

SQA Advanced unit specification

General information

Unit title: Managing Turf Playing Performance (SCQF level 8)

Unit code: HW8X 48

Superclass: SF

Publication date: November 2017

Source: Scottish Qualifications Authority

Version: 01

Unit purpose

The aim of this unit is to develop understanding of the relationships between measurable parameters and playing performance of fine turf, using industry standard methodology to record and analyse a range of variables. The unit will be suitable for learners who have a strong working knowledge of golf course management who are likely to have achieved SQA Advanced Certificate or Professional Development Award in Golf Course Management including the units *Turf Grass Ecology: An Introduction*, *Management of Turf Areas on Golf Courses* and *Soil Science for Turf Managers 1*.

Outcomes

On successful completion of the unit the learner will be able to:

- 1 Discuss the principles and practices of objective measurement of turf playing performance.
- 2 Create management objectives and formulate management programmes to optimise playing performance.

Credit points and level

1 SQA Credit at SCQF level 8: (8 SCQF credit points at SCQF level 8)

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Recommended entry to the unit

It is recommended that learners studying this unit should have completed SQA Advanced Certificate or Professional Development Award in Golf Course Management or similar awards. It would be an advantage if they had completed the units *Turf Grass Ecology: An Introduction, Management of Turf Areas on Golf Courses* and *Soil Science for Turf Managers 1*. There may be occasional instances where a learner would have sufficient relevant experience for entry to the unit without formal qualifications and in such instances entry would be determined on an individual basis.

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this unit specification.

There is no automatic certification of Core Skills or Core Skill components in this unit.

Context for delivery

If this unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

The unit is likely to be delivered as part of a Group Award, either SQA Advanced Diploma or Professional Development Award in Golf Management.

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

SQA Advanced unit specification: Statement of standards

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Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Where evidence for outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Learners should not know in advance the items on which they will be assessed, and different items should be sampled on each assessment occasion.

Outcome 1

Describe the principles and practices of objective measurement of turf playing performance.

Knowledge and/or Skills

- ◆ Benefits of good quality surfaces (agronomic, environmental, economic, playability)
- ◆ Identification, measurement and discussion of parameters for playing performance (smoothness, trueness, speed, firmness)
- ◆ Identification, empirical assessment and discussion of the factors upon which these parameters depend (sward composition, soil moisture, organic matter content)
- ◆ Characterisation of turf situations by practical measurement, recording and presentation of data

Outcome 2

Create management objectives and formulate management programmes to optimise playing performance.

Knowledge and/or Skills

- ◆ Analysis of different data sets as a method of understanding and explaining playing performance
- ◆ Establishment of SMART objectives in improving or maintaining the playing performance of a given turf area
- ◆ Formulation of a Course Policy Document and a detailed, integrated turf management programme designed to bring about the required changes and meet the objective
- ◆ Explanation of and justification for the programme

Evidence Requirements for this unit

Learners will need to provide evidence to demonstrate their Knowledge and/or Skills across all outcomes by showing that they can:

- ◆ identify, describe and contrast turf quality parameters and contributing factors.
- ◆ take measurements of relevant parameters and collate data.
- ◆ analyse data and present findings in an appropriate format.
- ◆ make recommendations for action and formulate a detailed maintenance programme.

SQA Advanced Unit Support Notes

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Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this unit

This unit is intended to allow the learner to understand why modern golf course managers find themselves working in an increasingly pressured environment with every turf management decision coming under scrutiny with reference to efficient and effective use of resources, environmental impact, social responsibility and the production of a quality playing surface. A full and detailed understanding of the physical growing environment allows good decisions to be made and these interdependent demands to be met. This unit will develop that understanding and should be delivered within that context, and with reference to the STRI Programme (Sports Turf Research Institute) which subjectively measures a range of performance parameters and provides correlation to agronomic factors. Analysis and understanding of data generated allows targeted, efficient and effective turf management actions to be taken and the effects of such actions monitored. It is the intention of the unit that successful learners will gain and develop skills in subjective measurement, planning of appropriate actions and communication of those decisions to appropriate others.

Guidance on approaches to delivery of this unit

This unit will be delivered using a variety of techniques and situations. It is anticipated that the scene will be set in the classroom by discussing the parameters and methods of measurement that are available for measuring playing performance. Learners will be introduced to the measuring equipment and trained in its use. A range of golf course situations will be visited (recommended minimum of three courses) and data collected from each on a sample basis, eg three greens per golf course. Physical samples will also be collected and subsequently analysed in the laboratory. Data should be inserted into appropriate software and analysed to establish relationships/correlations where they exist. Analysis of these relationships and correlations will allow SMART objectives to be set and detailed management programmes to be formulated. The subjective nature of scientific method will be maintained throughout, and the strength of this as a basis for decision making and clear communication emphasised. It is anticipated that professional skills of *Working with Others*, *Numeracy*, *Information and Communication Technology (ICT)* and *Communication* will also be enhanced through this approach.

Guidance on approaches to assessment of this unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

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- ◆ Outcome 1 could be assessed by a written or spoken report to identify, describe and discuss turf quality parameters and contributing factors. This will be supported by the learner, working within a group where appropriate, recording data from an agreed situation and presenting this in an appropriate format. A second set of data (either recorded directly or provided) will be discussed and the two sets contrasted. This could be achieved through a spoken presentation using appropriate software, or a written report.
- ◆ Outcome 2 could be assessed through a written or spoken report in the form of a Course Policy Document with a detailed maintenance programme designed to address any quality shortcomings identified in the analysis of data in Outcome 1. As this is a direct follow-on from Outcome 1 it could be presented within the same report or presentation as used for Outcome 1.
- ◆ The integration of assessments for both outcomes into an holistic assessment is the recommended assessment approach for this unit.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

The choice of delivery methods for the unit is particularly important as the unit lends itself to learning and teaching approaches which make it possible for learners to document and present suitable assessment evidence as they work through the unit.

Learners, for example, will be encouraged to create an e-portfolio, or write a blog or maintain a learning journal. They could, as an integral part of the learning and teaching process, be given guidance on how to structure and organise their material so that it is in a form that can easily be presented for assessment purposes.

Learners work will be authenticated through guidance provided above.

Hence, in devising suitable delivery methods, it may be helpful to bear in mind that evidence for assessment can be generated in many different ways, including:

Use of e-portfolios: embed or link media rich work such as audio, video, image; encourage peer review and feedback conversations; open online platform debate and discussion; learning journals; project documentation; research diaries and reading logs; reflection.

Use of blogs: embed or link media rich work such as audio, video, photographs, project documentation, learning journals, research diaries, online presentation.

Use of VLEs as collaborative assignment hubs: eg documentation of project research; events; work experience; forums.

Use of social media as interactive assignment hubs: eg documentation of project, research diary; events; work experience; forums.

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Methods such as those above link learning and teaching methods directly with the generation of formative and summative assessment evidence so that they become part and parcel of the same thing. The categories are not mutually exclusive, eg social media can be used as a hub for peer review.

Opportunities for developing Core and other essential skills

Depending on the learning and teaching approaches adopted, the unit provides opportunities for developing three components of the Core Skill of *Communication*, two components of *Problem Solving*, and two components of *Working with Others*.

Communication: Oral Communication at SCQF level 6

Learners will work, both individually or as part of a team developing a broad range of skills while communicating with other members of the team. They will need to convey information and contribute to classroom debates and discussions all of which will require them to use vocabulary, appropriate to the golf industry.

Communication: Written Communication (Reading) at SCQF level 6

In order to complete the unit, learners will have to become familiar with the technical terms used in the golf industry.

Communication: Written Communication (Writing) at SCQF level 6

In order to complete the unit, learners will have to generate evidence to demonstrate that they have achieved both outcomes. This could take the form of written communication. In this, they will be expected to present their work in a suitable manner using a recognised format. There are alternative ways to present written evidence such as by personal reports or by contributions to an online forum. Whatever approach is adopted, learners will be required to organise a substantial body of material and make use of complex language and specialist vocabulary.

Communication: Oral Communication at SCQF level 6

Learners will be required to provide evidence of various aspects of golf courses under investigation. The research may be complex and learners may also respond to questions or queries from others. Learners may also contribute to debates and discussions all of which will require them to use vocabulary appropriate to the audience involved.

Problem Solving: Critical Thinking at SCQF level 6

In order to complete the unit, learners will be expected to put some of the theories into practice while expanding both skill set and knowledge. The learner will have to compare and consider the choices available at different golf clubs/facilities.

Problem Solving: Planning and Organising at SCQF level 6

In order to complete the unit, learners will have to plan their activities and research. Learners will have to identify the type and availability of resources required by the project which will require them to engage in research activity.

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Information and Communication Technology (ICT): Accessing Information at SCQF level 6

In order to complete the unit, learners will be required to carry out research relevant to their chosen strategy. This is likely to involve the use of a range of ICT equipment and learners may need to carry out complex searches for information relevant to the chosen strategy. Learners are also likely to need to ensure that the data for their project is kept secure and well managed.

Information and Communication Technology (ICT): Providing/Creating Information at SCQF level 6

In the development of their idea from the initial concept through production of the final report, learners are likely to use *ICT* for a range of tasks including locating and integrating data from a range of sources.

Working with Others: Working Co-operatively with Others at SCQF level 6

The learner will, on occasion, be working as part of a team. During this phase the learner will to collaborate with others while considering individual preferences, working methods and shared goals within a task. Opportunities will arise for the learner to review and discuss their own performance with the aim of becoming more efficient and competent.

Other essential skills

Throughout the unit learners will develop knowledge and skills which are specifically intended to enhance their employability in the golf sector. Because these and other soft skills such as punctuality, presentability and efficient time management are readily transferable, they could also be applied to many other sectors and/or areas of employment.

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History of changes to unit

Version	Description of change	Date

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SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of SQA Advanced Qualifications.

FURTHER INFORMATION: Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 279 1000. Alternatively, complete our [Centre Feedback Form](#).

General information for learners

Unit title: Managing Turf Playing Performance (SCQF level 8)

This section will help you decide whether this is the unit for you by explaining what the unit is about, what you should know or be able to do before you start, what you will need to do during the unit and opportunities for further learning and employment.

This unit is about managing the performance of your turf areas using the tools of objective measurement and analysis. Within the unit you will use modern methods to measure and record turf characteristics including firmness, smoothness, trueness and green speed. Measurements will also be made of organic matter content, moisture content, and sward composition. The data generated will be used to look for correlations which, if established, will allow appropriate maintenance programmes to be formulated. The ideas for this approach come from the development of the STRI Programme' which has as its objective the production of consistent surfaces both within greens and across greens. Subjective measurement and tailored maintenance programmes are at the base of this programme and it is an understanding of these that we will aim to develop. The unit will build on your current understanding of turf management/soils/ecology and agronomy and equip you with the knowledge and skills for modern turf management at a highly professional level.