

School Building Cost Benchmarking

'The Power of Data to Bust Myths'

Steve Clow

Assistant Director Property & Facilities
Hampshire County Council

Introduction

- Partnership between Hampshire County Council and East Riding of Yorkshire
- Supported (and now funded) by the LGA
- Schools in scope:
 - Primary
 - Secondary
 - SEN
- Construction Project Categories (for each 3 school types)
 - New build developments
 - Re-build and extension
 - Refurbishment

Introduction (contd)

- Aim is to:
Share completed school delivery costs to encourage greater collaboration between Local Authorities (and the DfE) to drive down school costs and maximise value from limited budgets

Engagement and Availability

- Reports shared with:
 - Cabinet Office (Infrastructure & Projects Authority)
 - Department for Education (DfE)
 - Education & Skills Funding Agency (ESFA)
- Co-ordinated in conjunction with:
 - Education Building and Development Officers Group (EBDOG)
 - National Association of Construction Frameworks (NACF)
- Study is public and available (free to all) on the internet:
<https://www.local.gov.uk/sites/default/files/documents/national-school-delivery--1a2.pdf>

Growth in Participation

- The study has grown significantly over 5 years from 39 schools in 2013 to 546 in 2017
- Primary schools only in 2013 to Primary, Secondary and SEN in 2017
- ESFA joined in 2015

2016 Study Overview

545 projects submitted

107 Local Authorities participated

£2.9 billion combined project value

PSBP1 data submitted by the EFA

Primary, Secondary & SEN schools



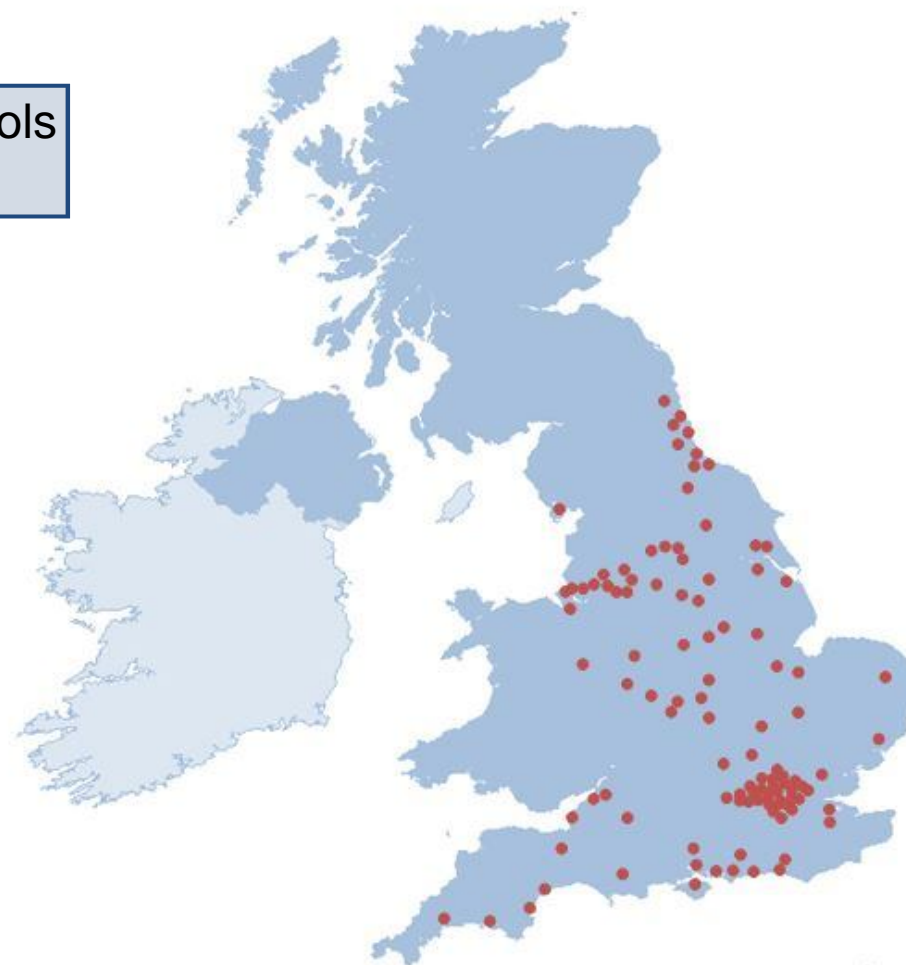
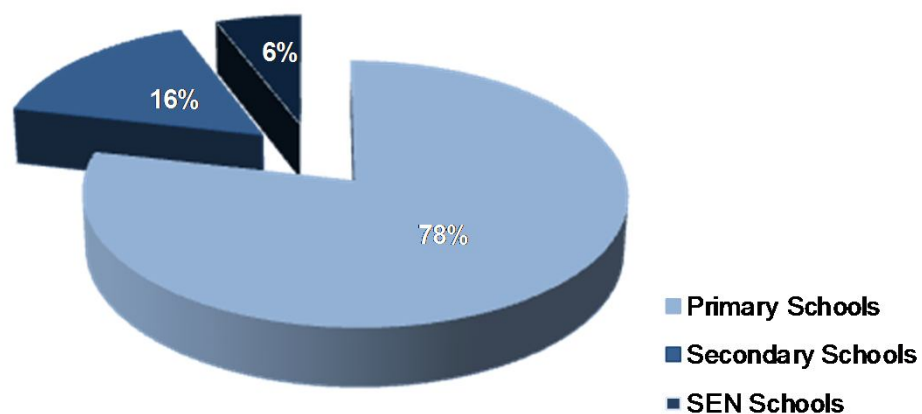
2016 Study Overview

107 Authorities from across England

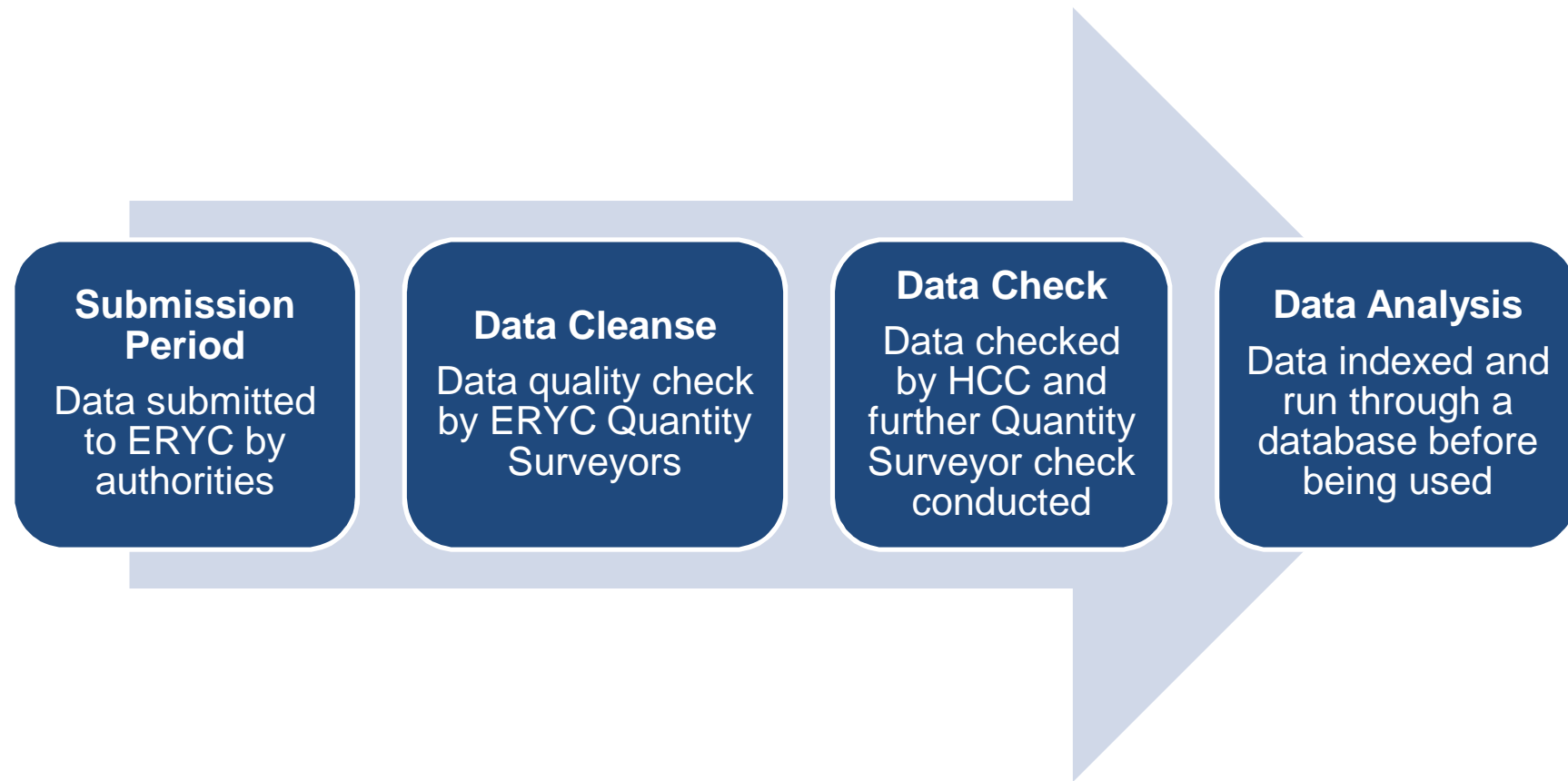
Primary Schools
428

Secondary Schools
85

SEN Schools
32

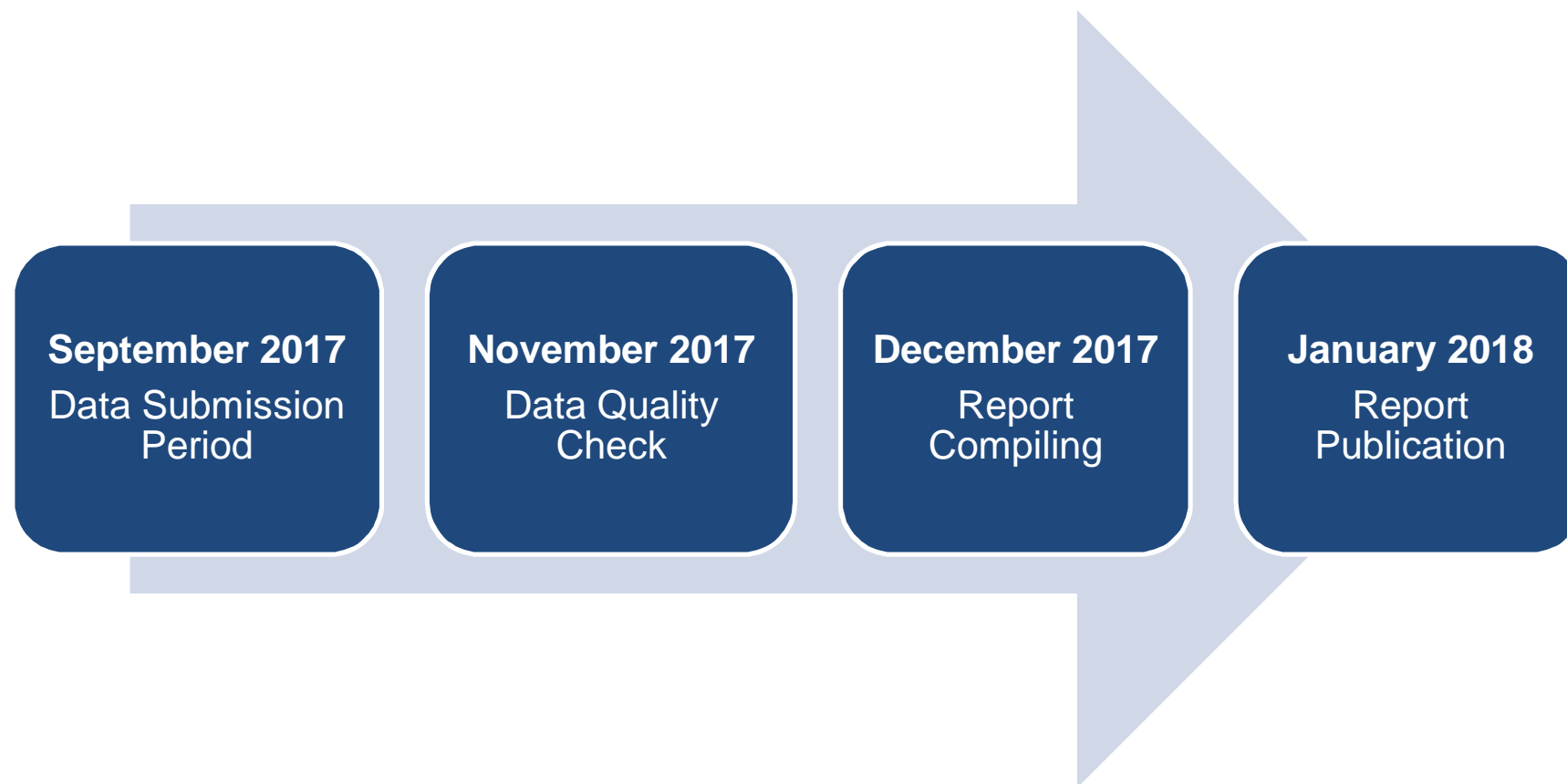


Data Capture Process



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2017 Study (to be published in early 2018)



We welcome new Authorities submitting data

Reliable and Comprehensive Study

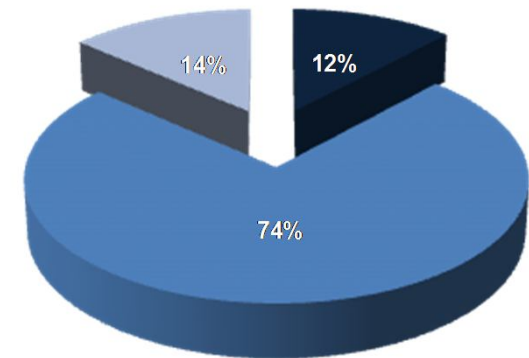
- Data captured on a standard pro-forma
- Common standard of cost analysis
- All costs at tender stage
- Clear definitions for new, rebuild and refurbishments
- Location factor as published by BCIS

Reliable and Comprehensive Study (contd)

- Inflation normalised to common base date
- Industry recognised common formats for:
 - Floor area (nett and gross)
 - Total project costs (including fees, external works and abnormals)
 - Costs per pupil place

Primary Schools - Overview

- 428 Projects: £1.5bn capital value; 106,000 pupil places
- 51 New Build; 319 Rebuild/Extensions; 58 Refurbishment
- Majority are Rebuild/Extension
- New Builds increased 55% from 2015 to 2016
- Majority procured via a Framework



12% New Development
14% Refurbishment
74% Rebuild & Extension

Primary Schools – Cost Trajectory

- Gross costs reduced by 8% 2012-2016
- New build costs have reduced by 21% 2012-2016
- Average gross floor area has reduced (more smaller projects)
- Early indications are that costs are now rising (market pressures?)

Primary Schools | Annual Cost Trajectory

Graph | Primary School Gross Costs per m²

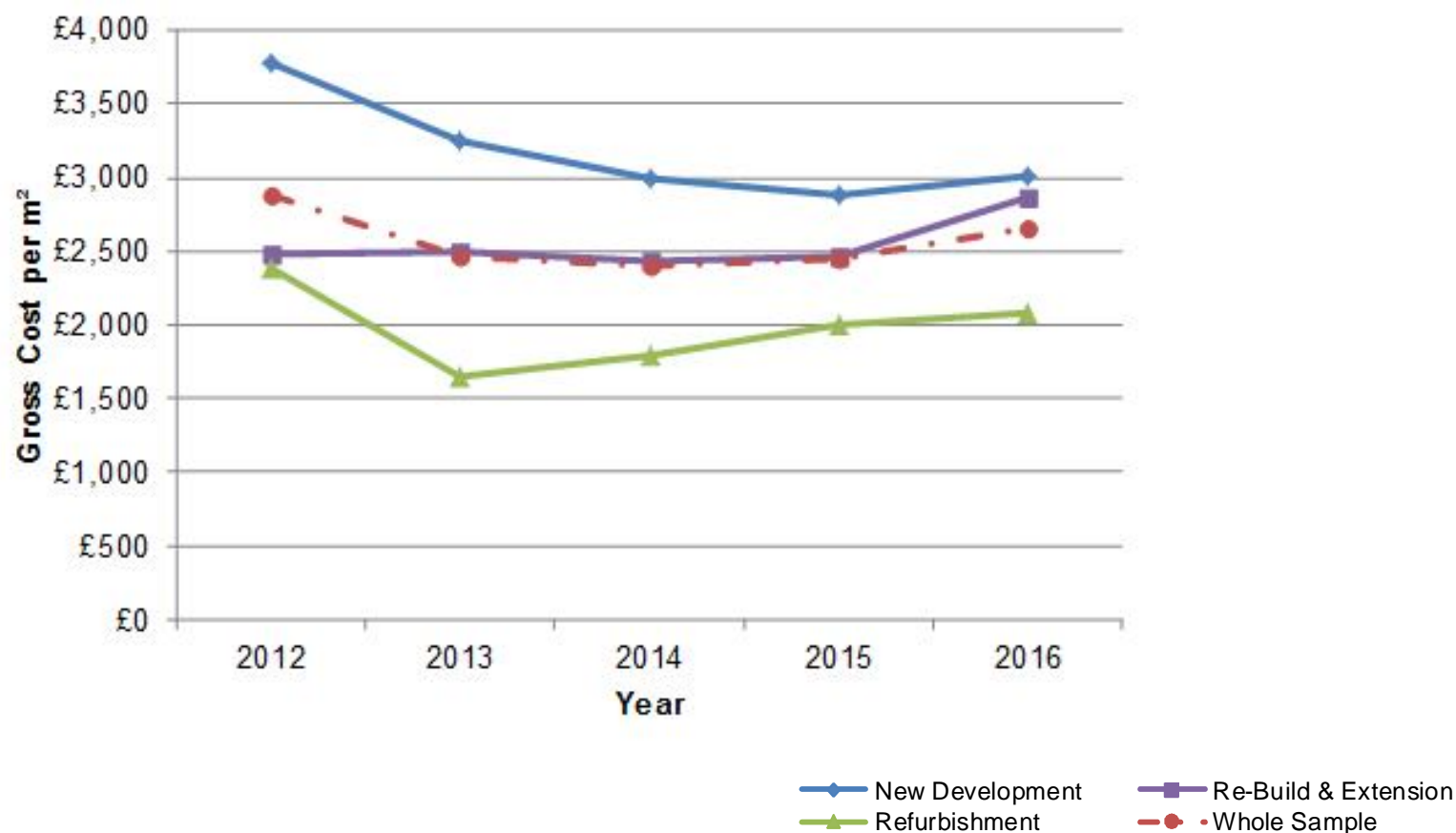


Figure 1 | Primary School Gross Costs per m²

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	£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

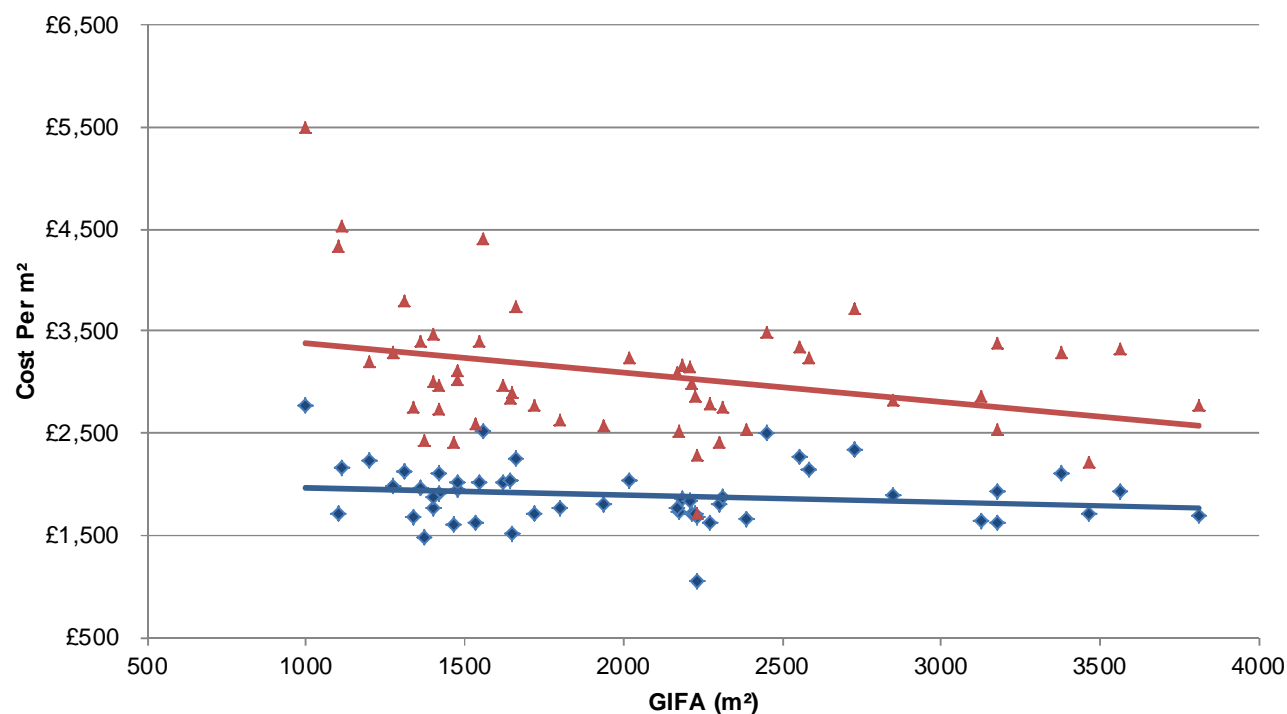
Primary Schools – New Developments

- Majority procured via two-stage open book tender
- Majority steel frame/composite cladding and some modular
- 15% reduction in average time on site for modular
- Infrastructure costs 10% higher than re-build/ extensions

National School Delivery Cost Benchmarking | 2016

Primary Schools | New Development

Graph | New Development Gross Costs & Nett Costs per m²



2,031m²

average floor area

5.3m²

average GIFA per pupil
place

48 wks

average contract period

£3,085

average gross cost

£1,897

average nett cost

£19,051

average cost per place

National School Delivery Cost Benchmarking | 2016

Primary Schools | New Development

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

Figure 3 New Development Average Cost Summary							
GIFA (m²)	Gross Cost per m²		Nett Cost per m²		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	£3,373	£2,750	£1,958	£1,710	£21,244	£16,886	16
		£3,801		£2,121		£23,675	
1,500 - 2,250	£2,938	£2,590	£1,824	£1,694	£18,966	£14,319	19
		£3,192		£2,026		£24,971	
2,250 - 3,000	£3,015	£2,668	£2,014	£1,748	£17,474	£14,327	9
		£3,413		£2,303		£20,419	
3,000 - 3,750	£2,936	£2,546	£1,822	£1,635	£16,428	£14,911	6
		£3,327		£1,926		£17,394	
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	£1,897	£1,673	£19,051	£15,168	51
		£3,395		£2,113		£23,439	

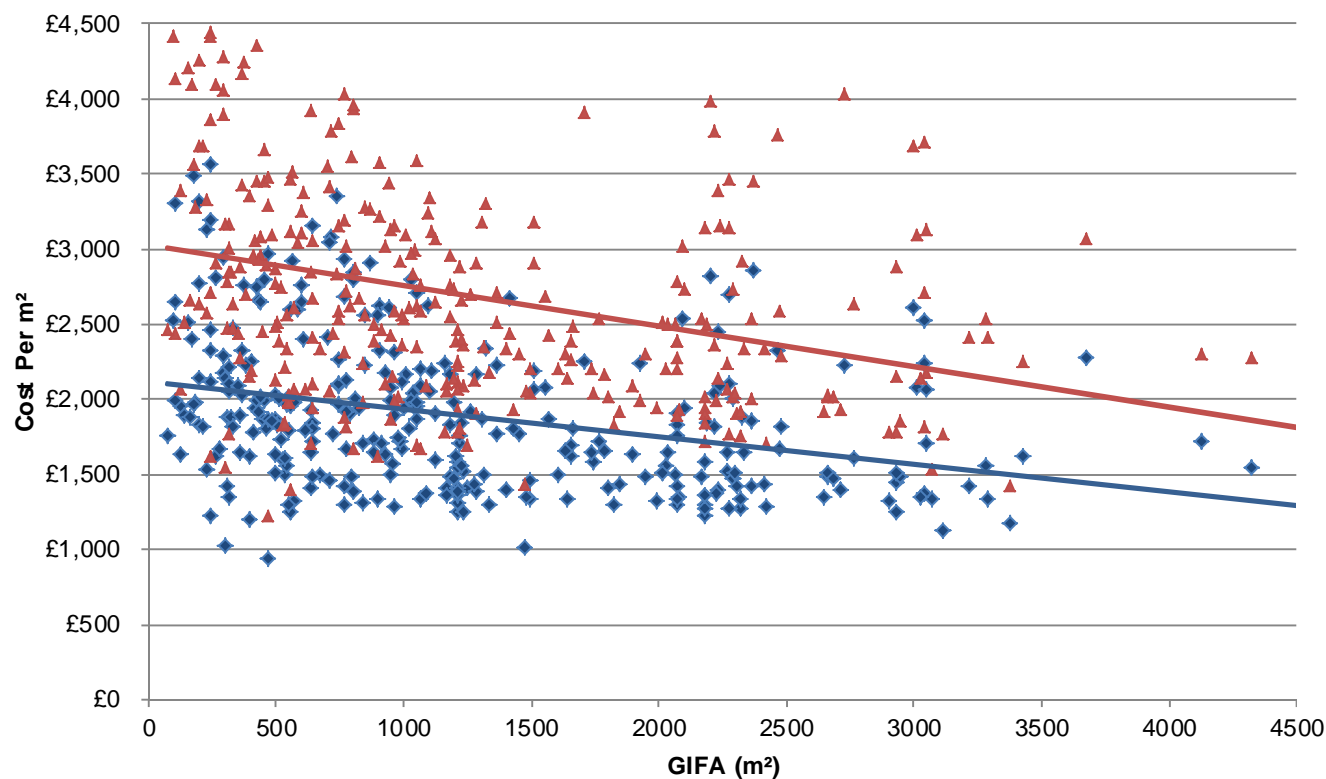
Primary Schools – Re-Build and Extension

- 319 Projects (81 ESFA)
- Variety of procurement including single and two stage
- Mostly steel frame construction
- Infrastructure costs are lower (15% of total)

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Primary Schools | Re-Build & Extension

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



1,343m²

average floor area

5.3m²

average GIFA per pupil
place

42 wks

average contract period

£2,685

average gross cost

£1,886

average nett cost

£13,760

average cost per place

National School Delivery Cost Benchmarking | 2016

Primary Schools | Re-Build & Extension

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	£3,015	£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	£2,082 £2,295	£1,561	£1,472 £1,646	£14,054	£12,760 £15,561	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

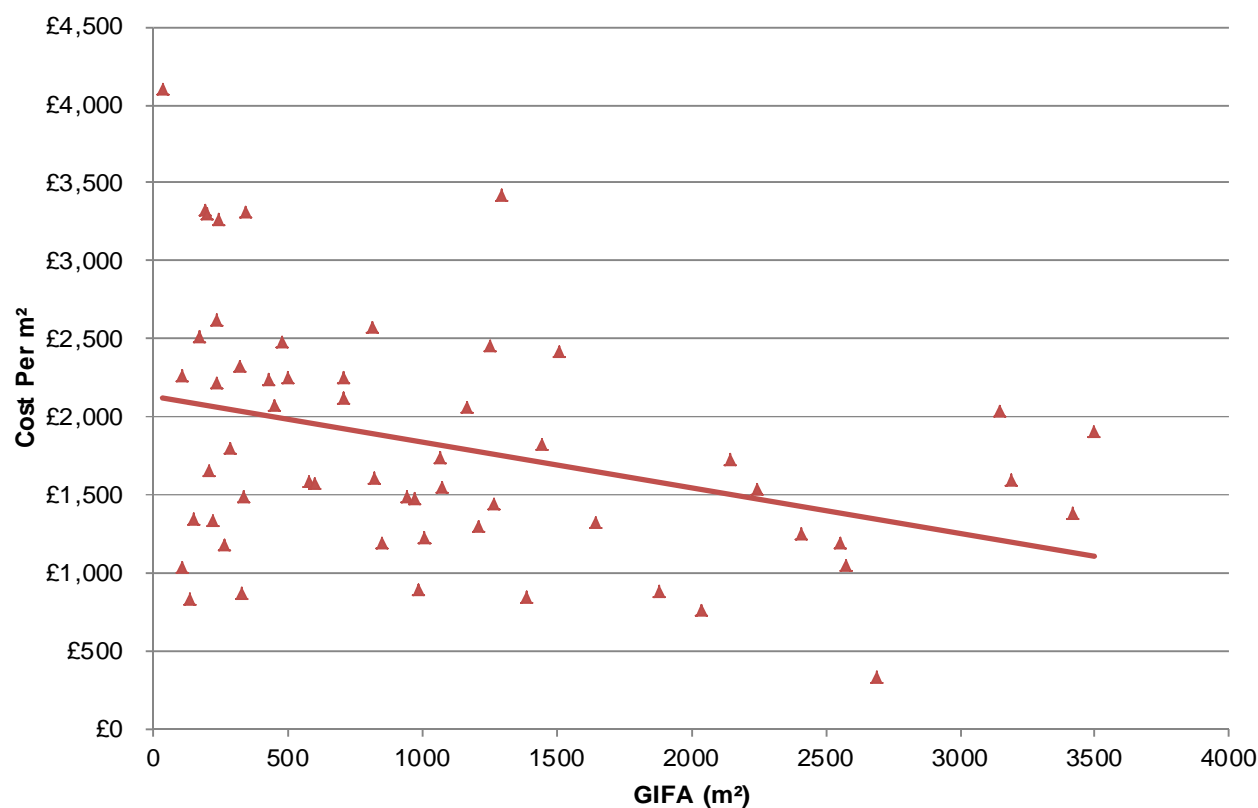
Primary Schools – Refurbishment

- 58 Projects
- Scope and costs vary considerably
- Split into light, medium and heavy

National School Delivery Cost Benchmarking | 2016

Primary Schools | Refurbishment

Graph | 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 place

National School Delivery Cost Benchmarking | 2016

Primary Schools | Refurbishment

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

Figure 5 Refurbishment Average Cost Summary							
GIFA (m²)	Gross Cost per m²		Nett Cost per m²		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

Secondary Schools - Overview

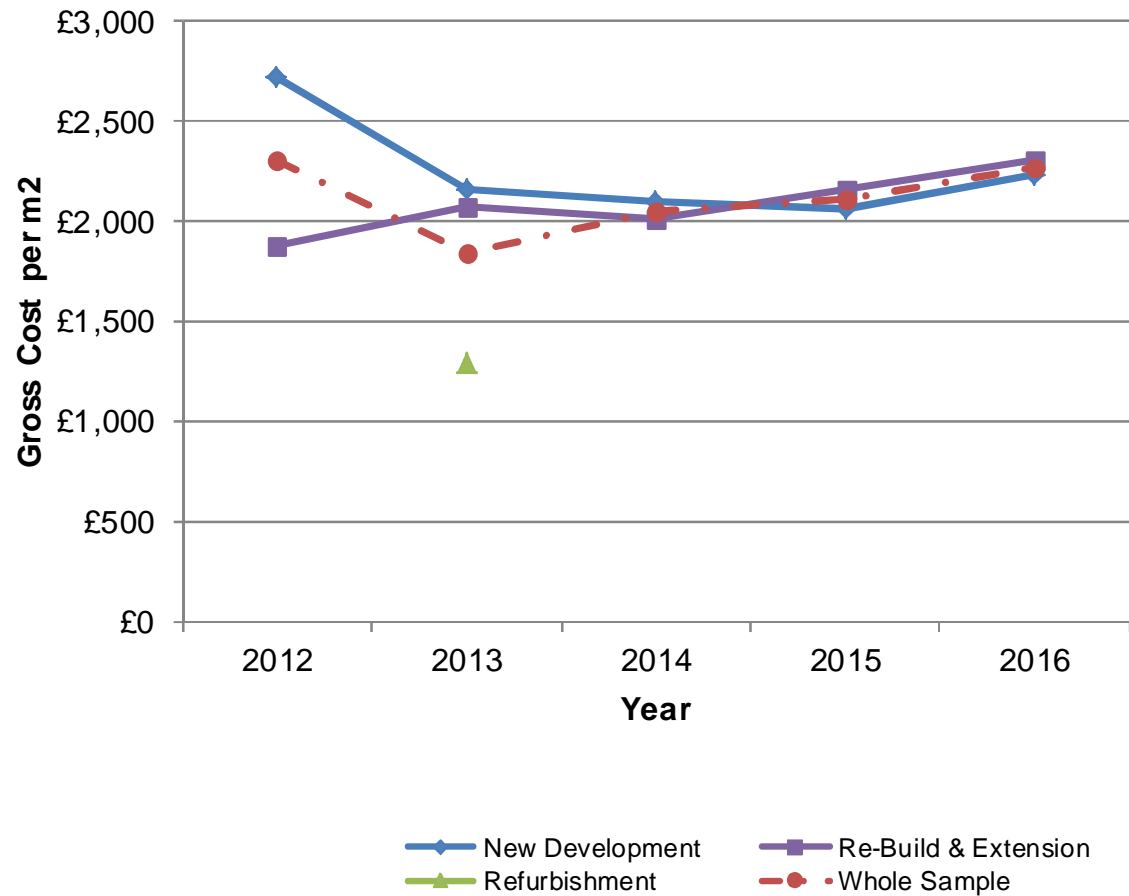
- 85 Projects: £1.2bn capital value; 78,000 pupil places
- 5 New Build; 78 Re-Build/Extensions; 2 Refurbishments
- Small sample size for New Build
- Costs have been rising (average area going down)
- Market factor likely

Secondary Schools | Annual Cost Trajectory

85 projects

£1.2 billion capital value

78,000 new secondary places



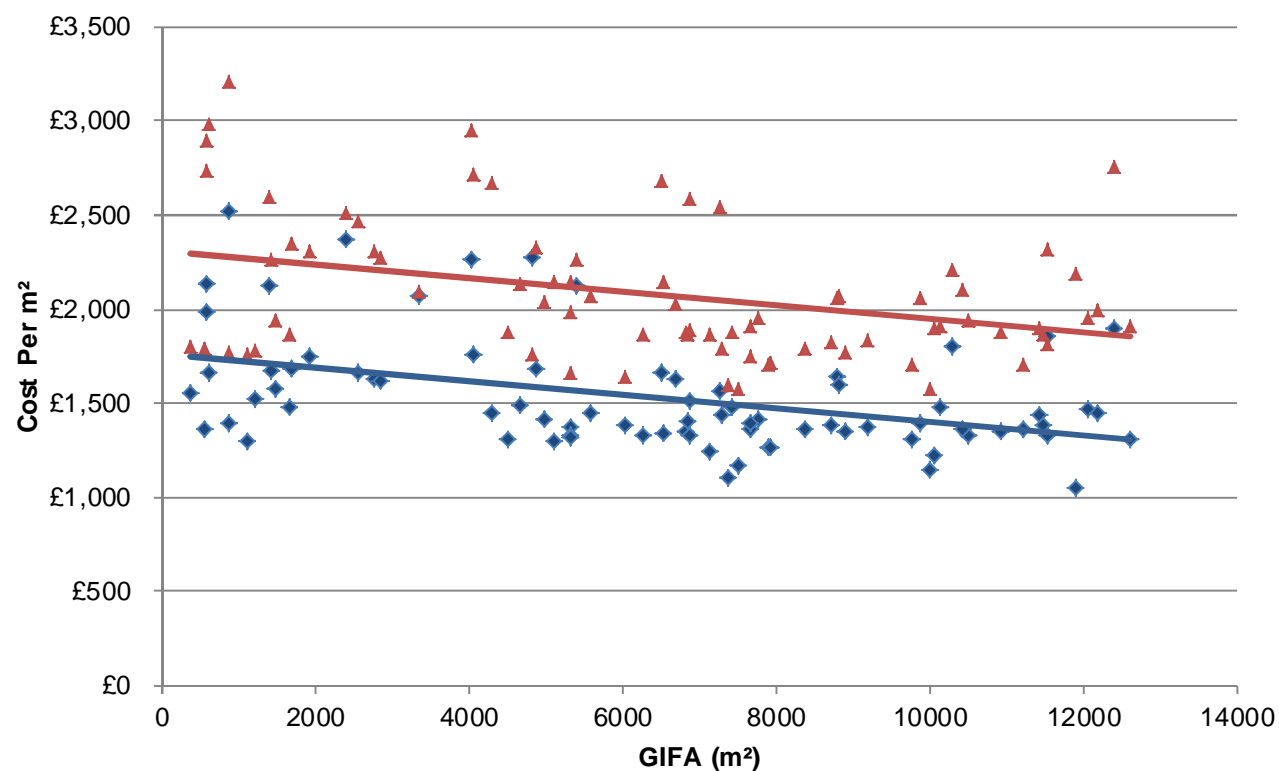
Secondary Schools | Annual Cost Trajectory

Figure 6 Secondary School Gross Costs per m ²								
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

National School Delivery Cost Benchmarking | 2016

Secondary Schools | Re-Build & Extension

Graph | Re-Build & Extension Gross Costs & 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 place

National School Delivery Cost Benchmarking | 2016

Secondary Schools | Re-Build & Extension

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	£1,908 £1,908	£1,313	£1,313 £1,313	£19,685	£19,685 £19,685	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

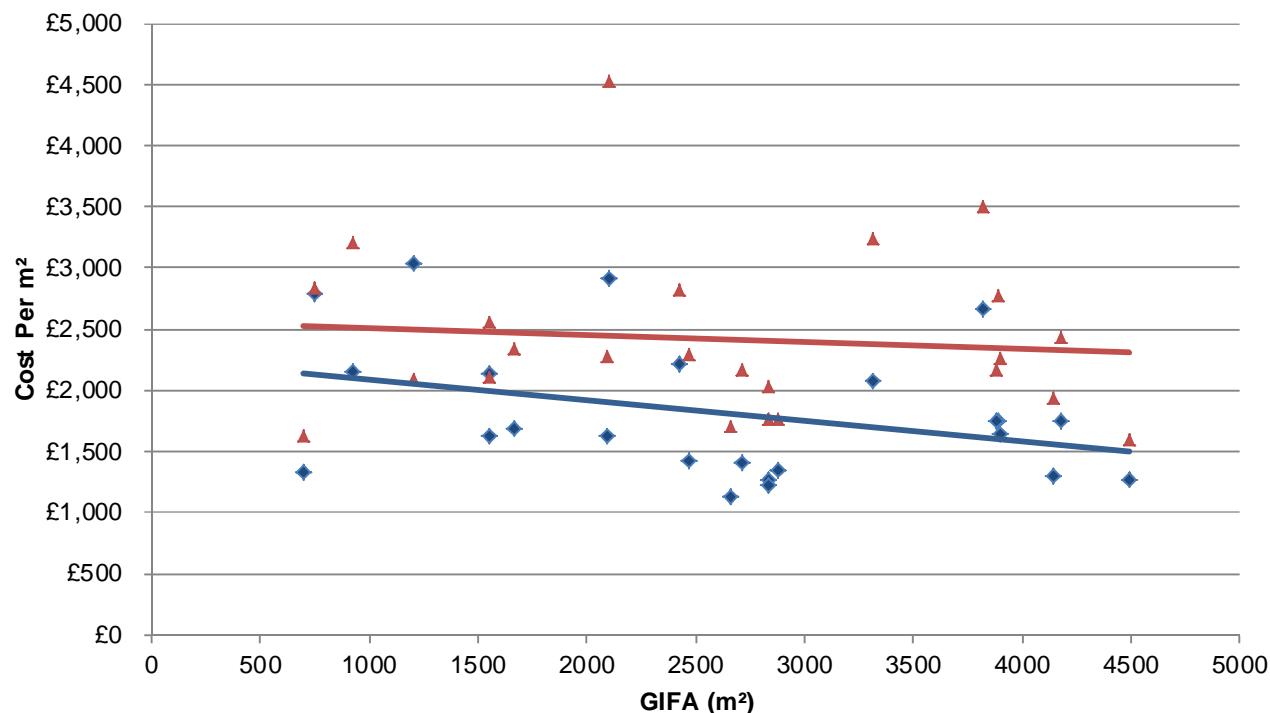
SEN Schools - Overview

- 32 projects
- £206 million capital value
- 3,700 pupil places

National School Delivery Cost Benchmarking | 2016

SEN Schools | Re-Build & Extension

Graph | Re-Build & Extension Gross Costs & 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 place

National School Delivery Cost Benchmarking | 2016

SEN Schools | Re-Build & Extension

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

Figure 10 | Rebuild & Extension Average Cost Summary

GIFA (m²)	Gross Cost per m²		Nett Cost per m²		Cost Per Pupil Place		Sample Size
	Average	20th Percentile 80th Percentile	Average	20th Percentile 80th Percentile	Average	20th 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	

SEN Schools | New Development and Refurbishment

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

Local Authority/ESFA Cost Comparisons

- Primary Schools: 127 LA; 77 ESFA
- ESFA average gross costs are lower than LA but the gap is reducing – 18% in 2013 to 6% in 2016
- ESFA projects are larger (economies of scale)
- ESFA benefits from batching projects and keen market

Primary Schools | Alternative Delivery Model Cost

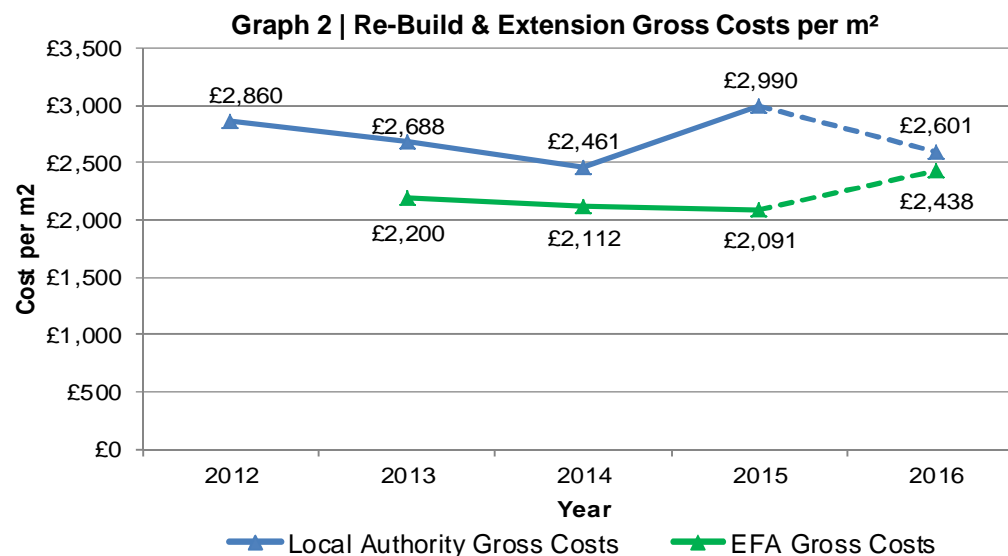


Figure 2 | Primary School Costs

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	£2,067	2	£15,341	18	£11,779	2
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	£13,048	7	£14,382	8

Future Event: Interactive Workshop 06 October in London

- Study Findings and Case Studies
- Workshops
 - Individuality vs Standardisation (including off-site manufacture)
- Procurement key lessons
- Intelligent Client/School Place Planning/Developers' Contributions
- Achieving and delivering lower costs
- Information on this event to follow

Thanks for listening

Questions and Comments welcome