Construction in the UK Economy
The Benefits of Investment

October 2009

A study commissioned by the UK Contractors Group
After 12 years of sustained growth, the construction industry is facing its worst economic downturn since the second world war. Output has dropped around 20% this year and we expect to see further falls before we reach the bottom of the downturn.

At the same time, there is an intense national debate about the volume of public spending. Everyone is clear that the level must be reduced and there will be some tough decisions for the politicians to make. About 40% of our business comes from the public sector and so construction will not be immune from these decisions. It is important therefore that those making the tough choices are well informed.

As an industry we have often undersold our contribution to the wider economy yet this industry has huge potential to stimulate economic growth and employment.

This report seeks to quantify that contribution and puts forward a persuasive case for continued public sector investment in construction. It provides clear messages which I hope the whole industry can get behind. This report gives us the ammunition to play our part in the national debate.

James Wates
Chairman
UKCG

The UK construction industry makes a tremendous contribution to the national economy.

This report outlines the essential relationship between the construction sector and numerous broad social and economic objectives including regional development, employment, and the delivery of the UK's low-carbon future.

We all recognise that there is great pressure to reduce public spending given the state of the public finances.

However, the CBI believes that a long-term failure to maintain adequate levels of investment in infrastructure would be short-sighted. A strong economy requires fit-for-purpose schools and hospitals. Investment in high quality transport infrastructure is vital to ensure that the UK remains competitive. Urban capital regeneration projects can attract a nucleus of new business and generate rising prosperity. Supporting infrastructure development in the technology sector boosts knowledge and innovation, creating the technological base that will give UK firms a competitive edge.

The CBI urges Government to ensure appropriate long-term investment levels that will safeguard and enhance the UK's economic position.

John Cridland CBE
Deputy Director
CBI
Construction in the UK economy – the benefits of investment

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Introduction

- This study has been commissioned by the UK Contractors Group and was conducted during August and September, 2009

- The objectives of this study are to demonstrate the impacts of the UK construction industry on the UK economy, and specifically to highlight the benefits of investing in construction

- The key areas covered by the study include:
  - the significant contribution that construction makes to the UK economy, both at a national level and in supporting the regions
  - the key contribution that construction makes to UK employment
  - the enabling role that construction plays in realising a range of broader economic and social objectives
The construction industry is vital to the overall UK economy, but is suffering heavily in the recession

- Construction* is a major contributor to UK GDP (directly c. 8.5% in 2008, rising to c.10% overall* when the entire value chain is considered) and a driver of historical GDP growth
- The construction industry value chain consists of c.300,000* firms, including many small- and medium-sized family and local businesses
  - the sector employs c.3 million* people in a multitude of roles representing 8% of UK employment
  - a significant proportion of construction employees (>60%) are low-skilled labourers with relatively limited alternative employment opportunities
- Construction is also an important driver of growth for other sectors, without which there would be a loss of domestic production capacity and skills
- UK government investment has played an important role in growing the UK’s capital stock
  - government investment in construction has historically focused on infrastructure, education, housing and health
  - government has historically represented 30-40% of construction demand
- Compared to its European counterparts, the UK has suffered from a more pronounced decline in construction activity since the onset of the recession
  - the impact on the construction sector is already apparent through sharp increases in company closures (an increase of over 40% between Q4 2008 and Q1 2009) and individual bankruptcies and redundancies (an increase in bankruptcies of c. 35% between Q4 2008 and Q1 2009 and a redundancy rate of 28 per 1,000 employees in Q1 2009 – the highest amongst UK industries)

Note: * Construction here refers to the whole construction value chain defined as being the UK Standard Industrial Classification of Economic Activities (SIC, 2003) codes 45 (construction) and 74.2 (architectural and engineering activities) and the construction products sector
Source: ONS; BERR; Annual Business Inquiry; Registry Trust; Insolvency Agency; Financial Times; L.E.K. analysis
The construction industry value chain consists of c.300,000 firms employing over 3 million people in a multitude of roles

<table>
<thead>
<tr>
<th>Stage</th>
<th>Professional services*</th>
<th>Site preparation, construction, improvement and repair</th>
<th>Installations and services</th>
<th>Construction products and materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role in value chain</td>
<td>Planning, architecture and design</td>
<td>New build and repair and maintenance of both residential and non-residential buildings, including specialist trades, e.g., bricklaying, roofing, scaffolding</td>
<td>Installation of fixtures and fittings, including gas fittings, plumbing, heating and ventilation plant, sound and heat insulation, electrical fixtures and fittings</td>
<td>Supply of basic materials, e.g., aggregates and cement</td>
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<tr>
<td></td>
<td>Civil and structural engineers, quantity surveyors</td>
<td>Extensions, site preparation, major alterations and enhancements</td>
<td>Painting and decorating, glazing, plastering, tiling, on site joinery and carpentry, flooring, plumbing, etc.</td>
<td>Supply of value added building materials and building products, e.g., bricks, blocks, pavings</td>
</tr>
<tr>
<td></td>
<td>Project planning and management</td>
<td>Civil engineering: construction of roads, railways, runways, bridges and tunnels, harbours, canals, drainage systems</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employees</th>
<th>Firms</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>c.300,000</td>
<td>c.30,000</td>
<td>c.£21bn (2007)</td>
</tr>
<tr>
<td>c.2,200,000</td>
<td>c.230,000</td>
<td>c.£124bn (2008)</td>
</tr>
<tr>
<td>c.650,000</td>
<td>c.30,000</td>
<td>c.£50-55bn (2008)</td>
</tr>
</tbody>
</table>

Note: * Architectural & engineering services and related technical consultancy; Professional services output is calculated as a ratio of total turnover and assumes that architects and consultants contribute 80% of output in SIC code 74.2

Source: BERR; DTI; ONS; Construction Products Association (CPA); Annual Business Inquiry

UK Contractors Group. Construction in the UK economy.
The report is structured in three parts that, together, support the overall message:

1. Impact on economic activity
   - Construction is one of the best ways of stimulating economic activity – not just in the construction sector, but across the economy as a whole, including troubled manufacturing sectors. It also has one of the lowest levels of imports, so the stimulus spending stays within the national economy.

2. Contribution to employment
   - Construction is the best sector for stimulating employment. The employment that construction provides benefits lower skilled and young workers who have relatively few alternative opportunities. Many regions are heavily dependent on construction jobs.

3. Benefits of investment
   - Construction is not only immediate economic production, it is also investment rather than consumption, which provides significant long-term economic and social benefits.

Government investment in construction is the most beneficial use of stimulative public expenditure in both the short and longer term, and any reduction in construction expenditure would have significant immediate and enduring negative consequences for the UK.
Construction is one of the best ways of stimulating economic activity

- Construction* is a major contributor to UK GDP (directly c. 8.5%* in 2008, £124 billion)
- Construction has been a significant contributor to historical UK output growth
- The construction industry is a driver of growth in other sectors due to its heavy reliance on an extended and varied supply chain
- £1 spent on construction output generates a total of £2.84 in total economic activity (i.e. GDP increase)
- In addition to the economic benefits, every £1 invested in construction provides financial returns to the Treasury in tax income and benefit savings
- In the short term, construction is one of the most effective sectors in which the government could invest to stimulate economic activity
- Compared to other sectors, construction relies little on imports; hence, investment in construction is more likely than other sectors to generate additional economic activity within the UK
- Private construction output is very sensitive to changes in GDP; private activity has contracted sharply in the current downturn, causing reductions in GDP and employment
- Private sector construction spend is falling faster than in previous recessions; CVAs, receiverships and bankruptcies in the construction sector have increased since the onset of the current recession
- Construction has had the greatest increase in redundancy rate in the UK since the start of the current recession
- Even if current government plans in construction are maintained, construction output is expected to fall significantly over the next 2-3 years. Any reduction in public expenditure would exacerbate this problem

Note: * Construction is defined here as SIC code 45 and excludes construction products and business services, e.g., architecture and surveying
Construction is a major contributor to UK GDP (c. 8.5% in 2008, £124 billion)

- Construction’s* total output includes c. £80 billion of direct value-add and c. £44 billion of intermediate consumption
  - intermediate consumption comprises the total amount of materials and services used in construction, including sub-contracting services
- UK government investment has historically driven 30–40% of construction output
- Construction contributes a net trade surplus to the UK (£223m in 2008)
  - little construction output is imported; increased construction demand is therefore more likely to directly benefit domestic UK firms
  - furthermore, construction supports high-value net-export service sectors such as engineering consultancy and design, architectural activities, and property management

Note: * Construction is defined here as SIC code 45 and excludes construction products and business services, e.g., architecture and surveying; ** Construction output for GB only
Source: ONS
UK Contractors Group. Construction in the UK economy.
Construction has been a significant contributor to historical UK output growth

Real change in UK GVA by sector
(1994-08)
Billions of 2007 pounds

- Construction contributed c.10% of total UK GVA* growth between 1994 and 2007, and is an important driver of growth in other sectors of the economy
- Much of the growth in total UK GVA in recent years can be attributed to government, financial and real estate sectors
- The high growth in these other sectors is unlikely to be sustainable
- Furthermore, other traditional sectors of the economy, e.g., manufacturing, have been in decline

Note: * GVA plus taxes minus subsidies is equivalent to GDP; ** Other business services includes non-financial professional services, e.g., marketing; *** Construction is defined as SIC code 45 and excludes construction products and business services, e.g., architecture and surveying
Source: ONS; L.E.K. analysis

UK Contractors Group. Construction in the UK economy.
The construction industry is a driver of growth in other sectors due to its heavy reliance on an extended and varied supply chain.

Consumption of output from other sectors by construction in purchaser prices (2007)

- The construction industry uses a wide range of inputs from many industries to produce its goods and services.
- Investment in the construction industry therefore indirectly supports a broad set of industries as the increase in final demand filters through to key industries which supply the sector.
- In particular, the following sectors are amongst those that benefit most from increases in construction activity:
  - aggregates
  - renting of machinery
  - real estate
  - architectural and technical consultancy
  - plastic products
  - wood products
  - metal products
  - mining and quarrying

Note: * Construction is defined as SIC code 45 and excludes construction products and business services, e.g., architecture and surveying.

Source: ONS; L.E.K. analysis
£1 spent on construction output generates a total of £2.84 in total economic activity (i.e. GDP increase)

- **Investment in construction**
- **Direct impact**
  - Wage income and corporate profit generated in the construction sector, plus spend on non-labour inputs
- **Indirect impact**
  - Supply chain impacts of construction and their knock on effects, i.e., increase in output and income up and down the supply chain
  - Sectors that benefit from increased construction output include manufacturing (especially of building products and equipment), real estate, business services (including architecture, planning and surveying), mining and quarrying, and transportation
- **Induced impact**
  - Increase in household income as a result of increased employment / income in construction and other sectors leads to increase in spending and demand / output in the overall economy

- The type I output multiplier is a measure of the direct and indirect effects associated with an additional £1 spend on a particular sector. The type I multiplier for construction in the UK was estimated by the ONS to be 2.09
- Type II multipliers include the induced impacts associated with the increased economic activity and income in the economy. This has been estimated by L.E.K. based on income tax and National Insurance rates, indirect taxes, savings ratios, and import share of disposable income

Source: ONS (2002); L.E.K. analysis
UK Contractors Group. Construction in the UK economy.
In addition to the economic benefits, every £1 invested in construction provides financial returns to the Treasury in tax income and benefit savings.

<table>
<thead>
<tr>
<th>Estimated returns to the Treasury from investing £1 in construction</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct effect</strong></td>
<td></td>
</tr>
<tr>
<td>Income tax and NI</td>
<td>0.12</td>
</tr>
<tr>
<td>Benefits</td>
<td>0.23</td>
</tr>
<tr>
<td>Corporation tax</td>
<td>0.01</td>
</tr>
<tr>
<td>Stamp duty</td>
<td>0 - 0.02*</td>
</tr>
<tr>
<td><strong>Total direct tax and benefits savings</strong></td>
<td>0.36</td>
</tr>
<tr>
<td><strong>Total tax from indirect effects</strong></td>
<td>0.12**</td>
</tr>
<tr>
<td><strong>Total tax from induced effects</strong></td>
<td>0.08**</td>
</tr>
<tr>
<td><strong>Total tax income and benefits savings to the Treasury</strong></td>
<td>0.56</td>
</tr>
</tbody>
</table>

- Taking into account direct, indirect and induced tax effects allows us to estimate the net financial costs to the Treasury from spending £1 supporting the construction industry.

- These estimates assume that increased demand in the economy would reduce current unemployment which is likely to be the case at current levels of depressed economic output.

Note: For new buildings (the tax and benefits effects are c. 1p higher for renewals and maintenance); * Not included in total; ** Excludes benefit allowance savings; Indirect tax effects have been calculated by multiplying the additional tax earnings for each sector from spending £1 by their contribution to the indirect impacts of construction (i.e., the £1.09 of the construction type I multiplier); The induced effect has been calculated by multiplying the median additional tax earnings from £1 investment in sector output by the induced output effect associated with £1 investment in construction.

Source: ONS; Oxford Economics; L.E.K. analysis.
In the short term, construction is one of the most effective sectors in which the government could invest to stimulate economic activity

UK type I output multipliers by selected sectors

- £1 of output by construction generates demand for the supply of products and materials used in the construction process, as well as demand for professional services
- The type I output multiplier is a measure of the direct and indirect effects associated with an additional £1 spend on a particular sector. The ONS estimates the construction output multiplier at 2.09
  - sectors that benefit from increased construction output include manufacturing (especially of building products and equipment), real estate, business services (including architecture, planning and surveying), mining and quarrying and transportation
- In addition, the wealth generated in these sectors induces further, broader beneficial impact on the wider economy (not captured in the type I multiplier)
- Construction has one of the highest output multipliers among sectors that are candidates for government support. This makes it one of the most effective ways of stimulating the overall economy

Note: Sectors selected are ones for which the government is a major provider (e.g. education) or ones which have received or are likely to receive significant government support (e.g. banking and finance); * Local or Central Government industry sectors, which have different production assumptions than market sectors
Source: ONS (1995 – the last time the analysis was undertaken; published in 2002)
Compared to other sectors, construction relies little on imports; hence, investment in construction is more likely than other sectors to generate additional economic activity within the UK.

**Imports as a percentage of intermediate consumption (2007)**

- The construction industry typically imports a very low proportion of intermediate consumption, much lower than that many other industries
  - in 2007 construction imported less than 8% of its supply, while UK manufactured motor vehicles imported nearly 28%

- The low proportion of imports in the construction industry means that for every pound invested in construction, nearly all of it will be retained in the UK
  - for other industries, with a high percentage of imports (e.g., the motor manufacturing industry), a much higher proportion of any government support will be “leaked” abroad

Note: Construction is defined as SIC code 45 and excludes construction products and business services, e.g., architecture and surveying

Source: ONS; L.E.K. analysis

UK Contractors Group. Construction in the UK economy.
Private construction output is very sensitive to changes in GDP; private activity has contracted sharply in the current downturn, causing reductions in GDP and employment.

Construction output and GDP quarterly percentage change* (1Q 2002-2Q 09)

The decline in private construction activity since the onset of the current economic downturn has led to reductions in GDP and employment.

"… The sharp fall in the UK economy is being blamed primarily on the construction and manufacturing sectors. Construction output fell by 6.9% over the quarter, compared with the fall of 5% in the previous quarter. Output in the service sector also fell by 1.6% …"

ICM, June 2009

"… Around half the [GDP] revision in the latest quarter is a result of new construction output data …"

ONS, 1Q2009

"… Employers in the construction sector were most likely to be operating either a partial or organisation-wide recruitment freeze (81%) … Over half (54%) of construction companies are putting graduate recruitment on hold, as the sector reacts to declining demand for new build projects …"

CBI, June 2009

"… Construction employment began to fall in 2008 with a decline of 1% over the year, however, the CSN forecasts a much larger drop of 15% across 2009 to 2010, with the largest losses (around 13%) expected in 2009. The total number of construction job losses from 2009 to 2010 could be up to 450,000 if output contracts by the suggested higher rate of 12% in 2009 …"

Construction Skills Network, July 2009

Note: * 2005 prices; Seasonally adjusted; Includes repair and maintenance
Source: 2009 Work patterns in the recession report, CBI; Institute of Commercial Management; 1Q2009 National Accounts briefing note, ONS
UK Contractors Group. Construction in the UK economy.
Private sector construction spend is falling faster than in previous recessions; CVAs, receiverships and bankruptcies in the construction sector have increased since the onset of the current recession.

**Private construction output during recessions**

- Early 1980s recession
- Early 1990s recession
- Current recession

**Company voluntary arrangements and receivership appointments**

(3Q 2007-1QE 09)

<table>
<thead>
<tr>
<th></th>
<th>Receiverships</th>
<th>CVAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3 2007</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td>Q4 2007</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Q1 2008</td>
<td>44</td>
<td>57</td>
</tr>
<tr>
<td>Q2 2008</td>
<td>50</td>
<td>68</td>
</tr>
<tr>
<td>Q3 2008</td>
<td>57</td>
<td>97</td>
</tr>
<tr>
<td>Q4 2008</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Q1E 2009</td>
<td>97</td>
<td></td>
</tr>
</tbody>
</table>

**Bankruptcies amongst self-employed**

(3Q 2007-1QE 09, not seasonally adjusted)

<table>
<thead>
<tr>
<th></th>
<th>Number of people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q3 2007</td>
<td>40</td>
</tr>
<tr>
<td>Q4 2007</td>
<td>60</td>
</tr>
<tr>
<td>Q1 2008</td>
<td>80</td>
</tr>
<tr>
<td>Q2 2008</td>
<td>100</td>
</tr>
<tr>
<td>Q3 2008</td>
<td>120</td>
</tr>
<tr>
<td>Q4 2008</td>
<td>140</td>
</tr>
<tr>
<td>Q1 2009</td>
<td>160</td>
</tr>
</tbody>
</table>

Note: * Construction only; infrastructure is attributed solely to public after 1Q1980; Early 1980s recession excludes housing; Nominal prices
Source: ONS; BERR; Registry Trust; Insolvency Agency; L.E.K. analysis
The construction sector has had the greatest increase in redundancy rate in the UK since the start of the current recession

UK redundancies by industry
(1Q 2007-2Q 09)

Redundancy rate (per 100)

- The construction sector has had the highest redundancy rate in the UK (c. 28 per 1,000 employees) since the start of the current recession
  - construction’s redundancy rate is c.40% greater than manufacturing and c.50% greater than financial intermediation and business services

“… The construction industry has endured a prolonged period of discomfort, as a sharp slowdown in house building and a drying up of new commercial building projects has caused an estimated 16 per cent decline in output during this year, making it the country’s leading source of redundancies during the recession …”

Financial Times,
10 September 2009

Note: * No data available for certain quarters when sample sizes are too small to provide estimates; Not seasonally adjusted
Source: ONS; Financial Times
Even if current government plans in construction are maintained, construction output is expected to fall significantly over the next 2-3 years. Any reduction in public expenditure would exacerbate this problem.

**Total construction output and gross public expenditure (1985-12F)**

Billions of pounds

<table>
<thead>
<tr>
<th>Year</th>
<th>Public Output</th>
<th>Private Output</th>
<th>Gross Public Expenditure (plus private output)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>30</td>
<td>35</td>
<td>65</td>
<td>-</td>
</tr>
<tr>
<td>1986</td>
<td>35</td>
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<td>2010</td>
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<tr>
<td>2011</td>
<td>160</td>
<td>35</td>
<td>195</td>
<td>-</td>
</tr>
<tr>
<td>2012</td>
<td>165</td>
<td>35</td>
<td>200</td>
<td>-</td>
</tr>
</tbody>
</table>

CAGR% CAGR% (2002-08)(2008-12F)

- CPA (summer 2009) forecasts large falls in private construction output 2009-13, particularly in the offices, retail, factories and warehouse subsectors.
- CPA’s public construction output forecasts are based on government budgets, adjusting for government departments’ historical performance in actual spend compared to plan, and an industry expert panel’s current views on project and funding status.

Under this CPA forecast scenario, construction will suffer from a marked decline in output levels in spite of the assumed relatively constant government investment.

Note: * CAGR is for gross public expenditure only (excludes change in private output); Includes repair and maintenance work; All infrastructure is accounted for in public expenditure; Current prices; Calculated using CPA growth rates and adjusted for inflation.

Source: ONS; CPA; HM Treasury; L.E.K. analysis.

UK Contractors Group. Construction in the UK economy.
Construction is the best sector for stimulating employment

- Construction employs c.8% of the UK workforce, and has been a major contributor to employment growth.

- Due to its labour intensity, additional spending on construction output can generate more employment opportunities than other sectors that have recently received significant government support.

- Construction currently employs many lower skilled workers who are typically most vulnerable at times of recession.

- Construction employment is particularly significant to many regional and local economies.

- Comparing regional employment data highlights the significance of construction output to many local economies - 60% of the GB construction workforce is in regions where unemployment is higher than average or would be in the absence of construction.

- Government funded and/or government influenced projects represent a large proportion of pipeline regional construction.
Construction employs c.8% of the UK workforce, and has been a major contributor to employment growth

**UK workforce by industry (2008)**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Administration, Education and Health</td>
<td>29.6%</td>
</tr>
<tr>
<td>Distribution, Hotels &amp; Restaurants</td>
<td>20.3%</td>
</tr>
<tr>
<td>Banking, Finance &amp; Insurance and Business Services</td>
<td>19.2%</td>
</tr>
<tr>
<td>Mining, Energy &amp; Water</td>
<td>13.4%</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing and Hunting, Transport, Storage and Communication</td>
<td>9.8%</td>
</tr>
<tr>
<td>Other Business Services **</td>
<td>9.6%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>5.0%</td>
</tr>
<tr>
<td>Construction*</td>
<td>1.5%</td>
</tr>
<tr>
<td>Other</td>
<td>1.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Growth in UK workforce by industry (CAGR) (1993-08)**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Administration, Education and Health</td>
<td>3.1%</td>
</tr>
<tr>
<td>Distribution, Hotels &amp; Restaurants</td>
<td>2.5%</td>
</tr>
<tr>
<td>Banking, Finance &amp; Insurance and Business Services</td>
<td>2.0%</td>
</tr>
<tr>
<td>Mining, Energy &amp; Water</td>
<td>1.9%</td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing and Hunting, Transport, Storage and Communication</td>
<td>1.7%</td>
</tr>
<tr>
<td>Other Business Services **</td>
<td>1.5%</td>
</tr>
<tr>
<td>Construction*</td>
<td>1.0%</td>
</tr>
<tr>
<td>Other</td>
<td>0.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4.0%</strong></td>
</tr>
</tbody>
</table>

Note: * Workforce numbers include sole proprietorships, but exclude professional construction services such as architects and surveyors, and workforce in the construction products sector; ** Other services include other professional services, e.g., marketing

Source: ONS

UK Contractors Group. Construction in the UK economy.
Due to its labour intensity, additional spending on construction output can generate more employment opportunities than other sectors that have recently received significant government support.

**Total workforce by GVA by industry (2008)**

Employees / £100,000 GVA

- Workforce per GVA gives a measure of the level of labour intensity for a given sector
  - the larger the number of employees per value of output, the more work opportunities are generated for a given level of output
- Construction has a relatively high workforce to GVA ratio, which implies that it is relatively labour intensive
- Construction is more labour intensive than other candidates for government support
  - c. 40% higher than manufacturing, given the capital intensity of manufacturing
  - c. 75% higher than business services and finance, reflecting higher salaries in those sectors

Note: * Workforce numbers include sole proprietorships, but exclude professional construction services such as architects, surveyors and construction products workforce

Source: ONS

UK Contractors Group. Construction in the UK economy.
Construction currently employs many lower skilled workers who are typically most vulnerable at times of recession

Construction workforce* split by skill level (2009)

- Construction* employs c. 8% of UK workers, from highly skilled professionals through to lower skilled workers
- Lower skilled workers (trades and operatives) represent c. 63% of the UK construction workforce
  - this varies by region, with Northern Ireland (75%) and the North East (72%) having the largest proportion of lower skilled workers
  - across all regions, lower skilled workers represent more than 55% of the regional construction workforce
- Lower skilled workers are vulnerable at times of recession
  “…People with higher skill levels are more resilient to economic shocks and more able to take advantage of opportunities that arise whilst those with fewer or non-transferable skills are much more vulnerable and have access to far fewer opportunities …”
  - The Work Foundation, July 2009
- Construction participates in a number of key initiatives to bring young people into the workforce and to enhance skills, training over 70,000 people through apprenticeships in the period 2007-9

Note: * Includes architects, civil engineers, surveyors and other construction professionals and technical staff, excluding workforce in construction products
Source: Construction Skills Network; eGovmonitor; The Work Foundation
UK Contractors Group. Construction in the UK economy.
Construction employment is particularly significant to many regional and local economies

- Whilst all regions would suffer adverse employment consequences of reduced construction activity, some will be harder hit than others

- In particular, it is possible to identify the different local authority areas where:
  - construction jobs are responsible for a below average rate of unemployment;
  - the construction sector is stronger than the local non-construction economy and is therefore creating employment opportunities in regions of high unemployment; and
  - unemployment is above average due to a lack of construction demand and therefore few available construction jobs

- The analysis on the following pages identifies and locates these important areas
Comparing regional employment data highlights the significance of construction output to many local economies

The chart creates a framework where each local authority area can be plotted against its level of unemployment and the proportion of its employment in construction, and be compared with the national averages - areas plotted towards the left have less unemployment and areas plotted towards the top have greater dependency on construction jobs.

In addition, a line representing constant non-construction employment at the national average has been added (i.e., it represents the situation where the change in construction employment from the national average equals the change in unemployment from the national average) which highlights the areas that enjoyed below-average unemployment due to construction jobs and that suffer above-average unemployment due to a lack of local construction demand.

Source: ONS Annual Population Survey (Jan 2008-Dec 2008); ONS Annual Business Inquiry employee analysis (2007); L.E.K. analysis
The economy is strong and unemployment is low (40%). Construction is responsible for above average employment (15%). Employment is below average, but construction is over-delivering jobs compared to average (18%). Construction is weak but the general economy is weaker (17%). Lack of construction demand is to blame for above average unemployment (11%).

60% of the GB workforce is in local authority areas where unemployment is higher than average or would be in the absence of construction.

### Examples

**A.** The economy is strong and unemployment is low (40%).

**B.** Construction is responsible for above average employment (15%).

**C.** Employment is below average, but construction is over-delivering jobs compared to average (18%).

**D.** Construction is weak but the general economy is weaker (17%).

**E.** Lack of construction demand is to blame for above average unemployment (11%).

**These areas enjoy below-average unemployment due to construction jobs**

- Amber Valley
- Carmarthenshire
- Castle Morpeth
- Clackmannanshire
- Congleton
- East Renfrewshire
- Gedling
- Hertsmere
- Maldon
- Mid Suffolk

**Examples**

- Midlothian
- New Forest
- North Cornwall
- North East Derbyshire
- North Warwickshire
- Oswestry
- Pembrokeshire
- Renfrewshire
- Rossendale
- Rugby
- Sevenoaks

**These areas suffer above-average unemployment due to a lack of construction demand**

- Blackburn
- Blackpool
- Bradford
- Brighton and Hove
- Burnley
- Corby
- Easington
- Lancaster
- Nuneaton and Bedworth

- Merthyr Tydfil
- Newport
- Norwich
- Peterborough
- Portsmouth
- Slough
- Southampton
- Wirral

Source: ONS Annual Population Survey (Jan 2008-Dec 2008); ONS Annual Business Inquiry employee analysis (2007); L.E.K. analysis
Government funded and / or government influenced projects represent a large proportion of pipeline regional construction

Planned government and / or government influenced projects (as of July 2009)

Billions of pounds

- Government and government influenced projects represent a significant proportion of regional construction, especially in Wales, Greater London, East of England and the West Midlands
- Reduction in, or cancellation of, government projects would have a significant detrimental effect on regional construction
- Reduction in government construction spend could therefore result in a significant loss in employment opportunities for the local workforce. This is especially true for lower skilled male workers because other sectors that traditionally employ them, such as manufacturing, are expected to reduce employment significantly

Source: Construction Skills Network / Glenigan; L.E.K. analysis
Construction is investment that provides long-term social and economic benefits

- Based on the UK Low Carbon Transition Plan, investment in construction is a prerequisite for achieving c.80% of the current emission reduction targets

- Construction represents an investment that will generate long-term benefits for the country
  - building new schools has been considered as an example

- A conservative estimate suggests that £1 invested in school construction could generate c.£1–2 of economic impact for the UK economy in the long term through higher educational attainment by the pupils taught there

- Combining the economic effects, a £1 investment in construction (in the example of a new school) would have a net cost of only c. £0.44 to the Government for a total benefit of £3.87–5.04
Based on the UK Low Carbon Transition Plan, investment in construction is a prerequisite for achieving c.80% of the current emission reduction targets

**Carbon equivalent abatement required to meet 2018-22 carbon budget**

- An 18% emission reduction from 2008 levels is required to achieve budget target for 2022
- The Government is expecting new buildings to play a key role in the reduction of carbon emissions. It has set Zero Carbon targets for new buildings:
  - 2016 for all new homes
  - 2016 for all new schools
  - 2018 for all public sector buildings
  - 2019 for all new buildings
- This will form a significant part of the reductions included in homes and communities
- The Energy Performance of Buildings Directive will also be important in reducing the emissions from workplaces and jobs
- The Government is also committed to obtaining 15% of its electricity from renewable sources by 2020, around 70% of which is projected to come from wind farms, requiring a six-fold increase in output from wind

Note: *Net change includes impact of EU Emission Trading System

Source: DECC (April 2009); ‘The UK Renewable Energy Strategy’, DECC (July 2009); L.E.K. analysis

UK Contractors Group. Construction in the UK economy.
Construction represents an investment that will generate long-term benefits for the country – example: building new schools

**Building new schools**

**Background**
A schools capital programme began in 2005 with the aim of refurbishing or rebuilding all 3,500 of England’s secondary schools. Continuation of the investment programme is still dependent on future budget allocations.

**Long-run policy objectives**
- Improved educational attainment by pupils (in terms of GCSE results)
- Improved health (from better sports and kitchen facilities)
- Regeneration of areas of high social deprivation

**Quantification of outcome**
- Student performance at newly built schools to date has been varied; however, the uplift in the proportion of students achieving 5 or more A*-C GCSEs can be up to 15%
- Outcomes have not been quantified

**Illustrative estimate of long-term benefits**
- Increased lifetime earnings per student of £600-£1,300* (Present value)
- Impacts have not been estimated

Note: * Calculated based on an assumed 1% increase in the proportion of students achieving 5 or more A*-C GCSEs from the 2008 baseline of 65%. Lifetime earning potential increase is calculated from the average of those with currently no qualification or other qualifications, and those with those with 5 A*-C GCSEs and GCSE A-Level equivalent. This is a conservative estimate as it caps pupils’ earning potential at that of people with only 5 A*-C GCSEs and those with GCSE A-Level equivalent.

Source: ‘Evaluation of Building Schools for the Future – 2nd Annual Report’, DCSF (December 2008); NAO; Partnership for Schools; LSC; L.E.K. analysis
A conservative estimate suggests that £1 invested in school construction could generate c. £1–2 of economic impact for the UK economy in the long term through higher educational attainment.

<table>
<thead>
<tr>
<th>Impact</th>
<th>Valuation (PV)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output impact to the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>economy</td>
<td>Direct</td>
<td>£1 investment in building a school generates £1 of additional output in the construction sector</td>
</tr>
<tr>
<td></td>
<td>Indirect</td>
<td>£1 investment in construction generates an additional £1.09 of demand within the UK economy</td>
</tr>
<tr>
<td></td>
<td>Induced</td>
<td>Subsequent impacts on the overall demand for products and services in the UK economy as a result of increased household incomes associated with the direct and indirect increases in output.</td>
</tr>
<tr>
<td>Short-term output</td>
<td>£2.84</td>
<td>Construction generates one of the highest immediate-term output impacts relative to other sectors</td>
</tr>
<tr>
<td>impact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tax impact</td>
<td>Direct</td>
<td>The exchequer receives c.£0.12 in income tax and NI from the increase in wage levels associated with the increase in construction activities, and £0.01 in corporation tax from contractors; assumes no stamp duty is collected on the new school building.</td>
</tr>
<tr>
<td></td>
<td>Indirect +</td>
<td>Estimated increase in household and corporation tax receipts associated with the indirect and induced employment and output impacts associated with the construction investment.</td>
</tr>
<tr>
<td></td>
<td>induced</td>
<td></td>
</tr>
<tr>
<td>Savings in allowance</td>
<td>Direct</td>
<td>Estimated reduction in government benefits (job seekers’ allowance, housing benefits, tax credits) associated with increased construction employment</td>
</tr>
<tr>
<td>payments</td>
<td>Indirect +</td>
<td>There will be additional savings as a result of increased employment in other sectors of the economy; however, this has not been estimated</td>
</tr>
<tr>
<td></td>
<td>induced</td>
<td></td>
</tr>
<tr>
<td>Short-term Exchequer</td>
<td>£0.56</td>
<td>Excludes savings from government benefits from additional indirect and induced employment in the economy</td>
</tr>
<tr>
<td>impact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long term impact</td>
<td>Improved</td>
<td>Estimated based on an assumed 1% uplift (with a gradual tapering effect) in pupils gaining 5+ A*-C GCSE grades (from a baseline of 65.3% in 2008) over 30 years, and that pupils gaining 5+ A*-C GCSE grades have lifetime earning potential that is 10–23% higher than those with minimum qualifications</td>
</tr>
<tr>
<td>educational attainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improved</td>
<td>Better health facilities, better kitchen facilities, and improved indoor and outdoor environments can potentially lead to better staff and student health; however, the impact has not been estimated.</td>
</tr>
<tr>
<td></td>
<td>Regeneration</td>
<td>Regeneration is one of the goals of the school investment programme, but the impact has not been quantified</td>
</tr>
<tr>
<td>Long term multiplier</td>
<td>c.£3.87–5.04</td>
<td>£0.44 of government investment in construction (£1 net of tax benefits) would generate an additional c.£3.87–5.04 worth of economic output throughout the UK economy over a 30-year period</td>
</tr>
</tbody>
</table>
Combining the economic effects, a £1 investment in construction (of a new school) would have a net cost of only c. £0.44 to the Government for a total benefit of £3.87-5.04

<table>
<thead>
<tr>
<th>Impact</th>
<th>Example: Investment in school construction (new build)</th>
<th>ILLUSTRATIVE</th>
<th>Total impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treasury impact</td>
<td>Government investment in school construction</td>
<td>£1</td>
<td>Net £0.44 expenditure</td>
</tr>
<tr>
<td></td>
<td>Increased income tax, NI and corporation tax receipts</td>
<td>£0.13</td>
<td>£2.84</td>
</tr>
<tr>
<td></td>
<td>Savings in benefits allowance</td>
<td>£0.23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increased income tax, NI and corporation tax receipt</td>
<td>£0.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increased benefits allowance</td>
<td>£?</td>
<td></td>
</tr>
<tr>
<td>Short-term economy-wide impact</td>
<td>Increase in UK construction output (direct impact)</td>
<td></td>
<td>£1.09</td>
</tr>
<tr>
<td></td>
<td>Indirect impact</td>
<td></td>
<td>£0.75</td>
</tr>
<tr>
<td>Long term benefits</td>
<td>Increase in education sector output</td>
<td></td>
<td>£1.03–2.20</td>
</tr>
<tr>
<td></td>
<td>Increase in educational attainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other health and regeneration benefits</td>
<td>?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increase in lifetime earnings</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Quality of life and wider social and economic benefits</td>
<td></td>
<td>£3.87–5.04</td>
</tr>
</tbody>
</table>

Key: £ Estimated present value of impact £ Present value of impact excluded from the current analysis

Note: Assumes no stamp duty is paid for the newly constructed school
Source: ONS; L.E.K. analysis
UK Contractors Group. Construction in the UK economy.
Government investment in construction is the most beneficial use of stimulative public expenditure in both the short and longer term, and any reduction in construction expenditure would have significant, immediate and enduring negative consequences for the UK.

1. Impact on economic activity
   - Construction is one of the best ways of stimulating economic activity – not just in the construction sector, but across the economy as a whole, including troubled manufacturing sectors. It also has one of the lowest levels of imports, so the stimulus spending stays within the national economy.

2. Contribution to employment
   - Construction is the best sector for stimulating employment. The employment that construction provides benefits lower skilled and young workers who have relatively few alternative opportunities. Many regions are heavily dependent on construction jobs.

3. Benefits of investment
   - Construction is not only immediate economic production, it is also investment rather than consumption, which provides significant long-term economic and social benefits.
The UK Contractors Group (UKCG) represents leading contractors and their trade associations operating in the UK on construction specific issues. Its mission is to represent contractors’ interests to government and key clients and to encourage contractors to work together to promote change and best practice, especially on health and safety and environmental issues. UKCG also works closely with the CBI Construction Council to ensure that contractors’ interests are properly reflected in the wider business agenda.

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Founded in 1983, L.E.K. has 20 offices and over 850 staff across the world. In 2007, L.E.K. Consulting was awarded the Queen’s Award for Enterprise for its achievements in international trade.
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