

Your APC pathway guide to
**Minerals and
Waste Management**



Your pathway guide to Minerals and Waste Management

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Introduction

About the APC

The RICS/SCSI Assessment of Professional Competence (APC) ensures that those applying for RICS/SCSI membership are competent to practise and meet the high standards of professionalism required by RICS/SCSI. There is a wide range of pathways available to qualify as an RICS/SCSI member covering 19 different areas of practice, at APC (Chartered).

The APC normally consists of:

- a period of structured training
- a final assessment.

The structured training is based on candidates achieving a set of requirements or competencies. These are a mix of technical, professional, interpersonal, business and management skills.

How to use this guide

This guide is designed to help you understand more about qualifying as an RICS/SCSI member in minerals and waste management. The guide is based on Irish market practice and may be unsuitable for candidates based in other countries. The material is set out in three sections.

Section one- provides information on this area of practice with a general overview of the minerals and waste management pathways.

Section two- lists the competency requirements of the minerals and waste management APC

Section three- describes the main technical competencies associated with minerals and waste management, providing expanded sector specific guidance on each of them. This forms the main part of the guide.

About the competencies

The APC aims to assess that you are competent to carry out the work of a qualified chartered surveyor. To be competent is to have the skill or ability to perform a task or function. The RICS/SCSI competencies are not just a list of tasks or functions, they are also based upon attitudes and behaviours. The competencies have been drawn up in a generic way so that they can be applied to different areas of practice and geographical locations. This guide is designed to help you interpret these competencies within the context of minerals and waste management.

The competencies are defined at three levels of attainment and each APC pathway has its own specific combination of competencies that you must achieve at the appropriate level. You must reach the required level in a logical progression and in successive stages:

Level 1 – knowledge and understanding

Level 2 – application of knowledge and understanding

Level 3 – reasoned advice and depth of technical knowledge.

The competencies are in three distinct categories:

Mandatory competencies – the personal, interpersonal, professional practice and business competencies common to all pathways and compulsory for all candidates. These are explained in more detail in the *Requirements and Competencies guide*.

Core competencies – the primary competencies of your chosen APC pathway.

Optional competencies – a set of competencies selected by the candidate from a list defined for the particular pathway. In most cases there is an element of choice. These are mostly technical competencies, but certain mandatory competencies also appear on the optional competency list and candidates are permitted to select one of these at a higher level.

This guide only deals with the principal core and optional competencies associated with this area. It does not cover the mandatory competencies.

Choosing your competencies

It is important that you give careful thought to your choice and combination of competencies. Your choice will inevitably reflect the work you do in your day-to-day environment (driven by the needs of your clients/employer). Your choice and combination of competencies will be a reflection of your judgement. At final assessment interview, the assessors will take these choices into account. They will expect you to present a sensible and realistic choice that reflects the skills needed to fulfil the role of a surveyor in your field of practice.

This guide should help candidates and employers with a degree of assistance in choosing the competencies that are most appropriate to their area of practice.

How to find help

SCSI Education and Membership will be able to help you with any general APC queries:
T 01 6445500
F 01 6611797
education@scsi.ie
www.scsi.ie

About minerals and waste management

Minerals are the raw materials needed to supply the construction and manufacturing industry and provide fuel for the world's energy requirements. A consumer led society needs careful waste disposal and management. Extracting minerals and managing waste requires sensitive planning from the initial prospecting stage to the ultimate restoration and after-use of each site.

Together with practical management during the operational phase, it also requires negotiation and consultation with landowners, the general public and other professionals, including planners, environmental specialists, lawyers and accountants.

Minerals and waste management surveyors must have technical skills and a broad and practical knowledge of mining and quarrying, surveying, geology, minerals economics and valuation, mining law, planning law and environmental legislation.

Recently, the industry has seen an increase in legislation, relating to professional due diligence, insurance, investment and in all sectors of risk management from subsidence to gas emission. Many professionals in this specialist field are becoming involved in the planning processes and the promotional activities for major environmentally sensitive development schemes.

Minerals and waste management APC

The minerals and waste management pathway is ideal for anyone pursuing a career in property with a particular interest in the mining, minerals and waste management industry.

Although minerals and waste management is a skill applied by chartered surveyors across a wide variety of assets, this pathway is aimed at individuals who work in mining and quarrying, minerals economics and valuation, mining law, minerals planning, environmental assessment and auditing and waste disposal and their management.

The APC pathway places emphasis on competency in minerals and waste management. However, as with other pathways, a broad base of experience in the areas mentioned in the previous paragraph would be required.

Chartered alternative designations related to this pathway

All candidates qualifying under the minerals and waste management APC pathway will be entitled to use the designation 'Chartered Minerals Surveyor'.

Pathway Requirements

Minerals and waste management APC

Mandatory competencies

You must achieve the minimum levels as set out in the mandatory competencies.

Core competencies

Level 3

- Minerals management (T058)
- or Waste management (T084)

Level 2

- Legal/regulatory compliance (T051)
- and** three competencies to Level 3 from the list below
- Environmental assessment (T028)
- Environmental audit (and monitoring) (T029)
- Ground engineering and subsidence (T037)
- Inspection (T044)
- Landlord and tenant (including rent reviews and lease renewals) (T048)
- Legal/regulatory compliance (T051)
- Mapping (T056)
- Planning (T061)
- Valuation (T083)

Optional competencies

Two competencies to Level 2 from the list below
(including any core competencies not already used).

- Consultancy services (T014)
- Contaminated land (T015)
- Contract administration (T016)
- Development appraisals (T023)
- Development/project briefs (T024)
- Risk management (T077)
- Works progress and quality management (T085)
- Sustainability (M009)

Plus one competency to Level 2 from the full list of technical competencies, including any not already chosen from the lists on this page.

Competency guidance

The pages that follow are intended to provide guidance for users on the main competencies associated with minerals and waste management.

The guidance has been drawn up by experienced practitioners and aims to give you a clear and practical understanding of how to apply the listed core and optional competencies in the context of minerals and waste management. The guidance does not cover the mandatory competency requirements.

The official competency definitions (at levels one, two and three) are provided, followed by a description of the key knowledge and activities that are likely to fall within the scope of each competency.

The information provided is designed to be helpful but informal guidance. The knowledge and activities described under each competency are not exhaustive, and should not be relied upon as any form of revision list. Candidates must satisfy themselves and their employers that they have reached the required level of attainment before applying for final assessment.

The competencies are arranged in alphabetical order.

The full list of RICS/SCSI competencies and pathway requirements can be found in the *Requirements and Competencies guide*.

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Consultancy services

Reference no. T014

Description of competency in context of this sector

This competency is about the provision of management consultancy services to a range of different clients from inception to completion.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of the procurement and execution of advisory and strategic consultancy services in the context of the real estate and construction sectors.

Examples of knowledge comprised within this level are:

- Different forms of procurement for consultancy services
- The range of different consultancy interventions and approaches
- The consultancy cycle
- The types of problems, risks and issues that may arise during each phase of the consultancy cycle
- The importance of agreeing a clear contract with clients
- The need for the planning, timing and managing of consultancy interventions
- Managing the use of resources
- Managing client expectations
- Forms of reporting
- How to manage ethical dilemmas
- The principal tools and techniques relevant to consultancy services
- Importance of confidentiality when dealing with sensitive information.

Level 2

Apply your knowledge of the provision of consultancy services in the context of the real estate and construction sectors.

Examples of activities and knowledge comprised within this level are:

- Preparing consultancy service plans
- Preparing client briefs
- Updating reports to clients
- Negotiating client contracts
- Dealing with ethical dilemmas
- Selecting appropriate tools and techniques for a given consultancy service
- Using selected tools and techniques to achieve agreed outcomes
- Keeping appropriate records.

Level 3

Give reasoned advice, prepare and present consultancy reports, together with relevant analysis to clients, in the context of the real estate and construction sectors.

Examples of activities and knowledge comprised within this level are:

- Providing reports containing strategic advice and recommendations to a range of clients
- Presenting to clients
- Implementing consultancy intervention.

Contaminated land

Reference no. T015

Description of competency in context of this sector

This competency sets out the understanding of contaminated land in context of urban and rural land as well as property asset management, transaction and development, law and planning.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of how land becomes contaminated through human activities and natural occurrences. Clearly illustrate the implications of contamination for real estate valuation, development and management.

Examples of knowledge comprised within this level are:

- The definition of contaminated land under the relevant regulations and associated legislation
- Areas of professional practice where contaminated land is relevant, eg valuations, development, asset management, transactions, environmental assessment
- Demonstrate an understanding of the limitations upon chartered surveyors in this area, eg Professional Indemnity Insurance, Public Liability Insurance.

Level 2

Prepare a brief and/or specification for the appointment of a specialist(s) to undertake a site investigation.

Examples of activities and knowledge comprised within this level are:

- Advising clients on the application of contaminated land to their asset management, planning and development projects
- Advising clients on the law, regulation, procedures, RICS/SCSI guidance and professional practice appertaining to contaminated land
- Assembling specialist team members to advise on contaminated land assessment and remediation
- Undertaking Review Stage 1 and desk top environmental reports and advising clients accordingly.

Level 3

Supervise a site investigation, interpret the results of laboratory analyses and make recommendations as to remedial treatments.

Examples of activities and knowledge comprised within this level are:

- Providing reasoned advice on contaminated land issues to clients
- Assisting in project management of and undertaking phased contaminated land assessments and remediation options appraisals
- Negotiating and liaising with clients and regulators on contaminated land issues
- Working with specialist project teams dealing with contaminated land assessment and remediation.

Contract administration

Reference no. T016

Description of competency in context of this sector

This competency covers the role of a surveyor administering a construction contract. Candidates should be aware of the roles and responsibilities of the administrator under the main forms of contract. They should have a detailed understanding of the contractual provisions relating to the forms of contract that they have administered.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of the contractual, legislative and statutory terminology/requirements, of a construction contract.

Examples of knowledge comprised within this level are:

- The various standard forms of contract and sub-contract used in the industry
- Basic contractual mechanisms and procedures applied at various stages of the contract
- The roles and responsibilities of the administrator.

Level 2

Implement administrative procedures necessary for the smooth running of a construction contract.

Examples of activities and knowledge comprised within this level are:

- Issuing instructions
- Dealing with payment provisions
- Managing change procedures
- Being involved with dispute avoidance
- Dealing with completion and possession issues
- Issuing certificates.

Level 3

Advise on the administrative procedures necessary for the smooth running of a construction contract including document control techniques and systems, meetings and reporting procedures.

Examples of activities and knowledge comprised within this level are:

- Resolving disputes
- Assessing entitlement for extension of time
- Assessing entitlement for loss and expense
- Advising all parties of their contractual rights and obligations.

Development appraisals

Reference no. T023

Description of competency in context of this sector

This competency is about the role of development appraisals in residential and commercial development. Development appraisals also have a role in residual valuations of development sites but it should be remembered that the two are different activities.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of the principles and practices underlying a valid development appraisal.

Examples of knowledge comprised within this level are:

- The role of development appraisals in the marketplace and the situations where their use is appropriate
- The content of appraisals and how different issues such as planning requirements can be reflected
- The sensitivities of appraisals and what factors affect the appraisal
- Awareness of external factors that have an influence upon the appraisal process.

Level 2

Identify, select, assemble and analyse data relevant to carrying out development appraisals. Undertake appraisals using relevant techniques and methodology and identify possible sources of development funding.

Examples of activities and knowledge comprised within this level are:

- Analysing appropriate sources of information and data
- Preparing appraisals for possible acquisition, disposal or valuation of development sites including residential, commercial and/or mixed use
- Using different techniques and software available for appraisals (whilst having an understanding of the basic principles of development appraisal)
- Undertaking a sensitivity analysis
- Assisting in the selection of appropriate sources of development finance.

Level 3

Interpret and provide evidence of reasoned advice on development appraisals and further opportunities.

Examples of activities and knowledge comprised within this level are:

- Using development appraisals to advise on the acquisition, disposal or valuation of development sites
- Producing reasoned analysis of risk using appropriate sensitivity analysis
- Advising on the appropriate sources of development finance.

Development/project briefs

Reference no. T024

Description of competency in context of this sector

The purpose of development briefs stimulate interest in development sites whilst project briefs is to influence the form that a desired development will take. Both provide a framework for developers in the conception of major types of development schemes.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of the information required to prepare a development brief or project brief.

Examples of knowledge comprised within this level are:

- The objectives of development/project briefs
- Essential site details including history, location, accessibility, services and utilities
- Environmental features and issues
- The consultation process
- The planning policy background
- Relevant planning documentation
- Land ownership and disposal arrangements
- Market conditions
- Development budgets.

Level 2

Apply your knowledge to identify, select, assemble and analyse information relevant to the preparation of development briefs or outline project briefs.

Examples of activities and knowledge comprised within this level are:

- Producing a development/project brief
- Analysing gathered information and data for a development/project brief
- Programming or phasing of the stages of development
- Producing a risk analysis.

Level 3

Apply information in the preparation and presentation of development briefs or detailed design briefs, or parts thereof.

Examples of activities and knowledge comprised within this level are:

- Using a development/project brief to design a development scheme
- Negotiating agreements with stakeholder interests
- Planning the implementation of a development scheme
- Formulating financial arrangements for development scheme.

Environmental assessment

Reference no. T028

Description of competency in context of this sector

This competency is about an understanding and application of the principles of environmental assessment, particularly environmental impact assessment and strategic environmental impact assessment for projects, within the planning and regulatory framework.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of appropriate environmental assessment concepts, processes and systems. This should include responsibilities imposed by law, codes of practice and other regulations relating to environmental assessment.

Examples of knowledge comprised within this level are:

- Principles of Environmental Impact Assessment (EIA) and Strategic Environmental Impact Assessment (SIA) regulations arising from EC Directives and national/local legislation
- Understand the data gathering processes needed for EIAs
- Demonstrate knowledge of where EA may apply and whether this involves formal or informal environmental assessment.
- Understand the basic processes, procedures and requirements of formal EIA and SIA.

Level 2

Apply in practice your understanding of environmental assessment and the requirements for compliance, including undertaking an environmental assessment.

Examples of activities and knowledge comprised within this level are:

- Advising on the need for environmental assessment, including EIA and SIA for development projects
- Advising on requirements and scope of EIA and the regulators' roles.
- Managing the preparation of environmental assessment.

Level 3

Provide evidence of reasoned advice including the preparation and production of reports based on appropriate environmental assessments.

Examples of activities and knowledge comprised within this level are:

- Advising on the need and application of EIA, SIA and EA
- Co-ordinating and providing specialist advice on these, including negotiations with clients and regulators
- Preparing and compiling environmental statements and non-technical summaries for submission to clients and regulators, and other stakeholders.

Environmental audit (and monitoring)

Reference no. T029

Description of competency in context of this sector

This competency is about knowledge and understanding of the processes and standards used in environmental audit, in the context of land and property and the application of these principles in practice.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of appropriate environmental auditing concepts, processes, systems and the role of the environmental audit in environmental monitoring.

Examples of knowledge comprised within this level are:

- An understanding of what an environmental audit is
- An understanding of where environmental audit applies in chartered surveyor practice
- An understanding of standards used in environmental audit including EMAS.

Level 2

Apply in practice your understanding of environmental auditing and monitoring, as appropriate.

Examples of activities and knowledge comprised within this level are:

- Advising clients on the needs of environmental audit
- Advising clients on the scope and methods to be used for environmental audit
- Advising clients on the specialisms and specialists required to conduct environmental audit.

Level 3

Provide evidence of reasoned advice including the preparation and production of reports based on appropriate environmental audits.

Examples of activities and knowledge comprised within this level are:

- Carrying out environmental audit and reporting
- Presenting and proposing actions following the findings of environmental audit
- Negotiating and liaising with clients and regulators on the findings and actions arising from environmental audit.

Ground engineering and subsidence

Reference no. T037

Description of competency in context of this sector

Detailed understanding of rock and soil mechanics and how these are applied to ground and slope stability problems. Detailed understanding of natural and mining induced subsidence in terms of causation, effect, mitigation and remedies.

Examples of likely knowledge, skills and experience at each level

Level 1

Undertake appropriate investigations including site inspection to research site history and geology.

Examples of knowledge comprised within this level are:

- An understanding of soil and rock properties
- An understanding of causation of natural and mining induced subsidence
- Monitoring ground movement in a subsidence area
- Monitoring the effect of ground movement on a building/structure
- An understanding of the various categories of land slip and their causation
- Be aware of calibration issues, ISO documentation and relevant guidance and client guides.

Level 2

Collate, analyse and interpret information gathered after initial research.

Examples of activities and knowledge comprised within this level are:

- Investigating geological and mining records to produce a report on causation of ground movement
- Examining the options for minimising the risk of ground movement
- Examining the amount of ground movement expected and the strains induced
- Considering the options for the treatment of subterranean voids and mine outlets
- Identifying sites suitable for opencast/landfill having regard to ground stability
- Considering the options for a mine/site layout having regard to likely ground movement.

Level 3

Provide evidence of reasoned advice, prepare and present reports.

Examples of activities and knowledge comprised within this level are:

- Calculating slope stability and point of failure
- Calculating a mining subsidence profile including strains
- Calculating crown hole collapse associated with natural and mining sources
- Producing reports with recommendations for the minimisation, mitigation and remedy of subsidence damage
- Producing a report on slope instability recommending means of minimising risk
- Analysing the results of rock and soil tests and considering the effect on slope behaviour
- Assisting with the preparation of an expert witness report on ground engineering/subsidence
- Analysing the results of ground movement monitoring and producing a report with conclusions
- Evaluating the options for treating subterranean voids and mine outlets and recommending a course of action.

Inspection

Reference no. T044

Description of competency in context of this sector

Undertaking physical site inspections of mineral and/or waste facilities to ensure compliance with or breach of agreements, planning permissions, permits or licence conditions, Lease/Licence conditions and appropriate legislation. Obtaining factual evidence and providing reasoned advice and recommendations on the same.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of the different requirements for inspection, together with the required information and factors affecting the approach to an inspection.

Examples of knowledge comprised within this level are:

- Understanding of inter alia appropriate planning, environmental and waste legislation
- Emerging legislation that might impact on current/future operations
- Understanding of working methods, processes etc
- Understanding of on site Health and safety requirements
- Red Book requirements on inspections for valuation purposes.

Level 2

Undertake inspections and apply the information gained to prepare reports, schedules and/or registers of equipment, presenting appropriate information gained from the inspection.

Examples of activities and knowledge comprised within this level are:

- Reporting on progress of operations ie workings, restoration
- Reporting on adherence to approved schemes ie working, environmental monitoring, restoration etc
- Reporting on operational methods, difficulties being encountered etc
- Reporting on any proposed future requirements/development potential.

Level 3

Provide evidence of reasoned advice and recommendations arising from inspections.

Examples of activities and knowledge comprised within this level are:

- Advising client/owner/tenant of breaches and non-compliance of agreements, implications of same and recommendations on courses of action
- Advising client/owner/tenant of current working practices and emerging legislation that might impact on existing, current or future operations
- Advising/recommending to client/owner/tenant of potential working agreements eg lease/licence terms.

Landlord and tenant (including rent reviews and lease renewals)

Reference no. T048

Description of competency in context of this sector

This competency is about the management of the landlord and tenant relationship in the context of minerals and waste management facilities as commercial property, covering lease negotiations and all lease related matters arising between landlord and tenant, representing either party.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of the law and practice relating to landlord and tenant.

Examples of knowledge comprised within this level are:

- The principles of property law, including minerals ownership and ownership of landfill void
- The statutory and common law framework applying to the landlord and tenant relationship
- The content, form and structure of mineral extraction and/or waste management facility leases.

Level 2

Apply the principles of the law and practice relating to landlord and tenant. Carry out relevant negotiations to provide solutions to issues affecting both owners and occupiers of real estate.

Examples of activities and knowledge comprised within this level are:

- Reading and interpreting minerals and/or waste management facility leases
- Preparing reports containing recommendations prior to the commencement of negotiations
- Preparing, serving and responding to notices
- Entering into negotiations
- Reaching an agreed solution and reporting recommendations to client
- Instructing legal advisers.

Level 3

Provide evidence of reasoned advice, prepare and present reports on the law and practice relating to landlord and tenant. Apply your knowledge to assist in undertaking relevant dispute resolution procedures.

Examples of activities and knowledge comprised within this level are:

- Providing strategic advice upon landlord and tenant matters
- Dealing with more unusual/challenging cases
- Providing advice as to alternative dispute resolution options in the event of breakdown of negotiations and taking any necessary action to protect the clients' position.

Legal/regulatory compliance

Reference no. T051

Description of competency in context of this sector

Detailed understanding of mineral and waste law and the terminology used in formulating arrangements relating to the ownership of minerals and voids, mineral extraction, working rights and abandonment/restoration together with the regulatory framework associated with minerals and waste.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of any legal/regulatory compliance requirements in relation to your area of practice.

Examples of knowledge comprised within this level are:

- The ownership of land, minerals and voids
- Rights of support and withdrawal of support
- Subsidence damage, cause and remedies
- Compulsory purchase in relation to minerals and voids
- Copyhold interests
- Content of mineral and waste leases
- Mining codes
- Rights of working and restrictions to working
- Law of Trespass
- Mineral and Waste Planning Law
- Water abstraction and discharge
- Abandonment and restoration
- Health and safety.

Level 2

Apply your knowledge to comply with legal/regulatory requirements in specific situations within your area of practice.

Examples of activities and knowledge comprised within this level are:

- Preparing Heads of Terms for a mineral or waste lease
- Securing an exploration or other form of simple licence
- Inspecting and preparing a report on a mineral and/or waste site
- Preparing a planning application relating to minerals/waste
- Securing rights to abstract and/or discharge water
- Securing rights to withdraw support
- Preparing and serving notices in relation to Copyhold and/or Mining codes
- Preparing a report on the statutory and regulatory requirements relating to abandonment/restoration of a mineral/waste site
- Undertaking a Risk Assessment for a mineral/waste operation
- Providing advice on the remedies available for subsidence damage.

Level 3

Provide evidence of reasoned advice, prepare and present reports on legal/regulatory compliance requirements in relation to your area of practice.

Examples of activities and knowledge comprised within this level are:

- Negotiating terms for a mineral/waste lease, licence, agreement and understanding the differences
- Negotiating mineral and working rights
- Negotiating compensation for loss of working rights
- Preparing a report recommending the avenue to be pursued for mining subsidence
- Assessing compensation under the mining codes, Mines Working Facilities and Support legislation and Compulsory Purchase Orders
- Assessing compensation payments to Copyholders
- Negotiating planning conditions following the submission of a planning application
- Compiling information for an Expert Witness report
- Providing advice on the preparation of a Planning Appeal for minerals/ waste.



Mapping

Reference no. T056

Description of competency in context of this sector

Mapping, in this context, is an exceptionally broad potential area of practice. Encompassing everything from LIDAR, IFSAR, aerial photography and other primary data capture techniques to ground control using GPS and/or traditional techniques and the production of digital elevation models, DTMs or any form of geographical output including GIS data capture and output.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of the principles of mapping and geographic information sciences appropriate to your area of practice. Be aware of accuracy, scale, currency and fitness for purpose of hardcopy and/or digital maps, drawings, imagery and plans.

Examples of knowledge comprised within this level are:

- Full awareness of data capture techniques and the knock on effects regarding accuracy and precision
- Awareness of instrument checking techniques
- Awareness and understanding of the basic principles of geodesy and its application to mapping according to your area of practice
- Knowledge and use of basic survey software.

Level 2

Apply your knowledge of mapping and geographical sciences in relation to your area of practice.

Examples of activities and knowledge comprised within this level are:

- Using post processing survey/mapping software competently
- Using digital terrain modelling/digital elevation models
- Understanding the principles of data integration and compatibility, integrating different data sets to achieve client needs
- Understanding scalability in the context of both mapping and user requirements
- Using imagery software and GIS data capture tools
- Using modern survey instrumentation and understanding checking/calibration techniques.

Level 3

Provide evidence of reasoned advice on the design and specification of mapping and/or geo-information projects in a national and/or international context.

Examples of activities and knowledge comprised within this level are:

- Using all forms of survey/mapping/imagery contracts competently and describing the nuances of each (ie accuracy/fitness for purpose issues)
- Being fully conversant with all RICS Geomatics specifications and guidance in relation to mapping
- Explaining complex mapping issues to clients and discerning their 'actual' needs.

Minerals management

Reference no. T058

Description of competency in context of this sector

This competency deals with the practical aspects of waste management including the regulatory framework, compliance issues, an appreciation of economic viability, technical design, planning and permitting, estates and project management.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate a broad appreciation of geology, exploration techniques (including site investigation), and surface and/or underground mining methods.

Examples of knowledge comprised within this level are:

- Understanding of current and emerging legislation including relevant minerals planning and aggregates levy
- Appreciation of the various minerals management technologies dealing with minerals types, extraction methods and how they are utilised
- Knowledge of Estates and Planning management functions
- Understanding of how to inspect facilities to assess property issues including ownership boundaries, rights of way, easements, discharge consents, regulatory compliance.

Level 2

Analyse site investigations and interpret results. Demonstrate an appreciation of the economic and technical viability and/or management of mineral extraction and restoration.

Examples of activities and knowledge comprised within this level are:

- Advising on legal agreements, royalties, rents, rating and compliance issues
- Carrying out evaluation of facilities to assess economic and technical viability
- Knowledge of quarry or mine development engineering and design, environmental control systems, and aftercare and restoration measures
- Carrying out monitoring and compliance with planning, legal or environmental controls of a minerals site.

Level 3

Design, give advice on, and/or manage mineral exploitation schemes, their implementation and/or property interests therein.

Examples of activities and knowledge comprised within this level are:

- Carrying out detailed valuations/ financial appraisals and preparing reports to clients in support of development opportunities
- Designing and/or project managing planning applications or determinations
- Managing property interests including acquisition or disposal/sale of minerals assets
- Identifying and evaluating related business opportunities including new technologies.

Planning

Reference no. T061

Description of competency in context of this sector

The planning system plays a vital role in the opportunities available for any potential development scheme. This means it is important for developers to have good working knowledge and experience of the processes involved to ensure successful development outcomes.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of the principles of planning.

Examples of knowledge comprised within this level are:

- The purpose of the planning system
- The importance of the strategic planning framework
- The decision making process on planning applications
- Awareness of special planning powers for conservation areas, listed buildings and trees
- The requirements for community involvement in the planning system.

Level 2

Apply your knowledge to matters relevant to the planning process.

Examples of activities and knowledge comprised within this level are:

- Completing the submission of planning applications
- Applying pre-consultation and negotiation processes to the planning application process
- Participating in the formulation of spatial planning strategies
- Interpreting strategic planning policies.

Level 3

Give reasoned advice, including the preparation and presentation of reports on planning matters, brief other professional consultants and understand the application of specialist knowledge to the resolution of planning problems.

Examples of activities and knowledge comprised within this level are:

- Producing viability/feasibility reports
- Providing reasoned client advice on planning applications including advice on appeals
- Advising clients on reasonableness of planning conditions and involvement in related negotiations
- Justifying environmental and other impact assessments
- Overseeing the work of external consultants such as architects or engineers etc.

Risk management

Reference no. T077

Description of competency in context of this sector

This competency is about the effective use of risk management relating to projects. It includes a knowledge, understanding and use of the tools and techniques available.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate your knowledge and understanding of the nature of risk and, in particular, of the risks associated with your area of business/practice.

Examples of knowledge comprised within this level are:

- The concepts of risk
- The tools and techniques commonly used to evaluate and manage risk
- The use of risk registers and the models used to quantify risk.

Level 2

Apply your knowledge to carry out risk assessments taking into account all relevant factors. Understand the application of the various methods and techniques used to measure risk.

Examples of activities and knowledge comprised within this level are:

- Applying the various methods and techniques to measure risk
- Participating in risk workshops
- Preparing reports resulting from risk workshops.

Level 3

Provide evidence of reasoned advice and implement systems to manage risk by competent management in relation to specific projects.

Examples of activities and knowledge comprised within this level are:

- Facilitating risk workshops including preparation prior to the workshop
- Evaluating the qualitative and quantitative output from risk workshops
- Ongoing monitoring of risk issues through the project lifecycle.

Sustainability

Reference no. M009

Description of competency in context of this sector

A broad based understanding of the theory of sustainability set in its political and legal framework together with an appreciation of its economic, social and environmental context and the tools and techniques used to measure cost and return and evaluate options for action.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of why and how sustainability seeks to balance economic, environmental and social objectives at global, national and local levels, in the context of land, property and the built environment.

Examples of knowledge comprised within this level are:

- Historical background – Brundtland, Green Party, Climate Change
- Legal and policy background – Egan Report, Agenda 21, Building Regulations, Environmental Impact Assessments, P & CP Act 2004
- Essential tools – BREEAM, ECOHOMES, Green Guide to Specification
- Design considerations – site, location, building form, materials, lighting, ventilation, heating, water and drainage.

Level 2

Provide evidence of practical application of sustainability appropriate to your area of practice, and of awareness of the circumstances in which specialist advice is necessary.

Examples of activities and knowledge comprised within this level are:

- Planning policy and guidance (PPGs), sustainability checklists
- Focus on energy – EU Directive on Energy Performance of Buildings
- Renewable energy – photovoltaics, wind turbines, biomass, central heating and power (CHP), ground source heating, thermal mass
- Post-occupancy evaluation, life-cycle costing.

Level 3

Provide evidence of reasoned advice given to clients and others on the policy, law and best practice of sustainability, in your area of practice.

Examples of activities and knowledge comprised within this level are:

- Sustainable valuation, triple bottom line, economic, social and environmental considerations, short-medium-long term impacts
- Hard and soft valuation issues, health, well-being and productivity
- Examples and case studies of advice given and impact made upon client practice
- Transfer of knowledge and practice

Valuation

Reference no. T083

Description of competency in context of this sector

Understanding the processes involved in the preparation of valuations for a range of disciplines including capital purposes, rating, compulsory purchase and compensation.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate knowledge and understanding of the purposes for which valuations are undertaken; the relevant valuation methods and techniques; the appropriate standards and guidance; and any relevant statutory or mandatory requirements for valuation work.

Examples of knowledge comprised within this level are:

- Understanding of the physical and economic factors which affect valuations including reserves, rates of output/input and implications for valuation
- Understanding of inter alia appropriate, tenure, planning, environmental and waste legislation constraints and implications for valuation
- Emerging legislation that might impact on valuation
- Sources of comparable information and analysis of such information
- Understanding of the use of yields
- Red Book requirements for valuation purposes
- Consequences of client/third party reliance upon valuations.

Level 2

Demonstrate practical competence in undertaking both capital and rental valuations and detailed involvement with the preparation and presentation of client reports. Demonstrate your ability to use valuation methods and techniques appropriate to your area of practice. Show how the relevant valuation standards and guidance have been applied to your valuation experience.

Examples of activities and knowledge comprised within this level are:

- Inspecting and referencing of sites
- Collating data relating to tenure planning, licencing, environmental matters, reserves and resources and other matters impacting on valuation
- Collating and analysing comparable information
- Applying collated data and undertaking valuations
- Drafting of valuation reports including, where appropriate, compliance with Red Book and other regulatory requirements.

Level 3

Demonstrate practical competence in undertaking valuations, either of a range of property types or for a range of purposes. Demonstrate the application of a wide range of valuation methods and techniques. Be responsible for the preparation of formal valuation reports under proper supervision and provide reasoned advice. Demonstrate a thorough knowledge of the appropriate valuation standards and guidance and how they are applied in practice.

Examples of activities and knowledge comprised within this level are:

- Preparing final valuation reports
- Discussing the following issues with parties who will rely on the valuations: how the valuations have been calculated; limitations of the valuations; consequences of variation in factors affecting valuations
- Negotiating and agreeing valuations
- Reacting to responses from those who will rely on valuations – ie what actions taken and impact on valuations.



Waste management

Reference no. T084

Description of competency in context of this sector

This competency deals with the practical aspects of waste management including the regulatory framework, compliance issues, an appreciation of economic viability, technical design, planning and PPC permitting, estates and project management.

Examples of likely knowledge, skills and experience at each level

Level 1

Demonstrate a broad appreciation of practical aspects of waste management and regulatory regime. Undertake inspections of waste management facilities.

Examples of knowledge comprised within this level are:

- An understanding of current and emerging legislation
- Appreciation of the various waste management technologies dealing with collection, recycling, treatment and disposal together with trends in the industry
- Knowledge of estates and planning management functions
- Inspection of facilities to assess property issues including ownership boundaries, rights of way, easements, discharge consents, regulatory compliance.

Level 2

Demonstrate an appreciation of the economic and technical viability and/or management application of the practical requirements and monitoring of waste facilities.

Examples of activities and knowledge comprised within this level are:

- Advising on legal agreements, royalties, rents, rating and compliance issues
- Carrying out evaluation of facilities to assess economic and technical viability
- Knowledge of landfill engineering and design, gas utilisation, environmental control systems and aftercare measures or similar aspects relating to another waste treatment technology
- Carrying out environmental monitoring of a waste management facility.

Level 3

Design, advise on, and/or manage waste management schemes, their implementation and/or property interests therein.

Examples of activities and knowledge comprised within this level are:

- Carrying out detailed valuations/ financial appraisals and preparing reports to clients in support of development opportunities
- Designing and/or project managing planning and/or PPC permit application or waste treatment/disposal tenders
- Managing property interests including purchase and sale of waste assets
- Identifying and evaluating related business opportunities including new technologies.

Works progress and quality management

Reference no. T075

Description of competency in context of this sector

Chartered surveyors are frequently involved in the supervision of works on site. It is essential that candidates selecting this competency demonstrate a detailed knowledge of construction technology techniques, and the relevance of the techniques on site. Quality of workmanship is vital to ensure the long term functional ability of the element of the building design, and candidates will be expected to demonstrate detailed knowledge site quality requirements.

Examples of likely knowledge, skills and experience at each level

Level 1

Inspect and record progress and quality of building works.

Examples of knowledge comprised within this level are:

- The ability to carry out a site inspection, and the importance of recording progress of works
- A knowledge of the requirements of recording progress, and comparing to programmed works progress
- Knowledge of the requirement for quality descriptors as set out in the contract documentation.

Level 2

Report and advise upon the adequacy of progress and quality of building works.

Examples of activities and knowledge comprised within this level are:

- Carrying out inspections of works being completed on site, and preparing the necessary reports showing progress and quality issues that have arisen
- Preparing reports and advice for clients detailing the effects of additional instructions, amendments to specifications, and the likely effect on progress
- Recording for in house and external purposes reports on quality of works on site, including any works rejected, and the reasons for doing so.

Level 3

Manage and co-ordinate progress and quality of building works as a contract administrator/supervising officer or equivalent.

Examples of activities and knowledge comprised within this level are:

- Preparing cost reports for clients, on works progress, showing any deviation from expected progress
- Implementing systems for recording progress and quality issues as part of CA/SO duties, and preparing reports for external circulation
- Showing an understanding of the differences between the duties of a CA/SO, and those of a person appointed solely to report on progress and quality issues
- Acting as a CA/SO, and incorporating into your duties the requirements for progress and quality reporting.

Dating back to 1895, the Society of Chartered Surveyors www.scsi.ie Ireland is the independent professional body for Chartered Surveyors working and practicing in Ireland.

Working in partnership with RICS, the pre-eminent Chartered professional body for the construction, land and property sectors around the world, the Society and RICS act in the public interest: setting and maintaining the highest standards of competence and integrity among the profession; and providing impartial, authoritative advice on key issues for business, society and governments worldwide.

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Members of the profession are typically employed in the construction, land and property markets through private practice, in central and local government, in state agencies, in academic institutions, in business organisations and in non-governmental organisations.

Members' services are diverse and can include offering strategic advice on the economics, valuation, law, technology, finance and management in all aspects of the construction, land and property industry.

All aspects of the profession, from education through to qualification and the continuing maintenance of the highest professional standards are regulated and overseen through the partnership of the Society of Chartered Surveyors Ireland and RICS, in the public interest.

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