



Department for  
Business, Energy  
& Industrial Strategy

## CONSULTATIVE COMMITTEE ON CONSTRUCTION INDUSTRY STATISTICS

Minutes of meeting held on Tuesday 15<sup>th</sup> May 2018

**Venue:**

Conference Centre,  
Department for Business, Energy and  
Industrial Strategy,  
1 Victoria Street,  
London,  
SW1H 0ET

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## Attendees

Frances Pottier (Chair)	Department for Business, Energy and Industrial Strategy
Bláithín Stack (Secretary)	Department for Business, Energy and Industrial Strategy
John Allcoat	Office for National Statistics
Ole Black	Office for National Statistics
Giorgio Buttironi	National Federation of Builders
Adam Evans	Construction Industry Training Board
Kelly Forrest	Core Five
Noble Francis	Construction Products Association
Brian Green	Brickconomics
Stephen Gruneberg	University College London
James Hastings	Experian
Fred Haynes	Office for National Statistics
Neil Higgins	Ministry of Housing, Communities and Local Government
Ceri Lewis	Office for National Statistics
Rosie McGarrity	Ministry of Housing, Communities and Local Government
Jim Meikle	
Alex Murray	Infrastructure and Projects Authority
Ian Pegg	Royal Institute of Chartered Surveyors
Les Ruddock	University of Salford
Steven Ruddock	London South Bank University
Steve Shelley	Barbour ABI
Jane Tarver	AMA Research
Adam Valentine	Barbour ABI
Allan Wilén	Glenigan

## Apologies:

Robert Davis

### **1. Introductions:**

- Roundtable – everyone introduces themselves and states where they work

### **2. Neil Higgins & Rosie McGarrity – Improving the measurement of new homes built**

- Neil: Recap of the building house problem – there are different numbers from different measures. There has always been a gap between the different sources reporting on housing delivery, but the gap has become worse
- Housing Supply; this is the breakdown of where new dwelling are coming from – majority are new builds
- MPs have asked why there's a gap in the different sources, and it's important to fix it from a statistical point of view
- Why is there an issue? It's become more complicated to collect the data. It used to be just local authority building new housing, but more recently there's more bodies involved with the construction of new housing
- There are now multiple local authorities working together, building control partnerships, and outsourcing to the private sector

- For building control purposes there are concerns about quality of new housing. Completion certificates aren't being issued in some new build dwellings, leading to statistical issues and building control issues. The figures need to be improved to ensure confidence in the statistics, but also to ensure completion certificates are being issued properly, and that the information from building control inspectors is comprehensive.
- How to improve the statistical issues? Rosie: Delta; a new data collection system has been implemented. They are working with building control policy to promote comprehensive data collection. There are 98 approved inspectors, only one is obliged to provide data to the department.
- They're targeting 80 inspectors, 81% response in December
- Issues for non-compliance – IT issues, some don't do residential- better coverage than before
- Neil: An agreement has been made for a new performance standard and statistical reporting. The house building data collection is mandatory for NHBC and LABC, but voluntary for AI's. These standards apply to the whole sector and legislation is not required. Implemented in next financial year (2020)
- Action going forward; each house needs to have a completion certificate, this would significantly help the problem.
- A plan will be published on what's been done so far (next month).
- QA: Jim Meikle: Are we any closer to reconciling starts and completions? – There is a need to declare intention to start, but not actually starting. This is where working on a specific definition of 'starting work' will be beneficial, this consultation will hopefully improve the issue.
- James Hastings: As forecasters we're more interested in starts than completions, any improvement in that accuracy would be helpful.
- Frances Pottier: What do you do with non-response? Imputation or write off? – non-response local authorities are based on similar local authorities, or an estimate on previous responses if they have responded to the survey previously
- Noble Francis: difference between MHCLG quarterly numbers with the NHBC stats, do you gross up? If so is it based on a market share? – figures provided by NHBC are figures included, they're not grossed up
- James Hastings: There are opportunities to improve documentation process
- Noble Francis: NHBC should be helping more with the documentation process, MHCLG do try to get them on board
- Brian Green: Would it not make sense/useful to have local authorities compile a list of dwellings themselves, so we know the number of dwellings and what they constitute (habited/uninhabited)? Would it not save a lot of administrative duties in other places? – MHCLG agree, we are looking at ordnance surveys, it is being considered as part of the review.
- Post-meeting note - An action plan on improving the quarterly house building statistics has been published on the 28 June 2018  
<https://www.gov.uk/government/publications/improving-the-measurement-of-new-homes-built-action-plan>

- We welcome any views users have in response to this programme of improvement work or on other improvements to the statistics. The views can be submitted to the housing statistics mailbox [housing.statistics@communities.gsi.gov.uk](mailto:housing.statistics@communities.gsi.gov.uk)

### 3. **Adam Evans – Skills Transferability**

- The aim of this research was to understand the transferability of labour and skills across the construction sector, and from comparable sectors into construction
- The data sources that were available were consulted we considered using data from stats lab. However, this is difficult to get access too, it required booking time in in the stats lab, and there's no guarantee that useful outputs could be generated. Therefore, it was decided not to use this approach.
- We then looked at other data sources available, and a mini quant survey was run with 400 construction workers. It began in January 2017 and is due to be published soon.
- Desk research began which has some issues, one being the definition of transferability which can include several different factors
- Different types of transferability; for example, we had to look at people who moved into construction from manufacturing, moving location, moving up the ladder within their industry
- Construction sector transferability: we asked employers what pro-active behaviours they had e.g provided training, funding, offer extra cash to employees to move region. It was found that 60% of employers do nothing. This was a surprising result for research and fieldwork partners
- No perfect or clear solutions on how to help people transfer roles in construction sector. We had to look at different ideas and different case studies to come up with suggestions
- It was found that the main success in sector transferability were larger businesses. They were more likely to have programs for recruiting ex-military staff, mini secondment schemes etc. in place.
- Geographical mobility: in the past people would follow the path of construction, live in temporary accommodation while travelling up and down the country. Nowadays, there is less willingness to do that (particularly in Scotland). Workers are more likely to take inconsistent work, or work with a smaller company, to stay in the same location
- Transferability of skills/jobs: skills are transferable within the sector, but it doesn't often happen. Most workers want to stay in their skill/profession. CSCS cards requirement can be a barrier. Looking at oil and gas workers are well paid, when the economy dropped sights were reluctant to bring them in on construction as there was the worry they would leave to go back when the economy picked up again. The health and safety skills they had were too specific, they would need to train again.
- Large employer initiatives; combat to construction – funded and supported by CITB – involves putting younger soldiers on apprenticeships, they can pick up construction specific skills quickly. Numbers were in the 100s and the cost of this programme was high. To get more movement there is a need for more development of careers work and get the industry to lead the way, show the industry how they could tap into a new source of labour

- Actions that employers did take; minor top up courses on basic entry level qualifications, increase wages for professional side.
- Recommendation: careers work, show employers how they could have success with this and making use of funding available,
- Q&A: Noble Francis; focus is always trying to get people into the industry, partial focus on people leaving the industry every time there's a recession, 10 years on from the recession and employment in contractors is still 250,000 fewer than before. Lost half a million during the 2008 recession, retaining employment and where have the skilled employment gone from before the recession? James Hastings: And why are they not coming back after recession? – They go to manufacturing during this time, it's more stable and workers don't want to go back to uncertainty after if there's a chance of losing their jobs every 10 years.
- Frances: ONS are looking at migration and effects on construction work force
- LFS – James Hastings: This can't pick up overseas workers that come to UK for 6 months and then go home.
- Brian Green; there is less willingness for people to move, how much does this effect the migrant workers which are now filling that void? – migrant publication is coming out in June that will give an update on migrant workers.
- Scotland: Lifestyles have changed; if both parents are working need to change child care patterns, more of a need to be at home
- Brian Green: Were labour agents consulted? Did you hear from the labour agents on how they were looking to multi-skill and up-skill labourers? – Labour agents just want to fill a role and get their payment, less interested in people's career development
- Stephen Gruneberg: Are there any hotspots of hope or signs of optimism in any particular area (sector, role etc.)? – Adam: No, emphasis is more on cost effective promotion than funding pots
- Other key industries/skills places that have overlap besides oil/gas – manufacturing, there's a lot of relative skills
- James Hastings: multi-skilling question has come up in a lot of areas, particularly productivity, there's a division of opinion of the usefulness of multiskilling. Some see it as a negative, jack of all trades that can't do anything to a specialist level. Unions were also not keen on multiskilling, don't want membership diluted.

#### 4. **James Hastings – Output and what is being collected**

- Not a criticism of ONS, it's the best data we're going to get with current limitations.
- These issues have been discussed before, especially how to define 'work done'. No answers to these questions, good to discuss possible solutions ONS could implement.
- Definition of gross output: - that is the core of it (first line of slide 1). Always need to remember it is gross output, includes the cost of materials etc.,
- 2 sets of issues; Coverage and interpretation
- A lot of sole proprietors are excluded from the industry, difference of about 600,000. They are under VAT threshold, do not pay themselves through PAYE. Therefore, they are not included in construction statistics. Missing about £15-20b in the sector. – Going forward potentially using administrative data from other firms could make this more accurate

- Materials: if materials are bought by contractor it will be included in output, if bought by the client it won't be. Example, private housing, sole proprietors will get the client to buy materials to keep themselves under VAT.
- Wind turbines are a good example of this; Has the contractor or client bought the wind turbine? Barbour has done research which has shown it's a 50/50 split. Sometimes being included in output and sometimes not
- Subcontractors: Are firms excluding sub-contracted work or not from their returns? Contractors don't read the notes when filling in forms, so what is being reported can vary in consistency from firm to firm
- Offshore work: is offshore work included in the data? (excluding oil platforms) In relation to work on the continental shelf – again wind farms. Is it being counted in the data?
- Timing of responses; how are contractors defining work done? In short, we don't know. The suspicion is that work done is being defined by invoices raised in any given month. However, an invoice raised in one month does not necessarily mean the work is done in that month. Research could be useful to understand what the cohort is using as a definition of work done.
- Disaggregation
- Mixed use developments: all output is assigned to the largest part of that development (mixed development; for example, residential and retail). Residential element will almost always be the biggest part, therefore overstating the amount of residential work.
- Public/private housing: is it feasible to split these out effectively? Reclassifying public housing as private, can we accurately record the difference between the two anymore?
- R&M vs Refurbishment – difference in the definition of R&M and refurbishment. Obvious in the residential sector, however in the non-residential sector it's much more of a grey area. Where do you draw the line between the two? How do contractors draw the line and tell the difference in their reporting?
- The regions and R&M: on this side when the work is reported on the form, it is not asked to specify where the work took place. Automatically assigned to the region where the firm is listed. – However, this doesn't hold true on the public side, there's a suspicion that work is being reported in the wrong place. For example, the Yorkshire flooding. After this there was no spike in Yorkshire and The Humber data for R&M, there was in Scotland. It turned out that a lot of properties were insured through Scottish agencies, therefore the R&M work got reported to Scotland, not Yorkshire.
- There are issues around assuming repair-work is done through local firms in the area.
- Q&A:
- Ole Black: a lot of work is being done on developing construction statistics at ONS. Some of these questions we can give answers too, some we need opinions on the best way to tackle the inconsistencies
- One area of improvement is regarding coverage. Currently we're depending on VAT and PAYE register. There is a cross – government project which is developing a new and larger register. It's a challenge on how this will be used in the future. One challenge is on what is turnover for the sole proprietors, some are registered but not producing a lot of work. This will affect how to make estimations on people they are unlikely to survey.

- Raised an issue with regards to timings; should we be asking for output or turnover? We decided to continue with output. If this was changed to turnover it would create a major discontinuity in the data, there is always going to be a mixed bag of answers no matter what variable you ask firms to report on. Looking forward making more use of VAT data, but looking towards turnover for smaller companies
- Off shore questions, is this work being registered?: If it is a UK registered company it will be picked up, if not it isn't
- Ceri Lewis on mixed-use development: they do ask for the split, can't assume it's all assigned to the majority development. R&M; we don't have a source to get the breakdown.
- Noble Francis on Public/private housing output problem: It was defined back when there was an obvious split between the two housing sections. Should forecasts be done split out? They have very different drivers, so we would need the data to be split out to continue producing forecasts. To get an accurate number on housing output we would need to combine them, but there are still positives to splitting the data out.
- Brian Green: There is a large amount of construction work done that isn't picked up because the firms aren't considered construction firms
- Stephen Gruneberg: It's uncomfortable to have these limitations pulled up - however all data is based on estimates. Can't read too much into the data because it's not accurate. Noble Francis: we need to understand the definitions, read and understand the caveats, and establish if there's a way of rectifying the caveats.
- Jim Meikle: we have been trying to reconcile the housing and construction statistics gross-output, and turnover in the national accounts, it's very difficult. It would be helpful if you could describe the process of the 3 sets of data. There are different trends over time that are inconsistent between the data sets, hard to understand this. Ole Black: the different data sets measure different things.
- Brian Green: who sends in what form and what the delays are? There was a small sample research project that showed the nature of what actually gets filled in. This research showed that small firms are much slower to fill in the forms.
- Noble Francis: Construction output data is lower in January than December every year, this is not feasible and therefore indicates lags in the data.
- Ole Black: Find high Decembers, firms tend to throw in output for their EOY.

##### **5. Ceri Lewis – ONS update**

- Brief update on plans:
- Background to development work: ONS took responsibility for the publication of the Construction Price and Cost Indices and introduced an interim solution for measuring output prices. These are no longer considered an interim solution and reviews and improvements are being made
- Assessing the 3 different elements as part of their review; improving constructed values methodology, implementing bias adjustment, improving new orders to output model

- Work Plan: we are finalising all our analysis and recommendations, presenting this to users, we have also talked through regional impact with the Scottish government because it impacts them and how they use the data
- Presenting recommendations to the regulatory committee to get feedback on them
- Depending on what changes are being implemented they will be in place in June/July
- Investigating bias on revisions: graph 1: first 2/3s of graph there is a lot of volatility, a lot of up and down revisions. Predominantly coming from revisions made to seasonal adjustment. Now predominantly upwards revisions, this suggests a bias.
- Constructed data: non-response of businesses who have never previously returned a survey, calculate an average to account for non-response.
- Reducing bias: improve the constructed value methodology, it's outdated. It's been brought more in line with imputed valued methodology. Changing the basis, just consider businesses within an SIC (previously size-band and SIC). Changing the trimming factor; trimming top 10% of business for constructed values, not done for imputed values. – so removing this
- In the next 18 months, more improvements will be made as part of transformations
- Still bias there even after changing constructed values – decaying adjustment
- Plan to implement a bias adjustment model to address the remaining bias
- Adjustment system; the aim is to get the survey data to best possible point for when VAT data becomes available. This system has the capacity to implement different adjustments
- Can be used for any other factors; lower response for 3<sup>rd</sup> month because of new GDPB. This system can account for lower response rate every 3<sup>rd</sup> month.
- Applying bias adjustment model; additive model; multiplicative model; multiplicative model considering other factors
- Multiplicative model considering other factors is the model ONS have gone with
- Looked at the correlation between the number of imputations at specific points in time can provide a basis to apply a multiplicative adjustment.
- Graph 2; the correlation between imputations and growth rates that would need to be applied.
- Next steps; constructed values methodology is nearly ready to implement. It's easy to implement and the methodology will be applied backwards in the data
- Bias adjustment facility will be in use for July, and the bias adjustment model will be used in the August publication of GDP
- Regional and lower sector levels estimates: tables 5 and 6 in the output publication, this is modelled using new orders data. This spreads the value of new orders over a fixed amount of time. It assumes the same length for every project, that all projects start straight away, and assumes all new orders are always built, which is not always the case.
- The new model uses a combination of data points; PROBE, Barbour ABI, ONS New Orders Survey
- It is a two-stage approach, and will be implemented back to 2010
- High-level overview of the new model; one approach for projects over £50m, and one for under £50m. Barbour now have a much richer data source.

- For the approach for projects costing less than £50m, there is less data available so much more assumptions are being made on weighted averages.
- Next steps: this is currently being finalised, implementation in June's publication and back to 2010
- Q&A: Jim Meikle on the distribution of expenditure; historically I would have assumed an S curve – Fred Haynes responds – it's modelled off probe curve survey. Ian Pegg – it's more peaked than I would have expected.
- Stephen Gruneberg; was there a correlation between start dates and finish dates? - Ceri Lewis: research was done a while ago and there was no relationship between the two.
- Ceri Lewis: The model can be looked at being developed further in future. But we needed to develop new methodology asap. It's not perfect but much better than the previous methodology. Project duration is calculated on real live projects durations.
- Ole Black: 3 limitations were distorting the data and assumptions need to be made. Jim Meikle suggests profiling the start and finish dates of projects. Noble Francis: I would expect the end to peak up due to the end of projects being costly.
- Ian Pegg; suggested frontloading the cost
- Brian Green commented that getting rid of trimming will cause outliers; Ceri Lewis responded by saying these will be dealt with on a case by case basis

#### **6. Alex Murray – Large sample analysis of construction firm accounts data**

- Analyst at cabinet office, lecturer at UCL
- Trade credit and cash farming: looking at payment practices in contractors in construction
- Profit margin \* operating multiplier = rota
- Relationships between all ratios, RE (rest of the economy) CC (construction contractors)
- Less profit for construction when compared with companies in the rest of the economy (conducted in 2013)
- Wants to reassess the research and increase number of contractors
- Framework used – pont analysis – developed over 100 years ago.
- Profitability is not all about profit margin
- There's trade-offs, you can't do well in all ratios.
- FAME search criteria. MSc drives this research. Financial accounts made easy. Sic codes, known value, turnover, etc. new sampling approach.
- To be in 9.5 thousand sample need to report these values in at least one year. Can't do it for all years, very small sample
- Extra set to clean the data, must provide PBIT, T, TA etc.
- Resulting sample 3415: take these numbers and do analysis
- Developers are within construction sic, but very different
- SAS software used. Turnover by employee, remuneration per employee. Companies that tend to outsource, don't employ a lot of staff, employ project managers which tend to get paid more. Purple is developers, 40-50k per employee. Way above what we know to

be true. ABS 23-25k per employee. Not picking up smaller firms (tier 3/ 4) there is a bias towards larger contractors.

- Histogram of construction: taking out developers. Still large number of 50-60% profit margins
- Cost of sales to turnover: high cost of sale relative to turnover. this is a proxy to how much you outsource
- Sic code isn't a good way to identify how firms operate. What they do/how they do
- Assets structure: current assets + fixed assets = total assets. Worrying that developers claim their assets are current assets, doesn't make sense. Assets should be fixed
- Higher you are in outsourcing, the lower your profit margin will be.
- ROTA: 3d plot: tier 1 contractors will have assets, but made up of money owed to them by the client
- Data shows there is inconsistencies on how certain firms mislabel themselves as contractors when they can't be based on their assets
- **QA:** Noble Francis: The time period you were looking at 2012 – 2015, is entirely a period of growth, would it be worth replicating this information over a couple of business cycles? Is the data available? Alex: The problem here is you can only look back 10 years with FAME. We're looking to get more data and reconcile it, we can get data back to the late 80's. Trying to look at SPV accounts, but I can't go back to the mid-late 90's due to the restrictions.
- Jim Meikle; what section of the industry does this represent? Registered as tier 2, but may have gone on to tier 1 over time. Alex – this is not a fair representation of the industry. Most of the industry falls below the values required to register accounts.
- Brian Green; How do you deal with subsidiaries?

## 7. AOB & General discussion

- None