



National School Delivery Cost Benchmarking Primary, Secondary & SEN Schools

A national cost benchmarking study undertaken by Hampshire County Council in conjunction with East Riding of Yorkshire Council and the Education and Skills Funding Agency

February 2018

Version 4 Final

Supported By



Infrastructure
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Authority

1 | Barton Farm School, Hampshire County Council



EBDOG

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This publication is split into five distinct sections, namely; report context, primary schools, secondary schools, SEN schools and further information. These sections are shown below along with their key outputs.

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| St Modwen's Catholic Primary, Staffordshire County Council

660 projects submitted

This document publishes the results of a national cost benchmarking exercise undertaken by Hampshire County Council in partnership with East Riding of Yorkshire Council on new build, extended and refurbished primary, secondary and SEN schools.

This report provides a useful reference point for Local Authorities when establishing their school building costs. As part of the initiative the Local Government Association (LGA) is seeking to encourage greater collaboration between Local Authorities to drive down new and refurbished school costs. A benchmarking workshop was held on 6 October 2017 to discuss the output of the 2017 study and the presentation of information included and analysed in that report. As a result some additional features have been included this time. It is also intended to further develop the data following the workshop and publish any additional findings.

The findings contained within this report have been shared with the Infrastructure and Projects Authority (IPA) which is part of the Cabinet Office, Department for Education (DfE) and Education and Skills Funding Agency (ESFA). This report is the sixth publication produced for the public sector and is a valuable tool to understand the total costs associated with providing new school places across the country.

This study has been undertaken with funding from the LGA and has been conducted in conjunction with the following organisations:

- ◆ Education Building and Development Officers Group (EBDOG).
- ◆ National Association of Construction Frameworks (NACF).

The project sample used in this report comprises 660 projects from across England, consisting of:

- ◆ 510 primary school projects.
- ◆ 105 secondary school projects.
- ◆ 41 SEN school projects.
- ◆ 4 All-Through school projects.

Common Standard

A common standard of cost analysis has been used to capture cost data, ensuring a high level of consistency across the sample, while including detailed cost and background information on each project – allowing the costs to be fully understood on an individual project basis. The data has then been collated at a common price base, in order to compare projects with each other on level terms.

The following criteria were used to select projects for this study:

- Primary, secondary or SEN school projects.
- Permanent new build, extended or refurbished school projects.
- Contract formed since 2012.

Full details of how the data has been adjusted can be found on page 31.

Industry Summary

Recent commentary from the Royal Institution of Chartered Surveyors (RICS) Building Cost Information Service (BCIS) notes that there is still uncertainty following the outcome of the Brexit vote and a potential period of uncertainty within the construction sector. The BCIS are also predicting a “muted” recovery in their narrative within the sector and they consider prices will remain competitive as contractors have to compete more for work.

237,000
school places

£3.77 billion
combined project capital value

We are grateful to all Local Authorities who have contributed projects to this study. In addition to data submitted directly from authorities, we are also grateful to have received a new sample from the Education and Skills Funding Agency (ESFA) of ESFA capital programme schemes. The list below shows the areas covered by the study.

- Birmingham City Council
- Bradford Metropolitan District Council
- Brighton & Hove City Council
- Bristol City Council
- Buckinghamshire County Council
- Bury Metropolitan Borough Council
- Calderdale Metropolitan Borough Council
- Cambridge City Council
- Cambridgeshire County Council
- Central Bedfordshire Council
- Cheshire West and Chester Council
- Chichester District Council
- City of York Council
- Cornwall Council
- Coventry City Council
- Cumbria County Council
- Daventry District Council
- Derby City Council
- Devon County Council
- Doncaster Metropolitan Borough Council
- Dorset County Council
- Durham County Council
- East Riding of Yorkshire Council
- East Sussex County Council
- Elmbridge Borough Council
- Epsom & Ewell Borough Council
- Essex County Council
- Gateshead Metropolitan Borough Council
- Halton Borough Council
- Hampshire County Council
- Hartlepool Borough Council
- Hertfordshire County Council
- Isle of Wight Council
- Kent County Council
- Kingston upon Hull City Council
- Lancashire County Council
- Leeds City Council
- Leicester City Council
- Lewes District Council
- Lincolnshire County Council
- Liverpool City Council
- London Borough of Barking and Dagenham
- London Borough of Barnet
- London Borough of Brent
- London Borough of Bromley
- London Borough of Camden
- London Borough of Croydon
- London Borough of Ealing
- London Borough of Enfield
- London Borough of Hammersmith & Fulham
- London Borough of Harrow
- London Borough of Havering
- London Borough of Hillingdon
- London Borough of Hounslow
- London Borough of Islington
- London Borough of Kensington and Chelsea
- London Borough of Lambeth
- London Borough of Lewisham
- London Borough of Merton
- London Borough of Newham
- London Borough of Redbridge
- London Borough of Richmond upon Thames
- London Borough of Southwark
- London Borough of Sutton
- London Borough of Tower Hamlets
- London Borough of Waltham Forest
- London Borough of Wandsworth
- London Borough of Westminster
- Luton Borough Council
- Manchester City Council
- Medway Council
- Norfolk County Council
- North East Lincolnshire Council
- North Lincolnshire Council
- North Somerset Council
- North Tyneside Metropolitan Borough Council
- North Yorkshire County Council
- Northampton Borough Council
- Northamptonshire County Council
- Northumberland Council
- Nottingham City Council
- Nottinghamshire County Council
- Oldham Metropolitan Borough Council
- Peterborough City Council
- Plymouth City Council
- Portsmouth City Council
- Reading Borough Council
- Redcar and Cleveland Council
- Reigate and Banstead Borough Council

- Rotherham Metropolitan Borough Council
- Royal Borough of Greenwich
- Royal Borough of Kensington and Chelsea
- Salford City Council
- Sandwell Metropolitan Borough Council
- Sheffield City Council
- Shropshire Council
- Slough Borough Council
- Somerset County Council
- South Gloucestershire Council
- Southampton City Council
- Spelthorne Borough Council
- St Helens Metropolitan Borough Council
- Stafford Borough Council
- Staffordshire County Council
- Stockport Metropolitan Borough Council
- Stockton-on-Tees Borough Council
- Stoke-on-Trent City Council
- Suffolk County Council
- Sunderland City Council
- Surrey County Council
- Swindon Borough Council
- Tameside Metropolitan Borough Council
- Thurrock Council
- Torbay Council
- Trafford Metropolitan Borough Council
- Wakefield Metropolitan District Council
- Warrington Borough Council
- Warwickshire County Council
- West Sussex County Council
- Wigan Metropolitan Borough Council
- Wiltshire Council
- Windsor and Maidenhead Council
- Wirral Council
- Wokingham Borough Council
- Wolverhampton City Council
- Worthing Borough Council



126 Local Authority Areas covered across England

Please Note | Markers display the spread of Local Authorities who have contributed, they do not indicate exact locations.

Part Two Primary Schools



Westgate School, Hampshire County Council

The primary school sample consists of 510 projects which are split into three school categories as shown in the pie chart (right). This sample features projects from 2012 to 2017 with a total combined capital value of £1.8 billion, comprising:

- ◆ 64 New Development projects.
- ◆ 385 Re-Build & Extension projects.
- ◆ 61 Refurbishment projects.

510 primary schools

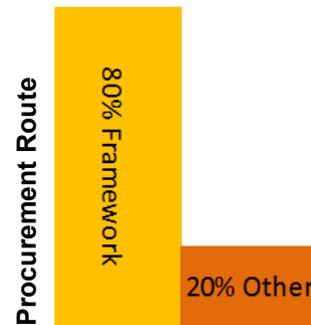
The majority of the primary school sample consists of Re-Build & Extension projects, continuing the trend that Local Authorities are expanding existing school sites to meet the increasing demand for pupil places. However, New Development projects on greenfield sites have seen a 21% increase in number since the last report. This rise tends to reflect the growth in new school places associated with major developments and reduced viability of providing new school places on existing sites.

The majority of schemes are procured via a framework arrangement, be that at a national, regional or local level. It has not been possible to draw sufficient trends relating to the cost benefits of these different procurement routes due to the significant variations in the framework arrangements.

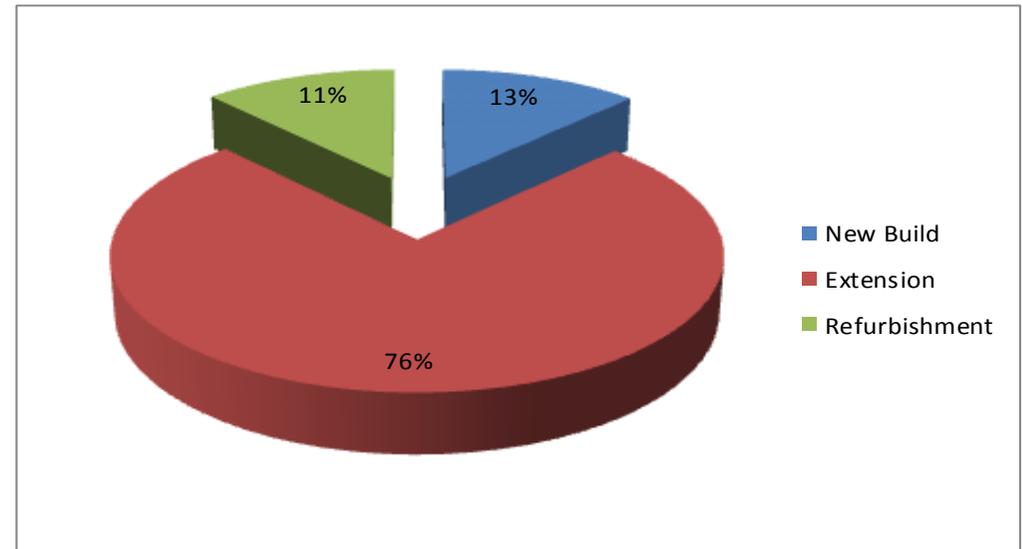
Over the next pages further commentary is provided for each project category which details cost variations and observations on drivers for costs between projects.

126,000
new primary places

£1.8 billion
capital value of primary school sample



Project Categories



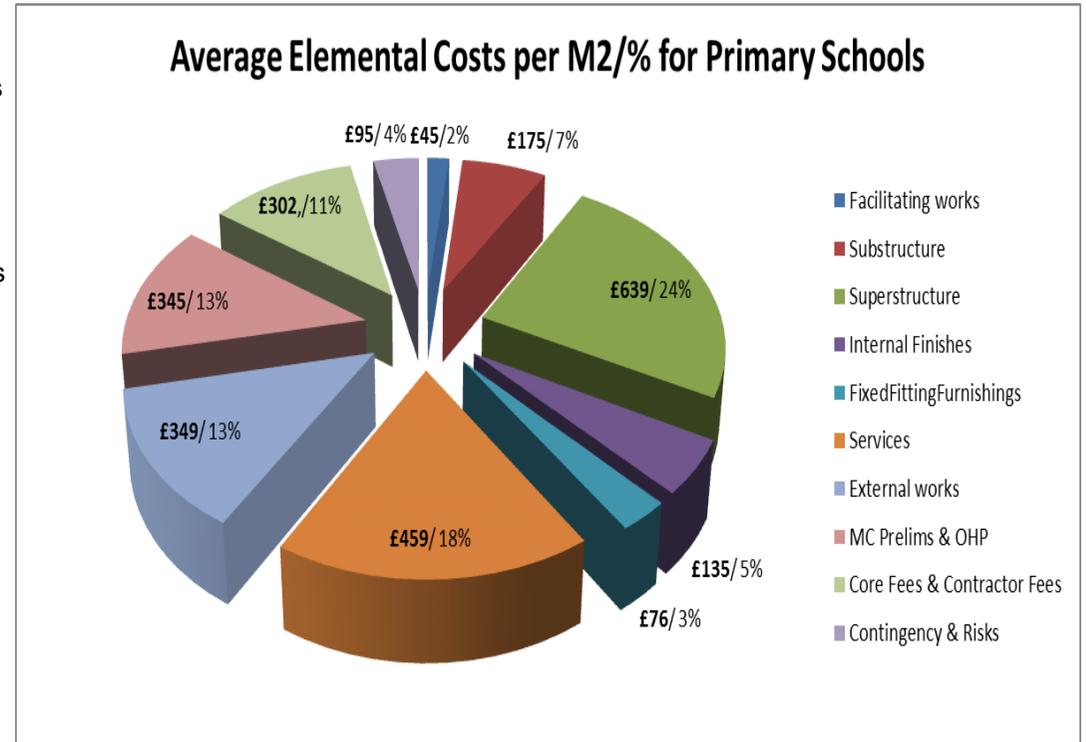
Whitehouse School, Ipswich Council

New Feature for the 2018 Study

Following the benchmarking workshop in October 2017, it was agreed to publish elemental cost and guidance costs for new Primary Schools using the combined data set. The benchmarking team are pleased to include a snapshot of these new features for the first time in the 2018 report. Further analysis will also be carried out and an update will be targeted prior to the 2019 study being undertaken.

New Development Primary Schools

Gross and nett rates plus average elemental cost breakdown have been provided this year for new build developments. This provides a cost per m² of the main building elements and the percentage of the cost each element represents drawn from the entire whole sample.



Guidance Costs

Guidance has been provided in the table opposite for the average gross and nett rates for a 1FE, and 2FE primary school.

Primary School	Average of Indexed Gross Build Cost Per M2 Inc Fees	Average of Indexed Nett Build Cost Per M2	Average of Indexed Cost Per Pupil Place Inc Fees
1FE	£3,185	£2,106	£16,358
2FE	£2,811	£1,938	£14,785

Primary school gross costs as a whole sample have decreased by 19% since 2012, after indexing. The sample size of 2016 projects has increased from the 2017 data capture giving more confidence to the figures. The graph indicates that 2014 and 2015 represented the lowest point of the gross costs trends which has since increased in 2016 and 2017. There are a number of reasons for the fluctuations evidenced in the cost trajectory over the last five years (Graph 1, right) which are outlined below.

New Development

Projects built on greenfield sites with 100% of the works being new build have seen a steady reduction in gross costs over the last five years, equating to a 21% reduction since 2012. The positive trend indicated is likely to be as a result of the adoption of a standardised approach to design; More delivery through collaborative arrangements and adopting a more cost driven approach.

In 2016 the new build Gross cost rose slightly which is considered to be a reflection of the market conditions, Brexit and the impact of the increase in housing output on prevailing prices.

Re-Build & Extension

Extensions to existing school buildings, new teaching blocks and re-built schools on existing sites have seen an increase in gross costs over the last two years. A number of factors influence this trend (N.B. page 10 dataset used as comparator):

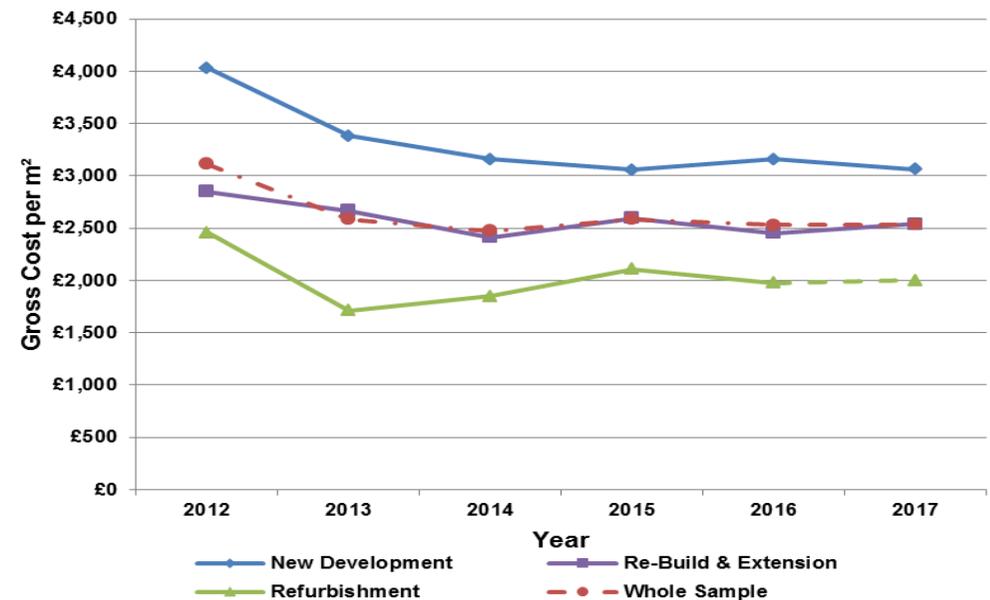
- ◆ Whilst the sample contains a large number of projects these tend to be of small to medium size extensions with average floor areas up to 1400m². This reduces the cost benefits experienced by larger schemes.
- ◆ The market has seen 4.3% (RICS, BCIS TPI) inflation since 2016 and although the figures within this report are indexed for the effect of inflation, it is believed market factors are not yet being reflected in the indices to account for market pressures in terms of labour and material costs.

Refurbishment

Due to the varying nature of refurbishment projects it is difficult to draw conclusive results from the cost trajectory. Due to a small sample size in 2016, there is a lower level of confidence in the data and 2017 data only had one project so a provisional trend is shown pending more data.

Figure 1 (right) displays the average costs per year alongside the number of projects in each year banding.

Graph 1 | Primary School Gross Costs per m²



Year	New Development		Re-Build & Extension		Refurbishment		Whole Sample	
	Gross Cost	Sample Size	Gross Cost	Sample Size	Gross Cost	Sample Size	Gross Cost	Sample Size
2012	£4,032	5	£2,848	20	£2,458	6	£3,113	31
2013	£3,384	10	£2,666	44	£1,711	18	£2,587	72
2014	£3,162	13	£2,411	69	£1,846	13	£2,473	95
2015	£3,056	17	£2,594	69	£2,107	15	£2,586	101
2016	£3,159	10	£2,453	34	£1,978	8	£2,530	52
2017	£3,062	9	£2,540	5	Insufficient Data		£2,521	14

Re-Build & Extension projects are formed from a combination of new blocks, extensions to existing schools and re-build projects on the existing site. The sample used for comparing Local Authority with ESFA procured schemes has been restricted to projects with a GIFA of over 750m² as none of the ESFA projects are less than 1FE within the sample.

Graph 2 (right) displays a cost trajectory for the ESFA projects alongside those from Local Authorities. The 2016 sample has increased by a large number of projects. The 2017 sample is currently a small number of projects so a trend line has been used that indicates that the gross rates are continuing in a downward direction.

Local Authority costs fell steadily between 2012 and 2014, but costs rose in 2015. The 2016 sample indicates a decrease of 10.7%. Early indications are that the 2017 rates continue to fall but at a slower rate.

ESFA average gross costs are lower than Local Authorities but the gap is reducing, this is in part due to the collaborative working between the ESFA, LA's and EBD OG on understanding cost differences and sharing best practice. ESFA projects were more than 20% lower prior to 2013 but are currently 16.6% lower in the 2016 sample of projects. There are a number of factors influencing these costs:

- ◆ ESFA projects are generally much larger than Local Authority schemes and therefore benefit from economies of scale.
- ◆ The ESFA has had the benefit of batching projects and a historically keen contractors' market but has recently experienced a rising construction market and this study has confirmed that costs increase beyond 2015. Early indications for the 2017 data is that costs are on a downward trajectory, however the sample sizes are very small so this is highly indicative.

Due to the data set collected by this study a large percentage of projects submitted for the 2015 and 2016 year banding are smaller in size than those in 2014. This is evidenced in Graph 2 (right) which shows an increase in Local Authority costs for 2015 then easing in 2016.

Figure 2 (right) displays the average costs per year alongside the number of projects in each year banding.

Graph 2 | Re-Build & Extension Gross Costs per m²

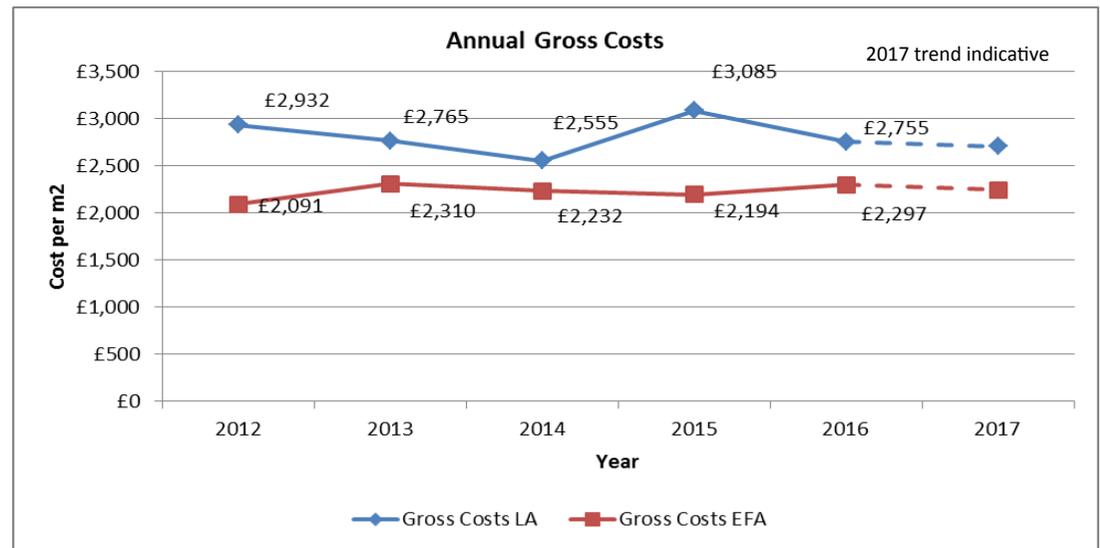


Figure 2 | Primary School Costs

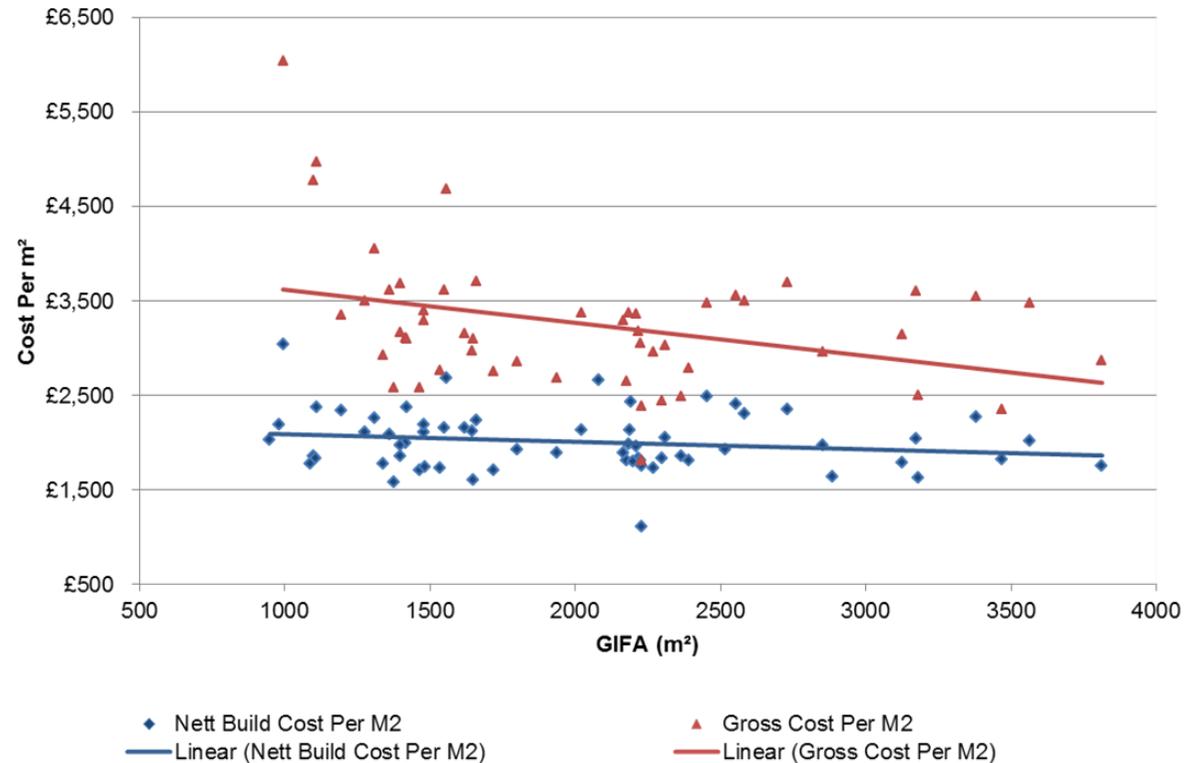
Year	Gross Costs per m ²				Costs Per Pupil Place			
	Local Authority		ESFA		Local Authority		ESFA	
	Average	Sample Size	Average	Sample Size	Average	Sample Size	Average	Sample Size
2012	£2,932	18	£2,091	2	£15,729	18	£11,917	2
2013	£2,765	35	£2,310	10	£16,564	35	£12,064	10
2014	£2,555	38	£2,232	33	£15,625	38	£11,587	33
2015	£3,085	31	£2,194	38	£17,519	31	£11,658	38
2016	£2,755	12	£2,297	23	£12,876	12	£11,860	23

New Development projects are new schools built on greenfield sites, which include significant infrastructure and external work costs. There are 64 such projects in this study. Graph 3 (right) displays the gross and nett costs per m² for these projects. A detailed breakdown is shown on page 12.



St Leonard's School. Devon County Council

Graph 3 | New Development Gross & Nett Costs per m²



1,990m²

average floor area

5.0m²

average GIFA per pupil place

48wks

average contract period

£3,222

average gross cost

£2,002

average nett cost

£19,883

average cost per pupil place

Key Definitions

New Development

Any project where 100% of the works being undertaken are new build and the site used is a greenfield site. Includes significant infrastructure and external works.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288. Index taken from August 2017 data forecasts. This adjusts costs for inflation. VAT is excluded throughout.

Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

A detailed breakdown of average costs by GIFA bands is shown in the table below.

Figure 3 New Development Average Cost Summary							
GIFA (m ²)	Gross Cost per m ²		Nett Cost per m ²		Cost Per Pupil Place		Sample Size
	Average	20th Percentile	Average	20th Percentile	Average	20th Percentile	
		80th Percentile		80th Percentile		80th Percentile	
0 - 750	No Data						
750 - 1,500	£3,496	£2,926 £3,683	£2,056	£1,777 £2,257	£22,195	£17,881 £26,040	21
1,500 - 2,250	£3,109	£2,669 £3,372	£1,971	£1,781 £2,148	£19,150	£13,693 £23,949	24
2,250 - 3,000	£3,057	£2,546 £3,492	£2,031	£1,816 £2,344	£18,934	£15,238 £21,372	12
3,000 - 3,750	£3,102	£2,500 £3,544	£1,925	£1,786 £2,039	£17,261	£16,385 £18,171	6
Above 3,750	£2,870	Insufficient Data	£1,750	£1,750 £1,750	£16,047	Insufficient Data	1
Whole Sample All GIFA Bands	£3,222	£2,669 £3,550	£2,002	£1,776 £2,242	£19,883	£15,548 £24,172	64

Some key analysis from this data set is summarised below.

Procurement

The study has demonstrated that the majority of New Development projects are procured via two stage open book tendering.

Form of Construction

The majority of projects use a steel frame with a composite cladding system. A small number of schemes use modular forms of construction, which on average reduce contract periods by about 15% on a typical school build when compared to an equivalent sample of steel frame projects.

Infrastructure

Due to the nature of these projects a significant investment in infrastructure and external works is evidenced throughout the sample. On average this infrastructure cost is 10% higher than seen throughout an equivalent sample of Re-Build & Extension projects where the existing site is used.

Key Definitions

New Development

Any project where 100% of the works being undertaken are new build and the site used is a greenfield site. Includes significant infrastructure and external works.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288. Index taken from August 2017 data forecasts. This adjusts costs for inflation. VAT is excluded throughout.

Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

Re-Build & Extension projects are formed from a combination of new blocks, extensions to existing schools and re-build projects on the existing site. In most cases there are elements of demolition and some projects include refurbishment work to existing buildings.

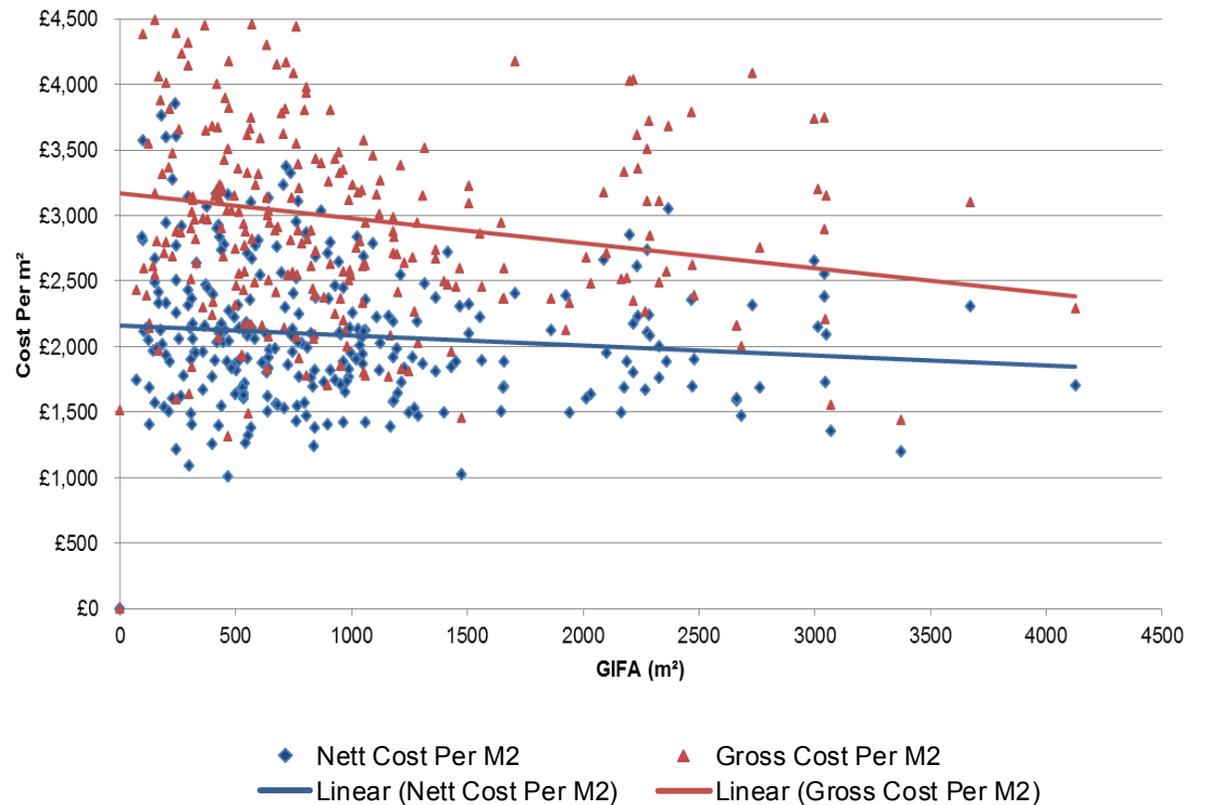
In total, 385 Re-Build & Extension projects were submitted to the study, Graph 4 (right) displays the gross and nett costs per m² for these projects. A detailed breakdown is shown on page 14.

The sample includes 111 ESFA schemes submitted by the ESFA, these projects include local authority contributions where applicable.



The Butts Primary School, Hampshire County Council

Graph 4 | Re-Build & Extension Gross & Nett Costs per m²



1,353m²

average floor area

5.14m²

average GIFA per pupil place

41wks

average contract period

£2,791

average gross cost

£1,939

average nett cost

£14,164

average cost per pupil place

Key Definitions

Re-Build & Extension

Any project where over 50% of the works being undertaken are new build, where the site used is adjacent to or the same as the existing site. Including new build blocks, extensions to existing buildings and rebuilds which include elements of demolition.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288. Index taken from August 2017 data forecasts. This adjusts costs for inflation. VAT is excluded throughout.

Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

A detailed breakdown of average costs by GIFA bands is shown in the table below.

Figure 4 Re-Build & Extension Average Cost Summary							
GIFA (m ²)	Gross Cost per m ²		Nett Cost per m ²		Cost Per Pupil Place		Sample Size
	Average	20th Percentile	Average	20th Percentile	Average	20th Percentile	
		80th Percentile		80th Percentile		80th Percentile	
0 - 750	£3,188	£2,427 £4,048	£2,182	£1,643 £2,716	£13,860	£8,678 £17,616	142
750 - 1,500	£2,681	£2,168 £3,214	£1,916	£1,485 £2,277	£14,742	£11,636 £17,698	114
1,500 - 2,250	£2,451	£2,036 £2,708	£1,700	£1,404 £1,910	£13,868	£10,662 £16,438	67
2,250 - 3,000	£2,500	£1,899 £3,109	£1,734	£1,410 £2,050	£14,405	£9,545 £17,939	38
3,000 - 3,750	£2,418	£1,904 £2,932	£1,636	£1,379 £2,104	£13,719	£10,246 £18,443	20
Above 3,750	£2,181	£2,092 £2,270	£1,551	£1,489 £1,609	£13,318	£10,682 £15,847	4
Whole Sample All GIFA Bands	£2,791	£2,135 £3,391	£1,939	£1,475 £2,353	£14,164	£10,061 £17,747	385

Some key analysis from this data set is summarised below.

Procurement

The study demonstrates that the Re-Build & Extension projects are procured via a number of different methods which include single stage and two stage tendering.

Form of Construction

The majority of projects use a steel frame with a composite cladding system. A small number of schemes use modular forms of construction, which on average reduce contract periods by 11% when compared to an equivalent sample of steel frame projects.

Infrastructure

Due to the nature of Re-Build & Extension projects, where the existing site is maintained, the costs associated with infrastructure are low, representing 15% of the total project cost on average across the sample.

Key Definitions

Re-Build & Extension

Any project where over 50% of the works being undertaken are new build, where the site used is adjacent to or the same as the existing site. Including new build blocks, extensions to existing buildings and rebuilds which include elements of demolition.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288. Index taken from August 2017 data forecasts. This adjusts costs for inflation. VAT is excluded throughout.

Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

Refurbishment projects vary considerably in nature which makes trends and benchmarking difficult. We have split these schemes into three types of refurbishment project, namely light, medium and heavy to try and limit the variations.

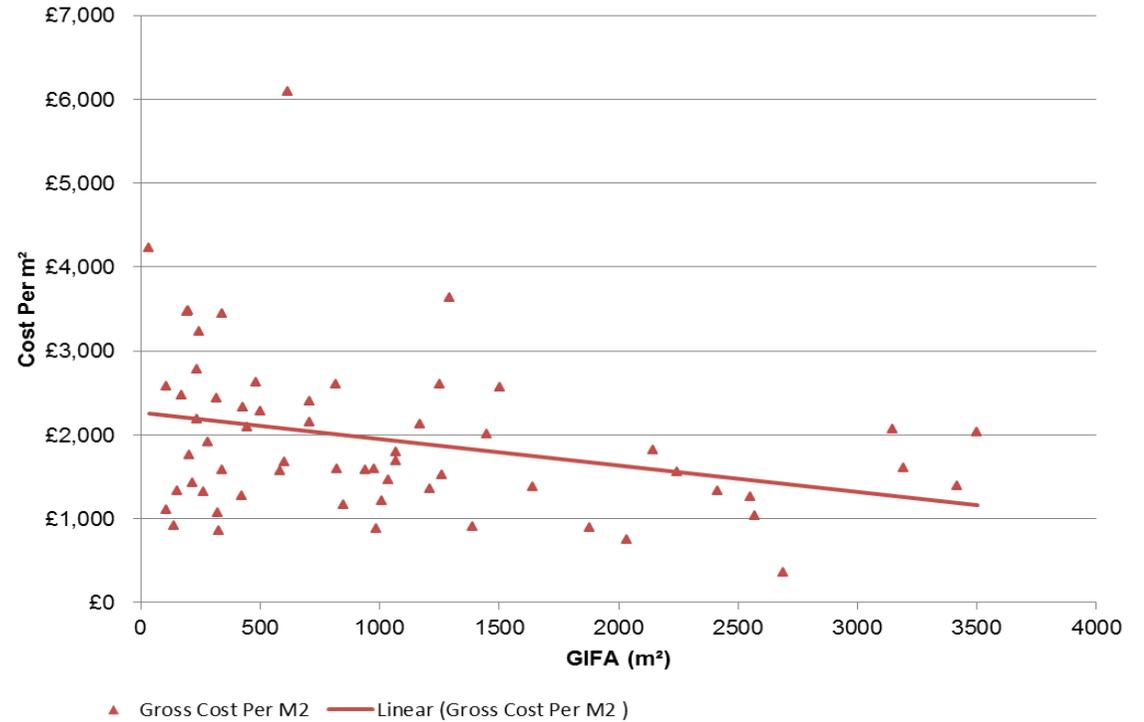
In total, 61 refurbishment projects were submitted to the study, Graph 5 (right) displays the gross costs per m² for these projects. A detailed breakdown is shown on page 16.

Full definitions of light, medium and heavy refurbishment used for this study can be found on page 31.



Richard Lee Primary, Coventry City Council

Graph 5 | Refurbishment Gross Costs per m²



1,272m²

average floor area

5.8m²

average GIFA per pupil place

36wks

average contract period

£1,935

average gross cost

£11,053

average cost per pupil place

Key Definitions

Refurbishment

Any project which contains significant alterations or less than 50% new build to existing buildings. The works are further categorised as light, medium and heavy refurbishment. See further definitions for these levels on page 29.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288. Index taken from August 2017 data forecasts. This adjusts costs for inflation. VAT is excluded throughout.

Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

A detailed breakdown of average costs by GIFA bands is shown in the table below.

Figure 5 Refurbishment Average Cost Summary							
GIFA (m ²)	Gross Cost per m ²		Nett Cost per m ²		Cost Per Pupil Place		Sample Size
	Average	20th Percentile	Average	20th Percentile	Average	20th Percentile	
		80th Percentile		80th Percentile		80th Percentile	
0 - 750	£2,273	£1,336 £2,879	Not Benchmarked		£10,044	£6,560 £12,177	30
750 - 1,500	£1,752	£1,242 £2,105			£11,319	£6,432 £15,016	17
1,500 - 2,250	£1,497	£891 £1,824			£13,794	£9,721 £18,632	6
2,250 - 3,000	£1,000	£770 £1,291			£6,482	£5,877 £7,168	4
3,000 - 3,750	£1,778	£1,525 £2,050			£17,946	£11,389 £22,873	4
Whole Sample All GIFA Bands	£1,935	£1,264 £2,574			£11,053	£6,593 £15,381	61

Some key analysis from this data set is summarised below.

This study has demonstrated that heavy refurbishment projects which typically extend the economic life of a building by approximately 15 - 25 years have an average gross cost per m² of £2,970. This represents a 38% increase when compared to a sample of equivalent medium refurbishment projects which typically increase the economic life of a building by up to 15 years. Given that heavy refurbishment projects include significant structural alterations and may also include the replacement of facades and roof finishes, this additional cost would be expected. The above is indicative as the majority of the sample (49 in number) comprise medium refurbishment projects. The sample of heavy refurbishment projects is just 6 projects, as is the case for light refurbishment.

Projects within the dataset vary considerably, as is the nature of refurbishment schemes and therefore it is difficult to draw any firm trends across the sample.

Key Definitions

Refurbishment

Any project which contains significant alterations or less than 50% new build to existing buildings. The works are further categorised as light, medium and heavy refurbishment. See further definitions for these levels on page 29.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288. Index taken from August 2017 data forecasts. This adjusts costs for inflation. VAT is excluded throughout.

Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

Part Three Secondary Schools



Starbank All through School, Birmingham City Council

The secondary school sample consists of 109 projects which are split into three school categories as shown in the pie chart (right). This sample features projects from 2012 to 2016 with a total combined capital value of £1.7 billion, comprising:

- ◆ 13 New Development projects (3 All Through schools).
- ◆ 94 Re-Build & Extension projects (1 All Through school)
- ◆ 2 Refurbishment projects.

109 secondary schools

The majority of the secondary school sample consists of Re-Build & Extension projects, demonstrating that Local Authorities are starting to expand existing school sites to meet the considerable forecast demand for pupil places. The sample has seen a 30% increase in schemes since last year, evidencing the growing demand within the secondary sector.

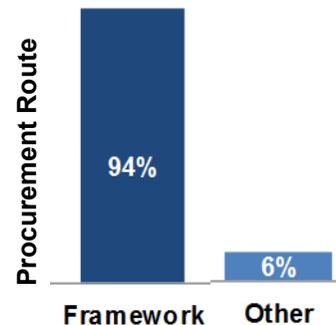
The majority of schemes are procured via a framework arrangement, be that at a national, regional or local level. It has not been possible to draw sufficient trends relating to the cost benefits of these different procurement routes due to the significant variations in the framework arrangements.

Over the next pages, further commentary is provided for each project category which details cost variations and observations on drivers for costs between projects. A small sample of New Development and Refurbishment projects has been obtained. It is not possible to draw any conclusions or provide further commentary, but this information is given to show the emergence of the sample.

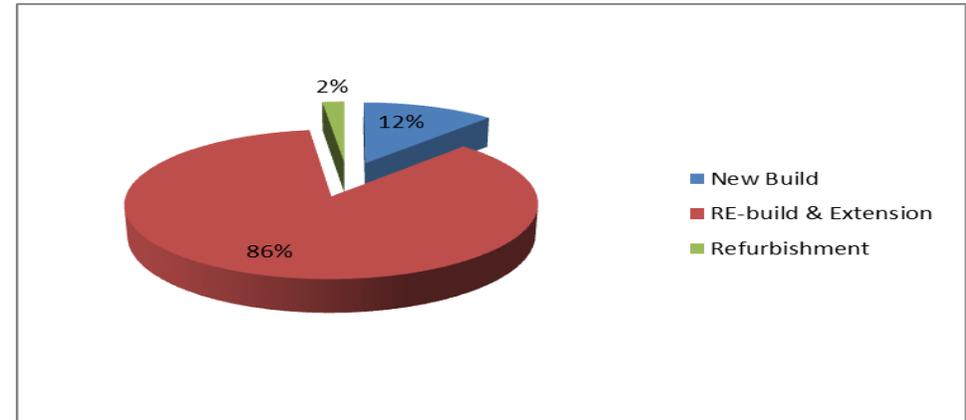
106,000
secondary places provided

£1.7 billion

capital value of secondary school sample



Project Categories



Wickersley Comprehensive, Rotherham Metropolitan Borough

Secondary school gross costs as a whole sample have increased over the last two years. This has been driven by the small data sets available within the study for New Development and Refurbishment Projects. This study has demonstrated a number of reasons for the fluctuations evidenced in the cost trajectory over the last five years (Graph 6, right) which are outlined below.

New Development

A small sample of New Development projects has been obtained. It is not possible to draw any conclusions or provide further commentary, but this information is given to show the emergence of the sample.

Re-Build & Extension

Extensions to existing school sites, new teaching blocks and re-built schools on existing sites have seen a steady increase in gross costs over the last 24 months shown. It should be noted that the sample size for 2012 is small and that therefore greater certainty can be placed in the 2013 - 2016 trajectory, which has seen a 6.9% increase in gross costs. This study has shown a number of factors influencing this trend:

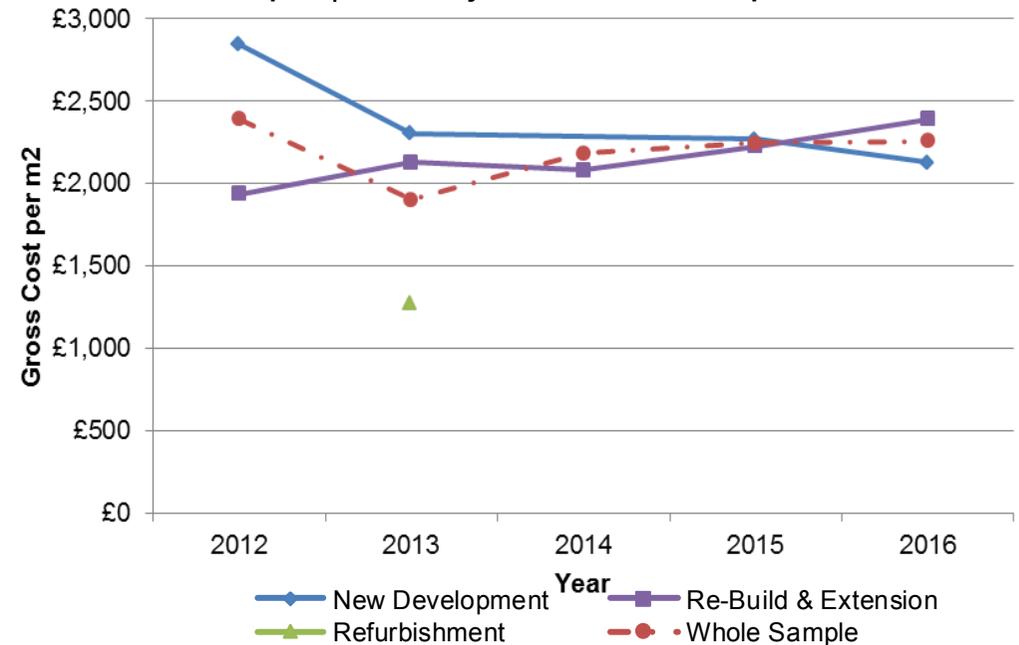
- ◆ Smaller projects have continued to be procured over the last 12 months shown, with the average project GIFA over this period being 5,500m². This is considerably smaller than the 7,500m² average GIFA seen prior to 2015, which reduces the cost benefits experienced by larger schemes.
- ◆ The market has seen 4.3% (RICS, BCIS TPI) inflation and although the figures within this report are indexed for the effect of inflation, we believe a market factor is not yet being reflected in the indices to account for market pressures in terms of labour and material costs.

Refurbishment

A small sample of Refurbishment projects has been obtained. It is not possible to draw any conclusions or provide further commentary.

Figure 6 (right) displays the average costs per year alongside the number of projects in each year banding. It should be noted that the secondary school sample is small and therefore average costs displayed are indicative only.

Graph 6 | Secondary School Gross Costs per m²



Year	New Development		Re-Build & Extension		Refurbishment		Whole Sample	
	Gross Cost	Sample Size	Gross Cost	Sample Size	Gross Cost	Sample Size	Gross Cost	Sample Size
2012	£2,844	2	£1,997	1	-	-	£2,390	3
2013	£2,303	1	£2,147	11	£1,278	2	£1,904	14
2014	-	-	£2,053	27	-	-	£2,184	27
2015	£2,268	4	£2,081	32	-	-	£2,247	36
2016	£2,127	6	£2,297	24	-	-	£2,260	30

Re-Build & Extension projects are formed from a combination of new blocks, extensions to existing schools and re-build projects on the existing site. In most cases there are elements of demolition and some projects include refurbishment work to existing buildings.

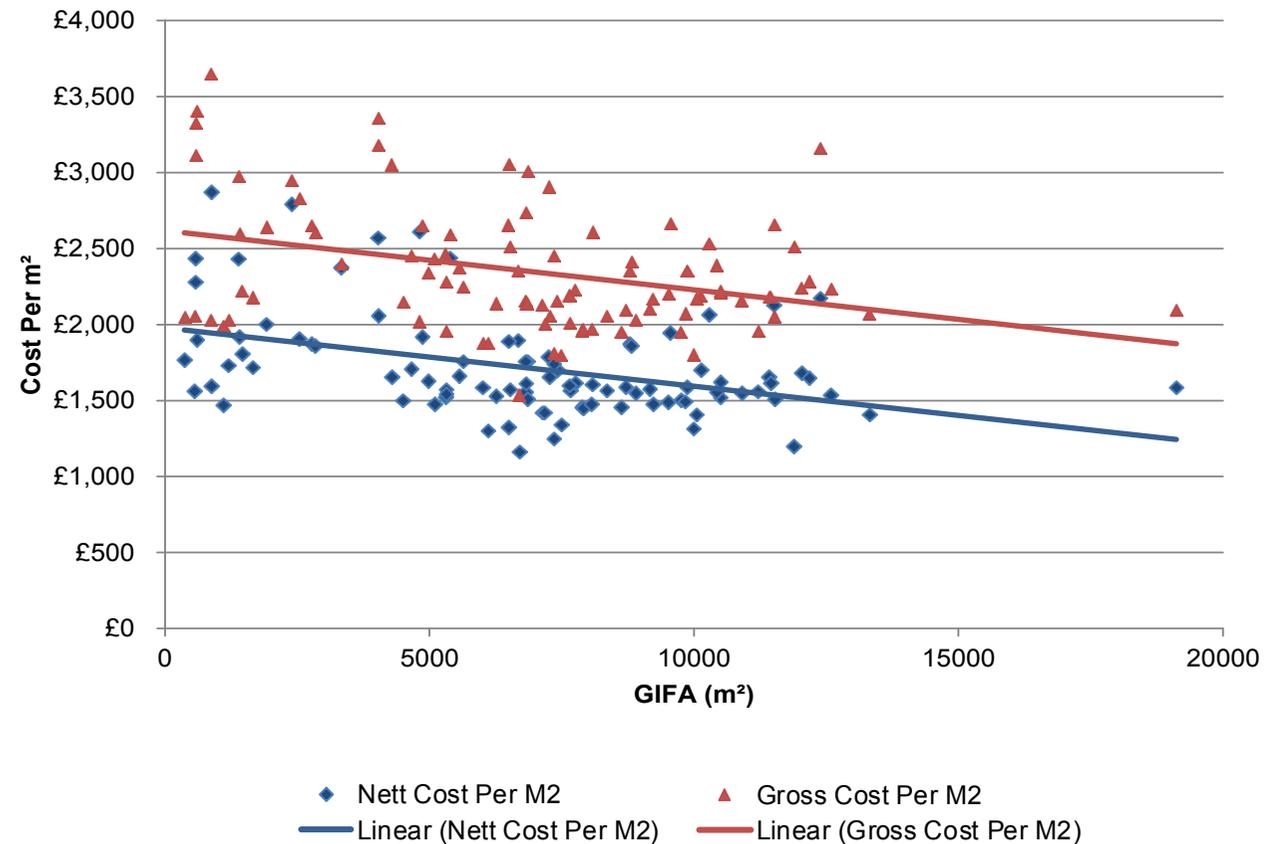
In total, 94 Re-Build & Extension projects were submitted to the study, Graph 8 (right) displays the gross and nett costs per m² for these projects. A detailed breakdown is shown on page 21.

The sample includes 68 ESFA schemes submitted by the ESFA, these projects include local authority contributions where applicable.



Robert Mays Secondary School Extension, Hampshire County Council

Graph 8 | Re-Build & Extension Gross & Nett Costs per m²



7,013m²

average floor area

7.5m²

average GIFA per pupil place

57wks

average contract period

£2,133

average gross cost

£1,555

average nett cost

£15,822

average cost per pupil place

Key Definitions

Re-Build & Extension

Any project where over 50% of the works being undertaken are new build, where the site used is adjacent to or the same as the existing site. Including new build blocks, extensions to existing buildings and rebuilds which include elements of demolition.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288. Index taken from August 2017 data forecasts. This adjusts costs for inflation. VAT is excluded throughout.

Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

A detailed breakdown of average costs by GIFA bands is shown in the table below.

Figure 7 Re-Build & Extension Average Cost Summary							
GIFA (m ²)	Gross Cost per m ²		Nett Cost per m ²		Cost Per Pupil Place		Sample Size
	Average	20th Percentile	Average	20th Percentile	Average	20th Percentile	
		80th Percentile		80th Percentile		80th Percentile	
0 - 2,500	£2,383	£1,862 £2,989	£1,840	£1,483 £2,249	£15,105	£8,563 £21,318	15
2,500 - 5,000	£2,392	£2,338 £2,830	£1,786	£1,763 £2,230	£17,764	£17,319 £25,379	12
5,000 - 7,500	£2,070	£1,997 £2,563	£1,448	£1,581 £1,759	£15,959	£16,569 £21,856	28
7,500 - 10,000	£1,958	£1,770 £1,976	£1,434	£1,338 £1,548	£14,255	£13,055 £16,020	21
10,000 - 12,500	£2,096	£2,345 £2,348	£1,505	£1,894 £1,910	£16,913	£25,442 £34,331	16
12,500 - 15,000	£1,898	Insufficient Data	£1,300	Insufficient Data	£17,113	Insufficient Data	2
Whole Sample All GIFA Bands	£2,133	£1,874 £2,811	£1,555	£1,478 £2,212	£15,822	£11,772 £22,386	94

Some key analysis from this data set is summarised below.

Procurement

The study has demonstrated that the majority of local authority Re-Build & Extension projects are procured via two stage open book tendering. ESFA projects are let via an ESFA procurement process.

Infrastructure

Due to the nature of Re-Build & Extension projects, where the existing site is maintained, the costs associated with infrastructure are low, representing 15% of the total project cost on average across the sample.

Key Definitions

Re-Build & Extension

Any project where over 50% of the works being undertaken are new build, where the site used is adjacent to or the same as the existing site. Including new build blocks, extensions to existing buildings and rebuilds which include elements of demolition.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288. Index taken from August 2017 data forecasts. This adjusts costs for inflation. VAT is excluded throughout.

Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

A small sample of New Development and Refurbishment projects has been obtained. It is not possible to draw any conclusions or provide further commentary, but this information is given to show the emergence of the sample.

Figure 8 | New Development Average Cost Summary

GIFA (m ²)	Gross Cost per m ²		Nett Cost per m ²		Cost Per Pupil Place		Sample Size
	Average	20th Percentile	Average	20th Percentile	Average	20th Percentile	
		80th Percentile		80th Percentile		80th Percentile	
0 - 2,500	£2,129	£1,923 £2,334	£2,029	£1,953 £2,105	£11,187	£7,723 £14,652	2
2,500 - 5,000	No Data						
5,000 - 7,500	£1,844	£1,770 £1,917	£1,444	£1,388 £1,500	£15,745	£15,454 £16,035	2
7,500 - 10,000	£2,397	£2,194 £2,473	£1,638	£1,549 £1,741	£18,795	£15,965 £20,504	5
10,000 - 12,500	£2,391	£2,069 £2,692	£1,645	£1,485 £1,800	£18,387	£16,386 £20,533	3
12,500 - 15,000	£2,725	£2,725 £2,725	£1,963	£1,963 £1,963	£23,205	£23,205 £23,205	1
Whole Sample All GIFA Bands	£2,294	£1,941 £2,624	£1,695	£1,455 £1,915	£17,401	£14,845 £20,533	13

Figure 9 | Refurbishment Average Cost Summary

GIFA (m ²)	Gross Cost per m ²		Nett Cost per m ²		Cost Per Pupil Place		Sample Size
	Average	20th Percentile	Average	20th Percentile	Average	20th Percentile	
		80th Percentile		80th Percentile		80th Percentile	
2,500 - 5,000	£1,278	£1,269 £1,286	No Data		£13,361	£13,256 £13,467	2
Whole Sample All GIFA Bands	£1,278	£1,269 £1,286			£13,361	£13,256 £13,467	2

Key Definitions

New Development & Refurbishment

Category definitions can be found on page 31.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288. Index taken from August 2017 data forecasts. This adjusts costs for inflation. VAT is excluded throughout.

Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

Part Four SEN Schools



Portesbury SEN School :Surrey County Council

The SEN school sample consists of 41 projects which are split into three school categories as shown in the pie chart (right). This sample features projects from 2012 to 2016 with a total combined capital value of £265 million, comprising:

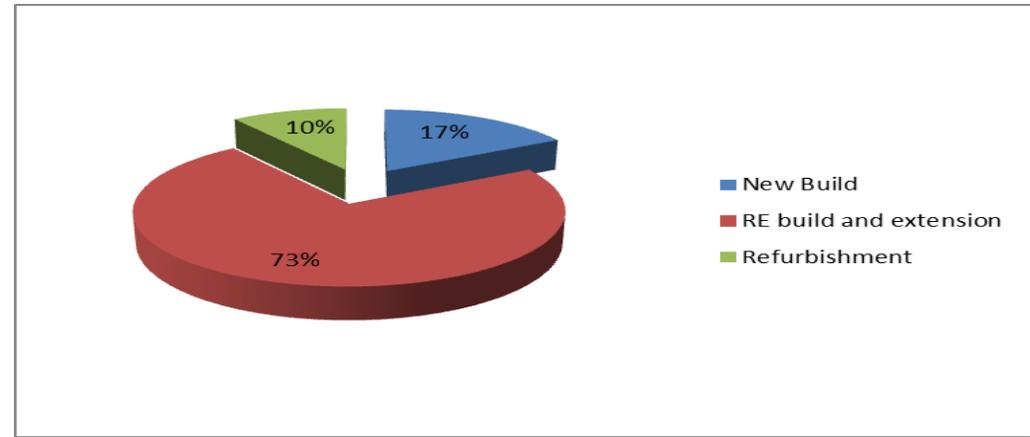
- ◆ 7 New Development projects.
- ◆ 30 Re-Build & Extension projects.
- ◆ 4 Refurbishment projects.

41 SEN schools

While significant demand for primary and secondary school capacity is being seen across the country, this increases the need for specialist teaching facilities and therefore Local Authorities are starting to increase the capacity within SEN school stock. This study evidences that the majority of provision is being made within existing schools, namely Re-Build & Extension projects.

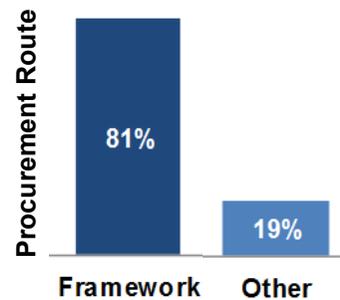
The majority of schemes are procured via a framework arrangement, be that at a national, regional or local level. It has not been possible to draw sufficient trends relating to the cost benefits of these different procurement routes due to the significant variations in the framework arrangements.

Over the next pages further commentary is provided for each project category which details cost variations and observations on drivers for costs between projects. A small sample of New Development and Refurbishment projects has been obtained. It is not possible to draw any conclusions or provide further commentary, but this information is given to show the emergence of the sample.



4,700
new SEN places

£265 million
capital value of SEN school sample



Re-Build & Extension projects are formed from a combination of new blocks, extensions to existing schools and re-build projects on the existing site. In most cases there are elements of demolition and some projects include refurbishment work to existing buildings.

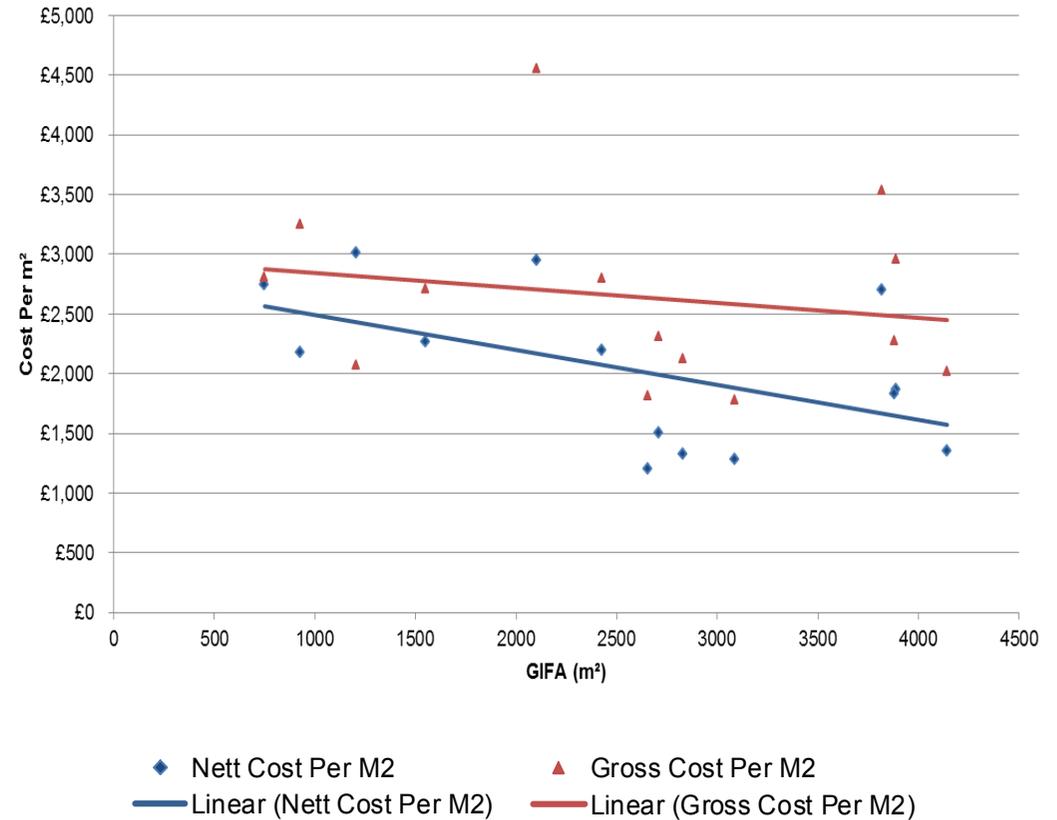
In total, 30 Re-Build & Extension projects were submitted to the study, Graph 9 (right) displays the gross and nett costs per m² for these projects. A detailed breakdown is shown on page 26.

The sample includes 16 ESFA schemes submitted by the ESFA, these projects include local authority contributions where applicable.



Yewstock Special School, Dorset County Council

Graph 9 | Re-Build & Extension Gross & Nett Costs per m²



2,711m²

average floor area

23m²

average GIFA per pupil place

59wks

average contract period

£2,366

average gross cost

£1,764

average nett cost

£67,379

average cost per pupil place

Key Definitions

Re-Build & Extension

Any project where over 50% of the works being undertaken are new build, where the site used is adjacent to or the same as the existing site. Including new build blocks, extensions to existing buildings and rebuilds which include elements of demolition.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288. Index taken from August 2017 data forecasts. This adjusts costs for inflation. VAT is excluded throughout.

Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

A detailed breakdown of average costs by GIFA bands is shown in the table below.

Figure 10 Rebuild & Extension Average Cost Summary							
GIFA (m ²)	Gross Cost per m ²		Nett Cost per m ²		Cost Per Pupil Place		Sample Size
	Average	20th Percentile	Average	20th Percentile	Average	20th Percentile	
		80th Percentile		80th Percentile		80th Percentile	
0 - 750	£2,266	Insufficient data	£2,085	Insufficient data	£36,381	Insufficient data	2
750 - 1,500	£2,661		£2,598		£53,949		2
1,500 - 2,250	£2,837		£2,064		£87,322		5
2,250 - 3,000	£2,155		£1,491		£62,897		8
3,000 - 3,750	£2,496		£1,678		£56,543		2
Over 3,750	£2,246	£2,285 £3,073	£1,633	£1,799 £2,036	£71,621	£69,554 £82,971	11
Whole Sample All GIFA Bands	£2,366		£1,764		£67,379		30

Key Definitions

Re-Build & Extension

Any project where over 50% of the works being undertaken are new build, where the site used is adjacent to or the same as the existing site. Including new build blocks, extensions to existing buildings and rebuilds which include elements of demolition.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

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Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

A small sample of New Development and Refurbishment projects has been obtained. It is not possible to draw any conclusions or provide further commentary, at this stage.

Figure 11 | New Development Average Cost Summary

GIFA (m ²)	Gross Cost per m ²		Nett Cost per m ²		Cost Per Pupil Place		Sample Size
	Average	20th Percentile 80th Percentile	Average	20th Percentile 80th Percentile	Average	20th Percentile 80th Percentile	
0 - 750	No Data						
750 - 1,500	£3,743	Insufficient Data	£2,478	Insufficient Data	£72,896	Insufficient Data	2
1,500 - 2,250	£2,169		£1,562		£43,921		1
2,250 - 3,000	£2,414		£1,706		£67,591		1
3,000 - 3,750	No Data						
Over 3,750	£2,478	£2,087 £2,866	£1,844	£1,707 £2,000	£117,836	£60,526 £166,843	3
Whole Sample All GIFA Bands	£2,786		£1,965		£87,259		7

Figure 12 | Refurbishment Average Cost Summary

GIFA (m ²)	Gross Cost per m ²		Cost Per Pupil Place		Sample Size
	Average	20th Percentile 80th Percentile	Average	20th Percentile 80th Percentile	
0 - 750	£3,096	Insufficient Data	Insufficient Data		1
750 - 1,500	£1,502	£1,324 £1,680	£26,594	Insufficient Data	2
Whole Sample All GIFA Bands	£1,892				3

Key Definitions

New Development & Refurbishment

Category definitions can be found on page 31.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2017.

Inflation

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Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 31.

Part Five Further Information



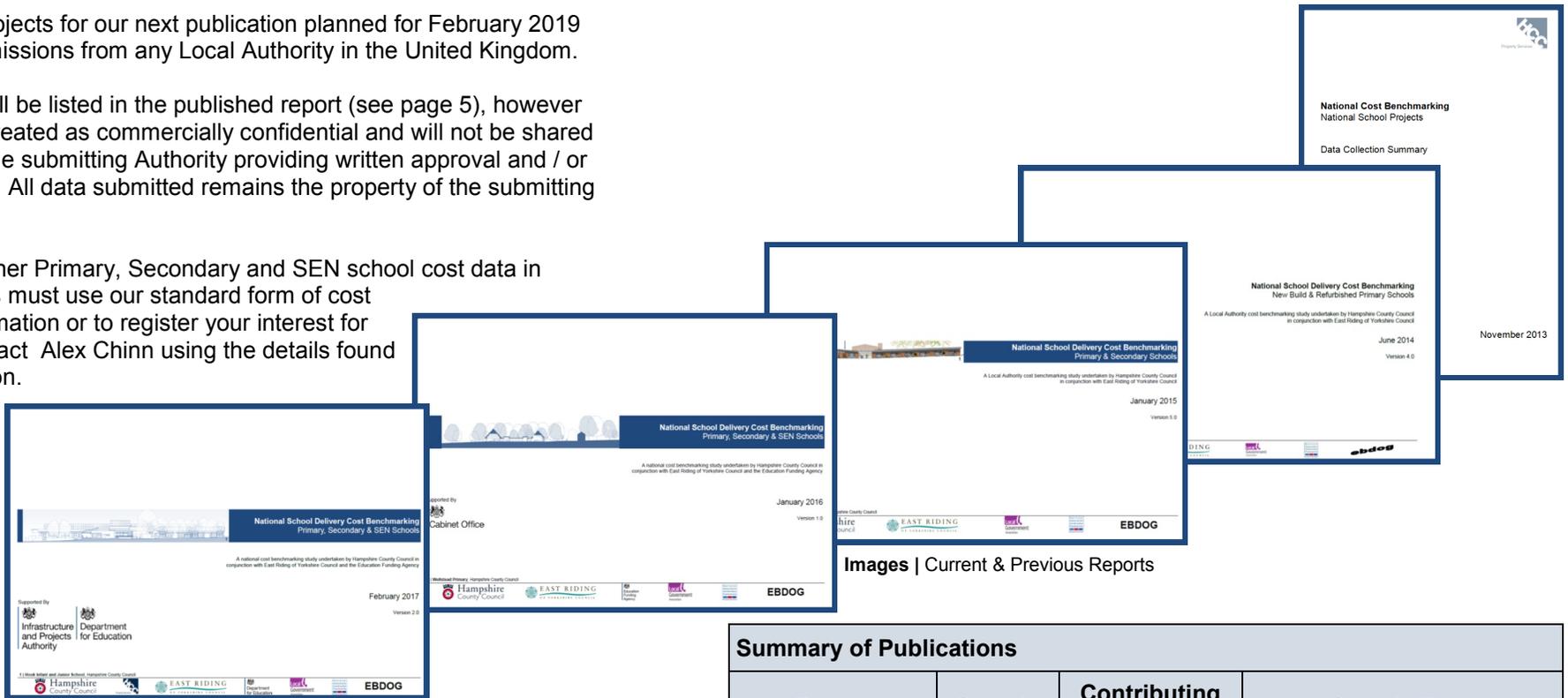
Tweseldown Primary, Hampshire County Council

Intentionally Blank

We are keen to receive projects for our next publication planned for February 2019 and welcome project submissions from any Local Authority in the United Kingdom.

Participating Authorities will be listed in the published report (see page 5), however any data supplied will be treated as commercially confidential and will not be shared with third parties without the submitting Authority providing written approval and / or written acknowledgement. All data submitted remains the property of the submitting Authority.

We are keen to obtain further Primary, Secondary and SEN school cost data in particular. All submissions must use our standard form of cost analysis. For further information or to register your interest for the next study please contact Alex Chinn using the details found at the end of this publication.



Images | Current & Previous Reports



Alfred Sutton Primary, Reading Borough Council

Summary of Publications

Report	Sample	Contributing Authorities	Sample Type
April 2013*	45	-	Primary & Secondary
November 2013	39	-	Primary
June 2014	70	-	Primary
January 2015	122	42	Primary & Secondary
February 2016	343	63	Primary, Secondary & SEN
February 2017	546	108	Primary, Secondary & SEN
February 2018	660	126	Primary, Secondary & SEN

Key terms used throughout this publication and an outline of how data has been adjusted for inflation and regional cost variations are defined here.

New Development

Any project where 100% of the works being undertaken are new build and the site used is a greenfield site. Includes significant infrastructure and external works.

Re-Build & Extension

Any project where over 50% of the works being undertaken are new build, where the site used is adjacent to or the same as the existing site. Including new build blocks, extensions to existing buildings and rebuilds which include elements of demolition.

Refurbishment

Any project which contains significant alterations or less than 50% new build to existing buildings. The works are further categorised as light, medium and heavy refurbishment. See further definitions for these levels.

Refurbishment Level - Light Refurbishment

Investment focused on common areas and essential repairs only. Extension of economic life is approximately 5 years. Works include strip out of existing space, shell and core refurbishment including cosmetic upgrades. Assumes existing main plant, existing floors and ceilings are retained.

Refurbishment Level - Medium Refurbishment

Investment involves full upgrade of the existing building services and finishes but stops short of major structural alterations. Extension of economic life is approximately 15 years. Works include strip out of existing space, shell and core refurbishment including cosmetic upgrades. No major structural or substructural alterations. Existing floors and ceilings are retained and minor repairs only to façade.

Refurbishment Level - Heavy Refurbishment

Investment includes significant structural alterations and may also include the replacement of facades and roof finishes. The complete renewal of internal fittings, finishes and MEP systems. The building is typically unoccupied. Extension of economic life is approximately 15 - 25 years. Works include strip out of existing space, shell and core refurbishment including cosmetic upgrades. Replacement to raised floors, ceilings and new services.

Spatial Measures (GIFA)

Encompass the most common formats used by clients and industry to benchmark total construction costs, which in the case of schools has been taken as £/m² of the Gross Internal Floor Area (GIFA). This is related to throughout and is the total m² of accommodation delivered by a project. For Refurbishment projects the GIFA refers to the percentage of new build floor area only.

Total Project Cost

Represents the overall project cost at tender stage, inclusive of fees, external works, abnormal costs, including minor building works and fittings and fixtures. It is inclusive of additions for preliminaries, contingency, overheads and profit.

Nett Cost per m²

Represents the tendered cost per m² of GIFA, exclusive of fees, abnormal, external works, minor building works and alterations. It is inclusive of additions for preliminaries, contingency, overheads and profit. Fixed fittings and furnishings are included.

Gross Cost per m²

Represents the tendered Total Project Cost per m² of GIFA.

Cost Per Pupil Place

Represents the Total Project Cost, divided by the number of additional pupil places being created by the works in the school. Where this data has not been available for refurbishment projects, the Total Project Cost has been divided by the total number of pupils in the school.

20th and 80th Percentiles

The 20th percentile is the value below which 20% of the observations may be found, while the 80th percentile is the value below which 80% are found.

Abnormals

These encompass substructure cost above normalised base cost and demolitions. The normalised base cost for substructures used was £120 per m² of GIFA. This value has been derived using the worked example for calculating substructure abnormal published by the former Department for Education and Employment (DFEE) within their document entitled "Education Building Projects: Information on Costs and Performance Data". This calculation used within this report recognises the impact of timing (tender factor), location and size of projects.

Fees

All professional (client) fee costs have been included where provided within the sample data. These fees include project management, cost management and other professional services associated to the project. In house architectural service fees are also included where applicable. If fee information was not available a standardised professional fee allowance of 12% has been included on all projects where the unadjusted tendered Contract Sum is £10m or less. A standardised professional fee allowance of 10% has been included on all projects where the unadjusted Contract Sum is in excess of £10m. A professional (client) fee of 3% has been applied to all centrally funded projects submitted by the ESFA as agreed with the ESFA.

Excluded Cost Elements

Statutory fees, survey costs, loose furniture and equipment, client department costs including programme management, legal and land acquisition costs are excluded from all figures shown herein.

Preliminaries, Contingency, Overheads & Profit

Included in all figures herein as a percentage cost of GIFA. In the case of Refurbishment projects the GIFA refers to the percentage of new build floor area only.

Location Factor

All costs have been normalised to a common UK average price level using regional location factors published by BCIS to accord with the UK Mean 100. Index taken at November 2016.

Inflation

All costs have been updated to the latest Building Cost Information Service (BCIS) ALL-IN Tender Price of Index (TPI) of 1st Quarter 2017 of 288 Index taken at August 2017 This adjusts costs for inflation. VAT is excluded throughout.

Please Note

All cost data contained within this report relates to Tender Stage (Gateway 3, Contract Let) costs, unless otherwise identified as Outturn figures.

Photographs contained throughout this publication are used with the permission of the associated Local Authority.

For further information relating to this study or for details regarding future publications and how to participate please contact the individuals below.

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Branston Road High School, Staffordshire County Council

