Education
Funding
Agency

Property Data Survey Programme

Condition need model

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Contents

Table of figures

Introduction

This document provides an explanation of how survey data collected through the Property Data Survey Programme (PDSP) has been weighted to provide a relative assessment of condition need.

Background

The PDSP consists of a series of high-level surveys of educational establishments in England. These surveys provide detailed information on the condition of the school estate, which will allow us to allocate funding where it is most needed. Just under 19,000 establishments were surveyed – this excludes those schools that have been recently modernised or are part of a long-term PFI arrangement.

The Property Data Surveys (PDS) have been developed to provide a cost-effective method of obtaining consistent condition data. PDS are typically more high-level and less intrusive than traditional full Building Condition and Compliance Surveys that local authorities, trusts, voluntary-aided (VA) bodies and education establishments use. The PDS excludes any assessment with regards to sufficiency, suitability and compliance considerations.

The PDS was carried out by chartered surveyors contracted by the Education Funding Agency. The surveyors looked at the condition at each establishment on a block by block basis and buildings at each educational establishment were divided into 'blocks' generally identified by the age of construction or building type. The condition of that block was then broken down in to elements (i.e. roofs), sub-elements (i.e. roof structure or coverings) and construction types (i.e. tiles or asphalt). A full list of these headings is included in Table 1.

The surveyors graded the condition of the establishment at the construction type level. A PDS survey record was created for each relevant construction type and given a condition grade of A-D and a priority from 1-4. This information is not designed to specify maintenance works required, but identify condition and priority assessments at a more detailed level to inform planning. The approach used to allocating these grades can be found in the Property Data Survey manual which is available at https://www.gov.uk/government/publications/property-data-survey-programme . The initial survey findings were shared with bodies responsible for building maintenance of education establisments over the summer of 2014.

Condition need model

To weight the need across different elements, we have developed a set of need factors to weight the respective costs of addressing different types of condition need.

The need factors for grade D are based on a typical scope of works to replace a construction type. The need factors for grade C are based on replacing a proportion of the construction type. The need factors were then calculated on the basis of Royal Institution of Chartered Surveyors Building Cost Information Service minor works rates. The calculation used for all construction types is set out below.

Surveyors assessed the percentage of the construction type present and the condition grade informed the need factor to be used. The inputs to the calculation were then taken from the surveyor assessment and the table of PDS need factors set out in Table 1.

To provide an example of how this is applied:

If a building had a flat roof on part of a block, the surveyor will assess the proportion of the block that was covered by a flat roof (the Percentage of construction type present). They would then multiply this by the ground floor area of the block (the Need Quantity) as this reflects the footprint of the building and therefore amount of roof required in total. If the flat roof is graded D, this would then be multiplied by the factor we have calculated for the full replacement of flat roofs (based on a typical scope of work agreed with the Royal Institution of Chartered Surveyors).

So where a flat roof graded D covered 80% of a 400m2 block the calculation would be:

80% x 400m2 x 124.69 = £39,901 of PDS need

It is important to note that this is a relative weighting of need, rather than a full estimate of the cost of carrying out the works at any one building. This will vary significantly from one establishment to the next, e.g. depending on where this element sits in combination with other elements, whether temporary accommodation is required and/or whether asbestos is present.

The PDS is not intended to replace local survey information and prior to undertaking any work, appropriate survey and feasibility work should be conducted to generate a robust cost estimate.

The surveyors undertaking the PDS had no involvement in the calculation of need factors or need.

Table 1: PDS Need factors

Source: PDSP 2014

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
1 Roofs	1.1 Structure	1.1.1 Flat roof structure and deck - Generally	Ground floor area in m2	124.69	31.17
		1.1.2 Pitched roof structure - Generally	Ground floor area in m2	228.59	40.00
	1.2 Coverings and insulation	1.2.1 Flat roof - Flexible sheet; single ply or built up	Ground floor area in m2	114.51	34.35
		1.2.2 Flat roof – Asphalt	Ground floor area in m2	108.24	32.47
		1.2.3 Flat roof - Flat metal sheet	Ground floor area in m2	280.97	105.36
		1.2.4 Flat roof - Liquid applied	Ground floor area in m2	97.78	29.34
		1.2.5 Flat roof - Green roof	Ground floor area in m2	236.96	71.09
		1.2.6 Flat roof - Glazed areas / rooflights	Ground floor area in m2	2.88	0.72
		1.2.7 Pitched roof - Natural slates	Ground floor area in m2	171.56	55.76
		1.2.8 Pitched roof – Tiles	Ground floor area in m2	172.99	56.22
		1.2.9 Pitched roof - Flexible sheet; single ply or built up	Ground floor area in m2	141.97	42.59
		1.2.10 Pitched roof - Profiled fibreglass / GRP / plastic / composite sheet	Ground floor area in m2	95.38	19.08
		1.2.11 Pitched roof - Profiled fibre cement sheet	Ground floor area in m2	85.92	17.18
		1.2.12 Pitched roof - profiled metal sheet; self finished	Ground floor area in m2	120.67	36.20
		1.2.13 Pitched roof - Flat metal sheet	Ground floor area in m2	433.99	162.75
		1.2.14 Pitched roof - Glazed areas / rooflights	Ground floor area in m2	946.68	236.67

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
	1.3 Drainage	1.3.1 Flat roof - Fibre cement	Ground floor area in m2	16.55	4.14
		1.3.2 Flat roof - Cast iron	Ground floor area in m2	20.82	5.21
		1.3.3 Flat roof – Aluminium	Ground floor area in m2	18.04	4.51
		1.3.4 Flat roof - Other metal	Ground floor area in m2	45.75	11.44
		1.3.5 Flat roof – Plastic	Ground floor area in m2	7.87	1.97
		1.3.6 Pitched roof - Fibre cement	Ground floor area in m2	16.55	4.14
		1.3.7 Pitched roof - Cast iron	Ground floor area in m2	20.82	5.21
		1.3.8 Pitched roof - Aluminium	Ground floor area in m2	18.04	4.51
		1.3.9 Pitched roof - Other metal	Ground floor area in m2	45.75	11.44
		1.3.10 Pitched roof - Plastic	Ground floor area in m2	7.87	1.97
2 Floors and stairs	2.1 Ground bearing / hollow floors – structure	2.1.1 Generally	Ground floor area in m2	227.12	56.78
	2.2 Suspended floors – structure	2.2.1 Generally	Block floor area less ground floor area in m2	242.40	60.60
	2.3 Floors - screed & finish	2.3.1 Concrete / unfinished screed / floor paint	Block floor area in m2	120.01	42.00
		2.3.2 Softwood boarding	Block floor area in m2	64.64	18.45
		2.3.3 Hardwood strip / wood block / sprung floor	Block floor area in m2	146.96	44.09
		2.3.4 Raised access floor	Block floor area in m2	92.39	16.76
		2.3.5 Vinyl / rubber / cork in tiles / sheet	Block floor area in m2	46.05	8.83

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
		2.3.6 Ceramic tiles / terrazzo	Block floor area in m2	180.22	56.17
		2.3.7 Carpet	Block floor area in m2	47.25	9.28
	2.4 Staircases – structure	2.4.1 Concrete	Block floor area in m2	98.81	14.82
		2.4.2 Timber	Block floor area in m2	37.89	9.47
		2.4.3 Metal	Block floor area in m2	45.40	6.81
	2.5 Staircases – Balustrades	2.5.1 Timber	Block floor area in m2	19.73	4.93
		2.5.2 Metal; painted	Block floor area in m2	24.06	6.02
		2.5.3 Metal; powder coated / self finished	Block floor area in m2	28.75	7.19
	2.6 Staircases – Treads & risers	2.6.1 Timber	Block floor area in m2	-	-
		2.6.2 Vinyl / rubber / cork / carpet in tiles / sheet	Block floor area in m2	7.93	1.49
		2.6.3 Ceramic tiles / terrazzo	Block floor area in m2	21.85	6.51
3 Ceilings	3.1 Generally	3.1.1 Fair faced concrete	Block floor area in m2	39.95	13.98
		3.1.2 Plaster / render / plasterboard lining / timber lining	Block floor area in m2	41.90	12.57
		3.1.3 No ceiling / exposed structure	Block floor area in m2	-	-
		3.1.4 Fibreboard / acoustic tile lining	Block floor area in m2	63.75	19.13
		3.1.5 Suspended ceiling; timber boarding / panels	Block floor area in m2	75.43	22.63
		3.1.6 Suspended ceiling; fibreboard / acoustic tiles	Block floor area in m2	51.92	15.58
		3.1.7 Suspended ceiling; metal tiles	Block floor area in m2	75.13	22.54

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
		3.1.8 Suspended rafts below fair faced / plaster soffit	Block floor area in m2	60.78	18.24
4 External walls, windows and doors	4.1 Walls – structure	4.1.1 In situ concrete	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	407.51	101.88
		4.1.2 Precast concrete	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	442.89	110.72
		4.1.3 Brick / block	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	208.92	52.23
		4.1.4 Stone	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	300.60	75.15
		4.1.5 Concrete / brick / block with rainscreen cladding	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	124.96	37.49
		4.1.6 Timber framed curtain walling	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	1,081.60	270.40

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
		4.1.7 Metal framed curtain walling	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	1,075.59	322.68
		4.1.8 Frameless glazing	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	1,342.05	402.61
	4.2 Walls - external finishes	4.2.1 Concrete	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	469.12	140.74
		4.2.2 Brick / stone	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	46.94	14.08
		4.2.3 Render	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	70.25	21.08
		4.2.4 Natural slate hanging	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	143.93	43.18

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
		4.2.5 Tile hanging	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	119.26	35.78
		4.2.6 Timber cladding	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	109.88	32.96
		4.2.7 No wall finish / exposed structure	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	-	-
		4.2.8 Profiled fibre cement sheet	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	101.55	30.47
		4.2.9 Profiled fibreglass / GRP / plastic / composite sheet / profiled metal sheet	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	161.87	48.56
		4.2.10 Flat metal sheet / panels	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	357.38	107.22

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
		4.2.11 Flat fibreglass / GRP / plastic / composite in sheet / panels	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	136.83	34.21
		4.2.12 Ceramic tiles	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	115.37	28.84
	4.3 Walls – internal finishes	4.3.1 Concrete / brick / block / stone	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	-	-
		4.3.2 Plaster / render / plasterboard lining	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	39.30	11.79
		4.3.3 Fibreboard / acoustic lining	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	34.11	10.23
		4.3.4 Timber lining	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	56.37	16.91

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
		4.3.5 Ceramic tiles	Perimeter of building multiplied by height, less the estimated percentage of windows and doors	85.80	25.74
	4.4 Windows and doors	4.4.1 Timber	Perimeter of building multiplied by height, multiplied by the estimated percentage of windows and doors	444.42	133.33
		4.4.2 Metal	Perimeter of building multiplied by height, multiplied by the estimated percentage of windows and doors	596.79	179.04
		4.4.3 Plastic	Perimeter of building multiplied by height, multiplied by the estimated percentage of windows and doors	484.07	145.22
5 Internal walls and doors	5.1 Walls and partitions – structure	5.1.1 Brick / block / concrete	Block floor area in m2	232.86	32.93
		5.1.2 Timber / metal stud	Block floor area in m2	60.88	10.32
		5.1.3 Glazed screen	Block floor area in m2	184.04	50.90
		5.1.4 Sliding / folding partition	Block floor area in m2	372.06	114.39
	5.2 Walls and partitions finishes	5.2.1 Concrete / brick / block / stone	Block floor area in m2	-	-
		5.2.2 Plaster / render / plasterboard lining	Block floor area in m2	55.35	9.50

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
		5.2.3 Fibreboard / acoustic lining	Block floor area in m2	50.85	7.16
		5.2.4 Timber lining	Block floor area in m2	135.03	22.38
		5.2.5 Ceramic tiles	Block floor area in m2	130.61	18.67
	5.3 Doors	5.3.1 Timber	Block floor area in m2	30.76	7.60
		5.3.2 Metal / plastic	Block floor area in m2	44.43	9.81
6 Sanitary Services	6.1 Generally	6.1.1 Generally	Block floor area in m2	19.36	6.78
7. Mechanical Services	7.1 Heat source & equipment	7.1.1 Generally	Block floor area in m2	22.69	6.24
	7.2 Heating distribution, emitters & controls	7.2.1 Generally	Block floor area in m2	65.22	22.83
	7.3 Hot & Cold Water System	7.3.1 Generally including heat source / calorifiers for heating the water	Block floor area in m2	25.94	9.08
	7.4 Gas distribution	7.4.1 Generally	Block floor area in m2	10.81	3.78
	7.5 Mechanical Ventilation / air conditioning	7.5.1 No mechanical ventilation or air conditioning	Block floor area in m2	-	-
		7.5.2 Ventilation	Block floor area in m2	57.67	14.42
		7.5.3 Air conditioning	Block floor area in m2	97.17	26.72
8 Electrical Services	8.1 Control Gear	8.1.1 Generally	Block floor area in m2	115.97	37.69
	8.2 Power	8.2.1 Generally	Block floor area in m2	58.46	16.81
	8.3 Lighting System	8.3.1 Generally	Block floor area in m2	104.68	39.12
	8.4 Alarms	8.4.1 Generally	Block floor area in m2	26.65	7.66

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
	8.5 Communications and IT infrastructure	8.5.1 Generally	Block floor area in m2	9.56	3.57
	8.6 Lifts and Hoists	8.6.1 Generally	Count	67,253.15	16,813.29
9 Re-decorations	9.1 External - walls	9.1.1 Unpainted	Block floor area in m2	-	-
		9.1.2 Painted	Block floor area in m2	31.69	6.34
	9.2 External - windows, doors etc.	9.2.1 Timber	Block floor area in m2	28.75	5.75
		9.2.2 Metal / plastic; unpainted	Block floor area in m2	-	-
		9.2.3 Metal; painted	Block floor area in m2	26.17	5.23
	9.3 Internal - walls	9.3.1 Unpainted	Block floor area in m2	-	-
		9.3.2 Painted	Block floor area in m2	42.40	8.48
	9.4 Internal - ceilings	9.4.1 Unpainted	Block floor area in m2	-	-
		9.4.2 Painted	Block floor area in m2	15.21	3.04
	9.5 Internal - windows, doors etc	9.5.1 Generally	Block floor area in m2	1.09	0.22
10 Fixed Furniture and Fittings	10.1 Teaching - science, technology	10.1.1 Generally	Block floor area in m2	420.44	147.16
	10.2.1 Teaching - other	10.2.1 Generally	Block floor area in m2	134.68	47.14
	10.3 Non-teaching - catering kitchen	10.3.1 Generally	Block floor area in m2	1,845.86	646.05
	10.4 Non-teaching - other	10.4.1 Generally	Block floor area in m2	105.62	36.97
11 External Areas	11.1 Roads and car parks	11.1.1 Tarmac	Site area minus ground floor area in m2	71.64	17.91

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
		11.1.2 In-situ concrete	Site area minus ground floor area in m2	122.79	30.70
		11.1.3 Slabs / blocks	Site area minus ground floor area in m2	100.16	25.04
	11.2 Paths, pedestrian paved areas, play areas	11.2.1 Tarmac	Site area minus ground floor area in m2	56.32	14.08
		11.2.2 In-situ concrete paving	Site area minus ground floor area in m2	112.79	28.20
		11.2.3 Slab/block paving	Site area minus ground floor area in m2	94.75	23.69
	11.3 Soft Landscaping	11.3.1 Generally	Site area minus ground floor area in m2	34.40	8.60
	11.4 Mains Services	11.4.1 Generally	Site area minus ground floor area in m2	0.75	0.19
	11.5 Boundary walls and fences	11.5.1 Brick / block / concrete / stone	Boundary length	217.53	54.38
		11.5.2 Timber / metal	Boundary length	74.85	18.71
		11.5.3 Chainlink	Boundary length	37.45	7.49
		11.5.4 No boundary / others' boundary	Boundary length	-	-
	11.6 Other walls, fences and barriers including around tennis courts, 'MUGAS' etc	11.6.1 Generally	Site area minus ground floor area in m2	14.63	2.93
	11.7 Swimming Pools - Structure	11.7.1 Generally	Swimming pool count	12,150.33	8,505.60
	11.8 Swimming Pools - Plant	11.8.1 Generally	Swimming pool count	15,537.50	10,876.25
	11.9 Drainage - Treatment Plant	11.9.1 Generally	Site area minus ground floor area in m2	6.84	2.39

			Grade	D	C
Element	**Sub Element**	**Construction Type**	**Unit Quantity**	**Need Factor**	**Need Factor**
	11.10 Drainage - Other	11.10.1 Generally	Site area minus ground floor area in m2	34.18	11.96
12 Playing Fields / equipment	12.1 Generally	12.1.1 Tarmac	Playing field area	56.32	14.08
		12.1.2 All Weather, artificial and specialist	Playing field area	146.52	29.30
		12.1.3 Grass	Playing field area	8.96	2.24

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