



Public Health
England

Protecting and improving the nation's health

UK National Radon Action Plan

Response to public consultation

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Introduction

The National Radon Action Plan (NRAP) (McColl *et al*, 2018a) has been prepared by a Core Group of representatives from government departments and agencies, with input from stakeholders, to comply with a requirement of the European Union Basic Safety Standards Directive (EU-BSS) (EU, 2013).

Before and during its preparation, a detailed gap analysis was made of radon-related activities currently undertaken in all parts of the UK to identify where the UK is fully compliant and where further work or new activities needed to be considered.

The Core Group has met periodically to prepare and review the draft NRAP since August 2015. In August 2017, an event was held at PHE's Centre for Radiation, Chemical and Environmental Hazards at Chilton in Oxfordshire, where radon stakeholders outside the Core Group and government were invited to contribute information on the activities undertaken by the wider radon industry. This enabled additional information to be reflected in the draft NRAP.

Following the enactment of the Ionising Radiation (Basic Safety Standards) (Miscellaneous Provisions) Regulations 2018 (SI 2018/482) (BEIS, 2018), that established the regulatory requirement for a UK NRAP, a public consultation was carried out.

The draft NRAP (McColl *et al*, 2018b) presented in a single document:

- the existing elements of radon control that make up the national radon strategy,
- the national radon action plan, and
- proposed additional activities to fulfil the radon-related requirements of SI 2018/482.

The consultation was opened on 29 June 2018 for a four week period on the PHE consultations page of www.gov.uk with a link to the SelectSurvey.net application. Publicity on the consultation was sent to around 2,600 stakeholders, either directly by email or through professional bodies and communities of interest.

Response statistics

SelectSurvey.net was used to gather responses to the consultation. A landing page was prepared, which led to questions asking respondents to indicate (yes/no) on whether they had any comments on each of the four main sections, unlimited size free text boxes for their responses, and additional provision for any other comments. A name and indication of an affiliation (private citizen or representing an organisation) were requested, to identify unique respondents. Comments were also received via other routes from two respondents and have been treated in the same way. The final summary statistics are presented in Table 1. The high number of individual comments

SI 2018/482 enacts part of the 2013 European Union Basic Safety Standards on protection against ionising radiation (EU, 2013).

is a result of the longer submissions provided by the respondents being broken down into specific points in the relevant section. In several cases, however, the comments made were relevant to different sections from the one being highlighted. This was especially notable for question 1, where respondents made comments about the current and future arrangements for radon in the UK, rather than about the strategy. Table 2 shows the number of times that the consultation was viewed and a statistical summary of the respondents. As well as private citizens, a range of organisations was represented, including professional associations, public sector bodies outside the Core Group, academic institutions and private companies.

Table 1: Summary of respondent feedback

Question	Yes	No	Comments	Total individual comments
Question 1 Are there any gaps that you can identify in the UK strategy for managing radon (NRAP section 2)? If so please give details.	13	14	12	7
Question 2 Are there any gaps that you can identify in the current UK arrangements for managing radon (NRAP section 3)? If so please give details.	15	12	13	102
Question 3 Are there any gaps that you can identify in the list of potential future actions (NRAP section 4)? If so please give details.	15	12	13	47
Question 4 Are there any other points you would like to make in relation to the NRAP? If so, please give details.	14	13	11	44
This box is provided for any additional comments you might wish to add.	-	-	8	18

Table 2: Statistical summary of SelectSurvey.net views and respondents

Category	Number
SelectSurvey.net page views	158
Respondents	51 (22 individual; 25 organisation; 4 Not specified)
Location	42 UK; 6 Non-UK; 3 Not specified

Summary responses to comments

The Core Group have considered all the comments from respondents and either made changes to the post-consultation version of the NRAP or not adopted the suggested changes for a variety of reasons. As the NRAP was prepared to fulfil a specific requirement of the EU-BSS, a number of comments were received that were considered to be outside its scope. These comments will be considered separately as part of “business as usual” by the appropriate members of the Core Group.

The responses have been consolidated and are summarised in Table 3.

Table 3: Responses to comments received, by relevant NRAP section

Section 1 Introduction	This section gives the background to the properties of radon and radon exposure in the UK within the context of overall radiation exposure
	<p>A number of comments were fully supportive of the approach and topics covered in this section, including the areas identified for further work.</p> <p>Suggestions adopted:</p> <ul style="list-style-type: none">• Text was reviewed throughout the document for consistency of wording.• A new subsection on international advice was added.• Text was inserted describing the physical properties and distribution of radon and thoron from various sources, including past uses of radioactive material.• Text was added to describe the UK radon measurement database.

	<p>Suggestions not adopted:</p> <ul style="list-style-type: none"> • The approach to understanding the health risks from radon was challenged. The text reflects the main factors and evidence concerning health risks from radon and the requirements of the EU-BSS (including Annex XVIII). • The scientific framework for addressing radon was challenged. The UK radiation protection framework (including radon) follows the approaches advocated by ICRP, IAEA, WHO and others. • The inclusion of material relating to interactions between radon exposure and other factors was challenged. The interaction between radon levels and energy efficiency measures is an ongoing area of relevance and is identified as a matter for consideration in the EU-BSS. • The privacy of individual results in the national radon measurement database was challenged. Individual measurement data are private and many are self-funded. Statistical data summaries are published separately from the radon maps.
<p>Section 2 UK radon strategy</p>	<p>A radon strategy is explicitly required by the EU-BSS and necessarily references and summarises other sections of the NRAP</p>
	<p>A number of comments were supportive of the strategy, although questioned why it existed as a separate section.</p> <p>Suggestions adopted:</p> <ul style="list-style-type: none"> • Changes were made to improve the completeness and clarity of the strategy. • Text was changed to note that some legislation is devolved to the individual territories of the UK. <p>Suggestions not adopted:</p> <ul style="list-style-type: none"> • The need to include the radon strategy as a separate section was questioned. The strategy is included as a separate section to clearly show compliance with a specific requirement of the EU-BSS.

	<ul style="list-style-type: none"> References were requested to all relevant legislation in force in the UK. The NRAP is not intended to be an exhaustive guide to all relevant legislation, including those that do not have radon-specific references but still apply.
Section 3 Existing UK action on radon	This section describes the arrangements currently in place for radon in the UK, including matters that are devolved to the four home nations
	<p>A number of comments were supportive of the existing action on radon in the UK, but made suggestions on where the contribution of stakeholders outside government could be strengthened, including on measurement and mitigation, and the need for effective communication, awareness and action.</p> <p>Suggestions adopted:</p> <ul style="list-style-type: none"> Text was added to describe the UK Target Level in relation to WHO recommendations. Text was added to emphasise that radon measurements should be considered in regularly occupied basements in all areas. The reference to the radon measurement validation scheme has been updated. A revised validation scheme was published in September 2018, and is available at [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/742223/validation_scheme_for_organisations_making_measurements_of_radon_in_UK_buildings_2018.pdf]. Text was added on the maintenance of mitigation systems in workplaces. Radon guidance on protective measures in new buildings was added in a reference to BR211, the underpinning legislation and EU-BSS. Text was added to emphasise the need to test new buildings constructed with radon preventive measures. A reference to the EU directive on drinking water was added. Text was added to reflect the wider range of organisations and professionals which are engaged in radon awareness and who need radon knowledge. Text was added on the use of short term and additional measurements in exceptional circumstances.

	<ul style="list-style-type: none"> • Text was added to reflect the ongoing challenge of effective radon awareness and action. • Text referring to targeted communications was amended to reflect that some people who need to take action on radon are statutory duty holders. Text changes were made on the methods and arrangements for communications on radon. • A subsection on stakeholder engagement was added. <p>Suggestions not adopted:</p> <ul style="list-style-type: none"> • A number of comments were specific to the application and management of workplaces where the precursors to radon and thoron are used. This is outside the scope of the NRAP and a matter for the detailed application of regulations, including the Ionising Radiations Regulations 2017 and Ionising Radiations Regulations (Northern Ireland) 2017 (IRR17). • The completeness of the NRAP as a UK-wide document was challenged. The NRAP reflects the devolved nature of legislative responsibilities of some matters relating to radon. • Some changes to policy were proposed by respondents that have already been considered by government. The NRAP reflects the product of relevant policy decisions. • The provision of multiple radon risk maps was proposed. A single radon Affected Area map for the UK, which is generated from radon measurements in dwellings and geology, is maintained to avoid confusion caused by mapping using multiple reference levels (e.g. Target Level or IRR17 threshold). Workplaces are not included owing to their significant inhomogeneity and different measurement protocols. • The provision, methodology for, and use of, radon risk maps were challenged. The radon maps implement the EU-BSS requirement to identify areas with potentially high radon exposure or where reference levels are exceeded. The underlying mapping techniques are regularly reviewed between PHE and BGS and are similar to other approaches adopted internationally. • It was suggested that measurements from all radon measurement laboratories should be included in the National Radon Database that is used to prepare radon risk maps. The measurement validation scheme previously required the submission of measurement data but this was removed as this had not been in use for over 20 years owing to data quality and governance issues. Detailed comments about that publication are outside the scope of the NRAP.
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	<ul style="list-style-type: none"> • The traceability of radon measurements to primary standards was questioned. Radon measurements made under the UK validation scheme and the regular UK intercomparison exercises are traceable to a primary standard. • The enforcement of Building Regulations and planning conditions was challenged. There is no evidence that checks provided by approved inspectors are less rigorous than LA building control. Also, it is not the function of building control bodies (LA or private) to discharge or enforce planning conditions as this falls to the local planning authority (LPA). In deciding whether to discharge a planning condition the LPA can - where appropriate and relevant - take account of Building Regulations compliance certification where that certification would also show that a planning condition had been met. • Comments were made that related to the duty of care on the employer, details of the regulations and dosimetry, and services that support duty holders. These are outside the scope of the NRAP.
<p>Section 4 Forward plan for action on radon</p>	<p>The EU-BSS Annex XVIII lists items for consideration. Section 4 identifies areas where the UK needs to maintain and review the current arrangements and proposes several new topics.</p>
	<p>The UK has arrangements in place for many radon-related issues, which have been developed over four decades. This means that most of the EU-BSS Annex XVIII items have already been considered. The additional items identified in this section of the draft NRAP, and the production of the NRAP itself, result largely from the gap analysis.</p> <p>Suggestions adopted:</p> <ul style="list-style-type: none"> • Text was modified to reflect existing arrangements that provide for the maintenance and review of the full range of current activities. • Text was amended to reflect the publication of a revised validation scheme for the measurement of radon. • Text was amended to include reference to a developing programme of work led by PHE to prepare and provide material to support local radon activities, including a radon-

	<p>specific public health indicator and locally oriented digital information and resource packs, which are aimed primarily at local authorities.</p> <p>Suggestions not adopted:</p> <ul style="list-style-type: none"> • The proposed review period of the NRAP was challenged. The NRAP review period (no more than 5 years) reflects UK legislation (SI 2018/482 Regulation 10). • It was proposed that the review periods for a range of radon related arrangements should be fixed. It would not be practical to impose a regular review cycle on all elements within the NRAP.
Other comments	<p>This section relates to comments that did not reference specific items in the NRAP or were of a more general nature</p>
	<p>Comments that were considered to be outside the scope of the NRAP will be considered separately as part of 'business as usual'.</p> <p>Suggestions adopted:</p> <p>Text was updated to clarify the new regulatory requirements established by the EU-BSS.</p> <p>Text changes were made for completeness and clarification.</p> <p>A glossary of terms and list of acronyms were added.</p> <p>Suggestions not adopted:</p> <p>The inclusion in the NRAP of a comprehensive digest of scientific evidence was requested. The NRAP describes the arrangements already in place that meet EU-BSS requirements and identifies additional actions required, but is not intended to be a review of the scientific evidence relating to these matters.</p>

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