

# NHBC: Who we are and What do we do

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- About NHBC and NHBC Conditions?
- Garden Verification
- Gas Verification
- Radon ?



# NHBC are.....

- The National House Building Council
- Leading Warranty and Building Control provider
- Providing consumer protection for new homebuyers
- Raising standards in the new house building industry



# Buildmark Warranty

- Contaminated Land Cover is included in Section 3.6 (Section 5 pre October 2019)
- What is Covered  
*‘Work required to improved the condition of your land if you receive a statutory notice for your land or a statutory notice could be issued because of the condition of your land’*
- Financial Limit for the warranty is the sales price of the Home.



# NHBC Standards

## Chapter 4.1 Land Quality – Managing Ground Conditions

- Chapter 4.1 provides a framework for managing geotechnical and contamination risks.
- Key Objectives for contaminated sites:
  - Ensure all sites are properly assessed and investigated for contamination hazards;
  - Ensure sites are properly remediated where necessary or appropriate and design precautions taken; and
  - Ensure appropriate documentation and verification is provided to NHBC



# NHBC Standards

## Chapter 10.2 Drives, paths and landscaping

### Key sections for garden areas

- 10.2.1 - All works should be completed in accordance with the ground remediation statement (where applicable);
- 10.2.7 – Topsoil should be of a quality that will not present a hazard to users of the guidance area and refers to BS3882 and CLEA guidance for determining suitability (see also 10.2.9);
- 10.2.9 – No obstructions within 450mm of finished ground surface; and
- 10.2.9 – Appropriate action should be undertaken to restore drainage characteristics of soil compacted during construction.



# Building Regulations – AD C1 2004 Edition



The Building Regulations 2010

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## Site preparation and resistance to contaminants and moisture

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**APPROVED DOCUMENT**

**C1 Site preparation and resistance to contaminants**  
**C2 Resistance to moisture**

# Part C1 – What does it say

## Requirement

## Limits on application

### Site preparation and resistance to contaminants and moisture

#### Preparation of site and resistance to contaminants.

C1. (1) The ground to be covered by the building shall be reasonably free from any material that might damage the building or affect its stability, including vegetable matter, topsoil and pre-existing foundations.

(2) Reasonable precautions shall be taken to avoid danger to health and safety caused by contaminants on or in the ground covered, or to be covered by the building and any land associated with the building.

(3) Adequate sub-soil drainage shall be provided if it is needed to avoid:

(a) the passage of ground moisture to the interior of the building;

(b) damage to the building, including damage through the transport of water-borne contaminants to the foundations of the building.

(4) For the purpose of this requirement, 'contaminant' means any substance which is or may become harmful to persons or buildings including substances which are corrosive, explosive, flammable, radioactive or toxic.

## METHANE AND OTHER GASES FROM THE GROUND

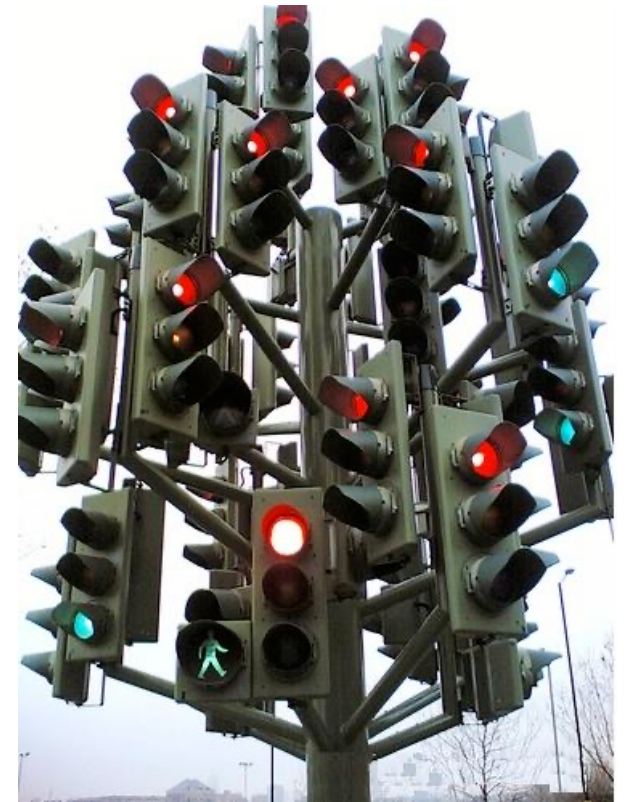
### Introduction

**2.25** The term 'methane and other gases' is used to define hazardous soil gases which either originate from waste deposited in landfill sites or are generated naturally. It does not include radon which is dealt with separately in paragraphs 2.39 and 2.40. However, the term does include volatile organic compounds (VOCs). As stated in Limitations on Requirements above, measures described in this document are the minimum that are needed to comply with the Building Regulations. Further actions may be necessary to deal with the requirements of other legislation.



# NHBC Requirements and Process

- We undertake a land quality review for ALL sites that are registered with us.
- We set MANDATORY conditions to ensure the requirements set out in the standards are met.
- This WILL include verification reports.
- A warranty will NOT be provided until all mandatory conditions have been cleared.



# NHBC Warranty

## Why do you need a warranty?

NHBC will not release our warranty if:

- Issues remain that would result in a claim.
- Major issues exists that may affect the health and safety of the occupants.
- Outstanding issues remain that during rectification would cause significant disruption to the homeowner.

# Council of Mortgage Lenders (CML) Initiative

## Finalling Procedures

- CML initiative introduced in 2003.
- A warranty provider's cover note must be obtained before mortgage funds are released;



# Cover systems - Design it

- Consider final site levels:
  - Is there space for the capping?
  - Cut & fill/site strip - Will the contaminant source still be present?
- Land Use?
  - Private Gardens, communal areas/landscaping, POS
- Clean Cover Source – is it suitable?
- What thickness of capping is required?
  - Assume 600mm or use BRE 465 design chart / spreadsheet?
- Is a break layer required?
- Verification Plan

# Topsoil and/or Subsoil for use as a growth medium

- Where topsoil and/or subsoil is not being used as part of a contamination remediation strategy and is only being placed as a growth medium, NHBC will not usually require the provision of chemical analysis/testing;
- However, any materials being used must be suitable for use and should conform to BS3882:2015 and Chapter 10.2 of NHBC standards.

# Gas Risk Assessment

Get the CSM right.

Carry out sufficient monitoring to characterise the risk (and use alternative lines of evidence e.g. RB17 where applicable)

Consider the actual risk potential, don't just use the guide in NHBC Table 14.1 for typical maximum concentrations as a blind trigger (read the notes and assess accordingly)

Does the design take into account the construction methods, earthworks proposals, construction details (floor, foundations etc). Will sealing the site or dewatering cause the risk to change? Do the foundations create a pathway?

# Gas Risk Assessment – Shortcomings

Many instances of inadequate or incorrect gas measures we see are due to either poor design or poor workmanship.

The majority of these could be avoided with adequate monitoring/characterisation on low risk sites (i.e. mitigation is probably not required).

If mitigation is recommended and poor installation occurs, builders have to choose to either carry out interim monitoring to assess if the risk is actually present (why not do that at the outset?) or opt for expensive remedial measures.

Most opt for remedial measures due to concerns that monitoring may confirm there is a risk and the remedial work will be required anyway.

Radon !!

# Verification plans

## Updated requirements in CIRIA C735

- Details the what, how, when and by whom checking the installed mitigation measures.
- Provides details of the appropriate selection of ventilation membrane specification, how these will be installed and verified (photos, integrity check, pick tests etc).
- We may ask to see these if they don't form part of a remediation strategy report or supplemental to the gas protection details.



# Verification requirements

## NHBC Traffic Lights.

Amber 1 – gas details/specification only. No verification reports required. Builder expected to get on with it (model assumes holes so membrane is permeability contrast only).

Amber 2 – as above with either verification from the specialist installer and/or appropriate integrity testing.

This doesn't have to be on every plot (eg 1<sup>st</sup> 5 then 1:10 after) proportionate and risk based.

# What we check

Typical verification report.

Confirms gas risks

Membrane used.

Ventilation details

Photographs of installation, laps/joints/services

Check sheets – any issues, repairs, comments?

Integrity testing (if required).

# What's the threshold?

What will we accept?

We push for the highest standards of reporting

We work with builders/consultants to improve standards

We will accept information that isn't complete

But only with use of professional judgement

Balance between pragmatism and commercial interests

We won't just accept anything.

# Further information

- NHBC Standards – [www.nhbc-standards.co.uk](http://www.nhbc-standards.co.uk)
- NHBC Standards Technical Extra  
[www.nhbc.co.uk/Builders/ProductsandServices/TechZone/nhbcstandards/](http://www.nhbc.co.uk/Builders/ProductsandServices/TechZone/nhbcstandards/)
- BS 3882: 2015 – Topsoil – Specification for Topsoil.
- BS 8601: 2013 – Specification for subsoil
- BS8485: 2015 (A1 2019)
- CIRIA C665
- NHBC Report 04 (2007)
- BRE 414 (2001)