

The Royal Agricultural University

Programme Specification:

Postgraduate Certificate Cultural Heritage Research

2025/26

PROGRAMME SPECIFICATION [ACADEMIC YEAR 2025/26]

This Programme Specification is designed for prospective students, current students, academic staff and potential employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided. More detailed information on the teaching, learning and assessment methods, learning outcomes and content of each module can be found in the Module Specifications.

Section 1 – Material Programme Information

Criteria	Detail
Validating body	The Royal Agricultural University
Teaching Institution	The Royal Agricultural University
Subject Area	Land and Property Management (LPM)
Entry Award(s)	Postgraduate Certificate Cultural Heritage Research
Final Award and exit	Postgraduate Certificate Cultural Heritage Research
route(s)	
Programme title	Postgraduate Certificate Cultural Heritage Research
Location(s) of study	RAU Cultural Heritage Institute, Swindon
Compressed study	One semester
Full-time study	One year or One semester
Part-time study	Two Years
Language of study	English
Programme start month	September or January
Period of validation	September 2024 - August 2029
Name of Professional,	N/A
Statutory or Regulatory	
Body	
Type of Accreditation	N/A
Accreditation due for	N/A
renewal	
Entry requirements	An Undergraduate Honours Degree (2:2 or above) from a
(this should be the standard	UK university or overseas equivalent, or a professional
University entry	qualification or experience considered to be equivalent to
requirements unless	the above. For information on international qualifications,
otherwise approved by the	please, see our country specific pages. For countries not
Academic Board, and	listed please contact admissions@rau.ac.uk
include UCAS entry profile	·
for UG programmes and	
IELTS)	
Non standard application	We welcome applications from applicants with non standard
Non-standard application	We welcome applications from applicants with non-standard qualifications who are able to demonstrate knowledge,
	experience and skills developed in the workplace or elsewhere and which are relevant to the programme of
	study. Applicants will need to use their personal statement
	to provide further details supported by a CV. All non-
	standard applications should contact the Programme Leader
	to discuss their application. An interview may sometimes be
	required as part of the admissions process.
English language	If English is not your first language, you will need to reach
	the requirements outlined in our English language
	requirements for the level of study. For postgraduate
	taught programmes this is IELTS Academic min. overall 6.5
	with no element below 5.5(or equivalent). English language
	tests usually have a validity of 2 years from the date the
	test is taken.
Interviews	Interviews are sometimes required for non-standard
	applications. Please contact the Programme Leader to
	discuss.

UCAS Code	N/A
Quercus Code	CHRC
HECoS Code	100807 – Heritage Management
QAA Subject Benchmark Statement(s) and other reference points	This Postgraduate Certificate programme has been designed to meet: • Archaeology (including Master's) 2022 • The professional standards criteria of the Institute for Historic Building Conservation (2012) • The Chartered Institute for Archaeology (2016) • The Royal Institute of Chartered Surveyors (2019)
Academic level on Framework for Higher Education Qualifications (FHEQ)	Level 7
Approval at AQSC	17 July 2024 (Academic Board)
Version	1.0

Section 2 - Programme Structure

The structure of all University awards complies with the University's <u>Academic Regulations</u> for Taught Programmes which includes information about the:

- Rules for progression between the stages of a programme;
- · Consequences of failure for referrals, compensation and exist awards;
- Calculation and classification of awards.

The programme will be delivered as a form of block teaching built around one or two intensive teaching days per week.

The Postgraduate Certificate programme consists of two x 30 credit taught modules. There are three possible modes of study:

Compressed programme

On the compressed programme, learners take two modules in one semester. Learners will study two modules, the core module and their elective module, across two days each week. As not all modules run in both semesters, learners should discuss their module choice with the Programme Leader to ensure it is compatible with their desired start date.

Full-time programme

Learners undertake the two modules across two semesters, studying for one day each week. As not all modules run in both semesters, learners should discuss their timetable for module choices with the Programme Leader.

Part-time programme

Learners may also study for a Postgraduate Certificate part time one day a week for one semester. There is a minimum requirement for the learner to take one module per year. As not all modules run in both semesters, learners should discuss their ideal timetable in advance with their ProgrammeLeader.

PG Certificate Cultural Heritage Research (60 credits)

The accumulation of 60 credits at level 7 through the assessment of programme elements as detailed below:

Module code	Module title	Level	Credit value	Core/ Elective	Semester
7C011	Specialist Project by Practice or Research	7	30	Core	1 or 2
7C008	The Past in Principles and Practice	7	30	Elective	1
7C002	Landscape Archaeology	7	30	Elective	1
7C006	Understanding Buildings and Landscapes	7	30	Elective	1
7C010	Regeneration and Placemaking in the Historic Environment	7	30	Elective	2
7C007	Heritage Interpretation	7	30	Elective	2
7C009	Practical Conservation, Retrofitting and Sustainability	7	30	Elective	2
7C004	Excavation and Post-excavation	7	30	Elective	2
	Total Credits: Postgraduate Certificate Cultural Heritage Research		60		

Section 3 – Programme overview and Programme Aims

This programme is designed to give the learner practical experience of carrying out cultural heritage research in a specialist area of their choosing. It is designed to support learners who may be new to research design and management, or who would like additional scaffolding and support while they undertake a specific piece of work. This programme will suit early career researchers, those considering further postgraduate study, or practitioners already working within the cultural heritage sector who wish to take their work to the next level.

The programme is built around a core module: 7C001 Specialist Project by Practice or Research. This comprises eight weeks of taught content, followed by supported independent research. The module will give the learner core skills in research design and project management including:

- conceptualisation, including constructs, units of analysis, etc.;
- design of research questions;
- inductive and deductive research;
- scope, extent and feasibility testing;
- operationalisation, including design, collection/sampling strategies, research method selection, etc.;
- literature and theoretical review;
- proposal writing;
- pilot testing;
- data collection, analysis and interpretation;
- understanding audience and output design.

The independent research aspect of the module is fully scaffolded to support the learner in carrying out their own research. This may include group discussion and group crits to help

shape the project; one-to-one tutorials with the module leader, group and individual writing exercises, working with drafts, feedback and feedforward.

The second, elective module is designed to allow the learner to specialise in the area most useful to their individual research aims. Learners can choose from a wide range of modules focusing on heritage interpretation, landscape, built environment, regeneration, etc. These taught modules are designed to support their learning in their chosen field and feed into their Specialist Project study. All modules have flexible assessment components, which allow the learner to focus on their research area of choice.

For example, the learner could compile a historic building assessment for 7C006 Understanding Buildings and Landscapes. They could then build on this foundation for their Specialist Project and use the information to undertake a conservation management plan for a building in their organisation's care.

Alternatively, the learner could take 7C007 Heritage Interpretation and use the assessment opportunity to prepare for an exhibition. The execution of the exhibition could then become the focus of their Specialist Project assessment.

Whichever elective module is chosen, the emphasis of the programme remains the same: supporting students to undertake exceptional, professional project work by providing a balance of useful taught content and targeted research support.

We will expect our students to graduate with a high level of autonomy and self-direction, the demonstration of adaptability, initiative and originality alongside accountability, integrity and ethical judgement.

Section 4 – Programme Sustainability

This programme is aligned to UN Sustainable Development Goal (SDG) 11 which aims to make cities and human settlements inclusive, safe, resilient and sustainable. It also contributes towards several other SDG goals, especially SDG3, wellbeing. It does this by training heritage practitioners in the sustainable management of cultural heritage assets. This will ensure that heritage:

- are managed as efficiently as possible in terms of energy and other resource use (SDG1, SDG3, SDG7, SDG8 & SDG11);
- provide appropriate educational materials to enable people to understand, enjoy and conserve the historic environment (SDG4 & SDG13);
- are used to reduce inequalities within local communities (SDG10)
- will be more resilient to the impacts of a more severe climate (SDG13);
- provide viable future uses for historic buildings, sites or materials (SDG8);
- save money and contribute towards an economically viable future (SDG8);
- help communities to become more resilient (SDG3, SDG10 & SDG11);
- work towards better standards of natural and built environments, which increase the wellbeing of users (SDG3).

Section 5 – Programme intended learning outcomes

The learning outcomes employ those of the OfS Sector standards, QAA Master's degree specification and the QAA Archaeology specification. They use established skill group

descriptors which relate to national standards from the Institute of Historic Building Conservation and the Royal Institute of Chartered Surveyors

On successful completion of the named award, students will be able to demonstrate the following Learning Outcomes (LOs):

Knowledge and Understanding

LO no.	On successful completion of the named award, students will be able to: Module Code/s		
1.	Cultural heritage in context Understand how the values and significance framework applies within their chosen aspect of cultural heritage. Understand how economic, cultural, ethical, and social factors shape public, professional and political perceptions of cultural heritage at community, national and international level.	All modules	
2.	Threats to the cultural heritage Understand and evaluate the range of threats facing their chosen aspect of cultural heritage and develop and implement strategies to minimise or mitigate them through good management and/or practice.	All modules	
3.	Protections Understand and be familiar with the use of appropriate guidance documents, legislative tools and instruments, and best practice to manage and conserve their chosen aspect of cultural heritage.	All modules	
4.	Sustainability Demonstrate a critical understanding of the the UN Sustainable Development Goals and how these relate to and interact with the learner's chosen aspect of cultural heritage. Students will also be able to articulate a coherent vision for the future in their chosen specialism and contribute to debates around sustainability in heritage.	All modules	

Intellectual, Professional, Key skills

LO no.	On successful completion of the named award, students will be able to:	Module Code/s
1.	Personal Responsibility for Learning Successfully plan and follow a tailored pathway through Postgraduate Certificate study with due consideration of career planning, identifying and meeting skills gaps, target setting and operationalisation.	All modules
2.	Research Design & Implementation Identify needs, issues or problems, and design and conduct research to address these. Students will be able to identify appropriate and relevant approaches and methodologies, be able to analyse data and provide conclusions, and be able to evaluate the effectiveness of their own work and that of others.	All modules

3.	Personal Effectiveness	All modules
٥.	Demonstrate critical self-awareness, self-reflection and self-	All Illoudies
	management; time management; sensitivity to diversity in people	
	and different situations, and the ability to continue to learn	
	through self-managed study, reflection on practice and	
	experience.	
4.	Interpersonal Skills (Teamwork)	All modules
	Demonstrate effective performance within teams and the ability	7 III THOUGHES
	to recognise and utilise individuals' contributions in group	
	processes and to negotiate and persuade or influence others;	
	team selection, delegation, working with stakeholders,	
	development and management.	
5.	Communication Structure and Narrative	All modules
	Carry out effective two-way communication: listening, effective	7
	oral and written communication of complex ideas and arguments,	
	using a range of media, including the preparation of outputs	
	appropriate to the audience. Understand the importance of	
	narrative and storytelling within wider communication methods.	
6.	Digital Skills	All modules
	(a) effective comprehension and professional use of IT including	
	email and internet, word processing, PowerPoint, image	
	manipulation, and where appropriate the use of databases,	
	spreadsheets, photography, digital recording, social media,	
	visualisation, etc.	
7.	Critical & Creative Thinking	All modules
	Think critically and be creative: To manage the creative processes	
	in self and others; The capability to organise thoughts, identify	
	assumptions and evaluate statements in terms of evidence,	
	detect false logic or reasoning, identify implicit values, define	
	terms adequately and generalise creatively but appropriately.	
8.	Problem Solving & Decision Making	All modules
	Solve complex problems and make decisions: establish criteria	
	using appropriate decision-making techniques, apply them to	
	create and evaluate options and then implement and review	
	decisions.	
9.	Synthesis, Analysis & Evaluation	All modules
	Locate, synthesise, analyse and evaluate data and information	
	from a wide range of sources to support and evidence solutions	
	to problems. Understand how to select appropriate tools for	
	quantitative or qualitative analysis and the implications of these	
16	choices.	
10.	Data management	All modules
	Plan and apply a system for data management taking into	
	account ethical concerns, security and GDPR.	

Programme specific skills

LO	On successful completion of the named award, students	Module
no.	will be able to:	Code/s

	A11 1 1
	All modules
lentify issues within the cultural heritage sector and produce a	
ece of research to professional standard and in the appropriate	
dustry format to address these issues.	
ultural Heritage Research	All modules
an and undertake independent research using a wide range of	
opropriate resources. Evaluate and assess relevant data in a	
, , , , , , , , , , , , , , , , , , ,	All modules
	All Illoudles
oblem or activity into a wider context.	
ommunication	All modules
e able to assess, evaluate and employ different media forms to	
roject Management	All modules
evelop, plan and operationalise an original research project,	but especially
cluding assessing viability, feasibility and utility, and delivering	7C011
	dustry format to address these issues. Iltural Heritage Research an and undertake independent research using a wide range of oppopriate resources. Evaluate and assess relevant data in a umber of formats, such as texts, images, maps, objects, terview, focus groups, etc. Synthesise data and, where ecessary, perform analysis. Inalysis and Significance See multiple lines of evidence to place a given asset, theme, oblem or activity into a wider context. Inalysis and Significance See able to assess, evaluate and employ different media forms to ammunicate cultural heritage to specific audiences. Students will so be able to articulate a coherent and professional strategy for piece of cultural heritage research. Toject Management

Specialism specific skills

LO no.	Depending on the elective module chosen, students will also be able to demonstrate a competency in one or more of the specialisms below:	Module Code/s
1.	Heritage Interpretation Demonstrate a critical understanding of interpretation and the interpretive narrative and practical approaches to the interpretation of buildings, sites, monuments and landscapes. Understand audiences, segmentation, costs and benefits in interpretation decision making.	7C007 (7C004)
2.	Landscape Approaches Ability to analyse historic landscapes and contextualise them in terms of setting and wider social and economic understandings. This may include use of technologies such as GPR, resistivity or UAVs, desk-based approaches, such as aerial photo or map analysis, or field-based studies to assess the contribution to setting of heritage assets	7C002 (7C006)
3.	Regeneration and reuse in the historic environment Demonstrate a critical understanding of the principles and practice of social, economic and environmental regeneration and explore, research, understand and be able to critically assess heritage resources in a regeneration context. To be able to relate these ideas to the UN Sustainable Development Goals. Students will also be able to articulate a coherent vision for the future of historic buildings, sites, environments and landscapes. Contribute to debates around sustainable repurposing and reuse of heritage assets with reference to 'sense of place' and community needs.	7C010

4.	Archaeological Excavation Understand chronology and context and how archaeological evidence is employed to understand the past. Evaluate and select appropriate approaches to research. Confidently plan, target and undertake excavation, survey and all forms of on-site recording. Competently undertake post-excavation processes including site phasing and stratigraphy, finds processing and identification, and interpretation.	7C004
5.	Artefact Analysis and Interpretation Understand a broad selection of artefact types including ceramics, animal and human bone, glass, metal, building materials and ecofacts in terms of date, style or type, use, manufacture and meaning. Understand how to clean, conserve and manage collections of artefacts and ecofacts for storage and future study. Be able to draw data from and contextualise artefacts and ecofacts in terms of wider site and thematic narratives. Understand the role of artefacts and ecofacts in building chronologies and reference collections.	7C004
6.	Historic Buildings Understand broad outlines of building history, architectural styles and movements. Be able to contextualise building form within the physical, economic and social environment through time and use this to provide interpretations. Understand and be able to use the methods and techniques of building recording and analysis to discuss building history, evolution and significance.	7C006 (7C009)
7.	Practical Conservation Skills Pursue a holistic approach to historic buildings showing good understanding of the use of materials and the interactions between them. Understand the role of the heritage practitioner in assessing and rectifying building pathology. Understand how to professionally approach an archaeological investigation, process artefacts and protect archaeological resources.	7C009 (7C006)

Section 6 – Approach to Learning and Teaching delivery

Cultural Heritage Projects often require practitioners to have knowledge across a range of heritage and applied disciplines from audience development, through to PESTLE analysis and sustainability. This programme allows learners to create a specialised programme of taught content and supported research to support their own specific needs for learning and professional development.

This programme has specifically been designed to meet the needs of postgraduate learners many of whom may be combining study with work and/or caring or other responsibilities. Teaching is designed to be fully flexible, to allow full participation for both part-time and full-time students.

Our sessions are built around exercises to support and scaffold the learning process, and to provide valuable opportunities for peer-to-peer learning. Material is taught in workshop format combining formal elements, such as lectures, with more hands-on exploratory or consolidatory exercises, for example discussions, 'live' group research to explore or apply a

particular concept, group-crit sessions, supported writing exercises, and problem-based learning.

We know that learners have many and varied motivations and ambitions for taking this programme. We therefore concentrate on drawing out and articulating these with the learner to create a tailored route through the programme, whether that be identifying training opportunities, targeted reading, or support in designing assessment projects that will be relevant to their needs.

This programme recognises that there are many demands on learner's time and that these may fluctuate over the course of the programme. We therefore provide for a flexible spectrum of participation. We ask learners to complete a minimum of 30 credits (one module) per academic year with a maximum time allowance of two years to complete the full 60 credit programme. Should a learner's personal circumstances change, they may switch between full and part time modes of study. Should learners wish, they are also able to switch to the PG Diploma or full MSc programmes by the completion of the appropriate number of core credits.

Our building, seminar rooms, lecture theatre, laboratory and toilet facilities are fully accessible with parking provision for Blue Badge holders at the front door. Care is taken to ensure practical sessions and field trips are accessible to as wide a range of students as possible and module leaders are always happy to discuss ways of improving access to learning.

Here at the RAU, we are always looking for ways to better support our students. We recognise that a number of our students may be working or have caring responsibilities alongside studying which can sometimes make it difficult to attend every teaching session in person. As such we have the ability for you to join lectures and seminars through an alternative digital format in prior discussion with your programme leader. Please note that for international students on a student visa, you are expected to attend your classes in person. Remote delivery is not a UKVI-authorised mode of attendance for the taught element of your course and therefore non-attendance would affect your student visa.

Please note that this type of study participation is only available to registered UK-based students and Postgraduate study.

Section 7 – Approach to Assessment

The full Postgraduate Certificate programme comprises two modules.

All modules are assessed by course work. The intention of the course work assessments is to replicate the range of analyses, syntheses, reports and products which may reasonably be expected from an individual working professionally in the sector. Assessments are focussed around professional outputs that are typically produced by trained cultural heritage specialists. There is plenty of flexibility around the format assessments can take and module leaders will work individually with students to help them develop research projects, methods and approaches that will not only meet the assessment criteria but will also help them achieve their wider aims for the programme and aspirations for the future. It is possible to work on a live brief for an employer.

Alongside tutorials and discussions, formative, in-class exercises will be used to scaffold and develop the learner's writing skills. Learners may take part in group-crits on their work in

progress, sessions on understanding and incorporating feedback/feed-forward, and in-class supported-writing exercises. These will provide valuable formative feedback and allow peer-to-peer learning to take place.

This programme is very much designed to support early career researchers or those wishing to take the next step in the cultural heritage sector. Learners are therefore encouraged to treat the assessments as opportunities for portfolio- and network-building. To this end, learners are encouraged and supported to negotiate 'live' projects with building owners and users, community groups or heritage organisations. We are more than happy to support learners carrying out projects for an existing employer. This will ensure that there is real world input into the development of their assessed work and the work produced will be useful and impactful, public- and/or sector-facing outputs.

Overall, the programme is taught and assessed through*:

	Learning and Teaching		Assessment			
	Directed	Independent	Placement	Exam	Coursework	Practical
Year 1	20.7%	79.3%	0.0%	0.0%	100.0%	0.0%

^{*}based on 7C011 (core) + 7C006

Section 8 – Coursework grading and feedback

Assessment is an integral part of the learning experience of students. All University programmes are assessed by a range of assessment activities, each developed to provide the most appropriate means of demonstrating the student's achievement of a specified learning outcome. An assessment may assess more than one learning outcome.

The University operates standard pass criteria which can be found in the RAU Academic Regulations (paragraphs 116 - 129).

The normal basis for awards will be the overall average score in the final assessment, graded as follows:

Distinction weighted average of	70% and above
Merit weighted average of	60% - 69%
Pass weighted average of	40% - 59%
Fail average	0% - 39%

In addition to assigning a percentage mark to the work, tutors provide written feedback for all assessments which normally includes the strengths and weaknesses of the piece as well as advice about improving the work. Individual feedback is provided within 20-working days of the deadline for submission. All assessment decisions are subject to internal moderation and external scrutiny by the programme's External Examiners. Students must ensure they retain all coursework in case the External Examiner(s) wishes to see it.

Section 9 – RAU Graduate Framework

At the RAU we have chosen five values to underpin our learning community. These are the values which we will all work by and for which we want the RAU to be known for. We aim for our graduates to be:

Collaborative

We believe in the power of working together. We are stronger as a community of practice - inspiring each other, identifying shared goals, and providing reciprocal support leads to greater success.

Open-minded

We are receptive to new ideas and we value the diversity of experiences and skills. We are committed to listening to everyone across the RAU community.

Resourceful

We adopt creative approaches to achieve our goals while setting higher standards, promoting professionalism and sustainability.

Responsible

Individually and collectively we take accountability for our actions working with integrity to achieve the highest ethical standards.

Inclusive

We acknowledge the fundamental value and dignity of all individuals and are committed to maintaining an environment that seeks to eliminate all forms of discrimination and respects diverse traditions, heritages, and experiences.



Section 10 - Progression

This programme is designed to provide a broad-based introduction to the rapidly changing discipline of cultural heritage management. It sets cultural heritage management in wider professional context, bringing together the analysis of heritage values and significance,

audience understanding, and the role of sustainable regeneration in future heritage resilience. In consequence, the course is suited to those who are seeking curatorial or consultancy roles where this breadth of knowledge is seen as desirable.

Our emphasis on portfolio building and the completion of 'live' projects with heritage organisations for assessment ensures that our graduates leave with a solid and growing network of professional collaborators and stakeholders who are aware of their professional qualities. It also allows learners to build their interpersonal and other 'soft' skills alongside acquiring essential knowledge, meaning that our graduates have a head start in entering into this highly competitive sector.

The programme will enable graduates to pursue a wide range of careers in the cultural heritage sector. Elective modules will allow students to tailor their Postgraduate Certificate to a specialist area (for example, standing buildings, interpretation, or archaeology) within the wider sector. On completion of the course our students will be able to work in local authorities, heritage organisations, museums, collections, as self-employed consultants, and in the private sector, which require specialists with an in-depth and applied understanding of cultural heritage.

Section 11 – Student support, wellbeing and counselling

The <u>University</u> is offering a wide range of support to all RAU students, including practical advice and guidance as well as emotional support.

Disability and Neurodivergent support

We support disabled & neurodivergent students and students with long-term health conditions. These disabilities include dyslexia, mental health diagnoses, ADHD, autism, mobility challenges, sensory impairments and many more. Students are encouraged to make contact with Student Services as early as possible by emailing: studentservices@rau.ac.uk. When you tell us about a disability, you will be offered support based on your specific needs, which can include:

- Alternative exam arrangements such as extra time, rest breaks, or a smaller room.
- Access to support workers such as study skills tutors, specialist mentors, readers and scribes.
- Access to assistive technology (AT), which helps remove barriers to learning, communication and participation. The AT can help students who face difficulties with taking notes, organisation and time management.

Mental Health Support

Student Services has a dedicated team who are here to support you with the emotional challenges that can crop up during university life. They take a wide-ranging approach to mental health support, and the team ensure they are available for informal chats as well as providing in-depth support for students with emerging or existing mental health conditions.

The team also offer mental health support in the form of daily drop-in sessions, weekly group Time to Talk sessions, mental health workshops, awareness and campaign days and 1:1 confidential meetings for when students face challenges to their wellbeing.

Student Services can also refer students for counselling sessions with an external agency if they are required. They can also signpost you to our Student Assistance Programme, providing 24/7 care, support and advice.

Academic Support Tutor Programme

All students have access to the Academic Support Tutor (AST) programme, which provides high-quality academic support for students. ATS provide timetabled group tutorials and individual support for students who are most at risk. Group tutorials focus on providing high-quality academic support at the appropriate academic level; advice and guidance in relation to the course; and advice about making study choices on the course (in line with the AST Handbook). Individual support focuses on continuation and may be in person or online.

Section 12 – Enhancing the Quality of Learning and Teaching

The programme is subject to the University's rigorous quality assurance procedures which involve subject specialist and internal peer review of the course at periodic intervals, normally of 6 years. This process ensures that the programme engages with the applicable national Subject Benchmarks and references the Framework for Higher Education Qualifications.

All programmes are monitored on an annual basis where consideration is given to:

- External Examiner Reports
- Key statistics including data on retention and achievement
- Results of the Student Satisfaction Surveys
- Feedback from Student Delegates from programme committees
- Feedback from Student-Staff Liaison committees
- Annual Programme Monitoring