Build 2020
Construction Sector Performance and Capacity

Prepared by the Department of Public Expenditure and Reform
gov.ie/2040
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Foreword:

This is the second annual addition of the BUILD Report which compiles and analyses the available official statistics relating to the Irish construction sector for the previous year.

It should be noted that the latest available data in many cases largely covers the period up to Q1 2020 when the full impact of the Covid-19 pandemic upon the construction sector had yet to materialise. However, there a number of short term indicators which are incorporated in this Report that give an indication of the Covid-19 impact on the construction sector and its initial recovery. The full impacts of Covid-19 on the sector will take time to materialise and the collection and analysis of official data will duly follow with the next edition of Build due in Q1 2021.

The purpose of this Report is to provide as comprehensive an overview of the performance and prospects of the sector as possible, based on official statistics, at this point in time.

The Report is an important source of evidence to inform the work of the Construction Sector Group which was established following the launch of Project Ireland 2040 and acts as a forum for dialogue between Government and stakeholders in the industry.

The Report should be seen together with the broader package of info in relation to Project Ireland 2040 that is available at gov.ie, which includes the Investment Project and Programmes Tracker, Project Ireland 2040 Annual Report etc.
Summary:

Covid-19 Response
- The Construction Purchasing Managers Index returned to growth (51.9) in June 2020 for the first time in four months.
- As of 21st July 2020, 27,300 construction sector workers remained on Pandemic Unemployment Payments, down from the 79,300 on 5th May 2020.
- Significant initial increase in public capital investment of an additional €742 million in 2020 primarily in Health and Business, Enterprise and Innovation.
- A further capital investment of €500 million made available as part of the July Stimulus.

Regional Activity
- In 2018 and 2019, the Southern Region had the highest number of planning permissions granted per head of population, and the highest total number of civil engineering planning permissions granted.
- The Eastern and Midland Region has witnessed the highest level of new dwelling completions per head of population over the period 2014-2020.

Investment and Output
- Total investment in building and construction grew by an estimated 11 percent in 2019 to €27 billion, but could decrease by 35 percent in 2020 due to a fall in private sector investment to stand at €17.9 billion.
- Additional public investment has been provided in direct response to Covid-19 and through the recent July Stimulus. Public capital expenditure is planned to increase by 12 percent in 2021.

Costs
- The Wholesale Price Index for Building and Construction Materials increased by 0.3 percent on an annual basis to May 2020.
- Average hourly earnings for all construction employees increased by 1.8 percent on an annual basis in Q1 2020 to stand at €21.50.

Employment and Enterprise
- Growth in construction sector employment slowed to 2.8 percent in the year to Q1 2020 to stand at 148,700.
- This represents a 6.3 percent share of total employment in the Irish economy compared to the EU average of 6.8 percent.

Skills and Knowledge
- There was a total of 3,499 new construction apprentice registrations in 2019, representing an annual increase of 3 percent.
- In 2019, new apprentice registrations in bricklaying and plastering remained approximately 90 percent below their peak levels in 2004.

Productivity
- In 2017, there was an increase of 5.45 percent in labour productivity in the construction sector; however, this still remains below the level recorded by the sector in 2010.
- In 2017, the gross value added (GVA) per hours worked by persons engaged in the Irish construction sector was €25.2, or 25 percent below the Euro Area average.
- Investment in R&D by the Irish construction sector in 2017 was €0.70 per capita, compared to €2.40 in the UK and €5 in the Netherlands.
**Section 1: Overview**

**1.1 Policy Context**

An efficient and sustainable construction sector is more necessary than ever in order to deliver the increased level of housing and infrastructure that will be required for the country’s recovery from Covid-19. This annual report seeks to contribute to the evidence base to inform Government and the construction sector on the performance of the industry. The report assesses the industry’s capacity, as well as highlighting possible constraints, risks and opportunities.

Covid-19 has had a major impact on the construction sector, effectively shutting down almost all output at the height of the crisis with the exception of a limited number of essential projects. As activity returns, it is timely to assess trends in the sector in the context of the new Programme for Government, the July Stimulus Package and the ongoing requirement for the supply of high quality housing and public infrastructure in the right locations in line with Project Ireland 2040. The construction sector has a central role in addressing these challenges.

Last year’s BUILD 2019 Report noted an increasing level of investment and output from both the public and the private sector in terms of infrastructure, housing, commercial buildings etc. However, the report also pointed to elevated tender inflation in the non-residential sector, subdued levels of students in construction training and education, and employment levels in the sector which were below the EU average at a time of close to full employment in the wider economy. Combined with stagnant productivity growth in the sector since 2010, these factors pointed towards a growing capacity constraint in the sector.

These issues informed the work programme of the Construction Sector Group (See Box 1) in 2019. One of the major outputs from the group was the development of a new action plan for innovation in the construction industry, the Building Innovation Report.

As detailed here in Build 2020 the headline trends had continued in terms of increased investment, increasing construction costs and subdued levels of productivity and training in the sector. The level of employment growth in the sector had also slowed as the wider economy reached full employment, further reducing any possible increase in capacity.

Covid-19 has impacted both supply and demand in the construction sector with initial indicators detailed in this report.

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**Box 1: Construction Sector Group**

The Construction Sector Group (CSG) was established in 2018 in order to ensure regular and open dialogue between Government and the construction sector. Its remit includes:

- Working with industry and government bodies to (a) benchmark and improve productivity and environmental sustainability and (b) to modernise public works delivery;
- Considering opportunities to introduce reforms within the sector that will help in controlling construction price inflation, improving efficiency and delivering value for money for investment;
- The supply of necessary skills and measures enhancing capacity (including potential use of overseas contractors); and
- Issues arising from inadequate or ineffective regulation, poor performance and systemic poor quality.

The industry bodies represented are:

- Construction Industry Federation
- Irish Congress for Trade Unions
- The Building Materials Federation
- Engineers Ireland
- Society of Chartered Surveyors Ireland
- Royal Institute of the Architecture of Ireland
- Association of Consulting Engineers of Ireland
- Irish Planning Institute

The BUILD Report is an important source of evidence to inform the work of the CSG. The CSG operates under the Transparency Code.
1.2 Purpose of BUILD

The purpose of this report is to give a comprehensive overview of the performance and prospects of the Irish construction sector, based on the available official statistics and data. This report will aid in the monitoring of trends across the sector, ranging from output and investment to employment and cost inflation, so that risks and performance issues can be identified and addressed where necessary. This report, along with the broader work of the CSG and the evidence based approach to public investment set out in the National Development Plan (NDP), will help to ensure that a more sustainable and innovative Irish construction sector develops over the coming period in order to deliver both public infrastructure and private investment in a timely and cost efficient manner for our society.

1.3 BUILD 2020 Format

BUILD 2020 covers the period 2010-2019 and includes official figures and projections for 2020 and future years where available.

BUILD was first published in 2019 and primarily focused on examining trends covering a ten year rolling period or as much of this time period as the data available covers. The report is published annually on outturn data for the previous year and latest projections for the coming years.

As with last year’s report, BUILD continues to provide a wide-ranging analysis of trends and projections in five key components of the construction sector, as well as a focus on Covid-19, and a new sector examining regional activity:

1. Regional Activity
2. Investment and Outputs
3. Costs
4. Employment and Enterprise
5. Skills and Knowledge
6. Productivity

In BUILD 2020, the principle indicators for measuring activity in the sector have been updated with the latest data and a number of indicators have been added relating to:

- Covid-19
- Regional Activity, including Northern Ireland
- Exports
- Construction Waste
- CO2 Emissions
- R&D and ICT
- Work Permit Approvals

1.4 The National Development Plan

Following the economic downturn, the public infrastructure that had been put in place over the past two decades played a very important role supporting the resilience and recovery of the Irish economy. However, in the years following the crisis, public investment was significantly constrained to safeguard the provision of essential public services.

The NDP represents a forceful response to these deficits and identifies the strategic priorities for public capital investment for all sectors.

The NDP sets out the investment priorities that will underpin the successful implementation of the new National Planning Framework (NPF). This will guide national, regional and local planning and investment decisions in Ireland over the next two decades to cater for an expected population increase of over 1 million people.

The NDP demonstrates a commitment to meeting Ireland’s infrastructure and investment needs over the medium-term, through a total investment estimated at €116 billion over the period. This represents a very substantial commitment of resources and is expected to move Ireland close to the top of the international league table for public investment.

This level of capital spending will ensure ongoing employment maintenance and creation with appropriate regional development. It will also provide clarity to the construction sector, allowing the industry to provide the capacity and capability required to deliver Government’s long-term investment plans.

The NDP also illustrates the commitment to reforming how public investment is planned and delivered. This will be achieved through a decisive shift to integrated regional investment plans, stronger co-ordination of sectoral strategies and more rigorous selection and appraisal of projects to secure value-for-money. A new funding model for Exchequer-funded public investment is being put in place to ensure that resources are allocated to projects and programmes that meet NPF priorities.

1.5 The National Planning Framework

The NPF will guide strategic planning and development for the country over the next 20+ years, so that as the population grows, that growth is sustainable (in economic, social and environmental terms). The vision set out under this framework is based on a set of values that will ensure Ireland’s long term economic, environmental and social progress for all parts of our country. In framing a new way forward, the NPF draws upon
lessons learned from the National Spatial Strategy and highlights a vision of success based on better choices compared to a ‘business as usual’ approach.

Ten National Strategic Outcomes (NSOs) are outlined in the NPF. The NDP outlines the new configuration for public capital investment over the next ten years which will contribute to securing the realisation of these ten NSOs.

The ultimate objectives of the NPF are to:

- Guide the future development of Ireland, taking into account a projected 1 million increase in our population, the need to create 660,000 additional jobs to achieve full employment and a need for 550,000 more homes by 2040;
- Of the 1 million extra people:
  1. 25 percent is planned for Dublin, recognised as our key international and global city of scale and principle economic driver;
  2. 25 percent across the other four cities combined (Cork, Limerick, Galway and Waterford), enabling all four to grow their population and jobs by 50-60 percent, and become cities of greater scale, i.e. growing by twice as much as they did over the previous 25 years to 2016; and
  3. with the remaining 50 percent of growth to occur in key regional centres, towns, villages and rural areas, to be determined in the forthcoming regional plans – Regional Spatial and Economic Strategies (RSEss).
- Enable people to live closer to where they work, moving away from the current unsustainable trends of increased commuting;
- Regenerate rural Ireland by promoting environmentally sustainable growth patterns;
- Plan for and implement a better distribution of regional growth, in terms of jobs and prosperity;
- Transform settlements of all sizes through imaginative urban regeneration and bring life/jobs back into cities, towns and villages; and
- Co-ordinate delivery of infrastructure and services in tandem with growth, through joined-up NPF/National Investment Plan and consistent sectoral plans, which will help to manage this growth and tackle congestion and quality of life issues in Dublin and elsewhere.

1.6 Implementation and Review of NDP

Since the launch of Project Ireland 2040, a number of new structures were put in place to ensure the efficient, coordinated and timely implementation of the NDP and NPF. These include: the Project Ireland 2040 Delivery Board of the Secretaries General; the Investment Projects and Programmes Office (IPPO) in the Department of Public Expenditure and Reform (DPER); the Land Development Agency; a new and improved Investment Tracker; and, the four NDP funds were launched.

Over the course of 2019, a number of significant additional outputs and actions were undertaken, including:

- Publication of the first Annual Report setting out progress to date in delivery, as well as policy developments across the system;
- Publication of an updated Public Spending Code;
- Publication of the MyProjectIreland mapping tool, alongside an updated and expanded Investment Tracker;
- Regional Spatial and Economic Strategies have been progressed and adopted; and
- A review of public procurement of construction was commenced.

As well as committing to bringing forward the review of the National Development Plan from 2022, the Programme for Government makes a range of commitments directly related to public investment, notably in the areas of climate action and biodiversity; town-centric planning and compact growth; reorientation of transport investment in support of sustainable modal shift; retrofitting; and advancement of Project Ireland 2040 goals in relation to balanced regional development.
Construction and Covid-19

Initial Impact

- The Construction Purchasing Managers Index which measures sentiment in the sector hit an all-time low of 4.5 in April 2020 (<50 indicates a contraction).
- The index rose to 51.9 in June 2020 for the first time in four months following the significant fall in sentiment in March and April during the height of the Covid-19 restrictions.
- According to the CSO’s Business Impact of Covid-19 Survey 80 percent of construction enterprises were trading in some capacity as of 28th June 2020.
- As of 21st July 2020 27,300 construction sector workers remained on Pandemic Unemployment Payments, down from the 79,300 on 5th May 2020.
- 42 percent of construction sector employers were in the Temporary Wage Subsidy Scheme as of 2 July.
- Industry sources have indicated that the vast majority of construction sites are now back open to some extent while complying with health and safety guidelines.
- Market updates from some publicly listed companies have indicated some postponement of capital investment for the remainder of 2020 in the private sector.
- The full impact of Covid-19 on issues such as costs, timelines, productivity and demand/supply more generally will take some time to become evident.

Initial Response

- The public health measures introduced on 27 March 2020 to halt the progress of Covid-19 required the imposition of restrictions on many areas of our society and economy, including the construction sector.
- On April 14th 2020, the Minister for Finance and Public Expenditure & Reform, Paschal Donohoe TD, announced a suite of measures to manage these risks in the short term, safeguarding the integrity of Project Ireland 2040 and providing for a timely restart to construction, when circumstances and public health measures allowed.
- The measures included extending ex gratia interim payments to contractors on public works contracts to cover certain non-pay fixed costs associated with site closures from 12 April 2020 until midnight on 4 May 2020 and subject to further extension should the current restrictions continue.
- On 1 May, the Government subsequently published a Roadmap for Reopening Society and Business to ease the COVID-19 restrictions and reopen Ireland’s economy and society in a phased manner.
- Furthermore, the Government produced the Return to Work Safely Protocol which was designed to support employers and workers to put measures in place that will prevent the spread of COVID-19 in the workplace when the economy begins to slowly open up.
- The construction industry itself has shown strong leadership in coping with the impacts of Covid-19 through engagement in the Labour Employer Economic Forum and by industry bodies providing guidance, supports and online training to their members.

Public Investment

- In direct response to Covid-19, there has been a significant increase in public capital investment of an additional €742 million in 2020 primarily in Health and Business, Enterprise and Innovation.
- Capital investment made available as part of the July Stimulus.

Next Steps

- The Programme for Government makes a range of commitments related to public investment, including bringing forward the review of the NDP from 2022.
Section 2:
Regional Activity

2.1 Overview

This section examines trends in construction activity across Ireland’s three Regional Assembly areas. While public investment has a strong regional spread, private investment, for example in housing, is strongly focused in Dublin and the Eastern and Midland Regions. Project Ireland 2040 has set out a clear strategy for the country’s development. The dispersed development and urban sprawl of the past has led to our regional cities not achieving their full potential, thus undermining the surrounding rural areas and wider regions. Under Project Ireland 2040, the four cities of Cork, Galway, Limerick and Waterford have a growth target of 50 percent, double the 25 percent growth target of Dublin. Achieving these targets will be necessary in order to make these viable cities of scale which can act as an alternative to Dublin in attracting investment and skilled labour.

Key findings are as follows:

- From 2018 to 2020, the Southern Region had the highest number of planning permissions granted per head of population, followed by the Northern and Western Region.
- The Southern Region has also seen the highest number of civil engineering planning permissions granted for every quarter since Q1 2018.
- In the public pipeline the Eastern and Midland Region has the highest number of major infrastructure projects per million of population at 42 projects.
- The Northern and Western Region has the highest number of approved projects from the Rural Regeneration and Development Fund at 54.
- In terms of private investment, the Eastern and Midland Region has had the highest level of new dwelling completions per head of population over 2014-2019.
- Dublin is the region with the smallest share of employment in the construction sector at 4.5 percent of total employment in Q1 2020.

2.2 Output

In terms of the regional spread of construction output activity, Figure 2.1 shows that from Q1 2018 to Q1 2020, the Southern Region has had the highest number of planning permissions granted per head of population, followed by the Northern and Western Region, and Eastern and Midland Region. This includes planning permissions for Dwellings, Commercial Buildings, and Buildings for Agriculture, Industrial Buildings, Government, Health, Education, Other Buildings for Social Use, Civil Engineering and Other.

Figure 2.1: Planning permissions granted by region (2018-2020Q1) per thousand population

Source: CSO
Looking at the trend in civil engineering projects, the Southern Region has seen the highest number of planning permissions granted for every quarter since Q1 2018, followed by the Eastern and Midland Region and Northern and Western Region.

**Figure 2.2: Planning Permissions granted for Civil Engineering Projects**

In terms of major infrastructure projects (€20 million+) included in the Investment Projects and Programmes Tracker published on gov.ie, the Eastern and Midland region has the highest number of projects per million of population at 42. When interpreting this figure, it should be noted that this does not capture infrastructure projects below €20 million (e.g. most schools projects). It should also be recognised that the Eastern and Midland Region, as the location of the capital, contains many national infrastructure projects, such as; the National Children’s Hospital and the North Runway at Dublin Airport.

**Figure 2.3: Major Infrastructure Projects per million population**

As part of Project Ireland 2040, four funds were established to help deliver the core aims of the plan. The Urban Regeneration and Development Fund of €2 billion will help to rejuvenate significant but underused areas in Ireland’s five cities and other large towns. The Southern Region had the highest number of successful projects in the first round with 15 approved.

The Rural Regeneration and Development Fund of €1 billion will provide investment to support rural renewal for suitable projects in towns and villages with a population of less than 10,000, and outlying areas. Following the first two rounds, the Northern and Western Region has the highest number of approved projects at 54.

**Figure 2.4: Approved Projects by Region and Fund**

Tables 1 and 2 set out the largest projects by level of funding for each region under the Rural and Urban Regeneration Development Fund respectively.

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Source: CSO

Source: Investment Projects and Programmes Tracker, gov.ie

Source: DRCD and DHPLG
Tender price inflation in 2019 stood at 6.6 percent nationally as shown in Figure 2.5. The highest inflation for 2019 was in Dublin at 6.8 percent and the lowest in Munster at 5 percent.

**Figure 2.5: 2019 Tender Price Inflation by Region**

![Graph showing tender price inflation by region](source)

New dwelling completions have increased across all three regions since 2014. The Eastern and Midland Region has witnessed the largest increase, even when correcting for population size as shown in Figure 2.6.

**Figure 2.6: New Dwelling Completions per thousand population**

![Graph showing new dwelling completions](source)

### 2.2 Employment

Dublin is the region with the smallest share of employment in the construction sector at 4.9 percent of total employment in Q1 2020, no change on Q1 2019. The Border region has the highest share of employment in the construction sector at 8.5 percent.

**Figure 2.7: Share Regional Employment in the Construction Sector in Q1 2020**

![Graph showing regional employment share](source)

Construction sector employment has been increasing as a share of total employment across all regions since 2012. However, while the total number of people employed in the construction sector in Dublin, the Mid-East and Mid-West has increased, the numbers employed in the South-East, Border, South-West, Midland and West were lower in Q1 2020 compared to Q1 2009.

**Figure 2.8: Comparison of Construction Sector Employment by Region**

![Graph showing comparison of employment by region](source)
Construction sector output in Northern Ireland since 2010 has followed a similar but less volatile trend compared to the construction sector in the Republic of Ireland. Output in Northern Ireland decreased from 2010-2013 and has gradually increased up to 2019. However, between 2015 and 2019, growth in construction output in Northern Ireland (5 percent) has been subdued in comparison to the Republic of Ireland (55 percent). The divergence between Northern Ireland and the Republic has continued to grow with NI experiencing a decrease of 4 percent in the year to Q1 2020 while the Republic had a 14 percent increase in the same period. Despite fluctuations, the total volume of construction output in Northern Ireland has been on an upward trend since Q4 2013. These figures do not take into account the Covid-19 pandemic however.

Northern Ireland and the Republic of Ireland have a closely connected labour market. Given that the Republic of Ireland has until very recently been experiencing a tight labour market in the construction sector, the conditions in Northern Ireland are of relevance to policy makers.

While both jurisdictions experienced a fall in their construction employment shares following 2009, the share in the Republic of Ireland fell at a much faster rate to a low of 4.2 percent, while the lowest point reached in Northern Ireland was 5.6 percent. That gap has closed since the second half of 2017 with shares in both markets at around 6.5 percent. As of Q1 2020, total Northern Ireland construction employment was at 65,000, down from a high of 82,000 in March 2008. In this context, it would seem that there is likely little capacity to ease the Republic of Ireland’s labour market tightness. This data does not take into account the full impact of the Covid-19 pandemic.

Gross Value Added (GVA) in the construction sectors of the Republic of Ireland and Northern Ireland were about equal in 2010/2011. GVA in the Republic of Ireland since then has risen dramatically, and now stands at nearly three times that of Northern Ireland. Given that Northern Ireland’s economy is roughly one quarter the size of the Republic’s, this dramatic divergence actually brings conditions closer to what would be expected. As seen in section 7, labour productivity in the Republic of Ireland has fallen 3.3 percent overall since 2010 but has been rising since the low of 2015. Northern Ireland, while experiencing a more consistent decline since 2010, rebounded from 2014. Labour productivity in Northern Ireland now stands at 17.7 percent higher than it did in 2010.

Source: Office for National Statistics and CSO
Section 3: Investment and Output

3.1 Overview
This section examines a broad range of elements in relation to construction sector investment and output in Ireland for both the private and public sectors. Trends in output are detailed by subsector, with a particular focus on civil engineering and housing output. An overview is also provided of the anticipated construction pipeline by incorporating the latest data on planning permissions, confidence indices and the major infrastructure pipeline now in place under Project Ireland 2040.

Key findings are as follows:

- Total investment in building and construction grew by an estimated 11 percent in 2019 to €27 billion, but could decrease by 35 percent in 2020 due to a fall in private sector investment to stand at €17.9 billion.
- In 2018, total investment in the sector in Ireland (12.3 percent as a share of national income), was above the EU28 average (10.3 percent).
- In terms output, the residential sector saw an annual volume increase of 29.3 percent as of Q1 2020. Non-residential activity was also up with an increase of 15 percent year on year.
- In 2019, total housing completions were 21,241. This was outstripped by housing demand which was estimated at over 30,000 for 2019.
- Planning permissions for non-residential building in Q2 and Q3, 2019 was almost double what it has been at any point in the last 10 years. It might be expected that this pipeline will slow following Covid-19.
- The latest edition of the Investment Projects and Programmes Tracker includes 255 major projects and programmes in total, with 22 projects to be commenced in 2020 and a further 59 ongoing throughout the year.

3.2 Trends in Investment
The official measure of total investment in the sector (including both private and public investment) is Gross Fixed Capital Formation (GFCF) in Building and Construction. Total investment was estimated at €27 billion for 2019 and covers housing, commercial building, civil engineering and public infrastructure. This consisted of €19.8 billion in private investment and €7.7 billion in public investment.

The latest official forecasts produced in April for the Stability Programme Update by the Department of Finance anticipate that total investment could decrease by 35 percent to stand at €17.9 billion in 2020. It should be noted that while public investment in the sector will continue to increase in 2020 and 2021, private sector investment could decrease to €9.9 billion in 2020 before increasing to €14 billion in 2021. An important caveat to note here is that there could be upside revisions to this for 2020 as construction activity was re-opened sooner than had been assumed at the time of the SPU in April.

Figure 3.1: Total Investment in Building and Construction

Source: CSO and 2019-2021 estimate and forecasts from Department of Finance
GFCF in building and construction was 13 percent as a share of GNI* in 2019. This share has been increasing since the low point of 7.4 percent in 2011. The average over the period 2000-2018 was 14.5 percent. Based on the latest forecasts, GFCF in the sector will now decrease in 2020 due to the impact of Covid-19.

### Box 3: Measuring the Construction Sector

**Gross Fixed Capital Formation (GFCF) in Building and Construction**

GFCF is the official measure of investment for statistical and accounting purposes as defined by the European System of Accounts (ESA, 2010).

GFCF is defined as acquisitions less disposals of fixed assets. This is often referred to as investment.

GFCF in Building and Construction includes all new building and major reconstruction of existing buildings, as well as all construction work such as roads, harbours, airports, electricity generating stations, drainage and reclamation of agricultural land, bog development, forestry development, etc.

**Construction Subsectors**

According to Eurostat’s NACE Statistical classification of economic activities the definition of Construction (F) includes the following subsectors:

- **Construction of Buildings (NACE F41)**
  - Development and construction of residential and non-residential buildings.

- **Specialised Construction Activities (NACE F43)**
  - Demolition and site preparation, test drilling and boring, building completion and finishing, electrical and plumbing, and other construction installation activities.

- **Civil Engineering (NACE F42)**
  - Construction of road, railways, bridges, utility projects and water projects.

In addition, the report includes data on the following NACE subsector which is strongly linked to construction:

- **Architectural and Engineering Activities (NACE M71)**
  - Architectural and engineering activities and related technical consultancy.
  - Technical testing and analysis.

GFCF in building and construction was 13 percent as a share of GNI* in 2019. This share has been increasing since the low point of 7.4 percent in 2011. The average over the period 2000-2018 was 14.5 percent. Based on the latest forecasts, GFCF in the sector will now decrease in 2020 due to the impact of Covid-19.
This is in contrast to the above average investment in building and construction in Ireland compared to the EU as highlighted in Figure 3.3. This raises concerns in relation to the productivity of the Irish construction sector and its ability to convert high levels of investment into a high value of output. This is examined in further detail in Section 7 of this report.

When broken down by subsector, Figure 3.6 shows that value added at factor cost for construction of Buildings has recovered to a level above both Architecture and Engineering, and Civil Engineering.

The level of activity in the overall construction sector has increased by 16 percent in the year to Q1 2020.

The year on year change to Q1 2020 for the Residential sector has seen a volume increase of 29.3 percent. Civil Engineering activity decreased by 7.4 percent year on year.

Meanwhile, according to this measure non-residential activity increased by 15 percent on an annual basis. Section 3.5 also indicates a strong pipeline in this sector based on planning permissions data.

The Annual Business Survey of Economic Impact is a survey of the client companies of Enterprise Ireland, IDA Ireland and Údarás na Gaeltachta. There are 240 such construction companies. As shown in Figure 3.8, exports by construction client companies stood at €1.9 billion in 2018. This was an increase of 39 percent compared to 2017 and 246 percent increase compared to 2010.
Figure 3.9 summarises the total Construction and Demolition Waste and Soil Waste projections for the period 2018-2028, indicating the volumes anticipated and projected market growth over the period. The output in waste is forecast to grow by an average of over 5 percent from 2019-2028. The capacity to process the waste produced in 2019 was barely sufficient and it will therefore be necessary that capacity increases in line with projected output.

There are many influencing factors which can impact on these estimates, including construction output, annual capital expenditure, market slowdown, Brexit, by-products and end of waste.

Figure 3.10: Construction Sector Greenhouse Gas Emissions

Total greenhouse gas emissions from the construction sector have risen significantly as the sector has recovered from the financial crisis of 2008. Total emissions in 2018 stood at 485,000 tonnes per annum. However, emissions per million Euro of gross value added has fallen by 63 percent since 2009.

A large quantity (approximately 83 percent) of the increase since 2011 in total value added at factor cost is coming from the construction of buildings and specialised activities, as shown in Figure 3.6.

These figures do not take into account the emissions from production of cement or other intermediate products which generate high levels of emissions.
### 3.4 Trends in Housing Output

According to research carried out by the Department of Finance, the estimated demand for houses has been increasing since 2012. In 2019, demand was an estimated 30,817 representing a 9 percent increase on the same period in 2018. Demand was expected to decrease in 2020 to 29,875.

![Figure 3.12: Estimated Demand for Houses](source: Department of Finance)

In 2019, there were 21,241 new dwelling completions. This was an 18 percent increase on 2018.

In 2019, 17 percent of new dwelling completions were in an Apartment Scheme, increasing to 21 percent in Q1 2020. This may signify a trend towards a greater diversification of the housing stock and increasing densification in line with the National Planning Framework (NPF) as discussed opposite.

![Figure 3.13: New Dwelling Completions by Type](source: CSO)

The share of new dwelling completions in an Apartment Scheme has remained relatively constant with an average of 12 percent of total output since 2011. The share of new completions in Housing Schemes have increased from a low of 14 percent in the first quarter of 2011 to the latest share of 57 percent in the first quarter of 2020.

![Figure 3.14: New Dwelling Completions by Type of House and Quarter](source: CSO)

In the first quarter of 2020, 77 percent of new dwelling completions were in urban areas. This is reflective of an upward trend since 2011, also slightly down on quarter four 2019. This is a particularly positive trend given the strategic objective of compact growth in the NPF which is “targeting a greater proportion (40 percent) of future housing development to be within and close to the existing ‘footprint’ of built-up areas.”

![Figure 3.15: Share of New Dwelling Completions by Urban and Rural and Quarter](source: CSO)
3.5 Anticipated Construction Pipeline

In this section an overview is given of the anticipated construction pipeline by incorporating the latest data on confidence indices, planning permissions, and the major infrastructure pipeline planned under Project Ireland 2040, with a particular focus on 2020.

3.5.1 Trends in Confidence and Planning Permissions

The Ulster Bank Construction Purchasing Managers Index surveys select companies which provide an advance indication of sentiment in the private sector economy. However, it should be noted that it is a measure of sentiment rather than actual output. A reading of >50 indicates expansion (<50 indicates contraction).

The index rose to 51.9 in June 2020 for the first time in four months following a significant fall in sentiment in March and April during the height of the Covid-19 restrictions. Housing (55.8) and Commercial (50.9) sectors were back in expansion. Meanwhile, Civil Engineering sentiment remains in contraction since September 2018, albeit experiencing a large improvement in sentiment in June to stand at 43.4. It should be noted that this sentiment towards Civil Engineering seems to be at odds with the increase in Civil Engineering output recorded by the CSO in Figure 3.7.

The purpose of the CSO Planning Permissions Statistics is to provide a short-term indicator on anticipated levels of construction sector activity.

The total floor area for which planning permission was granted in 2019 was 8.4 million sq. metres. This was an 11 percent increase on 2018, representing a slowdown in growth from the previous year which had seen a 33 percent increase.

Residential dwellings represent 60 percent of the total floor area for which planning permission was granted in the first quarter of 2020. Other new construction (which excludes dwellings) represented 32 percent of total floor area granted planning permission in the first quarter of 2020. Other new construction includes construction in sub-sectors such as hotels, restaurants and cafes, office developments, health, manufacturing, agriculture, education, transport and entertainment etc.
In 2019, planning permission was granted for 40,252 new houses and apartments, an increase of 38 percent on 2018.

![Figure 3.19: Number of Planning Permissions Granted for New Houses and Apartments](source)

The share of planning permission granted for new apartments has been rising each year since 2014 to a high of 51 percent of all new dwellings in 2019.

![Figure 3.20: Share of Planning Permissions Granted for New Houses and Apartments](source)

As shown in Figure 3.21, demand for commercial planning permissions did not ease in 2019 or Q1 2020. In terms of floor space, while returning to trend in Q4, planning permissions for non-residential building in Q2 and Q3 2019 was almost double what it has been at any point in the last 10 years. This will continue to put pressure on construction capacity that is available for the construction of residential property.

![Figure 3.21: Non-residential Planning Permissions by Floor Space](source)

### 3.5.2 Public Investment Priorities

Project Ireland 2040 – the National Development Plan (NDP) and the National Planning Framework (NPF) – remains the strategic vision for Ireland’s public capital infrastructure priorities strictly aligned with the National Strategic Outcomes (NSOs) for Ireland’s new spatial strategy contained in the NPF.

The plan is ensuring a shift to greater integration of regional investment plans, stronger co-ordination of sectoral strategies and more rigorous selection and appraisal of projects to secure value-for-money.

The Government is committed to continued investment in infrastructure to support, in line with the National Planning Framework vision for balanced regional development. To that end, it is already envisaged that investment under the Public Capital Programme will increase to €9,161 million in 2021. This is an increase of nearly €1 billion, or 12 percent, on the 2020 budget of €8,166 million – which has already been augmented with an additional €742 million for 2020, chiefly to fund essential health infrastructure and capital supports for business. Almost all of the 2021 funding has already been allocated to Departments.

The indicative project costs of the 2020 stimulus total €500 million. This investment package will also ensure that Covid-19 impacts on construction activity in certain areas, which might have led to underspend across certain Votes, will be mitigated and that overall economic impact of construction activity and capital investment can be sustained and augmented.

The projects and programmes cover a broad geographic and sectoral scope, including housing, education, environment, heritage and tourism.
The latest update of the Government’s Investment Projects and Programmes Tracker was published in January 2020 on gov.ie before Covid-19 had impacted the sector. The full impact of Covid-19 on issues such as costs, timelines, productivity and demand/supply more generally will take some time to become evident. The next update of the tracker, scheduled for Q4 2020 should give some indication of these impacts.

The tracker includes almost 200 projects and over 100 programmes.

The tracker sets out the scale and breath of planned public investment and provides the clarity and certainty to enable the construction sector to hire, invest and expand capacity.

There are currently four infrastructure projects with an estimated project cost in excess of €1 billion. These are:

- **Metro Link** – construction commencement in 2021
- **National Children’s Hospital** – construction commenced in 2017
- **Water Supply Project** – construction commencement date is 2024
- **National Broadband Plan** – contract signed in November 2019

Some of the largest infrastructure programmes in excess of €1 billion are:

- **The Social Housing Programme**
- **The Schools Building Programme**
- **Irish Water Capital Programme**
- **Residential Energy Efficiency**
- **DART Expansion Programme**
- **Heavy Rail Programme**

Table 3 gives a breakdown of projects and programmes by NSO. NSO 10 has the largest number of projects and programmes included in the tracker. NSO 4 has one of the fewest number of projects and programmes. However, these are generally particularly big projects such as Metro Link and Bus Connects.

In January 2020, Prospects - Ireland’s Pipeline of Major Infrastructure Projects was published to provide further visibility on the sequencing of 50 of Ireland’s priority infrastructure projects over the coming years, thereby facilitating Irish and overseas construction firms to plan for commercial opportunities on the horizon.

Phase 2 of the MyProjectIreland map viewer also went live in January 2020. The interactive mapping tool provided details on over 500 projects across Ireland, ranging from small-scale investments to the largest projects included in the capital programme. The viewer is hosted on gov.ie.
Construction on 22 major public infrastructure projects will commence in 2020 and a further 58 are at construction stage. As shown in Figure 3.24, of the projects currently included in the tracker, commencements of projects are front loaded in the earlier years of the plan. It should be noted that there are a number of particularly large projects due to be completed in the second half of the plan, including the three largest projects in the NDP.

Table 4 sets out the 22 major infrastructure projects due to go to construction in 2020. These include a range of projects across Health, Education, Transport, Water, Flood Defences and Culture. The largest projects are the Dunkettle Interchange and the Arklow Sewerage Scheme which are both in the range of €100-€250 million.

In terms of the project lifecycle, as shown in Figure 3.25, 64 percent of projects are at some stage of appraisal or planning and design, while 31 percent are at implementation/construction.

**Figure 3.24: Number of Commencements per year of Major Public Infrastructure Projects**

<table>
<thead>
<tr>
<th>Year</th>
<th>Commencements</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>5</td>
</tr>
<tr>
<td>2019</td>
<td>20</td>
</tr>
<tr>
<td>2020</td>
<td>25</td>
</tr>
<tr>
<td>2021</td>
<td>15</td>
</tr>
<tr>
<td>2022</td>
<td>10</td>
</tr>
<tr>
<td>2023</td>
<td>5</td>
</tr>
<tr>
<td>2024</td>
<td>5</td>
</tr>
<tr>
<td>2025</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Investment Projects and Programmes Tracker

**Figure 3.25: Share of Projects at each Lifecycle Stage**

1. Strategic Assessment | 15%
2. Preliminary Business Case | 19%
3. Final Business Case | 28%
4. Implementation | 34%
5. Review | 5%

Source: DPER Investment Projects and Programmes Tracker
### Table 4: Major Public Infrastructure Projects due to go to Construction in 2020*

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Project</th>
<th>Construction Completion Date</th>
<th>Project Cost Range (€m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>National Archives</td>
<td>2022</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>2</td>
<td>E3 Trinity College Dublin</td>
<td>2022</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>3</td>
<td>Royal Irish Academy of Music (RIAM) redevelopment</td>
<td>2021</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>4</td>
<td>Beaumont Hospital Radiation Oncology Unit</td>
<td>2023</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>5</td>
<td>Arklow Sewerage Scheme Wastewater Treatment Plant</td>
<td>2023</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>6</td>
<td>Athlone Sewerage Scheme</td>
<td>2023</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>7</td>
<td>Cork City Water Supply Scheme - Upgrade of Water Treatment Plant</td>
<td>2023</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>8</td>
<td>South Westmeath Regional Water Supply Scheme (Athlone and Mullingar)</td>
<td>2023</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>9</td>
<td>Upper Liffey Valley Sewerage Scheme 2B</td>
<td>2022</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>10</td>
<td>Kilkenny Regional Water Supply Scheme - Upgrade of Troyswood Water Treatment Plant</td>
<td>2023</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>11</td>
<td>Blackpool Flood Relief Scheme</td>
<td>2022</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>12</td>
<td>Enniscorthy Flood Relief Scheme</td>
<td>2023</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>13</td>
<td>Hawkins House</td>
<td>2021</td>
<td>Subject to Appraisal</td>
</tr>
<tr>
<td>14</td>
<td>Leeson Lane redevelopment</td>
<td>2022</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>15</td>
<td>Tom Johnson House</td>
<td>2022</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>16</td>
<td>Distillers Building, Smithfield</td>
<td>2022</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>17</td>
<td>Capacity Extension Works at Shannon Foynes Port</td>
<td>2023</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>18</td>
<td>Athy Southern Distributor Road</td>
<td>2023</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>19</td>
<td>Coonagh to Knockalisheen</td>
<td>2023</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>20</td>
<td>Listowel Bypass</td>
<td>2022</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>21</td>
<td>M8/N25 Dunkettle Interchange</td>
<td>2023</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>22</td>
<td>Nangor Road, Clondalkin</td>
<td>2021</td>
<td>€20m-€50m</td>
</tr>
</tbody>
</table>

Source: DPER Investment Projects and Programmes Tracker

*Progress on some of these projects may have been impacted by Covid-19.

Note: More detailed information can be found on the Investment Projects and Programmes Tracker on gov.ie.
Table 5 sets out the 19 major infrastructure projects due to complete construction in 2020, including projects in education, health, housing, flood defences and transport. The largest project completed will be the R407 Sallins Bypass which follows on from the upgrade of the M7. Projects like the N25 New Ross Bypass have already opened in early 2020.

Table 5: Major Public Infrastructure Projects due to complete Construction in 2020*

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Project</th>
<th>Project Cost Range (€m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Carrigaline School Campus</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>2</td>
<td>Technological University Dublin, Grangegorman</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>3</td>
<td>Maynooth Post-Primary Schools</td>
<td>Commercially Sensitive</td>
</tr>
<tr>
<td>4</td>
<td>National Rehabilitation Hospital Redevelopment - Phase 1</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>5</td>
<td>Our Lady of Lourdes Hospital, Drogheda</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>6</td>
<td>Tallaght Renal Dialysis Unit</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>7</td>
<td>Peamount to Saggart Pump Station and Rising Main</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>8</td>
<td>Financial Management Shared Services Project: 85 - 93 Lower Mount Street, Dublin 2</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>9</td>
<td>Bandon Flood Relief Scheme</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>10</td>
<td>Clonakilty Flood Relief Scheme</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>11</td>
<td>Ringaskiddy Redevelopment</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>12</td>
<td>M7 Naas to Newbridge Bypass Widening</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>13</td>
<td>PPP: N25 New Ross Bypass</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>14</td>
<td>R407 Sallins Bypass</td>
<td>€250m-€500m</td>
</tr>
<tr>
<td>15</td>
<td>Bunratty Road (Phase 1c)</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>16</td>
<td>Springvale, Chapelizod</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>17</td>
<td>Bonham Street, Dublin 8</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>18</td>
<td>Cork St / Chamber St, Dublin 8</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>19</td>
<td>St. Teresa's Gardens</td>
<td>€20m-€50m</td>
</tr>
</tbody>
</table>

Source: DPER Investment Projects and Programmes Tracker
*Covid-19 will have impacted the timelines of some of these projects

Note: More detailed information can be found on the Investment Projects and Programmes Tracker on gov.ie.
### Table 6: Major Public Infrastructure Projects under Construction in 2020

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Project</th>
<th>Project Cost Range (€m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Remediation of Haulbowline Island</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>2</td>
<td>Oweninny Wind Farm Project (Phase 1)</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>3</td>
<td>National Broadband Plan</td>
<td>€1 billion+</td>
</tr>
<tr>
<td>4</td>
<td>Maynooth University Technology Society and Innovation Building</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>5</td>
<td>Cork University Hospital Radiation Oncology Unit</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>6</td>
<td>Galway Emergency Department and Ward Block</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>7</td>
<td>National Forensic Mental Hospital on Portrane Campus</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>8</td>
<td>New Children's Hospital</td>
<td>€1 billion+</td>
</tr>
<tr>
<td>9</td>
<td>University College Hospital Galway, Radiation Oncology Unit</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>10</td>
<td>Waterford University Hospital Ward Block</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>11</td>
<td>New Visual Control Tower at Dublin Airport</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>12</td>
<td>Blanchardstown Sewerage Scheme</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>13</td>
<td>Ringsend Wastewater Treatment Plant Project</td>
<td>€500m-€1billion</td>
</tr>
<tr>
<td>14</td>
<td>Skibbereen Regional Water Supply Scheme - Water Treatment Plant &amp; Network</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>15</td>
<td>Upper Liffey Valley Sewerage Scheme Phase 3 Contract 2A</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>16</td>
<td>Vartry Water Supply Scheme</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>17</td>
<td>Letterkenny Regional Water Supply Project including Creeslough Wastewater Treatment Plant</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>18</td>
<td>National Laboratory (Limerick)</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>19</td>
<td>Forensic Science Laboratory</td>
<td>Subject to Appraisal</td>
</tr>
<tr>
<td>21</td>
<td>Eastern Garavogue Bridge and Approach Road (Department of Transport Tourism and Sport element)</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>22</td>
<td>Luas Green Line Capacity Enhancement</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>23</td>
<td>M50 Enhancing Motorway Operation Services (EMOS) - M50 Traffic Flow Optimisation</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>No.</td>
<td>Name of Project</td>
<td>Project Cost Range (€m)</td>
</tr>
<tr>
<td>-----</td>
<td>-----------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>24</td>
<td>N22 Ballyvourney to Macroom</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>25</td>
<td>N4 Collooney to Castlebaldwin</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>26</td>
<td>N5 Westport to Turlough</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>27</td>
<td>N56 Dungloe to Glenties</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>28</td>
<td>N56 Mountcharles to Inver Road</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>29</td>
<td>National Arena Phase 2</td>
<td>€20 - €50 m</td>
</tr>
<tr>
<td>30</td>
<td>National Train Control Centre</td>
<td>€100m-€250m</td>
</tr>
<tr>
<td>31</td>
<td>Shannon Crossing/Killaloe Bypass/R494 Upgrade</td>
<td>€50m-€100m</td>
</tr>
<tr>
<td>32</td>
<td>Cornamona, Ballyfermot</td>
<td>€20m-€50m</td>
</tr>
<tr>
<td>33</td>
<td>Dominick Street (East Side)</td>
<td>€20m-€50m</td>
</tr>
</tbody>
</table>

Source: DPER Investment Projects and Programmes Tracker
Section 4: Costs

4.1 Overview
This section examines the overall trends in residential and non-residential construction costs, tracking developments in recent years. Elevated construction sector inflation is evident from the data. This risks undermining value for money from the existing and planned high levels of public investment, with knock on consequences for the wider economy.

Key findings are as follows:

- The Construction Tender Price Index, which covers non-residential construction, is estimated to increase by 6.6 percent over 2019.
- The Construction Costs Index for residential buildings in Ireland increased by 0.56 percent on an annual basis to Q1 2020.
- Residential construction costs have remained largely in line with the EU average since 2010.
- The Wholesale Price Index for Building and Construction Materials increased by 0.3 percent on an annual basis in May 2020.
- At the same time, within this, a number of materials have seen their price decrease in the year to February 2020, including other structural steel (-7.5 percent) and stone (-6.1 percent).
- Average hourly earnings for all construction sector employees increased by 3.1 percent on an annual basis in Q4 2019 to stand at €21.80.
- Average hourly earnings for architects and engineers in Q3 2019 stood at €26.07. This is largely unchanged on Q3 2018 (€26.03).

4.2 Trends in Non-Residential Construction Costs
The Construction Tender Price Index is based on tender returns for non-residential projects during the period in question. It is based on predominately new build projects with values in excess of €500,000 across all regions. The Index is therefore a measure of average price increases across differing project types and locations.

The Construction Tender Price Index increased by 3.2 percent in the twelve month period to June 2019 and is estimated to increase by 6.6 percent over 2019.

Construction tenders prices in 2019 surpassed the level of their previous peak in the first half of 2007.

Figure 4.1: Construction Tender Price Indices (2015=100)
4.3 Trends in Residential Construction Costs

The Construction Cost Index in Figure 4.2 shows the development of costs incurred by the contractor to carry out the construction process. In other words, the cost of labour, materials and plant overheads.

This measure does not therefore include costs to the client or final owner such as VAT, Site Cost, Professional Fees, or Selling Price.

Construction costs for residential buildings in Ireland increased by 0.56 percent on an annual basis in Q1 2020.

Since the recovery began, costs faced by Irish House builders have grown at a slower rate than the EU average. Construction costs for new residential buildings have seen low rates of inflation since Q4 2011 and Q1 2020, increasing by an average of less than 1 percent over the period and 11 percent overall. This was largely in line with the EU average for the same period.

As shown in Figure 4.4, the Wholesale Price Index for Building and Construction Materials increased by 0.3 percent in the year up to May 2020.

Figure 4.3: Wholesale Price Index for Building and Construction Materials (2016=100)

![Wholesale Price Index for Building and Construction Materials](source)

As shown in Figure 4.4, the Wholesale Price Index for Building and Construction Materials increased by 0.3 percent in the year up to May 2020.

Figure 4.4: Annual Change in Wholesale Price Index (percent) for Building and Construction

![Annual Change in Wholesale Price Index](source)

Table 7 sets out the three highest and lowest ranked materials from within the Wholesale Price Index for Building and Construction. As of December 2019, the building and construction material with the largest increase in its price since 2016 was Bituminous emulsions (20.4 percent), followed by cement (20.3 percent) and Fabricated Metal (19.34 percent). A couple of materials have seen a reduction in their cost since 2016 as detailed in table 4, namely glass (-0.8 percent) and other structural steel (-2.1 percent).

4.4 Trends in Cost of Materials

As seen in the previous two sections, tender prices as well as residential construction costs have increased in the past year. The price of materials is one element of these increases.

The Wholesale Price Index for Building and Construction Materials provides a general indication of price trends in the sector.

Actual transaction prices are collected for materials purchased by construction and civil engineering firms. The price indices reflect an ‘average’ over a mixture of products from many companies throughout the country. They also reflect prices for both long-term and short-term contracts and for high and low volume civil engineering works.
In the year to February 2020, a number of types of materials have actually seen their price decrease, including other structural steel (-7.5 percent) and Stone (-6.1 percent).

Table 7: The Three Highest and Lowest ranked materials from the Wholesale Price Index (Excel VAT) for Building and Construction in February 2020

<table>
<thead>
<tr>
<th>Materials</th>
<th>Index (Base 2015=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand and Gravel</td>
<td>132</td>
</tr>
<tr>
<td>Fabricated Metal</td>
<td>123.4</td>
</tr>
<tr>
<td>Structural Steel</td>
<td>120.6</td>
</tr>
<tr>
<td>Insulating materials</td>
<td>102.8</td>
</tr>
<tr>
<td>Other Structural Steel</td>
<td>97.5</td>
</tr>
<tr>
<td>Glass</td>
<td>95.2</td>
</tr>
</tbody>
</table>

Source: CSO

4.5 Trends in the Cost of Labour

The data used in this section comes from the CSO’s Earnings, Hours and Employment Costs Survey (EHECS) which aims to collect, compile and disseminate series of quarterly and annual earnings and labour costs statistics across economic sectors in Ireland.

As detailed in Figure 4.5, growth in average hourly earnings for all construction employees dropped by 1.8 percent on an annual basis in Q1 2020. On average, over the period 2010 to 2019, average hourly earnings grew by 0.4 percent per year.

Figure 4.6 details the earnings data by subsector. Average hourly earnings for workers in architecture and engineering rose 2.3 percent, specialised activities rose 2.5 percent, civil engineering rose 9.8 percent, and construction of buildings rose 10.5 percent in the year to Q4 2019.

From Q4 2010 up to Q4 2019, earnings in architecture and engineering rose 16 percent, specialised activities rose 7.4 percent, civil engineering rose 6.2 percent, and earnings in the construction of buildings have risen 12.4 percent.

Figure 4.6: Average Hourly Earnings for Construction Subsectors

Source: CSO

Similarly, the number of weekly paid hours has stayed relatively constant since 2008, although with a slight upward trend. As of Q1 2020, the average weekly paid hours for all construction employees stood at 37.6. This represented an increase of 3.5 percent in comparison to the same time in 2019.

Figure 4.7: Average Weekly Paid Hours for All Construction Employees (Seasonally Adjusted)

Source: CSO
Section 5: Employment and Enterprise

5.1 Overview
This section examines trends in construction sector employment and enterprise. The level and composition of construction sector employment is analysed by considering the split by subsector, between Irish and non-Irish workers and male and female employment. The profile of construction sector enterprise is also examined based on the available data.

Key findings are as follows:

- As of 21st July 2020, 27,300 construction sector workers remained on Pandemic Unemployment Payments, down from the 79,300 on 5th May 2020.
- 42 percent of construction sector employers were in the Temporary Wage Subsidy Scheme as of 2nd July. Construction sector employers represented 16 percent of all employers in the TWSS.
- According to the CSO’s Business Impact of Covid-19 Survey 80 percent of construction enterprises were trading in some capacity as of 28th June 2020.
- Growth in employment in the construction sector slowed to 2.8 percent in the year to Q1 2020 to stand at 148,700.
- Construction sector employment represents a 6.3 percent share of total employment in the Irish economy, below the EU average in 2018 of 6.8 percent.
- If the construction sector were to reach 6.8 percent of employment in Ireland in Q1 2020, an additional 12,000 workers would have been required in the sector thereby reaching 160,000 workers.
- In 2017, there were 57,255 construction enterprises.
- New lending to construction sector SMEs has been on a volatile but general upward trend from Q4 2013.

5.2 Covid-19 Impacts
The public health measures introduced on 27th March 2020 to halt the progress of Covid-19 required the imposition of restrictions on many areas of our society and economy, including the construction sector.

The COVID-19 Pandemic Unemployment Payment (PUP) was initially launched on the 13th March 2020. The number of people from the construction sector in receipt of PUP decreased significantly following the reopening of the construction sector on 18th May. However, as shown in Table 8, there was still almost 30,000 construction sector works in receipt of PUP as of 14th July.

Table 8: Pandemic Unemployment Payments

<table>
<thead>
<tr>
<th></th>
<th>5th May</th>
<th>14th July</th>
<th>21st July</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>598,000</td>
<td>345,600</td>
<td>313,800</td>
</tr>
<tr>
<td>Construction</td>
<td>79,300</td>
<td>29,800</td>
<td>27,300</td>
</tr>
<tr>
<td>Share of total</td>
<td>13%</td>
<td>9%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Since the start of Phase 1 on 18th May, 9,300 construction sector workers have closed their claims for the Pandemic Unemployment Payment for reasons of returning to work and whose pay is currently being subsidised under the Government’s Temporary Wage Subsidy Scheme (TWSS) on 14th July.

The TWSS is available to employers who keep employees on payroll throughout the COVID-19 pandemic, meaning employers can retain links with their employees for when business picks up after the crisis.
According to the data published by the Revenue Commissioners, 42 percent of construction sector employers were in the TWSS as of 2nd July. Construction sector employers represented 16 percent of all employers in the TWSS.

According to the CSO’s Business Impact of Covid-19 Survey 80 percent of construction enterprises were trading in some capacity as of 28th June 2020. At the same time industry representatives have confirmed that the vast majority of major construction sites are back open. This could suggest that the 20 percent of construction firms which were not trading as of 28th June are from the disproportionately large cohort of micro construction enterprises in the sector (see Figure 5.15 and Table 11). Almost half (46.7 percent) of responding enterprises in the Construction sector restarted trading in the first four weeks of June. 82.4 percent of firms in the Construction sector reported lower than normal turnover.

5.3 Trends in Employment

Growth in employment in the construction sector slowed to 2.8 percent in the year to Q1 2020 to stand at 148,700.

As a share of total employment, the construction sector has plateaued between 6.2-6.4 percent since Q2 2018. This is below the EU average of 6.8 percent as shown in Figure 5.2. For the construction sector to reach 6.8 percent of employment in Ireland in Q4 2019 would have required an additional 12,000 workers shifting to the sector to bring it to over 160,000 workers.

Combined with other factors such as low unemployment over that period and high housing costs facing foreign workers entering the market, this suggests that the ability to increase employment in the sector was constrained.

Of the four sub-categories of construction detailed in Figure 5.3, there has been a general upward trend since 2012. In 2017 there was a significant divergence between the numbers employed in “Building” and those employed in “Specialised Activities”. The cause of this divergence is unclear.

Between Q1 2019 and Q1 2020, employment in specialised construction activities fell by 0.4 percent to 74,900. Construction of buildings employment fell to 39,700 in Q1 2020, a 26.75 percent drop from Q1 2019, but still above the decade low of 37,100 of Q3 2017. The annual change to Q1 2020 for civil engineering was an increase of 16.69 percent to 17,700, while architectural and engineering activities decreased by 1.73 percent to 39,700.
Table 9 shows that while construction sector employment in 2019 exceeded the level of employment in the year 2000, the number of new dwellings completed in 2019 is estimated to be approximately 60 percent, or over 30,000 units, lower than in the year 2000. This suggests that there is easily enough construction labour in Ireland to meet the housing demand.

Table 9: Comparison of New Dwelling Completions and Construction Sector Employment in the years 2000 and 2019

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Sector Employment</td>
<td>138,625</td>
<td>146,850</td>
</tr>
<tr>
<td>Total New Dwelling Completions</td>
<td>49,412</td>
<td>21,214</td>
</tr>
</tbody>
</table>

Source: CS

In Q1 2020 construction sector unemployment stood at 8,700. This was an increase on Q4 2019 when there were 4,900 unemployed persons who had previously worked in construction, representing only 4.4 percent of total unemployed persons. This is down from a high of 81,900 in Q4 2009.

Figure 5.4: Construction Sector Employment and Unemployment

Source: CSO

In Q1 2020 there were 25,600 Non-Irish people employed in the construction sector, representing a significant annual increase of 50 percent. Non-Irish construction sector employees made up 17 percent of employment in the sector in Q1 2020, bringing the sector in line with the 17 percent Non-Irish workers in the total labour market. In the period leading up to the downturn there were approximately 40,000 Non-Irish construction sector workers representing 20 percent of employment in the sector.

Figure 5.5: Share of Construction Sector Employment by Nationality

Source: CSO

Figure 5.6 shows the increasing tightness in the labour market since 2010 as indicated by the general upward path of the job vacancy rates for the construction sector as well as for the overall labour market.

The vacancy rate is calculated as the number of job vacancies divided by total sector employment plus total vacancies.

While the vacancies rate in construction is below the rate for all NACE sectors, it is still relatively high compared to Q1 2010, albeit declining since Q2 2018.

Figure 5.6: Job Vacancy Rates

Source: Department of Finance

The Beveridge Curve maps the unemployment rate against the vacancy rate and is shown in Figure 5.6. As a rough guide to the curve, the bottom left quadrant represents an efficient labour market where unemployment is low and vacancies are being filled quickly. Pre-Q4 2008 represents this well, as well as Q3 2016. Points in the bottom right quadrant indicate recession – the unemployment rate is high and job vacancies are low.
The top left quadrant with low unemployment and high vacancies, usually indicates a labour shortage rather than a skills shortage. There simply is not enough labour to meet demand. In Q2 2018, vacancy rates were at their highest and unemployment rates at their lowest since 2008. In Q1 2020 vacancy rates have started to drop and unemployment has started to rise.

As can be seen in Figure 5.8, Civil Engineers were issued the highest number of permits with a 34 percent share of the total. Second were Carpenters and Joiners at 26 percent and third were Quantity Surveyors at 7.5 percent.

As shown in Figure 5.9, construction (30 percent) has a relatively high level of self-employment compared to the rest of the economy (12 percent).

As shown in table 10, the age profile of those employed in the construction sector increased between the 2006 census and the 2016 census. In 2006, 47 percent of construction sector employees were over the age of 35, increasing to 70 percent by 2016.

If current trends continue, with the average construction sector worker getting older, the construction sector in Ireland is likely to get significantly tighter in the medium to long term as greater proportions retire. Large increases in productivity along with increases in the numbers entering construction employment either from the education system, immigration, or some combination, will be required for Ireland to keep its desired level of capital investment.
Table 10: Age Profile of those Employed in the Construction Sector

<table>
<thead>
<tr>
<th>Type</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 24 years</td>
<td>21%</td>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>25 - 44 years</td>
<td>54%</td>
<td>58%</td>
<td>56%</td>
</tr>
<tr>
<td>45 years and over</td>
<td>25%</td>
<td>35%</td>
<td>38%</td>
</tr>
</tbody>
</table>

Source: CSO Census

Female employment in the construction sector stood at 12,200 as of Q1 2020. This represents a share of 8.2 percent of total employment in the construction sector. While this represents a relatively low share of female participation compared to the wider economy (46 percent), female participation has generally been trending upwards in the construction sector since 2000 when it stood at the relatively low level of 3 percent.

It should be noted that as total employment in the construction sector has begun to increase since 2012, the share of construction employment accounted for by females has fallen up until Q4 2018, when the share was 5.3 percent. So while the initial increase in employment in the construction sector was driven by males, the rate of female entrance into the sector has since overtaken that of males. In fact, in Q4 2019, the number of males employed in the sector actually fell, while the number of females continued to rise.

In 2017, there were 57,255 active construction enterprises. This is above the 52,607 enterprises active in 2010. According to the CSO, an enterprise is considered to be active in a certain period if it generates turnover, employs staff, or makes investments in that period.

In 2017, over 95 percent of construction enterprises were classified as having 0-9 persons engaged, with less than 5 percent of enterprises having 10-49 persons engaged and less than 1 percent of enterprises having more than 50 persons engaged. These shares of enterprise size by persons engaged have remained relatively constant since 2009. More productive sectors of the economy, such as ICT and Manufacturing, have 4 and 11 percentage points lower shares respectively, compared to the construction sector.

After falling from 12.8 per 100,000 workers in 2013 to 3.4 in 2018, fatalities have increased up to 8.1 per 100,000 in 2019. There were 12 fatalities in the construction sector in 2019, representing 26 percent of the total workplace fatalities for the year. Only Agriculture had a higher number with 21 fatalities.
Gross value added per enterprise has increased substantially since 2010, increasing 5 fold to 2017.

Figure 5.15: Average Gross Value Added per Construction Enterprise

In relation to the Real Estate Sector, the four-quarter rolling average stood at €264 million as of Q1 2020, down from a high of €473 million in Q4 2019. The statistical classification of real estate activities by Eurostat includes the buying, selling and renting of real estate, as well as the maintaining and operating of real estate.

By way of comparison, new lending to SMEs in the manufacturing sector stood at €87 million in Q1 2020.

As detailed in Table 11, in 2017, there were 17 companies with more than 250 persons engaged and on average these companies engaged 525 persons.

Table 10 also details the average gross value added per person engaged for each category of enterprise.

Gross value added can be defined as company profits plus compensation of employees.

Of particular note is the fact that the average gross value added per person engaged in the large construction enterprises is €91,000. This is down on 2016. While significantly more than the smaller firms, which suggests that the larger firms have a higher level of productivity, the gap has been closing.

As shown in Figure 5.14, the average gross value added per construction enterprise has been on an upward trend since 2010, with the exception of a minor decrease in 2015.
## Table 11: Construction Enterprises by Persons Engaged and Statistical Indicator in 2017

<table>
<thead>
<tr>
<th></th>
<th>Micro (0 – 9)</th>
<th>Small (10-49)</th>
<th>Medium (50 – 249)</th>
<th>Large (250+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Enterprises (Number)</td>
<td>55,387</td>
<td>1,696</td>
<td>155</td>
<td>17</td>
</tr>
<tr>
<td>Persons Engaged - Total (Number)</td>
<td>83,180</td>
<td>31,301</td>
<td>13,822</td>
<td>8,936</td>
</tr>
<tr>
<td>Average number of persons engaged per enterprise</td>
<td>1.5</td>
<td>18</td>
<td>89</td>
<td>525</td>
</tr>
<tr>
<td>Average Turnover (Euro Thousand) per enterprise</td>
<td>262</td>
<td>3,203</td>
<td>16,272</td>
<td>139,781</td>
</tr>
<tr>
<td>Average Gross value added (Euro Thousand) per enterprise</td>
<td>98</td>
<td>1,271</td>
<td>5,802</td>
<td>47,805</td>
</tr>
<tr>
<td>Average Gross value added (Euro Thousand) per persons engaged</td>
<td>65</td>
<td>69</td>
<td>65</td>
<td>91</td>
</tr>
</tbody>
</table>

Source: CSO Enterprise Statistics on Construction
Section 6:
Skills and Knowledge

6.1 Overview
This section gives a brief analysis of trends in skills and training for the construction sector with a particular focus on participation in apprenticeships and higher level education in engineering, manufacturing and construction.

Key findings:
- There was a total of 3,499 new construction apprentice registrations in 2019. This represented an increase of 3 percent on 2018 and was the highest level of new construction apprentice registration in ten years.
- In 2019, apprenticeships in construction plant fitting and electrical were at 81 percent and 85 percent of the peak levels witnessed in 2006.
- However, in 2019, new apprentice registrations in bricklaying and plastering were 90 percent lower than their peak in 2004.
- There were 5,525 undergraduate new entrants in engineering, manufacturing and construction in 2018/19, representing an annual increase of 16 percent.
- In 2019, architecture and construction saw an 8 percent increase in second level students choosing degree courses in these areas as their first preference with the Central Applications Office.
- There were 885 building and civil engineering new entrants in 2018/19 representing an annual increase of 2.5 percent. The number of new entrants in building and civil engineering in 2018/19 was 42 percent below the 2009 level.

6.2 Trends in Skills
As investment continues to increase in the construction sector over the coming years, it is crucial that the sector has the necessary pipeline of skills in order to produce the high quality output which is required.

The necessary skills in the sector are generally produced through the apprenticeship system for the construction trades and through higher education for the construction professions.

In 2019, there was a total of 3,499 new construction apprentice registrations. This represented an increase of 3 percent on 2018 and was the highest level of new construction apprentice registrations since 2007.

Figure 6.1: Number of New Construction Apprentice Registrations

The recovery in the level of new apprenticeship registrations since the low of 2010 has varied significantly across the different trades.

In 2019, apprenticeships in construction plant fitting and electrical were at 81 percent and 85 percent respectively of the levels witnessed in 2007.
However, the muted recovery has continued in new apprentice registrations in the wet-trades – particularly bricklaying and plastering as shown in Figure 6.2. In 2019, new apprentice registrations in bricklaying and plastering were 90 percent of their peak in 2004.

There were 5,525 undergraduate new entrants in engineering, manufacturing and construction in 2018/19, representing 10.7 percent of all undergraduate new entrants in 2018/19. The total increase was 16.4 percent for the year.

In 2019, architecture and construction saw an 8 percent increase in second level students choosing degree courses in these areas as their first preference with the Central Applications Office.
Section 7: Productivity

7.1 Overview
This section analyses trends in productivity in the construction sector since 2010 in comparison to other sectors of the Irish economy, as well as in comparison to other European countries. The contribution of labour inputs, capital inputs and multifactor productivity to changes in gross value added will also be examined. The latest official data relates to 2017.

Key findings are as follows:
- Productivity in the construction sector has been increasing since 2015; however, according to the latest data for 2017, productivity still remains below 2010 levels.
- In 2017, there was an increase of 5.45 percent in labour productivity in the construction sector.
- The gross value added (GVA) per hours worked by persons engaged in the Irish construction sector was €25.2, or 25 percent below the construction sector average in the Euro Area.
- Had the Irish construction industry been as productive in 2017 as the average European construction sector, gross value added in terms of profits and wages would be some €1.7 billion higher.
- Expenditure on construction sector R&D in 2017 increased to €3.2 million, an increase of around 33 percent since 2011.
- R&D spending by the Irish construction sector is low by international standards, with investment in R&D in 2017 at €0.70 per capita, compared to €2.40 in the UK and €5 in the Netherlands.

7.2 Trends in Productivity
Covid-19 is likely to impact on the productivity of the construction projects and the construction sector more generally due to the requirement to follow the health guidelines relating to social distancing etc. It is too early at this point to tell what the full impact of Covid-19 on the productivity on sites will be. It will also take some time before it is reflected in the official data on productivity in Ireland which has a two year lag. Nonetheless, it is important that we continue to monitor productivity in the sector as regularly as the data will allow.

Increasing productivity is a win-win for industry, Government and workers as it provides the opportunity for simultaneous delivery of higher value to purchasers with the same or fewer inputs, which can lead to higher-quality structures at lower cost for owners, higher profitability for contractors, and higher wages for workers.

Build 2019 detailed the challenge posed by the Irish construction sector’s poor productivity performance – in both an international and domestic context.

This issue became ever more important in 2019 and 2020 as growth in construction sector employment slowed (Section 4) and the skills pipeline remained thin (Section 5).

The construction sector must address this shortfall or the consequences for the industry and the wider economy will be severe.

As is the case in other sectors of the economy, construction firms must redouble their efforts to embrace innovation, such as the adoption of digital technology, offsite manufacturing and next generation building techniques.
Figure 7.1 shows that productivity growth in the Irish construction sector has been quite volatile between the years 2010 and 2017. Growth in productivity over the 2011 to 2013 period was eroded in 2014 and 2015 but has since rebounded with a 5.5 percent annual growth to 2017. However, productivity levels remain below the level reached in 2010. Over the same period, productivity in the domestic dominated sectors of the Irish economy grew by approximately 20 percent while the productivity of the foreign dominated sectors of the economy grew by over 87 percent.

**Box 4: Measuring Construction Sector Productivity**

**Gross Value Added (GVA)**

GVA is defined as the value of output less the value of intermediate consumption. Intermediate consumption is a national accounts concept which measures the value of the goods and services consumed as inputs by a process of production. It excludes fixed assets whose consumption is recorded as consumption of fixed capital. GVA can also be defined as company profits plus compensation of employees.

**Labour Productivity**

Labour productivity measures output in the economy relative to hours worked. It is calculated as Gross Value Added divided by hours worked.

**Why Labour Productivity in Construction Matters**

An increase means that higher value can be provided to customers with the same or fewer inputs, which can lead to higher-quality structures at lower cost for owners, higher profitability for contractors, and higher wages for workers. Any one or two of these objectives can also be achieved without productivity growth — for instance, squeezing wages or margins to lower costs or raising prices for owners to be able to meet wage requirements — but the combination of all three requires productivity growth. High labour productivity often also goes hand in hand with shorter and more reliable construction schedules.


As Figure 7.2 shows, changes in labour productivity in Ireland’s construction sector have been driven by fluctuations in both gross value added and hours worked.

As explained by Department of Finance research, the halving of hours worked in the construction sector in 2009 were in low productivity roles, while GVA saw a smaller decline relative to hours worked, leading to a spike in labour productivity.

In 2017, GVA by the construction sector in Ireland increased by 15 percent while hours worked increased by 7 percent, resulting in labour productivity growth of nearly 5 percent. All three of these figures have held relatively constant since 2016.

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1 Papa, Rehill and O’Connor 2018
Figure 7.3 decomposes output growth in the construction sector over the period 2010 to 2017 into labour and capital inputs and to multifactor productivity.

Growth in the GVA of the construction sector averaged 1 percent per annum over the 2010-2017 period. Most of this output growth is accounted for by increases in capital inputs. Labour input growth contributed negatively over the period on average.

**Figure 7.4: Decomposing the Euro Area – Ireland’s productivity gap into sectoral contributions (2017)**

Eurostat data shows that the Irish economy considerably outperforms the euro area average in terms of value added per hour worked – the key measure of productivity. However, the construction industry acts as a drag on average productivity and performs worse than the euro area average.

Figure 7.4 shows that Ireland’s overall labour productivity is 47 percent higher than the euro area average. This gap is largely explained by higher than average productivity in the Manufacturing, ICT, Professional, Financial and real estate sectors. However, a negative productivity gap exists between Ireland and the euro area average in a number of sectors, the largest of which is in the construction sector which reduces Ireland’s overall productivity by 5 percent compared to the euro area average.

Had the Irish construction industry been as productive in 2017 as the average European construction sector, gross value added in terms of profits and wages would be some €1.7 billion higher.

**Figure 7.5: International Comparison of GVA per hour worked by persons engaged in Construction (2017)**

GVA per paid hour worked for the four subsectors is displayed in Figure 7.6. The general upward trend across sub-sectors since 2010 is
particularly pronounced in the “Building” subsector. From 2016 to 2017, GVA per paid hour grew 44 percent in the construction of buildings, grew 34 percent in specialised activities (which includes demolition, site preparation), grew 3.6 percent in civil engineering, and fell 1.7 percent in architecture and engineering.

For every person living in the Republic of Ireland, the construction sector spent €0.70 on research and development in 2017. At the other end of the spectrum Finland invests €21 per capita. The Netherlands invests €5 per capita while the U.K. invests €2.40.

Figures 7.7 and 7.8 look at Irish construction sector research and development spending over time and compared internationally. After a large decrease of nearly €1.5 million from 2013 to 2015, expenditure on construction sector R&D has recovered in 2017 to €3.2 million, an increase of around 33 percent on 2011.
Section 8: Conclusions and Next Steps

8.1 Overview
Public investment in construction in Ireland in 2020 will remain among the highest in the EU in spite of Covid-19. This investment is required for the development of new social, economic and climate infrastructure. Grasping these opportunities requires overcoming the significant challenges posed by Covid-19 as well as increasing innovation in the construction sector. Both Government and industry are undertaking a wide range of measures to address these risks.

8.2 Summary
The information detailed in this report plays a critical role in informing the work of the Construction Sector Group (CSG) and the Project Ireland 2040 Delivery Board.

In order to deliver on Project Ireland 2040, Ireland needs a competitive, dynamic, and sustainable construction sector that delivers high quality physical infrastructure for all our citizens.

In the short term, the focus has been on managing the risks posed by Covid-19 to society, workers, projects and the industry itself.

In the medium term, the capacity of the sector will likely remain an important consideration and can be increased through productivity growth and the development of the skills pipeline.

On a positive note, this report also details a number of encouraging trends in the sector in the last year, such as the increasing spread of regional investment e.g. the Southern Region having the highest number of planning permissions granted for civil engineering projects. The share of planning permissions granted for apartments has also increased and this is positive in light of the need to increase development densities in order to achieve the targets set out in Project Ireland 2040.

Total investment in the sector in Ireland was 12.3 percent as a share of national income in 2018. This is well above the recent EU28 average of 10.3 percent, but below Ireland’s peak in 2006 of 24 percent.

Housing output by the sector continued to increase with 21,000 dwellings built in 2019. However, this was largely concentrated in the Eastern and Midland Region and was well below the estimated demand.

However at the same time, the pipeline of housing continues to strengthen with 40,252 new houses and apartments granted planning permission in 2019, an increase of 38 percent on 2018.

In 2019, there were 9 major infrastructure projects completed as detailed in Section 2 (e.g. the Gorey Enniscorthy Motorway). A further 19 major projects were due to be completed in 2020 before the onset of Covid-19. This will still be delivered but timelines may need to be extended in some cases.

Section 3 of this report, noted that the construction tender price index, which covers non-residential construction, was estimated to have increased by 5.7 percent over the course of 2019. The Wholesale Price Index for Building and Construction Materials increased by 2 percent on an annual basis to December 2019. At the same time, average hourly earnings for all construction employees also increased by 3.2 percent on an annual basis in Q3 2019 to stand at €21.83.

As flagged in last year’s report, labour supply has remained subdued. Employment growth in the construction sector decreased to 2.8 percent in the year to Q1 2020 to stand at 148,700. Employment of non-Irish workers in the construction sector had increased to 25,600 in Q1 2020, although this source of labour may be impacted by Covid-19.

Skills supply is likely to continue to be a constraint in the medium term, with a report by the Expert Group on Future Skills Needs due shortly. The number of new construction apprentice registrations increased by 1.5 percent in 2019 to reach 3,499, well below the average of 6,000 for the period 2000-2006. Meanwhile, at third level, the number of new entrants in building and civil
engineering in 2018/2019 was 792.

Finally, while productivity in the Irish construction sector has been increasing since 2015, it has remained below the level seen in 2010. The level of labour productivity in the Irish construction sector was 25 percent below the Euro Area average for construction sectors in 2017.

### 8.3 Policy Responses

As detailed in the “Construction and Covid-19” Box at the start of this report, a range of measures have been undertaken by Government to ensure the sustainability of the sector and provide confidence for the industry.

Through the work of the CSG it will be important to continue to closely monitor the impacts of Covid-19 on the sector in order to inform appropriate responses to be adopted as necessary.

Policy for infrastructure and construction must also look beyond Covid-19 in the context of Ireland’s long-term plan, Project Ireland 2040.

The following four elements will continue to underpin the approach adopted going forward:

1) **Increased Public Investment**

Additional capital expenditure has been provided in direct response to Covid-19 and through the recent July Stimulus. Public capital expenditure is planned to increase by 12 percent in 2021. This is a clear signal that, unlike in previous crises, the capital allocations will in broad terms be preserved and maintained to support counter-cyclical fiscal policy; leading in turn to greater confidence among construction sector and wider stakeholders.

This response from Government reflects the thinking underpinning the rationale for a long-term capital infrastructure plan, in the form of Project Ireland 2040, which provides clarity and confidence to the industry which allows the sector to scale up its capacity. A number of structures have been put in place and developed to oversee implementation of, and deal with a range of risks faced by Project Ireland 2040, including risks from the construction sector. These structures include:

- The Project Ireland 2040 Delivery Board
- The Investment Projects and Programmes Office (IPPO) in DPER
- The Land Development Agency;
- Long-term National and Regional Spatial Plans;
- An Office of the Planning Regulator;
- A new and improved Project Ireland 2040 Investment Tracker
- The Construction Sector Group (CSG)

As well as committing to bringing forward the review of the National Development Plan from 2022, the Programme for Government makes a range of commitments directly related to public investment, notably in the areas of climate action and biodiversity; town-centric planning and compact growth; reorientation of transport investment in support of sustainable modal shift; retrofitting; and advancement of Project Ireland 2040 goals in relation to balanced regional development.

2) **Communicating for industry confidence**

The Construction Sector Group is the forum through which Government Departments and industry representatives engage on a regular basis. Since the onset of Covid-19 the CSG has met on 22nd May, 19th June, with a further meeting scheduled for 3rd September. All meeting agendas and minutes are published on gov.ie. This will continue to be an important channel for communication.

More generally in terms of communication, the Project Ireland 2040 Investment Tracker provides those involved in the delivery of infrastructure with a clear signal on what construction is in the pipeline. This can imbue the industry with the confidence to plan, invest and hire to expand capacity.

The Tracker was further developed over the course of 2019 to include greater details and a wider range of projects. The latest version of the tracker was published in January 2020, with a revised edition due in Q4 2020.

3) **Securing the skills pipeline**

In late 2019, the Expert Group on Future Skills Needs commenced a detailed skills foresight exercise with input from CSG members entitled ‘The Future Skills Needs of the Built Environment Sector to 2030’. The study is aiming to determine the nature and scale of skills needs within Ireland’s construction and broader built environment sector over the next decade.

This work, the research for which was largely undertaken prior to the Covid-19 related lockdown of the economy in late March 2020, is currently being finalised and is due to be published by the EGFSN in September 2020.

On the forecasts within the study, the impact of Covid should be covered- as the draft report states: "Notwithstanding that this analysis was undertaken before the COVID-19 pandemic, the disruptions from the likely recession that is predicted for mid-2020 are not dissimilar to the disruption from the global financial crisis, which is captured in the historical data used for the model.”

4) **Driving productivity improvement**

In close consultation with the CSG, a wide-ranging analysis of productivity in the sector was undertaken over the course of 2019 in order to
identify new industry approaches for improvement. This work informed the Building Innovation in 2020 Report which is was published in June 2020 and is currently available on gov.ie.

8.4 Building Innovation

In 2019, the Department of Business, Enterprise and Innovation launched the Government’s Future Jobs Ireland Strategy which is based on embracing innovation and technological change, improving productivity, enhancing skills and transitioning to a low carbon economy.

The Building Innovation in 2020 Report, published in June 2020, is strongly aligned with the Future Jobs Ireland Strategy and through this coordinated approach, the construction industry stands to make significant gains in productivity through synergies being developed in the wider Irish innovation ecosystem.

Three important themes have emerged, which, if addressed, can help improve profits, wages and output for the industry, and thereby provide value for money in the delivery of Project Ireland 2040.

These include:

1. The need for the industry, particularly SMEs and small firms, to increase investment in innovation and technology in order to spur the next wave of growth based on a foundation of digital adoption, by both clients and contractors;

2. The need for ongoing regulatory reform of public procurement, environmental, labour and other areas in order to streamline and assist in achieving competitiveness and sustainability; and

3. The need to increase certainty and visibility of the pipeline of project opportunities in order to provide the industry with the confidence to invest.

Further details on the actions to be taken are contained within the Building Innovation in 2020 report and these will form the basis of the work programme for the CSG in 2020 and beyond. The CSG meets every quarter, providing an opportunity to monitor the implementation of these actions and progress a range of issues to the benefit of the sector and the delivery of Project Ireland 2040.