



University of
St Andrews

Radiation Local Rules & Site-Specific Information

Site Name: Biomedical Sciences Research Complex Annex (BSRC), Purdie Buildings and Willie Russell Laboratories Complex of Buildings

Document type	Policy
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Purpose	Compliance with Ionising Radiations Regulations 2017 legislation



Radiation Local Rules & Site-Specific Information

Site Name: Biomedical Sciences Research Complex Annex (BSRC), Purdie Buildings and Willie Russell Laboratories Complex of Buildings

This document constitutes the Local Rules under Regulation 18 of the Ionising Radiations Regulations 2017 (IRR17) for the above site and must always be kept up to date. The contents of this document and its references must be brought to the attention of all personnel affected by them.

Site Appointees – Radiation Protection Supervisors (RPSs)

The RPSs appointed under the IRR17 have roles including the responsibility for ensuring that St. Andrews University complies with these Local Rules and the associated Radiation Work Instructions as identified in Work Instruction 1 (WI 1)

Name	Date Training Completed	Date Next Refresher Due (At least every 3 years)
Professor Terry Smith	9th Jan 2023	Jan 2026
Dr Magnus Alphey (X-ray equipment)	9th Jan 2023	Jan 2026
Dr Verena Ohler	9th Jan 2023	Jan 2026

Radiation Protection Advisers

The Radiation Protection Advisers employed by Aberdeen Radiation Services act as RPAs to St. Andrews University. They can be contacted as below:

Working Hours: **01224 749784**
ARPS @aberdeenradiation.co.uk

Outside working hours (emergency contact):
01224 518020

Radiation Protection Officer

The Radiation Protection Officer for St. Andrews University, Mr John Nicholson, is responsible for the routine advice regarding IRR17 and the implementation of these Local Rules. He can be contacted as below:

Working Hours: **01334 467228 or 07990 380160**
Outside Working Hours: **01334 467228 or 07990 380160**

Dose Investigation Level

The St. Andrews University whole-body effective dose investigation level is **0.5 mSv** in a calendar year or **0.5 mSv** in a two-month period.

Where workers are issued with finger TLDs the dose investigation level is **0.5 mSv** in any two-month wear period.

Contingency Arrangements

Section 2.6 of the Work Instructions has identified the contingency arrangements for foreseeable incidents happening within the laboratories in this area. Emergency incident posters will be located in rooms where radioactive work as well as use of X-ray generators. The detailed emergency arrangements can be found in the Work Instructions attached to this document

Description	Doc. Ref
Radiation Area Incidents due to Unsealed Radioactive Sources	Work Instruction 2.6.2
Radiation Area Incidents due to X-ray Generators	Work Instruction 2.6.3
Contamination Monitoring	Work Instruction 6
Lost Sealed or Unsealed Source	Work Instruction 2.6.2 and Work Instruction 2.6.4
X-Ray Unit Incident	Work Instruction 11

It is vital to maintain training for the response to such incidents are practiced. An annual training session will be arranged by the URPO.

Written Arrangements for Non-Classified Workers

Please refer to the job specific Radiation Work Instructions; these set out the arrangements in place to restrict an exposure to ionising radiation, including the use of PPE and restrictions on the type of work, dose rates and the time spent in the area. All written arrangements must be approved by the RPA. If the arrangements are not adequately defined in the Radiation Work Instructions, contact the RPA to assist with the preparation of a suitable written arrangement.

Controlled Radiation Areas:

Controlled areas have been identified within all X-ray generators. All laboratories where X-ray generators have had their interlocks by-passed for beam alignment processes will be deemed as Controlled areas. In such laboratories, access will be by a system of work identified in the Standard Operating Procedures identified in Risk Assessment No 9 attached to this document.

Location: Room 325, Purdie Building - X-ray Generator (Beam Alignment Process)
Room 425, Purdie Building - X-ray Generator (Beam Alignment Process)
Room 217H, Purdie Building - X-ray Generator (Beam Alignment Process)
Room 220, Purdie Building - X-Ray Generator (Beam Alignment Process)
Room B213a, Biomedical Sciences Research Complex (BSRC) - X-ray Generator (Beam Alignment Process)

Supervised Radiation Areas:

Location: **BSRC Annexe Room 313c**

The maximum quantities of radioactive material which can be used and stored under a Radiation Supervised area is

	Storage Supervised Area (MBq)	Usage Supervised Area (MBq)
Radionuclide		
3H	1000	100
14C	500	50
32P	50	5
35S	500	50
36Cl	50	5
45Ca	50	5
51Cr	500	50
86Rb	50	5
125I	10	5

If there is a need to use more than these quantities, then the area would have to be redesignated as a 'Controlled Area' under Ionising Radiations Regulations 2017

Temporary Radioactive Waste Storage Areas

Location(s) used: **BSRC Annexe Room 313c**

Permanent Radioactive Waste Storage Area

Location: **Radioactive waste store - The Scores, University of St Andrews, St Andrews, Fife**

Access Arrangements: **Key available from University Radiation Protection Officer, Mr John Nicholson.**

Telephone No.: **01334 467228 or 07990 380160**

Designated Areas for X-Ray Crystallography Equipment

Location: **BSRC Annexe Room B213a
Purdie Rooms 217H, 220, 325, 425**

Small (exempt) Source Store Locations

Test: Not applicable

Other: N/A

Designated Areas – Supervised Areas

All areas where unsealed sources are manipulated. All areas where radioactive Geological specimens are handled or worked with. All other areas where the risk assessment identifies that a radiation dose of greater than 1 mSv but less than 6 mSv may be received in a year.

Designated Areas – Controlled Areas

All areas where a doserate in excess of 7.5 μ Sv/h exists or the risk assessment identifies that a dose of greater than 6 mSv per year may be received.

Radiation Work Instructions

The following Radiation Work Instructions (RWI) and generic risk assessments apply at this site. These must be used in conjunction with the contents of the St. Andrews University Radiation Policy & Guidance Document (.....).

RWI No.	RWI Title (see)	Applies	IRR17- Risk Assessments which apply
Management			
01	Management of Work with Ionising Radiations at the University of St Andrews	<input checked="" type="checkbox"/>	
02	Radiation Area Incidents	<input checked="" type="checkbox"/>	
03	Radiation Record Keeping	<input checked="" type="checkbox"/>	
Laboratory Radioactive Materials Operations			
04	Handling unsealed radioactive solutions	<input checked="" type="checkbox"/>	IRR17-Risk Assessment No. 1 - Risk assessment for the consent for the deliberate addition of radioactive substances in the production of products
05	Radioactive Waste	<input checked="" type="checkbox"/>	
06	Contamination Monitoring	<input checked="" type="checkbox"/>	
07	Use of Unsealed radioactive sources for undergraduate work	<input checked="" type="checkbox"/>	IRR17-Risk Assessment No. 1 - Risk assessment for the consent for the deliberate addition of radioactive substances in the production of products
08	Use of small sealed sources for teaching	<input type="checkbox"/>	
9	Use of Radioactive Sources for Luminescence Dating	<input type="checkbox"/>	
Sealed Sources and Radiation Generators			
10	X-Ray Crystallographic Units	<input checked="" type="checkbox"/>	IRR-Risk Assessment No. 8 - X-Ray-Risk assessment for the use of radiation generator equipment consent under the ionising radiations regulations 2017 - Normal use. IRR17 - Risk Assessment No.9 - X-Ray- Risk assessment for the high risk use of radiation generator equipment HSE Registration under the ionising radiations regulations 2017
Geological Specimens			
17	Radon	<input type="checkbox"/>	
18	Handling Specimens	<input type="checkbox"/>	
Animal Experiments			
19	Seal studies in pool	<input type="checkbox"/>	

Detailed additional project-specific risk assessments and written arrangements can be found on the relevant Radiation Protection Management Programme RadProt at URL: <https://portal.st-andrews.ac.uk/radprot/open/>

Approved

Name Mr John Nicholson

Position University Radiation Protection Officer and Health and safety manager sciences
, University of St Andrews

Signature..... 

Date24/08/2023.....

Version number	Purpose / changes	Document status	Author of changes, role and school / unit	Date
v1.0	New Document	Approved	Dr Paul Szawlowski	12/07/2021
V1.1	Change of URPO	Approved	Mr John Nicholson	24/08/2021