



FURTHER EDUCATION SCHEMES

COST MODELS

NEW BUILD, SMALL WORKS & REFURBISHMENT CONSTRUCTION

JULY 2014

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1 ACKNOWLEDGEMENTS

This document has been prepared by AECOM, with the guidance and editorial input of the Skills Funding Agency.

AA Projects have provided comments and observations upon the initial draft document which have been discussed and incorporated as appropriate.

The original publication date was October 2007 for the Learning and Skills Council.

The previous issue published was October 2013 at present day June 2013 cost allowances.

The current issue is dated July 2014.

2 USER GUIDE

The purpose of the study is to provide a series of guide Cost Models which relate to typical new build, small works / extension and refurbishment projects with typical scope and specification reflected within the description element.

It is recognised that some projects will fall outside the Cost Models, creating either a lower or higher outturn cost, being driven by a number of factors including use, specification, size and geographical location.

The Cost Models are tailored to facilitate ease of use by any assessment panel and are intended to allow submissions to be measured against an expectation, represented by the Cost Models.

These Cost Models are presented at July 2014, referred to as present day. This assumes a project cost completing in September 2015.

The costs included within these Cost Models are also based on the programme criteria noted in Section 6 and procurement criteria noted in Section 7. Projects that fall outside this criteria will need to be assessed according to published indices.

These Cost Models provide guidance for the following project schemes:

- Typical New Build schemes expected to represent a majority of funded projects, and identified by geographical location.
- Typical Refurbishment schemes, classed as "Full", "Medium" or "Minimal" standard, and identified by geographical location.
- Typical Small Works schemes, (principally extensions to existing premises) and identified by geographical location.

The Cost Models are subject to regular review and update.

The basis upon which each of the cost models has been prepared offers an example of a range of costs which are appropriate to a typical new or refurbished building. Each model is related to a specific geographical location recognising the Skills Funding Agency's regions of Southern, Central and Northern.

Specific reference is made to the project baseline criteria and programme criteria upon which these Cost Models have been based.

Model One	-	Relates to the East and West Midlands, East and South West of England.
Model Two	-	Relates to London and the South East, together with Essex, Hertfordshire and Cambridgeshire*
Model Three	-	Relates to Yorkshire, Humberside and the North East and North West of England.

* Please refer to Section 12 for regional identification

2 USER GUIDE (Cont'd)

The comparison of a scheme proposal with the appropriate Cost Model should be undertaken, acknowledging the following criteria:

- Geographical location
- Identifying whether the scheme broadly relates to the key project baseline criteria.
- Questioning whether the proposed scheme has truly exceptional elements which sit outside the scope of the Cost Models
- Timing

Guidance on such matters is provided hereafter.

The guidelines cannot be fully comprehensive and are not intended to provide a means of assessing every type of scheme.

The Cost Models are a guide only.

During the process of using the data contained in this document for whatever purpose it is essential that any proposed project under consideration is understood in respect of its similarity or relevance to the Cost Models and the variants are reflected in any evaluation where the Cost Models are being used as a benchmark.

The Cost Models are developed from a compilation of benchmark data taken from recently completed projects and represent as closely as possible 'typical schemes' aligned as the project baseline criteria, programme criteria and specification detail contained within the Cost Models.

The guidelines cannot be fully comprehensive and are not intended to provide a means of assessing every type of scheme.

All submissions are to include full VAT liability.

3 CHANGES FROM PREVIOUS ISSUE

The following is a summary of the key changes from the previously published issue (October 2013):

- Each model has been updated to reflect present day costs at July 2014 (from June 2013 present day costs).
- The typical programme dates have been amended to reflect a July 2014 date for receipt of tender, present day, excluding forward inflation.
- All Cost Model elements include the scope and specification of work required to achieve a typical 'Very Good' Building Research Establishment Environmental Assessment Method (BREEAM) rating, in compliance with projects registered under BREEAM New Construction 2011 Scheme. A summary position has been provided to express the total costs for schemes that are targeting BREEAM 'Excellent'.
- Schemes not registered prior to the June 2014 deadline will be assessed under BREEAM UK New Construction 2014 Scheme and identification of any 'exceptional' costs associated with achieving the required rating will need to be presented for consideration.
- Please note the references to VAT legislation which are noted in Section 2.
- Please note the reference to inflation as an allowance added to each Cost Model based upon an assumed forward programme (see Section 6), with the final date being the completion of construction and handover to the end user. Therefore costs are noted as present day (July 2014) and completion/handover (September 2015), with a start on site date of July 2014.
- In Refurbishment projects, these Cost Models assume BREEAM registration has been made under the BREEAM Education 2008 Scheme to achieve a 'Very Good' rating.
- Major refurbishment projects (that include significant replacement of building fabric such as facade, roof and mechanical & electrical plant equipment such as boilers, heating emitters, lighting and so on) can be assessed under the New Build Scheme provisions.
- The previous issue of the Cost Models in October 2013 noted that following a long period of continued contraction within the industry tender levels reached their lowest point in early 2013 after which costs began to rise. This increase has gathered momentum and from late last year up to the present time a noticeable increase in tender levels has been observed, the extent varying and dependent upon geographical location. Apart from the rising costs being generated by the escalating volume of business it is also affected by the continuing rise in the cost of raw materials and business administration. The course of the construction industry during the next period through 2015 remains subject to further growth on an uncertain trajectory. However, current forecasts suggest an annual increase from September 2015 to September 2016 of approximately 5.9%.

4 SUSTAINABILITY / RENEWABLES

Costs for Sustainability and Renewables are included within the Cost Models.

The Association of Colleges and Skills Funding Agency are placing increasing emphasis upon funding applications being supported by comprehensive statements of sustainability strategy and future intent. These statements should set out measurable targets which indicate significant reduction in the current carbon footprint, providing a comparison between the pre project data and that which will be achieved as a result of the project.

It is also acknowledged that local authorities are increasingly looking to condition planning approvals with sustainability criteria in accordance with their own guidance and Government legislation.

It is proposed that further discussions with the Association of Colleges, Skills Funding Agency and other funding parties may create a more specific set of requirements to be satisfied in this respect which will enable applicants to specifically focus on Government policy and sustainability.

5 PROJECT BASELINE CRITERIA

Brief description of the concept of a typical New Build scheme

Location :	Model One – East and West Midlands and the East and South West of England Model Two – London and South East, together with Essex, Hertfordshire and Cambridgeshire Model Three – Yorkshire, Humberside and the North East and North West of England
Gross Internal Area (GIA) :	2,000m ² - 3,000m ² (measured inside face to inside face of external walls across all service voids and staircases and including floor areas within open performing and community spaces)
Number of Storeys :	3 - 4 (Ground, First, Second, Third)
Greenfield/Brownfield:	May be subject to demolition or ground remediation
New Build / Refurbishment:	Yes
Existing Campus or Relocation:	Either
Procurement:	Two stage, design and build or other as appropriate
Date at which stated present day costs are valid:	Base date: July 2014
Date at which final day costs are valid:	September 2015 (project practical completion)
General Specification:	Offering a mix of general teaching and vocational curriculum, based within a maximum of 2nr separate or linked buildings. Specifications to be in accordance with the detail expressed within the Cost Models and to a 'mid-range' quality.

6 ASSUMED PROGRAMME DATES

Feasibility RIBA Stage 1:	Start:	August 2013
	Complete:	September 2013
Proposal - RIBA Stage 2:	Start:	October 2013
	Submit:	January 2014
Full Proposal - RIBA Stage 3:	Start:	February 2014
	Submit:	May 2014
Start on Site:		July 2014
Phasing:		Single or two consecutive phases as applicable
Completion on Site:		September 2015
Pre Contract Period:		11 months
Post Contract Period:		14 months

NOTE: The Cost Model present day costs are stated at July 2014.

Pre-Contract Period - The pre-contract period will depend on a wide variety of factors, not least of which will be the ability to achieve a timely planning consent. Additionally the assumption that the design development will evolve in line with the budget is crucial in order to avoid a time consuming cost engineering exercise in the event of the contractor tenders exceeding the fixed budget (which will have been established during the feasibility stage).

Post Contract Period - The post contract period assumes that sub soil conditions and ground bearing capacities have been established in the pre-contract period and that the majority of items within the risk register have been addressed.

The selected periods for both the pre and post contract activities have been established from a wide selection of data baselined against benchmark data from completed new builds of a similar value (gross outturn cost of circa £5.5 - 8.5 million) upon which the Cost Models are based.

7 CONTRACTOR PROCUREMENT STRATEGY

The Cost Model assumes either a single stage or two stage design and build procurement strategy for new build projects as the route for producing a firm price from a preferred contractor competitively selected following a rigorous tender evaluation process and interviews.

The current market place may create circumstances in which single stage tendering may be more advantageous but the benefit of two stage procurement, where the process is correctly applied and managed may still offer additional benefits. The benefit of two stage tendering is believed to rest with careful contractor selection, a clear brief and the contractor's full engagement with the selected consultant team during the pre-contract period.

A project team can submit an alternative proposal where they feel that the interests of the College or other Client body are better served, with appropriate supporting rationale.

The procurement strategy will be reviewed on a regular basis.

The construction industry is currently experiencing a period of increasing activity in which contracting companies are becoming more selective in respect of their response to tender invitations and in particular tending to veer away from single stage procurement. As a consequence of the status of the market place contractors are showing a greater interest in two stage tendering which reduces the extent of their risk in investing in the tender process. The increasing activity in the market place is forecast to continue for the foreseeable future.

8 EXCEPTIONAL ITEMS

Items previously regarded and presented as 'abnormals' are now embodied within the Cost Models herein and will no longer be referred to as 'abnormals'.

Items of a specific exceptional nature relating to site conditions may be considered by the Skills Funding Agency as additional costs outside the Cost Model. These items must be supported by a case study for each item and demonstrating such items as being unavoidable and included as representing the most economical approach to accommodate such works.

Such works may include:

- Off site infrastructure to access the project
- Remote locations
- Archaeological impact
- Incoming mains services from a distance off site
- Ground conditions

The above is indicative and does not represent an exhaustive list.

TYPICAL NEW BUILD COST MODEL FE COLLEGES SCHEME

LOCATION MODEL ONE

East and West Midlands and the East and South West of England
(Please see Section 12 for detailed information for location)

9. TYPICAL NEW BUILD COST MODEL FE COLLEGES SCHEME – LOCATION MODEL ONE

Element	Cost Allowance £/m ²	%	New Build- Location Model One - Typical Specification
Demolition	19	0.7	2,500m ² of two storey buildings, with minor deleterious material content. (Cost allowance £15,000 - £25,000).
Substructure	113	4.3	Excavation and disposal, piled foundations, pile caps, ground beams and ground slab. Ground improvement where necessary for poor load bearing ground.
Substructure Subtotal	132	5.1	
<u>2 Superstructure</u>			
2A Frame	112	4.3	Structural steel beams and columns, fire protected and encased or reinforced concrete beams and columns.
2B Upper Floors	69	2.6	Precast, pre-stressed reinforced concrete or insitu reinforced concrete or hollowcore precast planks.
2C Roof	102	3.9	Insitu reinforced concrete or composite roof deck and concrete with single ply membrane (or similar), insulation and associated drainage either gravity or syphonic. Mansafe or equivalent maintenance system, walkway tiles.
2D Stairs	21	0.8	Core staircases in precast reinforced concrete with half landings. Feature stairs to have stainless steel handrails and perforated metal balustrading. Escape stairs to have painted steel handrails and balustrades. Walls, ceilings & floors included in finishes.
2E External Walls	124	4.7	Rainscreen cladding system including bracket and rail system, insulation, waterproofing and internal wall linings, (approximately 60% of total elevation allowed). Brickwork cavity walls in facing bricks and block inner leaf and insulation, (approximately 10% of total elevation allowed). Louvres associated with mechanical plant and so on within facade.

**Further Education Schemes
Cost Models
July 2014**

Element	Cost Allowance £/m ²	%	New Build- Location Model One - Typical Specification
2F Windows and External Doors	123	4.7	Double glazed aluminium windows, curtain walling unitised system, incorporating simple polyester powder coated brise soliel as required, (approximately 30% of total elevation allowed). Automatic double doors to main entrance. Manual double and single doors for all others. Main Entrance to receive an entrance canopy.
2G Internal Walls and Partitions	80	3.1	Combination of plasterboard stud partitions and blockwork. (130mm thick partitions comprising 2 layers of 15mm plasterboard - with localised use of soundblock or similar board to meet acoustic requirements). Timber framed glazing with manifestation as panels within walls, (10% of total wall area). An allowance of £10/m ² has been allowed for 'extra' acoustic treatment.
2F Internal Doors	21	0.8	Standard quality solid core doors with laminate or veneer facing in softwood frames. Single and double doors and frames. Stainless steel ironmongery. Lock suiting and compliant with the Equality Act 2010.
Superstructure Subtotal	652	25.0	
<u>3 Internal Finishes</u>			
3A Wall Finishes	28	1.1	Combination of: plaster to blockwork walls; paint on plastered walls; paint on fair faced concrete / blockwork. Plasterboard lining and paint, wall tiling to toilets, cafes, servery and splash backs to sinks - full height to wet areas.
3B Floor Finishes	67	2.6	Combination of screeds, raised access floor (approximately 60% of total area), carpet tiles (approximately 30% of total area), sheet vinyl and coved skirtings (approximately 45% of total area), feature tiling (limestone/ceramic and so on), (approximately 10% of total area), epoxy paint to concrete floor (approximately 15% of total area). Painted MDF skirtings. Barrier matting to entrance area.
3C Ceiling Finishes	30	1.1	Part open / exposed ceilings. Plasterboard ceilings on framing, emulsion paint finish. Mineral fibre concealed grid ceiling, plasterboard margins and bulkheads. Acoustic treatments.
Internal Finishes Subtotal	125	4.8	

Further Education Schemes
Cost Models
July 2014

Element	Cost Allowance £/m ²	%	New Build- Location Model One - Typical Specification
4 Fittings, Furniture and Equipment Generally fixed items of fittings, furniture & equipment	32	1.2	External and internal identity, directional and statutory signage. Reception furniture. IT work benches to general teaching spaces. Laboratory work benches. Fume cupboards and other laboratory fittings. Whiteboards, pinboards and other teaching room fittings, window blinds and vanity units, shelving and storage racks.
5 Services			
5A Sanitary Installations	10	0.4	WC's fixtures and fittings. Urinals fixtures and fittings. Wash hand basins fixtures and fittings. Shower in cubicle, tray, fittings. Classroom sinks, laboratory sinks, cleaners sinks, and drinking fountains (excludes all drainage and water service pipework - included in items below).
5B Disposal Installation	13	0.5	Soil, waste and ventilating systems to sanitary appliances, including connections to foul water drainage. Rainwater disposal including rainwater outlets, gratings, downpipes and connections to foul water drainage.
5C Mechanical Installation	219	8.4	
5C1 Services Equipment	19	0.7	Kitchen, servery and bar fit out.
5C2 Hot and Cold Water Installations	19	0.7	Mains water service treatment. Hot and cold water storage and distribution pipework including accessories, ancillaries brackets etc. Pipework insulation including all identification marking.
5C3 Space Heating, Air Treatment and Vent.	176	6.7	Space heating using low temperature hot water radiators with all supporting plant and distribution. Part natural, part mechanical ventilation / cooling, opening windows. Extract to toilets and kitchen areas. Air handling units and limited local cooling. Localised extract to plant rooms.
5C4 Gas Installation	5	0.2	Incoming gas supply connected to meter and pipework distribution within plant room.

Further Education Schemes
Cost Models
July 2014

Element	Cost Allowance £/m ²	%	New Build- Location Model One - Typical Specification
5D Electrical Installation	241	9.2	
5D1 Electrical Installation	144	5.5	Mains and sub-mains distribution including all power cabling and all fittings. Small power generally including final circuit power from distribution boards including power cabling and all fittings, sockets and outlets. Electrical supplies to mechanical plant and equipment. Lighting and emergency lighting including power cabling, ceiling roses, flex connections and supports. Lighting control (dimnable daylight saving) including zone control. External lighting.
5D2 Protective Installation	5	0.2	Lightning protection.
5D3 Communication Installation	59	2.3	Fire alarm and smoke detection including interface with door hold system, cabling and containment from primary containment system. Security system to include intruder detection installation, CCTV installation, Access Control installation. Public Address with class change alarm bell. Hearing Induction loop. Disabled refuge call system and WC alarm system. Data network including wiring and containment from primary containment system.
5D4 Specialist Installation	33	1.3	Building Management System (BMS) controls, with new central control system, direct digital control devices and field devices. Central wiring included.
5E Lift & Conveyor Installation	23	0.9	2 Nr 10 person lifts to comply with Equality Act 2010 requirements.
5F Builders' Work in Connection	25	1.0	Framing and access platforms in risers. Forming holes and chases and so on based on 5% of services costs.
Services Subtotal	531	20.3	
<u>BUILDING SUBTOTAL (1 to 5)</u>	1,472	56.4	

Further Education Schemes
 Cost Models
 July 2014

Element	Cost Allowance £/m ²	%	New Build- Location Model One - Typical Specification
<u>6 External Works</u>			
6A Site Works	69	2.6	
6A1 External Works	34	1.3	Landscaping, street furniture, boundaries, infrastructure, pavings, hard standings, site clearance and on-site roadworks.
6A2 Decanting	16	0.6	Provisional allowance of circa £50k.
6A3 Planning	19	0.7	Provisional allowance for section 106/278 works and landscaping.
6B Drainage	13	0.5	Foul and rainwater discharge to boundaries of site and manhole chambers, soakaways and connections to buildings.
6C External Services	14	0.5	Incoming services and distribution to buildings. (Does not allow for new substation).
<i>External Works Subtotal</i>	96	3.7	
<u>7 Preliminaries</u>	204	7.8	Management costs, site establishment and site supervision. Contractor's preliminaries, overheads and profit at approximately 13%. Testing and commissioning of building services installations, building manuals.
<u>SUBTOTAL (1 to 7)</u>	1,772	67.9	
<u>8 Contingencies</u>	54	2.1	
8.1 Contingency	27	1.0	1.5% allowance.
8.2 Design Reserve	27	1.0	Allowance for design development at 1.5%.
<u>9 Equipment</u>	76	2.9	New loose fittings, furniture & equipment, procured either directly by the client or via the main contractor (latter option to include management fee). Allows for 70% new and 30% re-utilisation of legacy equipment and decant / recant. ICT loose plug-in equipment is a revenue item (servers, screens and so on)

Further Education Schemes
 Cost Models
 July 2014

Element	Cost Allowance £/m ²	%	New Build- Location Model One - Typical Specification
<u>10 Professional Fees</u>	274	10.5	15% of all costs excluding Equipment (9 above). Also allows for survey costs.
<u>SUBTOTAL (1 to 10)</u>	2,176	83.3	
<u>11 VAT</u>	435	16.7	20% of all costs
<u>TOTAL</u>	2,611	100.0	
Inflationary Costs to allow for increases from July 2014 to completion at September 2015	91		Based on 4% of Net construction costs, preliminary costs, equipment costs and VAT (professional fees, assumed unaffected as orders should have been placed)
<u>ADJUSTED OVERALL TOTAL</u>	2,702		Final Day Costs at September 2015

9. TYPICAL NEW BUILD COST MODEL FE COLLEGES SCHEME

SUMMARY

MODELS ONE, TWO AND THREE

Base build costs embracing sustainability items relevant to 'Very Good' BREEAM rating

Element	Cost Allowance £/m ² September 2015	Location factor	Skills Funding Agency Regions
MODEL ONE Total allowance September 2015	£2,702/m ²	1.00	East and West Midlands and the East and South West of England.
MODEL TWO Total allowance September 2015	£2,972/m ²	1.10	London and the South East of England, together with Essex, Hertfordshire and Cambridgeshire.
MODEL THREE Total allowance September 2015	£2,567/m ²	0.95	Yorkshire, Humberside and the North East and North West of England

Note: Inflation - current forecasts suggest an annual increase from September 2015 to September 2016 of approximately 5.9%.

Further Education Schemes
Cost Models
July 2014

Where schemes have been agreed to target BREEAM "Excellent" an increase in the gross costs would be expected. There is little empirical evidence which would support a specific number however, where the timing of the determination to seek a greater credit value and the impact on the design and resultant costs varies considerably project to project and is linked to timing of such decision.

As a guide, it is expected that a BREEAM "Excellent" Scheme would deliver the following gross Model costs:

Base build costs embracing sustainability items relevant to 'Excellent' BREEAM rating

Element	Cost Allowance £/m ² September 2015	Location factor	Skills Funding Agency Regions
MODEL ONE Total allowance September 2015	£2,878/m ²	1.00	East and West Midlands and the East and South West of England.
MODEL TWO Total allowance September 2015	£3,165/m ²	1.10	London and the South East of England, together with Essex, Hertfordshire and Cambridgeshire.
MODEL THREE Total allowance September 2015	£2,734/m ²	0.95	Yorkshire, Humberside and the North East and North West of England

Note: Inflation - current forecasts suggest an annual increase from September 2015 to September 2016 of approximately 5.9%.

TYPICAL SMALL WORKS / EXTENSION SCHEME NEW BUILD COST MODEL - LOCATION MODEL ONE

East and West Midlands and the East and South West of England.
(Please see Section 12 for detailed information for location)

PROJECT BASELINE CRITERIA - SMALL WORKS / EXTENSION

Brief description of the concept of a typical Small Works / Extension Scheme New Build

Gross Internal Area (GIA) :	400 - 700m ²
Number of Storeys :	2 (Ground, First)
Greenfield/Brownfield:	Brownfield - building in use. May be subject to demolition or ground remediation / facilitation works to 'connect' new extension to existing building.
New Build / Refurbishment:	Yes
Existing Campus or Relocation:	Existing campus
Procurement:	Single stage traditional or design and build or two stage, design and build or other as appropriate
Date at which stated costs are valid:	Base date: July 2014 (present day).
Completion Date:	September 2015
General Specification:	As appropriate in respect of existing building and in accordance with guide specification provided within these Cost Models.
Value:	£900,000 to £1.7million gross
BREEAM:	Very Good' Rating

10. TYPICAL SMALL WORKS / EXTENSION SCHEME NEW BUILD COST MODEL - LOCATION MODEL ONE

Element	Cost Allowance £/m ²	%	Small Works / Extension - Typical Specification
Demolition	11	0.5	Minor demolition works or facilitation works to 'connect' new extension to existing building.
Substructure	113	4.7	Excavation and disposal, concrete pad foundations. Minor allowance for localised remediation/ground improvement.
Substructure Subtotal	124	5.2	
<u>2 Superstructure</u>			
2A Frame	100	4.2	Steel frame and traditional brickwork construction (costs of latter included in part within this section and external walls).
2B Upper Floors	68	2.9	Precast, pre-stressed reinforced concrete or insitu reinforced concrete or hollowcore precast planks, all formwork or shuttering (permanent & temporary).
2C Roof	88	3.7	Lightweight timber/steel construction with single ply membrane or tiled construction to match existing insulation and associated drainage. Mansafe or equivalent maintenance system.
2D Stairs	22	0.9	Core staircases in precast reinforced concrete with half landings, polyester coated or painted steel handrailing balustrades.
2E External Walls	125	5.2	Rainscreen cladding system including bracket and rail system, insulation, waterproofing and internal wall linings, (approximately 60% of total elevation allowed). Brickwork cavity walls in facing bricks and block inner leaf and insulation, (approximately 10% of total elevation allowed). Louvres associated with mechanical plant and so on within facade. Generally to match existing.

**Further Education Schemes
Cost Models
July 2014**

Element	Cost Allowance £/m ²	%	Small Works / Extension - Typical Specification
2F Windows and External Doors	107	4.5	Double glazed aluminium windows, curtain walling unitised system, incorporating simple polyester powder coated brise soleil as required, (approximately 30% of total elevation allowed). Secondary entrance with manual double doors. No main entrance included. Manual single doors for all others.
2G Internal Walls and Partitions	60	2.5	Combination of plasterboard stud partitions and blockwork. (130mm thick partitions comprising 2 layers of 15mm plasterboard - with localised use of soundblock or similar board to meet acoustic requirements). Timber framed glazing with manifestation as panels within walls, (10% of total wall area). An extra over allowance of £8/m ² has been allowed for 'extra' acoustic treatment.
2F Internal Doors	27	1.1	Standard quality solid core doors with laminate or veneer facing in softwood frames. Single and double doors, frames. Stainless steel ironmongery. Lock suiting and Equality Act 2010 compliant.
<i>Superstructure Subtotal</i>	597	25.1	
<u>3 Internal Finishes</u>			
3A Wall Finishes	28	1.2	Combination of: plaster to blockwork walls; paint on plastered walls; paint on fair faced concrete / blockwork. Plasterboard lining and paint, wall tiling to toilets, cafes, servery and splash backs to sinks - full height to wet areas.
3B Floor Finishes	65	2.7	Combination of screeds, raised access floor (approximately 60% of total area), carpet tiles (approximately 40% of total area), sheet vinyl and coved skirtings (approximately 45% of total area), epoxy paint to concrete floor (approximately 15% of total area). Painted MDF skirtings. Barrier matting to entrance area.
3C Ceiling Finishes	30	1.3	Part open / exposed ceilings. Plasterboard ceilings on framing, emulsion paint finish. Mineral fibre concealed grid ceiling, plasterboard margins and bulkheads. Acoustic treatments.
<i>Internal Finishes Subtotal</i>	123	5.2	

Further Education Schemes
Cost Models
July 2014

Element	Cost Allowance £/m ²	%	Small Works / Extension - Typical Specification
4 Fittings, Furniture and Equipment Generally fixed items of fittings, furniture & equipment	39	1.6	External and internal identity, directional and statutory signage. Reception furniture. IT work benches to general teaching spaces. Laboratory work benches. Fume cupboards and other laboratory fittings. Whiteboards, pinboards and other teaching room fittings. Window blinds and vanity units. Retain lockers, shelving and storage racks.
5 Services			
5A Sanitary Installations	10	0.4	WCs and fittings. Extra for disabled fittings. Urinals and fittings. Wash hand basins and fittings. Shower in cubicle, tray, fittings. Classroom sinks, laboratory sinks, cleaners sinks, drinking fountains. Extent and scope of works expected to be lower main works due to the scale and complexity of the scheme.
5B Disposal Installation	14	0.6	Waste, soil and vent pipework. Rainwater installations.
5C Mechanical Installation	154	6.5	
5C1 Services Equipment	9	0.4	Provisional allowance. No major services equipment expected, but may necessitate either additions to existing or upgrading plant.
5C2 Hot and Cold Water Installations	23	1.0	Mains water service treatment. Hot water storage and distribution. Cold water storage and distribution.
5C3 Space Heating, Air Treatment and Vent.	117	4.9	Space heating using low temperature hot water radiators with all supporting plant and distribution. Part natural, part mechanical ventilation / cooling, opening windows. Extract to toilets and kitchen areas. Air handling units and limited local cooling. Localised extract to plant rooms. Extent and scope of works expected to be lower main works due to the scale and complexity of the scheme.
5C4 Gas Installation	5	0.2	Incoming gas supply extended with new pulse meter.

Further Education Schemes
Cost Models
July 2014

Element	Cost Allowance £/m ²	%	Small Works / Extension - Typical Specification
5D Electrical Installation	219	9.2	
5D1 Electrical Installation	152	6.4	Extension of mains and sub-mains distribution, small power generally, electrical supplies to mechanical plant and equipment, lighting, emergency lighting and external lighting. Lighting control (dimmable daylight saving) including zone control. Extent and scope of works expected to be lower main works due to the scale and complexity of the scheme.
5D2 Protective Installation	7	0.3	Lightning protection.
5D3 Communication Installation	45	1.9	Fire alarm and smoke detection including interface with door hold system, cabling and containment from primary containment system. Security system to include intruder detection installation, CCTV installation, Access Control installation, all extended from existing with repeater panels. Public Address with class change alarm bell. Hearing Induction loop. Disabled refuge call system and WC alarm system. Data network including wiring and containment from primary containment system. Extent and scope of works expected to be lower main works due to the scale and complexity of the scheme.
5D4 Specialist Installation	15	0.6	Building Management System (BMS) control wiring, set points extended into new areas. Main controller retained and reprogrammed to suit.
5E Lift & Conveyor Installation	0	0.0	Excluded
5F Builders' Work in Connection	20	0.8	Framing and access platforms in risers. Forming holes and chases and so on based on 5% of services costs.
Services Subtotal	417	17.5	
<u>BUILDING SUBTOTAL (1 to 5)</u>	1,300	54.6	

Further Education Schemes
 Cost Models
 July 2014

Element	Cost Allowance £/m ²	%	Small Works / Extension - Typical Specification
6 External Works			
6A Site Works	32	1.3	
6A1 External Works	16	0.7	Localised (to extent of extension) of landscaping, street furniture, pavings, hard standings, site clearance and amendments to on-site roadworks. No provision for off-site works.
6A2 Decanting	6	0.3	Provisional allowance for decanting and recanting resultant from the extension works.
6A3 Planning	10	0.4	Provisional allowance for discharge of planning conditions and to tie-in new and existing developments.
6B Drainage	13	0.5	Foul and rainwater discharge to existing manhole chambers, soakaways and connections to buildings.
6C External Services	10	0.4	Amendments to incoming services and distribution to buildings. No new major plant or major upgrades included.
External Works Subtotal	55	2.3	
7 Preliminaries	190	8.0	Management costs, site establishment and site supervision. Contractor's preliminaries, overheads and profit at approximately 14%. Testing and commissioning of building services installations, building manuals.
SUBTOTAL (1 to 7)	1,545	64.9	

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Element	Cost Allowance £/m ²	%	Small Works / Extension - Typical Specification
8 Contingencies	92	3.9	
8.1 Contingency	46	1.9	3% allowance.
8.2 Design Reserve	46	1.9	Allowance for design development at 3%.
9 Equipment	69	2.9	New loose fittings, furniture & equipment, procured either directly by the client or via the main contractor (latter option to include management fee). Allows for 70% new and 30% re-utilisation of legacy equipment and decant / recant. ICT loose plug-in equipment is a revenue item (servers, screens and so on)
10 Professional Fees	278	11.7	17% of all costs excluding Equipment (9 above). Also allows for survey costs.
SUBTOTAL (1 to 10)	1,984	83.3	
11 VAT	397	16.7	20% of all costs
TOTAL	2,381	100.0	
Inflationary Costs to allow for increases from July 2014 to completion at September 2015	82		Based on 4% of Net construction costs, preliminary costs, equipment costs and VAT (professional fees, assumed unaffected as orders should have been placed)
ADJUSTED OVERALL TOTAL	2,463		Final Day Costs at September 2015

10. TYPICAL SMALL WORKS / EXTENSION SCHEME NEW BUILD COST MODEL

SUMMARY

MODELS ONE, TWO AND THREE

Base build costs embracing sustainability items relevant to a 'Very Good' BREEAM rating

Element	Cost Allowance £/m ² September 2015	Location factor	Skills Funding Agency Regions
MODEL ONE Total allowance September 2015	£2,463/m ²	1.00	East and West Midlands and the East and South West of England.
MODEL TWO Total allowance September 2015	£2,709/m ²	1.10	London and the South East of England, together with Essex, Hertfordshire and Cambridgeshire.
MODEL THREE Total allowance September 2015	£2,340/m ²	0.95	Yorkshire, Humberside and the North East and North West of England

Note: Inflation - current forecasts suggest an annual increase from September 2015 to September 2016 of approximately 5.9%.

REFURBISHMENT COST MODEL - REFURBISHMENT WORKS - MEDIUM LEVEL - LOCATION MODEL ONE

East and West Midlands and the East and South West of England.
(Please see Section 12 for detailed information for location)

PROJECT BASELINE CRITERIA - REFURBISHMENT WORKS - MEDIUM LEVEL

Brief description of the concept of a typical levels of refurbishment criteria

FULL: Strip the building back to its primary frame, retain structural floors, provide a new envelope, replace and resurface roof coverings only (not structural replacement) and fully fitted out internally (including full fixed furniture, fixtures and equipment replacement) and partial (approximately 85%) replacement of loose furniture, fixtures and equipment, including mechanical and electrical works, information technology and communication installations.

MEDIUM: Retain the existing structural fabric and envelope (minor repair/replacement of windows included) of the building, replacing roof coverings and introduce extensive new internal finishes and partial replacement of loose furniture, fixtures and equipment, with part renewal of mechanical and electrical works, information technology and communication installations.

MINIMAL: Retain the building in its present form, with limited elements only of new finishes internally including part loose furniture, fixtures and equipment.

Cost Models have been developed for the Medium Refurbishment level and are displayed in an elemental form. The Cost Models relate to the three Skills Funding Agency regions (Southern, Central and Northern). For a detailed schedule of locations, please see Section 12.

However, such is the variable nature of refurbishment, it is expected that any submission will range considerably from one to the next. These refurbishment models are intended to act as guidance.

It is advised that for **Full or Minimal** levels of refurbishment works an adjustment is made to the total base (medium) build rates:

Full: + 30% for models One, Two or Three

Minimal: - 45% for models One, Two or Three

Any refurbishment submissions will be assessed on the basis of the Medium Refurbishment Cost Model, with due allowance made for the scope of the works, as given above.

NOTE: Total Base Build Present Day Costs include fees and full VAT liability and are expressed at July 2014 values. Final day costs relate to September 2015.

Refurbishment works can be subject to compliance with current and changing legislation (Building Regulations) relating to electrical and other installations.

11. REFURBISHMENT COST MODEL - REFURBISHMENT WORKS - MEDIUM LEVEL - LOCATION MODEL ONE

Element	Cost Allowance £/m ²	%	Refurbishment Works - Medium Level - Typical Specification
Demolition	15	0.9	Internal demolitions of existing building only (50% strip out of services, demolition of non-structural internal walls). Minor asbestos removal.
Substructure	0	0.0	No works to substructure.
Substructure Subtotal	15	0.9	
2 Superstructure			
2A Frame	15	0.9	Works to existing frame only - adaptation/fire rating
2B Upper Floors	20	1.1	Works to existing floors only - making good, forming and trimming openings.
2C Roof	63	3.6	Replacement of roof coverings and insulation only (no structural works).
2D Stairs	5	0.3	Repairs and making good only - no new provision.
2E External Walls	44	2.5	Localised repairs and making good.
2F Windows and External Doors	107	6.1	Localised repairs to existing windows - allowance to repair/replace 20% of existing windows. New doors and ironmongery.
2G Internal Walls and Partitions	68	3.9	Partial replacement of internal walls (approximately 50%) with new plasterboard stud partitions and blockwork. Timber framed glazing panels within walls (10% of total wall area). An allowance of £10/m ² has been allowed for 'extra' acoustic treatment.
2F Internal Doors	20	1.1	Partial replacement of solid core fire rated doors in hardwood frames. Doors in hardwood frames. Stainless steel ironmongery. Lock suiting and DDA Equality Act 2010 compliant, (approximately 50% replacement).
Superstructure Subtotal	342	19.5	

Further Education Schemes
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Element	Cost Allowance £/m ²	%	Refurbishment Works - Medium Level - Typical Specification
<u>3 Internal Finishes</u>			
3A Wall Finishes	31	1.8	Combination of: plaster to blockwork walls; paint on plastered walls; paint on fair faced concrete / blockwork. Plasterboard lining and paint, wall tiling to toilets, cafes, servery and splash backs to sinks - full height to wet areas.
3B Floor Finishes	56	3.2	Combination of screeds, raised access floor (approximately 50% of total area replaced), carpet tiles (approximately 30% of total area), sheet vinyl and covered skirtings (approximately 45% of total area), feature tiling (limestone/ceramic and so on), (approximately 10% of total area), epoxy paint to concrete floor (approximately 15% of total area). Painted MDF skirtings. Barrier matting to entrance area.
3C Ceiling Finishes	30	1.7	Part open / exposed ceilings. Plasterboard ceilings on framing, emulsion paint finish. Mineral fibre concealed grid ceiling, plasterboard margins and bulkheads. Acoustic treatments.
<i>Internal Finishes Subtotal</i>	117	6.7	
<u>4 Fittings, Furniture and Equipment</u> Generally fixed items of fittings, furniture & equipment	32	1.8	External and internal identity, directional and statutory signage. Reception furniture. IT work benches to general teaching spaces. Laboratory work benches. Fume cupboards and other laboratory fittings. Whiteboards, pinboards and other teaching room fittings. Window blinds and vanity units. Retain lockers, shelving and storage racks.
<u>5 Services</u>			
5A Sanitary Installations	7	0.4	WCs and fittings. Extra for disabled fittings. Urinals and fittings. Wash hand basins and fittings. Shower in cubicle, tray, fittings. Classroom sinks, laboratory sinks, cleaners sinks, drinking fountains. Re-useable fittings retained where possible.
5B Disposal Installation	6	0.3	Adaptions to waste, soil and vent pipework. Rainwater installations, syphonic drainage. 20% retained (rainwater installations).

Further Education Schemes
Cost Models
July 2014

Element	Cost Allowance £/m ²	%	Refurbishment Works - Medium Level - Typical Specification
5C Mechanical Installation	155	8.9	
5C1 Services Equipment	20	1.1	Kitchen, servery and bar fit out.
5C2 Hot and Cold Water Installations	20	1.1	Mains water service treatment. Hot water storage and distribution. Cold water storage and distribution. 40% services retained.
5C3 Space Heating, Air Treatment and Vent.	112	6.4	Space heating using low temperature hot water radiators with all supporting plant and distribution. Part natural, part mechanical ventilation / cooling, opening windows. Extract to toilets and kitchen areas. Air handling units and limited local cooling. Localised extract to plant rooms. 40% services retained.
5C4 Gas Installation	3	0.2	Incoming gas supply and distribution adapted to suit new configuration as required.
5D Electrical Installation	170	9.7	
5D1 Electrical Installation	107	6.1	Extension of mains and sub-mains distribution, small power generally, electrical supplies to mechanical plant and equipment, lighting, emergency lighting and external lighting. Lighting control (dimmable daylight saving) including zone control. 30% services retained.
5D2 Protective Installation	3	0.2	Lightning protection retained and made good where required.
5D3 Communication Installation	38	2.2	Upgrade of fire alarm and smoke detection, interface with door hold system, disabled refuge communications system, induction loop alarm interface. Security system, intruder alarm, CCTV, public address. Induction loop. Disabled WC alarm system and data network including containment. 40% services retained.
5D4 Specialist Installation	22	1.3	Building management system control wiring replaced where required (assumed 60%), with new set points and reprogramming existing main controller unit.
5E Lift & Conveyor Installation	22	1.3	Major refurbishment of existing lift finishes and making good.
5F Builders' Work in Connection	25	1.4	Framing and access platforms in risers. Forming holes and chases and so on based on 7.5% of services costs.
Services Subtotal	385	22.0	

Further Education Schemes
 Cost Models
 July 2014

Element	Cost Allowance £/m ²	%	Refurbishment Works - Medium Level - Typical Specification
<u>BUILDING SUBTOTAL (1 to 5)</u>	891	50.9	
<u>6 External Works</u>			
6A Site Works	39	2.2	
6A1 External Works	8	0.5	Minor hard landscaping amendments associated with fire exits/entrances and general circulation around the campus.
6A2 Temporary Works	15	0.9	Temporary works and services necessary to facilitate the refurbishment works.
6A3 Decanting	12	0.7	Provisional allowance for decanting and recanting resultant from refurbishment works.
6A4 Planning	4	0.2	Minor allowance associated with any entrance works.
6B Drainage	7	0.4	Making good foul and rainwater discharge to boundaries of site and manhole chambers, soakaways and connections to buildings.
6C External Services	0	0.0	No works expected.
<i>External Works Subtotal</i>	46	2.6	
<u>7 Preliminaries</u>	141	8.1	Management costs, site establishment and site supervision. Contractor's preliminaries, overheads and profit at approximately 15%. Testing and commissioning of building services installations, building manuals.
<u>SUBTOTAL (1 to 7)</u>	1,078	61.6	
<u>8 Contingencies</u>	113	6.5	
8.1 Contingency	81	4.6	7.5% allowance.
8.2 Design Reserve	32	1.8	Allowance for design development at 3%.

Further Education Schemes
 Cost Models
 July 2014

Element	Cost Allowance £/m ²	%	Refurbishment Works - Medium Level - Typical Specification
9 Equipment	77	4.4	Based upon circa £103/m ² teaching space. ICT loose plug-in equipment is a revenue item (servers, screens etc.) 35% to be retained for the re-utilisation of legacy equipment.
10 Professional Fees	191	10.9	16% of all costs excluding Equipment (9 above). Also allows for survey costs.
SUBTOTAL (1 to 10)	1,459	83.3	
11 VAT	292	16.7	20% of all costs
TOTAL	1,751	100.0	
Inflationary Costs to allow for increases from July 2014 to completion at September 2015	61		Based on 4% of Net construction costs, preliminary costs, equipment costs and VAT (professional fees, assumed unaffected as orders should have been placed)
<u>ADJUSTED OVERALL TOTAL</u>	1,812		Final Day Costs at September 2015

11. REFURBISHMENT COST MODEL - REFURBISHMENT WORKS - MEDIUM LEVEL

SUMMARY

MODELS ONE, TWO AND THREE

Base build costs embracing sustainability items relevant to a 'Very Good' BREEAM rating

Element	Cost Allowance £/m ² September 2015	Location factor	Skills Funding Agency Regions
MODEL ONE Total allowance September 2015	£1,812/m ²	1.00	East and West Midlands and the East and South West of England.
MODEL TWO Total allowance September 2015	£1,993/m ²	1.10	London and the South East of England, together with Essex, Hertfordshire and Cambridgeshire.
MODEL THREE Total allowance September 2015	£1,721/m ²	0.95	Yorkshire, Humberside and the North East and North West of England

Note: Inflation - current forecasts suggest an annual increase from September 2015 to September 2016 of approximately 5.9%.

12 LOCATION MATRIX

Skills Funding Agency Regions		Covering regional offices / areas	Relevant Model
Southern	London North and East	Barking and Dagenham Barnet Camden Enfield Hackney Haringey Havering Islington Kensington + Chelsea Newham Redbridge Tower Hamlets Waltham Forest Westminster	Two Two Two Two Two Two Two Two Two Two Two Two Two Two
	London South and West	Bexley Brent Bromley Croydon Ealing Greenwich Kingston Hammersmith + Fulham Harrow Hillingdon Hounslow Lambeth Lewisham Merton Richmond Southwark Sutton Wandsworth	Two Two Two Two Two Two Two Two Two Two Two Two Two Two Two Two Two Two

12 LOCATION MATRIX (Cont'd)

Skills Funding Agency Regions		Covering regional offices / areas	Relevant Model
	South Central	Hampshire Dorset Surrey Bournemouth Poole Southampton Portsmouth West Sussex Isle of Wight Brighton + Hove	Two One Two One One Two Two Two Two Two
Southern	South West	Bath + NE Somerset Bristol Cornwall Devon Isles of Scilly North Somerset Plymouth Somerset South Gloucestershire Torbay	One One One One One One One One One One
	South East	Kent East Sussex Thurrock Medway Southend on Sea Essex	Two Two Two Two Two Two

12 LOCATION MATRIX (Cont'd)

Skills Funding Agency Regions		Covering regional offices / areas	Relevant Model
	Thames Valley	Bucks Oxfordshire Swindon Reading West Berks Slough Bracknell Forrest Windsor + Maidenhead Wokingham Wiltshire	Two Two Two Two Two Two Two Two Two Two
Central	Central Eastern	Hertfordshire Cambridgeshire Central Bedfordshire Bedford Bedfordshire Luton Northampton Milton Keynes Suffolk Norfolk Peterborough	Two Two Two Two Two Two One Two One One One
Central	West Midlands	Telford + Wrekin Shropshire Herefordshire Worcestershire Warwickshire Coventry Birmingham Sandwell + Dudley Staffordshire Walsall Wolverhampton Solihull	One One One One One One One One One One One One

12 LOCATION MATRIX (Cont'd)

Skills Funding Agency Regions		Covering regional offices / areas	Relevant Model
	East Midlands	Derby Derbyshire Leicester Leicestershire Lincolnshire Nottingham Nottinghamshire Rutland	One One One One One One One One
Northern	Cheshire, Warrington + Staffordshire	Bolton Bury Cheshire West and Warrington Trafford Stockport Tameside Manchester Salford Wigan Stoke on Trent Cheshire East Rochdale Oldham	Three Three Three Three Three Three Three Three Three Three Three Three Three
Northern	Liverpool City Region, Cumbria and Lancashire	Liverpool Cumbria Lancashire Blackpool Sefton Blackburn + Darwin Wirral Knowsley Halton St Helens	Three Three Three Three Three Three Three Three Three Three

12 LOCATION MATRIX (Cont'd)

Skills Funding Agency Regions		Covering regional offices / areas	Relevant Model
	Yorkshire and the Humber	North Yorkshire York East Riding of Yorkshire Doncaster Kingston upon Hull Rotherham Sheffield Barnsley Kirklees Wakefield Leeds Bradford Calderdale North Lincolnshire North East Lincolnshire	Three Three Three Three Three Three Three Three Three Three Three Three Three Three Three
	North East	Northumberland County Durham Gateshead Newcastle upon Tyne North Tyneside South Tyneside Sunderland Hartlepool Middlesbrough Redcar + Cleveland Stockton on tees Darlington	Three Three Three Three Three Three Three Three Three Three Three Three