NHBC Risk Guide

Waterproofing of basements and other below ground structures (Revised 01/24)

(Refer to NHBC Standards Chapter 5.4)

Site ref:..... Site manager:..... Inspector:.....

Date:..... Signature:..... Signature:.....

Please specify the construction type(s) where waterproofing is/should be required on site including plot numbers					
Type		Plots	Type		Plots
Basement	Yes / No		Raised podium	Yes / No	
Retained ground and semi-basement	Yes / No		Lift pit	Yes / No	
Stairs adjacent to the structure	Yes / No		Stepped floor slab where the retained ground is greater than 150mm	Yes / No	
Retaining walls forming lightwells	Yes / No		Split levels	Yes / No	
Buried podium	Yes / No		Raised external ground levels	Yes / No	

Waterproofing designer's details	
Name of waterproofing design specialist:	
Do they hold a Certified Surveyor in Structural Waterproofing (CSSW) qualification?	Yes / No
If no, please confirm suitability to design waterproofing	

Installer's details	
Name of installer:	
Suitably qualified or trained by manufacturer/supplier?	Yes / No / N/A
If no, please confirm suitability to install waterproofing. Installers should be competent.	

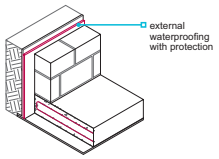
Provision of information			
It is essential that the following information is available on site			
Full set of current drawings		Product manufacturer information	
Third-party certifications or independent assessments		Method statement detailing sequence of works	
Details of joints, junctions and service penetrations (complex details should be in three dimensions)		Concrete reinforcement details, particularly when used as a Type B (structural integral) system (see below)	

Protection grade(s) required on site					
Grade 3 (Habitable)		Grade 1b and 2 (Non-habitable i.e car parking areas)		Grade 1a (Retaining walls)	

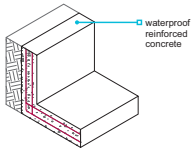
Waterproofing system to be used		
Protection grade	System type	Please select
3 (Over 600mm)	Type A (waterproofing barrier) and Type B (structural integral)	
	Type A (waterproofing barrier) and Type C (drained cavity)	
	Type B (structural integral) and Type C (drained cavity)	
	Type B (structural integral) Note 1	
Note 1: Type B structurally integral concrete system is acceptable without further protection from a combined system ONLY if a detailed hydrogeological assessment has been undertaken and to demonstrate that the water table is permanently below the lowest floor slab.		
1b and 2 Note 2 (Both over 600mm)	Type A (waterproofing barrier – fully bonded) Note 3	
	Type A (waterproofing barrier) and Type B (structural integral)	
	Type A (waterproofing barrier) and Type C (drained cavity)	
	Type B (structural integral)	
	Type C (drained cavity)	
Note 2: The systems shown against Grade 1b and 2 are the minimum to meet NHBC's requirement of Grade 1b. Should additional systems be added to these to meet Grade 2 then they shall be to the waterproofing design specialists design. Note 3: Fully bonded barriers are Type A barrier systems that form a composite with the structural wall. Includes cementitious and liquid applied systems.		
1a	Type A (waterproofing barrier)	
	Type B (structural integral)	
	Type C (drained cavity)	
In all cases, also see NHBC Technical Guidance 5.4/01.		

Continues on reverse

Type A – Waterproofing barrier

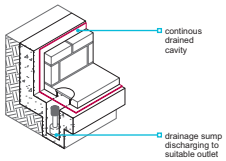
Ensure weather conditions at the time of installation are appropriate for the system being installed	
Ensure the substrate is clean, free from debris e.g. laitance fully removed (including at corners, around services and other difficult to access areas) and prepared in accordance with the manufacturer's recommendations	
Bonded sheet membranes should only be directly applied to masonry substrates that are smooth with flush pointed joints. Ensure it is used in accordance with the third-party certification or independent assessment	
Ensure waterproofing material is protected to prevent damage	

Type B – Structural integral construction

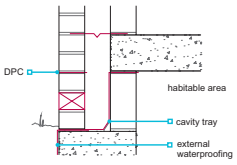
Penetrations from tie bars and the like should be made good in accordance with the design	
Where joints are formed in concrete, the surfaces should be clean and free from excessive laitance	
Protect hydrophilic strips from water prior to joint formation	
Quality managements systems and quality audits should be used to record and monitor the placement of concrete	

Specify concrete type to be used (reports and associated certification to be made available)

Type C – Drained cavity construction

Ensure access points for drainage systems are installed in accordance with the design	
Cavity drain membranes should be installed using the fixings recommended by the manufacturer	
Ensure pumped systems operate automatically and include a: • Primary pump • Secondary pump with battery or generator backup • Suitable audio or visual alarm that indicates pump failure	
Ensure cavity drain system suitable for use on hazardous gas/contaminated sites with potential hazardous gas migration pathways and chemical resistance of materials assessed, and design accepted by NHBC Technical Operations prior to installation	

Interface with the above ground structure

Ensure the waterproofing system extends at least 150mm above external ground level	 Example of linking waterproofing with DPC/cavity tray
The material used to form the cavity tray should be able to withstand the loading from the wall and be compatible with the below ground waterproofing system	
How do you intend to achieve a watertight seal where the waterproofing is linked to the above ground structure?	
Note: Consider limitations of sheet material in three dimensional details	

Inspection requirements

Confirm stages of build below where an inspection should be carried out by NHBC:

NHBC, NHBC House, Davy Avenue, Knowlhill, Milton Keynes, Bucks MK5 8FP
Tel: 0344 633 1000 **Fax:** 01908 747255