

Appendix D

Design Parameters

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D.1 Codes of Practice:

D.1.1 Eurocodes

- BS EN 1990 – Eurocode 0 – Basis of structural design
- BS EN 1991 – Eurocode 1 – Actions on structures
- BS EN 1992 – Eurocode 2 – Design of concrete structures
- BS EN 1993 – Eurocode 3 – Design of steel structures
- BS EN 1993 – Eurocode 5 – Design of timber structures
- BS EN 1996 – Eurocode 6 – Design of Masonry Structures
- BS EN 1997 – Eurocode 7 – Geotechnical design

D.1.2 Building Regulations:

- Approved Document A – Structure (2013 edition)
- Approved Document H – Drainage & Waste Disposal (2010 edition)

D.1.3 Temporary Works

- Demolition Works to be carried out in line with ICE Demolition Protocol 2008.
- D.1.4 Design Life
- The building to be designed for a design life of 100 years in line with BS EN1990.

D.2 Design Loadings:

D.2.1 Imposed Loadings: kN/m²

- a. Offices 2.5+1.0
- b. Ward spaces 1.5+1.0
- c. Roof, access 2.5
- d. Roof, planted areas 2.5
- e. Roof plant areas 5.0
- f. Other plant areas 7.5

D.2.2 Superimposed Dead Loadings: kN/m²

a. Office and wards	
Services and Ceiling	0.45
75mm screed	1.55
Total	2.00
b. Roof planted areas	
Specimen shrubs	Nominal (included in imposed load)
500mm of L.W. soil	5.50
500mm void former	0.30
85mm blue roof	0.85
Insulation	0.20
Services and Ceiling	0.45
Total	7.30
c. Roof paved areas	
50mm Pavers	1.30
150mm blue roof	1.50
Insulation	0.20
Services and Ceiling	0.45
Total	3.45
d. Green roof	
Green roof system	3.40*
235mm blue roof	2.35
Insulation	0.20
Services and Ceiling	0.45
Total	6.40
e. Ground floor ambulance bay	
150mm sets	3.75
100mm blinding	2.50
200mm insulation	0.30
100mm screed to fall	2.20
Ceiling and Services	0.45
Total	9.20

*Based on Bauder Seeded Extensive Green Roof system

D.2.3 Deflection:

Serviceability deflections will typically be limited to

- Span / 250
- Cantilever / 100

Imposed load deflections will typically be limited to

- Span / 360 typical
- Span / 500 facade
- Cantilever / 180
- Vibration criteria
 - RF 2.0 to ward spaces
 - RF 8.0 to other spaces

Local requirements may be slightly different to reflect requirements for brittle finishes, economic design and allowable head height requirements at later design stages.