

C.WEM Mandatory Competence Attainment Report Guidance

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Mandatory competencies allow you to show us the formal and informal skills and qualities that you have developed throughout your career. They will demonstrate:

- your ability to work independently and as part of a team,
- how you take initiative to work effectively and apply yourself to a variety of situations, and
- how you have reached a stage in your career where you can competently lead in your technical field and influence others.

Please provide a response to each of the CIWEM Mandatory Competencies in the relevant section of your online application. The maximum number of words for the Mandatory Competence submission is 4000 words; the distribution between individual competencies is at your discretion to best demonstrate your experience. However, we recommend that you do not exceed 400 words on any response to ensure that you provide us with sufficient information to demonstrate the full breadth of experience required. Please give due consideration to all competencies in your submission; no competence can be left blank.

Also, please note that appendices, references and footnotes will not be accepted.

You need to use examples from your own practical experience to demonstrate the appropriate level of achievement for each competence.

Your responses need to be written in the first person and identify your roles and responsibilities, what you have done and what you have learned. Using words such as "involved" is discouraged as this does not inform us of your role and responsibility. If you were part of a team you need to identify what you personally did, describing your contribution to the overall aim of the specific project or piece of work.

As a guide, you normally need to provide two examples that demonstrate the appropriate level of attainment for each mandatory competence. Please do not provide more than three examples, as you will find it difficult to present the depth of knowledge required within the word limit. Your text for each example should be specific to each competence. Generic and repeated text will not demonstrate a sufficient depth of knowledge.

The CIWEM mandatory competencies relate solely to CIWEM membership. If you are applying for registration with the Engineering Council (CEng/Eng/EngTech), Science Council (CSci) or Society for the Environment (CEnv), then you also need to complete the list of competencies relevant to the particular registration you are seeking.

Each of these are given in the online application and you are provided with an additional 4000- word limit for each registration for which you are applying. You should ensure that through your responses you demonstrate the requirements of the relevant external registration body.



You can obtain guidance for completing the competence for each of these external bodies on their respective web sites:

Engineering Council www.engc.org.uk/

Science Council www.sciencecouncil.org/

Society for the Environment www.socenv.org.uk/

Guidance on completing each individual CIWEM competence is given below.

Please note that you do not have to address all of the questions under each competence, they are there to help you think about your responses to the Mandatory Competence.

Guidance Revision 20 July 2023

Please note this document was updated during June/July 2023.

Revisions were made to the supporting guidance for C.WEM Mandatory Competences B2, C1 and D2 only, the competences themselves are unchanged.

A Competencies | Existing and emerging factors influencing environmental and water issues

A1. Knowledge of wider environmental issues and trends (you should demonstrate your knowledge of wider environmental and water issues beyond your area of expertise)

You should be able to demonstrate that you have a breadth of knowledge and have an awareness of the development of the sector in which you operate and how it has developed over time with a view to future issues and development. You should be able to demonstrate a general understanding of legislation, local/national/international directives, financial and societal drivers within the wider water and environmental industry and specific key drivers within your own industry. You will also be familiar with examples of current local, national or global environmental issues.

- Do you understand the wider context of your position in the water and environmental sector?
- You are expected to understand the main regulations and drivers in your own industry. How are these relevant in the wider environmental context?
- Why is it important that industry takes account of environmental performance?
- How can new technologies help you to meet future requirements?
- What other environmental issues is your company involved in outside of your area?
- Are you familiar with examples of important, current local, national or global environmental issues?

A2. Ability to develop strategies or plans to address changes in your sector

You will need to demonstrate that you can identify, monitor and review changes driven by factors external to your organisation (e.g. financial, technological or legislative) within your sector by preparing a strategy at a personal, team and/or organisational level. The imposed impact of the change on individual / team / organisational workloads and revenues should be identified and you should demonstrate your ability to put appropriate planning frameworks in place to prepare for change. You will be able to identify gaps in your knowledge and information and be able to conduct appropriate research.

- What are the main changes driven by external factors such as changing legislation, social responsibility, or technical development affecting your sector?
- What plans or strategies have you devised and implemented to address these changes?
- What strategies have you devised and implemented to help your employer or clients evolve to meet external pressures?
- How do you address gaps in your knowledge to be able to support strategy development?
- How does your work help to achieve the company's strategy?

- Have you developed a new standard, system or service which has been adopted for future strategy?
- What actions/initiatives have you developed and implemented to address changes and/or developments? Have they been adopted by other members of your team/organisation?
- Have you established a programme of research or investigation to supplement existing information?
- What strategies does your employer have in place to address external challenges and how do you contribute to the achievement of these strategic aims or goals?

B Competencies | Planning, implementation and evaluation of work

B1. Ability to analyse and evaluate environmental and/or water problems

You may wish to identify a project or a piece of work for which you have had responsibility (e.g. community / user / infrastructure / environment / economic / compliance) demonstrating that you understand the problems/causes and systems necessary to facilitate successful solutions. Undertake research (site surveys / mapping / desktop research) to demonstrate you have considered the implications of potential solutions, including legislative, social, historical, ecological, environmental and/or financial as appropriate, this will include all stakeholders' perspectives (client / public / regulators / users).

- What was the problem or opportunity you needed to address?
- What research/investigation did you carry out?
- What were the main factors (e.g. topography, other services, funding, hydrology, environmental, compliance standards etc) which needed to be considered in investigating the problem and considering potential solutions?
- Who were the stakeholders and how did you consult with them?
- How did you ensure that the nature and extent of the problem was fully understood by all concerned and the reasoning captured?
- Did you prepare and agree a brief for investigatory work?
- When evaluating problems, what is the importance of professional neutrality?

B2. Ability to solve problems by identifying, developing and evaluating options

You should demonstrate the use of advanced scientific / engineering / management / environmental principles as appropriate when formulating potential options to solve a problem. You will need to demonstrate that you have considered the implications of each method of working or option to provide a solution; identifying the option that best fits with the issues and requirements identified (e.g. regulatory / legislative / social / economic / environmental / customer). You will use evidence to support the recommended option and be able to show how the decision was made.

- What solutions/options did you identify and consider and why?
- What criteria did you use to evaluate the options and how did you apply them?
- How did you ensure your original objectives were met, or were there compromises to be considered and how did you decide that these were acceptable?
- What evaluation did you undertake to identify a preferred outcome? How did you collaborate with others to reach a recommendation? Were there external stakeholders involved?
- Which solution/option did you recommend and why?
- Are there multiple benefits of the option you recommended and how were these considered? Were these benefits quantifiable? Did you consider benefits for all stakeholders?
- How did you use creative and original thought in identifying potential solutions/options?
- How did you compare widely differing approaches to find the best solution/option?
- How do you illustrate your method of presenting your analysis and conclusion to a client?

B3. Ability to initiate, implement and manage change

You will need to demonstrate you can deal with the unexpected when change occurs during your work (e.g. weather delays, material cost increases, physical obstacles, requests from Clients). You will need to demonstrate the ability to plan, initiate, monitor and revise plans to manage change by use of skills such as anticipating change / new development within your work or project, evaluating the implications, identifying mitigation measures, understanding and communicating residual risks. Consider coordination of documents, systems and services / preparation of procurement, contract and production documents and ensuring legal compliance, budgetary control and communication with clients / stakeholders in your response.

- Did anything threaten the success of a solution or its delivery?
- What were your options to manage change?
- Was it successful? If not, why not?
- How did you plan for the introduction of change?
- What steps did you take to ensure stakeholder buy-in?
- How did you resolve any problems?
- How did you deal with contractual risks?
- How did you deal with risk?

B4. Ability to plan and implement solutions and monitor their continuing performance

You will need to demonstrate that you can effectively plan for and implement solutions (e.g. services, research, development) complying with appropriate standards (e.g. H&S, QA, costs, resource management...) identifying risks that may compromise the outcome (e.g. via

risk register...). You will also need to demonstrate that you can evaluate performance against the initial baseline, need or specification that was agreed with the client/stakeholders. In addition, you will need to demonstrate the ability to learn from and amend operating procedures using performance criteria and data collection as appropriate.

- How did you plan the implementation of a solution?
- How did you manage the implementation?
- What were the main issues affecting implementation?
- How did you monitor the performance of the solution?
- How did you determine the root cause of any implementation problems?
- What actions did you initiate to resolve any unsatisfactory performance?
- What plans were prepared to ensure continuing operation?
- What mitigating actions did you put in place to minimise risk to successful implementation?
- Have you carried out an audit or post project appraisal?
- Did the solution achieve what was expected of it?
- If the solution did not achieve what was expected of it what corrective action did you take?
- Did you produce relevant handover documentation or a training package?

C Competencies | Safe and effective working practices

C1. Ability to manage resources effectively and efficiently

You will be expected to demonstrate your level of management skill and how your working practices contribute to your organisation or workplace (financially, technically and professionally). You could, for example, demonstrate an understanding of the recruitment and selection process of resources and manpower or a project/piece of work and how to work effectively to deliver your responsibilities on time, to the appropriate standards and to budget. You could also identify training needs / skills gaps, opportunities to utilise new and emerging technologies / processes and to promote sharing of best practice and knowledge, including your ability to assess the changing requirements of your organisation's industry.

- How do you fulfil your responsibilities in a timely and professional manner?
- Do you have budgetary responsibilities and/or understand the budgetary process?
- What resources are managed / how do you ensure efficiency?
- What have you introduced to improve performance?
- How do you secure appropriate resources?
- Have you optimised a system or process to maximise efficiency?
- What training have you prepared/delivered?
- What forms of contract do you work with? Are you delivering projects as part of a framework or wider programme?
- How have you ensured that the skills needed within your team/organisation are appropriate for the work that you do?

C2. Understanding, promotion and application of Health, Safety and Wellbeing (HS&W)

You will be expected to demonstrate your implementation of relevant HS&W policy and legislation controlling your industry (e.g. including, but not limited to, organisation HS&W policy, legislation relating to health and safety for all employees and specific legislation relating to your industry), your understanding and promotion of safe working practices for all stakeholders. You will be expected to demonstrate an understanding of any processes in place to investigate and record accidents, and those which promote a preventative approach to HS&W. You will also need to show your understanding of a culture of wellbeing and good behaviours to support this.

- What Health and Safety (H&S) legislation is relevant to your work?
- How do you keep up to date with the requirements?
- What actions do you take to ensure compliance with H&S requirements in the planning and implementation of your work?
- What are the responsibilities of you and others?
- How do you ensure that others fulfil their responsibilities?
- What is the procedure for recording and investigating near misses?
- How do you deal with an unsafe act?
- How do you encourage others to apply appropriate H&S standards?
- How do you apply safe systems of work?
- Are you an engineer? Do you know about CDM, or equivalent construction health and safety regulation in your country?

C3. Your contribution to sustainability

You will be expected to explain your understanding of the term “sustainability” and give practical examples of how you have implemented your definition. You could for example demonstrate the need to minimise waste, manage the use of non-renewable resources, monitor and review energy consumption, recycle and promote use of alternative materials. You may wish to carry out an audit of your workplace to assess its sustainability credentials.

- What is your response to the climate change and ecological emergency?”
- What is your response to the net carbon zero challenge?
- What impact does your work have on the environment?
- What measures have you taken to minimise negative impacts?
- What environmental improvements have you identified and delivered?
- How do you define sustainability?
- How do you encourage others to adopt a sustainable approach?
- How do you implement sustainability principles in your personal life?
- What examples of sustainability have you incorporated into a project?
- What actions do you take to minimise impact on the environment?
- How do you balance economic, environmental and societal factors?
- How do the outputs of your work contribute to sustainability?

- How do you promote sustainable solutions?

C4. Understanding, promotion and application of quality enhancement and quality assurance (QA)

You could discuss your practical knowledge of quality management systems and requirements relevant to your discipline, this will include the need to deliver your responsibilities to established standards and contribute to continual improvement. If you use data collection and/or interpretation, you could demonstrate you can assess the accuracy, quality and data reliance to deliver appropriate recommendations. You could also show how you identify, implement and evaluate changes to meet quality objectives and make business improvements.

- Do you or your organisation work to any QA system?
- Do you understand and comply with its requirements?
- What are the benefits of QA in your work environment?
- Have you developed any processes or procedures to ensure consistency of approach to the required standard?
- How do you ensure the integrity of information in your workplace?
- How do you assess the accuracy of your data?
- How do you promote the principle of quality assurance to colleagues?

D Competencies | Communication and professional ethics

D1. Ability to communicate in English

You will need to demonstrate that you can communicate effectively.

This competence will be largely judged on the basis of your application (including the report) and your interview which includes a presentation. Examples could include a brief statement to demonstrate where you have contributed to, chaired or recorded actions in meetings; written guidance documents/specifications/letters/technical reports distributed to clients and colleagues, prepared and delivered presentations to a variety of stakeholders.

D2. Work professionally, ethically and comply with relevant codes of conduct

You will need to demonstrate that you understand CIWEM's, your organisation's and other relevant policies and promote them to your colleagues to ensure that you are complying with the required standards and promoting professionalism. You will need to demonstrate how you adhere to all relevant legislation and regulatory frameworks (e.g. employment legislation). You will need to demonstrate that you think and act professionally and impartially. You will be aware of the limits of your own knowledge, expertise and

competence and when to seek advice or guidance. You will need to demonstrate awareness of CIWEM's Professional Ethics and Code of Conduct.

- What policies/codes apply to you – how do you comply?
- How do you deal with stakeholders?
- Have you ever needed to give an unpopular message?
- How do you promote compliance with codes of conduct and professional working?
- How do you take into account stakeholder requirements?
- When have you needed to supplement your knowledge seeking expert advice?
- Do you know the limits of your delegated responsibilities?
- Have you ever declined to do a task you are not qualified to do, even when feeling under obligation to carry out the task?
- Have you ever been faced with a conflict of interest?

E Competencies | Professional development

E1. Demonstrate continuing professional development

You will need to demonstrate that you are recording your continued learning and professional development. You will need to give examples of self-directed research (e.g. journals, magazines, legislative documents), training courses (e.g. H&S, presentation / report writing skills, new technology / software.....), conferences, and technical panel meetings, seminars, publishing papers and giving presentations.

You will be aware of the need of Corporate members, to maintain at least 30 hours of CPD per year and keeping a record of this in the CIWEM template or similar, illustrating how the learning is contributing to your ability to perform as a professional.

- Do you have a personal development plan?
- Do you coach, counsel or mentor others?

E2. Discuss your commitment to CIWEM

You will need to identify your commitment to CIWEM, identifying your reasons for joining the Institution, how you have, will continue to or will in future contribute to developing the Institution (e.g. Branch meetings, journal papers, The Environment articles, Special Interest Groups, Technical Panels, networks etc).

- Why did you choose CIWEM?
- What have or will you contribute to CIWEM?
- How do you promote the benefits of CIWEM with your colleagues and other potential members?

