Construction and Related Engineering Sector Report

1. This is a report for the House of Commons Committee on Exiting the European Union following the motion passed at the Opposition Day debate on 1 November, which called on the Government to provide the Committee with impact assessments arising from the sectoral analysis it has conducted with regards to the list of 58 sectors referred to in the answer of 26 June 2017 to Question 239.

2. As the Government has already made clear, it is not the case that 58 sectoral impact assessments exist. The Government’s sectoral analysis is a wide mix of qualitative and quantitative analysis contained in a range of documents developed at different times since the referendum. This report brings together information about the sector in a way that is accessible and informative. Some reports aggregate some sectors in order to either avoid repetition of information or because of the strong interlinkages between some of these sectors.

3. This report covers: a description of the sector, the current EU regulatory regime, existing frameworks for how trade is facilitated between countries in this sector, and sector views. It does not contain commercially-, market- or negotiation-sensitive information.

Description of sector

Construction Definition

4. In order to provide a comprehensive analysis of the sector, a wide definition of the construction sector is used, including construction products and services. This will create some overlaps with other sectors (e.g. on products there will be overlaps with manufacturing sectors while construction services will overlap with Professional and Business Services). However, given these sectors are closely linked, and it is important to consider the impacts of the UK’s departure from the EU on the construction industry as a whole, a wider definition of the construction sector is being used, consistent with the Construction 2025 sector strategy.

5. In total, it is estimated that in 2016, the wider UK construction sector:

- Had a turnover of £370 billion;

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1 The international definition of construction in the Standard Industrial Classification (SIC) codes (2007) used to scope as footnote 1. Labour Market Statistics and Annual Business Survey, ONS, October 2017 (self-employed construction contractors). Note: the products and services elements of this definition of construction may overlap with other sector definitions.
● Contributed approximately £138 billion to the UK economy - 9 per cent of UK value added;

● Was comprised of 374,000 businesses; and

● Covered some 2.2 million jobs. There were additionally, nearly 900,000 self-employed jobs in construction contracting, which gives a total of 3.1m workers for wider construction or 9% of the total UK workforce.

Figure 1: Composition of the UK wider construction sector

<table>
<thead>
<tr>
<th>Contracting</th>
<th>Services</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 million jobs</td>
<td>351,000 Jobs</td>
<td>315,000 Jobs</td>
</tr>
<tr>
<td>315,000 Businesses</td>
<td>38,300 Businesses</td>
<td>20,700 Businesses</td>
</tr>
<tr>
<td>£97.7bn GVA</td>
<td>£20.8 billion GVA</td>
<td>£19.7 billion GVA</td>
</tr>
<tr>
<td>£257.4 billion turnover</td>
<td>£60.9 billion turnover</td>
<td>£51.2 billion turnover</td>
</tr>
</tbody>
</table>

- Construction of buildings e.g. commercial, residential.
- Civil engineering e.g. roads, tunnels, bridges, utilities.
- Specialised construction activities e.g. electrical and plumbing installation, demolition and site preparation, plastering, painting and roofing.

- Architectural and quantity surveying.
- Wholesale of construction products, materials, hardware, plumbing and heating equipment.
- Renting and leasing of construction equipment.

- Manufacture of construction products and materials e.g. bricks, tiles, cement, concrete products and plaster.
- Manufacture of metal structures, doors and windows of metal, carpentry and joinery etc.
- Wiring devices, electric lighting equipment etc.
- Paints, varnishes and other chemical products used in construction.

Sector Structure and the Construction Supply Chain

6. In general, both contracting and product manufacture are localised activities undertaken by small firms. Relatively few firms operate regionally or nationally, and an even smaller proportion internationally. Overseas investment in UK contracting and products manufacturing, generally by takeover, is determined by the relative strength and prospects of the UK domestic market, and the UK is consistently one of the biggest construction markets in the EU. While decisions to scale up or retrench contracting activity may be made relatively quickly, investment in UK product

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3 BEIS analysis adjusted to reflect ONS Annual Business Survey measurement of approximate GVA.
4 Provisional results for 2016 taken from the ONS (2017) Annual Business Survey. Contracting defined as SIC 41, 42 and 43. Note jobs and number of businesses figures does not include the self-employed. https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/bulletins/uknonfinancialbusinesssec onomy/2016provisionalresults. Note: "businesses" refer to firms registered for VAT or with employees registered for PAYE.
manufacturing capacity by either domestic or overseas businesses tends to be based on longer-term returns because of typically high fixed costs. In the minerals sector, firms will also own the extraction rights and planning consents for key minerals, which represent valuable "sunk assets" in those sub-sectors.

7. Most activity within the sector is organised around projects, with contractors working with specialist subcontractors and product suppliers under contract to a client to deliver a specific built asset. Therefore, supply chains are mainly national, regional, or in most instances, local. There is some EU integration, but very little impacting on the UK. Due to the large volumes of often bulk products required by the sector, and the relative expense of transport, relatively low levels of construction products are imported from the EU and internationally; around 20 per cent of the total construction products used in the UK come from outside the UK.\(^5\) Construction services show greater degrees of global integration. However, this is not confined to the EU, in fact global markets are often stronger.

8. UK construction contracting companies tend to be smaller than their EU and international competitors. Only Balfour Beatty and Carillion tend to appear in lists of the top 20 European contractors by sales.\(^6\) However, even firms on this scale are not typical of the sector, which is largely comprised of small and micro-businesses within the sector:

- 99.9 per cent of all construction contracting businesses in England can be classified as micro or small businesses. The 255 largest firms account for 15.2 per cent of industry employment and 26.1 per cent of industry turnover.

- 99.3 per cent of all construction contracting businesses in Scotland can be classified as micro or small businesses. The 35 largest firms account for 16.3 per cent of industry employment and 23.1 per cent of industry turnover.

- 99.9 per cent of all construction contracting businesses in Wales can be classified as micro or small businesses. There are 5 large firms with more than 250 employees, and data is not available on their share of industry employment and turnover.

- 99.8 per cent of all construction contracting businesses in Northern Ireland can be classified as micro or small businesses. There are 5 large firms with more than 250 employees, and data is not available on their share of industry employment and turnover.\(^7\)

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https://www.building.co.uk/top-european-contractors-and-housebuilders-european-league-tables-2013/5048253.article

9. The market for construction contracting is broad and diverse, covering infrastructure (both physical infrastructure such as roads and social infrastructure such as schools), house building, commercial, industrial and repair, maintenance and improvement (RMI). Arguably, there is no ‘one construction’ sector but a range of specialist sub-sectors. These can be very different from each other and can also be characterised by different supply chain relationships, at times driven by the business models of the client organisation. Annex B lists the activities considered by HMG to make up the contracting sector.

10. Within this varied context, the industry typically contracts on a project-by-project basis, with complex supply chains coming together to deliver a specific project and then fragmenting. While there are examples of large, repeat and expert clients adopting a strategic approach to their supply chain, many of the industry’s customers in the private and public sector are occasional or commission a single project, and supply chain relationships are essentially transactional.

11. The construction supply chain is highly fragmented. Research undertaken for BIS in 2013 provided an insight into the complexity of supply chain management and the degree of spend aggregation. For instance, for a main contractor to have 50 to 70 suppliers and subcontractors is not uncommon.

12. While there are some large businesses, approximately 99.8 per cent of firms are small or micro businesses and, of those, some 86 per cent employ no more than one person. The largest firms account for 13.6 per cent of industry employment and 25.0 per cent of industry turnover. The industry tends to rely on a high degree of sub-contracting and has a high proportion of self-employment, with approximately 40 per cent of UK construction contracting jobs being self-employed. This makes the industry as a whole highly flexible and responsive to changes in market conditions, but

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9 BIS Research paper No 145 Supply Chain Analysis into the Construction Industry October 2013
12 SIC 41, 42 and 43 with 250 or more employees
13 Labour Market Statistics, ONS, October 2017
the high degree of fragmentation does have other consequences, such as reducing the incentive to invest in developing workforce skills.

Figure 2: Simplified representation of a supply chain for a typical construction project\textsuperscript{14}

13. The structure of relationships in the construction sector is often discussed in terms of ‘tiers’. These are explained in Figure 3, below. Tier 1 contractors are typically termed main contractors, and many Tier 2 contractors are described as specialist contractors. Labour-only sub-contractors typically operate at the third Tier.

\textsuperscript{14} BIS Research paper No 145 Supply Chain Analysis into the Construction Industry October 2013
Figure 3: Definitions of construction supply chain tiers

<table>
<thead>
<tr>
<th>Tier</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1</td>
<td>Designers and constructors that have a direct contract with the ultimate client</td>
<td>Novated design consultants \n Sub-contractors \n Manufacturers and material distributors \n Suppliers of major plant and equipment such as tower cranes</td>
</tr>
<tr>
<td>Tier 2</td>
<td>Designers, constructors and suppliers with a sub-contract with the Tier 1 contractor</td>
<td>Designers providing working details \n Specialist sub-contractors e.g. concreting \n Manufacturers and materials distributors \n Plant and equipment hire and supply firms</td>
</tr>
<tr>
<td>Tier 3</td>
<td>Designers, constructors and suppliers with a sub-contract with a Tier 2 sub-contractor</td>
<td>Designers providing working details \n Specialist sub-contractors e.g. concreting \n Manufacturers and materials distributors \n Plant and equipment hire and supply firms</td>
</tr>
</tbody>
</table>

Contribution to the UK Economy

14. The construction contracting sector contributes approximately £97.7 billion to the UK economy (or 6.1 per cent) in value added.\textsuperscript{15} Figures 4 and 5 provide a breakdown of GVA by country and by region. The majority of construction contracting activity is concentrated in England (86 per cent of GVA). Within England, London (16 per cent) makes up the largest share of construction GVA.

Employment in the Construction Contracting Sector

15. ONS construction statistics suggest that in 2016 around 1.5 million people were employed in the UK construction contracting sector\(^\text{18}\). There are also approximately 900,000 self-employed construction contractors\(^\text{19}\). This gives a total of 2.4 million workers (7 per cent of the total UK workforce). Within the UK, 83 per cent of contracting jobs are in England, with 10 per cent in Scotland, 5 per cent in Wales and 3 per cent in Northern Ireland. Within England, approximately 15 per cent of employment is in the South East, 13 per cent is in London, 11 per cent in the East of England, and 9 per cent in the North West.\(^\text{20}\) Figures 6 and 7 provide a breakdown of employment by country and by region.

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\(^{17}\) Source: Estimates based on calculations from National accounts, Regional gross Value Added and Regional Annual Business Survey. Percentages presented as a proportion of the UK figure and so do not add to 100%.

\(^{18}\) Provisional Results 2016, Annual Business Survey, ONS, 2017.

\(^{19}\) Self-employed construction contractors: Labour Market Statistics, ONS, October 2017.

16. The sector relies on migrant workers, primarily from the EU/EEA, to supplement the UK workforce. Whilst 89 per cent of the workforce is made up of UK nationals, EU27 nationals constitute 9 per cent of the total UK construction contracting workforce. A further two per cent of the construction contracting workforce are non-EU/UK nationals.\textsuperscript{23} There is a similar distribution across the main construction contracting sub-sectors (defined by SIC code).

17. Analysis from the Construction Products Association (CPA) suggests that EU-national construction workers are predominantly concentrated in London, representing around

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|}
\hline
\textbf{Nationality} & \textbf{UK} & \textbf{EU} & \textbf{Non-EU} \\
\hline
\% of Construction Workforce & 89 & 9 & 2 \\
\hline
\end{tabular}
\end{table}
27 per cent of London’s construction workforce.\textsuperscript{25} According to 2017 research from the Construction Industry Training Board (CITB), four EU countries (Poland, Romania, Lithuania and Ireland) were among the top five most common countries of origin for migrant construction workers in the UK.\textsuperscript{26}

18. Migrant workers are found in all construction professions and trades, from the highly skilled (e.g. civil engineering and quantity surveying) to the relatively low skilled (e.g. general labourers). The flexible employment model of the sector, with high levels of self-employment and agency provided labour, means that it is relatively easy for migrant workers to obtain employment; this is a common feature of the construction sector in the EU and internationally. Research from the CITB in 2017 found that migrant workers were more likely to be self-employed (53 per cent) than UK-born construction workers (38 per cent).\textsuperscript{27}

19. Despite the high mobility of construction workers, and the flexibility of the labour market, there continues to be reports of some skills shortages in the UK construction sector. The 2015 UK Commission for Employment and Skills (UKCES) Employer Skills Survey (ESS) reported that “an area of real concern is skill shortages faced by the construction sector”… “[t]he ESS findings show employers are struggling to fill one in three construction vacancies, up from one in four in 2013, because they can’t find people with the right skills.” (UKCES, 2016, Foreword).\textsuperscript{28}

\textbf{Trade and Investment}

20. Figure 9 shows that construction contracting businesses accounted for £822 million of exports to the EU and £965 million of exports to the rest of the world in 2016. Imports of construction contracting from the EU are £798 million and £271 million from the rest of the world. This shows that 75 per cent of construction contracting imports come from the EU. There is a more equal split with where exports are traded. Approximately half of construction contracting exports (by value) are traded with the EU.

\textsuperscript{26} Migration and Construction: The view from employers, recruiters and non-UK workers, CITB, June 2017
\textsuperscript{27} Ibid
Figure 9: Trade in Construction Contracting, 2016 (International Trade in Services - only covers projects lasting less than 1 year)  

<table>
<thead>
<tr>
<th>2016, £m</th>
<th>EU</th>
<th>Non-EU</th>
<th>Total</th>
<th>% EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imports</td>
<td>798</td>
<td>271</td>
<td>1,069</td>
<td>75%</td>
</tr>
<tr>
<td>Exports</td>
<td>822</td>
<td>965</td>
<td>1,787</td>
<td>46%</td>
</tr>
<tr>
<td>Balance</td>
<td>24</td>
<td>694</td>
<td>718</td>
<td></td>
</tr>
</tbody>
</table>

21. The global market for construction services imports, excluding the UK, was worth around £54 billion in 2015. Countries besides the 27 other EU Member States accounted for £42 billion, or 77 per cent, of this global market.

22. However, contracting imports and exports are complicated. The main International Trade in Services Survey (ITIS) only covers projects up to a year in duration, in line with international standards. Any longer than this and it is considered foreign direct investment (FDI) rather than trade. As a result, when making estimates of exports and imports for contracting, earnings from FDI need to be considered too. Imports are earnings from FDI by foreign firms in the UK (inward investment), and exports are earnings from FDI by UK firms abroad (outward investment). The most recent year that this data is available is 2016. This FDI data, shown in Figure 10, shows that the majority (70 per cent) of the UK’s FDI exports came from outside the EU in 2016 but the majority of the FDI imports (89 per cent) came from the EU.

Figure 10: Construction Contracting Foreign Direct Investment Earnings, 2015 (only covers projects lasting more than a year)  

<table>
<thead>
<tr>
<th>£m, 2015</th>
<th>EU</th>
<th>Non-EU</th>
<th>Total</th>
<th>%EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imports</td>
<td>378</td>
<td>45</td>
<td>423</td>
<td>89%</td>
</tr>
<tr>
<td>Exports</td>
<td>57</td>
<td>133</td>
<td>190</td>
<td>30%</td>
</tr>
<tr>
<td>Balance</td>
<td>-321</td>
<td>88</td>
<td>-233</td>
<td></td>
</tr>
</tbody>
</table>

29 Pink 2017, ONS, Table 9.11
30 Data obtained from ITC, UNCTAD, WTO trade in services database based on Eurostat, International Monetary Fund, Organisation for Economic Co-operation and Development (OECD) and relevant national statistical authorities statistics. The value of the global market is defined as the sum of every country’s imports for whom data was available, minus the value of the UK imports.
31 FDI involving UK companies, ONS, 2015
Imports = earnings from FDI by foreign firms in the UK (inward investment)
Exports = earnings from FDI by UK firms abroad (outward investment)

Construction Services\(^{32}\)

- Architectural and quantity surveying.
- Wholesale of, construction products, materials, hardware, plumbing and heating equipment.
- Renting and leasing of construction equipment.

23. Construction services, such as architecture and design services, are usually considered to be part of the wider Professional and Business Services (PBS) sector. These include architecture and quantity surveying, but also the supply of equipment (e.g. plant and machinery), and the wholesale supply of construction products or materials to firms in the sector.

24. Many of the world’s top architectural practices are based in London. For example, two of the ten largest global architectural companies, Gensler (US) and IBI (Can), have their Europe office in London as do HoK (US). Jacobs and Aecom (who have acquired UK consultancy companies such as Davis Langdon, Faber Mansell and Edaw) have offices across Europe but their main EU HQ is in London. Data from the ONS show that the UK architecture sector is similarly dominated by SMEs.

\(^{32}\)Source products and services: ONS Annual Business Survey, 2016
25. The 2016 Architects Council of Europe study of the profession in 27 countries showed that UK had the largest construction market in Europe and the second largest market for architecture in Europe. A lower proportion of UK architecture principals surveyed expected workloads in the next 12 months to increase (27 per cent) compared to the EU 27 average (31 per cent). The same study showed that a greater proportion of UK architecture principals surveyed expected workloads in the next 12 months to decrease (32 per cent) compared to the average across 27 European countries (23 per cent).

26. There are large multidisciplinary consulting firms that can tender for business in many service markets and locations. Such firms typically have global networks of offices both inside and outside the EU. Many are created through establishment (essentially setting up a company in the target market) or acquisition of an existing overseas company. This model is used due to the need for familiarity with the laws, regulations and operation of the market in the country or region in which they operate.

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36 Mirza & Nacey estimates based on data sourced from Eurostat, Turkstat and Statistical Office of the Republic of Serbia updated using the most recent Eurostat Construction Output Production Indices.

37 ‘Market size’ refers to the architectural market as measured as the sum of the revenue earned by private architectural practices in each country.
**Economic Contribution of Construction Services**

27. The construction services sector contributed approximately £20.8 billion to the UK economy (or 1.3 per cent) in value added, comprises of 38,300 businesses and has a sector turnover of £60.9 billion.\(^{38}\)

**Employment in Construction Services**

28. There are approximately 351,000 workforce jobs in the construction services sector (approximately 1 per cent of all UK jobs).\(^{39}\)

**Architecture Services**

29. In 2015, EU nationals constituted 7.5 per cent of the total UK architecture services workforce. However, in London, where 25 per cent of UK architecture services jobs are located, EU migrants represented 24.2 per cent of the workforce.\(^{40}\) By comparison, non-EU/UK nationals constitute 3.4 per cent of the architecture services workforce nationwide, and 8.8 per cent of the London workforce. UK nationals represent 89 per cent of the nationwide workforce, and 67 per cent of the London architecture services workforce.\(^{41}\)

**Trade and Investment**

30. While there are definitional issues around the professional and business services side of the construction sector, data from the UK Balance of Payments “Pink Book” has been used to produce estimates for trade in architecture services. This shows that the UK has a positive trade balance in architecture services.\(^{42}\) This is shown in Figure 12.

**Figure 12: Trade in Architecture Services, 2016**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imports</td>
<td>46</td>
</tr>
<tr>
<td>Exports</td>
<td>515</td>
</tr>
<tr>
<td>Balance</td>
<td>469</td>
</tr>
</tbody>
</table>


\(^{39}\) Provisional Results 2016, Annual Business Survey, ONS, 2017.


\(^{41}\) Ibid

\(^{42}\) Pink Book International Trade in Services (IT IS) 2017. Table 3.8.
31. The UK is localised in its construction products provision, with around 80 per cent of construction products used in the UK also manufactured in the UK. Rather than target exports to the UK, overseas products manufacturers have tended to acquire UK producers. Partly this is driven by the cost of heavy material transportation.

32. The UK construction products industry is a broad and complex manufacturing industry covering items such as bricks, cement, sand and concrete and can also be considered to include products such as paints, ceramic fittings, cast steel etc. Many of these products will also have uses outside of the wider construction sector and are usually considered part of the manufacturing sector.

33. While there are some bespoke and high value, highly designed and engineered products such as complete bathroom pods in the hospitality sector or building services systems, it is generally the case that construction products are commodities, widely interchangeable (i.e. a building frame can be made of timber, block, precast concrete, poured concrete or steel) which are further worked or assembled on site to produce a built asset. It is also the case that these commodity items tend to be domestically sourced. Construction materials tend to be bulky and heavy and transport can present considerable additional costs.

34. There is extensive overseas investment in the UK construction products sector, including ownership of many of the products manufacturing facilities in the UK. Firms that produce cement, bricks and blocks, plasterboard, boilers and glass products in the UK are all owned by overseas headquartered businesses, both in the EU and outside the EU. While peaks in demand may be managed through imports, it has generally been the case that these businesses have looked to meet UK demand from UK capacity, although overall, the balance of trade gap in construction products and materials has increased from £6.1 billion in 2011 to £9.1 billion in 2016 in nominal terms.

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43 Source products and services: ONS Annual Business Survey 2016.
Contribution to the UK Economy

35. It is estimated that the construction products sector contributes approximately £19.7 billion to the UK economy (or 1.1 per cent) in value added, comprises of 20,700 businesses and has a sector turnover of £51.2 billion.46

36. The top 5 construction product and material sectors contributing to GVA (by proportion of total sector GVA), accounting for just over half the total is:

- 25.11 Manufacture of metal structures and parts of structures (15.7 per cent);
- 16.23 Manufacture of other builders’ carpentry and joinery (11.1 per cent);
- 22.23 Manufacture of builders’ ware of plastic (10.7 per cent);
- 28.25 Manufacture of non-domestic cooling and ventilation equipment (6.8 per cent); and
- 23.61 Manufacture of concrete products for construction purposes (5.8 per cent).

Employment in the Construction Products Sector

37. There are approximately 315,000 workforce jobs in the construction products sector (approximately 1.0 per cent of the UK workforce).47 The CPA states that 64.7 per cent of construction product businesses have between 1 – 9 employees and only 1.2 per cent has 250 or more.48

Trade and Investment

34. A greater proportion of trade in construction products (approximately 60 per cent) is with other EU countries rather than the rest of the world. Imports of construction materials decreased by £730,000 in the second quarter of 2017 (to £4,212 million) compared to the previous quarter, a decrease of 0.02 per cent.49 Compared to pre-recession levels in 2007, the share of total UK construction material exports going to the EU has declined from 70 per cent to 60 per cent in 2016.

35. The top five exported materials in 2016 accounted for 37 per cent of total construction material exports. The top five imported construction materials in 2015 accounted for 31 per cent of total construction material imports.

36. While on SIC code definitions, the construction products sector appears a relatively large importer by total value, some of the largest imports are low unit value products which are not always used for construction applications (electrical wire, lamps).

48 Results from industry: https://www.constructionproducts.org.uk/about-us/our-industry/
Figure 13: UK Exported and Imported Construction Materials in 2016

<table>
<thead>
<tr>
<th>£million</th>
<th>Top 5 Exported Materials</th>
<th>Top 5 imported materials</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Electrical wire</td>
<td>Electrical wire</td>
</tr>
<tr>
<td></td>
<td>711</td>
<td>1,723</td>
</tr>
<tr>
<td></td>
<td>Paints and Varnish</td>
<td>Lamps and fittings</td>
</tr>
<tr>
<td></td>
<td>608</td>
<td>973</td>
</tr>
<tr>
<td></td>
<td>Lamps and fittings</td>
<td>Sawn wood &gt;6mm thick</td>
</tr>
<tr>
<td></td>
<td>365</td>
<td>838</td>
</tr>
<tr>
<td></td>
<td>Plugs and sockets</td>
<td>Central heating boilers</td>
</tr>
<tr>
<td></td>
<td>360</td>
<td>624</td>
</tr>
<tr>
<td></td>
<td>Air conditioning equipment</td>
<td>Air conditioning equipment</td>
</tr>
<tr>
<td></td>
<td>341</td>
<td>585</td>
</tr>
</tbody>
</table>

37. It is also likely that some of this activity may include importing and re-exporting of goods, with or without added UK value.

Figure 14: UK Trade of Construction Materials with EU and Non EU Countries, 2016

<table>
<thead>
<tr>
<th>£million</th>
<th>All building materials and components</th>
<th>EU</th>
<th>Non EU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Imports</td>
<td>9,750</td>
<td>5,944</td>
</tr>
<tr>
<td></td>
<td>Exports</td>
<td>3,867</td>
<td>2,557</td>
</tr>
</tbody>
</table>

38. The top five export markets for construction materials in 2016 are the destinations for 49 per cent of total construction materials exports. Ireland remains the largest market, despite having shrunk from a pre-recession peak of 27 per cent of total exports in 2007, to 14 per cent in 2016. The top five import markets in 2016 comprise of 49 per cent of total construction materials imports. 17 per cent of all imports are from China.

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The current EU regulatory regime

Construction Products Regulation (CPR)

39. Article 2 of the Construction Products Regulation CPR 305/2011/EU, defines a construction product as any product that is to be permanently placed into a construction work (building construction or civil engineering) which has an effect on the performance of the construction work.

40. The CPR is an EU Single Market regulation, intended to overcome technical barriers to trade. The CPR came into force on 1st July 2013, and introduced compulsory European Conformity (CE) marking for most construction products used for building and civil engineering works. There are currently around 500 standards, and new standards continue to be adopted. The EU Construction Products Regulations place obligations on manufacturers, distributors and importers of construction products when these products are placed on the market. Construction materials manufactured in the UK currently are required to comply with EU standards if they are covered by a harmonised standard.

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Figure 15: Top 5 UK Export and Import Markets for Construction Materials in 2016

<table>
<thead>
<tr>
<th>£million</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top 5 export markets</strong></td>
<td><strong>Top 5 import markets</strong></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>918</td>
<td>China</td>
</tr>
<tr>
<td>Germany</td>
<td>668</td>
<td>Germany</td>
</tr>
<tr>
<td>France</td>
<td>529</td>
<td>Italy</td>
</tr>
<tr>
<td>USA</td>
<td>525</td>
<td>Netherlands</td>
</tr>
<tr>
<td>Netherlands</td>
<td>503</td>
<td>Spain</td>
</tr>
</tbody>
</table>

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41. The British Standards Institute (BSI) is responsible for working with UK industry, regulators and CEN (European Committee on Standardization) to draft the technical detail of standards. Manufacturers wishing to import into the EU from outside are required to CE mark their products under the CPR. CEN is an association of 33 European standards bodies (BSI being the UK representative) that is recognised by the EU as making compulsory and voluntary standards at a European level.

42. The CPR aims to ensure the reliability of information on the performance of construction products. This is achieved through compulsory harmonised European product standards and voluntary European Technical Assessments that use a common technical language and uniform assessment methods. The CPR includes requirements for construction products that come within the scope of a harmonised European product standard to have a CE marking and to be accompanied by a Declaration of Performance (DoP) and other information if they are to be placed on the market in the EU. The manufacturer may choose to affix a CE mark and prepare a DoP if the product is covered by a voluntary European Technical Assessment (for some products not covered by a harmonised European standard).

43. The impact of these regulations on industry is variable due to the diversity of construction products. This market includes complete products such as doors, components and materials. Businesses involved in manufacturing vary from micro specialists such as carpentry to international brick manufacturers. The regulations do not only directly impact manufacturers in terms of cost of compliance or design of products, but indirectly to clients through the supply chain e.g. by creating certainty of quality, interoperability, ability to comply with building performance or safety standards, or the ability to purchase from a wide supplier base across the EU. Firms exporting to the EU, which is a significant destination for UK exports, will need to ensure their products continue to conform to the CPR.

Product Accreditation

44. The EU CPR relies on a system of notified bodies in Member States considered to be competent to carry out the conformity assessment. Such bodies are first approved by their respective Member States to carry out certain designated tasks, and then notified to the European Commission and other Member States. Notified bodies are required to participate in the ‘Group of Notified Bodies’ (GNB), with their European counterparts, to discuss practical implementation matters to achieve a consistent approach to the implementing the Regulation.

45. The UK has over 50 accreditation bodies operating certification schemes for construction industry manufacturers/suppliers, covering product conformity, quality management and employee qualifications for particular types of construction work. UKAS (United Kingdom Accreditation Service) certifies each of these bodies and provides specific advice on achieving appropriate accreditation for any given market, product or service.

46. Where an assessment by a Notified Body is required, once this has been undertaken, the notified body will issue relevant certification allowing manufacturers to produce a
DoP, CE mark their products and put them on the market in the EU. The list of UK-based EU notified bodies are currently the same accreditation bodies previously approved by UKAS.

**Health and Safety**

47. The Construction Design and Management (CDM) Regulations 2015 require the implementation of health and safety requirements in the construction contracting sector. The CDM regulations transpose EU Directive 1992/57/EEC. Directive 92/57/EEC lays down minimum safety and health requirements for temporary or mobile construction sites i.e. any construction site at which building or civil engineering works are carried out and intends to prevent risks by establishing a chain of responsibility linking all the parties involved.

48. It requires health and safety coordination for both the project preparation stage and during project execution stages; clear roles and responsibilities of the various stakeholders; the preparation of a limited number of documents that assist in ensuring good working conditions; and extends to all of the firms involved in construction projects and the principles that are found in the health and safety Framework Directive (89/391/EEC) for undertakings sharing a workplace to cooperate and coordinate in preventing occupational risks.

49. Also applicable to the sector is Directive 89/391 EEC which sets the minimum safety and health requirements that apply in all workplaces, while Member States are allowed to maintain or establish more stringent measures. Other directives relevant to the sector include:

- Directive 89/656/EEC - use of personal protective equipment;
- Directive 90/269/EEC – manual handling of loads;
- Directive 92/58/EEC - safety and/or health signs;
- Directive 98/24/EC – chemical agents;
- Directive 2009/104/EC – use of work equipment;
- Directive 2002/44/EC – vibration;
- Directive 2003/10/EC – noise; and

**Energy efficiency related regulations**

50. The construction sector is impacted by a range of EU directives related to climate change. The particular Directives are:

- **Energy Efficiency Directive** (2012/27/EU) - This Framework Directive requires national planning to deliver improvements in energy efficiency to meet both indicative and binding energy-saving targets. This has specific requirements relating to the role of the public sector, supplier obligations, auditing for large companies, promotion of combined heat and power, metering and billing and information provision.
• **Energy Performance of Buildings Directive** (2010/31/EU) – This Directive sets minimum requirements for new build and major renovations for both domestic and non-domestic buildings, requires a national calculation methodology for assessing the energy performance of buildings and requires Energy Performance Certificates (EPC) at point of sale or rental.

• **Ecodesign Directive** (2009/125/EC) – This Directive covers a range of products used in construction such as windows and boilers.

• **Energy Labelling Directive** (2010/30/EU) – This Directive covers a range of products used in construction such as air conditioning units and boilers.

• **Renewable Energy Sources Directive** (2009/28/EC) – This Directive sets the context and high level targets for renewable energy generation and is implemented through a range of UK policies and incentives. These domestic regulations and policies influence the installation of renewable energy systems, e.g. solar panels, in new and existing homes and non-domestic buildings.

51. The Energy Performance of Buildings Directive is implemented in England through Building Regulations with regard to implementing the minimum energy requirement. These are devolved to Scotland, Wales and Northern Ireland (the requirements for the Energy Performance Certificate framework in the Directive are implemented using European Communities Act powers, which is also a devolved matter).

52. The construction products sector is also impacted by regulations relating to greenhouse gas emissions, including EU ETS. It is worth noting that the suite of regulations and how they are applied in the UK has a significant impact on the viability and investment opportunities for certain UK construction products such as steel, glass, cement, ceramics and bricks.

**Environmental and Chemicals related legislation**

53. There are a number of generic environmental regulations that impact to a greater or lesser extent on the construction products sub-sector. For example, legislation such as REACH (see below) and labelling and exports regulations, impact on UK manufacture of paints and varnishes and plastics based products such as coated wire.

**REACH**

54. Chemicals produced in or imported by the EU are subject to the EU REACH 1907/2006/EC (Registration, Evaluation, Authorisation of Chemicals) Regulation. REACH is a single market measure that addresses the production and use of chemical substances, and their potential impacts on both human health and the environment. REACH also has the aim of ensuring the free circulation of goods across the internal market and enhancing competitiveness and innovation.
55. REACH primarily puts the responsibility on manufacturers and importers of chemicals and other substances covered by REACH, with a focus on identifying risk and applying appropriate risk management measures. Further duties affect downstream sector users of chemicals. Authorities (Member States or the European Chemicals Agency (ECHA), which manages REACH on behalf of the Commission/EU) can initiate additional EU-wide regulatory controls on the most dangerous chemicals.

**EU Classification, Labelling and Packaging (CLP) Regulation, 2008**

56. CLP aims to ensure a high level of protection of health and the environment, as well as the free movement of chemicals. CLP is fundamental to the EU chemicals legislative framework and applies to all suppliers of chemicals from SMEs to larger businesses across all chemical sectors and all volumes of chemicals. The identification of the hazardous properties of chemicals under CLP is the starting point for the control of chemicals in the EU and through relevant domestic legislation including REACH.

57. Chemicals are required to be classified according to their hazards and labelled and packaged as appropriate according to the Classification, Labelling and Packaging (CLP) Regulation (EC) No 1272/2008. This regulation adopts the international United Nations Globally Harmonised System of Classification and Labelling of Chemicals (the “GHS”). Like REACH, CLP applies to the EEA and is adopted into their national legislation. Criteria changes at UN level lead to corresponding changes at EU level, normally every 2 years via Adaptations to Technical Progress (ATPs). CLP also governs the system on the agreement of legally binding hazard classifications for substances (“harmonised classifications”) to reflect the latest scientific data. These ATPs are adopted annually.

58. CLP applies across the UK including the Devolved Administrations (DAs). There are domestic regulations that give regulatory authorities powers to enforce CLP in the UK.

**Export and Import of Hazardous Chemicals EU Regulation, 2012 (commonly referred to as the ‘Prior Informed Consent’ Regulation or PIC)**

59. The Export and Import of Hazardous Chemicals EU Regulation No 649/2012 requires information exchange between the countries of exporters and importers so that the hazardous properties of the chemical are known to trading parties. A subset of these chemicals is subject to the ‘prior informed consent’ procedure established by the UN Rotterdam Convention and a smaller subset is banned under the UN Stockholm Convention. PIC is marked as EEA relevant by the EU but is considered by the EEA EFTA States not to be relevant for incorporation into the EEA Agreement.

60. Besides covering the 44 substances currently listed in the Rotterdam Convention, the Regulation also applies various trade controls on some 350 other hazardous substances.
**Rotterdam Convention**

61. The Rotterdam Convention is a multilateral environmental agreement that promotes shared responsibilities in relation to importation of hazardous chemicals. The convention promotes open exchange of information and calls on exporters of hazardous chemicals to use proper labelling, include directions on safe handling, and inform purchasers of any known restrictions or bans. Parties, of which the UK is one in its own right, can decide whether to allow or to ban the importation of chemicals listed in the treaty, and exporting countries are obliged to make sure that producers within their jurisdiction comply. It is implemented by the EU Regulation on Prior Informed Consent (EU 649/2012).

**Persistent Organic Pollutants (POPs) Regulation, 2004**

62. The EU Regulation No 850/2004 on Persistent Organic Pollutants (POPs) bans or severely restricts the production and use of 35 chemicals that are listed in the international Stockholm Convention.

**Stockholm Convention**

63. The Stockholm Convention is a multilateral environment agreement to which the UK is a Party in its own right, effective from May 2004, which aims to eliminate or restrict the production and use of persistent organic pollutants (POPs). It is implemented by the EU regulation on POPs. A number of substances that have applications for wood preservation are included. The Convention on Long-Range Transboundary Air Pollution EU Decision 81/462/EEC implements the convention on long-range transboundary air pollution. This restricts the use of certain substances, including some that can be used in applications such as wood preservation.

**EU Waste Framework Directive, 2008**

64. The Waste Framework Directive (2008/98/EC) sets out a framework for waste management, detailing the basic concepts and definitions, such as those for waste, recycling and recovery. It explains when waste ceases to be waste and becomes a secondary raw material (known as end-of-waste criteria), and how to distinguish between waste and by-products.

**EU Waste Shipments Regulation, 2006**

65. The Waste Shipments Regulation (EC/1013/2006) sets out the procedures for the transboundary shipment of waste within the EU and between the EU and other countries. It also places a ban on the export of hazardous wastes to countries not in the OECD as well as a ban on the export of waste for disposal. This implements our international obligations under the UN Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their disposal, and the OECD decision establishing a control system for wastes destined for recovery (C(2001)107/FINAL).
The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

66. The Basel Convention is an international treaty that aims to reduce the movements of hazardous waste between nations and specifically to prevent transfer of hazardous waste from developed to less developed countries. As noted above, the UK is also a party to OECD Decision C(2001)/107/FINAL establishing a control system for wastes destined for recovery. Our obligations under both of these are implemented through the EU Waste Shipment Regulations. These are both implemented into EU law by the EU Waste Shipments Regulations (EC) No 1013/2006.

Enforcement

67. Construction product regulations are enforced by Trading Standards (England, Scotland and Wales) and the Northern Ireland Trading Standards Service.

68. Classification, Labelling and Packaging (CLP) is enforced by:
   • The Health and Safety Executive;
   • Local authorities – trading standards;
   • The General Pharmaceutical Council (limited enforcement powers re pharmacies);
   • Environment Agency (support re environmental hazards);
   • The Scottish Environment Protection Agency (support re environmental hazards); and
   • HSENI (in Northern Ireland).

69. The Prior Informed Consent (PIC) regulation is enforced by:
   • The Health and Safety Executive (Designated National Authority and Enforcement);
   • HM Revenue and Customs (Enforcement);
   • The UK Border Agency (Enforcement); and
   • HSENI (in Northern Ireland).

70. REACH is enforced by:
   • The Health and Safety Executive (UK Competent Authority and Enforcement);
   • The Health and Safety Executive for Northern Ireland;
   • Local authorities – health and safety;
   • Local authorities – consumer safety;
   • Environment Agency (support re environmental hazards);
   • The Scottish Environment Protection Agency (support re environmental hazards);
   • Northern Ireland Environment Agency(support re environmental hazards);
   • DEFRA;
   • BEIS – Energy Development Unit (environmental protection re offshore installations); and
   • Office of Rail and Road (for railway installations and rolling stock).

71. Energy Efficiency legislation is enforced by:
• The Environment Agency;
• National Measurement and Regulation Office;
• Ofgem;
• Local Authorities;
• The Scottish Environment Protection Agency (SEPA); and
• The Northern Ireland Environment Agency (NIEA).

72. Waste regulations are generally enforced by Local Authorities and the four UK environmental protection bodies (Environment Agency (EA); Scottish Environmental Protection Agency (SEPA); Northern Ireland Environment Agency (NIEA); Natural Resource Wales (NRW)). Waste shipments are enforced by the UK competent authorities, which are the EA; SEPA; NIEA; NRW.

73. Enforcement of the procurement rules is through the courts rather than through a competent authority. EU Directive 2007/66/EC (‘the remedies directive’) regulates when and how public procurement decisions may be challenged when there has been an alleged breach. Suppliers can take action in the domestic courts. The Commission can also bring infraction proceedings either independently or following a complaint. The Remedies Directives have been incorporated into the main regulations governing public procurement – the Public Contracts Regulations 2015, the Utilities Contracts Regulations 2016 and the Concession Contracts Regulations 2016.

74. The CDM Regulations are normally enforced by the Health and Safety Executive in Great Britain and by the Health and Safety Executive for Northern Ireland in Northern Ireland. Some aspects of construction work are enforced by local authorities where they are the enforcing authority for that type of premises. This covers non-notifiable construction work which is entirely internal to the building and which is not separated off from the normal operations of the premises, and work to do with the removal or maintenance of insulation on heating or water systems.

Existing frameworks for how trade is facilitated between countries in this sector

75. The arrangements described in this section are examples of existing arrangements between countries. They should not be taken to represent the options being considered by the Government for the future economic relationship between the UK and the EU. The Government has been clear that it is seeking pragmatic and innovative solutions to issues related to the future deep and special partnership that we want with the EU.

76. There are a number of existing arrangements that govern the way in which non-EU Member States trade in consumer goods with the EU. Around the world, other countries have also created arrangements for trading specific categories of consumer goods.
77. Manufacturers from outside of the EU wishing to export construction products to the EU need to meet the requirements set out in the applicable EU legislation. Importers and distributors of construction products from manufacturers based in third countries must satisfy themselves that the products comply with EU legislation, including a conformity assessment by an EU notified body. These manufacturers would also need to comply with legislative requirements in their home country, and any other countries, where they intend to market products.

78. Countries can use bilateral Mutual Recognition Agreements that allow conformity assessment bodies in either market to carry out product testing and certification to each other’s legislative requirements. The authorities in both parties agree to accept conformity assessment decisions issued by bodies recognised in one another’s markets. Manufacturers still need to ensure that products meet the requirements set out in the legislation where they plan to market the product.

79. The EU has concluded MRAs with seven countries, covering a variety of sectors. Some of the EU’s bilateral MRAs have been integrated into FTAs, not all of which cover construction products. CETA is an example of an MRA that does cover some construction products, and offers mutual recognition of conformity assessment for eleven sectors including toys and recreational craft. CETA also contains provisions for voluntary cooperation on data exchange to support market surveillance activity and exchange of information about the development of technical regulations.

80. Other existing agreements, such as the EU-Swiss agreements and the EEA Agreement, provide for further mutual recognition. For example the EU-Swiss MRAs provide mutual recognition across around twenty product types, including those in CETA as well as personal protective equipment and are linked to an agreement that recognises Swiss legislation as equivalent. Where legislation is deemed equivalent, notified bodies’ certificates of conformity with the product rules in the EU will be recognised as proving conformity with Swiss legislation, and vice versa. They also cover cooperation on market surveillance of products already on sale.

81. In the EEA agreement, where there is EU legislation for construction products, EEA countries adopt EU product legislation into their domestic legislation, and goods that originate from these countries are treated as products from member states. The agreement also includes a system of surveillance and enforcement.

82. Trade in manufactured goods can be facilitated through the use of international standards, such as those developed by the International Standards Organisation (ISO) and the International Electrotechnical Commission (IEC). These are voluntary agreements on best practice for a given process or product. These standards are voluntary, and the majority are developed purely for commercial purposes, such as to support the interoperability of supply chains.

Customs

83. There are many customs facilitation arrangements in international agreements. These include the EU’s agreements with a number of third countries, such as Canada, Korea,
and Switzerland. These agreements differ in the depth and scope of customs facilitation offered. Examples of customs facilitations include: simplifying customs procedures, advance electronic submission and processing of information before physical arrival of goods, and mutual recognition of inspections and documents certifying compliance with the other parties’ rules.

**Tariffs**

84. In the absence of a preferential trade agreement, goods imported into the EU from non-EU countries must pay a tariff. Tariffs are custom duties levied on imported goods. Under WTO Most Favoured Nation (MFN), a country’s tariff schedule must be consistent for all countries it trades with, except those where a preferential trade agreement exists. EU MFN tariff rates vary depending on the good.

**Rules of Origin**

85. The EU includes rules of origin in all of its FTAs, which are restrictions on the originating content of products that exporters must comply with to gain tariff preferences. These rules typically reflect both the supply chains of both the EU and its FTA partner. Many of the EU’s rules of origin arrangements are based on the Regional Convention on Pan-Euro-Mediterranean Preferential Rules of Origin, which includes provisions that allow producers to treat content from some third countries as if it comes from their own country. Several arrangements aim to reduce the administrative requirements associated with origin certification, including the EU’s Registered Exporter (REX) system, which lets businesses register for self-certification of origin using an online system, avoiding paper certificates.

**Sector views**

[This information was provided by the Government to the Committee, but the Committee has decided not to publish this section]
Annex: Stakeholder Engagement on European Union Exit (EU Exit) in the Department for Business, Energy and Industrial Strategy

[This information was provided by the Government to the Committee, but the Committee has decided not to publish this section]