



## 6.1 Dental X-Ray Equipment Engineers

Dental X-ray equipment engineers often undertake work with dental X-ray equipment, and employers at dental practices should know what is expected of engineers in terms of their arrangements for radiation protection and compliance with the requirements of IRR17.

**Typical work undertaken by dental X-ray equipment engineers that is subject to IRR17 includes the following:**

- Assisting the dental practice by providing the necessary information (such as adequate room plans, technical details of X-ray equipment) to enable the practice to consult its RPA regarding the planned installation or relocation of dental X-ray equipment.
- Carrying out the installation of dental X-ray equipment, in which case they are responsible for ensuring the critical examination is completed satisfactorily.
- The engineer carrying out the installation may also undertake test exposures as part of the critical examination.
- As the supplier of dental X-ray equipment, they also have a duty to pass on the user adequate information regarding the safe use, testing and maintenance of the equipment.

**In order to comply with IRR17, employers of dental X-ray equipment engineers who carry out the above tasks must do the following:**

- Register their work with radiation generators with HSE.
- Appoint a suitable RPA (who will advise on the following matters).
- Draft a radiation risk assessment conforming to paragraphs 70 and 71 of the ACoP (which must identify the conditions under which the engineer will need to designate controlled areas when working on clients' sites, how these will be demarcated and how access will be restricted and the key working instructions needed to restrict exposure and co-operation with other employers, including hand-over arrangements).
- Draft local rules and contingency plans.
- Appoint suitable staff as RPSs, provide training for them, and take steps to ensure that they are able to adequately supervise the work of the engineers.
- Consult the RPA regarding the conduct of critical examinations of dental X-ray equipment they install and treatment of the results of the examinations (this is likely to require a detailed protocol to be drawn up which engineers follow, with the RPA having significant input into preparation of any report containing the results of the examination and any recommendations arising out of it, that may be passed on to the user, and further training of engineers).
- Consult the RPA regarding arrangements for the co-operation between employers (including the transfer of responsibility for compliance with IRR17 between the dental practice's employer and the engineer's employer).
- Ensure that engineers receive further training regarding how to conduct critical examinations in accordance with the protocol, as advised by the RPA.



Furthermore, dental X-ray equipment engineers often carry out acceptance tests and routine tests on behalf of dental practices. The implications of this in terms of IRMER17 are as follows:

**Employers of dental X-ray equipment engineers will need to:**

- Make arrangements with an MPE to draw up protocols for the adequate testing of dental X-ray equipment that will meet the requirements of this guidance, and the requirements of IRMER17 (it is likely that the MPE will need to have significant input into preparation of the report containing the test results and any recommendations arising out of it, that may be passed on to the user).
- Purchase suitable instrumentation and other articles and arrange for this to be tested and maintained as appropriate, unless this is supplied and maintained by the MPE.
- Put in place arrangements for the appropriate hand-over of dental X-ray equipment between the engineer and dental practice.
- Ensure that dental X-ray equipment engineers are trained to an equivalent extent to RPSs, with additional training covering those subjects in Table 2, Schedule 3 of IRMER17 as relevant to dental radiography (but excluding clinical content), the testing protocols drawn up by the MPE and the correct use of any instrumentation.

***\*Employers of dental X-ray equipment engineers who undertake adequate testing should provide documentation giving an undertaking that the arrangements for the drafting of testing protocols and the training of engineers, as described above, have been met. Copies should be provided to employers at dental practices where this work takes place.***