



**WHAT'S NEW IN VERSION 13**

# **TECHNICAL MANUAL**

## Functional Requirements and Performance Requirements

What's changed	Where to find it
The Functional Requirements have been condensed down into 5 overarching requirements and are now located at the start of the Technical Manual.	At the start of the Technical Manual
Performance Requirements have been introduced to each section which help satisfy the Functional Requirements.	Within each section in shaded backgrounds

## Section 1. Ground Conditions

Updated guidance on foundation settlement for soluble geology and mining areas.	Performance Requirement 1.1.4
New guidance on managing ground contaminants.	Section 1.2

## Section 2. Waterproofing Below Ground Storeys and Structures

Section renamed to reflect scope of what's covered.	n/a
Guidance on structural design has been updated.	Performance Requirement 2.1.4
New guidance on ground condition requirements for waterproofing below ground storeys and structures.	Performance Requirement 2.1.5
New guidance on waterproofing design.	Performance Requirement 2.1.7
New guidance for waterproofing systems, materials and components.	Performance Requirement 2.1.8

## Section 3. Foundations

We now state, Building new structures off existing foundations is not covered by the guidance within the Mass Fill and Strip Foundations section,	Introduction for Mass Fill and Strip Foundations
We now state, For buildings which are 4 storeys or more, mass fill or strip foundations should be Engineer designed.	Introduction for Mass Fill and Strip Foundations
We now state Mass fill and strip foundations should follow the guidance in BS 8103-1.	Performance Requirement 3.1.3
We now state the piled foundation section covers displacement and replacement pile types.	Introduction to Piled foundation section
All of the guidance within the piled foundation section has been rewritten with input from our Engineers, to rationalise the guidance, make it more concise, and present it in a more logical order.	Section 3.2
New guidance on hydraulically treated soils.	Performance Requirement 3.5.5
New guidance on reinforced earth retaining walls.	Performance Requirement 3.7.3

## Section 4. Ground Floors

New guidance on gas protection systems.	Performance Requirement 4.1.5 and 4.2.4
New guidance on structural design of suspended timber floors.	Performance Requirement 4.1.6
New guidance on the specification of insulations.	Performance Requirement 4.1.7 and 4.2.7
New guidance on where sub-floor ventilation should be provided.	Performance Requirement 4.1.8
New guidance on end bearings of beam and block floors.	Performance Requirement 4.1.9
New guidance on the structural design of ground supported slabs.	Performance Requirement 4.2.5
New guidance on insulation requirements where it is specified below the ground supported slab.	Performance Requirement 4.2.7
New guidance on stepped party walls exceeding 150mm.	Performance Requirement 4.3.3

## Section 5. Drainage

Guidance the 'Drainage' section has been condensed down into 2 sections (from 7)	Section 5
We now state that air admittance valves should comply with BS EN 12380	Performance Requirement 5.1.4
New guidance on suitable outfalls for foul drainage	Performance Requirement 5.2.4
Updated guidance on pipe bedding	Performance Requirement 5.2.5
New guidance on pumped systems	Performance Requirement 5.2.5
New guidance on testing	Performance Requirement 5.2.5
Updated guidance on suitable outfalls for septic tank systems	Performance Requirement 5.2.5
Updated guidance on our requirements for packaged treatment plants	Performance Requirement 5.2.5
Updated guidance on our requirements for soakaways	Performance Requirement 5.2.5
New guidance on our requirements for rain gardens	Performance Requirement 5.2.5
Updated guidance on our requirements for other Sustainable Drainage Systems (SuDS)	Performance Requirement 5.2.5
New guidance on the prevention of ground gases/contaminants entering the home	Performance Requirement 5.2.6

## Section 6. External Walls

We now state what standards should be satisfied for the structural design of walls.	Performance Requirement 6.1.3
New requirements under the specification of masonry units.	Performance Requirement 6.1.5
New guidance on sulfate attack.	Performance Requirement 6.1.5
New guidance on cast stone masonry.	Performance Requirement 6.1.5
New guidance on mortar specification.	Performance Requirement 6.1.6
New guidance on sulfate attack for mortar.	Performance Requirement 6.1.6
New guidance on what materials are suitable for a DPC.	Performance Requirement 6.1.7
New guidance on gas protection systems.	Performance Requirement 6.1.8
New guidance on cavity barriers.	Performance Requirement 6.1.10
Updated guidance on wall ties, including their specification and spacing requirements.	Performance Requirement 6.1.11
Updated guidance on thermal insulation requirements.	Performance Requirement 6.1.12

<b>Section 6. External Walls</b>	
Updated guidance on movement joints. Particularly on materials for filling movement joints, sealants and additional requirements for concrete bricks.	Performance Requirement 6.1.15
Updated guidance on lintels.	Performance Requirement 6.1.18
New guidance on cavity closers.	Performance Requirement 6.1.19
Updated guidance on the specification of cavity trays.	Performance Requirement 6.1.20
Updated guidance on the material specification of feature stone surrounds.	Performance Requirement 6.1.22
Updated guidance on structural design for timber frame panels.	Performance Requirement 6.2.3
For quality assurance systems for open timber frame panels, we now accept: Full system acceptance and factory inspection by the Innovations team.	Performance Requirement 6.2.4
New guidance for gas protection systems.	Performance Requirement 6.2.10 and 6.3.7
New guidance on lintels and openings in the timber frame wall panel and LGSF panels.	Performance Requirement 6.2.12 and 6.3.10
Updated guidance on the material specification for structural sheathing boards.	Performance Requirement 6.2.13
New guidance on the UV resistance of breather membranes.	Performance Requirement 6.2.14 and 6.3.12
Updated guidance on the exposure of breather membranes.	Performance Requirement 6.2.14 and 6.3.12
New guidance on thermal bridging.	Performance Requirement 6.2.15 and 6.3.13
New guidance on external temperatures for criteria for a condensation risk analysis.	Performance Requirement 6.2.16
New guidance on the installation of AVCLs.	Performance Requirement 6.2.16 and 6.3.14
New guidance on internal wall linings.	Performance Requirement 6.2.17 and 6.3.15
New guidance on the specification and installation of cavity barriers.	Performance Requirement 6.2.20 and 6.3.18
New guidance for detailing around reveals.	Performance Requirement 6.2.21 and 6.3.19
Updated guidance for the specification of cavity trays.	Performance Requirement 6.2.22 and 6.3.20
Updated guidance for calculating differential movement.	Performance Requirement 6.2.24
New guidance on service penetrations for timber frame wall panels.	Performance Requirement 6.2.25 and 6.3.22
New guidance for the structural design of LGSF panels. We now reference what standards loads should be calculated in accordance with.	Performance Requirement 6.3.3
We now have a requirement for Independent Engineer verification for LGSF panels.	Performance Requirement 6.3.5
New guidance on anchoring of LGSF panels.	Performance Requirement 6.3.8
New guidance on structural sheathing boards.	Performance Requirement 6.3.11
Updated guidance on the positioning of breather membranes.	Performance Requirement 6.3.12
Updated guidance on the specification and installation of insulation boards for a LGSF panel.	Performance Requirement 6.3.13
New guidance on the provision of cavities.	Performance Requirement 6.3.17
New guidance on external claddings for LGSF panels.	Performance Requirement 6.3.21
Updated guidance on weather conditions for render.	Performance Requirement 6.4.3
Updated guidance on site exposure rating to wind driving rain for render.	Performance Requirement 6.4.4
Updated guidance on masonry background suitability.	Performance Requirement 6.4.5

## Section 6. External Walls

Updated guidance on accommodating movement in masonry.	Performance Requirement 6.4.6
Updated guidance on render thicknesses for factory made render and site made render.	Performance Requirement 6.4.7
Updated guidance on site made render.	Performance Requirement 6.4.7
Updated guidance on ancillary components for render.	Performance Requirement 6.4.8
Service life requirements for timber cladding boards updated to 25 years.	Performance Requirement 6.5.2 and 6.5.13
New guidance on the durability of all cladding systems now provided.	Performance Requirement 6.5.7
New guidance on impact resistance for brickslip cladding on framed construction with a backing board or as a rainscreen cladding system.	Performance Requirement 6.5.20
New guidance on background substrate suitability for External Wall Insulation Systems.	Performance Requirement 6.5.21
New guidance on impact resistance and External Wall Insulation Systems.	Performance Requirement 6.5.21
New guidance on the 3 lines of defence for parapets.	Performance Requirement 6.6.3
New guidance on the material specification of copings and cappings.	Performance Requirement 6.6.5
New guidance on where parapet walls abut an external wall.	Performance Requirement 6.6.9
New guidance on the structural design of gable spandrel panels.	Performance Requirement 6.7.3

## Section 7. Internal Walls

Updated guidance on the structural design of internal masonry walls.	Performance Requirement 7.1.4
Updated guidance on lintels.	Performance Requirement 7.1.5
New guidance on deflection heads.	Performance Requirement 7.1.6
New guidance for thermal insulation of internal walls between heated and unheated areas.	Performance Requirement 7.1.9, 7.2.11 and 7.3.11
Updated guidance on the structural design of timber stud walls.	Performance Requirement 7.2.4
Updated guidance on detailing of non-load bearing walls.	Performance Requirement 7.2.6 and 7.3.6
New guidance on lintels for metal studs.	Performance Requirement 7.3.5
New guidance on horizontal DPCs.	Performance Requirement 7.3.7
New guidance on the structural design of party wall spandrels.	Performance Requirement 7.4.3
New guidance on the fire resistance of internal walls.	Performance Requirement 7.5.3
New guidance on fire doorsets.	Performance Requirement 7.5.3
New guidance on building movement and fire stopping.	Performance Requirement 7.5.3

## Section 8. External Windows and Doors

Updated guidance for weathertightness performance classifications and operational loads.	Performance Requirement 8.1.3
New guidance on ventilation.	Performance Requirement 8.1.5
New guidance on ironmongery.	Performance Requirement 8.1.6
New guidance on secondary access doors.	Performance Requirement 8.1.7
New guidance on markings for safety glass.	Performance Requirement 8.1.11
New guidance on ramps.	Performance Requirement 8.1.15
New standards listed for the specification of uPVC windows and doors.	Performance Requirement 8.2.3
New point added for information to be provided Vertically Stacked Coupled Window Assemblies.	Performance Requirement 8.5.2

## Section 9. Stairs

New standards listed for the structural design of stairs.	Performance Requirement 9.1.3
New guidance for timber specification of timber stairs.	Performance Requirement 9.2.3
New requirement for fixing of concrete and steel staircases.	Performance Requirement 9.3.3

## Section 10. Upper Floors

Updated guidance on the structural design of timber upper floors.	Performance Requirement 10.1.3
New guidance on levelling and bearing on supporting structures.	Performance Requirement 10.1.5
Updated guidance on support of light-weight non-load bearing partitions.	Performance Requirement 10.1.5
Updated guidance on the structural design of concrete upper floors.	Performance Requirement 10.2.3
New guidance on the provision of fire stopping.	Performance Requirement 10.3.3
New guidance on penetrations in floors and ceilings.	Performance Requirement 10.3.3

## Section 11. Roofs

New information to be provided point added for gable and party wall spandrels.	Performance Requirement 11.1.2
New guidance for timber specification and durability.	Performance Requirement 11.1.3
New guidance on wall plates now provided.	Performance Requirement 11.1.4
New guidance on dormer construction added.	Performance Requirement 11.1.5
Updated guidance on bracing requirements.	Performance Requirement 11.1.6
New guidance on Items of plant, equipment or water storage tanks located in a cold pitched roof void.	Performance Requirement 11.1.6 and 11.1.7
New guidance on steps and staggers now provided.	Performance Requirement 11.1.6 and 11.1.7
New guidance on gable and party wall spandrels.	Performance Requirement 11.1.8
New guidance on thermal insulation for pitched roofs.	Performance Requirement 11.1.11
Updated guidance on pitched roof ventilation.	Performance Requirement 11.1.12 - 11.1.15

Section 11. Roofs	
Updated guidance on third party product conformity certification for panelised roof cassettes and its transitional arrangement.	Performance Requirement 11.2.3
New guidance on Materials for flashings and weatherings.	Performance Requirement 11.3.8
New guidance on positioning of rainwater outlets and rooflights.	Performance Requirement 11.3.9
Updated guidance for structural design requirements for all flat roofs. Performance Requirement 11.4.4	Performance Requirement 11.4.4
Updated standard listed for material specification of timber structural members.	Performance Requirement 11.4.5
New guidance on structural support connections.	Performance Requirement 11.4.5
New guidance on sourcing of ready mixed concrete.	Performance Requirement 11.4.7
New guidance on horizontal and hold down straps.	Performance Requirement 11.4.7
Updated guidance on the material specification of profiled metal deck structure.	Performance Requirement 11.4.9 and 11.4.10
New guidance on the installation of AVCLs in an inverted warm roof.	Performance Requirement 11.4.11
New guidance on criteria for a condensation risk analysis.	Performance Requirement 11.4.11
New guidance on ventilation for cold roof systems.	Performance Requirement 11.4.11
New guidance on absolute zero falls.	Performance Requirement 11.4.12
New guidance on information on roof plans.	Performance Requirement 11.4.13
New guidance on rainwater outlets.	Performance Requirement 11.4.14
New guidance on formed gutters (formally boxed gutters).	Performance Requirement 11.4.16
Updated guidance on material characteristics and independent certification for waterproofing systems.	Performance Requirement 11.4.17
New guidance on the installation of various waterproofing systems.	Performance Requirement 11.4.17
New guidance on pedestals.	Performance Requirement 11.4.21
New guidance on control of work post waterproofing completion.	Performance Requirement 11.4.22
New guidance on protection layers for green roofs.	Performance Requirement 11.5.4
New guidance on rainwater drainage for green roofs.	Performance Requirement 11.5.5
New guidance on waterproofing systems requiring a third party product conformity certificate.	Performance Requirement 11.5.6
New guidance on the material specification of insulations and their compressive strength.	Performance Requirement 11.5.6
Updated guidance on the material specification for single skin metal roof coverings.	Performance Requirement 11.6.3
Updated guidance on deck selection for single skin metal roof coverings.	Performance Requirement 11.6.4
Updated guidance on the specification of double skin metal roof coverings.	Performance Requirement 11.6.5
New stance on active or passive methods of attenuating rainfall.	Introduction of 11.7
New line of text referring to a “roof first, attenuation second” approach now included in guidance for blue roofs.	Performance Requirement 11.7.3
New general design principles for blue roofs.	Performance Requirement 11.7.3
Updated guidance on deflection and movement joints for blue roofs.	Performance Requirement 11.7.4
Updated guidance on waterproofing systems for blue roofs.	Performance Requirement 11.7.5
Updated guidance on the creation of falls for blue roofs.	Performance Requirement 11.7.7
New guidance for criteria for a condensation risk analysis.	Performance Requirement 11.7.9
Updated guidance on testing of blue roofs.	Performance Requirement 11.7.14
New guidance on zero falls for podium decks.	Performance Requirement 11.8.6

## Section 11. Roofs

New guidance on podiums also being as a blue roof and appropriate threshold design.	Performance Requirement 11.8.8
New guidance on pedestals.	Performance Requirement 11.8.8
New guidance on protection of completed waterproofing.	Performance Requirement 11.8.11
New guidance on control of work post waterproofing completion.	Performance Requirement 11.8.12

## Section 12. Roof Terraces and Balconies

New guidance on the specification of pedestals.	Performance Requirement 12.1.3
New guidance on the specification of insulation for roof terraces.	Performance Requirement 12.1.3
New guidance on threshold design and blue roof systems.	Performance Requirement 12.1.6
New guidance on sealants and level access thresholds.	Performance Requirement 12.1.6
New guidance on obstructions and rainwater drainage.	Performance Requirement 12.1.7
New guidance on the specification of cabling and pedestals in relation to rainwater outlets.	Performance Requirement 12.1.8
New guidance on control of work post waterproofing completion.	Performance Requirement 12.1.10
New guidance on pedestals.	Performance Requirement 12.1.11
Section 12.2 now covers inset balconies.	Introduction to 12.2
New guidance on obstructions below pedestrian surface finishes.	Performance Requirement 12.2.6
New guidance on where the abutting walls are exposed to localised wetting for balconies that are free draining.	Performance Requirement 12.2.6
New guidance on upstands for balconies.	Performance Requirement 12.2.8
New guidance on thermal breaks.	Performance Requirement 12.2.11

## Section 13. Chimneys and Flues

New guidance on the bonding and support of masonry chimneys.	Performance Requirement 13.1.3
Information to be provided now provided for gas flue outlets.	Performance Requirement 13.2.2
New guidance for adequate supply of combustion air.	Performance Requirement 13.2.4
New guidance for separation from combustible materials.	Performance Requirement 13.2.5

## Section 14. Driveways and Paving

We now provide a definition of the principle entrance.	Introduction to section 14.1
New guidance on Level access requirements and DPC levels.	Performance Requirement 14.1.7

## Section 15. Heating Systems

Section 15.1 has been retitled to 'Services Entering the Building' to better reflect what's covered within the section.	n/a
New line of text in relation to other aspects of service installations.	Performance Requirement 15.1.3
New guidance on service entries and structural stability.	Performance Requirement 15.1.4
New guidance on materials for services entering the building.	Performance Requirement 15.1.6
New guidance on prevention of ground gases/contaminants entering the home.	Performance Requirement 15.1.7
Section 15.2 has been retitled 'Space and Water Heating Systems' to better reflect the content of the guidance provided.	n/a
Information to be provided now included for space and water heating systems.	Performance Requirement 15.2.2
Updated guidance on performance of space heating systems.	Performance Requirement 15.2.4
New guidance on what standard unvented hot water systems should satisfy.	Performance Requirement 15.2.5
New guidance on recognised competent person scheme for electricity generating technologies with a capacity of up to 50kW and heat generating technologies with a capacity of up to 45kWth.	Performance Requirement 15.3.3
New requirement requesting UKCA/CE marking for heat pumps, wind turbines and biomass systems.	Performance Requirement 15.3.3
Updated guidance on installer competency.	Performance Requirement 15.3.4
New guidance on the provision of ventilation for items of plant and equipment.	Performance Requirement 15.3.8

## Section 16. Ventilation and Extraction

New guidance on controls.	Performance Requirement 16.1.6
New guidance on the competency of persons carrying out commissioning.	Performance Requirement 16.1.8

## Section 17. Electrical Services

New guidance on services entering the building.	Performance Requirement 17.1.1
New guidance on prevention of ground gases/contaminants entering the home.	Performance Requirement 17.1.3
New guidance on Installer/operatives competency for PV solar panels.	Performance Requirement 17.2.1
New points added to the information to be provided.	Performance Requirement 17.2.2
New guidance on the weather resistance of PV solar panels.	Performance Requirement 17.2.3
New guidance on compatibility for PV solar panels.	Performance Requirement 17.2.3
New guidance on fixings and fixing specifications for PV solar panels.	Performance Requirement 17.2.3
New guidance on battery storage for PV solar panels.	Performance Requirement 17.2.3

## Section 18. Cold Water Supply

New guidance on materials being suitable for the environment and the ground conditions.	Performance Requirement 18.1.4
New guidance on prevention of ground gases/contaminants entering the home.	Performance Requirement 18.1.5

## Section 19. Garages

New guidance on structural designs.	Performance Requirement 19.1.3
New guidance on foundations and attached/integral garages.	Performance Requirement 19.1.5
New guidance on protection against ground gases.	Performance Requirement 19.1.6
New guidance on preventing dampness entering habitable parts of the home.	Performance Requirement 19.1.6
New guidance on sub-floor ventilation requirements.	Performance Requirement 19.1.6
New guidance on garage walls and external door and window openings within the garage wall.	Performance Requirement 19.1.7
New guidance on retaining walls and below ground slabs.	Performance Requirement 19.1.8
New guidance on roofs.	Performance Requirement 19.1.9
New guidance on heat loss from dwelling areas.	Performance Requirement 19.1.10

## Section 20. Tolerances

New guidance on brick imperfections.	Performance Requirement 20.1.1
Updated guidance for gaps under non fire doors.	Performance Requirement 20.1.5

## Section 21. MMC Systems

This is a new section with guidance that focuses on our requirements for category 1 (volumetric) and category 2 (panelised) forms of offsite construction.	Section 21
--	------------

## Section 22. Conversions and Retained Elements

The new section offers more comprehensive information on conversions and retained elements and has been expanded from an appendix to a full section.	Section 22
--	------------

## Appendix B

Updated definition for what we mean by a coastal location.	Introduction to Appendix B
--	----------------------------

<b>Appendix C</b>	
New statement before the service life table.	Performance Requirement C.1.3
Updated service life table to now include: <ul style="list-style-type: none"> <li>Soffits, gutters and downpipes.</li> <li>Additional types of claddings.</li> <li>Render finishes including boards with an updated service life requirement of 25 years.</li> </ul>	Performance Requirement C.1.3
Updated guidance on timber grading and preservative treatment.	Performance Requirement C.1.4
New guidance on the handling, transportation and lifting of timber components.	Performance Requirement C.1.4
New guidance on concrete testing.	Performance Requirement C.1.5
New guidance on reinforcement.	Performance Requirement C.1.5
New guidance on the specification of ready mixed concrete.	Performance Requirement C.1.5
New guidance on concrete mixes and exposure classes related to environmental factors.	Performance Requirement C.1.5
New standards listed for admixtures for specifiers to comply with.	Performance Requirement C.1.5
New statement before minimum required supporting information for cavity trays and DPCs table.	Performance Requirement C.1.8



2 Shore Lines Building, Shore Road, Birkenhead, Wirral, CH41 1AU

T 0800 183 1755 E [enquiries@labcwarranty.co.uk](mailto:enquiries@labcwarranty.co.uk)

[labcwarranty.co.uk](http://labcwarranty.co.uk)