

CONTENTS

1.	INTRODUCTION	1
1.1.	Background	1
1.2.	Objective	2
1.3.	Scope	2
1.4.	Structure	3
2.	WORKPLACES AT WHICH RADON MAY PRESENT A RISK	3
2.1.	Risks of radon exposure	3
2.2.	Radon in workplaces	5
3.	SCHEME FOR THE CONTROL OF EXPOSURE TO RADON	8
3.1.	Overview	8
3.2.	Public information and awareness	8
3.3.	Practices, interventions and action levels	9
3.4.	Surveys	11
3.5.	Establishing action levels	11
3.6.	Determination of radon prone areas	12
3.7.	Measurement of radon levels in workplaces	13
3.8.	Workplaces in which radon levels are found to be below the action level	14
3.9.	Workplaces in which radon levels are found to be above the action level	15
3.10.	Prevention of elevated radon levels in future workplaces	15
4.	PRACTICAL TECHNIQUES FOR MEASURING RADON CONCENTRATIONS	16
4.1.	General considerations	16
4.2.	Measurement techniques	17
4.3.	Quality assurance and quality control	19
5.	REMEDIAL ACTION TO REDUCE RADON LEVELS	22
5.1.	Sub-floor depressurization 	22
5.2.	Sub-floor ventilation	23

5.3.	Floor sealing and membranes	23
5.4.	Increased ventilation	23
5.5.	Removal of subsoil	24
5.6.	Water treatment	24
5.7.	Cost and effectiveness of radon reduction methods	24
6.	CONTROL OF RADON EXPOSURES WHEN REMEDIAL MEASURES ARE INEFFECTIVE	25
6.1.	Authorization	25
6.2.	Classification of areas	26
6.3.	Dose assessment	26
6.4.	Doselimits	27
6.5.	Training	28
6.6.	Health surveillance	29
6.7.	Other duties of employers and employees	29
6.8.	Workplaces visited by members of the public	29
6.9.	Workplaces where special considerations apply	30
APPENDIX I:	SUMMARY OF DECAY SCHEMES	31
APPENDIX II:	CONVERSION COEFFICIENTS	33
REFERENCES	35
ANNEX I:	CONTROL OF EXPOSURE TO THORON.....	41
ANNEX II:	REVIEW OF THE RISK DUE TO RADON AND OVERVIEW OF RADON MEASUREMENTS IN WORKPLACES OTHER THAN MINES	45
ANNEX III:	EXAMPLE OF RADON MEASUREMENT IN SCHOOLS . . .	54
ANNEX IV:	EXAMPLE OF CONTROL OF RADON IN ABOVE-GROUND WORKPLACES IN THE UNITED KINGDOM	57
ANNEX VI:	WORKPLACES WHERE SPECIAL CONSIDERATIONS A P P L Y	59

ANNEX VI: EXAMPLE OF RADON REMEDIES USED BY THE NATIONAL RADIOLOGICAL PROTECTION BOARD, UNITED KINGDOM	62
DEFINITIONS	69
CONTRIBUTORS TO DRAFTING AND REVIEW	73