

NextGen: HN unit specification

Ecological and Conservation Horticulture (SCQF level 8)

Unit code: JMRL 48

SCQF level: 8 (16 SCQF credit points)

Valid from: August 2026

This unit specification provides detailed information about the unit to ensure consistent and transparent assessment year on year. It is for lecturers and assessors, and contains all the mandatory information you need to deliver and assess the unit.

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Unit purpose

This unit provides learners with the knowledge and skills they need to work in ecological and conservation horticulture. It focuses on plant ecology, the understanding of which can help with planning and decision making in plant conservation and wider conservation.

On completing the unit and on achieving the HND, learners may be able to progress to degree programmes in horticulture. Alternatively, they may want to go directly into employment in the horticulture industry or related work placements.

Entry requirements

Entry to this unit is at your centre's discretion. Before starting the unit, learners would benefit from having a foundation knowledge of plant conservation, ideally having completed Ecology and Environment for Horticulture at SCQF level 7, on which this unit expands. We also recommend that learners have one or more of the following:

- HNC Horticulture
- a horticultural qualification at SCQF level 7
- appropriate work experience in horticulture

Unit outcomes

Learners who complete this unit can:

1. examine the current state of global and local plant and habitat conservation
2. evaluate the effectiveness of conservation strategies for wild or horticultural plants under threat
3. produce a conservation plan

Evidence requirements

Learners must provide the following evidence:

Outcome 1

Learners gather evidence that demonstrates that they can:

- analyse a range of plant and habitat conservation programmes in the UK and overseas

They should analyse both in-situ and ex-situ programmes.

Outcome 2

Learners gather evidence that demonstrates that they can, for wild or horticultural plants:

- identify threats affecting wild or horticultural plants
- describe a range of conservation strategies used to protect threatened plant species
- compare the effectiveness of in-situ and ex-situ conservation approaches
- evaluate factors that contribute to the success or failure of conservation efforts

Outcome 3

Learners gather evidence that demonstrates that they can:

- carry out an ecological site survey to inform planning decisions
- set realistic conservation aims and objectives
- propose appropriate conservation strategies and management actions
- justify the selection of conservation methods using ecological evidence
- identify methods for monitoring and evaluating the success of the conservation plan
- present the conservation plan in a clear and structured format using appropriate scientific terminology

You can assess outcomes 1, 2 and 3 together through a portfolio of evidence.

Knowledge and skills

Knowledge	Skills
Outcome 1 Learners should understand: the global and local state of plant and habitat conservation, and the factors that have influenced this	Outcome 1 Learners can: - evaluate the current level of threat to plants and habitats - confront the factors and challenges of plant and habitat conservation
Outcome 2 Learners should understand: how wild or horticultural plant ecology relate to their successful conservation and cultivation	Outcome 2 Learners can: - demonstrate techniques used for successful in-situ and ex-situ plant conservation - assess the role of key players in plant conservation
Outcome 3 Learners should understand: - how to implement and interpret an ecological survey - planning and organising a conservation programme	Outcome 3 Learners can: - competently use a recognised professional survey technique - devise a conservation plan

Meta-skills

You must give learners opportunities to develop their meta-skills throughout this unit. We have suggested how to incorporate the most relevant ones into the unit content, but you may find other opportunities.

Self-management

This includes focusing, integrity, adapting and initiative. The most relevant are:

- focusing:
 - managing time effectively; demonstrating plant-conservation techniques
- initiative:
 - visiting sites for surveying; implementing ecological surveys

Social intelligence

This includes communicating, feeling, collaborating and leading. The most relevant are:

- communicating:
 - discussing relevant topics; considering conservation issues, including conflicting interests between different land-use bodies
- collaborating:
 - working in groups and co-ordinating with others to convey information and tackle problems on an individual and global cross-cultural level

Innovation

This includes curiosity, creativity, sense-making and critical thinking. The most relevant are:

- creativity:
 - coming up with strategies to enhance conservation and biodiversity on a site
- sense-making:
 - evaluating the current level of threat to plants and habitats; interpreting ecological surveys

Literacies

This unit provides opportunities to develop the following literacies.

Numeracy

Learners develop their numeracy skills through ecological surveying, monitoring skill development, collecting data, and using diversity indices.

Communication

Learners enhance their communication skills by working in groups, to encourage group work skills and communication. Working on the outputs and artefacts also helps learners with their communication skills; for example, through written work or a presentation.

Digital

Learners improve their digital skills and computer literacy by using different types of software and online resources. Learners should use online research, for example to find information on plant ecology.

Learning for Sustainability

Throughout this unit, you should encourage learners to develop their skills, knowledge and understanding of sustainability.

This includes:

- a general understanding of social, economic and environmental sustainability
- a general understanding of the United Nations Sustainable Development Goals (SDGs)
- a deeper understanding of subject-specific sustainability
- the confidence to apply the skills, knowledge, understanding and values they develop in the next stage of their life

Delivery of unit

Learners develop their plant identification skills as they survey wild plants. You can integrate this with assessment for Advanced Plant Biology at SCQF level 8.

Depending on the nature of the site that learners are working on, and the nature of their practice, you can integrate the unit with Professional Practice: Horticulture at SCQF level 8 and Sustainability and Innovation at SCQF level 8.

The notional design length for the unit is 80 hours. The amount of time you allocate to each outcome is at your discretion.

Additional guidance

The guidance in this section is not mandatory.

Approaches to delivery

We recommend that you use a range of delivery methods, and that you include visits to several case study sites. This gives learners the opportunity to see and discuss successes and failures of programmes from several different angles, including the:

- plant ecology
- nature of the site
- organisations involved
- practical skills required

Where possible, learners should practise the skills needed to maintain the case-study sites. Ideally, you should teach ecological theory in the field; for example, monitoring populations. You can back this up with online presentations or notes, and links to relevant journals and textbooks. Links with horticulture and conservation organisations and projects are key to enhancing the value of the unit and providing learners with connections and insights for the future.

Outcome 1

We recommend that learners analyse programmes including, but not limited to:

- species restoration
- habitat restoration
- urban biodiversity enhancement
- production for business
- other nature-based solutions

Programmes should be multi-organisational, reflecting real conservation programmes.

Outcome 2

Learners should gather evidence that demonstrates that they can assess the reasons for success and failure of conservation programmes, in terms of plant ecology, organisation, and fulfilling the original aims of the programmes.

Outcome 3

Learners should use a recognised professional technique, such as:

- Phase 1 habit survey
- UK Habitat Classification (UKHab)
- National Vegetation Classification (NVC)

They should assess the conservation value or potential of a site using recognised criteria, such as a designation of:

- site of special scientific interest (SSSI)
- local nature reserve (LNR)
- national nature reserve (NNR)

Learners should also investigate the International Union for Conservation of Nature (IUCN) threat status of plants on a site and produce a conservation plan that aims to enhance the biodiversity of a site

They should base their recommendations for improving conservation outcomes on ecological evidence.

Approaches to assessment

Case studies (all outcomes)

Learners should use case studies to explore real-life examples of plant conservation and ecology in action in the UK and globally.

You can assess learners on their ability to:

- analyse case studies from a range of plant and habitat conservations programmes in the UK and abroad, including both in-situ and ex-situ programmes
- assess reasons for the success or failure of a programme in terms of:
 - plant ecology
 - organisation
 - its original aim
- demonstrate competent use of a key conservation skill

Learners can present their findings from a case study as a poster, a presentation or a report. They can demonstrate a skill live, on a blog, or in a presentation or other format.

Conservation plan (all outcomes)

Learners survey, research, evaluate, and make recommendations for a site's conservation and biodiversity enhancement. The site could be urban, peri-urban or rural. It could already be designated for conservation, or a conservation site in theory. It does not need to be a site that is earmarked for conservation.

Learners should make recommendations for the management of the site to enhance conservation and biodiversity. They should produce a written report, as this is the industry standard, in which they:

- investigate the state of plant and habitat conservation on the survey site, including legislation and organisations relevant to the site
- survey their chosen site using a recognised professional ecological technique, such as:
 - a Phase 1 habitat survey
 - UKHab
 - NVC

At your centre's discretion, learners can produce a report or give an oral presentation with accompanying infographics, a podcast, a blog or other, in which they:

- assess the conservation value or potential of the site using recognised criteria, such as for designation of SSSI, LNR, NNR, and investigate the IUCN threat status of plants on their site
- produce a conservation plan, based on their survey and case study findings, to enhance biodiversity on the site and include an element of ex-situ conservation

Resources

Centres delivering this qualification must have suitably qualified staff for each of the subject components. Your centre should already have established processes to ensure staff are appropriately qualified to deliver in this subject area.

Assessors and internal verifiers must hold an industry and/or subject-specific qualification equivalent to the qualification. Centre staff should have relevant industry experience and be able to demonstrate industry-relevant CPD to maintain their subject-specific knowledge and skills.

Equality and inclusion

This unit is designed to be as fair and as accessible as possible with no unnecessary barriers to learning or assessment.

You must consider the needs of individual learners when planning learning experiences, selecting assessment methods or considering alternative evidence.

Guidance on assessment arrangements for disabled learners and those with additional support needs is available on the [assessment arrangements web page](#).

Information for learners

Ecological and Conservation Horticulture (SCQF level 8)

This information explains:

- what the unit is about
- what you should know or be able to do before you start
- what you need to do during the unit
- opportunities for further learning and employment

Unit information

This unit provides you with the knowledge and skills you need to work in the plant-conservation industry. It focuses on plant ecology and how understanding this can help with planning and decision making in plant and wider conservation.

On completion of the unit, you can:

1. examine the current state of global and local plant and habitat conservation
2. relate wild or horticultural plant ecology to their successful conservation and cultivation
3. implement and interpret an ecological survey

Prior knowledge and skills

Before starting the unit, you would benefit from having a foundation knowledge of plant conservation, ideally having completed Ecology and Environment for Horticulture at SCQF level 7, on which this unit expands.

We also recommend that you have completed one or more of the following:

- HNC Horticulture
- a horticultural qualification at SCQF level 7
- appropriate work experience in horticulture

Assessment

You can be assessed in various ways, such as through a portfolio of evidence, written report or oral presentation.

Future progression and employment

On completion of the unit, and on achievement of the HND, you may be able to progress to the BSc in Horticulture. Alternatively, you may be able to go directly into employment in the horticulture industry or related work placements.

Meta-skills

Throughout this unit, you develop meta-skills that are useful for the horticulture sector.

Meta-skills are transferable behaviours and abilities that help you adapt and succeed in life, study and work. There are three categories of meta-skills: self-management, social intelligence and innovation.

Self-management

You develop your self-management skills as you focus on managing your time effectively as you work on plant-conservation techniques, visiting sites for surveying and implement ecological surveys.

Social intelligence

You develop your social intelligence skills as you discuss and debate various relevant topics with your peers and lecturers, and as you work with others in class and on group tasks.

Innovation

You develop your innovation skills as you think creatively to come with strategies to enhance conservation and biodiversity, make sense of threat levels to plants and habitats, and interpret ecological surveys.

Learning for Sustainability

Throughout this unit, you develop skills, knowledge and understanding of sustainability.

You learn about social, economic and environmental sustainability principles and how they relate to the horticulture sector. You also develop an understanding of the [United Nations Sustainable Development Goals](#).

Administrative information

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Superclass: SA

History of changes

Version	Description of change	Date

Please check [our website](#) to ensure you are using the most up-to-date version of this unit.

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