

RPA 2000

LASER PROTECTION ADVISER CERTIFICATION GUIDANCE FOR THE CREATION OF THE PORTFOLIO OF EVIDENCE

1. INTRODUCTION

This Guidance relates to completion of the application made under the RPA2000 Laser Protection Adviser (LPA) certification scheme. An LPA would be expected to be able to offer advice on safety relating to lasers and in the medical/aesthetics field to intense light sources (ILS). There are a number of 'mandatory' elements of portfolio content, as described in section 3, below. The objective is a document through which the assessors can easily navigate and obtain the necessary information to enable them to reach a decision with regards to certification. ***Applicants should be very clear that the onus is on them to demonstrate competence, not on assessors to seek it out from a less than adequate portfolio.***

There is no minimum amount of time in terms of the experience that is needed. You are required to provide sufficient evidence from education, training, knowledge and practical experience to meet the requirements of the scheme. You should therefore submit a portfolio of evidence containing details of your training and relevant examples of your work. The portfolio is a collection of items of evidence supporting and demonstrating competent performance.

2. PRESENTATION OF THE PORTFOLIO

2.1 Construction

- The simplest way to present the portfolio is to place the various items of evidence, suitably numbered and indexed, in an A4 ring folder.
- It often proves helpful to separate the various sections of the portfolio using a simple system such as numbered, tabbed dividers.
- Placing the various documents inside plastic wallets keeps them safe, clean and less likely to become detached from the portfolio.

2.2 Length

- The exact length of the portfolio clearly depends on the amount and type of evidence being presented. However, as a guide, portfolios 10-15 mm thick have provided more than sufficient evidence to convince the assessors that the applicant should be awarded certification.
- The emphasis should be on the quality of the evidence rather than its quantity. Remember that the assessors will probably have to read carefully through each piece of evidence presented in the portfolio some two to three times.

2.3 Navigation

- Good navigation aids are essential, since aiding the assessors in their navigation through the portfolio is beneficial for all parties.
- The relevant pieces of evidence may be contained within a larger document to give context, in which case they should be clearly identified.
- The essential navigational elements of the portfolio are included in the list of portfolio contents that follows in section 3.

3. PORTFOLIO CONTENT

The portfolio should, as a minimum, include the following:

- (i) A comprehensive **contents list**, detailing and indexing all your items of evidence.
- (ii) A **summary section**, not exceeding 5-6 pages in length, in which each of the major items of your evidence is summarised into a *short contextual paragraph* that clearly identifies the competence(ies) that it supports.
- (iii) **Cross-reference Table No. 1** (see appendix 1), linking the relevant pieces of your evidence to each of the components of the *basic knowledge syllabus* for LPAs.
- (iv) **Cross-reference Table No. 2** (see appendix 2), linking the relevant pieces of your evidence to each of the *practical competencies* that you need to demonstrate.
- (v) All the documents that you are submitting as your **items of evidence**, each one annotated with the *short contextual paragraph* described in the point (ii) above.
- (vi) **Authentication**, by a suitable Referee, that the contents truly reflect the extent and nature of your own work.

4. GENERAL GUIDANCE

- To determine the suitability of a potential piece of evidence, examine it and ask yourself ‘How does this evidence show that (a) I have the basic knowledge/competence, and (b) my actions arose from competent performance’? This will help in deciding what material to include to ensure adequate coverage of all the competencies. Evidence can be generated specifically to demonstrate knowledge, understanding and competence.
- All the competency evidence must be valid, authentic, dated and taken from work carried out over the past five years.
- An item of evidence consisting of workplace documentation alone is unlikely to provide an adequate demonstration of competent performance. It will usually need some linking notes written by you, which will explain the intellectual process you went through at the time and perhaps the background and details of the situation involved. Include details of numerical calculations, logical reasoning behind decisions and reference to legislation, where appropriate.
- Items of evidence that include contributions by other people should be annotated to clearly show the extent of your contribution to the work and your relationship to the others involved (eg if you are the Department Head).
- The portfolio must be authenticated by a suitable Referee, who has agreed that the contents truly reflect the extent and nature of your own work.

5. BASIC KNOWLEDGE SYLLABUS FOR LPAs (see Appendix 1)

The following points are relevant:

- Sufficient evidence needs to be provided to demonstrate that **each item in the basic knowledge syllabus** has been covered in the applicant’s degree, postgraduate study, professional training courses, certificated study or other local training events.
- The basic syllabus also specifies the depth of knowledge required for each component of the syllabus ie GA (general awareness), BU (basic understanding) or DU (detailed understanding).
- Course outlines, syllabus information, programmes of meetings attended or similar items would usually suffice for the evidence in those areas where general awareness or basic understanding is required.
- Further supporting evidence is necessary in the areas where detailed understanding needs to be demonstrated. In addition to course based learning, evidence needs to be provided to demonstrate application of the knowledge, normally in a workplace environment. This should be similar to the sort of evidence used to support the practical competencies.
- Information should be provided as to whether or not performance on the training course(s) was formally assessed. If it was, a brief description of the method(s) of assessment should be provided together with the result(s) achieved by the applicant.

The table in Appendix 1 has been specifically designed to identify all the evidence that the applicant needs to supply and to provide a convenient format for:

- (a) the applicant to provide the evidence;
- (b) the assessors to make the assessment;
- (c) RPA2000 to automatically request further evidence, where deemed appropriate.

6. DEMONSTRATION OF BASIC KNOWLEDGE (see Appendix 1)

The applicant should record at the top of Table 1 the specialist fields in which he/she wishes to be certificated. The applicant must then demonstrate possession of knowledge relevant to those fields. An applicant will normally have a detailed knowledge of requirements for those fields in which he/she is working, but may not be aware of requirements relating to other fields. For example someone working entirely in industry may have a detailed knowledge of standards relating to equipment shielding but no knowledge of requirements for the use of medical lasers in an operating theatre. To obtain the certificate the applicant must provide evidence showing that he/she possesses an understanding at the required level for all relevant items in the table.

7. DEMONSTRATION OF PRACTICAL COMPETENCIES (see Appendix 2)

The table in Appendix 2 lists the nine categories where the applicant **must** demonstrate practical competence. Each category is then further subdivided. The following points are relevant:

- Applicants must provide *evidence in all main categories* and should seek to provide evidence in as many of the sub-categories as possible. Suitable evidence in at least 80% of the sub-categories will usually be necessary to demonstrate core competence.
- As a general principle, it is acceptable for one item of evidence to be used to demonstrate competence in several of these sub-headings.
- It must be clear that you have prepared or contributed to documents submitted. If this is not obvious from the document itself, then copies of letters or e-mails confirming your contribution must be submitted.
- Items of evidence might include operating data or documentation produced in the workplace, reports, minutes or notes on meetings, schedules, programmes, objectives/goals achieved, details of work on special projects, photographs, plans, drawings, etc.
- When using minutes or notes of meetings, you should ensure that they are from meetings where you have made a contribution, and are detailed enough to clearly show your contributions or actions.

The table in Appendix 2 has been specifically designed as a convenient format for:

- (a) the applicant to cross-reference all items of portfolio evidence to the appropriate competence(ies);
- (b) the assessors to record the conclusion of the assessment;
- (c) RPA2000 to automatically request further evidence, where deemed appropriate.

8. THE ASSESSMENT PROCESS

The assessment process is similar to that for RPA certification. Of relevance to the portfolio assessment is that:

- The **full portfolio** is sent to the lead assessor; and
- The **summary section** is sent to the two supporting assessors.

The supporting assessors can ask to see the full portfolio, or the lead assessor can send the full portfolio to another (or both) assessor(s) for a second opinion. Most often, the lead assessor reaches a conclusion and puts this to the supporting assessors for their confirmation.

Appendix 1 - CROSS-REFERENCE TABLE No. 1

Basic Knowledge Syllabus for Laser Protection Advisers

A1.1 Introduction

The components of the basic syllabus detail the extent and depth of the knowledge and training required by an LPA. The three levels of the depth of knowledge are defined as follows:

| Depth of knowledge | Definition |
|--------------------|---|
| GA | General Awareness. Knows that the topic exists and aware of its significance to work activities in context. Also knows how and where to obtain help on the topic if needed. |
| BU | Basic Understanding. Has a basic understanding of the topic with a level of detail that allows the LPA to apply it to familiar work activities in context. If necessary, can research further knowledge using readily available sources and apply it in less familiar circumstances. |
| DU | Detailed Understanding. Has a good understanding of the topic and the underlying principles and can apply the knowledge in appropriate contexts. Can apply the knowledge working from basic principles to deal with situations in new or unfamiliar areas and can identify and influence the peripheral and long-term issues arising from its application. |

A1.2 Instructions for completion of Basic Knowledge Syllabus Cross-reference Table No. 1

1. Indicate the areas in which you provide laser safety advice and wish to prove competency in the boxes at the top of the table
2. Provide suitable evidence **for each component** of the Basic Knowledge Syllabus to demonstrate that you have the necessary knowledge.
3. In the 'Evidence' column of the Table, provide a clear cross-reference to the relevant item(s) of your portfolio evidence, possibly using information from a course provider.
4. Leave the 'Assessment' column blank for use by the assessor.
5. Items which relate to a specialist field, e.g. medical, are only required for those applicants seeking certification for this field. This will be indicated in square brackets by the appropriate letter: (M – Medical, I – Industrial, R – Research, E- Entertainment, D – Defence and C - Communications). If you do not have specialist knowledge in a component because it is not related to your field, then please write N/A (not applicable) in the relevant column of the table.
6. General components, e.g. knowledge of the environment in which the lasers are used, should relate to the specialist field(s) for which competency is to be demonstrated.
7. If you have provided insufficient (or unsuitable) evidence then the Table will be returned to you. Please then provide additional evidence as requested.

A1.3 Basic Syllabus Cross-reference Table No.1

| Fields of application of your laser safety advice for which you wish to prove competency | | | | | |
|---|------------|----------|---------------|-----------------|-------------------|
| Medical | Industrial | Research | Entertainment | Defence | Communication |
| Components of Basic Syllabus for the LPA | | | <i>Depth</i> | <i>Evidence</i> | <i>Assessment</i> |
| Principles of source operation and beam propagation | | | BU | | |
| Basic eye and skin biology | | | BU | | |
| Interaction of optical radiations with matter | | | BU | | |
| Hazards from laser radiation | | | | | |
| Biological effects of laser radiation | | | BU | | |
| Hazards from different wavelength ranges | | | DU | | |
| Detection and measurement methods (including uncertainties and limits of detection) | | | | | |
| Lasers | | | BU | | |
| Intense Light Sources [M] | | | BU | | |
| Quantities and units | | | BU | | |
| Basis of laser radiation protection standards | | | | | |
| Meaning of the laser classification system | | | DU | | |
| Application of standards to ILSs [M] | | | BU | | |
| Exposures via intrabeam viewing and extended sources | | | DU | | |
| ICNIRP Guidelines / Statements | | | BU | | |
| Legal and regulatory basis: | | | | | |
| European Union legislation; | | | GA | | |
| National legislation (including relevant parts of Management of Health and Safety at Work Regs, Provision and Use of Work Equipment Regs, Personal Protective Equipment at Work Regs., Health and Safety, (Safety Signs and Signals) Regs.) | | | DU | | |
| Regulatory regimes for NHS Hospitals, private medical practice and uses of lasers/ILSs in aesthetic practices [M] | | | DU | | |
| Regulatory regime for entertainment licensing [E] | | | DU | | |
| International and national standards | | | | | |
| International laser safety standards | | | GA | | |
| BS EN 60825-1 Standard on safety of laser products | | | DU | | |
| BS EN 60825-2, -12 Standard for laser communication systems [C] | | | DU | | |
| IEC 60825-3 Guidance for lasers displays and shows [E] | | | DU | | |
| BS EN 60825-4 Standard for laser guarding [I, R] | | | DU | | |
| BS EN 60825-8 Guidelines for use of medical lasers [M] | | | DU | | |
| BS EN 60825-14 Laser Users' Guide | | | DU | | |
| BS EN 207 Standard on personal eye protection | | | DU | | |
| BS EN 208 Eye protection for adjustment of lasers | | | BU | | |
| BS EN 61040 Laser power & energy measuring instruments | | | BU | | |
| BS EN 60601-2-22 Medical electrical equipment - Part 2: Safety of diagnostic and therapeutic laser equipment [M] | | | BU | | |
| JSP 390 Military Laser Safety [D] | | | DU | | |
| National health & safety guidance | | | | | |
| Guidance on the Safe Use of Lasers in Medical & Dental Practice [M] | | | DU | | |
| Radiation Safety of Lasers used for Display Purposes (HSG95) [E] | | | DU | | |
| Controlling the radiation safety of laser display installations (HSG224(L)) [E] | | | DU | | |
| Non-ionising radiation – Radiation Safety of Lasers used for Display (LAC 60/5) [E] | | | BU | | |

| | | | |
|--|----|--|--|
| Operational protection for lasers and ILSs | | | |
| Types of lasers (gas, liquid, solid state (crystal) and semiconductor) | BU | | |
| Types of intense light sources [M] | BU | | |
| Hazard identification and risk assessment | DU | | |
| Concept of maximum permissible exposure and nominal ocular hazard distance | DU | | |
| Knowledge of environment in which lasers used | BU | | |
| Knowledge of type of people in the environment | BU | | |
| Management of risk | DU | | |
| Designation of areas | DU | | |
| Control measures (engineering, admin, personal protective equipment) | DU | | |
| Operating rules and contingency planning | BU | | |
| Emergency procedures | BU | | |
| Remedial action (including medical incident management) | BU | | |
| Analysis of past incidents including experience feedback | GA | | |
| Organisation of laser protection | | | |
| Role of the LPA | DU | | |
| Role of the person responsible for day-to-day management of laser safety | DU | | |
| Principles of laser safety management | DU | | |
| Safety culture (importance of human behaviour) | BU | | |
| Communication skills (ability to instil safety culture into others) | BU | | |
| Record keeping (including audit reports) | DU | | |
| Quality control/auditing | BU | | |
| Dealing with contractors | GA | | |
| Non-radiation hazards | | | |
| Sources of hazards | BU | | |
| Health risks from non-radiation hazards | BU | | |
| Management of non-radiation hazards | DU | | |

Appendix 2 - Cross-reference Table No. 2

Linking Portfolio Evidence to Practical Competencies

A2.1 Introduction

The Table lists the practical competencies for which evidence needs to be provided. They are listed under nine (numbered) main categories, each of which is divided into (lettered) sub-categories.

A2.2 Instructions for completion of Cross-reference Table No. 2

1. Provide suitable evidence *in each of the nine main categories* and seek to provide evidence in as many of the sub-categories as possible. Suitable evidence in at least 80% of the sub-categories will usually be necessary to demonstrate core competence.
2. In the 'Evidence' column of the Table, provide a clear cross-reference to the relevant item(s) of your portfolio evidence.
3. Leave the 'Assessment' column blank for use by the assessor.
4. **If this Table is subsequently returned to you**, it means that you are deemed to have provided insufficient (or unsuitable) evidence in respect of one or more main categories and/or sub-categories. Please then provide additional evidence for each of the main categories or sub-categories for which your initial evidence has been deemed to be insufficient.

A2.3 Cross-reference Table No.2

| <i>Practical Competencies</i> | <i>Evidence</i> | <i>Assessment</i> |
|---|-----------------|-------------------|
| 1. Supporting Risk Management | | |
| a) Provide information and advice | | |
| b) Contribute to problem solving | | |
| 2. Updating Laser Safety policies | | |
| a) Contribute to updating of the laser safety policy, local rules and associated documentation | | |
| b) Communicate the laser safety policy and associated documentation | | |
| c) Contribute to the identification & specification of laser safety responsibilities | | |
| 3. Assessing risk | | |
| a) Identify hazards for laser applications | | |
| b) Assess risks of exposure to laser beam, including application of MPE, NOHD, etc. | | |
| 4. Establishing Laser Safety Controls | | |
| a) Design engineering and procedural controls for sound laser safety management | | |
| b) Contribute to the implementation of laser safety management controls | | |
| c) Understand the limitations of personal protective equipment | | |
| d) Promote and support the development of contingency plans | | |
| 5. Monitoring of Controls | | |
| a) Monitor and evaluate risk management activity | | |
| b) Identify shortfalls in laser safety management | | |
| c) Identify shortfalls in the control of personal exposure to hazards | | |
| 6. Cultivating Safety Awareness | | |
| a) Promote and support management commitment to laser safety management | | |
| b) Promote consultation between employer & employees and contribute to the resolution of safety related conflicts | | |
| 7. Legislation Compliance | | |
| a) Identify shortfalls in compliance with legislation and standards | | |
| b) Promote action to rectify shortfalls | | |
| 8. Training of Staff | | |
| a) Identify training needs | | |
| b) Provide training to enable competency to be achieved | | |
| 9. Contribute to Local Advances in Safety | | |
| a) Contribute to advances in local laser safety and provide support to enable others to contribute to advances | | |
| b) Evaluate advances in local laser safety practice | | |