

Technical Extra

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Who should read this: Technical and construction directors and managers, architects, designers and site managers.

INTRODUCTION

The number of claims relating to basements and tanking failures is relatively small. However, we have recent experience of individual claims costing up to £500k. These high costs, and the disruption that can result when they occur, highlight the importance of ensuring basements are designed and built correctly.

STANDARDS CHAPTERS

NHBC Standards Chapter 4.1 and 5.1.

REQUIREMENTS

Basements should be constructed to ensure they are structurally robust, durable, able to resist water ingress and appropriate for their intended use.

An Approved Document for basements in dwellings, prepared by The Basement Information Centre, applied to new build basements in England and Wales but was withdrawn in October 2010. NHBC understands that updated guidance is currently with DCLG awaiting their approval for publication as a complementary document to the Building Regulations; in the meantime, designers and builders should follow the requirements of BS 8102¹ (references on p.4) and, to ensure compliance with the Building Regulations, the relevant national Approved Documents.

BS 8102¹ gives guidance on the construction of new basements, introducing three performance grades; shown in Table 1.



Image courtesy of The Basement Information Centre

NHBC requires basements which are to be used for habitable accommodation to be constructed to Grade 3, and those used for parking cars to be constructed to Grade 2; see *NHBC Standards Chapter 5.1, Clause D16*.

BS 8102 also specifies three types of waterproof protection, Types A, B and C; shown in Table 2.

Grade	Required level of performance
1	Some seepage and dampness is permitted
2	No water penetration, but dampness is permitted
3	No water penetration or dampness is permitted

Table 1

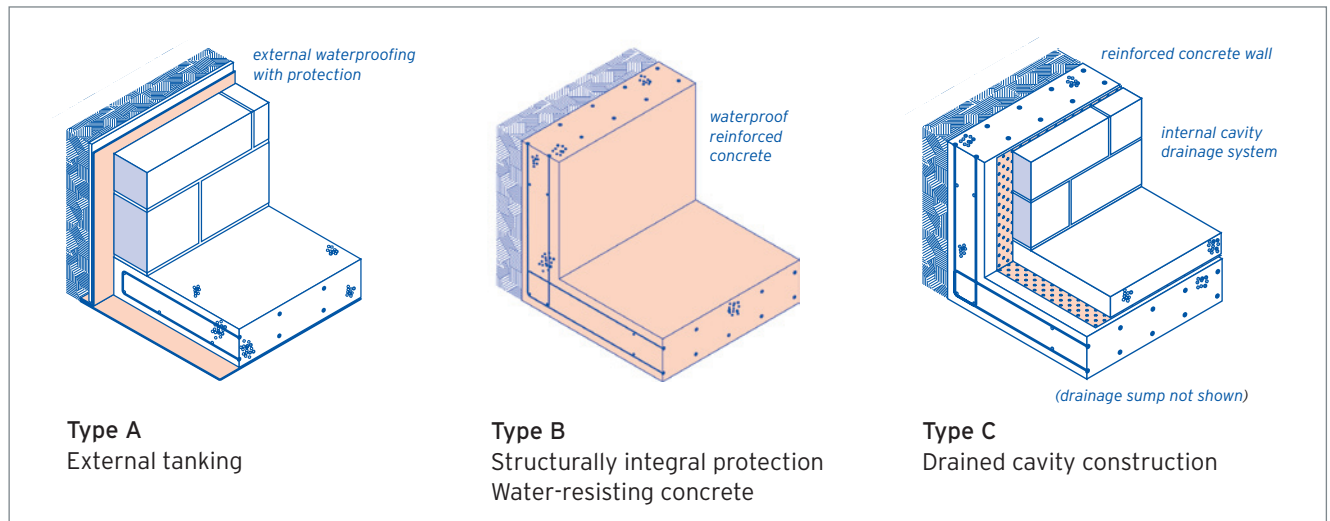
Type	Waterproof protection
A	Internal or external tanking
B	Structurally integral protection
C	Internal drained cavity protection with a sump and pump for removal of water or its disposal by gravity

Table 2



REQUIREMENTS (CONTINUED)

Typical construction details. For further examples, see *NHBC Standards Chapter 5.1; Appendix 5.1-C*



Where Type A tanking is used in new build basements, NHBC requires this to be applied externally. This results in the hydrostatic and ground pressure acting to maintain the tanking in contact with the retaining structure.

It is vital that ground investigation reports are commissioned to identify the appropriate type of waterproof protection (i.e. Type A, B or C) in conjunction with the basement grade (Grade 2 or 3) and the construction material (masonry, concrete or steel).

Ground investigations should always be appropriate for the intended development; see *NHBC Standards Chapter 4.1*. An accurate assessment of the ground water conditions and the possibilities of a seasonally variable water table must be considered. This will affect the type of waterproofing options available, as the risks associated with a variable or high water table are significant. As a result, Type A tanking on its own might not be sufficient to provide waterproofing protection in such situations. In the absence of adequate ground investigations to establish the ground water regime and drainage characteristics, BS 8102 (Clause 6.1) requires that 'Waterproofing measures should be designed on the basis of water to the full height of the retained ground at some time during the structure's life'.

Type B protection could be a proprietary waterproof admixture to concrete in walls and floors. Independent certification of waterproofing admixture systems to concrete, including waterstops or grouting at joints between floor, wall and podium slabs, is required to confirm the performance of these systems.

Only independently certificated waterproofing systems should be used.

Waterstops are an inherent part of any system designed to achieve watertight construction. Where a manufacturer's proprietary waterstop is being used to achieve watertight construction in conjunction with an accepted waterproof admixture system, the waterstop should also be covered by the certificate for the admixture or by its own separate certificate.

Where a manufacturer's proprietary waterstop does not have current certification, traditional dumbbell/face fixed waterstops should be used or a proprietary product that has current certification and is compatible with the waterproof admixture system.

Copies of the independent certification should be made available on site.

When renovating existing basements both Type A internal tanking and Type C drained cavity construction can be considered. However, there are certain additional requirements for Type A tanking, described in *NHBC Standards for Conversions and Renovations; July 2005 pages 10 and 11*, that should be taken into account.

Insulated Concrete Formwork

In recent times, Insulated Concrete Formwork (ICF) has been specified for basements due to its thermal performance.

Where proprietary ICF systems are to be specified for use in basements, they must, in conjunction with the basement slab, provide a fully waterproof envelope to the habitable accommodation. This may be achieved by, for example:



REQUIREMENTS (CONTINUED)

- Providing Type A external tanking (when suitable for the site conditions) to the entire perimeter of the basement, i.e. below the basement slab and to the basement's walls formed using the ICF system. The external Type A tanking to ICF walls should be compatible with the ICF material and be held in place against the ICF walls by means of fixings, adhesion or pressure.
- Providing a composite system using Type A external tanking to the ICF walls and a Type B basement slab incorporating a waterproof admixture with appropriate third-party certification. The external Type A tanking to ICF walls should be compatible with the ICF material and be held in place. The tanking should be appropriately sealed to the basement slab.
- Adopting Type B protection with structurally integral waterproofing throughout, i.e. an appropriate waterproof admixture is included within the basement slab and the concrete core to the ICF system. For such a system to be acceptable, the ICF system itself must have independent third-party certification for its use in basement situations and it is not sufficient to rely on any certification for the waterproofing admixture alone. The certification of the ICF system for use in basements must include all aspects of construction method including waterbars and waterstops.

Independent certification of the ICF will be required.

Where ICF is to be used in conjunction with a Type B structurally integral waterproofing system, the certification for the ICF system for use in basements must include all aspects of construction, including waterbars and waterstops.

NHBC is working with the ICF Association (www.icfinfo.org.uk) to develop a package of measures so that basements using ICF systems also have a tanking system that is suitable for the conditions and is compatible with the ICF.

Copies of independent certification should be made available on site.

Where a Type C drained cavity is specified, satisfactory details should be provided to NHBC before works commence on site.

Managing risk

A review of recent claims has identified water ingress at poorly detailed joints. These are typically those between walls and slabs, where the basement extends beyond the footprint of the superstructure and inadequate waterproofing of the main basement structure (including walls, floor or roof) or junction

detailing has been provided. This highlights the importance of careful detailing and construction of joints in basements.

The risks associated with basements, and guidance on managing these, are discussed in NHBC Foundation publication NF4² (available to download free from www.nhbcfoundation.org) and BRE Good Building Guide 72³.

As part of NHBC's risk management process, one of NHBC's team of project managers will be involved in any development incorporating a basement, to assess the proposals. To avoid the risk of delay, sites with basements or semi-basements (for example, on sloping sites where only part of the lower storey forms a basement) should be clearly identified on the Site Notification and Initial Notice (SNIN) when the application for Buildmark warranty is made; see section 10 on page 3 of the SNIN.

Section 10 of NHBC Site Notification and Initial Notice (SNIN) form

For a copy of the SNIN form or further information on completing and submitting it, including details of how to submit a SNIN through the Extranet, visit: www.nhbc.co.uk/builders/builderregistration/alreadynhbcregistered/registeranewsiteforwarranty.

For general technical enquiries on basements, contact NHBC technical helpline **01908 747384**, or email: technical@nhbc.co.uk.

To discuss structural issues, contact 'Engineering' on **0844 633 1000**.

References:

1. British Standards Institute 8102:2009 - Code of practice for protection of below ground structures against water from the ground. London, BSI, 2009
2. NHBC Foundation report NF4 - Risks in domestic basement construction
3. BRE Good building Guide 72 - Basement construction and waterproofing: Parts 1 and 2



REQUIREMENTS (CONTINUED)

YOU NEED TO...

- Ensure proposals to use basements or semi-basements are identified on the NHBC Site Notification and Initial Notice (SNIN) when making an application.
- Ensure proposals comply with the requirements of BS 8102:2009 'Code of practice for protection of below ground structures against water from the ground'.
- Only use waterproofing systems, including waterproofing admixtures, that have independent certification.
- Where specified, use ICF products which have independent certification.
- Ensure junctions are adequately detailed, with due consideration for the practicality of construction.



Who should read this: Technical and construction directors and managers, architects, designers and site managers.

INTRODUCTION

The Technical Guidance series addresses some of NHBC’s frequently asked technical questions. The guidance notes amplify some of the detail contained in the NHBC Standards and are referenced using the same format.

STANDARDS CHAPTERS

Details of new Technical Guidance documents, and changes to existing guidance are listed below.

REQUIREMENTS

The following lists the April 2011 changes to NHBC’s Technical Guidance series, copies are available at: www.nhbc.co.uk/builders/technicaladviceandsupport/technicalguidance

Reference	Title	Change
1.0/02	Japanese Knotweed	Updated to reflect latest Environment Agency Code: Managing Japanese Knotweed on development sites
5.3/06	Underground drainage - pipe crossovers	New: Guidance on requirements where drainage pipes cross
6.1/01	Partial fill insulation to gable walls	Text within guidance updated
6.1/10	Bedding lintels	Updated to refer to current Eurocode
6.1/22	Lintels within coastal sites	New: Guidance on where effect of coastal conditions should be considered
6.1/23	Lintels to walls over drive-through access to houses (England and Wales only)	New: Fire protection to underside of lintels at each end of a drive-through between two linked houses
6.1/24	Lintels over wide garage openings	New: Thermal movement of metal lintels supporting masonry over large spans, such as integral garages
6.1/25	Wall ties at movement joints	New: Use of slip ties at movement joints
6.7/13	View outside main entrance door	New: Guidance on when glazing can be considered as providing an acceptable view outside a main entrance door for security purposes
7.2/22	Slate hook fixings	Grade requirements for slate hooks added
7.2/23	Tiling battens	New: Joining of battens where batten gauge is less than 200mm

Table continued on next page



REQUIREMENTS (CONTINUED)

Reference	Title	Change
8.1/17	Wiring to wall lights	Updated reference to clauses within BS 7671 'Requirements for electrical installations'
8.1/18	Consumer unit - labelling	Updated guidance on requirements for notices, as required in BS 7671 'Requirements for electrical installations'
8.1/21	Support to cables in cable trays (England and Wales only)	New: Requirements for support of cables
9.2/07	External steps - mobility access (England and Wales only)	Updated to include further examples of where handrails may be required to external steps

YOU NEED TO...

Review the Technical Guidance series at: www.nhbc.co.uk/builders/technicaladviceandsupport/technicalguidance for additional technical information supporting the NHBC Standards.

REGULATION AND COMPLIANCE

What Code 2010 and FEES mean for house builders



Who should read this: Technical and construction directors and managers, architects and designers.

INTRODUCTION

In November 2010, a new version of the Code for Sustainable Homes Technical Guide (Code 2010) was launched, replacing the May 2008 version.

CHANGES TO REGULATIONS

The update aligns the Code with changes to Part L Building Regulations and introduces Fabric Energy Efficiency Standards (FEES).

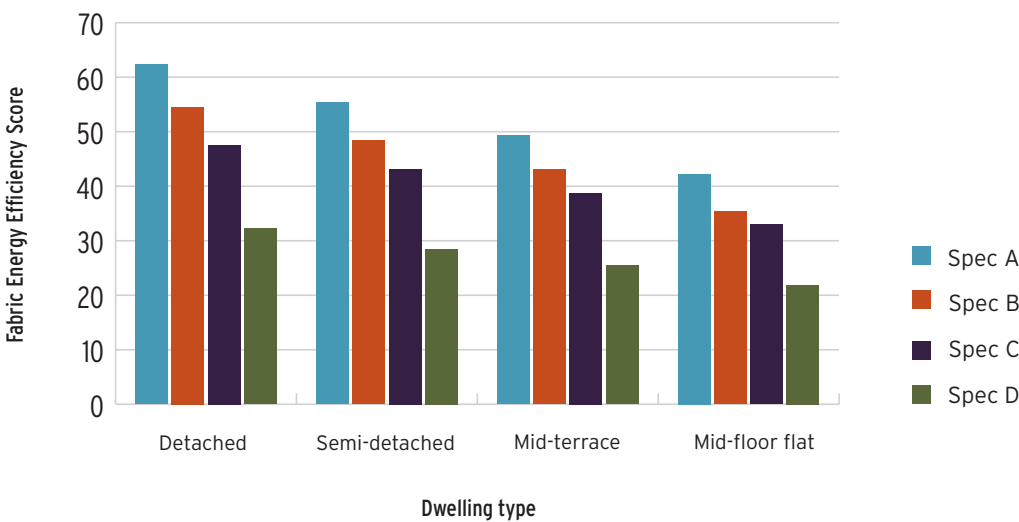
REQUIREMENTS

Part L 2010 represents a 25% improvement in thermal performance and energy efficiency over Part L 2006. Where compliance with the Code for Sustainable Homes is required, Code 2010 has been updated so that achieving Part L 2010 compliance aligns with the mandatory energy requirements for Code Level 3. Changes in the SAP2009 software make that compliance slightly less onerous than a 25% improvement over Part L 2006, which potentially represents a significant cost saving.

However, under Code 2010, credits are no longer awarded for achieving the Code Level 3 energy requirements so the five credits that have been lost

need to be made up in other categories in the Code. The FEES section of the Code now has nine credits available (compared with two credits previously). To achieve five credits in this section, detached and semi-detached dwellings need to achieve a FEES score of 52 or less; apartments and mid-terrace units need to achieve 43 or less.

The graph shows that the same specification performs very differently in different dwelling types against FEES. With specification A, the detached property would achieve no credits for fabric standards under the Code, whereas the mid-floor apartment would achieve eight credits.



Influence of dwelling type on FEES for a range of specifications



REQUIREMENTS (CONTINUED)

Therefore, targets for credits in the Code 2010 vary by dwelling type. The Code also allows the averaging of fee scores across apartment blocks and terraces.

The majority of the other Code credits are similar to older versions of the Code. Therefore, the deciding factor for whether Code 2010 is more cost effective for your scheme often depends on the performance under FEES.

A dwelling's performance under FEES is calculated using the SAP2009 software used for Part L 2010 compliance, so your SAP assessor should be able to help.

For further help or guidance, call **0844 633 1000** and ask for '**Sustainability**' or email: **sustainability@nhbc.co.uk**.

Headline changes to the Code for Sustainable Homes Technical Guide

Key changes within Code 2010 version 3 include:

- Aligning the Code with Part L 2010 requirements, with revised Ene1 performance criteria.
- Incentivising the introduction of 'Fabric Energy Efficiency Standards', by adapting Ene2.
- Site Waste Management Plans are no longer mandatory, though voluntary credits exist for minimising waste.
- Clearer surface water management standards introduced.
- Issue Ene7 now requires certification for renewables under either the Microgeneration Certification Scheme or CHPQA.
- Exemption granted from some 'Lifetime Homes' requirements on steeply sloping sites.
- NHBC's sustainability team has been discussing changes with clients on a case-by-case basis, as the impact varies.

YOU NEED TO...

- Check which version of the code you are using.
- Discuss with your code assessor the benefits of using Code 2010.

GUIDANCE AND GOOD PRACTICE

The Definition of Waste: Development Industry Code of Practice version 2



Who should read this: Technical and construction directors, and managers, and consultants.

INTRODUCTION

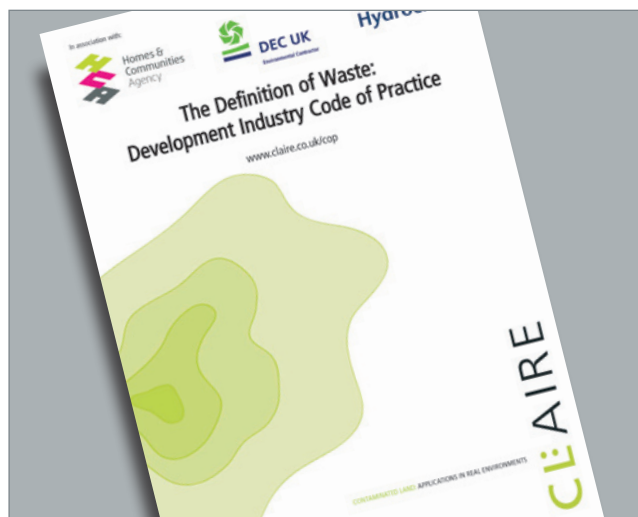
The Code of Practice (CoP) provides a clear, consistent and streamlined process which enables the legitimate re-use of materials on site or their movement between sites with a significantly reduced regulatory burden.

GUIDANCE

In many instances, the CoP can provide an alternative to Environmental Permits or Waste Exemptions when seeking to reuse excavated materials. The CoP is published by Contaminated Land: Application in Real Environments (CL:AIRE), www.claire.co.uk/cop.

The original version of the CoP was launched in September 2008 to provide a pragmatic solution to using excavated materials, including soils, on development sites in a sustainable manner, without getting tangled up in waste legislation.

Version 2 of the CoP, which was published on 30 March 2011, is applicable to England and Wales and provides a clear and concise process to determine whether excavated materials on a development site constitute waste in the first instance, and to identify the point when treated waste can no longer be considered as waste.



In general, either contaminated or uncontaminated materials that are excavated from development sites are considered to be waste and are therefore subject to regulatory controls, which may be perceived as creating a burden to the construction industry. However, the Environment Agency, which regulates the management of waste materials, may take account of this CoP and deem that materials are no longer waste, where it is correctly applied.

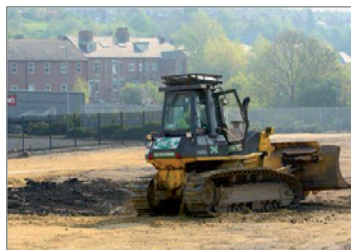


Image courtesy of CL:AIRE

The new updated CoP enables the direct transfer and re-use of clean, naturally occurring soil materials between sites. It creates the conditions to support the inclusion of fixed soil treatment facilities, which have a key role to play in the future of sustainable materials management. As with earlier versions, it enables the re-use of both contaminated and uncontaminated materials on the site of production, and between sites within defined cluster projects. Cluster projects allow for remediation and/or development of a number of relatively close sites which can, for example, share decontamination/treatment facilities.

In many instances, the CoP can provide an alternative to the use of an environmental permit, or waste exemption, in certain circumstances. Increase in the

For technical advice and support, call 01908 747384 or visit www.nhbc.co.uk

The Definition of Waste: Development Industry Code of Practice version 2



GUIDANCE (CONTINUED)

use of the CoP is already being seen since the effective removal of widely used waste exemptions (e.g. paragraph 9 and 19) in April 2010. This trend is expected to continue as developers face decisions as to whether or not they require an environmental permit, to cover the re-use of excavated materials.

To support its further use, CL:AIRE is keeping a confidential register of materials and services which fall within the Definition of Waste Code of Practice (CoP). CL:AIRE aims to link material holders with service providers or organisations requiring materials in order to make the process of finding project partners an easier and quicker process.

CL:AIRE will review the information provided against the register and contact organisations where they identify possible project partnerships for finding 'homes' for materials falling within the CoP, either through direct site transfer or via clusters. The register

is not publicly available; CL:AIRE will act to make the introductions and offer any further services as required in order to ensure successful partnerships are achieved. For further information on the register, email: codeofpractice@claire.co.uk.

For further information on the CoP, call **0844 633 1000** and ask for 'Engineering' or email: lqe@nhbc.co.uk.

The CoP may overlap with a Site Waste Management Plan (SWMP), where required.

For projects relating exclusively to earthworks, a Materials Management Plan (MMP), as described in the CoP, would cover the main requirements of an SWMP. For projects encompassing more than earthworks, the detail within the MMP could be a section of the SWMP.

For further information on site waste management plans, call **0844 633 1000** and ask for 'Health & Safety' or email: swmp@nhbc.co.uk.

YOU NEED TO...

This is a voluntary Code of Practice, but you may wish to consider using it where materials are being excavated on a development site and the intention is to either keep these materials on site or remove them to another site.

GUIDANCE AND GOOD PRACTICE

NHBC Foundation



Who should read this: Everyone.

INTRODUCTION

Supporting the industry with high-quality research and practical guidance, all NHBC Foundation reports are available to download free of charge at www.nhbcfoundation.org.

Here are summaries of the latest three reports.

GUIDANCE

Milton Keynes - A sustainable future: a low carbon prospectus NF27



Carried out in conjunction with Milton Keynes Council and Milton Keynes Partnership, this project chronicles the progress towards a sustainable future that has been made in Milton Keynes in recent decades. The city's sustainable development is set out under the four themes of:

- engaging the community and local initiatives
- reducing the environmental impact of buildings and transport
- improving the present and protecting the future
- clear and informed strategies, policies and masterplanning.

Part L 2010 - Where to start: an introduction for house builders and designers NF28



Complying with Approved Document L (conservation of fuel and power) has become increasingly challenging at each revision. A consequence is that builders and designers, particularly the small and medium-sized businesses, are increasingly dependent on advice from their suppliers and SAP assessors, who may have a preference for particular types of solution.

This guide simply explains how to comply with the latest version of Approved Document L, introduced in October 2010. It takes four types of home and presents four different compliant specifications for each, based on:

- enhanced fabric
- solar thermal panels
- solar photovoltaics
- mechanical ventilation with heat recovery (MVHR).

Together with illustrations of typical wall, floor and roof constructions reaching various levels of thermal performance, these examples should enable builders and designers to make better-informed choices about how they comply with the new requirements.

For technical advice and support, call 01908 747384 or visit www.nhbc.co.uk



GUIDANCE (CONTINUED)

Water consumption in sustainable new homes NF29

The Code for Sustainable Homes and Part G of the Building Regulations both set water consumption targets. They use a water calculator to predict the consumption in litres per person per day, based on the combination of fittings and appliances installed. This project measured in detail the actual water consumption in seven homes in order to establish the accuracy of the water calculator. The measurements were taken from multiple water meters installed at each outlet in each of the homes, with data gathered using state-of-the-art wireless communication.

The overall finding was that, although reduced below the national average, consumption significantly exceeded that predicted by the water calculator. In addition, the report details the amount of water used at each point of use and gives an assessment of the carbon footprint.



YOU NEED TO...

This article is for general interest. There are no actionable requirements although readers are advised to note the findings of the reports.

Any colour but yellow



Who should read this: Technical and construction directors and managers. Architects and designers. Site managers.

INTRODUCTION

The yellowing of trim paints is a common problem for house builders, and one that features highly on homebuyers' snagging lists.

GUIDANCE

Following changes in Volatile Organic Compound (VOC) legislation, paint manufacturers have been required to reduce the solvent content of traditional trim products. As part of this process, many of these solvent-based coatings were reformulated to have a higher 'solids' content. Whilst better for the environment, these formulations can have a greater propensity to yellow and discolour more quickly in rooms with limited or no daylight. This discolouration is a challenge faced by all paint manufacturers and brands.



For technical advice and support, call 01908 747384 or visit www.nhbc.co.uk



GUIDANCE (CONTINUED)

High solid alkyds form more 'cross-links' during the drying and curing process than previous non-compliant versions. This means that they create more by-products, resulting in greater yellowing appearing on the paint surface in environments with limited/no daylight.

Paint manufacturers such as Dulux Trade have recognised the problems presented to the end-user and placed significant investment in exploring alternative formulations - in particular, the use of water-based technologies.

While traditionally there has been some reticence toward water-borne products, with some arguing the earlier versions of these coatings didn't deliver the levels of coverage, finish and durability required, paint manufacturers have focused on improving these solutions.

To realise the benefits, however, it is important to recognise the differences between solvent-based and water-based trim solutions. The basic variation lies in the liquid element of the products. Both formulations contain similar pigmentation but different binders and additives dependent on technology routing. This gives the products different properties, which must be considered during application.

As the revised solvent-based coatings have 25% less solvent and higher solids content, the new formulations form a thicker layer which takes longer to dry. 2010-compliant undercoats can typically be recoated within 16 hours, and the glosses within

24 hours. The rate of drying, however, is more temperature dependent than the previous non-compliant formulations, meaning they will take longer to dry, especially in periods of cold weather or periods of high humidity, although this is more of a consideration for water-based coatings.

Water-based variants dry faster than solvent variants, with these coatings typically taking around four to six hours. Although faster drying, it is best if water-based paints aren't applied if the temperature is below 10°C or humidity is over 80%. At lower temperatures in particular, water-borne paints are slower in drying as they rely on the evaporation rate of water, which is lower at these temperatures.

Water-based coatings should be used in conjunction with synthetic brushes as opposed to bristle brushes. However, as they are heavier in consistency, water-based coatings may also clog a dry synthetic brush. Dampening the brush with water before application prevents clogging and avoids brush marks. Similarly with the gloss top coat, clogging can be overcome by lightly wetting the substrate with a damp sponge before application.

Solvent-based paints traditionally have a smoother flow, meaning that brush marks flow out more easily. Water-based trim paints, however, should be applied more heavily at first and then spread out.

This article has been prepared with the assistance of AkzoNobel (Dulux Trade).

YOU NEED TO...

Understanding the differences between solvent and water-borne paints, and ensuring these simple principles are adopted during application, will ensure the trim areas of the home are completed to the long-lasting, high-quality finish acceptable to the end user.

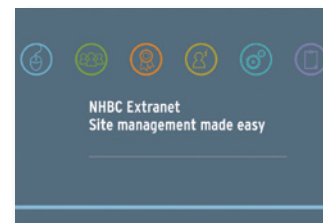


NHBC EXTRANET - SITE MANAGEMENT MADE EASY

The Extranet has been designed to help you manage and monitor NHBC Warranty, Building Control and Sustainability service provision. Through the Extranet you can:

- save up to 70% on print and postage costs with electronic document submissions
- keep up to date with the latest NHBC Standards
- run key management reports for your sites
- download Sustainability and Energy Rating Certification.

View a demo or sign up now at www.nhbc.co.uk/extranet



BUILDING REGULATIONS - VISIT TECHZONE

Keeping up to date with regulatory change is always a challenge, highlighted most recently by the significant changes to Parts F, J and L.

To help you keep on top of developments, we recently introduced TechZone, a specialist area on our website containing the latest information on all aspects of building control. You'll find the most up-to-date consultations on Building Regulations and a question and answer section containing practical advice and technical guidance from our in-house experts.

Visit: www.nhbc.co.uk/techzone



SUSTAINABILITY AND ENERGY

If you need advice on complying with sustainability or energy targets, NHBC's expert consultants can help you achieve your targets, cost effectively, with solutions that are suitable for you.

As well as offering consultancy advice, NHBC can offer Code for Sustainable Homes and BREEAM Assessments as well as EPCs and SBEM.

To speak to one of our consultants, call **0844 633 1000** and ask for 'Sustainability'.



UPCOMING TECHNICAL EVENTS

Fire safety in construction

Milton Keynes	10 May 2011
Bristol	11 May 2011
Sevenoaks	17 May 2011
Chelmsford	18 May 2011
Peterborough	19 May 2011

Sound insulation and air tightness testing (PCT) - free seminars

Glasgow	10 May 2011
Edinburgh	11 May 2011

Energy and the Code - half-day refresher course

York	24 May 2011
Manchester	07 June 2011
Birmingham	15 June 2011
Milton Keynes	21 June 2011
Bristol	28 June 2011
Dartford	05 July 2011
London	12 July 2011

Code for Sustainable Homes - half-day refresher course

York	24 May 2011
Manchester	07 June 2011
Birmingham	15 June 2011
Milton Keynes	21 June 2011
Bristol	28 June 2011
Dartford	05 July 2011
London	12 July 2011

An introduction to home building and sustainability

Edinburgh	12 May 2011
Belfast	19 May 2011
York	25 May 2011
Manchester	08 June 2011
Birmingham	16 June 2011
Milton Keynes	22 June 2011
Bristol	29 June 2011
Dartford	06 July 2011
London	13 July 2011

For details of NHBC training courses, call **0844 633 1000** and ask for 'Training' or email: training@nhbc.co.uk.

For more information on training from NHBC, view the latest edition of *Learning Times* at: www.nhbc.co.uk/builders/productsandservices/training

For technical advice and support, call **01908 747384** or visit www.nhbc.co.uk

Useful contacts for technical information and advice

NHBC technical advice and support

Phone: 01908 747384

Email: technical@nhbc.co.uk

Web: www.nhbc.co.uk/builders/technicaladviceandsupport

NHBC Standards

Buy online at:

www.nhbc.co.uk/nhbcshop/technicalstandards

Building Regulations

For guidance on issues relating to the Building Regulations, visit NHBC's TechZone at www.nhbc.co.uk/techzone

Building Control queries

For Building Control queries, please call 0844 633 1000 and ask for 'Building Control', or email buildingcontroladmin@nhbc.co.uk.

Engineering queries

For Engineering queries, please call 0844 633 1000 and ask for 'Engineering'.

NHBC Foundation research

The NHBC Foundation facilitates research and shares relevant guidance and good practice to the house-building industry.

www.nhbcfoundation.org

Zero Carbon Hub

The UK Government has set out an ambitious plan for all new homes to be zero carbon from 2016. The Zero Carbon Hub helps you understand the challenges, issues and opportunities involved in developing, building and marketing your low and zero carbon homes.

www.zerocarbonhub.org

NHBC Clicks & Mortar e-newsletter

NHBC regularly distributes information on a range of industry topics including new products and services, the building industry market, house-building news and house-building statistics. To receive this industry information, please register at:

www.nhbc.co.uk/newsandcomment/registerfore-news

NHBC Housing Developments e-newsletter

Housing Developments is a new, free resource developed specifically for the affordable housing sector and designed to report on current industry developments and issues, with expert insights into affordable and social housing.

To receive this e-newsletter, please register at:

www.nhbc.co.uk/housingassociations/affordablehousingnewsletter

General enquiries

For all other enquiries, including ordering products and services, please call 0844 633 1000, and ask for 'Sales'.

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