



CIWEM

The Chartered Institution of
Water and Environmental Management

Evidence Of Attainment Of Mandatory Competences Fellow / Member / CEng / CSci / CEnv

EVIDENCE OF ATTAINMENT OF CIWEM MANDATORY COMPETENCES

All applicants presenting themselves for consideration as Members or Direct Entry Fellows are asked to submit evidence of Attainment of CIWEM's Mandatory Competences on the following form.

The CIWEM Mandatory Competences give you a way to show your personal contribution. Make sure you show clearly the things you have achieved as your level of attainment and professionalism are being considered. Remember to give all the statement of attainment examples from your own recent personal perspective. (Write in the first person, I did, I was responsible also think about 'where', 'when' and 'how' when compiling your examples).

The form can be completed clearly in long hand or preferably you can type your statements. Each statement should be approximately 100 words or less in length and the font size 11. A copy of the form is available from the website, www.ciwem.org in Word and pdf Formats.

Please **do not** alter the format, (expand the boxes), make additions or append information to the form as this is used both by the Professional Boards at the initial assessment stage and, if you are invited, by the Interview Panel at the Professional Review Interview to record the outcome of your interview.

If you are invited to attend a Professional Review Interview try to cross reference the examples you give on the form with those given in your career and project report.

Please **ensure** that your Sponsor/Supervisor/Mentor indicates how they have judged your attainment of the competences, (written reports, observation questioning or other comments).

Also **ensure** that your Sponsor/Supervisor/Mentor signs and dates each statement made and also **signs the last page** to indicate their status.

Your Sponsor/Supervisor/Mentor's role is to support and advise you when you apply for CIWEM membership.

Applicants who have followed a formal Professional Development Scheme either for CIWEM, or another Professional Body, will still be required to complete the form in full.

Applicants who are already 'Chartered' via another qualifying body will also be required to fully complete the form.

You can provide more than one example for each competence however the information you do provide must be sufficient to meet the competence.

Your example(s) should be quantified wherever possible, e.g. flow volumes, cost etc.

Examples of the type of evidence required, are outlined on the following pages.

To help you complete this form some worked examples are given in appendix A. These are a very small sample and there are bound to be many more examples that you can draw on from your own personal experience.

GUIDANCE FOR COMPLETION OF CIWEM 14 MANDATORY COMPETENCES

The Competences are numbered A.1 – E.2 and under each heading there are some examples of areas you may wish to examine to demonstrate your personal attainment of each of the competences.

A.1 Your personal knowledge of environmental and water issues

Describe how you obtained your personal knowledge of environmental or water issues. For those with water related experience – it is important to refer, if appropriate to the linking of water quality, air quality and land use with public health aspects.

Investigate the historical development of the environmental sector

Refer to knowledge of the 'environment' gained from publications (magazines, periodicals and technical papers).

Investigate and assess regulatory factors, including legal and financial which govern the environmental sector.

Select a topic to research, e.g. flooding, and look at it from the public's perspective and maybe that of a private organisation or pressure group within the environmental sector.

Show that you understand the legislation, directives and regulations, including legal and financial, which may impact on your own employer.

Assess the main potential impact of emerging technologies and organisational changes and managerial issues affecting environmental and water affairs in the next five years and identify opportunities to apply this knowledge to existing products and processes.

A.2 Your ability to develop corporate or personal strategy to address legislative, economic or technological changes affecting the sector in which you work

Outline the progress you have made to ensure that environmental issues or water use factors are included in your personal development plan in your workplace, highlighting how cultural changes in your organisation may have impacted on such aspects.

Identify, monitor and review changes and developments in the sector in which you work, or related sectors, evaluate your findings and identify those changes and developments requiring formal and detailed review.

Select items that would have the greatest effect on your business in terms of workload or revenue.

Appraise and agree alternative strategies and options. Prepare and agree a planning framework for dealing with changes or developments.

Identify any gaps in your existing relevant information and implement appropriate programmes of research to satisfy them.

B.1 Your understanding of the constraints and success factors affecting environmental and water issues whilst supporting sustainable development and resource use

Describe a project, experimental or research plan you have formulated or have been involved in producing and how these meet or match the requirements of stakeholders, making reference to

relevant legislation, codes of practices and customary, historical aspects that have to be respected.

Formulate and agree a brief that meets client, user and community requirements, ensuring recognition for the complexities of the potential project; client needs; user and community requirements.

Look at why client needs and the public requirements may differ.

Undertake surveys, mapping or other investigations for a project and appraise the methodology and outcome.

Investigate the historical, social, ecological and environmental factors relating to the natural and built environment.

Consider the regulatory constraints or relevant directives that might influence any recommendations you may make governing site utilisation and development.

Look at the economic or financial implications of the work you are doing.

Investigate problems to identify their causes and the factors which will influence the evaluation of potential solutions.

B.2 Your ability to develop potential solutions using creative and original thought where appropriate; to evaluate their merit; and to prepare recommendations

Did you formulate novel approaches – How and why were these needed. Were new management, engineering, scientific principles involved. How did you assess the validity of these approaches and methods of working?

Look at a plan and highlight your personal contributions where problems or gaps have been identified.

Consider whether your various suggestions delivered a 'best fit' outcome.

Check your solution has met the regulatory and legislative requirements and customer expectations.

B.3 Your ability to initiate, implement and control change, including the impact on associated liabilities

Demonstrate the ability to deal with the unexpected.

Co-ordinate the production of documents, systems and services

Prepare procurement, contract and production documents to plan and control development.

Describe precisely how you were able to manage change – was this new in your organisation or was it down to external and not necessarily stakeholder influences. Give details and the framework that underpins the management direction.

How have you developed a plan for a task, monitored its development and made any necessary revisions during its implementation?

Understand and abide by the legal liabilities and risks in contractual relationships with clients on behalf of your employer.

B.4 Your ability to plan and control current and future operations and to maintain systems or advisory services, including monitoring and assessment of their performance

The extent to which you have the executive power to plan, implement and control the active management of the planning and implementation phases of projects. NOTE: These projects do not have to be major developments or research items with significant, (up to six figures) capital expenditure horizons.

What strategy have you developed to ensure a task will be achieved and comply with all the appropriate standards QA, H&S or environmental regulations?

Look at how you drew up a plan for monitoring and maintaining a system or services against pre-determined standards. Examine results including costs, resources management etc.

Look at the outputs from the task and any analysis you may have done giving recommendations to avoid the repeat of any that were unacceptable.

Identify any risks which may compromise the outcome.

C1. Your contribution to the effectiveness and competitiveness of your organisation through effective and efficient management of financial and staff resources

How you contribute to improving and /or maintaining the reputation and effectiveness of your employer or specific department within your employer's organisation, in the widest possible manner. This must include professional, technical and financial parameters of control.

Report on the performance of project aspects to which you are contributing. Look at how you can help your company to deploy, monitor, control and organise people and resources to achieve a planned outcome (within budgetary and time constraints), and that corrective action is taken as required.

Secure effective resource allocation for activities and projects.

Implement procedures for the development of human resources to secure project delivery by demonstrating an ability to:

- Recognise, interpret and apply appropriate employment regulations;
- Carry out appropriate selection and recruitment (e.g. for a project)
- Undertake appropriate negotiation, conflict resolution and counselling where necessary;
- Identify and review for effectiveness both work-place and off site training needs and provision for skills extension;
- Enhance performance and further staff abilities to adapt to new technology and changing requirements
- Develop, implement, maintain and enhance effective team working relationships; giving clear and accurate instructions; identifying collective goals and responsibilities; promoting and typifying appropriate professional convictions and attitudes; promoting the exchange of ideas; recognising the competence of others;
- Be aware of and contribute, where possible, to corporate marketing strategies and the competitiveness/effectiveness of your organisation.

Using appreciation of your employer's commercial position as appropriate, report on the performance of project aspects to which you are contributing.

C2. Your understanding and promotion of health and safety and your commitment to the health and safety requirements relevant to your work

Your knowledge of personal health & safety requirements must be clearly defined, together with how this knowledge is incorporated, or has been developed from legislative, regulatory, codes of practice and the normal parameters that broadly equate to custom and practice. It is important to realise that health & safety covers all activities, even outside the working environment and in personal time. This is intended to prevent such activities having a detrimental impact upon subsequent or impending activities in the workplace. This general philosophy must be rolled out to all personnel under both your direct and indirect control. Safe working practices must be sacrosanct.

Promote adherence to safety requirements. Investigate accidents and unsafe behaviour of individuals and the environment in which they work.

Show your awareness of your employer's health & safety policy and procedures, or the practices appropriate to aspects of your professional activity. Look at how you personally can promote adherence to safety requirements.

Co-ordinate and control environmental safety and impact e.g. in respect of pollution control, biodiversity protection etc...

C3. Your promotion and understanding of sustainable environmental management and your experience of its implementation

The sustainability of all activities (audit, reporting, evaluation, planning and monitoring) must be emphasised, especially those that impinge on environmental aspects. The widest possible linkages with the need to protect and enhance the environment must be considered and mentors must relate to this as a requirement not as a helpful adjunct to their role.

Look at how you have promoted the wise use of non-renewable resources through possible waste minimisation and recycling also the benefits you may have observed by the lowest consumption of raw materials and energy and by the adoption of sustainable management practices.

C4. Your ability to understand and promote relevant quality assurance requirements

Definitive references must be made to the need to understand why data collection is being planned, or where data is being collected, the importance of assessing the reliance and hence the quality of such data for use in specific circumstances. Not all data is suitable for such usage. This applies to direct use by oneself or by subordinates and colleagues for whom you are responsible.

Contribute to the continuous improvement of quality management systems.

Apply the appropriate quality procedures and assurance techniques.

Foster the acceptance of quality management principles in colleagues to ensure that work is performed to the established standards.

D1. Your promotion, understanding and application of professional ethics in your work; your ability to communicate effectively; your objectivity and integrity

This follows effectively from C4 and the requirement that all information derived from data is 'fit for purpose'. You must demonstrate aspects where professionally, the ability to think and act constructively and above all impartially is not compromised. Establish your limits of knowledge and ability and work to extend these. Retain a balanced judgement and use your expertise for the benefit and assistance of those who need your specialised direction. This applies to all stakeholders, irrespective of relative standing or linkages with client, community, regulatory or pressure group status.

Consider an issue that causes a challenge to your organisation.

Look at how you have dealt with influences that might affect you, your team, your employer or the wider community. This might include regulatory and legislative requirements and making sure they are met.

D2. Your promotion and understanding of and compliance with relevant Codes of Conduct

Demonstrate application of, promote and comply with professional ethics and codes of conduct in your work.

Ensure that those for whom you have responsibility comply with the required standards.

Try to give examples of situations where relevant codes and individual actions by stakeholders have fallen short of requisite standards of work and behaviour patterns.

E1. Your promotion and commitment to continued learning and professional development in both personal skills and professional knowledge

Your understanding and willingness to foster and involve yourself in continuing professional development programmes by reading, mentoring, meetings and application of lessons learned is essential and must be displayed.

Develop and improve personal competence in:-

- Managing oneself: e.g. preparation and maintenance of a career action plan, apply creativity and initiative in the conceptualisation of solutions to problems;
- Working with others e.g. counselling, exchanging ideas, conveying conviction;
- Managing information;
- Managing meetings; e.g. demonstrate conflict resolution, negotiating skills, etc.;
- Effective written communication;
- Computer technology.

Demonstrate a commitment to continued maintenance and improvement of knowledge, experience and skills via a personally developed CPD programme;

- Investigate needs and exploit opportunities for the transfer of technology within a particular industry or area of expertise, taking appropriate actions to secure the value of intellectual property;
- Continually optimise and enhance existing technology, services, products, current practices and processes ensuring continuing fitness for use;
- Apply and exploit the potential opportunities of emerging technology, products and processes and other relevant developments;
- Assess, review and identify the potential impacts of these changes ensuring sound environmental use and continued quality

Look at how you have improved your personal competence in your current position and how you intend to maintain and improve your knowledge and experience. Look at developing a personal CPD programme for the future.

E2. Demonstrate your commitment to CIWEM

Where possible demonstrate a commitment to the development of CIWEM by giving papers at local Branch/Special Interest Group meetings, presenting papers for publication in the Journal, involvement in the management of local Branch/Special Interest Group, and/or contribution to the management of CIWEM by volunteering for involvement in the relevant technical or standing committees.

Provide evidence where possible of attendance at CIWEM events over your training period.

Continuing support of CIWEM activities is essential and evidence supplied of your intent to enhance this pathway into the future.

APPENDIX A

EXAMPLES OF MANDATORY COMPETENCE ATTAINMENT

A.1 Your personal knowledge of environmental and water issues

Example 1 – My experience through 6 years in environmental roles of employment has developed my knowledge of the industry.

My Science degree gave grounding in marine processes and issues, initially gaining experience at Smiths Consultants. I studied full time for an MSc developing my infrastructure based experience with broader resource knowledge.

In Australia I investigated energy resources for a marine current turbine system, I then joined Jones' which included a short term secondment to the EA's coastal water quality monitoring team.

I joined Browns' to provide technical input on projects from preliminary flood risk assessments to large scale multidisciplinary planning for large waterfront developments, in compliance with international Water Quality Guidelines.

Example 2 – I have kept abreast of current issues by reviewing technical journals, Regulations, EC directives, Governmental circulars and non technical news media in order to appreciate the issues, not only from an Water Engineer and Scientist's point of view, by also from the point of view of the general public. I have prepared newspaper articles on the subject of water services provision and water conservation which required me to research both topics and transfer the information into a form that was accessible to the general public.

Example 3 – As a coastal modeller involved in a number of studies dealing with the impact of treated sewage on the quality of bathing waters in Brittany, France I developed a depth of knowledge in relation to the European Bathing Water Directive and its upcoming revision. Working for Local Authorities, I had many opportunities to inform my clients on the requirements of the Revised Directive and propose new services in relation to its implementation.

The diverse experience I have gained through the variety of projects that I am involved with my current employer, has helped me to gain a broad understanding of water and environmental affairs in relation to flood risk management. The recent events in south west England, highlight the importance of the government in taking some strategic control of the development in floodplains through the release of new regulations and guidance. I am also deepening my knowledge on the role of the floodplain and sustainable land use practices, subjects that will be addressed in the EU Flood Risk Management directive to be adopted later this year.

Example 4 - As a water engineer and scientist, I always try to deepen my understanding of environmental and water management. I lecture about the historical development of the water utilities and I undertake active research in future technical and managerial issues affecting the water and environmental industry. Moreover, I am currently investigating public interaction with the wastewater industry and the regulators regarding sustainable urban drainage systems. I am keen to promote sustainable techniques like swales, retention ponds and constructed wetlands. However I have experienced that finance is frequently the main driver for future developments.

A.2 Your ability to develop corporate or personal strategy to address legislative, economic or technological changes affecting the sector in which you work

Example 1 - I supervised the spill levels of maintenance dredging operation in a 9km channel in Asia. I helped develop a new methodology of measuring sediment flux using ADCPs, including 8 fixed, and 3 mobile monitoring stations. I further refined the strategy on site to optimise the monitoring capabilities considering the ongoing performance of the dredging operation and the available equipment.

I sat on the Project Advisory Group helping to develop the scheme prior to launch. The scheme aims to further environmental best practice in the UK construction industry by applying a scoring regime.

Example 2 – I was part of the Steering Group that formulated the rollout of non-domestic water metering in Ireland. As part of this group I worked together with a Department of Environmental and local authority representatives on the formation of a set of model Contract Documents for the use by all local authorities in the country. I was an author of the final pilot contract documents for the local authority. The implementation of the contract changed the fixed charge basis of water charging in Ireland to a metered basis as per the requirements of the Water Framework Directive.

Example 3 – The Environment Agency has an ever evolving strategy related to managing and assessing flood risk. Working on Environment Agency commissions under NEECA2 (National Engineering & Environmental Consultancy Agreement) and SFRM (Strategic Flood Risk Management) frameworks compels Consultancies to always adapt to change e.g. new specifications, strategies, in considering whether emerging technologies such as 2 or 3 dimension modelling could provide more cost-effective engineering solutions.

As a hydraulic engineer specialised in floodplain modelling in two dimensions, I disseminate this relatively new modelling technique to modellers through training courses that I provide. Using my modelling expertise we are able to provide the Environment Agency with cost-effective solutions on a number of Flood Alleviation Schemes, at pre-feasibility and Feasibility stages. When properly implemented, I have found 2-d and the latest combined 1-d/2-d modelling techniques to be the best tools for delivering accurate flood risk mapping and damage economic assessment.

Example 4 - As Diffuse Pollution Project Officer I wrote a Strategy for the West Midlands Area. This was designed to facilitate further work on diffuse pollution prevention. In order to do this I needed to raise the profile of diffuse pollution in relation to that of point sources and catalyse the transfer of resources to further work in this field. I devised a prioritisation scheme to assist in implementation. As a member of the Campaigns team I participated in the formulation of our Area Campaigns system.

Example 5 - I have experience in managing small research projects within the industrial but predominantly academic environment. There are 2 main funding councils for water engineering however the main financial provider is usually the academic department. My predominant task as the project leader is to formulate policies for both the day-to-day work and research strategies. I have to assess and review these strategies as the environmental system to be investigated changes. Planned modifications of the original research proposal require the agreement of all parties involved. I have experienced that it is important to include also technicians in the decision making process.

B.1 Your understanding of the constraints and success factors affecting environmental and water issues whilst supporting sustainable development and resource use

Example 1 - I am project coordinator for a project in Asia, assessing multidisciplinary inputs. The project is subject to environmental audit by the Environmental Public Authority (EPA). I lead the team ensuring water quality compliance, identifying environmental constraints and opportunities for the current phase under construction and proposed later phases undergoing design development.

Key packages include water exchange analysis, environmental approval submission, on-site monitoring and liaison with Ministry and independent environmental assessors. During design development and construction external influences require flexibility in the design. The environmental performance of the project has been shown to exceed predictions and has been used as a global milestone.

Example 2 – I have authored several preliminary reports for sewerage schemes, which involves the analysis of environmental, technical and financial constraints to the implementation of the project. I authored the Preliminary Report for the extension of a wastewater treatment plant, which is a coastal location with a fluctuating population between summer and winter due to tourism. As part of this Preliminary Report I developed a decision matrix for assessing the most appropriate solution, which included factors such as environmental impact, land constraints, financial constraints and other factors.

Example 3 – The main difficulty on the Skirting Beck Pre-feasibility study was to understand the flooding mechanism associated with a heavily culverted watercourse and to determine the correct modelling approach that would help in answering that question. Several site visits and a survey allowed me to identify the physical constraints on the watercourse and to collect useful anecdotal evidence through interviewing local residents. I used the collated information to develop an appropriate hydraulic model capable of identifying the pinch points in the system and mapping the extent of flooding. I was then able to propose the cost engineering solutions to alleviate flooding within the town. I wrote the Pre-feasibility report for the client.

As a project engineer involved in the Burstwick Drain Feasibility Study, I am currently assisting the Environment Agency in deciding which of a pumping station or raising flood walls, is the most appropriate solution to alleviate flooding to the towns of Hedon and Burstwick severely affected in June 2007. In light of the results of the hydraulic model I developed to assess the performance of each option. I am able to provide recommendations taking also into account other constraints such as technical feasibility, local authorities and public views, environment sustainability.

Example 4 - The main constraints for both the Campaigns and Diffuse Pollution work were lack of resources both financial and personnel. These were identified following prioritisation of the work, those tasks that could be resourced having the highest score. The other significant constraint was the perception of some of the implementing personnel. As a result of this work I wrote bids for funds for some of the actions and have let contracts to partner organisations to complete the work.

Example 5 - Whilst working at Toggs and Partners I assisted in the appraisal of various treatment processes by carrying out the hydraulic calculations associated with the 3 treatment options being considered for a flow up to 543L/sec. I prepared a report on the capital and running costs of each (allowing for pumping) for the Project Manager.

Example 6 - During the planning process of a research project, it is vital to identify potential constraints due to the implementation of both university and professional code of good practice policies in order to deliver all project objectives. I think that it is essential to formulate and agree a project brief, which meets the remit of the funding body, the requirements of the university,

profession and regulators as well as the expectations of research students and fellows. A proper survey of the characteristics of the natural or built environment and all factors relating to it is important in order to identify potential problems and constraints before the start of any project. Nevertheless, financial resource implications are frequently restricting further project developments in later planning stages.

B.2 Your ability to develop potential solutions using creative and original thought where appropriate; to evaluate their merit; and to prepare recommendations

Example 1 - My role in waterfront development master planning with a range of architects requires a sympathetic understanding of delivering expectations. Waterfront developments rely on water quality to maintain added value. Key study targets include maximization of waterfront length, optimization of amenity value, environmental improvement, and incorporation of any constraints.

The South African Project has been responsible for evaluating the 1km breakwater, considering site requirements, contractor capability, available materials and the client's aspirations. The evaluation included both numerical modelling and physical modelling (2D and 3D). Options considered included; Coreloc, Xbloc, Rubble Mound, reclaimed concrete, geobags and Seabees. The preferred solution which I recommended required to pre-casting and placement of 19,000 Seabee units.

Example 2 – I authored a report into treatment option for a fish processing facility in Co Donegal. This involved assessing the existing facilities at the site and then investigating the available technology to treat fish processing wastewater. The pros and cons of each technological solution were assessed under the heading of efficiency of treatment, operating costs, capital costs and flexibility of operation. The final recommendation was the installation of a Dissolved Air Flotation system to remove oils, fats and greases and the associated BOD. The recommendations were implemented by the industry and the plant was successfully procured and commissioned.

Example 3 – Whilst working at Teamer, I carried out a number of outfall hydraulic design studies. By modelling water quality and coastal processes such as tidal, wave and wind regimes, I was able to provide Sewage Treatment Works contractors with sustainable solutions related to the location and the rate of release of the treated sewages.

I assisted in the design of a Flood Defence Scheme to alleviate flooding. Using hydraulic modelling tools I developed and tested five different engineering solutions. I wrote a report on the hydraulic performance of each option which helped identifying the best solutions taking into the cost/benefit ratio as well as Health and Safety and Environmental sustainability requirements.

Whilst working on a Hydraulic Study for the Environment Agency. I prepared a set of recommendations and improvement to a culvert structure prone to blockages and heavy siltation. I developed a hydraulic model of the watercourse to conduct my investigation, which highlighted that the original design of the structure was at the source of the problem. I tested and suggested minor alterations to the structure that would reduce the siltation.

Example 4 - I have written a number of feasibility reports based on working up a variety of options which I had researched. These included: The best way forward for a dairy / cow unit, potential improvements to meet Consent requirements, the best option for disposal of aquatic plants from pumping stations.

Example 5 - Whilst working at Toggs and Partners I assisted in the design of a Sewage Treatment Works by undertaking comparative process design work and conventional activated sludge and percolating filters for a design flow to full treatment of 543 litres/sec. I prepared outline designs

and wrote a report on the advantages of each process which was incorporated into the overall report prepared by the Project Manager.

Example 6 - The main role of an academic researcher is to make recommendations for solutions regarding research projects and consultancy work. It is vital to plan the solution process in order to meet the requirements of the funding body. The preparation of a project timetable including the identification of milestones is common practice. I always conduct a literature review before the specification of a project idea in order to assess both alternative project solutions (option study) and compliance with standards. Solution processes to a project idea are summarised in the methods section within a proposal.

B.3 Your ability to initiate, implement and control change, including the impact on associated liabilities.

Example 1 - I wrote three technical supplementary reports for a project that had achieved planning approval that would further improve the agreed solution and reduce the environmental impact. I presented the findings to the client and met with the Local Authority to present the concepts and results of modelling studies. They all agreed and supported the changes.

I met the Director General of the EPA, to discuss the findings of the independent EIA and presented the revisions to the original submission. It was agreed that an addenda to the original document would be added.

With approval from the Client, the Local Authority and EPA I made alterations to the detailed design package. These have been implemented and constructed, with monitoring underway.

Suggested points to cover

- Liaison with and/or secondment to Company's Commercial and/or Legal and/or Contracts Department to understand Liabilities
- Similarly, exposure to Risk Management Team or equivalent

Example 2 – I am project manager on the implementation of the non-domestic water metering policy for five local authorities in Ireland. I was responsible for the procurement of contractors for the projects through relevant procurement directives and final Report on Tenders for the projects. I am responsible for the certification of payments to the contractor and the management of the Employer's Representative team, which also includes Site Client's Representative staff. The implementation of the contact changed the fixed charge basis of water Ireland to charging on a metered basis as per the requirements of the Water Framework Directive.

Example 3 – I participated in 8 oceanographic cruises, in charge of physical oceanography and water quality surveys carried out aboard R/V Georges Petit in the Kuwait waters. After each cruise, I undertook the analysis of the collected data under supervision of a senior scientist. I wrote the physical oceanography section of the annual report to the client and brought a better understanding of the coastal dynamics of the Kuwaiti waters.

Whilst working in Teamer, I brought strong improvements to the in house modelling software (Mars2D) originally designed to model oceanographic and coastal hydraulics. Through the programming of a series of sub-routines, I adapted the modelling code to deal with fluvial hydraulics. Thanks to this work, I was able to undertake successfully a flood alleviation study which represents the first fluvial hydraulic study my company ever carried out.

The objective of a Hydraulic Study that I undertook was to assess the impact on the watercourse of engineering works associated with the construction of a new road. I wrote the proposal detailing the proposed methodology, the project programme and fee. I supervised the development of two hydraulic models with and without the proposed scheme for comparison

purposes. I liaised with the design engineers to discuss the improvements that could reduce the impacts. I finally reported my conclusions to the client.

Example 4 - In Guatemala I bought and arranged transport for all the required materials into the mountains for installation of gravity fed water supplies. In Mozambique I designed and ordered well moulds for concrete ring fabrication. Bought cement, tools, pumps etc exported from Malawi and imported into Mozambique.

Example 5 - Whilst working for Toggs and Partners I undertook the details hydraulic design for Lower Pond STW (design flow for full treatment 543 litres/sec) and supervised the preparation of drawings by our CAD team. I also wrote the particular section of the specification for incorporating into the contract documents.

Example 6 - The ability to implement a solution with respect to a research project is usually simple because of considerable 'academic freedom' in undertaking research at the university. However funding bodies require the production of progress reports. The funding body does not make recommendations regarding the project management as long as the project is within the pre-defined framework. A vital part of any project is the production of a journal paper. I have published at least 15 papers relevant to the remits of CIWEM.

B.4 Your ability to plan and control current and future operations and to maintain systems or advisory services, including monitoring and assessment of their performance

Example 1 - I have developed monitoring methodologies (including temperature, salinity, DO, pH, currents, water levels, beach transects etc), trained local staff and reviewed data for the Asia Project. I am the principal contact for site supervision staff for marine enquiries.

With the locally collected and collated data I lead the assessment of:

- Performance and sustainability of constructed phases.
- Modelling results through additional validation
- Improved model rigor for future phases
- Potential maintenance commitment

A recent independent marine survey Consultant and Professor demonstrated the incredible performance of the instated ecosystem, and blossoming biodiversity. The monitoring programme will continue and expand as the project grows and develops.

Example 2 – I have authored several contracts which procured the operation and maintenance of facilities for long-term periods. I am project manager on a project which requires the contractor to treat sludge (1800tDS) for a period of 20 years. The contractor is also responsible for the maintenance of the facility to preset standards. As author of the contract documents and final Report on Tenders I was tasked with both setting the operational and maintenance provisions and assessing the contractor's response to these provisions in his tender through the process of a technical examination during the tender evaluation stage.

Example 3 – Whilst working in Kuwait, I set up a series of Quality Check procedures to be applied following the collection of scientific data carried out during oceanographic cruises. Firstly, I carried out a bibliographical search to identify the requirements for developing standard quality control procedures on collected oceanographic data. I then planned and developed quality procedures based on computed automatic checks and scientific validation according to the Intergovernmental Oceanographic Commissions guidelines. I held meetings and workshops to inform and train my co-workers to apply correctly the procedures. I maintained the new system successfully providing assistance and bringing improvement when necessary.

At Jacobs, I am currently in charge of the application of quality check modelling procedures built to assist the hydraulic modeller in the model development phase and to improve its outcome. I personally developed and now maintain these procedures through a regular review and a feedback system I set up in coordination with the other modellers of my company. I also provide training and assistance to the new members of the team to make sure those procedures are known and applied properly.

Example 4- I trained a team in Mozambique to do a variety of tasks, one being to encourage women to learn pump maintenance and set up water committees. These women were trained to maintain the pumps and encouraged to devise a way of raising funds for spare parts. This team is still carrying out this work some 7 years later as part of a community development programme.

Example 5- I set up and ran a section within Toggs and Partners to prepare schemes for replacing and renovating water mains over the area of Bumpshire. I evaluated the scale of the works required, identified and recruited the necessary resources, set up procedures and managed the work to completion. Some 45km of new main was laid in sizes ranging from 100 mm to 900mm diameter, and a further 25km of main was renewed by various trenchless techniques.

Example 6- I have considerable experience in managing the operation and maintenance of experimental systems like biological activated carbon fibres and constructed reed beds. A system of service requires maintenance or control throughout the operation or study. In order to meet performance objectives, it is essential to plan the operation of laboratory and pilot plant rigs. A quality assurance plan needs to be implemented in order to guarantee a satisfactory output or service above recommended standards. I found that a good knowledge of (geo-) statistics is helpful to guarantee a high quality management.

C1. Your contribution to the effectiveness and competitiveness of your organisation through effective and efficient management of financial and staff resources

Example 1 - My position in our small Rivers and Coastal Group requires a wide degree of flexibility and management skills. Although my technical specialism is in coastal issues and processes I often represent the practice in cross discipline master planning meetings and workshops, developing our profile with architects and clients, bringing together a bespoke team to respond to specific client requirements.

I have prepared many pre-qualifications, tender documents and expressions of interest whilst working for Smiths', Jones' and Browns'. For the Asia project I coordinated the resources, and I am responsible for timely delivery of inputs across the full infrastructure component, across three international offices.

I also assist my group manager with the day-to-day running of our nine person team and act as delegate in his absence.

Example 2 - I have written project proposals to secure the required funds for the continuation and development of the rehabilitation programme in Mozambique. I adhered to the budget and kept monthly accounts for the water project. This involved paying 40 staff and buying all the equipment required. I have written and secured bids for funding for the diffuse pollution project and managed these funds in partnership with the Farming and Wildlife Advisory Group.

Example 3 - I contribute to the increase of organisational efficiency within my university, because I always try to secure research funding by applying for grants. Moreover, I am research active. My department supports lecturers by providing a limited individual budget or giving them the opportunity to negotiate individual requests for financial support. I monitor and control my limited resources (manpower, equipment and finances). However, my Head of Department makes the

final decision about finances. Furthermore, I need to find individual agreements with my research students regarding their academic projects.

C2. Your understanding and promotion of health and safety and your commitment to the health and safety requirements relevant to your work

Example 1 – All projects under my management have regular health and safety reviews. The subject is included in all agendas in relation to the monthly progress meetings. I also review all health and safety legislation and guidelines.

Example 2 – While working in Kuwait I established a safety check list and agreed call procedures prior to and during marine sampling operation taking place on a small motor boat at sea. Since joining Jacobs, I have attended regularly in-house Health and Safety training courses and passed the CSCS Supervisors Health and Safety test. In compliance with health and Safety procedures of my company, I always carry out a site specific risk assessment prior to going on a site visit.

Example 3 - I attended Water Safety Training in 1993, First Aid June 2000, Health and Safety day Feb '02. I also have varied experience from lone working when I adhered to the agreed call in procedures. I established safe systems of work in Mozambique for the well diggers in particular for entering and exiting wells safely and lowering the concrete rings.

Example 4 - I undertook two in-house courses on “Health and Safety” awareness and “Design Risk Assessments”. I prepared “Design Risk Assessments” for Lower Pond STW pipeline construction, and provided information to the Planning Supervisor for inclusion in the Pre Tender Phase Health and Safety Plan.

Example 5 - As the Departmental Health and Safety Representative and an official First Aider, I am aware of safety systems and services provided by health and safety institutions. Recently, I have obtained the Standard Certificate in Health and Safety Practice. I have contributed to the development and implication of health and safety guidelines within my department. Moreover, I need to assess and help to create safe systems and conditions for staff and students. The evaluation of risk assessments is a major part of my administrative duties. Furthermore, I frequently need to investigate unsafe behaviour of individuals within laboratories and workshops.

Example 6 - Full consideration of all aspects of Health and Safety during the design of coastal structures is an integral component of the option appraisal process. From flow speeds through structures, to hand rails on revetments to the various 'during construction' potential risks. I have compiled design risk assessments for numerous projects in UK and Overseas.

Suggested points to cover:-

- Expand on the above Example
- Involvement with HSE and/or Incident Report

C3. Your promotion and understanding of sustainable environmental management and your experience of its implementation

Example 1 - I am fully aware of Sustainable Environment policy of my company and I comply with it through my day to day work in avoiding printing unnecessary documents and emails, re-using envelopes for internal mail, recycling paper. Before setting up a professional meeting, I always consider the possibility of a Video Conference or an Internet Conference (Web-Ex) to avoid unnecessary travels.

Example 2 – Sustainability is intrinsic to many of the projects in which I am involved. A particular example is the water metering projects.

Example 3 – Suggested points to cover:-

- Environmental Policies – workplace and regional/national/international
- Sustainability Appraisals
- Environment and Third Party Management Plans

C4. Your ability to understand and promote relevant quality assurance requirements

Example 1 – The management of quality through ISO 9001 systems is implemented in all aspects of my work. This includes peer review of documents and calculations, and encouraging quality amongst junior staff by undertaking regular reviews and feedback on their work.

Example 2 – Whilst working in Kuwait, I participated in the development of Standard Operational Procedures (SOP) for Quality Control on water sampling surveys. I applied these rigorously and I was always successfully audited. At Jacobs I attended in-house training courses to familiarise myself with the corporate Quality Management Systems.

Example 3 - Suggested points to cover:-

- Knowledge/application of the Company's QMS/ISO Procedures, Work Instructions and Guidelines
- Involvement in reviewing / writing QMS Procedures or other related documents
- How you comply with and promote these to others
- Explain Position as "Custodian" of QMS Procedure or other Documentation followed by others

D1. Your promotion, understanding and application of professional ethics in your work; your ability to communicate effectively; your objectivity and integrity

Example 1 - I have developed my experiences and knowledge, primarily during project work, but also by attending technical conferences and discussion groups. I sat on the Project Advisory Group developing CEEQUAL and I am a member of the Maritime committee of BCCB which I attend when project work commitments allow.

An increasingly important component of my work is the provision of broad scale consultancy to architects on master planning projects containing a coastal component, from a few hectares in UK to over 12,000 Ha developments Overseas. I am tasked with forwarding the advantages of environmental benefits, and the possibilities of delivering projects that satisfy the client's aspirations while maximising sustainability and minimising artificial maintenance regimes.

Example 2 – As a professional Water Engineer and Scientist it is my duty to apply professional ethics to my work. These professional ethics are applied whether it is dealing with clients in an honest manner or undertaking detailed tender assessments, which require that an objective assessment is made of each tender and they are treated equally in relation to the rules of the competition.

I have also been involved in housing development projects where development pressures come face to face with environmental constraints. In all cases I apply my professional judgement in a proper manner with reference to relevant guidelines and best practise.

Example 3 – As a hydraulic modeller, I always make a conscious effort to comply with professional ethics in adopting an impartial and truthful position towards the hydraulic models I develop and their own performance. While constructing a model, I strictly followed the quality control procedures to deliver the best product to the client. I use my professional judgement to identify the limitations of a model and the uncertainties on the modelling results. I always report on them to the client.

I also participated in forums and modelling workshops to discuss modelling methodologies with other professionals and issues related to the use of particular modelling softwares. For example I was a speaker at a CIWEM modelling conference during 2007. I thought it was important that other modellers benefit from my findings on mass conservation and instabilities, which are problems that a modeller could come across using new Halcrow ISIS-Tuflow 1-d/2-d modelling package.

Example 4 - I have represented my company as a field Officer; this has included giving a TV interview. I have exercised my professional discernment in assessing the adequacy of Farm Waste Management Plans and pollution prevention systems and strategies on industrial sites. I have worked both as a team member and leader and striven to balance often conflicting needs both in UK and overseas. I identified the long term needs for development through consultation with local people in Mozambique.

Example 5 - As an environmental water engineer and Graduate member of CIWEM, I always make a conscious effort to promote and comply with professional ethics and legal responsibilities. The submission of my reports to funding bodies and papers to refereed journals and conferences enables other members of the scientific community to benefit from my findings. I consider my own professional development (CPD) and independence as an academic essential in order to deliver unbiased research. I am committed to CIWEM policies and the development of my local Branch. Moreover, I have participated at paper competitions and published papers in the CIWEM Journal.

D2. Your promotion and understanding of and compliance with relevant Codes of Conduct

Example 1 - Suggested points to cover:-

- Attendance at the CIWEM Workshop on Professional Ethics
- Be familiar with CIWEM Code of Conduct
- Be Familiar with Employers Code of Conduct
- Demonstrate which techniques you use to ensure others you are responsible for comply.

E1. Your promotion and commitment to continued learning and professional development in both personal skills and professional knowledge

Example 1 – Since I completed my formal education in Engineering and Science I have made a point of continually supplementing my work experience with training and additional courses. In the past seven years I have averaged five days of course work per annum. Many of these courses involved further development of my core technical expertise, however I have sought to supplement this with other courses in other subjects such as health and safety and project management. A list of these courses accompanies this application. The application for Chartered Member of CIWEM is further indication that my application for Chartered Member of CIWEM is further indication that my professional development is a high priority.

Example 2 – I strongly believe that continuing learning and attending professional training courses is essential to ensure a good professional career.

For example, I attended nine in-house training courses to deepen my knowledge on Safety, Project Management and Quality Management.

Example 3 - I undertook an MSc to gain knowledge of water supply systems and their development in order to work overseas in this field. As a member of an engineering charity I have attended courses in water supply and sanitation for emergencies, personal effectiveness and the relationships between Refugees, Agencies and Donors. I have attended: Project Management, Team Building and Personal Effectiveness courses.

Example 4 - I work continuously on my personal and professional development. Therefore, I try to improve my skills by taking part at staff development courses in order to learn further management, inter-personal, communication and computational skills. I found it easy to manage myself and project students. However, I have to improve my personal skills in dealing with some technicians. I have discovered different attitudes to work and I have learnt to respect other attitudes as long as they do not harm the progress of research work. I am seeking a third secondment to a water company. This might be beneficial for my development.

E2. Demonstrate your commitment to CIWEM

Example 1 - I also keep up to date my technical skills in reading some Scientific Journals such as the CIWEM Water and Environment Journal and by attending modelling workshops UK wide.

I seek to broaden my personal knowledge of water and environmental affairs in attending national and local CIWEM conferences. I am a member of the CIWEM River and Coastal Group and participated in recent conferences on the European Floods held during 2007.

Example 2 - Suggested points to cover:-

- Attendance at and contributions to CIWEM Branch Meetings
- Attending CIWEM Young members study tour
- Site Visits visits in order to gain a wider knowledge of water and environmental affairs.
- CIWEM Courses and Seminars
- Promoting CIWEM at Colleges and Univesities
- Preparation of reports/papers/magazine articles
- CIWEM Related Presentations to other staff/teams
- CIWEM Diploma Course
- Awards/prizes
- Topical subjects in WEM

When completing your evidence of attainment of Mandatory Competences please note the following:-

- Use examples which relate to projects that you were directly involved in and/or responsible for.
- Do not greatly exceed the 100 word per Competence limit. If the word limit is exceeded, your application may be sent back to you for amendment leading to delay.
- Consider using bullet points to illustrate the attainment of each Competence as opposed to wordy sentences, this will aid you in working within the word limit mentioned above. Remember that you will be able to expand upon the examples you have given at the Professional Review Interview (PRI).
- Demonstrate the attainment of each Competence by focusing on your specific involvement (either individually or as part of a team) in the projects that you use as examples. Try to use "I" rather than "we" wherever possible.
- Read each Mandatory Competence fully and thoroughly, this will give you a better idea of what the Competence requires you to demonstrate.
- If you are applying for external registration (CEnv/CEng/CSci), bear this in mind when completing the Mandatory Competence. E.g. if you are applying for CEng as well as Member of CIWEM, you will be required to use examples which show your suitability for election as a Chartered Engineer as well as a Member of CIWEM.
- Ask Sponsors, Peers and/or Line Manager to fully read through your Mandatory Competences form before you submit them to CIWEM.

EVIDENCE OF ATTAINMENT OF MANDATORY COMPETENCES	CANDIDATE'S NAME:	
	Member / CEng / CEnv / CSci	

STATEMENT of ATTAINMENT:	A1 Your personal knowledge of environmental and water issues
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To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor:	Judged attainment by:
Signature:	Written reports <input type="checkbox"/> Questioning <input type="checkbox"/>
Date:	Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:	Decision:
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CIWEM Pass <input type="checkbox"/> Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEng/IEng Pass <input type="checkbox"/> Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEnv Pass <input type="checkbox"/> Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CSci Pass <input type="checkbox"/> Fail <input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	A2 Your ability to develop corporate or personal strategy to address legislative, economic or technological changes affecting the sector in which you work
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To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor:	Judged attainment by:
Signature:	Written reports <input type="checkbox"/> Questioning <input type="checkbox"/>
Date:	Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:	Decision:		
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CIWEM	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEng/IEng	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEnv	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CSci	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	B1 Your understanding of the constraints and success factors affecting environmental and water issues whilst supporting sustainable development and resource use
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To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor:	Judged attainment by:
Signature:	Written reports <input type="checkbox"/> Questioning <input type="checkbox"/>
Date:	Observations <input type="checkbox"/> Other (comments)

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:	Decision:		
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CIWEM	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEng/IEng	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEnv	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CSci	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	B2 Your ability to develop potential solutions using creative and original thought where appropriate; to evaluate their merit; and to prepare recommendations
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To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor:	Judged attainment by:
Signature:	Written reports <input type="checkbox"/> Questioning <input type="checkbox"/>
Date:	Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:				Decision:				
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CIWEM	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CEng/IEng	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CEnv	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CSci	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/Eng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	B3 Your ability to initiate, implement and control change, including the impact on associated liabilities
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To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor:

Signature:

Date:

Judged attainment by:

Written reports Questioning

Observations Other (comments)

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:		Decision:			
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CIWEM	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>	
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CEng/IEng	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>	
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CEnv	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>	
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CSci	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>	

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	B4 Your ability to plan and control current and future operations and to maintain systems or advisory services, including monitoring and assessment of their performance
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To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor:	Judged attainment by:
Signature:	Written reports <input type="checkbox"/> Questioning <input type="checkbox"/>
Date:	Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:	Decision:		
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	MCIWEM	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEng/IEng	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEnv	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CSci	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	C1 Your contribution to the effectiveness and competitiveness of your organisation through effective and efficient management of financial and staff resources
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To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor: Signature: Date:	Judged attainment by: Written reports <input type="checkbox"/> Questioning <input type="checkbox"/> Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>
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TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:	Decision:		
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	MCIWEM	Pass <input type="checkbox"/> Fail <input type="checkbox"/>
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CEng/IEng	Pass <input type="checkbox"/> Fail <input type="checkbox"/>
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CEnv	Pass <input type="checkbox"/> Fail <input type="checkbox"/>
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CSci	Pass <input type="checkbox"/> Fail <input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	C2 Your understanding and promotion of health and safety and your commitment to the health and safety requirements relevant to your work
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To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor: Signature: Date:	Judged attainment by: Written reports <input type="checkbox"/> Questioning <input type="checkbox"/> Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>
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TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:	Decision:		
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CIWEM	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEng/IEng	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEnv	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CSci	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	C3 Your promotion and understanding of sustainable environmental management and your experience of its implementation
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To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor:	Judged attainment by:
Signature:	Written reports <input type="checkbox"/> Questioning <input type="checkbox"/>
Date:	Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:	Decision			
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CIWEM	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>	
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEng/IEng	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>	
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEnv	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>	
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CSci	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>	

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	C4 Your ability to understand and promote relevant quality assurance requirements
--------------------------	--

To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor: Signature: Date:	Judged attainment by: Written reports <input type="checkbox"/> Questioning <input type="checkbox"/> Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>
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TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:		Decision:		
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CIWEM	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CEng/IEng	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CEnv	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CSci	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	D1 Your promotion, understanding and application of professional ethics in your work; your ability to communicate effectively; your objectivity and integrity
--------------------------	--

To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor:	Judged attainment by:
Signature:	Written reports <input type="checkbox"/> Questioning <input type="checkbox"/>
Date:	Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:				Decision:				
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CIWEM	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CEng/IEng	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CEnv	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CSci	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	D2 Your promotion and understanding of and compliance with relevant Codes of Conduct
To be completed by the candidate only, approximately 100 words or less in length and the font size 11.	
Mentor/Supervisor/Sponsor: Signature: Date:	Judged attainment by: Written reports <input type="checkbox"/> Questioning <input type="checkbox"/> Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:	Decision:		
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CIWEM	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEng/IEng	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CEnv	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/> Interview <input type="checkbox"/>	CSci	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reviewers comments overleaf			

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	E1 Your promotion and commitment to continued learning and professional development in both personal skills and professional knowledge
--------------------------	---

To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor:

Signature:

Date:

Judged attainment by:

Written reports Questioning

Observations Other (comments)

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:		Decision		
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CIWEM	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CEng/IEng	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CEnv	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>
Reports <input type="checkbox"/>	Interview <input type="checkbox"/>	CSci	Pass <input type="checkbox"/>	Fail <input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

STATEMENT of ATTAINMENT:	E2 Demonstrate your commitment to CIWEM
--------------------------	--

To be completed by the candidate only, approximately 100 words or less in length and the font size 11.

Mentor/Supervisor/Sponsor:	Judged attainment by:
Signature:	Written reports <input type="checkbox"/> Questioning <input type="checkbox"/>
Date:	Observations <input type="checkbox"/> Other (comments) <input type="checkbox"/>

TO BE COMPLETED BY PROFESSIONAL REVIEWERS ONLY

Demonstrated in:				Decision				
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CIWEM	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CEng/IEng	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CEnv	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>
Reports	<input type="checkbox"/>	Interview	<input type="checkbox"/>	CSci	Pass	<input type="checkbox"/>	Fail	<input type="checkbox"/>

Reviewers comments overleaf

Reviewers Comments

How the candidate has satisfied/not satisfied* the requirements for MCIWEM

How the candidate has satisfied/not satisfied* the requirements for CEng/IEng

How the candidate has satisfied/not satisfied* the requirements for CEnv

How the candidate has satisfied/not satisfied* the requirements for CSci

CANDIDATES NAME _____ MEMBER/CEng/CEnv/CSci

NOTES FOR MENTORS/SPONSORS/SUPERVISORS

Full details of the mandatory competences are given in this form. It is important that you indicate in the 'judged attainment by' column of the form (Mentor/Sponsor or Supervisor), how you have judged the candidate's attainment of the mandatory competences (e.g. by written reports, observation or questioning). Please sign each competence and this form indicating your status (*delete as applicable).

NAME: _____ *MENTOR/SPONSOR/SUPERVISOR

QUALIFICATIONS: _____

POSITION IN ORGANISATION: _____

SIGNATURE: _____ DATE: _____

NOTES FOR PROFESSIONAL REVIEWERS

It is important that you assess the degree to which the candidate has demonstrated attainment of the mandatory competences in both reports and at interview. Please tick the boxes appropriately and complete your comments on each competence in the box Provided. All Reviewers on the panel must jointly sign this form, on the day of the interview.

RECOMMENDATION

We the undersigned confirm that this Applicant has satisfied/not satisfied* the Institution's requirements and Mandatory Competences and we recommend to the Council that the Applicant be admitted to the grade of: *Member/CEng/IEng/CEnv/CSci (*delete as applicable).

REVIEWER COMMENTS

NAME: Chairman
CEng/IEng/CSci/CEnv _____ SIGNATURE _____

NAME:
CEng/IEng/CSci/CEnv _____ SIGNATURE _____

NAME
CEng/IEng/CSci/CEnv _____ SIGNATURE _____

DATE: _____

September 2008