



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 Funding Agency

February 2017

Version 2.0

Supported By



Infrastructure
and Projects
Authority

1 | Hook Infant and Junior 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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Rocester School, Staffordshire County Council

545 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. As a first step it is planned to run a collaborative workshop to discuss the outputs from this study during 2017.

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 Funding Agency (EFA). This report is the fifth 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 545 projects from across England, consisting of:

- ◆ 428 primary school projects.
- ◆ 85 secondary school projects.
- ◆ 32 SEN 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.
- ◆ A 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 29.

Industry Summary

Recent commentary from the Royal Institution of Chartered Surveyors (RICS) Building Cost Information Service (BCIS) notes that the uncertainty following the outcome of the BREXIT vote and a potential period of uncertainty within the construction sector. The comment goes on to say that the extent of this slowdown will be dependent upon political discussions and outcomes as a result of the exit negotiations.

188,000

school places

£3.6 billion

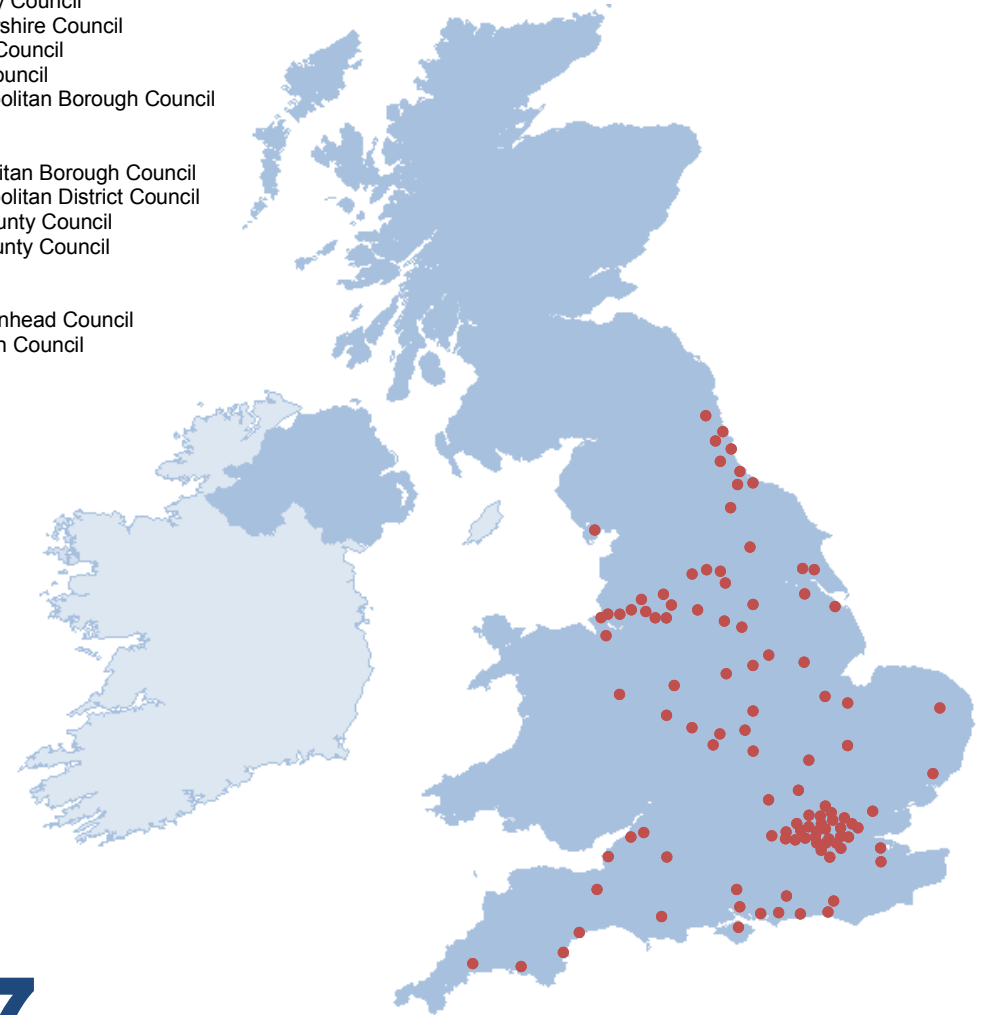
combined project capital value



Whitmore Park Primary, Coventry City Council

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 sample from the Education Funding Agency (EFA) of EFA capital programme schemes. The list below shows the areas covered by the study.

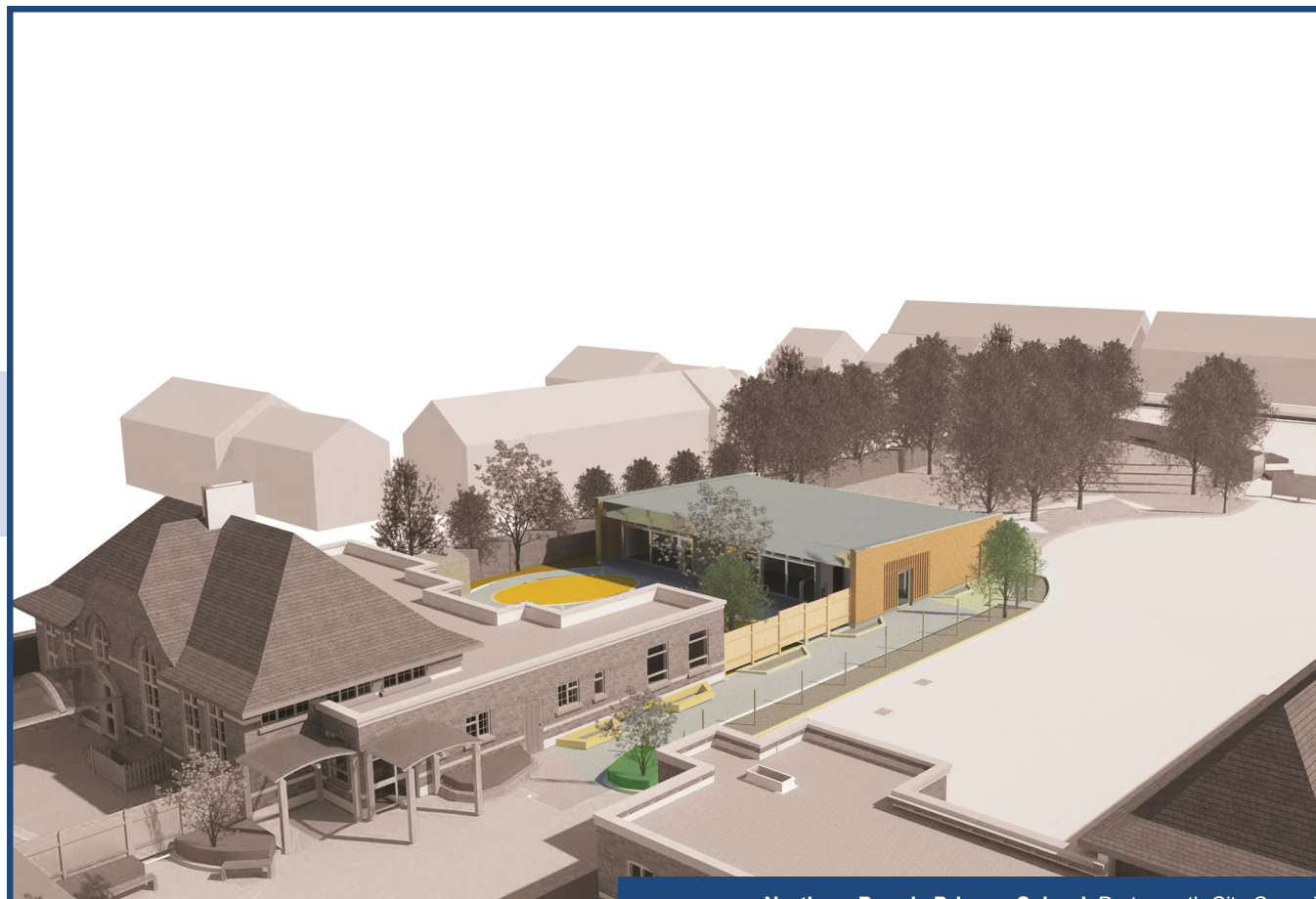
- | | | |
|--|---|---|
| Birmingham City Council | London Borough of Hillingdon | Suffolk County Council |
| Bradford Metropolitan District Council | London Borough of Hounslow | Somerset County Council |
| Brighton & Hove City Council | London Borough of Islington | Southampton City Council |
| Bristol City Council | London Borough of Lambeth | South Gloucestershire Council |
| Buckinghamshire County Council | London Borough of Lewisham | Sunderland City Council |
| Bury Metropolitan Borough Council | London Borough of Merton | Surrey County Council |
| Calderdale Metropolitan Borough Council | London Borough of Newham | Tameside Metropolitan Borough Council |
| Cambridge City Council | London Borough of Redbridge | Thurrock Council |
| Cambridgeshire County Council | London Borough of Richmond Upon Thames | Torbay Council |
| Central Bedfordshire Council | London Borough of Southwark | Trafford Metropolitan Borough Council |
| Cheshire West and Chester Council | London Borough of Sutton | Wakefield Metropolitan District Council |
| Chichester District Council | London Borough of Tower Hamlets | Warwickshire County Council |
| City of York | London Borough of Waltham Forest | West Sussex County Council |
| Cornwall Council | London Borough of Westminster | Wigan Council |
| Coventry City Council | Luton Borough Council | Wiltshire Council |
| Cumbria County Council | Manchester City Council | Windsor & Maidenhead Council |
| Daventry District Council | Medway Council | Worthing Borough Council |
| Derby City Council | Norfolk County Council | Wirral Council |
| Devon County Council | North East Lincolnshire Council | |
| Doncaster Metropolitan Borough Council | Northamptonshire County Council | |
| Dorset County Council | North Tyneside Metropolitan Borough Council | |
| Durham County Council | North Lincolnshire Council | |
| East Riding of Yorkshire Council | North Somerset Council | |
| East Sussex County Council | North Yorkshire County Council | |
| Essex County Council | Northumberland Council | |
| Gateshead Metropolitan Borough Council | Nottingham City Council | |
| Hampshire County Council | Nottinghamshire County Council | |
| Hartlepool Borough Council | Oldham Metropolitan Borough Council | |
| Hertfordshire County Council | Peterborough City Council | |
| Isle of Wight Council | Plymouth City Council | |
| Kent County Council | Portsmouth City Council | |
| Kingston upon Hull City Council | Reading Borough Council | |
| Leeds City Council | Redcar and Cleveland Council | |
| Leicester City Council | Rotherham Metropolitan Borough Council | |
| Lincolnshire County Council | Royal Borough of Greenwich | |
| Liverpool City Council | Royal Borough of Kensington & Chelsea | |
| London Borough of Barking and Dagenham | Salford City Council | |
| London Borough of Barnet | Sandwell Metropolitan Borough Council | |
| London Borough of Bromley | Sheffield City Council | |
| London Borough of Croydon | Shropshire Council | |
| London Borough of Ealing | Slough Borough Council | |
| London Borough of Enfield | Staffordshire County Council | |
| London Borough of Hammersmith and Fulham | St Helen's Metropolitan Borough Council | |
| London Borough of Harrow | Stockport Metropolitan Borough Council | |
| | Stockton on Tees Borough Council | |



107 Local Authority Areas covered across England

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

Part Two Primary Schools



Northern Parade Primary School, Portsmouth City Council

The primary school sample consists of 428 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 £1.5 billion, comprising:

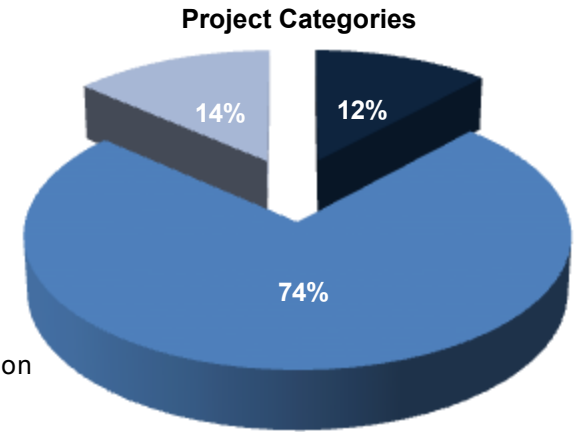
- ◆ 51 New Development projects.
- ◆ 319 Re-Build & Extension projects.
- ◆ 58 Refurbishment projects.

428 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 55% 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.

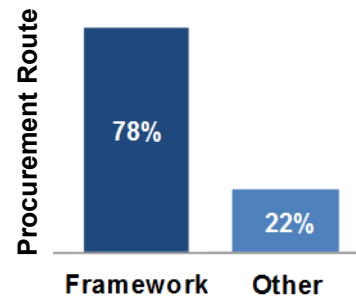
Over the next pages further commentary is provided for each project category which details cost variations and observations on drivers for costs between projects.



Rushden Primary, Northamptonshire County Council

106,000
new primary places

£1.5 billion
capital value of primary school sample



Primary school gross costs as a whole sample have decreased by 8% since 2012, however over the last two years costs have started to increase. This study has demonstrated 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.

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. This study has shown a number of factors influencing this trend:

- ◆ Smaller projects have been procured over the last 12 months, with the average project GIFA over this period being 900m². This is considerably smaller than the 1,400m² average GIFA seen prior to 2015, which reduces the cost benefits experienced by larger schemes.
- ◆ The market has seen 8.9% (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.

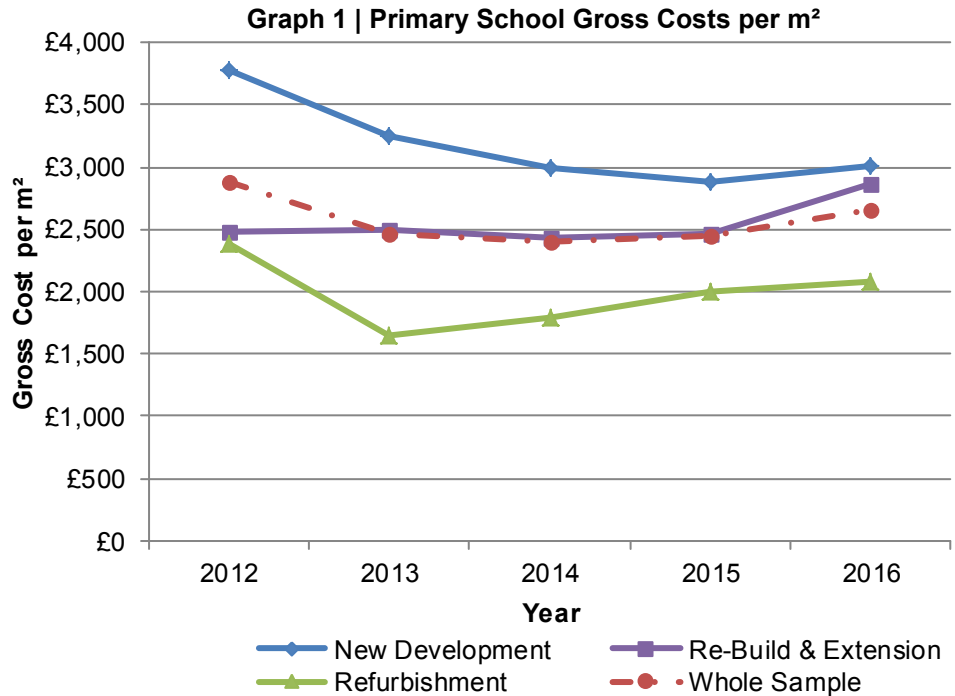
Refurbishment

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 this year banding.

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

8%

reduction in gross costs across the whole sample



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	£3,784	5	£2,844	27	£2,380	6	£2,883	38
2013	£3,252	10	£2,671	63	£1,643	18	£2,463	91
2014	£2,990	13	£2,554	105	£1,792	13	£2,404	131
2015	£2,882	17	£2,607	84	£2,006	15	£2,453	116
2016	£3,005	6	£3,110	40	£2,075	6	£2,651	52

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 EFA procured schemes has been restricted to projects with a GIFA of over 750m² as none of the EFA projects are less than 1FE within the sample.

This cost trajectory includes 77 EFA primary school projects. Graph 2 (right) displays a cost trajectory for these projects alongside those from Local Authorities.

Local Authority costs fell steadily between 2012 and 2014, but costs have since seen a rise. This has led to a reduced downward cost trajectory of 9.1% since 2012.

EFA average gross costs are lower than Local Authorities but the gap is reducing. EFA projects were 18% lower in 2013 and are currently 6% lower (in 2016). There are a number of factors influencing these costs:

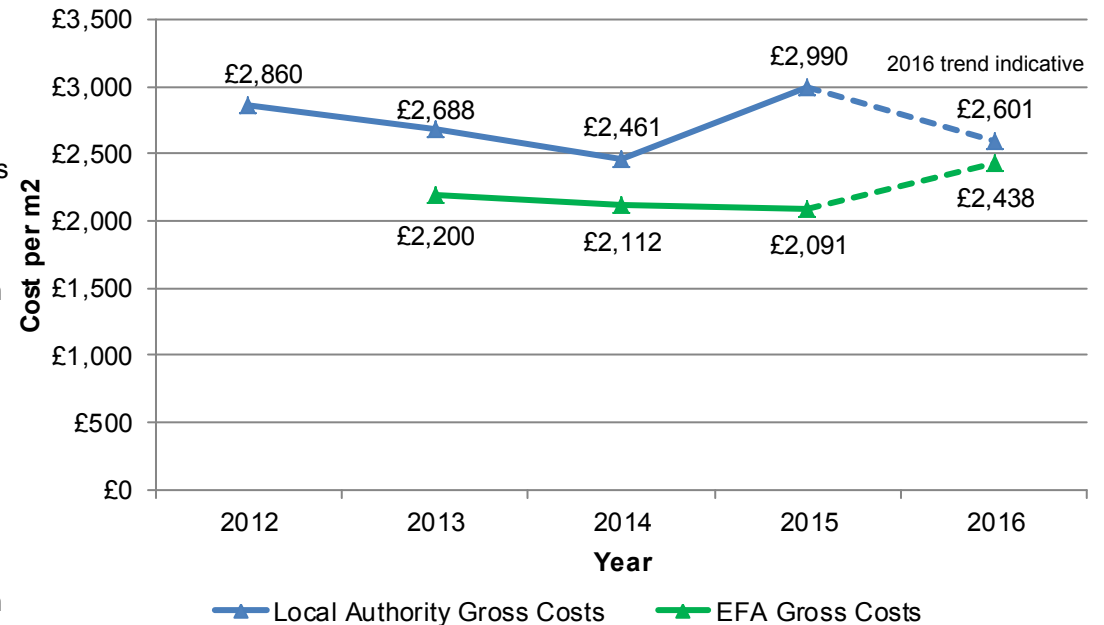
- ◆ EFA projects are generally larger than Local Authority schemes and therefore benefit from economies of scale.
- ◆ The EFA has had the benefit of batching projects and a historically keen contractors' market but has recently experienced a rising construction market and this study has confirmed that costs have started to increase since 2015. Costs may continue to increase due to a new risk of weaker Sterling (£) leading to material price increases.

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

Due to the small sample size of the 2016 data set it has not been possible to validate the pupil place numbers for these schemes.

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



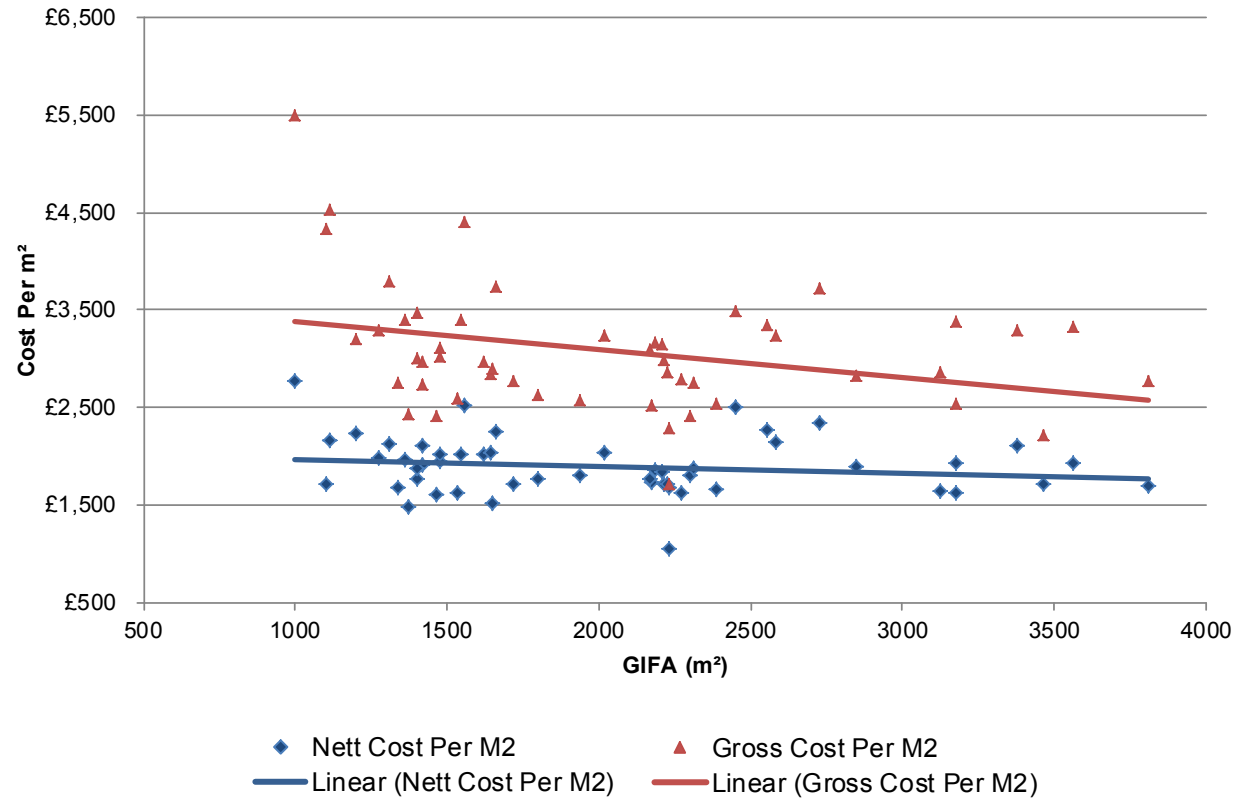
Year	Gross Costs per m ²				Costs Per Pupil Place			
	Local Authority		EFA		Local Authority		EFA	
	Average	Sample Size	Average	Sample Size	Average	Sample Size	Average	Sample Size
2012	£2,860	18	-	-	£15,341	18	-	-
2013	£2,688	35	£2,200	10	£16,119	35	£11,557	10
2014	£2,461	37	£2,112	30	£14,936	37	£11,237	30
2015	£2,990	30	£2,091	27	£16,956	30	£11,285	27
2016	£2,601	7	£2,438	8	-	-	-	-

New Development projects are new schools built on greenfield sites, which include significant infrastructure and external work costs. There are 51 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 11.



Northmoor Academy, Oldham Metropolitan Borough Council

Graph 3 | New Development Gross & Nett Costs per m²



2,031m²

average floor area

5.3m²

average GIFA per pupil place

48wks

average contract period

£3,085

average gross cost

£1,897

average nett cost

£19,051

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 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 2016 of 273. Index taken at November 2016. 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 29.

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 80th Percentile	Average	20th Percentile 80th Percentile	Average	20th Percentile 80th Percentile	
0 - 750	No Data						
750 - 1,500	£3,373	£2,750 £3,801	£1,958	£1,710 £2,121	£21,244	£16,886 £23,675	16
1,500 - 2,250	£2,938	£2,590 £3,192	£1,824	£1,694 £2,026	£18,966	£14,319 £24,971	19
2,250 - 3,000	£3,015	£2,668 £3,413	£2,014	£1,748 £2,303	£17,474	£14,327 £20,419	9
3,000 - 3,750	£2,936	£2,546 £3,327	£1,822	£1,635 £1,926	£16,428	£14,911 £17,394	6
Above 3,750	£2,777	Insufficient Data	£1,688	Insufficient Data	£15,525	Insufficient Data	1
Whole Sample All GIFA Bands	£3,085	£2,597 £3,395	£1,897	£1,673 £2,113	£19,051	£15,168 £23,439	51

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 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 2016 of 273. Index taken at November 2016. 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 29.

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.

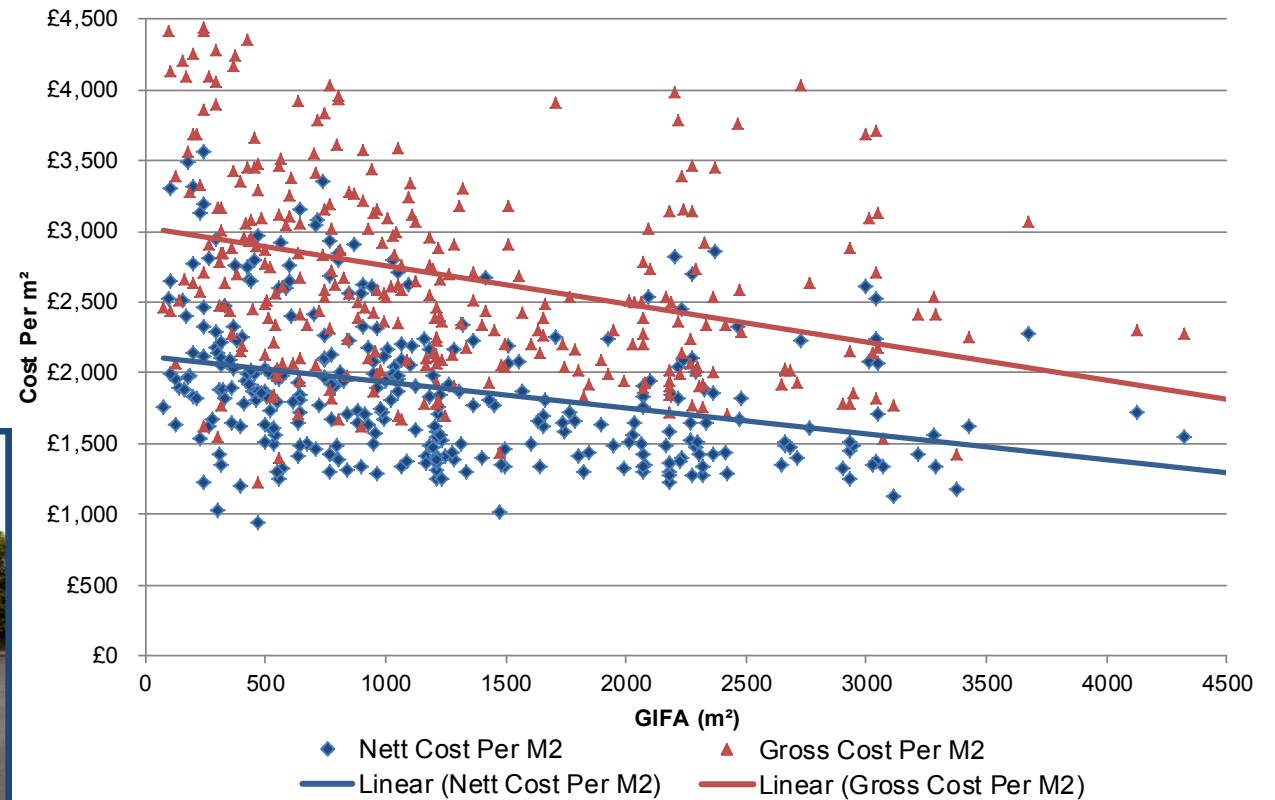
In total, 319 Re-Build & Extension projects were submitted to the study, Graph 4 (right) displays the gross and nett costs per m² for these projects. A detailed breakdown is shown on page 13.

The sample includes 81 EFA schemes submitted by the EFA, these projects include local authority contributions where applicable.



St Leonards Primary, Devon County Council

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



1,343m²

average floor area

5.3m²

average GIFA per pupil place

42wks

average contract period

£2,685

average gross cost

£1,886

average nett cost

£13,760

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 2016.

Inflation

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Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 29.

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 80th Percentile	Average	20th Percentile 80th Percentile	Average	20th Percentile 80th Percentile	
0 - 750	£3,015	£2,338 £3,711	£2,099	£1,640 £2,612	£13,049	£8,826 £15,827	115
750 - 1,500	£2,588	£2,060 £3,090	£1,853	£1,410 £2,186	£14,440	£11,209 £17,526	101
1,500 - 2,250	£2,435	£1,994 £2,729	£1,686	£1,362 £1,943	£14,278	£10,666 £18,321	51
2,250 - 3,000	£2,403	£1,916 £2,898	£1,681	£1,379 £1,930	£13,100	£9,200 £16,834	34
3,000 - 3,750	£2,413	£1,807 £3,071	£1,679	£1,338 £2,106	£14,320	£10,176 £19,622	15
Above 3,750	£2,179	Insufficient Data	£1,561	Insufficient Data	£14,054	Insufficient Data	3
Whole Sample All GIFA Bands	£2,685	£2,042 £3,260	£1,886	£1,426 £2,240	£13,760	£10,092 £17,544	319

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 2016.

Inflation

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Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 29.

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.

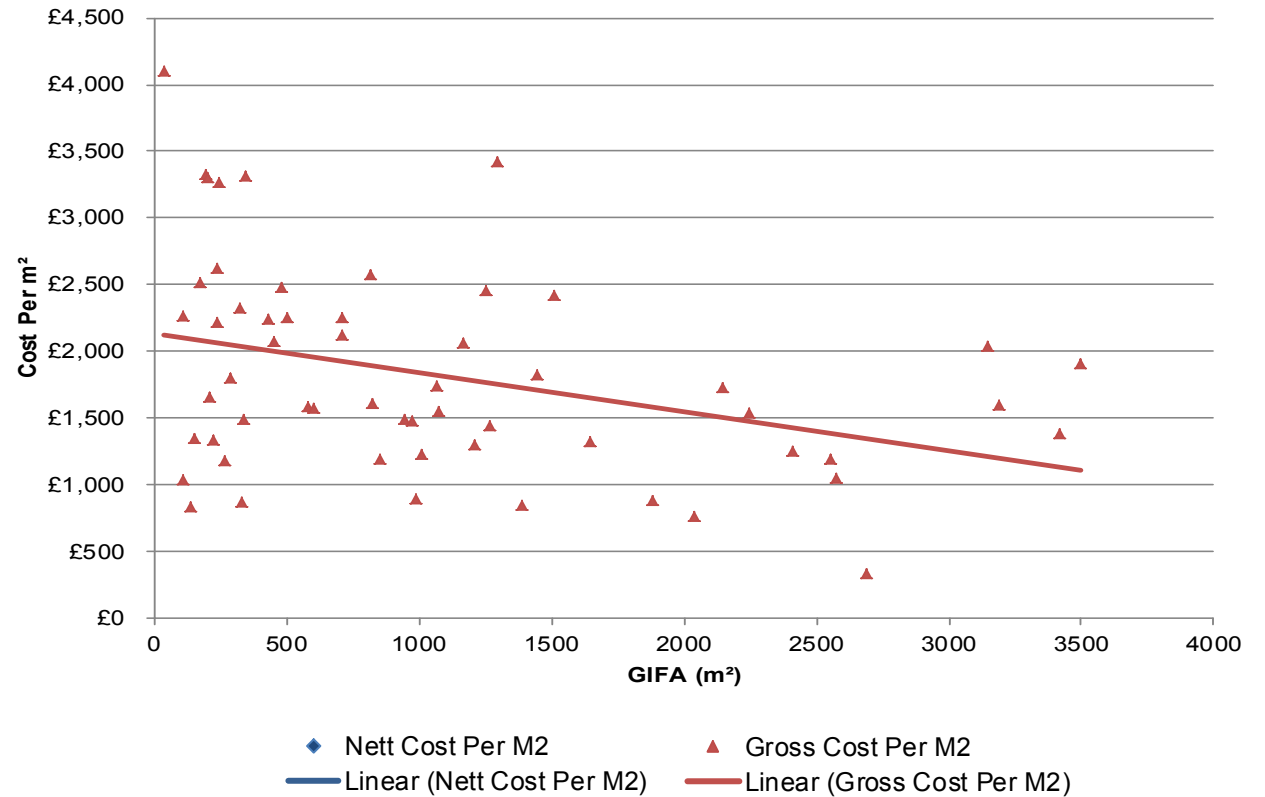
In total, 58 refurbishment projects were submitted to the study, Graph 5 (right) displays the gross costs per m² for these projects. A detailed breakdown is shown on page 15.

Full definitions of light, medium and heavy refurbishment used for this study can be found on page 29.



Richard Lee Primary, Coventry City Council

Graph 5 | Refurbishment Gross Costs per m²



1,976m²

average floor area

3.2m²

average GIFA per pupil place

39wks

average contract period

£1,891

average gross cost

£10,594

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 2016.

Inflation

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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	£2,256	£1,405 £3,009	Not Benchmarked		£9,636	£5,967 £11,980	28
750 - 1,500	£1,694	£1,223 £2,060			£10,675	£6,114 £15,501	16
1,500 - 2,250	£1,443	£884 £1,730			£13,292	£9,609 £17,674	6
2,250 - 3,000	£957	£767 £1,213			£6,207	£5,522 £7,015	4
3,000 - 3,750	£1,732	£1,508 £1,964			£17,310	£11,257 £21,923	4
Whole Sample All GIFA Bands	£1,891	£1,205 £2,443			£10,594	£6,209 £15,424	58

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 £2,000. This represents a 15% 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.

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 2016.

Inflation

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Part Three Secondary Schools



Starbank School *, Birmingham City Council

* All Through School

The secondary school sample consists of 85 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 £1.2 billion, comprising:

- ◆ 5 New Development projects (1 of which is an All Through school).
- ◆ 78 Re-Build & Extension projects.
- ◆ 2 Refurbishment projects.

85 secondary schools

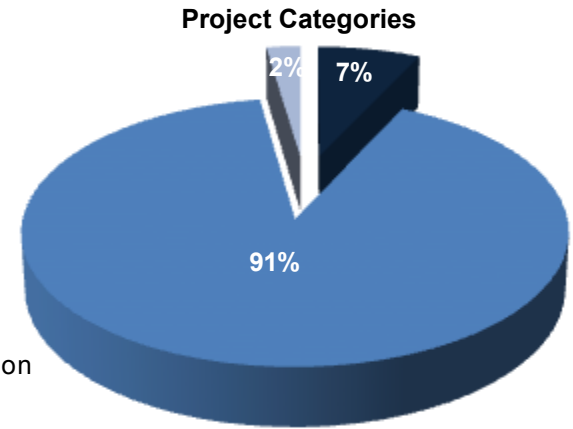
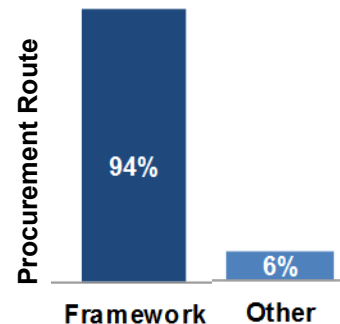
The majority of the secondary school sample consists of Re-Build & Extension projects, demonstrating that Local Authorities are starting to expand existing school sites to meet the considerable forecast demand for pupil places. The sample has seen a 34% increase in schemes since last year, evidencing 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.

78,000
new secondary places

£1.2 billion
capital value of secondary school sample



St Bedes Catholic Voluntary Academy, North Lincolnshire Council

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

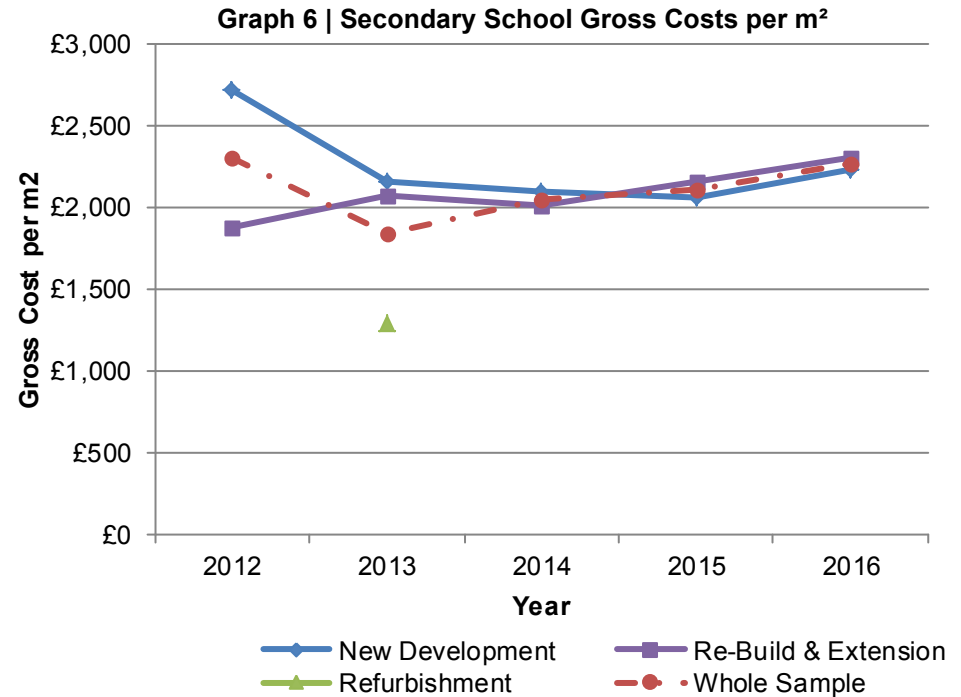
Extensions to existing school sites, new teaching blocks and re-built schools on existing sites have seen a steady increase in gross costs over the last 24 months. It should be noted that the sample size for 2012 is small and that therefore greater certainty can be placed in the 2013 - 2016 trajectory, which has seen a 8.17% increase in gross costs. This study has shown a number of factors influencing this trend:

- ◆ Smaller projects have been procured over the last 12 months, 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 8.9% (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.



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	£2,725	1	£1,876	1			£2,301	2
2013	£2,164	2	£2,103	10	£1,289	2	£1,843	14
2014			£1,973	27			£2,052	27
2015	£2,056	1	£2,039	22			£2,105	23
2016	£2,231	1	£2,275	18			£2,268	19

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.

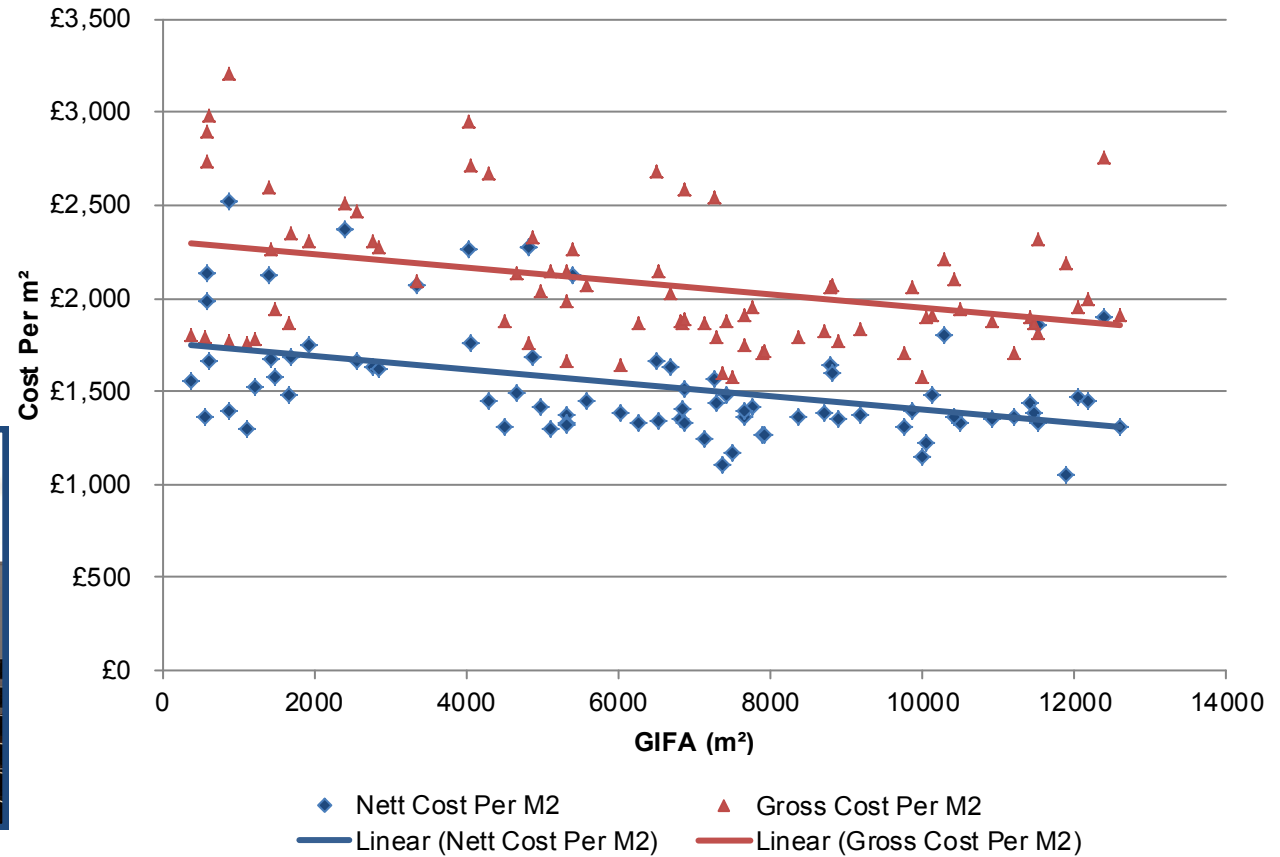
In total, 78 Re-Build & Extension projects were submitted to the study, Graph 7 (right) displays the gross and nett costs per m² for these projects. A detailed breakdown is shown on page 20.

The sample includes 51 EFA schemes submitted by the EFA, these projects include local authority contributions where applicable.



Axe Valley Community School, Devon County Council

Graph 7 | Re-Build & Extension Gross & Nett Costs per m²



6,528m²

average floor area

7.5m²

average GIFA per pupil place

57wks

average contract period

£2,077

average gross cost

£1,529

average nett cost

£15,493

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 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 2016 of 273. Index taken at November 2016. 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 29.

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	£2,280	£1,790 £2,768	£1,761	£1,460 £2,124	£14,446	£8,703 £20,418	15
2,500 - 5,000	£2,302	£2,053 £2,630	£1,719	£1,454 £2,010	£17,138	£13,593 £18,416	12
5,000 - 7,500	£2,005	£1,795 £2,148	£1,422	£1,317 £1,512	£15,940	£13,321 £20,013	21
7,500 - 10,000	£1,839	£1,717 £1,993	£1,377	£1,295 £1,401	£13,171	£11,694 £14,392	14
10,000 - 12,500	£2,028	£1,877 £2,194	£1,451	£1,328 £1,548	£16,488	£13,133 £19,176	15
12,500 - 15,000	£1,908	Insufficient Data	£1,313	Insufficient Data	£19,685	Insufficient Data	1
15,000 - 17,500	No Data						
Whole Sample All GIFA Bands	£2,077	£1,793 £2,314	£1,529	£1,328 £1,669	£15,493	£11,880 £18,760	78

Some key analysis from this data set is summarised below.

Procurement

The study has demonstrated that the majority of Re-Build & Extension projects are procured via two stage open book tendering.

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

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Inflation

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Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 29.

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	
Whole Sample All GIFA Bands	£2,380	£2,142	£1,664	£1,544	£20,235	£17,719	5
		£2,657		£1,850		£22,933	

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	
Whole Sample All GIFA Bands	£1,289	Insufficient Data	Not Benchmarked		£13,483	Insufficient Data	2

Key Definitions

New Development & Refurbishment

Category definitions can be found 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 2016.

Inflation

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Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 29.



Part Four SEN Schools



Hollinwood Academy, Oldham Metropolitan Borough Council

The SEN school sample consists of 32 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 £206 million, comprising:

- ◆ 5 New Development projects.
- ◆ 24 Re-Build & Extension projects.
- ◆ 3 Refurbishment projects.

32 SEN schools

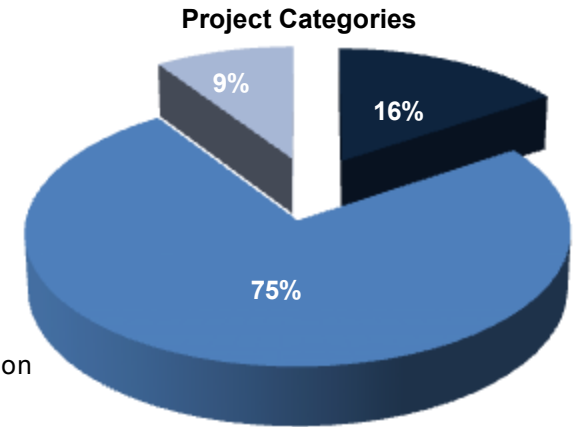
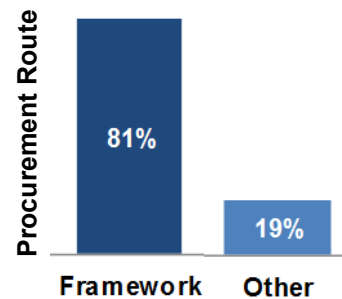
While significant demand for primary and secondary school capacity is being seen across the country, this increases the need for specialist teaching facilities and therefore Local Authorities are starting to increase the capacity within SEN school stock. This study evidences that the majority of provision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

3,700
new SEN places

£206 million
capital value of SEN school sample



Yewstock Special School, Dorset County Council

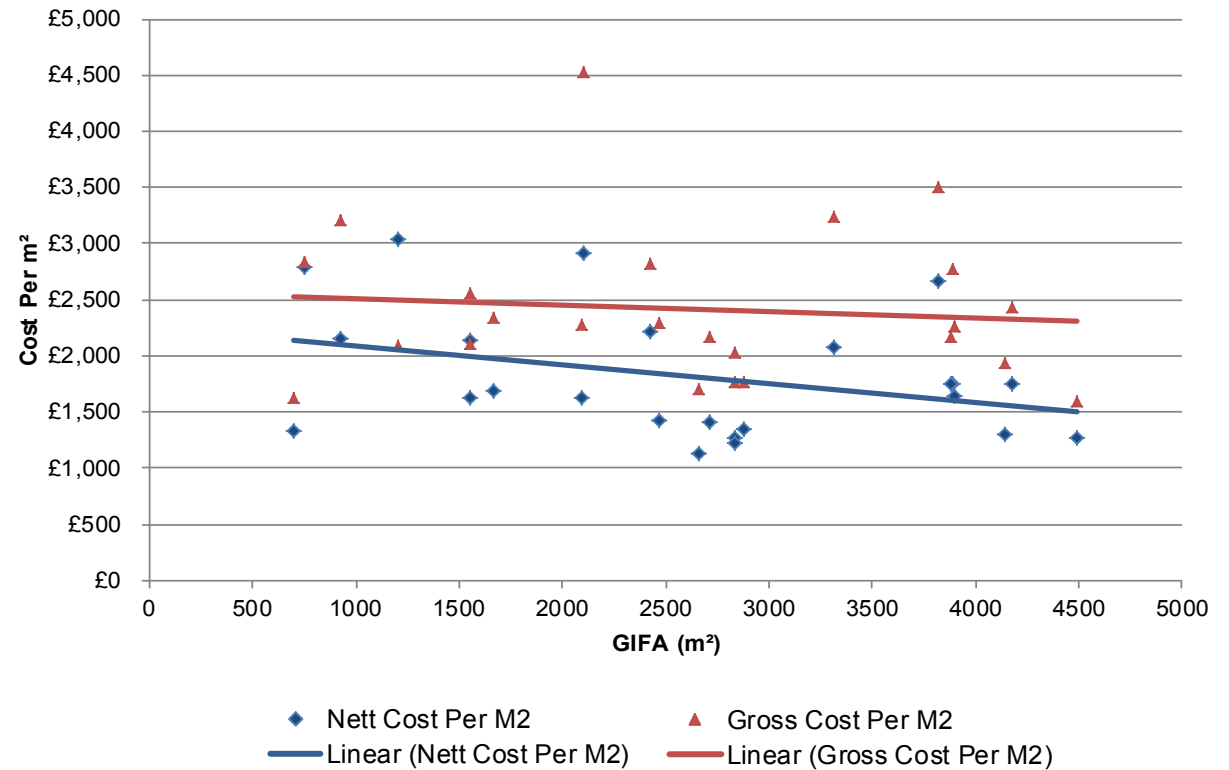
Re-Build & Extension projects are formed from a combination of new blocks, extensions to existing schools and re-build projects on the existing site. In most cases there are elements of demolition and some projects include refurbishment work to existing buildings.

In total, 24 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 25.

The sample includes 10 EFA schemes submitted by the EFA, these projects include local authority contributions where applicable.



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



2,711m²

average floor area

23m²

average GIFA per pupil place

59wks

average contract period

£2,418

average gross cost

£1,814

average nett cost

£65,433

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 2016.

Inflation

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Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 29.

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	£2,232	Insufficient Data	£2,060	Insufficient Data	£36,719	Insufficient Data	2
750 - 1,500	£2,651	Insufficient Data	£2,596	Insufficient Data	£53,995	Insufficient Data	2
1,500 - 2,250	£2,760	£2,239	£1,999	£1,631	£85,249	£60,531	5
		£2,949		£2,295		£105,751	
2,250 - 3,000	£2,081	£1,762	£1,434	£1,232	£57,320	£56,967	7
		£2,273		£1,420		£62,123	
3,000 - 3,750	£3,237	Insufficient Data	£2,070	Insufficient Data	£71,403	Insufficient Data	1
Over 3,750	£2,381	£1,980	£1,734	£1,365	£65,902	£50,149	7
		£2,709		£1,757		£73,397	
Whole Sample All GIFA Bands	£2,418	£1,865	£1,814	£1,320	£64,234	£46,978	24
		£2,834		£2,175		£73,178	

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

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Inflation

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Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 29.

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 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	Average	20th Percentile	Average	20th Percentile	
		80th Percentile		80th Percentile		80th Percentile	
Whole Sample All GIFA Bands	£2,824	£2,191	£1,984	£1,746	£94,509	£53,377	5
		£3,486		£2,356		£111,501	

Figure 12 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	
Whole Sample All GIFA Bands	£1,413	Insufficient Data	£11,186	Insufficient Data	£50,789	Insufficient Data	3

Key Definitions

New Development & Refurbishment

Category definitions can be found on page 29.

Location Factor

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Further definitions of key terms and footnotes outlining how the data has been treated can be found on page 29.



Part Five Further Information

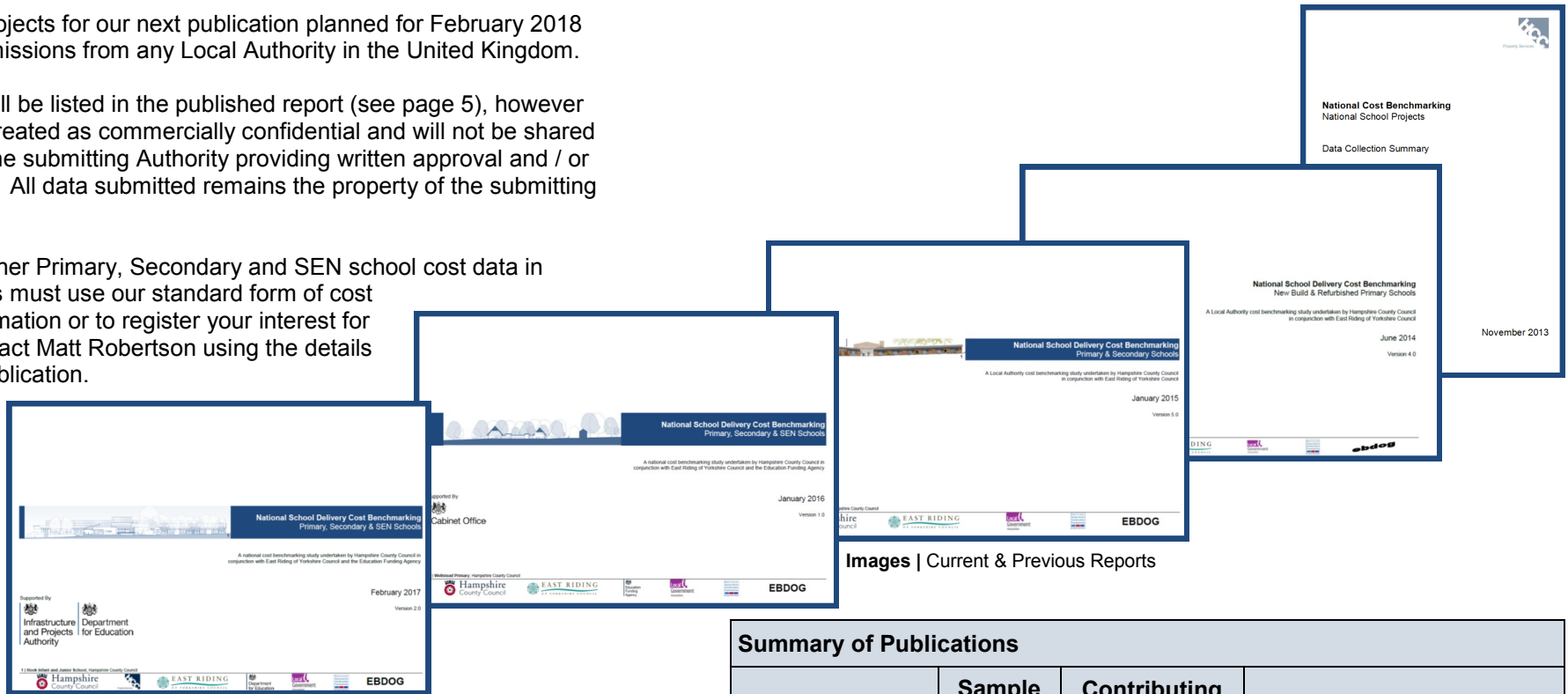


Tweseldown Primary, Hampshire County Council

We are keen to receive projects for our next publication planned for February 2018 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 Matt Robertson 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 Size	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	545	107	Primary, Secondary & SEN
February 2018*	-	-	-

* Report not currently available.

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 square metreage 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 EFA as agreed with the EFA.

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

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Inflation

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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

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