

Statistical bulletin

Output in the Construction Industry: May 2015

A short-term measure of output by the private sector and public corporations in the construction industry in Great Britain.

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14 August 2015

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1 . Main points

- The May 2015 statistical bulletin provides users with the latest estimates of output in the construction industry. Output is defined as the amount charged by construction companies to customers for value of work (produced during the reporting period) excluding VAT and payments to sub-contractors
- In May 2015, output in the construction industry was estimated to have decreased by 1.3% compared with April 2015. Both all new work, and repair and maintenance contributed to the fall
- All new work decreased by 1.5%, with all types of new work except infrastructure reporting decreases; total housing reported the largest fall of 5.8%, with smaller falls from private industrial, public other and private commercial of 3.3%, 1.4% and 0.3% respectively
- Repair and maintenance (R&M) decreased by 1.0%. Falls in non-housing R&M (-1.9%) and private housing R&M (-0.8%) were offset slightly by public housing R&M, which increased by 1.8%
- Compared with May 2014, output in the construction industry showed an increase of 1.3%. All new work increased by 3.2% while repair and maintenance decreased by 1.7%
- Comparing the 3 months, March 2015 to May 2015, with the previous 3 months, December 2014 to February 2015, construction output fell by 0.4%. All new work decreased by 1.7% and repair and maintenance increased by 1.8%
- When comparing the 3 months, March 2015 to May 2015 with the same 3 months a year ago, construction output was estimated to have increased by 2.7%. All new work increased by 4.2% and repair and maintenance by 0.3%
- The only period open for revision is April 2015 which has been revised upwards 0.3% from a fall of 0.8% to a fall of 0.5%. This was caused by the incorporation of late data. More information on revisions can be found in the background notes

2 . About this release

On 11 December 2014 the UK Statistics Authority announced its decision to suspend the designation of [Construction Price and Cost Indices](#) due to concerns about the quality of these deflators. As a result the UK Statistics Authority announced its decision to suspend the designation of Output and New Orders as National Statistics in respect of the Code of Practice for Official Statistics.

The Office for National Statistics (ONS) took responsibility for the publication and development of the Construction Price and Cost Indices from the Department for Business Innovation & Skills (BIS) on 1 April 2015. Since this point, we have worked towards creating an [interim solution](#) to measure output prices and replace the statistical models that had been used in the production of chained volume measures (CVMs) for output in the construction industry since quarter 3 (July to Sept) 2014 and to provide an ongoing source of data from quarter 1 (Jan to Mar) 2015 onwards. We have also launched a [consultation](#) to gather feedback from users to help us improve this methodology and understand more about how the CPCIs are used.

Construction output estimates are a short-term indicator of construction output by the private sector and public corporations within Great Britain and are produced from a monthly survey of 8,000 businesses in Great Britain. The estimates are produced and published at current prices (including inflationary price effects) and at chained volume estimates (with inflationary effects removed) both seasonally adjusted and non-seasonally adjusted.

Chained volume measures are also described as volume. Construction output is used in the compilation of the output approach to measuring [gross domestic product \(GDP\)](#).

Detailed estimates along with a longer run of time series data are available to download in the Output in the Construction Industry, May 2015 reference tables. In these tables, users will find chained volume estimates back to quarter 1 (Jan to Mar) 1997, and monthly estimates back to January 2010. Current price non-seasonally adjusted data are available back to quarter 1 (Jan to Mar) 1955. More information on these statistics can be found in the "[Definitions and explanations \(39 Kb Word document\)](#)" article.

The data published in this release cover construction estimates for Great Britain. Construction output estimates for Northern Ireland can be obtained from the Central Survey Unit.

3 . Output in the Construction Industry – May 2015

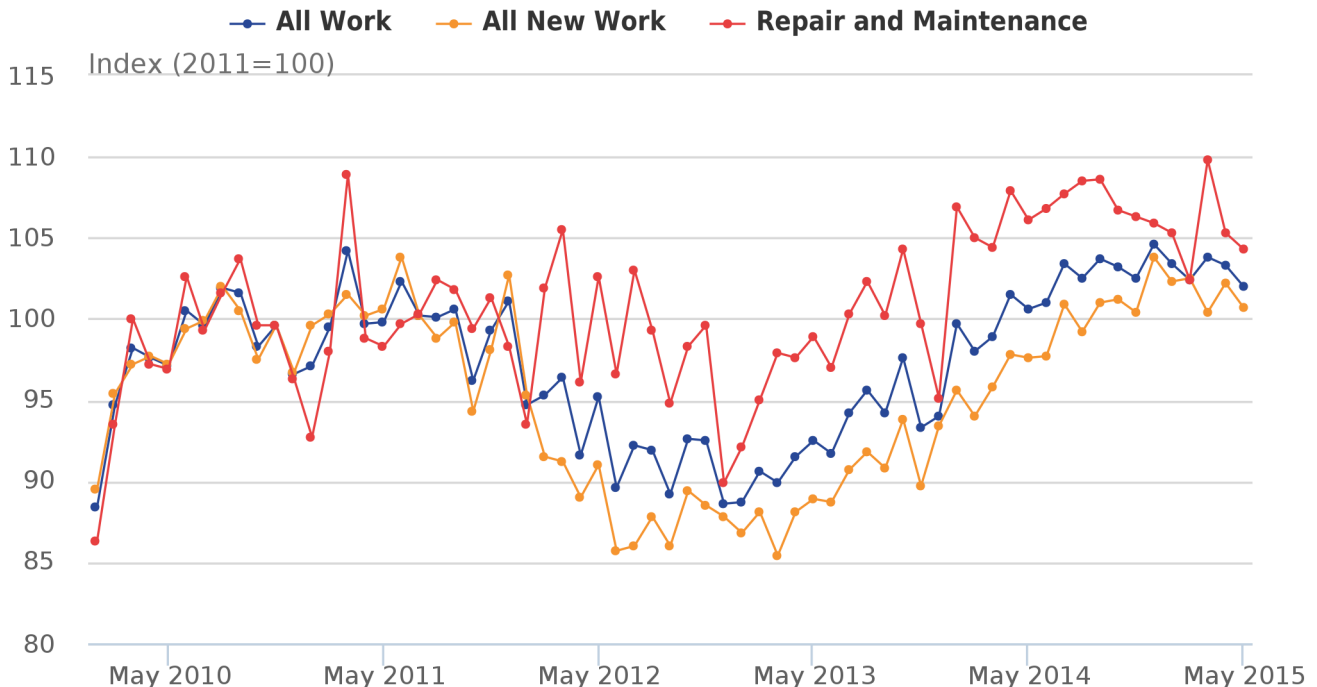
All work

In May 2015 all work:

- decreased by 1.3% compared with April 2015
- increased by 1.3% compared with May 2014
- in the 3 months (March 2015, April 2015, May 2015) compared with the previous 3 months (December 2014, January 2015, February 2015) construction output fell by 0.4%

Figure 1: All Work – monthly time series chained volume measures, seasonally adjusted (SA) Index (2011 = 100)

Great Britain, January 2010 to May 2015



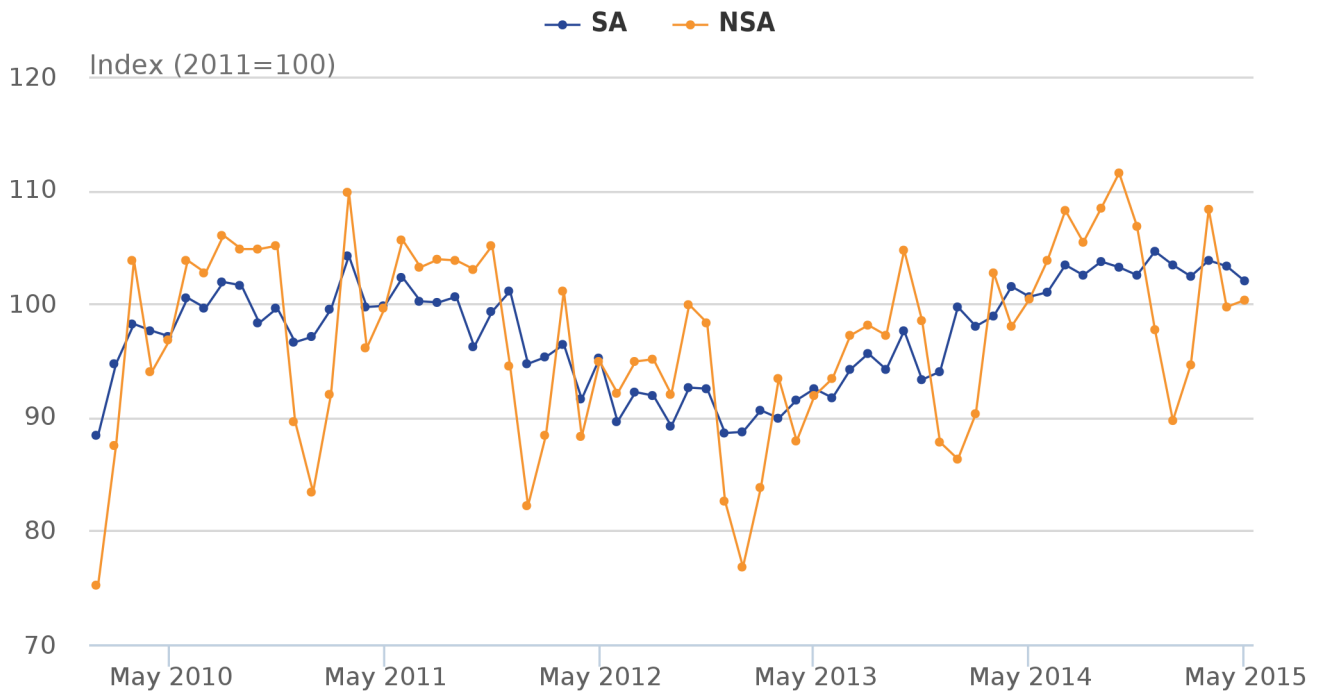
Source: Construction: Output & Employment - Office for National Statistics

Figure 1 shows the 2 main components of all work. The chart shows that the monthly path for construction output is a volatile one. After sustained growth since early 2013, there have been falls in both all new work, and repair and maintenance in recent periods. Both all new work, and repair and maintenance contributed to the fall in all work in May 2015.

Before we discuss each component, it is worth noting the change in the non-seasonally adjusted series.

Figure 2: All work-monthly time series chained volume measures, seasonally adjusted (SA) and non-seasonally adjusted (NSA) Index (2011=100)

Great Britain, January 2010 to May 2015



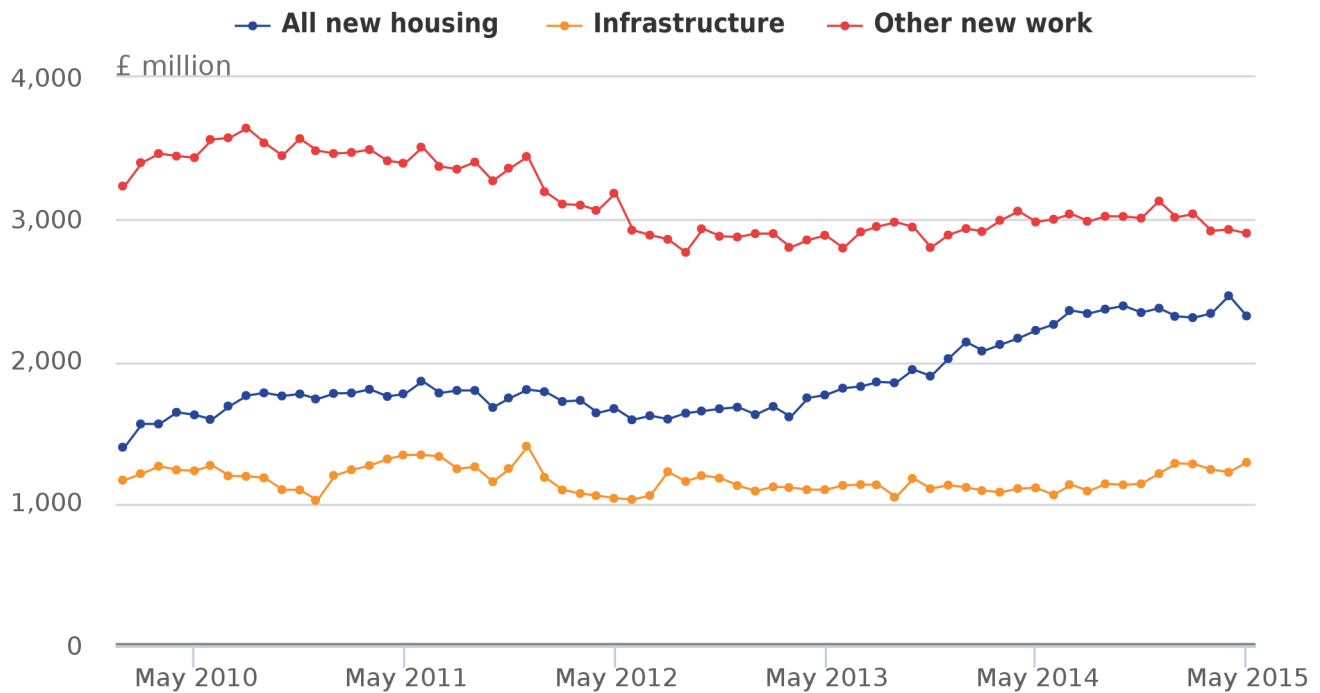
Source: Construction: Output & Employment - Office for National Statistics

Figure 2 shows the non-seasonally adjusted volume of all work in May 2015 did increase, but the increase of 0.6% in May 2015 compared with April 2014 was not as high as seen in previous April to May comparisons. As such, seasonal adjustment has resulted in this small increase in non-seasonally adjusted terms to become a contraction.

Figure 3 shows the components that make up all new work. The chart shows that there were falls in new housing and other new work in May 2015, while infrastructure has increased. While new housing has fallen this month the underlying pattern since early 2013 continued to show growth. Infrastructure has continued at a fairly constant level while other new work is showing a slight decline.

Figure 3: Components of all new work, monthly time series, seasonally adjusted chained volume measure £ million

Great Britain, January 2010 to May 2015

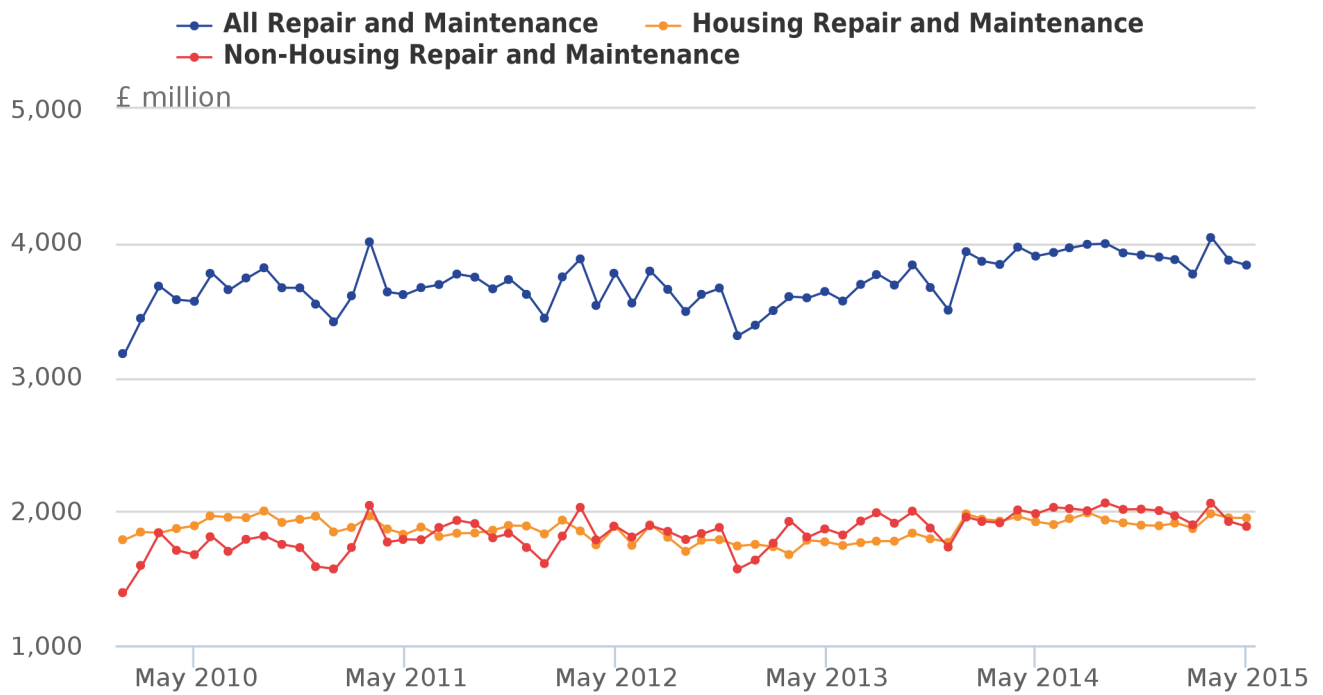


Source: Construction: Output & Employment - Office for National Statistics

Figure 4 looks at the 2 components of repair and maintenance. In May 2015, non-housing repair and maintenance caused the fall in all repair and maintenance while there was no change in housing repair and maintenance. The underlying level of both non-housing and housing repair and maintenance is similar, however, non-housing is the more volatile component.

Figure 4: Components of repair and maintenance, monthly time series, seasonally adjusted (SA) chained volume measures £ million

Great Britain, January 2010 to May 2015



Source: Construction: Output & Employment - Office for National Statistics

Table 1: Component comparison to previous levels, chained volume measure, seasonally adjusted

Great Britain

	Current volume £ million	Lowest volume £ million	Date	Highest volume £ million	Date	Percentage change from lowest volume (%)	Percentage change from highest volume (%)
New Housing							
Public	430	313	Jan 13	510	Dec 14	37.4	-15.7
Private	1,890	1,081	Jan 10	2,002	Apr 15	74.8	-5.6
Total	2,320	1,395	Jan 10	2,462	Apr 15	66.3	-5.8
Other New Work							
Infrastructure	1,288	1,021	Dec 10	1,402	Dec 11	26.2	-8.1
Excluding Infrastructure							
Public	743	743	May 15	1,248	Nov 10	0.0	-40.5
Private Industrial	316	238	Sep 13	373	Aug 10	32.8	-15.3
Private Commercial	1,844	1,625	Sep 12	2,104	Dec 11	13.5	-12.4
All New Work	6,510	5,524	Mar 13	6,712	Dec 14	17.8	-3.0

Notes:

1. Monthly time series for these components begins in January 2010

Summary of growth rates for all work types

Table 2 provides a summary of growth rates across the different types of construction work in May 2015. Some main points from this table are as follows:

- all work types except infrastructure and public new housing saw a decrease in the month-on-month growth rate; the main contribution to the fall was private new housing
- the month-on-month fall in all new work was due to a decrease in both total housing and other new work
- year-on-year there was a mixed picture with most work types reporting decreases, however, the larger weights in private new housing, infrastructure and private housing repair and maintenance resulted in a rise in all work

Table 2: Construction output summary tables, chained volume measures, seasonally adjusted, May 2015

Great Britain

	Percentage change (%)				
	Most recent 3 months on a year earlier	Most recent 3 months on 3 months earlier	Most recent month on the same month a year ago	Most recent month on the previous month	Most recent level
Construction					
Total All Work	2.7	-0.4	1.3-1.3		10,345
Total All New Work	4.2	-1.7	3.2-1.5		6,510
Total Repair & Maintenance	0.3	1.8	-1.7-1.0		3,835
All New Work					
Total All New Work	4.2	-1.7	3.2-1.5		6,510
New Housing					
Public Corporations	-5.1	-7.6	-10.7-6.4		430
Private Sector	13.5	4.1	8.9-5.6		1,890
Other New Work					
Infrastructure	13.8	-0.6	16.2-5.7		1,288
Excl Infrastructure					
Public Corporations	-2.3	-3.4	-0.6-1.4		743
Private Sector					
Private Sector - Industrial	1.4	-2.4	-3.1-3.3		316
Private Sector - Commercial	-4.3	-5.6	-3.4-0.3		1,844
Repair & Maintenance					
Total Repair & Maintenance	0.3	1.8	-1.7-1		3,835
Housing					
Public Corporations	0.9	2.7	-1.3-1.8		599
Private Sector	1.4	4.1	2.8-0.8		1,350
Non-Housing	-0.6	0	-4.8-1.9		1,886

4 . Construction estimates in gross domestic product (GDP)

Construction estimates are a main component of the output approach to measuring GDP along with the estimates of services, production and agriculture. As an aid to users, the short-term economic indicator releases that directly feed into GDP include an additional table of the GDP components. It is anticipated that this table will inform users of the relationship between the individual components which comprise GDP output. The publication dates and the quarterly growths of the individual GDP components appear in this section.

Each component of GDP has a weight within GDP based on its value in 2011. Construction has a weight of 64, which means that it is 64 parts of the 1,000 that make up total GDP.

To determine the effect each component has on GDP multiply the component growth by its weight in GDP.

An example using quarter 2, April to June 2014 data:

Construction growth = 0.7

Weight in GDP = 0.064 (64/1000)

Effect on GDP = $0.7 * 0.064 = 0.0448$ or 0.0 to 1 decimal place (dp)

Revisions to components and the effect on GDP can be calculated using the same process. As a general rule there are no revisions to GDP when the component revisions are:

Index of Production (IoP) = between 0.3 and -0.3

Construction = between 0.7 and -0.7

Index of Services (IoS) = 0.0 (all values above or below 0.0 effect GDP due to the high weight of IoS in GDP).

Because;

$IoP = 0.146 * 0.4 = 0.0584$ or 0.1 to 1 dp

Construction = $0.064 * 0.8 = 0.0512$ or 0.1 to 1 dp

$IoS = 0.784 * 0.1 = 0.0784$ or 0.1 to 1 dp

Table 3 shows the latest monthly and revised quarterly output figures that fed into the Quarterly National Accounts release for quarter 1 (Jan to Mar) 2015 published on 30 June 2015.

Table 3: GDP component tables, chained volume measures, seasonally adjusted, May 2015

Great Britain

Publication	Weight in GDP (%)	Publication date	Latest periods	Percentage Change (%)	
				Most recent period on a year earlier	Most recent period on the previous period
GDP	100.0	30 Jun	Q1 2015	2.9	0.4
			Q4 2014	3.4	0.8
Index of Production	14.6	07 Jul	Q1 2015	1.0	0.2
			Q4 2014	1.3	0.4
Construction output	6.4	10 Jul	Q1 2015	4.4	-0.2
			Q4 2014	8.9	0.2
Index of Services	78.4	30 Jun	Q1 2015	3.1	0.4
			Q4 2014	3.4	0.9
Agriculture	0.6	30 Jun	Q1 2015	2.5	-2.3
			Q4 2014	10.2	1.2

Notes:

1. Q1 refers to January to March and Q4 to October to December

The Quarterly National Accounts published on 30 June 2015 contained an estimate for quarterly construction of a fall of 0.2%. This estimate has not been revised within this release.

5 . The quality of the estimate of output in the construction industry

Output in the construction industry estimates are produced from the monthly business survey on the second Friday of the month, 2 months after the reporting month. Revised results, for previously published periods, are published in line with the national accounts revisions policy. More information about the data content for this release can be found in the background notes. Revisions are an inevitable consequence of the trade-off between timeliness and accuracy. The response rate in May 2015 was 70.8% of questionnaires, accounting for 79.0% of registered turnover in the construction industry. Therefore the estimate is subject to revisions as more data become available.

The monthly output in the construction industry time series now spans 65 months, however, users should note that 60 months is the minimum time span recommended by Eurostat for seasonal adjustment. While the seasonal pattern is generally established after 60 months in a monthly time series, there is still potential for increased revisions until the seasonal pattern has matured.

Users should note that the deflators used in the production of chained volume estimates of output in the construction industry have been created using a statistical model of the quarter 3, July to September 2014 tender price indices and (TPIs) and output price indices (OPIs). This is the second quarter where these deflators have been created using this statistical model and users should note that the confidence intervals surrounding these models are wide and caution should be taken when using the deflated estimates. More information on these statistical models can be found in the updated article Modelling Construction Statistics Deflators.

All estimates, by definition, are subject to statistical uncertainty and for many well-established statistics we measure and publish the sampling error associated with the estimate, using this as an indicator of accuracy. For construction output, we publish sample and non-sample errors in table 11 of the main reference tables. It should be noted that we are continually working on methodological changes to improve the accuracy of the construction output estimates, progress on these can be found on the [ONS continuous improvement](#) page on our website.

6 . Economic context

Construction output fell by 1.3% in May 2015 following a fall of 0.5% in April 2015. As a result of these consecutive, negative monthly outturns, the annual growth rate has eased from a recent peak of 11.2% in December 2014 to 1.3% in May 2015. These data suggest that output in the construction industry as a whole has been broadly flat over the last 2 quarters, a marked slowdown compared with the industry's performance during the broader economic recovery. Much of this easing is due to lower house building output growth, which has softened considerably in 2015.

On an annual basis, construction output grew by 1.3%, driven by the new work category. The strongest sub-component of new work was infrastructure, which increased by 16.2% in the year to May 2015. This was reflected in the [Bank of England's Agents' Summary of Business Conditions for June](#), which reported steady growth in commercial construction and infrastructure output. Higher housing output also made a contribution to output growth over this period. New work for housing grew by 4.6% driven by private housing, whereas public housing contracted. The Agents also noted that house building growth has been more modest than a year ago, partly due to skill shortages. Repair and maintenance exerted downward pressure on growth.

Comparing May 2015 with the previous month, the fall in construction output was driven by both new work, and repair and maintenance. New work fell by -1.5%, largely as a consequence of house building which contracted by 5.8%, which may in turn reflect changing house price expectations. The [ONS House Price Index \(HPI\)](#) showed that UK house prices increased by 5.5% in April 2015, a fall from 9.6% in March 2015 and is indicative of a broader slowing of house price growth which may influence the incentives of developers. The easing of housing output growth was also noted in the [Bank of England's Inflation Report for May 2015](#), which indicated that housing investment growth is expected to rise only modestly in 2015. The report highlighted that housing starts fell in quarter 2 (Apr to Jun) 2014 and that this was likely to feed through to lower investment in new dwellings in subsequent quarters.

All components of other new work excluding infrastructure also contracted on a monthly basis. Despite falling output for the sub-categories of other new work excluding infrastructure, [HMRC's property transaction statistics](#) show that non-residential property transactions were 6.4% higher in May 2015 compared with a year earlier, suggesting some pick-up in demand. In contrast, there was upward pressure on new work from infrastructure which increased by 5.7% on the month. Taken together, the easing of the growth rate of construction output is consistent with external indicators.

7 . International perspective

Output in the construction industry follows the [Eurostat Short Term Statistics \(STS\)](#) regulation for production in construction. Before any comparisons are made with the euro area or EU28, it is worth noting that the UK is the only member state to follow the A method for compiling [production in construction statistics](#).

The latest release of [production in construction](#) showed that construction output in the euro area (EA19) increased by 0.3% and fell by 0.3% in the EU28 in April 2015 compared with March 2015. The GB estimate for April 2015 showed that construction output decreased 0.5%. It should be noted that an accurate comparison cannot be made as Eurostat data are calculated on a 2010 = 100 basis, while GB data are calculated on a 2011 = 100 basis.

Outside of the EU, the US Census Bureau release [Value of construction put in place](#) showed provisional estimates of construction output increased by 0.8% in May 2015 compared with April 2015 and increased by 8.2% compared with May 2014.

8. Background notes

1. Future developments

We are unable to load Construction Output data onto a time series data set, however, the data will be available on our data explorer page early next week. Please note the link will not work until the data are published.

2. Revision policy

Construction output conforms to the standard [national accounts revision policy](#), which can be found on our website. In line with this, the construction output release for May 2015 has a revision period back to April 2015.

Figures for the most recent months are provisional and subject to revision in light of (a) late responses to the monthly business survey (MBS) and (b) revisions to seasonal adjustment factors which are re-estimated every period.

3. Revisions

One indication of the reliability of the main indicators can be obtained by monitoring the size of revisions. Analysis of the previously published quarterly seasonally adjusted chained volume measure series has shown that revisions to construction data are small. Generally these quarterly revisions are less than 1 percentage point when compared with the final revised period 5 quarters after initial publication. This indicates that the published estimates are a reliable snapshot of the output in the industry at the date of publication.

The size and pattern of revisions for both output and new orders data which have occurred in the open period can be found in the new revision triangles on the construction web page. Please note that these indicators only report summary measures for revisions. The revised data may be subject to sampling or other sources of error. Details about this revisions material can be found in the document "Revisions information in ONS First Release".

It should be noted that due to seasonal adjustment taking place on a short span of data points used to interpret the seasonal effects, there is potential for increased revisions until the seasonal pattern is established within the time series. The seasonal pattern is generally established after 60 months in a monthly time series.

Please note that a monthly seasonally adjusted chained volume series is not available pre-2010. This is due to monthly data not being available for this period. These data are a requirement for creating previous year's prices from which chain linked volume measures are created.

4. Use of the data

Output in the Construction Industry estimates are widely used both internally and externally and have been identified by legal requirement and user engagement surveys.

The main users of data from the Output of the Construction Industry dataset are:

- United Kingdom National Accounts
- Eurostat, the statistical office of the European Union, in order to comply with statutory legislation on short-term business statistics (STS) - short-term business statistics provide information on the economic development of 4 major domains: industry, construction, retail trade and other services
- industry analysts requiring estimates of the construction industry output of Great Britain
- trade associations making UK and international comparisons and to forecast trends in the construction industry

- other government departments including; the Department for Business, Innovation and Skills (BIS), HM Treasury (HMT), Department for Communities and Local Government (DCLG) and the Office for Budgetary Responsibility (OBR)

As well as being a main indicator of the performance of construction companies, the results of the survey also contribute to the estimate of the gross domestic product of the UK, contributing approximately 6.4% of GDP.

More information on the uses made of [short-term economic statistics](#) is available on our website.

5. Methods

The ONS Monthly Construction Output Survey measures output from the construction industry in Great Britain. It samples 8,000 businesses, with all businesses employing over 100 people or with an annual turnover of more than £60 million receiving a questionnaire by post every month. The results of the survey are deflated using price indices from the Building Cost Information Service (BCIS) of the Royal Institute of Chartered Surveyors (RICS) and then seasonally adjusted using X-13-ARIMA-SEATS to derive the published estimates.

6. Quality

The latest [quality and methodology report for the output of the construction industry estimates](#) and [quality and methodology report for new orders in the construction industry estimates \(100.2 Kb Pdf\)](#) can be found on our website.

7. Relevant links

- [Modelling construction statistics deflators \(84.5 Kb Pdf\)](#)
- [Impact of quarterly employment question on monthly survey response \(163.7 Kb Pdf\)](#)
- [Government Statistical Service \(GSS\) uncertainty guidance](#)
- [Annual construction publication construction Statistics, No. 15, 2014 Edition](#)
- [Analysis of the construction industry](#)
- [UK Statistics Authority assessment](#)
- [Disclosure control policy \(337 Kb Word document\)](#)
- [The circular flow of income](#)
- [Types of Construction work \(75.5 Kb Pdf\)](#)

8. Further information

Releases on construction output and employment prior to the transfer to us can be found on the [BIS website](#).

9. User Engagement

The [user engagement](#) section of our website contains preliminary results of the survey held in regarding users' satisfaction and use of the new orders and construction output surveys.

We published a summary of [initial responses](#) to the Short-term indicators National Accounts survey on 9 February 2015.

10. General information

Interpreting the data

When making comparisons it is recommended that users focus on chained volume measures or constant price (volume), seasonally adjusted estimates as these show underlying movements rather than seasonal movements.

Construction output estimates are subject to revision because of:

- late responses to the Construction Output Survey
- revisions to seasonally adjusted factors which are re-estimated every quarter
- annual updating of the Inter-Departmental Business Register (IDBR) that forms the basis of the sampling for the Construction Output Survey - this occurs in April and can have an effect on the results published in May.

Definitions and explanations

Definitions of terminology (39 Kb Word document) found within the main statistical bulletin are available.

11. Code of Practice for Official Statistics

National Statistics are produced to high professional standards which are set out in the [Code of Practice for Official Statistics](#). They undergo regular quality assurance reviews to ensure that they meet customer needs and are produced free from any political interference.

12. Publication policy

Details of the policy governing the release of new data are available from our Media Relations Office.

13. Accessing data

The Output in the Construction Industry statistical bulletin and relevant time series datasets are available to download free from our website at 9.30 am on the day of publication.

We allow a list of agreed officials to have access to data 24 hours before publication, which is available on the [Output in the Construction Industry: Pre-Release page](#).

14. Further information and user feedback

As a user of our statistics, we would welcome feedback on this release, in particular on the content, format and structure. For further information about this release, or to send feedback on our publications, please contact us using the following information.

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15. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk