

Applications Officer

Telephone: 01223 432316

Facsimile: 01223 432133

Email: memapp@rsc.org

Royal Society of Chemistry

Thomas Graham House

Science Park, Milton Road

Cambridge CB4 0WF

www.rsc.org



Continuing Professional Development

Realising your potential

Guidance Notes for
Professional Development Programme
for the Award of Chartered Chemist



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1.0 Introduction

Achieving chartered status in any profession denotes to the wider community a high level of specialised subject knowledge and professional competence. The award of the Chartered Chemist (CChem) designation recognises the experienced practising chemist who has demonstrated an in-depth knowledge of chemistry, significant personal achievements based upon chemistry, professionalism in the workplace and a commitment to maintaining technical expertise through continuing professional development.

The award of CChem is considered separately from admission to a category of membership. Members or Fellows are therefore expected to provide additional evidence to the RSC of appropriate learning and professional competence in chemistry.

The RSC accredits degree courses in chemistry of a high standard, the successful completion of which satisfies fully the academic requirements of the award of CChem.

The Professional Development Programme (PDP) is designed to assist intending Chartered Chemists to develop the necessary professional attributes and serves ultimately as an assessment tool for the CChem award.

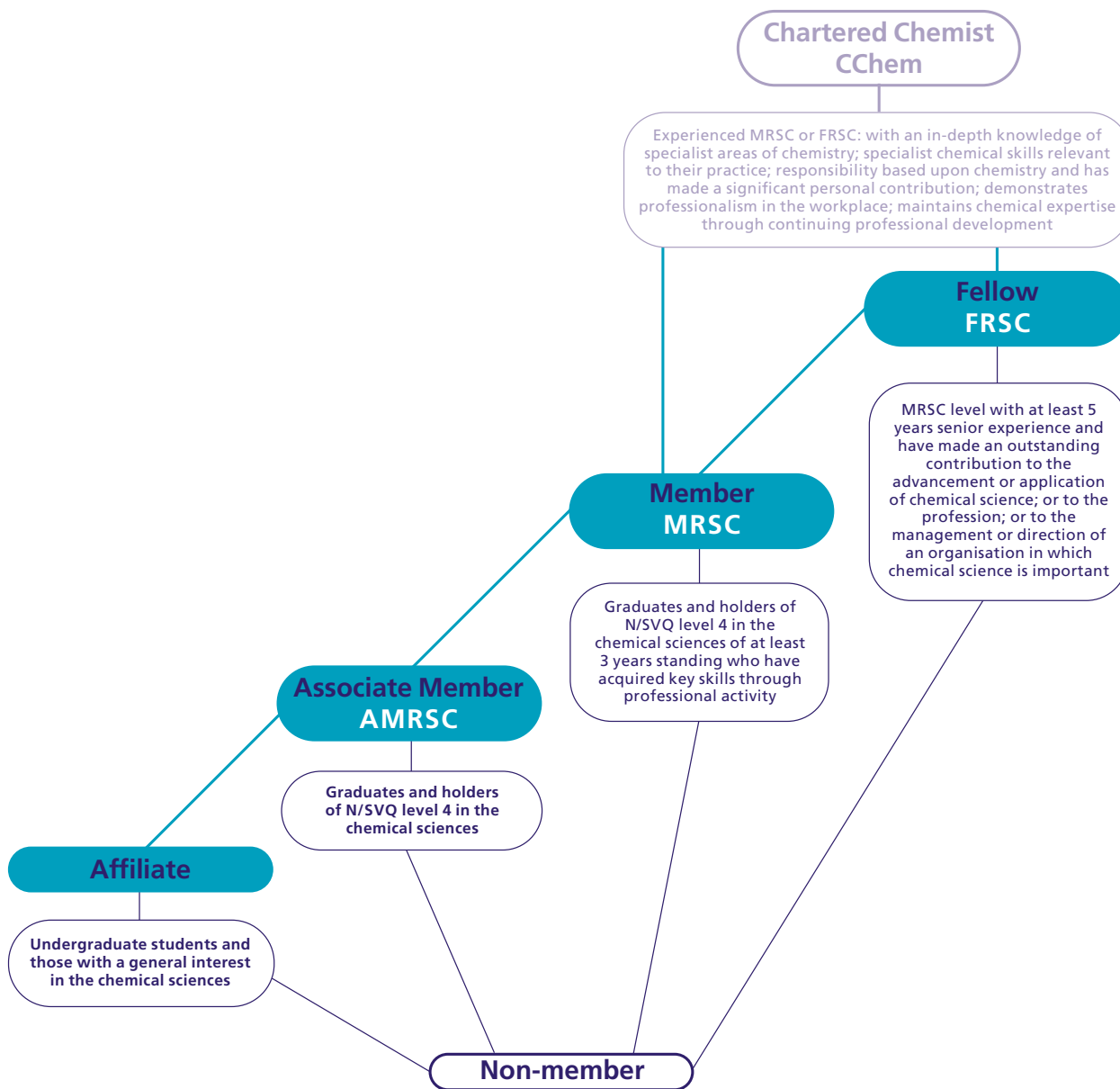
The route to CChem is illustrated in figure 1. Affiliates, who are studying for an accredited degree, are able to apply for admission to Associate Member (AMRSC) upon graduation. During a subsequent period of at least three years, an Associate Member is expected to develop appropriate key skills through professional experience and hence progress to Member (MRSC). At any time after admission to MRSC, suitably qualified members can apply to register for the PDP.

The illustrated route to CChem represents merely a 'standard' route. Suitably qualified and experienced candidates are able to achieve entry at any appropriate point.

When registering for the PDP, RSC members should consider the following:

- Members or Fellows who do not possess an accredited degree are able to register for the PDP so long as they can demonstrate that they have developed an in-depth knowledge and critical awareness of a substantial area of chemistry. (Refer to CChem Regulation CC3, Appendix 1);
- those admitted to the former category of Graduate (GRSC) before 1st August 2001 are regarded as satisfying the academic requirements for CChem.
- those in mid-career with substantial professional experience over a period of at least ten years and who have progressed to an appropriate professional level may apply for the award of CChem without completing a PDP. Further details are available from the Applications Officer.
- evidence produced for the attainment of a NVQ/SVQ at level 5, which incorporates the application of chemistry and is recognised by the RSC, can also be used as part of the PDP.

Figure 1 - Route to Chartered Chemist



2.0 What does CChem signify?

A Chartered Chemist is:

someone who is making a significant impact in their professional role drawing upon highly developed chemical skills.

The award of CChem is not a recognition of “long service”. It is not granted in cases where an individual’s involvement or academic achievement is not at an appropriate level or is not in chemistry.

To be awarded the Chartered Chemist designation a Candidate is expected to provide evidence to show that he/she:

- **has developed professional competence involving the application of chemistry across a variety of contexts, the outcomes of which may be unpredictable;**
- **exercises substantial personal autonomy and is accountable for critical analysis and diagnosis, design, planning, execution and evaluation;**
- **has significant influence on the work of others;**
- **observes health and safety requirements relevant to the job and pays due regard to personal safety and the safety of others.**

General Requirements

To be awarded CChem, RSC members must meet the following criteria:

- be MRSC or FRSC;
- hold an RSC accredited degree or equivalent;
- demonstrate that the chemical knowledge and skills derived from their education and training are critical to fulfilling the requirements of their job;
- demonstrate development of the twelve professional attributes.

3.0 What is the Professional Development Programme?

The normal route to CChem is by way of a two year Professional Development Programme (PDP). Through the PDP the RSC guides and monitors the professional development of its members. Local guidance is usually provided by the Candidate's line manager or an experienced colleague, who acts as a Mentor throughout the PDP.

The PDP relates primarily to a Candidate's professional achievements, approach and attitude towards work and work-related matters. In addition to personal achievement in the workplace, a Candidate's performance is judged against twelve professional attributes. On behalf of the RSC, the Mentor supports the Candidate and ensures that the activities pursued are in accordance with high level professional practice that can ultimately be recognised by the award of the CChem.

PDP is undertaken in employment and is for a minimum period of two years. Full-time postgraduate students are not eligible to register for the PDP whilst still engaged on their studies.

3.1 Professional attributes

The twelve attributes assessed through the PDP are that the Candidate can:

1. **Make significant personal contributions to key tasks in your employment area and understand fully the chemistry objectives of the work done and its relevance to the employer or others.**
2. **Demonstrate a high level of appropriate professional skills in the practice of chemistry.**
3. **Develop your chemistry and other professional skills as required for the work undertaken and career development.**
4. **Demonstrate an understanding and appreciation of Health, Safety and Environmental issues and adhere to the relevant requirements relating to your role.**
5. **Evaluate critically and draw conclusions from scientific and other data.**
6. **Demonstrate integrity and respect for confidentiality on work and personal issues, demonstrate other professional attributes such as thoroughness and reliability.**
7. **Plan and organise time systematically, demonstrate foresight in carrying out tasks, and offer suggestions for improvements to tasks/duties.**
8. **Demonstrate an interest in broader developments in chemical science and make a contribution to the profession of chemistry outside your direct work environment.**
9. **Write clear, concise and orderly documents and give clear oral presentations.**
10. **Discuss work convincingly and objectively with colleagues, customers and others. Respond constructively to, and acknowledge the value of, alternative views and hypotheses.**
11. **Demonstrate the ability to work as part of a team.**
12. **Exert effective influence.**

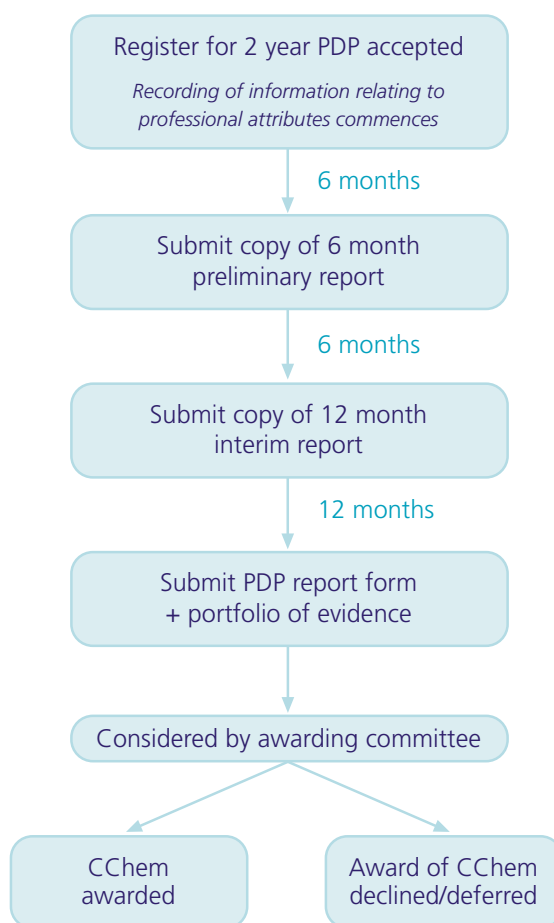
During the PDP, a portfolio of evidence is compiled. Two progress reports, one at the end of six months and one at twelve months, are required to be completed and submitted to the RSC. This is to ensure that Candidates are progressing satisfactorily with their programme.

At the end of the PDP, a summary of the evidence is produced as part of the Final Report. The Report is signed off by the Mentor and submitted with the portfolio of evidence to the RSC.

4.0 Timetable for PDP

Illustrated below (figure 2) is an indicative timetable for progression through the PDP. The timings presented are minimum values and may be greater in some cases.

Figure 2 - Indicative timetable for Chartered Chemist



5.0 Registering for PDP

5.1 Requirements for registration

All Candidates wishing to undertake a two year period of PDP must

- be MRSC or FRSC
- hold an RSC accredited degree or equivalent
- at the time of registration, be in employment and in a position where they can demonstrate that the chemical knowledge and skills derived from their education and training are critical to fulfill the requirements of their job.

Full details of the RSC's Regulations for the Award of CChem can be found in appendix 1.

5.2 How to register

In order to apply for CChem the Candidate is required to complete and submit the registration form for Professional Development Programme for the Award of Chartered Chemist with the appropriate registration fee. The form requires the Candidate to provide full details of any postgraduate employment and/or studies completed since being admitted to Member (MRSC). Particular emphasis should be given to the personal practice, application or teaching of chemistry within each post held. For the current post, a note of personal achievements and a *brief* outline of the employer's business should be provided. An organisation chart can assist.

It is critical that the Candidate chooses an appropriate Mentor. The Mentor offers support and guidance on the development of the professional attributes and on the collection of suitable evidence. The nominated Mentor needs to sign the registration form indicating willingness to act as such during the PDP.

Once the form is received by the RSC, a Candidate's details are reviewed by a Panel of senior Chartered Chemists who determine whether the requirements for the commencement of PDP are fulfilled. The Panel will ensure that the Candidate satisfies the academic requirements, review the professional experience to date to check that it is appropriate, and decide whether the current post is suitable for the purposes of the PDP.

5.3 Nomination of a Mentor

The Mentor is likely to be the Candidate's immediate line manager or someone who is closely associated with the work of the Candidate. Ideally, the Mentor will be an experienced Chartered Chemist. However, an important aspect is familiarity with day-to-day work and therefore the RSC will consider a suitable non-member as a Mentor in exceptional cases.

Prior to nominating their Mentor, Candidates should discuss fully the requirements of the PDP with their proposed nominee. Mentors should be aware of the RSC's expectations in this regard and the responsibility placed upon them (refer to page 11 - Advice to Mentor). Both Candidate and Mentor must recognise the requirement for them to work closely to ensure that the PDP is implemented correctly and that the outcomes are meaningful.

5.4 Starting the PDP

The PDP commences once the Panel has agreed the registration. The date of commencement will be confirmed in writing. Once confirmation is received, the Candidate should meet with his/her Mentor at the earliest possible opportunity to discuss the development of the professional attributes and methods of collecting appropriate evidence to substantiate the claim of competence.

5.5 Change of employment

Candidates must inform the RSC if, during their PDP, they change their employer or take on a significantly different role with the same employer. Details of the duties and responsibilities of the new post will need to be reviewed in order to determine the suitability of the post. In these circumstances it may be necessary to nominate a new Mentor.

For PDP purposes, employment should normally be continuous and comprise periods of not less than six months with any one employer.

Failure to notify the RSC of any changes in employment within three months may result in the period of the PDP having to be extended.

The RSC also appreciates that Candidates may be self-employed, take career breaks or may wish to work part time during the period of the PDP and takes a flexible approach. If any of these apply please contact the RSC straight away to discuss specific circumstances.

6.0 Development of the professional attributes

6.1 Conduct of the PDP

Candidates should recognise that the development process is continuous. They should also be aware of and understand fully the twelve attributes listed in Section 3.1.

Candidates should keep a record of the development of their professional attributes and the evolution of their careers. Candidates should maintain CPD Records (RSC framework or company framework) in which they can record their work, for example, projects undertaken, key tasks achieved, ideas/proposals suggested, training courses, lectures and meetings attended, and any activities in chemistry outside the usual work environment.

The RSC provides a *Report Form for PDP for Chartered Chemists* for recording progress and ultimately to assist with assessment of the PDP.

6.2 First six months

Satisfactory arrangements for the PDP should have been put in place and initial progress ought to be occurring. Six months after registration, Candidates are required to complete a Preliminary Report *Section 4 of the Report Form for PDP*. Once completed, a photocopy of the Preliminary Report should be sent to the RSC. When this has been received and the RSC is satisfied that the Candidate is progressing satisfactorily, written confirmation will be sent. Any delay in providing the Preliminary Report will affect the ultimate completion date.

6.3 Six to twelve months

During the PDP, the Candidate and Mentor will be in regular contact. After twelve months there should be a formal meeting to review the Candidate's progress. A note of the meeting must be recorded as an Interim Report in *Section 5 of the Report Form for PDP*.

The Report should summarise the Candidate's progress towards satisfying the twelve professional attributes and generally outline how the Candidate is progressing. The CPD Records can assist in the compilation of such a report.

Once the Interim Report has been completed and signed by both Mentor and the Candidate, a photocopy should be submitted to the RSC. Once this has been received and the RSC is satisfied that the Candidate is progressing, written confirmation will be sent. The Awarding Committee will recommend appropriate action (if needed) should any difficulties or problems be highlighted at this stage.

The Final Report, at the end of the development period, will only be accepted 1 year after the submission of the Interim Report. Delays in submitting the Interim Report will result in a delay in completion of the development period.

6.4 Final twelve months

The Candidate

During the final twelve months the Candidate should be collecting the evidence to show competence in the professional attributes under the guidance of the Mentor.

When the Candidate and the Mentor are satisfied that the appropriate evidence has been collected, which is expected to take a minimum of two years, the Candidate should complete the *Report Form for PDP* in full, including the nomination of referee(s) (see 6.5).

Once the Final Report has been fully completed and signed by both Mentor and Candidate, the complete PDP Report Form should be sent with the Portfolio of Evidence and assessment fee to the RSC by recorded delivery. Candidates are strongly advised to keep copies of originals of any key documents. The RSC cannot be held responsible for loss of or damage to any submitted documents.

The Mentor

- (a) Completion – At the end of the PDP, the Mentor is required to review the evidence and complete appropriate sections of the *Report Form for PDP*.
- (b) Conclusions – The Mentor should comment on the Candidate's professional achievements, contribution and overall progress throughout the PDP.
- (c) Recommendation – The Mentor must make a recommendation regarding the award of CChem. If the Mentor considers that CChem should not be awarded at this time, he/she is encouraged to recommend remedial action for progress, e.g. an extension of the PDP.

The Report Form includes a section where Candidates are able to comment on any aspect of the Programme and on any remarks made by the Mentor. Mentors are asked to encourage Candidates to take this opportunity to comment.

6.5 Nomination of Referee(s)

For the final assessment, all Candidates are required to provide the name of a referee who is currently a Chartered Chemist. If the Mentor is not a Chartered Chemist then an additional referee, acceptable to the RSC, must be nominated. In all cases referees are expected to have sufficient knowledge of the Candidate's work.

6.6 Consideration for the Award of CChem

Once the *Report Form for PDP* and portfolio of evidence is received by the RSC, the nominated referee(s) will be contacted. Having received referees' comments, the application for the award of CChem is considered by the RSC's Awarding Committee. The Committee's decision will be communicated in writing.

7.0 Preparation and submission of evidence

Candidates are advised to store all their evidence in a ring binder. This will form the portfolio. A mix of documents will probably need to be included, such as:

- records of work, which provide evidence for the twelve professional attributes,
- documentary evidence collected to show competence,
- testimonial evidence from appropriate personnel.

Portfolios should not be unnecessarily extensive (1-4 pages of A4 per attribute). They must contain clear concise documentation that covers all twelve areas. **The portfolio should be less than 30 pages in total.** One piece of evidence can cover more than one professional attribute and should be cross-referenced. There is no need to include multiple copies. A summary of your CPD activities is likely to be an important part of your portfolio.

Examples of the type of evidence that is required are given in appendix 2. It should be noted that these examples are not exhaustive. In each case, the evidence will be expected to reflect the work that the Candidate undertakes.

In presenting evidence, any issues of confidentiality or sensitivity can be erased from an original document or, if more appropriate, a general overview of the area being evaluated can be submitted.

Each piece of evidence should be marked clearly in the top right hand corner with the number(s) of the Professional Attribute to which it relates.

The portfolio of evidence should be submitted to the RSC at the same time as submitting the completed Report Form for PDP. The portfolio will be returned once a decision on the award of CChem has been made.

Candidates are reminded to keep copies of all items submitted.

8.0 Advice to the Mentor

The Mentor plays a critical role during the PDP. It is expected that Chartered Chemists will wish to assist their colleagues in achieving CChem status (or in the case of non-member Mentors, that they would like to see colleagues gain a professional qualification). By progressing towards CChem in a manner which demonstrates clearly that professional attributes are an integral part of the assessment, the standing of the award will be enhanced.

The RSC recognises that it is adding to the workload of a busy person in asking him/her to act as a Mentor for a member seeking to become CChem. The RSC would, therefore like to extend its thanks in advance for the advice, guidance and report writing that will be required.

8.1 Suitability of Mentor

The Mentor should be aware of the Candidate's strengths and weaknesses and be in a position to offer help and guidance to him/her. Consequently the Mentor should be either the Candidate's Line Manager or be associated with the work of the Candidate. Ideally, the Mentor will be an experienced Chartered Chemist. An important aspect is familiarity with the day-to-day work of the Candidate.

8.2 The Development Period

General

The Mentor should be prepared to review the Candidate's work to advise on ways in which the attributes listed in Section 3 can be achieved. Guidance and support is also needed if any problems arise. Additionally, the Mentor needs to be aware of any other external activities, e.g. involvement in RSC activities outside the day-to-day work environment.

The Mentor should ensure that regular review meetings are held with the Candidate in order that progress can be monitored and any problems discussed and resolved.

If a Candidate is judged to be making insufficient progress, then he/she should be informed at the earliest opportunity by the Mentor. Appropriate guidance and/or remedial action should be discussed and documented on the form. Mentors may seek advice on this or any other aspect of the PDP that is causing them concern from the Manager, Admissions and Qualifications Telephone: 01223 432258 Email: barrd@rsc.org.

Preliminary Report

To ensure that both the Candidate and the Mentor are clear on the work that is required during the PDP, a Preliminary Report at six months is required. This should be completed by the Candidate and signed off by the Mentor. A photocopy of the Report must be returned promptly by the candidate to the RSC.

Interim Report

The Mentor and the Candidate should complete jointly the Interim Report Section of the *Report Form for PDP*, giving details of the Candidate's progress and the development of the attributes listed. A copy of this report should be returned promptly to the RSC.

The Interim Report will only be accepted at least six months after the Preliminary Report has been accepted.

Final Report

The Mentor must complete, in full, the relevant sections of the Final Report (Section 6 of the *Report Form for PDP*).

Mentors are requested to pay particular attention to the completion of the summary of evidence section. The RSC requires substantiated evidence on how the Candidate's work demonstrates achievement of the attributes. Simple confirmation is not acceptable.

The Final Report provides an opportunity for Candidates to comment on the contents of the report. Mentors should encourage the Candidate to complete this section fully.

The Final Report will only be accepted at least twelve months after the Interim Report has been accepted.

Poorly completed submissions will need to be returned thereby delaying consideration of the Candidate's application for award of CChem.

8.3 Recommendations

The recommendation from the Mentor, as to whether or not CChem status should be granted, is critical. If a Mentor considers that the award is not merited, for whatever reason, this is the point at which such a comment should be made on the form.

A negative recommendation should not normally be made without any prior indication to the candidate. It is expected that any problems leading to a lack of support would have been identified and recorded at an earlier stage of the PDP.

The Awarding Committee will review the candidate's evidence, the Mentor's recommendation and comments from the referee(s) and decide whether to award CChem.

9.0 Summary

Responsibility for the successful completion of the PDP rests ultimately with the Candidate. It is for him/her to:

- arrange for a suitable Mentor,
- organise regular meetings,
- seek advice,
- identify and collect evidence,
- complete timely reports,
- keep the RSC informed of any unforeseen developments.

The level of demand presented by the PDP is considered appropriate for a chemist who wishes to demonstrate to his/her peers, and to the wider community, a high level of specialised knowledge and professional competence.

APPENDIX 1

Regulations for the Award of Chartered Chemist

- CC1 All Candidates for Chartered Chemist have to be a Member (MRSC) or Fellow (FRSC).
- CC2 Candidates are required to produce evidence of being awarded a RSC accredited degree at the standard of 1st or 2nd class honours and be engaged in the practice, application and/or teaching of chemistry.
- CC3 Candidates who cannot fulfil the academic requirements in CC2 above must demonstrate that they have an in depth knowledge and critical awareness of a substantial area of chemistry. This is usually demonstrated by achievement of a suitable postgraduate award and/or appropriate professional development. Council, at its discretion, may require Candidates to attend a Professional Interview, or undertake other procedures, to determine the extent of the Candidate's understanding of chemistry.
- CC4 All Candidates are required to present evidence of professional attributes in a range of specific areas to a level prescribed by Council. This is accomplished by means of a two year Professional Development Programme (PDP). Candidates must register with the RSC at the beginning of the Programme. They are also, at the time of registration, required to nominate a mentor who is able to provide guidance in developing the attributes and to verify the evidence provided.
- CC5 Candidates with substantial professional experience over at least ten years, and who believe that they have already achieved the level of professional attributes prescribed by Council, may apply for the direct award of Chartered Chemist without registering for the 2 year Professional Development Programme. In collating their submission, such Candidates are required to identify a mentor who is able to assist with the collection of information and to verify the evidence provided.
- CC6 For the final assessment, all Candidates are required to provide the name of a referee who is currently a Chartered Chemist. If, however, the agreed mentor is not a Chartered Chemist, two referees will be required, one of whom should be a Chartered Chemist and another who should preferably be a scientist or engineer chartered by their own professional society or institution that is acceptable to the RSC. In all cases the referee is expected to have sufficient knowledge of the Candidate's work.
- CC7 Chartered Chemists are entitled to use the abbreviation "CChem" after their names.

APPENDIX 2

Further guidance on evidence for the twelve professional attributes

The twelve professional attributes listed previously in Section 3.1 are presented below with examples of the type of information that can be used as evidence. The examples are presented for illustrative purposes and do not represent an exhaustive list.

1. Make significant personal contributions to key tasks in your employment area and understand fully the chemistry objectives of the work done and its relevance to the employer or others

Evidence: *relevant section from current job description and written examples of contributions to key tasks.*

2. Demonstrate a high level of appropriate professional skills in the practice of chemistry.

Evidence: *examples of the type of work undertaken in the workplace, which highlight the skills.*

3. Develop your chemistry and other professional skills as required for the work undertaken and career development.

Evidence: *analysis of needs and evidence of fulfillment in the form of a CPD summary. This may include training courses, attendance at professional meetings and published work. (A framework for CPD is available from the RSC). In addition to any work place based CPD this may also include activity within RSC subject groups, attendance at conferences etc.*

4. Demonstrate an understanding and appreciation of Health, Safety and Environmental issues and adhere to the relevant requirements relating to your role.

Evidence: *could include any records of training and achievement and a summary of Health, Safety and Environmental responsibilities. Examples of how implementation of HSE policies has been achieved should be provided by testimonial.*

Other evidence could include:

Preparation and interpretation of COSHH documents.

Member of Safety Inspection Team signing permits to work.

Reviewing Hazardous Area Classifications.

Writing emergency procedures for shutdown, evacuation, and recovery of a safe situation.

Specification of dust and fume control equipment and choice of emergency personal protective equipment.

5. Evaluate critically and draw conclusions from scientific and other data

Evidence: *examples of the type of level of decisions undertaken in the workplace.*

6. Demonstrate integrity and respect for confidentiality on work and personal issues.
Demonstrate other professional attributes such as thoroughness and reliability

Evidence: *from annual appraisal, testimonial from a Mentor.*

7. Plan and organise time systematically, demonstrate foresight in carrying out tasks, and offer suggestions for improvements to tasks/duties

Evidence: *this may be from the workplace in the form of project planning or design or completion of tasks/projects, testimonial evidence.*

8. Demonstrate an interest in broader developments in chemical science and make a contribution to the profession of chemistry outside your direct work environment.

Evidence: *this may be demonstrated through the record of CPD. Examples may be external or internal to the organisation in which you work, e.g. Internal briefing sessions, involvement in RSC Local Section activity or school/college/university involvement such as Chemistry at Work or presentations to external groups e.g. RSC Annual Conference – CIA Speak Out programme, Chemistry Week and Science Week activities, participation on committees of science related bodies, talks to Young Farmers, Women’s Institute etc.*

9. Write clear, concise and orderly documents and give clear oral presentations.

Evidence: *copies of documents prepared by the Candidate, examples of presentations and any feedback from audiences.*

10. Discuss work convincingly and objectively with colleagues, customers and others.
Respond constructively to, and acknowledge the value of, alternative views and hypotheses.

Evidence: *examples of relevant reports/correspondence, or testimonial evidence.*

11. Demonstrate the ability to work as part of a team.

Evidence: *testimonial evidence.*

12. Exert effective influence.

Evidence: *testimonial evidence.*