new recruits to the industry refer to the number of full time positions that are forecast to be required

## Inclusion of data relating to plumbers and electricians

This report aims to ensure the most comprehensive picture possible of the challenges facing the construction industry both now and for the future. To that end it includes data relating to plumbers and electricians. As part of SIC45, plumbers and electricians working in contracting are an integral part of the construction process. However we recognise that SummitSkills has responsibility for these occupations across several of the SIC45 codes (45.31 and 45.33). We have therefore passed outputs from the Construction Skills Network relating to those two occupations to SummitSkills for their analysis, while including them in this report to ensure completeness.

ConstructionSkills is the Sector Skills Council for construction, tasked by Government to ensure the UK's largest industry has the skilled workforce it requires. Working with Government, training providers and employers, it is responsible for ensuring that the industry has enough qualified new entrants and that the existing workforce is fully skilled and qualified, as well as for improving the performance of the industry and the companies within it.

This Construction Skills Network report can be downloaded at [www.constructionskills.net](http://www.constructionskills.net) from 5 June 2006.

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