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# Cost Model Report

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## Capital Building and Building Maintenance Works

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Advance Factory  
Alexandra Street  
York

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CM2017.1.FCP1

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13 January 2017

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## Cost Model Notes

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## **Cost model notes**

The cost model has been prepared from the following information:

- Sketch and specification as detailed in Appendix 1

The cost model excludes the following:

- Land or building acquisition costs
- Professional fees
- Value added tax

The cost model assumes the following:

- Site is reasonably level
- Ground conditions are reasonable
- Mains services are located locally and suitable for connection

The cost model includes a start on site date for the capital building works of 01 April 2017 and a construction period of 52 weeks. An allowance for increased construction costs is included in the cost model based on current forecasts that tender inflation will be at some 2.35% per year and construction inflation will be at some 2.38% per year for capital building works.

The cost model also includes building maintenance works costs (renewal and maintain costs). These are based on a maintenance period of 60 years commencing on 02 April 2018 after the construction completion and handover of the building. Calculations to determine future maintenance expenditure to a net present value (at the cost model's base date of 13 January 2017) use a discount rate of 3.5%. An allowance for the likely increase in maintenance tender costs is included in the cost model based on current forecasts that building maintenance works tender inflation will be at some 2.35% per year. The allowance for building maintenance construction cost inflation is accommodated in the discount rate used to determine net present value and is therefore not identified separately.

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## Cost Summaries

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Ref	Element		Total
1	Facilitating works		0
2	Substructure		220,623
3	Superstructure		491,951
4	Internal finishes		38,923
5	Fittings, furnishings and equipment		1,096
6	Services		470,982
7	Prefabricated buildings and building units		0
8	Work to existing buildings		0
9	External works		434,958
10	<b>Facilitating and building works</b>		<b>1,658,533</b>
11	Contractor's preliminaries	10.00%	165,853
12	<b>Facilitating and building works including preliminaries</b>		<b>1,824,386</b>
13	Contractor's overheads and profit	7.50%	136,829
14	<b>Building works estimate</b>		<b>1,961,215</b>
15	Project/design team fees	0.00%	0
16	Other development/project costs	0.00%	0
17	<b>Fees and other costs</b>		<b>0</b>
18	<b>Base cost estimate</b>		<b>1,961,215</b>
19	Risk allowance estimate	12.30%	241,255
20	<b>Cost limit excluding inflation</b>		<b>2,202,470</b>
21	Inflation	1.69%	37,330
22	<b>Cost limit</b>		<b>2,239,800</b>
23	Gross internal floor area (m <sup>2</sup> ): 2331		
24	Cost limit per m <sup>2</sup> : £960.88		
25	Cost model base date: 13 Jan 2017		

Ref	Element	Quantity	Unit	Rate	Total
	<b>Facilitating works</b>				
1	Toxic/hazardous material removal	0	m <sup>2</sup>	0.00	0
2	Major demolition works	0	m <sup>2</sup>	0.00	0
3	Temporary support to adjacent structures	0	m <sup>2</sup>	0.00	0
4	Specialist groundworks	0	m <sup>2</sup>	0.00	0
5	Temporary diversion works	0	m <sup>2</sup>	0.00	0
6	Extraordinary site investigation works	0	m <sup>2</sup>	0.00	0
7	<b>Facilitating works</b>				0
	<b>Substructure</b>				
8	Substructure	2184	m <sup>2</sup>	101.02	220,623
9	<b>Substructure</b>				220,623
	<b>Superstructure</b>				
10	Frame	2376	m <sup>2</sup>	99.62	236,689
11	Upper floors	147	m <sup>2</sup>	66.18	9,728
12	Roof	2376	m <sup>2</sup>	50.60	120,217
13	Stairs and ramps	1	nr	8,839.00	8,839
14	External walls	883	m <sup>2</sup>	60.78	53,669
15	Windows and external doors	100	m <sup>2</sup>	393.48	39,348
16	Internal walls and partitions	357	m <sup>2</sup>	39.81	14,213
17	Internal doors	12	nr	770.67	9,248
18	<b>Superstructure</b>				491,951
	<b>Internal finishes</b>				
19	Wall finishes	1076	m <sup>2</sup>	12.43	13,379
20	Floor finishes	294	m <sup>2</sup>	61.70	18,141
21	Ceiling finishes	294	m <sup>2</sup>	25.18	7,403
22	<b>Internal finishes</b>				38,923
	<b>Fittings, furnishings and equipment</b>				
23	Fittings, furnishings and equipment	2331	m <sup>2</sup>	0.47	1,096
24	<b>Fittings, furnishings and equipment</b>				1,096
	<b>Services</b>				
25	Sanitary installations	29	nr	212.72	6,169
26	Services equipment	0	nr	0.00	0
27	Disposal installations	29	nr	388.03	11,253
28	Water installations	46	nr	369.02	16,975
29	Heat source	62	kW	35.52	2,202
30	Space heating and air conditioning	2331	m <sup>2</sup>	23.45	54,662
31	Ventilation	2087	m <sup>2</sup>	6.62	13,819
32	Electrical installations	2331	m <sup>2</sup>	70.11	163,426
33	Fuel installations	0	m <sup>2</sup>	0.00	0
34	Lift and conveyor installations	1	nr	57,383.00	57,383
35	Fire and lightning protection	2331	m <sup>2</sup>	23.12	53,892
36	Communication, security and control systems	2331	m <sup>2</sup>	33.24	77,483
37	Specialist installations	0	m <sup>2</sup>	0.00	0
38	Builder's work in connection with services	2331	m <sup>2</sup>	5.89	13,718
39	<b>Services</b>				470,982

Ref	Element	Quantity	Unit	Rate	Total
	<b>Prefabricated buildings and building units</b>				
1	Prefabricated buildings and building units	0	m <sup>2</sup>	0.00	0
2	Prefabricated buildings and building units				0
	<b>Work to existing buildings</b>				
3	Minor demolition works and alteration works	0	m <sup>2</sup>	0.00	0
4	Repairs to existing services	0	m <sup>2</sup>	0.00	0
5	Damp-proof courses/fungus and beetle eradication	0	m <sup>2</sup>	0.00	0
6	Facade retention	0	m <sup>2</sup>	0.00	0
7	Cleaning existing surfaces	0	m <sup>2</sup>	0.00	0
8	Renovation works	0	m <sup>2</sup>	0.00	0
9	Work to existing buildings				0
	<b>External works</b>				
10	Site preparation works	5184	m <sup>2</sup>	1.26	6,532
11	Roads, paths, pavings and surfacings	2700	m <sup>2</sup>	80.09	216,236
12	Soft landscaping, planting and irrigation systems	300	m <sup>2</sup>	47.89	14,367
13	Fencing, railings and walls	5167	m <sup>2</sup>	1.24	6,431
14	External fixtures	3000	m <sup>2</sup>	0.11	332
15	External drainage	3000	m <sup>2</sup>	23.26	69,793
16	External services	3000	m <sup>2</sup>	40.42	121,267
17	Minor building works and ancillary buildings	0	m <sup>2</sup>	0.00	0
18	External works				434,958
19	Facilitating and building works				1,658,533
	<b>Contractor's preliminaries</b>				
20	Contractor's preliminaries: employer's requirements	1.00	%	1,658,533	16,585
21	Contractor's preliminaries: contractor's cost items	9.00	%	1,658,533	149,268
22	Contractor's preliminaries				165,853
23	Facilitating and building works including preliminaries				1,824,386
	<b>Contractor's overheads and profit</b>				
24	Contractor's overheads	5.00	%	1,824,386	91,219
25	Contractor's profit	2.50	%	1,824,386	45,610
26	Contractor's overheads and profit				136,829
27	Building works estimate				1,961,215



Ref	Element	Quantity	Unit	Rate	Total
	<b>Project/design team fees</b>				
1	Consultants' fees	0.00	%	1,961,215	0
2	Main contractor's pre-construction fees	0.00	%	1,961,215	0
3	Main contractor's design fees	0.00	%	1,961,215	0
4	<b>Project/design team fees</b>				<b>0</b>
	<b>Other development/project costs</b>				
5	Other development/project costs	0.00	%	1,961,215	0
6	<b>Other development/project costs</b>				<b>0</b>
7	<b>Base cost estimate</b>				<b>1,961,215</b>
	<b>Risks</b>				
8	Design development risks	1.32	%	1,961,215	25,916
9	Construction risks	6.86	%	1,961,215	134,475
10	Employer change risks	0.69	%	1,961,215	13,571
11	Employer other risks	3.43	%	1,961,215	67,293
12	<b>Risk allowance estimate</b>				<b>241,255</b>
13	<b>Cost limit excluding inflation</b>				<b>2,202,470</b>
	<b>Inflation</b>				
14	Tender inflation	0.50	%	2,202,470	11,061
15	Construction inflation	1.19	%	2,213,531	26,269
16	<b>Inflation</b>				<b>37,330</b>
17	<b>Cost limit</b>				<b>2,239,800</b>

Ref	Element		Total
	<b>Renewal</b>		
1	Facilitating works		0
2	Substructure		40,170
3	Superstructure		324,573
4	Internal finishes		116,166
5	Fittings, furnishings and equipment		0
6	Services		6,858
7	Prefabricated buildings and building units		0
8	Work to existing buildings		0
9	External works		1,143
10	<b>Renewal</b>		<b>488,910</b>
	<b>Maintain</b>		
11	Facilitating works		0
12	Substructure		0
13	Superstructure		63,661
14	Internal finishes		0
15	Fittings, furnishings and equipment		0
16	Services		186,782
17	Prefabricated buildings and building units		0
18	Work to existing buildings		0
19	External works		0
20	<b>Maintain</b>		<b>250,443</b>
21	<b>Renewal + maintain</b>		<b>739,353</b>
22	Contractor's preliminaries	5.00%	36,968
23	<b>Renewal + maintain including preliminaries</b>		<b>776,321</b>
24	Contractor's overheads and profit	7.50%	58,224
25	<b>Renewal + maintain estimate</b>		<b>834,545</b>
26	Consultants' and specialists' fees	0.00%	0
27	Employer definable costs	0.00%	0
28	<b>Fees + employer definable costs</b>		<b>0</b>
29	<b>Base cost estimate</b>		<b>834,545</b>
30	Risk allowance estimate	9.40%	78,454
31	<b>Cost limit excluding inflation</b>		<b>912,999</b>
32	Inflation	2.86%	26,099
33	<b>Cost limit</b>		<b>939,098</b>
34	Adjustment to NPV @ 3.5% discount rate		-612,353
35	<b>Cost limit at net present value</b>		<b>326,745</b>

Ref	Element	Quantity	Unit	Rate	Total
	<b>Renewal</b>				
	<b>Facilitating works</b>				
1	Toxic/hazardous material removal	0	m <sup>2</sup>	0.00	0
2	Major demolition works	0	m <sup>2</sup>	0.00	0
3	Temporary support to adjacent structures	0	m <sup>2</sup>	0.00	0
4	Specialist groundworks	0	m <sup>2</sup>	0.00	0
5	Temporary diversion works	0	m <sup>2</sup>	0.00	0
6	Extraordinary site investigation works	0	m <sup>2</sup>	0.00	0
7	<b>Facilitating works</b>				0
	<b>Substructure</b>				
8	Substructure	2184	m <sup>2</sup>	18.39	40,170
9	<b>Substructure</b>				40,170
	<b>Superstructure</b>				
10	Frame	2376	m <sup>2</sup>	29.24	69,477
11	Upper floors	500	m <sup>2</sup>	0.00	0
12	Roof	2376	m <sup>2</sup>	61.43	145,961
13	Stairs and ramps	1	nr	0.00	0
14	External walls	883	m <sup>2</sup>	49.06	43,323
15	Windows and external doors	100	m <sup>2</sup>	420.16	42,016
16	Internal walls and partitions	357	m <sup>2</sup>	23.45	8,372
17	Internal doors	12	nr	1,285.33	15,424
18	<b>Superstructure</b>				324,573
	<b>Internal finishes</b>				
19	Wall finishes	1076	m <sup>2</sup>	38.13	41,032
20	Floor finishes	294	m <sup>2</sup>	255.56	75,134
21	Ceiling finishes	294	m <sup>2</sup>	0.00	0
22	<b>Internal finishes</b>				116,166
	<b>Fittings, furnishings and equipment</b>				
23	Fittings, furnishings and equipment	2331	m <sup>2</sup>	0.00	0
24	<b>Fittings, furnishings and equipment</b>				0

Ref	Element	Quantity	Unit	Rate	Total
	<b>Services</b>				
1	Sanitary installations	29	nr	0.00	0
2	Services equipment	0	nr	0.00	0
3	Disposal installations	29	nr	0.00	0
4	Water installations	46	nr	0.00	0
5	Heat source	62	kW	110.61	6,858
6	Space heating and air conditioning	2331	m <sup>2</sup>	0.00	0
7	Ventilation	2087	m <sup>2</sup>	0.00	0
8	Electrical installations	2331	m <sup>2</sup>	0.00	0
9	Fuel installations	0	m <sup>2</sup>	0.00	0
10	Lift and conveyor installations	1	nr	0.00	0
11	Fire and lightning protection	2331	m <sup>2</sup>	0.00	0
12	Communication, security and control systems	2331	m <sup>2</sup>	0.00	0
13	Specialist installations	0	m <sup>2</sup>	0.00	0
14	Builder's work in connection with services	2331	m <sup>2</sup>	0.00	0
15	<b>Services</b>				<b>6,858</b>
	<b>Prefabricated buildings and building units</b>				
16	Prefabricated buildings and building units	0	m <sup>2</sup>	0.00	0
17	<b>Prefabricated buildings and building units</b>				<b>0</b>
	<b>Work to existing buildings</b>				
18	Minor demolition works and alteration works	0	m <sup>2</sup>	0.00	0
19	Repairs to existing services	0	m <sup>2</sup>	0.00	0
20	Damp-proof courses/fungus and beetle eradication	0	m <sup>2</sup>	0.00	0
21	Facade retention	0	m <sup>2</sup>	0.00	0
22	Cleaning existing surfaces	0	m <sup>2</sup>	0.00	0
23	Renovation works	0	m <sup>2</sup>	0.00	0
24	<b>Work to existing buildings</b>				<b>0</b>
	<b>External works</b>				
25	Site preparation works	5184	m <sup>2</sup>	0.00	0
26	Roads, paths, pavings and surfacings	2700	m <sup>2</sup>	0.00	0
27	Soft landscaping, planting and irrigation systems	300	m <sup>2</sup>	0.00	0
28	Fencing, railings and walls	5167	m <sup>2</sup>	0.00	0
29	External fixtures	500	m <sup>2</sup>	2.29	1,143
30	External drainage	500	m <sup>2</sup>	0.00	0
31	External services	500	m <sup>2</sup>	0.00	0
32	Minor building works and ancillary buildings	0	m <sup>2</sup>	0.00	0
33	<b>External works</b>				<b>1,143</b>
34	<b>Renewal</b>				<b>488,910</b>

Ref	Element	Quantity	Unit	Rate	Total
	<b>Maintain</b>				
	<b>Facilitating works</b>				
1	Toxic/hazardous material removal	0	m <sup>2</sup>	0.00	0
2	Major demolition works	0	m <sup>2</sup>	0.00	0
3	Temporary support to adjacent structures	0	m <sup>2</sup>	0.00	0
4	Specialist groundworks	0	m <sup>2</sup>	0.00	0
5	Temporary diversion works	0	m <sup>2</sup>	0.00	0
6	Extraordinary site investigation works	0	m <sup>2</sup>	0.00	0
7	<b>Facilitating works</b>				0
	<b>Substructure</b>				
8	Substructure	2184	m <sup>2</sup>	0.00	0
9	<b>Substructure</b>				40,170
	<b>Superstructure</b>				
10	Frame	2376	m <sup>2</sup>	0.00	0
11	Upper floors	500	m <sup>2</sup>	0.00	0
12	Roof	2376	m <sup>2</sup>	26.79	63,661
13	Stairs and ramps	1	nr	0.00	0
14	External walls	883	m <sup>2</sup>	0.00	0
15	Windows and external doors	100	m <sup>2</sup>	0.00	0
16	Internal walls and partitions	357	m <sup>2</sup>	0.00	0
17	Internal doors	12	nr	0.00	0
18	<b>Superstructure</b>				324,573
	<b>Internal finishes</b>				
19	Wall finishes	1076	m <sup>2</sup>	0.00	0
20	Floor finishes	294	m <sup>2</sup>	0.00	0
21	Ceiling finishes	294	m <sup>2</sup>	0.00	0
22	<b>Internal finishes</b>				116,166
	<b>Fittings, furnishings and equipment</b>				
23	Fittings, furnishings and equipment	2331	m <sup>2</sup>	0.00	0
24	<b>Fittings, furnishings and equipment</b>				0

Ref	Element	Quantity	Unit	Rate	Total
	<b>Services</b>				
1	Sanitary installations	29	nr	0.00	0
2	Services equipment	0	nr	0.00	0
3	Disposal installations	29	nr	0.00	0
4	Water installations	46	nr	0.00	0
5	Heat source	62	kW	487.74	30,240
6	Space heating and air conditioning	2331	m <sup>2</sup>	0.00	0
7	Ventilation	2087	m <sup>2</sup>	0.00	0
8	Electrical installations	2331	m <sup>2</sup>	0.00	0
9	Fuel installations	0	m <sup>2</sup>	0.00	0
10	Lift and conveyor installations	1	nr	31,320.00	31,320
11	Fire and lightning protection	2331	m <sup>2</sup>	26.85	62,582
12	Communication, security and control systems	2331	m <sup>2</sup>	26.87	62,640
13	Specialist installations	0	m <sup>2</sup>	0.00	0
14	Builder's work in connection with services	2331	m <sup>2</sup>	0.00	0
15	<b>Services</b>				<b>6,858</b>
	<b>Prefabricated buildings and building units</b>				
16	Prefabricated buildings and building units	0	m <sup>2</sup>	0.00	0
17	<b>Prefabricated buildings and building units</b>				<b>0</b>
	<b>Work to existing buildings</b>				
18	Minor demolition works and alteration works	0	m <sup>2</sup>	0.00	0
19	Repairs to existing services	0	m <sup>2</sup>	0.00	0
20	Damp-proof courses/fungus and beetle eradication	0	m <sup>2</sup>	0.00	0
21	Facade retention	0	m <sup>2</sup>	0.00	0
22	Cleaning existing surfaces	0	m <sup>2</sup>	0.00	0
23	Renovation works	0	m <sup>2</sup>	0.00	0
24	<b>Work to existing buildings</b>				<b>0</b>
	<b>External works</b>				
25	Site preparation works	5184	m <sup>2</sup>	0.00	0
26	Roads, paths, pavings and surfacings	2700	m <sup>2</sup>	0.00	0
27	Soft landscaping, planting and irrigation systems	300	m <sup>2</sup>	0.00	0
28	Fencing, railings and walls	5167	m <sup>2</sup>	0.00	0
29	External fixtures	500	m <sup>2</sup>	0.00	0
30	External drainage	500	m <sup>2</sup>	0.00	0
31	External services	500	m <sup>2</sup>	0.00	0
32	Minor building works and ancillary buildings	0	m <sup>2</sup>	0.00	0
33	<b>External works</b>				<b>1,143</b>
34	<b>Maintain</b>				<b>250,443</b>

Ref	Element	Quantity	Unit	Rate	Total
1	Renewal + maintain				739,353
	<b>Contractor's preliminaries</b>				
2	Contractor's preliminaries: employer's requirements	0.50	%	739,353	3,697
3	Contractor's preliminaries: contractor's cost items	4.50	%	739,353	33,271
4	Contractor's preliminaries				36,968
5	Renewal + maintain including preliminaries				776,321
6	Contractor's overheads and profit	7.50%	%	776,321	58,224
7	Renewal + maintain estimate				834,545
	<b>Fees/employer's definable costs</b>				
8	Consultants' and specialists' fees	0.00	%	834,545	0
9	Maintenance contractor's pre-contract and transition mo	0.00	%	834,545	0
10	Maintenance contractor's design fees	0.00	%	834,545	0
11	Employer-definable maintenance-related costs	0.00	%	834,545	0
12	Fees/employer's definable costs				0
13	Base cost estimate				834,545
	<b>Risks</b>				
14	Design and installation risks	2.50	%	834,545	20,881
15	Maintenance risks	3.94	%	834,545	32,902
16	Employer change risks	0.33	%	834,545	2,742
17	Employer other risks	2.63	%	834,545	21,929
18	Risk allowance estimate				78,454
19	Cost limit excluding inflation				912,999
20	Inflation	2.86	%	912,999	26,099
21	Cost limit				939,098
22	Adjustment to NPV @ 3.5% discount rate				-612,353
23	Cost limit at net present value				326,745

## Capital building and building maintenance works - construct, renewal and maintain costs

Ref	Element	Construct	Renewal	Maintain	Total
1	Facilitating works	0	0	0	0
2	Substructure	220,623	40,170	0	260,793
2	Superstructure	491,951	324,573	63,661	880,185
4	Internal finishes	38,923	116,166	0	155,089
5	Fittings, furnishings and equipment	1,096	0	0	1,096
6	Services	470,982	6,858	186,782	664,622
7	Prefabricated buildings and building units	0	0	0	0
8	Work to existing buildings	0	0	0	0
9	External works	434,958	1,143	0	436,101
10	<b>Facilitating and building works</b>	<b>1,658,533</b>	<b>488,910</b>	<b>250,443</b>	<b>2,397,886</b>
11	Contractor's preliminaries	165,853	24,446	12,522	202,821
12	<b>Facilitating and building works incl prelims</b>	<b>1,824,386</b>	<b>513,356</b>	<b>262,965</b>	<b>2,600,707</b>
13	Contractor's overheads and profit	136,829	38,502	19,722	195,053
14	<b>Building works estimate</b>	<b>1,961,215</b>	<b>551,858</b>	<b>282,687</b>	<b>2,795,760</b>
15	Project/design team fees	0	0	0	0
16	Other development/project costs	0	0	0	0
17	<b>Fees and other costs</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
18	<b>Base cost estimate</b>	<b>1,961,215</b>	<b>551,858</b>	<b>282,687</b>	<b>2,795,760</b>
19	Risk allowance estimate	241,255	51,879	26,575	319,709
20	<b>Cost limit excluding inflation</b>	<b>2,202,470</b>	<b>603,737</b>	<b>361,141</b>	<b>3,167,348</b>
21	Inflation	37,330	17,259	10,324	64,913
22	<b>Cost limit</b>	<b>2,239,800</b>	<b>620,996</b>	<b>371,465</b>	<b>3,232,261</b>
23	Adjustment to NPV @ 3.5% discount rate	0	-404,930	-242,219	-647,149
24	<b>Cost limit at net present value</b>	<b>2,239,800</b>	<b>216,066</b>	<b>129,246</b>	<b>2,585,112</b>
25	<b>Cost limit per m<sup>2</sup> of GIFA (+ per annum)</b>	<b>£960.88</b>	<b>£1.54</b>	<b>£0.92</b>	<b>£963.34</b>
26	Total cost limit @ NPV: £2,585,112				
26	Maintenance period (years): 60				
27	Gross internal floor area (m <sup>2</sup> ): 2331				
28	Cost limit per m <sup>2</sup> (+ per annum): £963.34				
29	Cost model base date: 13 Jan 2017				



## Building operation and occupancy costs

Ref	Element	Totals	Cost per m <sup>2</sup> per annum
1	Total operation and occupancy costs	3,077,400	1,320.21
2	Adjustment to net present value @ 3.5% discount rate	-1,798,258	-771.45
3	<b>Total operation and occupancy costs @ net present value</b>	<b>1,279,142</b>	<b>548.75</b>
4	Total operation and occupancy costs @ net present value: £1,279,142		
5	Life cycle/maintenance period (years): 60		
6	Gross internal floor area (m <sup>2</sup> ): 2331		
7	Total operation and occupancy costs per m <sup>2</sup> : £548.75		
8	Cost model base date: 13 Jan 2017		

## Building end of life costs

Ref	Element	Totals	Cost per m <sup>2</sup>
1	End of life costs	25,000	10.73
2	Discount factor @ 3.5%	0.1268	-
3	<b>Total end of life costs @ net present value</b>	<b>3,170</b>	<b>1.36</b>
4	Total end of life costs @ net present value: £3,170		
5	Life cycle/maintenance period (years): 60		
6	Gross internal floor area (m <sup>2</sup> ): 2331		
7	Total end of life costs per m <sup>2</sup> : £1.36		
8	Cost model base date: 13 Jan 2017		

## Building life cycle costs

Ref	Element	Totals at NPV	Cost per m <sup>2</sup> (+ per annum)
1	Constuct costs	2,239,800	960.88
2	Renewal costs	216,066	1.54
3	Maintain costs	110,679	0.79
4	Operation and occupancy costs	1,279,137	9.15
5	End of life costs	3,170	0.02
6	<b>Total life cycle costs @ net present value</b>	<b>3,848,852</b>	<b>972.38</b>
7	Total life cycle costs @ net present value: £3,848,852		
8	Life cycle/maintenance period (years): 60		
9	Gross internal floor area (m <sup>2</sup> ): 2331		
10	Total life cycle cost per m <sup>2</sup> (+ per annum): £972.38		
11	Cost model base date: 13 Jan 2017		

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## Construct Cost Plans

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Ref	Item	Quantity	Unit	Rate	Total
<b>Strip foundations</b>					
1	In-situ concrete 25N/mm2 foundation, 275mm thick Class B engineering brick cavity wall, damp proof course, including excavation and filling works 600mm wide x 1000mm deep	189	m	116.01	21,926
2	In-situ concrete 25N/mm2 foundation 250mm thick, 100mm thick concrete blockwork wall, damp proof course, including excavation and filling works 450mm wide x 1000mm deep	40	m	49.60	1,984
3	In-situ concrete 25N/mm2 foundation 250mm thick, 140mm thick concrete blockwork wall, damp proof course, including excavation and filling works 450mm wide x 1000mm deep	28	m	52.64	1,474
<b>Isolated pad foundations</b>					
4	In-situ concrete 25N/mm2 pad foundations, reinforced 50kg/m3, including excavation and filling works (rates per pad) 900mm x 900mm x 450mm, 1250mm deep pit	32	nr	187.19	5,990
5	1500mm x 1500mm x 600mm, 1500mm deep pit	8	nr	463.30	3,706
<b>Ground floors</b>					
6	In-situ concrete 20N/mm2 ground slab, damp roof membrane, 150mm blinded granular material bed, including excavation works 200mm thick concrete slab	2184	m <sup>2</sup>	73.85	161,288
7	extra for 1 layer of A252 fabric reinforcement	4368	m <sup>2</sup>	3.93	17,166
8	Designed joints in concrete, Grace Servicised Kork-pak waterproof bonded cork joint filler board or other equal 25mm thick, depth 150mm - 300mm, horizontal	188	m	11.27	2,119
9	Sealants, Grace Servicised Paraseal polysulphide compound or other equal, priming with Grace Servicised Primer P 25mm x 25mm, horizontal	188	m	10.72	2,015
Carried forward					217,668

Ref	Item	Quantity	Unit	Rate	Total
				B/f	217,668
1	Designed joints incorporating 445mm wide Reference 2611, 4.86kg/m2 Expamet Hy-rib permanent shuttering and reinforcement, 150mm end laps, temporary supports, formwork laid continuously across joint  in concrete, depth 150mm - 300mm, horizontal	126	m	23.45	2,955
<b>Total</b>					<b>220,623</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Steel frame, fabricated steelwork erected on site with bolted connections, fittings, fixings, fabrication, blast cleaning, priming, erection, holding down bolt assemblies, grouting under base plates</b></p> <p>Structural steel beams and columns, priming, 60 minute intumescent paint fire protection</p> <p>portal frame, 4.7m high, 26m span, typical weight 25kg/m2</p>	2376	m <sup>2</sup>	56.31	133,793
2	<p><b>Cold formed galvanized steel, Kingspan Multibeam or other equal</b></p> <p>Cold rolled purlins to roof at 1.50m centres, bolt-on cleats at 6.00m centres, tubular ties at 12.00m centres</p> <p>205mm x 65mm x 1.60mm gauge purlins, fixed to steelwork</p>	2376	m <sup>2</sup>	32.41	77,006
3	<p>Cold rolled cladding rails to walls at 1.50m centres, bolt-on cleats at 6.00m centres, vertical spacers at 12.00m centres</p> <p>175mm x 65mm x 1.60mm gauge purlins or rails, fixed to steelwork</p>	894	m <sup>2</sup>	28.96	25,890
<b>Total</b>					<b>236,689</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Precast concrete suspended floors</b></p> <p>1200mm wide suspended slab, 75mm thick screed, no coverings or finishes</p> <p>6.00m span, 150mm thick planks, 5.00 kN/m2 loading</p>	147	m <sup>2</sup>	66.18	9,728
<b>Total</b>					<b>9,728</b>



Ref	Item	Quantity	Unit	Rate	Total
	<b>Pitched roof coverings (measured surface area)</b>				
1	Steel PVF2 coated galvanized trapezoidal profile cladding, for roof pitches greater than 4 degrees composite insulated roofing system, 80mm overall panel thickness	2174	m <sup>2</sup>	40.44	87,917
2	GRP Translucent rooflights, factory assembled double skin	242	m <sup>2</sup>	46.66	11,292
	<b>Flashings</b>				
3	Steel PVF2 coated galvanized eaves flashings for cladding panels 200mm girth	272	m	3.10	843
4	Steel PVF2 coated galvanized ridge flashings for cladding panels 620mm girth	42	m	18.66	784
5	Steel PVF2 coated galvanized hip flashings for cladding panels 620mm girth	96	m	18.66	1,791
	<b>Roof drainage</b>				
6	Gutters, including angles, ends and outlets 900mm girth galvanised pressed steel box gutter	196	m	42.27	8,285
7	750mm girth Kalzip Membrane lined composite gutter system	44	m	141.13	6,210
8	Rainwater downpipes pipes, fixed to backgrounds, including offsets and shoes 100mm diameter polyester powder coated aluminium	115	m	26.91	3,095
<b>Total</b>					<b>120,217</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Reinforced concrete construction</b>				
	Staircase, terrazzo finish, mild steel balustrades and handrails, plastered soffit, balustrades and staircase soffit decorated				
1	3.00m rise, dogleg	1	nr	8,838.79	8,839
<b>Total</b>					<b>8,839</b>

**External walls**

Construct

Ref	Item	Quantity	Unit	Rate	Total
	<p><b>Insulated cavity walls in facing bricks (GBP 350/1000) and concrete blockwork (7.0N/mm2)</b></p> <p>103mm thick facing bricks, 75mm wide insulated cavity, 100mm thick blockwork</p>				
1	278mm wide	131	m <sup>2</sup>	80.16	10,501
	<p><b>Walls in concrete blockwork (7.0N/mm2)</b></p> <p>100mm thick concrete blocks</p>				
2	100mm wide	320	m <sup>2</sup>	20.03	6,410
	<p><b>Metal profiled cladding</b></p> <p>Standard trapezoidal profile</p>				
3	composite insulated wall cladding system, 80mm overall panel thickness	752	m <sup>2</sup>	48.88	36,758
<b>Total</b>					<b>53,669</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Windows</b>				
1	Aluminium purpose made double glazed windows including ironmongery various sizes over 1.50m2	46	m <sup>2</sup>	486.21	22,366
	<b>Window boards</b>				
2	MDF window boards including decoration 25mm x 150mm	38	m	12.77	485
	<b>External doors</b>				
3	Standard steel powdered coated finish security external doors and frames including ironmongery single leaf door, opening size 1000mm x 2100mm	4	nr	1,765.30	7,061
4	Aluminium double glazed purpose made external doors and frames including ironmongery single leaf door, opening size 1000mm x 2100mm	1	nr	1,752.93	1,753
5	double leaf door, opening size 1800mm x 2100mm	1	nr	2,844.20	2,844
6	Insulated overhead sectional doors and frames, power operation 4500mm x 4500mm	2	nr	2,419.55	4,839
<b>Total</b>					<b>39,348</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Brick/block masonry partitions</b>				
	Aerated/lightweight block walls				
1	100mm thick	160	m <sup>2</sup>	27.42	4,387
2	140mm thick	160	m <sup>2</sup>	37.03	5,925
	<b>Extra over internal walls for forming openings for internal doors</b>				
	Including precast concrete lintels				
3	1000mm x 2100mm in 100mm wide wall	10	nr	20.14	201
4	1000mm x 2100mm in 140mm wide wall	2	nr	27.87	56
	<b>Framed panel cubicles</b>				
	Changing and WC cubicles, high pressure laminate faced MDF proprietary system				
5	standard quality WC cubicle partition sets, aluminium framing, melamine face chipboard dividing panels and doors, ironmongery, small range (up to 5 cubicles), standard cubicle set, (rate per cubicle)	9	nr	404.91	3,644
<b>Total</b>					<b>14,213</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Fire doors</b>				
	Standard fire doors, cellular core, softwood lining, softwood architrave, aluminium ironmongery (lockable, self-closure), painting or polishing,				
1	single leaf, Oak veneered, 30min fire resistance, polished	10	nr	461.68	4,617
2	single leaf, Oak veneered, 60min fire resistance, polished	2	nr	735.73	1,471
	<b>Ironmongery sets</b>				
	Stainless steel ironmongery, euro locks, push plates, kick plates, signage, closures, standard sets				
3	office door, non locking, fire rated	4	nr	241.94	968
4	office/store, lockable, fire rated	8	nr	274.06	2,192
<b>Total</b>					<b>9,248</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>In situ wall finishes</b>				
1	Plasterboard, plaster and render two coats of lightweight plaster	580	m <sup>2</sup>	14.26	8,271
	<b>Rigid tile/panel/board finishes</b>				
2	Ceramic wall tiles, including backing medium to high quality	36	m <sup>2</sup>	42.22	1,520
	<b>Decoration</b>				
3	Emulsion on plaster or blockwork surfaces one mist and two coats emulsion paint	1040	m <sup>2</sup>	3.45	3,588
<b>Total</b>					<b>13,379</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Sheet/board flooring</b>				
	Flexible tiling, welded sheet or butt joint tiles, adhesive fixing				
1	vinyl safety flooring, 2.00-2.50mm thick	60	m <sup>2</sup>	44.19	2,651
	Carpet, including underlay, edge grippers				
2	heavy contract duty, Forbo Flotex HD	224	m <sup>2</sup>	45.92	10,286
	Entrance matting and matwell				
3	Gradus Topguard barrier matting with aluminium frame	10	m <sup>2</sup>	340.72	3,407
	<b>Skirtings</b>				
	Softwood				
4	softwood skirting, gloss paint finish	112	m	14.37	1,609
	Sit-on PVC skirtings				
5	100mm high	30	m	6.25	188
<b>Total</b>					<b>18,141</b>



Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Suspended and integrated ceilings</b></p> <p>Armstrong suspended ceiling, large rooms, over 250m2                      mineral fibre, medium quality, Corline, exposed grid</p>	294	m <sup>2</sup>	25.18	7,403
Total					7,403

Ref	Item	Quantity	Unit	Rate	Total
	<b>Kitchen units, including any pre-assembly</b>				
	Wall units				
1	600mm x 300mm x 720mm	2	nr	98.23	196
	Floor units with drawers				
2	600mm x 600mm x 870mm	2	nr	140.75	282
	Sink units (excluding sink top)				
3	1000mm x 600mm x 870mm	1	nr	188.97	189
	Laminated plastics worktops single rolled edge				
4	38mm thick, 600mm wide	2	m	36.32	73
	<b>Mirror with polished edges</b>				
	6mm thick rectangular glass mirrors, silver backed, fixed with chromium plated domed headed screws				
5	400mm x 300mm	16	nr	22.23	356
<b>Total</b>					<b>1,096</b>

Ref	Item	Quantity	Unit	Rate	Total
<b>Sanitary appliances and fittings</b>					
1	Single drainer stainless steel sinks with waste outlet, overflow, plug and chain and mixer tap bowl and a half	1	nr	316.02	316
2	White glazed fireclay sinks with waste outlet, plug and chain and brackets and basin taps 610mm x 380mm x 210mm	1	nr	304.91	305
3	White vitreous china wash basins with waste outlet, plug and chain, concealed brackets and basin taps 400mm	16	nr	148.80	2,381
4	Low level white vitreous china WC suites with pan, cistern and fittings, plastics seat and lid and drain connector close coupled WC, dual flush valve	9	nr	249.48	2,245
5	Range of white vitreous china urinal bowls and concealed automatic cistern and fittings, with concealed flush pipes and waste outlet range of two 400mm urinal bowls	1	nr	428.92	429
6	white vitreous china urinal divisions	1	nr	64.58	65
<b>Sanitary ancillaries</b>					
7	Pressalit Ltd or equal grab rails 450mm long ref RT101000	2	nr	61.19	122
8	600mm long ref RT102000,	2	nr	69.09	138
9	Pressalit Ltd or equal hinged grab rails 600mm long with spring counter balance ref RF016000	1	nr	168.49	168
<b>Total</b>					<b>6,169</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Foul drainage above ground to sanitary, kitchen or services appliances</b></p> <p>Waste, soil and vent pipe installations per appliance</p> <p>PVC-u and PVC-mu pipes and fittings</p>	29	nr	388.03	11,253
<b>Total</b>					<b>11,253</b>

## Water installations

Construct

Ref	Item	Quantity	Unit	Rate	Total
	<b>Hot and cold water installations, mains supply, storage, hot and cold water distribution</b>				
	Typical rates per outlet point				
1	cold water - simple installation	28	nr	349.77	9,794
2	hot water - simple installation	18	nr	398.96	7,181
<b>Total</b>					<b>16,975</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<b>Boilers</b> Typical rates per kW gas fired boilers including gas train and controls	62	kW	35.52	2,202
<b>Total</b>					<b>2,202</b>

Ref	Item	Quantity	Unit	Rate	Total
	<p><b>Typical space heating and air conditioning installations per building type</b></p> <p>Typical rates per gross internal floor area</p>				
1	factory unit, LTHW to offices, displacement system to warehouse	2331	m <sup>2</sup>	23.45	54,662
<b>Total</b>					<b>54,662</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Typical ventilation installations per building type</b>				
	Typical rates per gross internal floor area				
1	factory unit, smoke extract system	2037	m <sup>2</sup>	5.83	11,876
	<b>Typical ventilation installations per system type</b>				
	Ventilation systems (excluding smoke extract)				
2	building up to 3,000m2	50	m <sup>2</sup>	38.87	1,943
<b>Total</b>					<b>13,819</b>



Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Typical electrical installations including LV distribution, HV distribution, lighting and small power per building type</b></p> <p>Typical rates per gross internal floor area</p> <p>factory unit</p>	2331	m <sup>2</sup>	70.11	163,426
<b>Total</b>					<b>163,426</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Passenger Lifts, car height of 2.2m, standard car finish, brushed stainless steel 2 panel centre opening doors to BSEN 81 Part 1 &amp; 2, machine room less</b></p> <p>Electrically operated AC drive serving 2 levels with directional collective controls and a speed of 1.0m/s</p> <p>8 person</p>	1	nr	57,383.12	57,383
<b>Total</b>					<b>57,383</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Typical fire and lightning protection installations per system type</b>				
	Sprinkler installations				
1	building up to 3,000m2	2331	m <sup>2</sup>	20.33	47,389
	Lightning protection				
2	building up to 3,000m2	2331	m <sup>2</sup>	2.79	6,503
<b>Total</b>					<b>53,892</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Typical fire alarm, public address system and security installations per system type</b>				
	Fire alarm installation				
1	building up to 3,000m2	2331	m <sup>2</sup>	10.15	23,660
	IT wireways installation				
2	building up to 3,000m2	2331	m <sup>2</sup>	2.80	6,527
	Voice and data installation				
3	building up to 3,000m2	2331	m <sup>2</sup>	12.38	28,858
	Intruder detection and alarm installation				
4	building up to 3,000m2	2331	m <sup>2</sup>	7.91	18,438
<b>Total</b>					<b>77,483</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Builder's work in connection with services</b></p> <p>Allowance for builder's work items in connection with services</p> <p>all-inclusive percentage</p>	3.00	%	457,264.00	13,718
<b>Total</b>					<b>13,718</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Site clearance</b>				
	Clearing site vegetation				
1	bushes, scrub, undergrowth, hedges and trees and tree stumps not exceeding 500mm girth	5184	m <sup>2</sup>	0.36	1,866
	Excavating topsoil for preservation, to spoil heap less than 50m from excavations				
2	average 150mm deep	5184	m <sup>2</sup>	0.90	4,666
<b>Total</b>					<b>6,532</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Paved areas including edgings and kerbs</b>				
	Tarmacadam paving				
1	two layers, limestone or igneous chipping finish paving on sub-base, including excavation and type 1 sub-base	2295	m <sup>2</sup>	82.46	189,246
	Slab paving				
2	precast concrete paving slabs on sub-base, including excavation	135	m <sup>2</sup>	47.89	6,465
	Brick/block/setts paving				
3	precast concrete block paviors to footways including excavation, sub-base	270	m <sup>2</sup>	76.02	20,525
<b>Total</b>					<b>216,236</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Seeded and planted areas</b></p> <p>Planted areas (per m2 of planted area)</p> <p>shrubbed planting m2</p>	300	m <sup>2</sup>	47.89	14,367
Total					14,367



Ref	Item	Quantity	Unit	Rate	Total
	<b>Fencing and walls</b>				
	Chain link fencing, plastic coated				
1	1.80m high	300	m	19.46	5,838
	Bollards and barriers				
2	parking bollards precast concrete or steel	4	nr	148.15	593
<b>Total</b>					<b>6,431</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Street furniture</b></p> <p>Galvanized steel cycle stand fixing in position</p>	8	nr	41.48	332
<b>Total</b>					<b>332</b>

**External drainage**

**Construct**

Ref	Item	Quantity	Unit	Rate	Total
	<b>Typical overall cost/m2 of drained area allowances</b>				
	Site drainage				
1	per m2 of paved area	2565	m <sup>2</sup>	16.35	41,938
	Building drainage				
2	per m2 of gross internal floor area	2331	m <sup>2</sup>	11.95	27,855
<b>Total</b>					<b>69,793</b>

Ref	Item	Quantity	Unit	Rate	Total
	<b>Water mains supply</b>				
1	Connections to statutory undertaker's mains connection charges	2331	m <sup>2</sup>	10.41	24,266
	<b>Electricity mains supply</b>				
2	Connections to statutory undertaker's mains connection charges	2331	m <sup>2</sup>	5.24	12,214
	<b>Gas mains supply</b>				
3	Connections to statutory undertaker's mains connection charges	2331	m <sup>2</sup>	5.24	12,214
	<b>Telecommunication mains supply</b>				
4	Connections to statutory undertaker's mains connection charges	2331	m <sup>2</sup>	2.23	5,198
	<b>Site/street lighting systems</b>				
5	Bollard lighting including cabling 26 watt	12	nr	1,384.78	16,617
6	Wall mounted outdoor flood lighting including cabling 500 watt	16	nr	194.28	3,108
Carried forward					73,617

Ref	Item	Quantity	Unit	Rate	Total
				B/f	73,617
	<b>'Builder's work in connection with external services</b>				
	Excavation, backfilling, gravel surround and warning tape				
1	100mm diameter clay duct 500mm deep	506	m	24.43	12,362
2	4nr 100mm PVC-u ducts 500mm deep	506	m	69.74	35,288
<b>Total</b>					<b>121,267</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Contractor's preliminaries: employer's requirements</b></p> <p>Allowance for employer's requirements</p> <p>default all-inclusive percentage</p>	1.00	%	1,658,533.00	16,585
<b>Total</b>					<b>16,585</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Contractor's preliminaries: contractor's cost items</b></p> <p>Allowance for main contractor's cost items</p> <p>default all-inclusive percentage</p>	9.00	%	1,658,533.00	149,268
<b>Total</b>					<b>149,268</b>

Ref	Item	Total
	<b>Design development risks</b>	
	Risk items	
1	inadequate or unclear project brief	339
2	unclear design team responsibilities	3,292
3	unrealistic design programme	3,199
4	ineffective quality control procedures	2,929
5	inadequate site investigation	358
6	planning constraints/requirements	888
7	soundness of design data	1,368
8	appropriateness of design (constructionability)	2,917
9	degree of novelty (i.e. design novelty)	470
10	ineffective design co-ordination	1,033
11	reliability of area schedules	4,032
12	reliability of estimating data – changes in labour, materials, equipment and plant costs	529
13	reliability of estimating data – inflation (i.e. differential inflation due to market factors and/or timing)	1,719
14	use of provisional sums (i.e. do not give price certainty)	2,843
<b>Total</b>		<b>25,916</b>



Ref	Item	Total
1	<p><b>Construction risks</b></p> <p>Composite risk items</p> <p>changes to the project design, construction works and cost allowances due to the discovery of unanticipated items during the construction phase</p>	134,475
Total		134,475

Ref	Item	Total
1	<p><b>Employer change risks</b></p> <p>Composite risk items</p> <p>changes in scope of works or project brief during design, pre-construction and construction stages and Employer driven changes/variations introduced during the construction phase</p>	13,571
Total		13,571

Ref	Item	Total
1	<p><b>Employer other risks</b></p> <p>Composite risk items</p> <p>changes in statutory requirements, legislation, inflation and taxation, and allowance for additional costs due to design team deficiencies, contractual claims, force majeure and any other Employer-liable risks not allowed for elsewhere</p>	67,293
Total		67,293

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## Renewal and Maintain Cost Plans

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**Substructure****Renewal**

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<b>Movement joint sealant to floor slab - remove existing and replace with new</b>  Sealants, Grace Serviced Paraseal polysulphide compound or other equal, priming with Grace Serviced Primer P  25mm x 25mm, horizontal	188	m	35.61	Every 10 yrs	40,170
<b>Total</b>						<b>40,170</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<p><b>Fire protection to steelwork - remove existing and replace with new</b></p> <p>Intumescent fire protection coating/decoration to exposed steelwork, on site application, spray applied</p> <p>60 minute protection per tonne</p>	59.40	t	389.88	Every 20 yrs	69,477
<b>Total</b>						<b>69,477</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Pitched roof coverings (measured surface area) - remove existing and replace with new</b>					
	Steel PVF2 coated galvanized trapezoidal profile cladding, for roof pitches greater than 4 degrees					
1	composite insulated roofing system, 80mm overall panel thickness	2174	m <sup>2</sup>	47.65	Every 40 yrs	103,591
	GRP Translucent rooflights, factory assembled					
2	double skin	242	m <sup>2</sup>	55.00	Every 40 yrs	13,310
	<b>Flashings - remove existing and replace with new</b>					
	Steel PVF2 coated galvanized eaves flashings for cladding panels					
3	200mm girth	272	m	3.67	Every 40 yrs	998
	Steel PVF2 coated galvanized ridge flashings for cladding panels					
4	620mm girth	42	m	127.39	Every 40 yrs	5,350
	Steel PVF2 coated galvanized hip flashings for cladding panels					
5	620mm girth	96	m	22.00	Every 40 yrs	2,112
	<b>Roof drainage - remove existing and replace with new</b>					
	Gutters, including angles, ends and outlets					
6	900mm girth galvanised pressed steel box gutter	196	m	49.82	Every 40 yrs	9,765
7	750mm girth Kalzip Membrane lined composite gutter system	44	m	166.30	Every 40 yrs	7,317
	Rainwater downpipes pipes, fixed to backgrounds, including offsets and shoes					
8	100mm diameter polyester powder coated aluminium	115	m	30.59	Every 40 yrs	3,518
<b>Total</b>						<b>145,961</b>

**External walls**

Renewal

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<b>Metal profiled cladding - remove existing and replace with new</b>  Standard trapezoidal profile  composite insulated wall cladding system system, 80mm overall panel thickness	752	m <sup>2</sup>	57.61	Every 40 yrs	43,323
<b>Total</b>						<b>43,323</b>



**Windows and external doors**

Renewal

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Windows - remove existing and replace with new</b>					
1	Aluminium purpose made double glazed windows including ironmongery  various sizes over 1.50m2	46	m <sup>2</sup>	558.04	Every 40 yrs	25,670
	<b>Window boards - remove existing and replace with new</b>					
2	MDF window boards including decoration  25mm x 150mm	38	m	15.04	Every 40 yrs	572
	<b>External doors - remove existing and replace with new</b>					
3	Standard steel powdered coated finish security external doors and frames including ironmongery  single leaf door, opening size 1000mm x 2100mm	4	nr	954.34	Every 40 yrs	3,817
4	Aluminium double glazed purpose made external doors and frames including ironmongery  single leaf door, opening size 1000mm x 2100mm	1	nr	2,065.77	Every 40 yrs	2,066
5	double leaf door, opening size 1800mm x 2100mm	1	nr	3,351.77	Every 40 yrs	3,352
6	Insulated overhead sectional doors and frames, power operation  4500mm x 4500mm	2	nr	2,851.34	Every 40 yrs	5,703
Carried forward						41,180

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Redecoration to timber and steel surfaces</b>				B/f	41,180
	Prepare and apply one undercoat and one finishing coat of gloss oil paint to general surfaces					
1	isolated surfaces not exceeding 300mm girth	38	m	2.01	Every 5 yrs	836
<b>Total</b>						<b>42,016</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<p><b>Framed panel cubicles - remove existing and replace with new</b></p> <p>Changing and WC cubicles, high pressure laminate faced MDF proprietary system</p> <p>standard quality WC cubicle partition sets, aluminium framing, melamine face chipboard dividing panels and doors, ironmongery, small range (up to 5 cubicles), standard cubicle set, (rate per cubicle)</p>	9	nr	465.15	Every 20 yrs	8,372
<b>Total</b>						<b>8,372</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Fire doors - remove existing and replace with new</b>					
	Standard fire doors, cellular core, softwood lining, softwood architrave, aluminium ironmongery (lockable, self-closure), painting or polishing,					
1	single leaf, Oak veneered, 30min fire resistance, polished	10	nr	530.39	Every 30 yrs	5,304
2	single leaf, Oak veneered, 60min fire resistance, polished	2	nr	845.23	Every 30 yrs	1,690
	<b>Ironmongery sets</b>					
	Stainless steel ironmongery, euro locks, push plates, kick plates, signage, closures, standard sets					
3	office door, non locking, fire rated	10	nr	277.97	Every 30 yrs	2,780
4	office/store, lockable, fire rated	2	nr	314.84	Every 30 yrs	630
	<b>Redecoration to timber and steel surfaces</b>					
	Prepare and apply one undercoat and one finishing coat of gloss oil paint to general surfaces					
5	single doors and frames both sides, 1000mm x 2100mm	12	nr	41.80	Every 5 yrs	5,020
<b>Total</b>						<b>15,424</b>

**Wall finishes**

Renewal

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Rigid tile/panel/board finishes - remove existing and replace with new</b>					
1	Ceramic wall tiles, including backing medium to high quality	36	m <sup>2</sup>	48.51	Every 20 yrs	3,492
	<b>Decoration</b>					
2	Emulsion on plaster surfaces one mist and two coats emulsion paint	1040	m <sup>2</sup>	3.61	Every 5 yrs	37,540
<b>Total</b>						<b>41,032</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Sheet/board flooring - remove existing and replace with new</b>					
	Flexible tiling, welded sheet or butt joint tiles, adhesive fixing					
1	vinyl safety flooring, 2.00-2.50mm thick	60	m <sup>2</sup>	50.78	Every 15 yrs	6,094
	Carpet, including underlay, edge grippers					
2	heavy contract duty, Forbo Flotex HD	224	m <sup>2</sup>	52.76	Every 10 yrs	47,272
	Entrance matting and matwell					
3	Gradus Topguard barrier matting with aluminium frame	10	m <sup>2</sup>	391.42	Every 10 yrs	15,656
	<b>Skirtings - remove existing and replace with new</b>					
	Softwood					
4	softwood skirting, gloss paint finish	112	m	16.52	Every 20 yrs	3,700
	Sit-on PVC skirtings					
5	100mm high	30	m	7.19	Every 15 yrs	432
	<b>Redecoration to timber surfaces</b>					
	Prepare and apply one undercoat and one finishing coat of gloss oil paint or two coats lacquer to general surfaces					
6	isolated surfaces not exceeding 300mm girth	112	m	1.96	Every 5 yrs	1,980
<b>Total</b>						<b>75,134</b>

**Ceiling finishes**

Renewal

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<b>Suspended and integrated ceilings - remove existing and replace with new</b>  Armstrong suspended ceiling, large rooms, over 250m2  mineral fibre, medium quality, Corline, exposed grid	294	m <sup>2</sup>	28.93	Every 30 yrs	0
<b>Total</b>						<b>0</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Kitchen units, including any pre-assembly - remove existing and replace with new</b>					
	Wall units					
1	600mm x 300mm x 720mm	2	nr	112.87	Every 20 yrs	0
	Floor units with drawers					
2	600mm x 600mm x 870mm	2	nr	161.71	Every 20 yrs	0
	Sink units (excluding sink top)					
3	1000mm x 600mm x 870mm	1	nr	217.10	Every 20 yrs	0
	Laminated plastics worktops single rolled edge					
4	38mm thick, 600mm wide	2	m	41.73	Every 20 yrs	0
	<b>Mirror with polished edges - remove existing and replace with new</b>					
	6mm thick rectangular glass mirrors, silver backed, fixed with chromium plated domed headed screws					
5	400mm x 300mm	16	nr	25.56	Every 20 yrs	0
<b>Total</b>						<b>0</b>



Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Sanitary appliances and fittings - remove existing and replace with new</b>					
	Single drainer stainless steel sinks with waste outlet, overflow, plug and chain and mixer tap					
1	bowl and a half	1	nr	363.04	Every 30 yrs	0
	White glazed fireclay sinks with waste outlet, plug and chain and brackets and basin taps					
2	610mm x 380mm x 210mm	1	nr	350.30	Every 30 yrs	0
	White vitreous china wash basins with waste outlet, plug and chain, concealed brackets and basin taps					
3	400mm	16	nr	170.95	Every 30 yrs	0
	Low level white vitreous china WC suites with pan, cistern and fittings, plastics seat and lid and drain connector					
4	close coupled WC, dual flush valve	9	nr	286.60	Every 30 yrs	0
	Range of white vitreous china urinal bowls and concealed automatic cistern and fittings, with concealed flush pipes and waste outlet					
5	range of two 400mm urinal bowls	1	nr	492.74	Every 30 yrs	0
6	white vitreous china urinal divisions	1	nr	74.18	Every 30 yrs	0
	<b>Sanitary ancillaries - remove existing and replace with new</b>					
	Pressalit Ltd or equal grab rails					
7	450mm long ref RT101000	2	nr	70.28	Every 30 yrs	0
8	600mm long ref RT102000,	2	nr	79.37	Every 30 yrs	0
	Pressalit Ltd or equal hinged grab rails					
9	600mm long ref R3016000	1	nr	193.59	Every 30 yrs	0
Total						0

**Disposal installations**

Renewal

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<b>Foul drainage above ground to sanitary, kitchen or services appliances - remove existing and replace with new</b> Waste, soil and vent pipe installations per appliance PVC-u and PVC-mu pipes and fittings	29	nr	402.77	Every 30 yrs	0
<b>Total</b>						<b>0</b>

## Water installations

Renewal

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Hot and cold water installations, mains supply, storage, hot and cold water distribution - remove existing and replace with new</b>					
	Typical rates per outlet point					
1	cold water - simple installation	28	nr	363.04	Every 30 yrs	0
2	hot water - simple installation	18	nr	414.11	Every 30 yrs	0
<b>Total</b>						<b>0</b>

**Heat source**

**Renewal**

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<b>Boilers - remove existing and replace with new</b>  Typical rates per kW  gas fired boilers including gas train and controls	62	kW	36.87	Every 15 yrs	6,858
<b>Total</b>						<b>6,858</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<p><b>Typical space heating and air conditioning installations per building type - remove existing and replace with new</b></p> <p>Typical rates per gross internal floor area</p> <p>factory unit, LTHW to offices, displacement system to warehouse</p>	2331	m <sup>2</sup>	26.95	Every 30 yrs	0
<b>Total</b>						<b>0</b>

## Ventilation

Renewal

Ref	Item	Quantity	Unit	Rate	Period	Total
	<p><b>Typical ventilation installations per building type - remove existing and replace with new</b></p> <p>Typical rates per gross internal floor area</p>					
1	distribution centre, smoke extract system	2037	m <sup>2</sup>	6.69	Every 30 yrs	0
	<p><b>Typical ventilation installations per system type - remove existing and replace with new</b></p> <p>Ventilation systems (excluding smoke extract)</p>					
2	building up to 3,000m2	50	m <sup>2</sup>	40.28	Every 30 yrs	0
<b>Total</b>						<b>0</b>

**Electrical installations**

Renewal

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<p>Typical electrical installations including LV distribution, HV distribution, lighting and small power per building type - remove existing and replace with new</p> <p>Typical rates per gross internal floor area</p> <p>factory unit</p>	2331	m <sup>2</sup>	80.55	Every 30 yrs	0
Total						0

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<p><b>Passenger Lifts, car height of 2.2m, standard car finish, brushed stainless steel 2 panel centre opening doors to BSEN 81 Part 1 &amp; 2, machine room less - remove existing and replace with new</b></p> <p>Electrically operated AC drive serving 2 levels with directional collective controls and a speed of 1.0m/s</p> <p>8 person</p>	1	nr	59,563.13	Every 30 yrs	0
<b>Total</b>						<b>0</b>



**Fire and lightning protection**

Renewal

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Typical fire and lightning protection installations per system type - remove existing and replace with new</b>					
	Sprinkler installations					
1	building up to 3,000m2	2331	m <sup>2</sup>	21.11	Every 30 yrs	0
	Lightning protection					
2	building up to 3,000m2	2331	m <sup>2</sup>	2.90	Every 30 yrs	0
<b>Total</b>						<b>0</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Typical fire alarm, public address system and security installations per system type - remove existing and replace with new</b>					
	Fire alarm installation					
1	building up to 3,000m2	2331	m <sup>2</sup>	10.52		0
	IT wireways installation					
2	building up to 3,000m2	2331	m <sup>2</sup>	2.90		0
	Voice and data installation					
3	building up to 3,000m2	2331	m <sup>2</sup>	12.81		0
	Intruder detection and alarm installation					
4	building up to 3,000m2	2331	m <sup>2</sup>	8.19		0
<b>Total</b>						<b>0</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<p><b>Gross internal floor area (unless described otherwise)</b></p> <p>Warehouses and sports halls</p> <p>central heating, electrical and lift installation</p>	2331	m <sup>2</sup>	2.10	Every 30 yrs	0
<b>Total</b>						<b>0</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Paved areas including edgings and kerbs - remove existing and replace with new</b>					
	Tarmacadam paving					
1	two layers, limestone or igneous chipping finish paving on sub-base, including excavation and type 1 sub-base	2295	m <sup>2</sup>	94.74	Every 30 yrs	0
	Slab paving					
2	precast concrete paving slabs on sub-base, including excavation	135	m <sup>2</sup>	55.04	Every 30 yrs	0
	Brick/block/setts paving					
3	precast concrete block paviors to footways including excavation, sub-base	270	m <sup>2</sup>	72.04	Every 30 yrs	0
<b>Total</b>						<b>0</b>

**Fencing, railings and walls**

Renewal

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Fencing and walls - remove existing and replace with new</b>					
	Chain link fencing, plastic coated					
1	1.80m high	300	m	30.07	Every 30 yrs	0
	Bollards and barriers					
2	parking bollards precast concrete or steel	4	nr	170.17	Every 30 yrs	0
<b>Total</b>						<b>0</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<b>Street furniture - remove existing and replace with new</b> Galvanized steel cycle stand fixing in position	8	nr	47.65	Every 15 yrs	1,143
<b>Total</b>						<b>1,143</b>

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<p><b>Planned actions</b></p> <p>Planned preventive maintenance on rainwater gutters</p> <p>clearing out gutters once a year of silt, vegetation and debris</p>	1	item	1,079.19	Every year	63,661
Total						63,661

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Planned actions</b>					
	Planned preventive maintenance on heat source types					
1	servicing the boiler once a year	1	item	539.59	Every year	30,240
<b>Total</b>						<b>30,240</b>



Ref	Item	Quantity	Unit	Rate	Period	Total
1	<p><b>Planned actions</b></p> <p>Planned preventive maintenance on applicable lifts and enclosed hoists serving the passanger lift once a year</p>	1	item	539.59	Every year	31,320
Total						31,320

Ref	Item	Quantity	Unit	Rate	Period	Total
1	<p><b>Planned actions</b></p> <p>Planned preventive maintenance on applicable fire-fighting systems</p> <p>servicing the sprinkler installation once a year</p>	1	item	1,079.19	Every year	62,582
Total						62,582

Ref	Item	Quantity	Unit	Rate	Period	Total
	<b>Planned actions</b>					
	Planned preventive maintenance on applicable communication systems					
1	serving the fire alarm installation once a year	1	item	539.59	Every year	31,320
	Planned preventive maintenance on applicable security systems					
2	serving the intruder alarm installation once a year	1	item	539.59	Every year	31,320
<b>Total</b>						<b>62,640</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Contractor's preliminaries: employer's requirements</b></p> <p>Allowance for employer's requirements</p> <p>default all-inclusive percentage</p>	0.50	%	739,353.00	3,697
<b>Total</b>					<b>3,697</b>

Ref	Item	Quantity	Unit	Rate	Total
1	<p><b>Contractor's preliminaries: contractor's cost items</b></p> <p>Allowance for maintenance contractor's cost items</p> <p>default all-inclusive percentage</p>	4.50	%	739,353.00	33,271
<b>Total</b>					<b>33,271</b>

Ref	Item	Total
	<p><b>Design and installation risks</b></p> <p>Composite risk items</p> <p>1 changes to the project design and estimating data during the design development phase</p>	<p>20,881</p>
<b>Total</b>		<b>20,881</b>

Ref	Item	Total
1	<p><b>Maintenance risks</b></p> <p>Composite risk items</p> <p>changes to the project design, construction works and cost allowances due to the discovery of unanticipated items during the construction phase</p>	32,902
Total		32,902

Ref	Item	Total
1	<p><b>Employer change risks</b></p> <p>Composite risk items</p> <p>changes in scope of works or project brief during design, pre-construction and construction stages and Employer driven changes/variations introduced during the construction phase</p>	2,742
Total		2,742



Ref	Item	Total
1	<p><b>Employer other risks</b></p> <p>Composite risk items</p> <p>changes in statutory requirements, legislation, inflation and taxation, and allowance for additional costs due to design team deficiencies, contractual claims, force majeure and any other Employer-liable risks not allowed for elsewhere</p>	21,929
Total		21,929

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## Operation and Occupancy Cost Plan

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## Operation and occupancy costs

Ref	Item	Quantity	Unit	Rate	Total
	<b>Operation costs</b>				
	Utilities (energy, carbon emission)				
1	cost per annum	1	year	51,290.17	51,290
<b>Total</b>					<b>51,290</b>

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## End of Life Cost Plan

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## End of life costs

Ref	Item	Quantity	Unit	Rate	Total
1	<b>End of life costs</b> Disposal/dilapidations inspections preparing building for sale		item		25,000
<b>Total</b>					<b>25,000</b>

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## Base Data

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## Base Data

1	Gross internal floor area:	2331m <sup>2</sup>
2	Footprint area:	2184m <sup>2</sup>
3	Site area:	5184m <sup>2</sup>
4	Average storey height:	4.7m
5	Vertical envelope factor:	0.384
6	Main contractor's overheads:	5%
7	Main contractor's profit:	2.5%
8	Location index:	100
9	Cost model base date:	13 Jan 2017
10	Construction start date:	1 Apr 2017
11	Construction period:	52 weeks
12	Maintenance start date:	2 Apr 2018
13	Maintenance period:	60 years
14	Currency:	£
15	Works complexity:	Normal
16	Alteration works:	0%
17	Site access/set up factor:	0%
18	Project desirability factor:	0%
19	Library:	CostAdviser LCC Cost Planning Library
20	Indices base date:	1Q/2017
21	Current tender index (Base year 2000 - 100):	170
22	Forecasted construction tender price inflation per annum:	2.35%
23	Forecasted construction cost inflation per annum:	2.38%
24	Any overall adjustment to construction costs:	0%
25	Maintenance contractor's overheads and profit:	7.5%
26	Forecasted maintenance tender price inflation per annum:	2.35%
27	Discount rate:	3.5%
28	Any overall adjustment to maintenance costs:	0%

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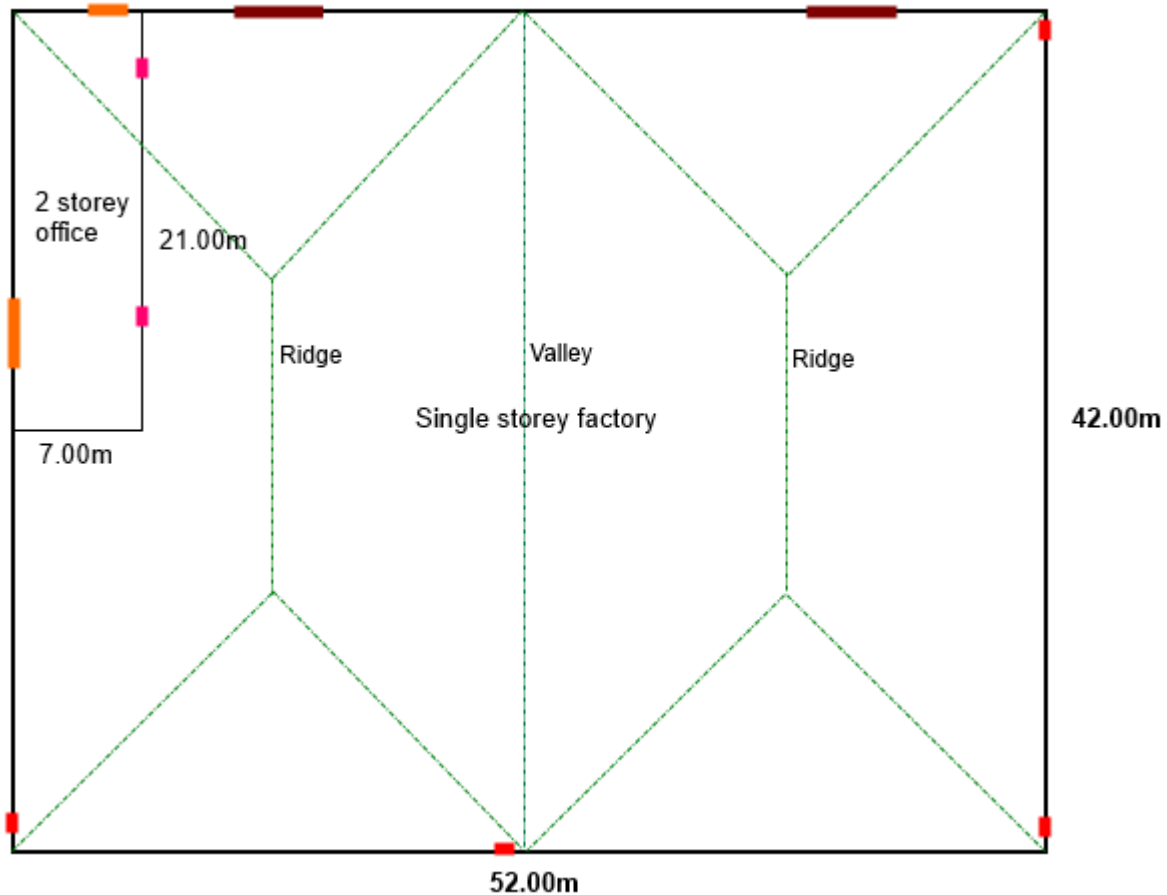
## Appendix

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## Appendix

### Proposed Plan



### Proposed Specification

1. Internal size 52.00m x 42.00m with 7.00m x 21.00m two-storey office. Height to eaves 4.70m. External works area 3000m<sup>2</sup>.
2. Structural steel portal frame with columns at approximately 6.00m centres and intermediate columns along the valley line. All steelwork to be fire protected with intumescent paint. Cold rolled galvanised steel roof purlin and wall cladding rails to support the roof and wall cladding.
3. 200mm thick insulated ground slab reinforced with 2 layers A252 fabric reinforcement. Designed construction joints to full length of slab on the lines of the roof ridges and valley and movement joints to full perimeter.
4. Reinforced concrete pad foundations to steel portal frame columns. Concrete strip foundations to external and internal walls.
5. Precast concrete plank upper floor to office capable of carrying 5KN/m<sup>2</sup> loading finished with structural screed.
6. Single quarter landing precast concrete staircase to first floor office.
7. Insulated steel composite roof cladding with 10% integral translucent rooflights. Inboard insulated valley and eaves gutters. Internal aluminum rainwater pipes at approximately 12m centres. Clip-in roof

## Appendix continued.....

access safety system required.

8. 103mm facing bricks, 75mm insulated cavity and 100mm concrete blockwork external walls to office. Insulated steel composite external wall cladding with 2.00m high 100mm concrete blockwork protection wall to factory.

9. 1200mm high double glazed aluminum windows to ground and first floor offices front elevation. 1nr 3500mm x 2100mm main entrance and 1nr 2000mm x 2100mm side entrance double glazed aluminum doors and side screens to office.

10. 2nr 4500mm x 4500mm electrically operated insulated steel external roller shutter doors and 4nr 1000mm x 2100mm flush personnel/fire exit doors to factory.

11. 140mm concrete blockwork wall between factory and office. 100mm concrete blockwork walls to office, 40m in length to ground floor and 20m to first floor.

12. Proprietary laminate faced WC cubicles to all WCs.

13. All internal doors to be 1000mm x 2100mm. 2nr one hour fire resistant flush doors between office and factory. 8nr half hour fire resistant doors with vision panels to offices. 2nr non-fire rated flush doors to toilet inner lobbies.

14. Plaster to all office walls. Eggshell paint to all plaster and blockwork walls. Ceramic tiling to toilets.

15. Barrier matting to office entrances (10m<sup>2</sup>). Non-slip sheet vinyl and PVC skirtings to toilets (60m<sup>2</sup>). Carpet tiles and painted softwood skirtings to remaining office areas.

16. Mineral fibre tile suspended ceiling system to offices.

17. Kitchen units for tea making to Kitchenette in offices. Vanity units and mirrors to male and female toilets.

18. 1nr stainless steel sink to kitchenette. 1nr cleaners sink. 8nr vanity basins to each male and female toilets. 1nr range of two urinals to Male WC. 5nr WCs to Female WC and 4nr WCs to male toilets. 1nr WC in each of the male and female toilets is to be suitable for disabled person use.

19. Hot and cold water supplies to office.

20. Gas fired boiler and hot water radiator heating system to offices. High level gas fired warm air heating system to factory.

21. Extract ventilation to male and female toilets. Smoke extract system to factory.

22. Full power and lighting systems to offices and factory.

23. 1nr 8-person 2- stop lift to offices.

24. Sprinkler installation to factory.

25. Lightning protection system to roof.

## **Appendix continued.....**

26. Telephone and data systems to offices.

27. Fire and intruder detection and alarm systems required to all areas.

28. 10% of the external works area is to be planted with shrubs. Of the remaining area 5% will be precast concrete footpaths, 10% concrete block pavior car parking areas, 20% macadam road areas and 65% in-situ concrete yard areas. Approximately 600m of precast concrete road kerbs and 100m of precast concrete path edgings are required.

29. 2100mm high plastic coated wire mesh fence to site perimeter with 1nr pedestrian gate and 1nr double vehicle gate.

30. Bollards to each side of roller shutter doors. 1nr cycle stand for 8nr cycles.

31. Foul and surface water drainage connecting into existing adjacent drainage installation.

32. New water, electricity, gas and telecommunication mains to be brought on to site.

33. 12nr lighting bollards to footpath areas. 16nr wall mounted outdoor flood lighting fixed to external walls of the building.