Hazards seldom arise from the equipment itself, but from the way it is used. When an exposure is made, the primary beam comes from the x-ray tube. You should never expose any part of yourself to this primary beam. The main source of radiation in the room, apart from the primary beam, is scattered radiation from the animal.

Use as small an x-ray field as possible. Take special care if the machine does not have a light beam diaphragm (LBD).

Use distance as a means of protection. Stand at least two metres away from the animal, or wear a lead-rubber apron (0.25 mm lead equivalence or greater) if you need to be closer.

Avoid holding the animal during radiography. If it is held then a lead-rubber apron and gloves or a lead-rubber tube must be worn. If the machine does not have an LBD then the animal must not be held. Always keep your hands out of the primary beam, even if you are wearing gloves.

A lead shield, at least 1.0 mm thick, should be placed on or just under the table top to reduce the exposure of people standing next to the table.

Share among the staff the workload of restraining animals, to reduce individual exposure.

Use the correct screens, films, and technique factors. Develop according to a time-temperature chart, change chemicals regularly, and make sure the darkroom is light-tight.

Shielding is seldom required in the walls of the room. If there is an occupied space in line with the x-ray beam, consult the NRL.
Hazards seldom arise from the equipment itself, but from the way it is used. When an exposure is made, the primary beam comes from the x-ray tube. You should never expose any part of yourself to this primary beam. The main source of radiation in the room, apart from the primary beam, is scattered radiation from the animal.

Use as small an x-ray field as possible. A light beam diaphragm (LBD) must be used, not a cone or other device.

Use distance as a means of protection. Stand out of the direct x-ray beam and either at least three metres away from the animal or wear a protective apron if you need to be closer.

Wear a protective apron if you hold the animal, and gloves if holding near the x-ray field. Apron and gloves should be of 0.35 mm (or greater) lead equivalence.

Use a spade holder or stand for the cassette. The person holding this must wear a protective apron, and also gloves if the cassette is held directly. Always keep your hands out of the primary beam.

Do not hold the x-ray machine unless it is strictly necessary. A holder must wear protective apron and gloves. Use of a stand is strongly recommended as in addition to reducing personnel exposure it reduces x-ray machine movement and improves image quality.

Share among staff the workload of restraining animals and holding equipment, to reduce individual exposure.

Use the correct screens, films, and technique factors. Develop according to a time-temperature chart, change chemicals regularly, and make sure the darkroom is light-tight.

Shielding may be required in the walls. Contact NRL for advice.