

June 2019

Training Specification

CECA Training Specification:

Groundworker Employer Occupational Brief & Training Specification



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Foreword

There can be no doubt about the importance of the role of the Groundworker for the UK construction industry. Whether building homes, commercial developments or infrastructure, most projects require Groundworks to deliver the vital substructure and site services needed to ensure timely progression.

Members of the Civil Engineering Contractors Association (CECA) build 80 per cent of all infrastructure and civil engineering in the UK. These members tell us that they see the Groundworker apprenticeship as a highly valued route for new entrants to join the sector. In recent research we found that it is the single most commonly used apprenticeship for member companies.

We want to ensure that every apprentice that works on member's sites has the right skills to deliver their role effectively and safely. For this reason we have been delighted to support the development of the Groundworker apprenticeship standard. To support this objective the recommendations of this Employer Occupational Brief and Training Specification will ensure that there is a consistent approach to the training and assessment of apprentices across England and potentially the other home nations of the United Kingdom.. It will act as a guide, shaping the provision of apprentices training in a way that has been developed by, and for, industry.



We see the publication of this document as being an important step on a journey towards ensuring that the United Kingdom can recruit the future Groundworks workforce that it needs to meet growing demand. This publication should not be seen as an end in itself, but as part of a broader programme to put in place an environment that attracts new entrants to become Groundworkers, and provides the right support to accelerate them into good quality Groundworks careers nationally.

I can give my commitment to support this continuing programme of works, and look forward to seeing this document being used to help focus the training of this new generation of Groundworkers.

Alasdair Reisner Chief Executive

Civil Engineering Contractors Association



Executive Summary

This document has been developed by the Employer Development Group (EDG) for the Groundworker Apprenticeship as outlined in the guidance provided by the Institute for Apprenticeships and Technical Education (IfATE). It is a recommendation in the form of a guide to organisations delivering training and organisations administrating End Point Assessments (EPA) for Groundworker Apprentices. It is not intended to be a set of rules, although criteria in this brief and the documents referenced may be used to monitor and determine the quality of provision. The EDG expect this brief to be used to ensure standardisation in the training and assessment of Groundworker Apprentices.

To confirm alignment with the qualifications provided by other home nations and support the registration and issue of cards the demand and outcome of this apprenticeship has been mapped to the National Occupational Standards for Construction and Civil Engineering Operations. For details please request a copy of the Task Scalar for Groundworker from CITB at Standards and Qualifications – standards.qualifications@citb.co.uk.

Section 1 Guidance Notes.

- 1. Training Objectives for this occupation have been developed by the EDG, Training delivery organisations must ensure each Training Objective 'standard' is met as a minimum trained outcome by each apprentice. To assist organisations with the preparation of a programme a Block Syllabus has been developed showing the minimum durations expected for the delivery of each subject. Organisations are encouraged to prepare a progressive programme using the Block Syllabus and the Training Objectives to ensure the requirements of the Apprenticeship Standard are achievable by every apprentice and that they are prepared for the EPA. Copies of these documents are included.
- 2. The Assessment Plan focuses on the EPA and includes details of the assessment gateway, quality assurance, the grading system and implementation. This brief highlights a number of documents designed to ensure consistent assessment in EPAs. Please see below.
- 3. The current versions of the documents outlined here are included below or a web link has been provided. As the nominated custodian organisation the Construction Industry Training Board (CITB) will ensure, as far as reasonably practicable, all referenced documents are aligned to the instructions provided by the EDG. Should the reader have any questions, comments or observations, in the first instance please contact CITB at Standards and Qualifications—standards. qualifications@citb.co.uk

Section 2 The Apprenticeship Standard for Groundworker

- 4. The standard was developed by the EDG following the IfATE criteria. Employer Development Groups must be a minimum of ten employers. The Groundworker EDG is employers representing organisations conducting Construction and Civil Engineering Operations and was supported by the Civil Engineering Contractors Association (CECA). It should be noted that there are members of the EDG who are not members of CECA.
- 5. Copyright to the Apprenticeship Standard and Assessment Plan for Groundworker has been assigned to the crown and is covered by the Open Government Licence which allows free publication. A copy of the approved standard and Assessment Plan can be viewed and downloaded from:

https://www.instituteforapprenticeships.org/apprenticeship-standards/groundworker/

Section 3 The Assessment Plan for Groundworker

6. EPA Organisations must follow the criteria detailed in the Assessment Plan. External Quality Control for the EPA for this apprenticeship is provided by the CITB. A copy of the Assessment Plan can be viewed and downloaded from: https://www.instituteforapprenticeships.org/apprenticeship-standards/groundworker/

Section 4 Block Syllabus

7. A block syllabus has been produced to assist training organisations in the formulation of a course programme. It shows the minimum duration of each subject as expected by the EDG. Subjects do not need to be delivered in the order shown, organisations are encouraged to produce a progressive programme. The block syllabus can be viewed below.

Section 5 Training Objectives

8. The Training Objectives show the tasks, the conditions under which the training for that task is to be delivered and the standard expected of the apprentice to confirm training is completed. The standard includes details of progressive testing and assessment designed to confirm assimilation and monitor the progress of each apprentice. This document provides clear guidance to course managers and instructors for planning the delivery of training. It may also be used to determine the quality of the training provided. Training Objectives can be viewed below.

Section 6 End Point Assessment

9. The EPA is a holistic assessment of the knowledge, skills and behaviours that have been learnt throughout the Apprenticeship. It is designed to ensure the apprentice has met the demands and outcomes defined in the standard and will ensure apprentices are consistently assessed across England. The EDG have developed a three phase assessment, a knowledge test, a skills test and a professional discussion supported by a portfolio that validates the experience gained and the application of the individual's skills and knowledge in the workplace. The professional discussion is undertaken by an independent assessor. Further details can be found in the Assessment Plan.

Groundworker ST0513 Block Syllabus As @160419

This syllabus shows the minimum time allocated to the delivery of each subject in 40 minute periods. It is advised that programmes be designed to cover 10 periods per day as shown on page 4.

It is up to the delivery centre to decide the time spent on theory lessons, classroom based and the time spent on practical lessons. Time for confirmation of learning is included in this block syllabus.

Serial	To Ref	Task	Subjects	Training Centre Periods	Employer Training Periods	Total Periods	Apprenticeship Reference		
1 Interp	1 Interpret information								
1	1.1	Interpret information for the work	Interpret Information 1	5	2	7	K3, S4		
2	1.2	Follow verbal work instructions	Interpret information 2	5	1	6	S3.		
3	1.3	Know how to solve problems with information	Problem solving 1	10	0	10	B6.		
4	1.4	Report and rectify inappropriate information	Reporting 1	4	2	6	K3.		
5	1.5	Identify types and sources of information	Interpret information 3	4	2	6	K3, S3.		
			Total section 1	28	7	35			

Serial	To Ref	Task	Subjects	Training Centre Periods	Employer Training Periods	Total Periods	Apprenticeship Reference
2 Comp	oly with	legislation					
6	2.1	Know how to maintain health and wellbeing	Self-management 1	20	5	25	K1.
7	2.2	Avoid risks by following health and safety information	Interpret information 4	5	3	8	K2, K7,S1, B10.
8	2.3	Know how to deal with substances hazardous to health (Asbestos)	Health and safety 1 - Hazardous substances	8	3	11	K2.
9	2.4	Know why when and how health and safety control equipment should be used	Health and safety 2 - Safety control equipment	5	2	7	K4.
10	2.5	Work at height and use access equipment	Health and safety 3 – Working at height	6	2	8	K9.
11	2.6	Know how and when to apply fire awareness	Health and safety 4 – fire awareness	5	1	6	K1, S1.
12	2.7	Carry out manual handling	Health and safety 5 – manual handling	10	3	13	K6, S6.
13	2.8	Store resources	Health and safety 6 – manual handling	2	3	5	K6, S6.
14	2.9	Identify activities that may cause health problems	Self-management 2	3	2	5	K1, S1.
15	2.10	Know the criteria for working below ground level	Workplace awareness 1	6	2	8	K11.

Serial	To Ref	Task	Subjects	Training Centre Periods	Employer Training Periods	Total Periods	Apprenticeship Reference
16	2.11	(641) Know how to identify and report hazards	Health and safety 7 - hazards	2	2	4	K2.
17	2.12	Know the criteria for working in confined spaces	Workplace awareness 2	3	1	4	K8.
18	2.13	Know how to comply with environmental responsibilities	Environmental aware- ness 1	20	2	22	K2.
19	2.14	Maintain a clear and tidy workspace	Workplace awareness 3	3	1	4	B7.
20	2.15	Dispose of waste	Environmental aware- ness 2	5	2	7	K2, S2.
21	2.16	Respond to emergencies, fires, spillages and injuries relating to the occupational activities	Health and safety 8 - emergencies	10	2	12	K1, S1.
22	2.17	Know how to report accidents	Health and safety 9 – accident reporting	2	2	4	K1.
23	2.18	Follow organisational procedures	Workplace awareness 4	5	2	7	S1, S2.
24	2.19	(641) Attend and contribute to site inductions	Health and safety 10 – site induction	2	5	7	K1, S1.
			Total section 2	122	45	167	

Serial	To Ref	Task	Subjects	Training Centre Periods	Employer Training Periods	Total Periods	Apprenticeship Reference
3 Selec	t and u	ise resources	•				
25	3.1	Select specified quality and quantity of resources	Selection and use of resources 1	10	2	12	S5.
26	3.2	Know the characteristics of resources	Selection and use of resources 2	10	2	12	S5.
27	3.3	Report and rectify inap- propriate resources	Problem solving 2	3	1	4	B6.
28	3.4	Calculate quantities of resources	Selection and use of resources 3	10	2	12	S5.
29	3.5	Apply resources as specified	Selection and use of resources 4	5	2	7	B7.
30	3.6	Select, use and maintain hand and power tools	Selection and use of resources 5	5	2	7	S5, S7.
31	3.7	Know the legal require- ments for operating plant, machinery and equipment	Selection and use of resources 6	1	1	2	S19.
32	3.8	Carry out user mainte- nance on plant, machin- ery and equipment	Selection and use of resources 7	20	10	30	S7.

Serial	To Ref	Task	Subjects	Training Centre Periods	Employer Training Periods	Total Periods	Apprenticeship Reference
3 Selec	t and ι	ise resources					
33	3.9	Operate and use plant, machinery and equip- ment	Selection and use of resources 8	20	3	23	S7.
34	3.10	Operate abrasive wheels	Selection and use of resources 9	5	1	6	K14, S7.
35	3.11	Know the criteria for ensuring sustainability	Environmental awareness 3	5	3	8	K1.
			Total section 3	94	29	123	
Serial	To Ref	Task	Subjects	Training Centre Periods	Employer Training Periods	Total Periods	Apprenticeship Reference
4 Follo	w poli	cies, procedures and docu	mentation				
36	4.1	Meet and monitor quality requirements	Work skills and knowledge 1	10	1	11	B7.
37	4.2	Supply information	Reporting 2	3	2	5	K3.
38	4.3	Record information	Reporting 3	5	2	7	K3.
39	4.4	Communicate with others	Communication 1	20	5	25	B1.
40	4.5	Build an evidence port- folio	Qualifications 1	15	25	40	Assessment plan.
41	4.6	Know how to complete card scheme registrations	Qualifications 2	2	0	2	Additional.
42	4.7	Know how to achieve qualifications and keep skills and knowledge up to date	Qualifications 3	5	1	6	Additional.
43	4.8	Know employee behaviours and responsibilities	Self-management 3	2	0	2	S2.
44	4.9	Know employment rights and responsibilities	Workplace awareness 5	2	0	2	S2.
45	4.10	Protect work	Environmental aware- ness 4	5	2	7	B7.
46	4.11	Know how to solve prob- lems	Problem solving 3	5	0	5	B6.
47	4.12	Complete work to programme	Workplace awareness 6	6	1	7	S2.
48	4.13	Interpret productivity targets	Workplace awareness 7	2	0	2	S2.
49	4.14	Report circumstances affecting the work pro- gramme	Workplace awareness 8	2	0	2	B8.
50	4.15	Estimate time require- ments	Workplace awareness 9	3	1	4	B5.
51	4.16	Work as part of a team	Communication 2	1	0	1	B4.
52	4.17	Consider the needs of other occupations	Communication 3	5	0	5	B2, B3.
			Total section 4	93	40	133	

Serial	To Ref	Task	Subjects	Training Centre Periods	Employer Training Periods	Total Periods	Apprenticeship Reference
5 Com	ply with	n contract information					
53	5.1	Demonstrate work skills gauge, mix, distribute, move, position, erect, secure, check, dismantle, store, remove, install, measure, mark out, sever, cut, drill, shape, lay, align, compact, spread, vibrate, finish, identify, protect, start, stop, replenish, fit, join, level, plumb, test, estimate, interpret, judge, explain, relay command, direct, guide, indicate, inform, instruct, sign, signal, construct, alter, assemble, adjust, reinforce, monitor and fix.	Work skills and knowledge 2	5	0	5	S2, S8, S9, S10, S12, S13, S14, S15, S16, S17, S18, S19.
54	5.2	Apply knowledge to safely follow methods of work	Work skills and knowledge 3	5	1	6	K1.
55	5.3	Provide information for Building Information Modelling	Reporting 4	2	1	3	K3.
56	5.4	Recognise and determine when specialist skills and knowledge are required	Problem solving 4	2	1	3	B9.
57	5.5	Determine specific requirements for heritage interests	Work skills and knowledge 4	2	0	2	S3.
58	5.6	Identify and follow installation quality requirements	Work skills and knowledge 5	1	1	2	S10, S11, S15.
59	5.7	Work with, around and in close proximity to plant, machinery and vehicles	Workplace awareness 10	5	1	6	S19.
60	5.8	Direct and guide the operations and movement of plant machinery and equipment	Work skills and knowledge 6	15	1	16	K6, S19.
			Total section 5	37	6	43	

Serial	To	Task	Subjects	Training Centre	Employer Training	Total Periods	Remarks
	Ref			Periods	Periods		_
		l (Modular pavement, Lay onstruction operations, E	_	_	construc	tion, Stru	ctural
61	6.1	(36) Prepare, mix and distribute concrete and mortars	Work skills and knowledge 7	10	1	11	K15, S8.
62	6.2	(172) Reinstate ground condition	Work skills and knowledge 8	15	1	16	K16, S18.
63	6.3	(250) Erect and dismantle access and working platforms	Work skills and knowledge 9	5	1	6	K14.
64	6.4	(360) install, maintain and remove work area protection and safety equipment	Work skills and knowledge 10	6	0	6	K10, S10
65	6.5	(361) Cut, drill and shape construction related materials	Work skills and knowledge 11	3	1	4	K14.
66	6.6	(632)Lay, place or apply construction related materials	Work skills and knowledge 12	5	0	5	K14, S12.
67	6.7	(366) Install street iron- work (metal, plastic and composite materials)	Work skills and knowledge 13	3	0	3	S15.
68	6.8	(367) Lay modular paving	Work skills and knowledge 14	10	0	10	S14.
69	6.9	(386) Lay preformed kerbs and channels	Work skills and knowledge 15	10	0	10	S13.
70	6.10	(370) Install, maintain and remove temporary excavation support	Work skills and knowledge 16	10	2	12	K12, S13.
71	6.11	(371) Pour concrete to form structures	Work skills and knowledge 17	5	5	10	K15, S13.
72	6.12	(372) Identify and mark the location of utilities apparatus and sub-struc- tures	Work skills and knowledge 18	25	0	25	K11, S16.
73	6.13	(373) Form and finish excavations manually	Work skills and knowledge 19	5	0	5	S18.
74	6.14	(400) Operate powered units, tools or pedestrian plant, machinery or equipment	Work skills and knowledge 20	10	0	10	S7.
75	6.15	(401) Set out secondary dimensional work control	Work skills and knowledge 21	20	0	20	S9.
76	6.16	(639) Install drainage	Work skills and knowledge 22	20	0	20	K13, S11.
77	6.17	(760) Control, direct and guide the operation of plant or machinery	Work skills and knowledge 23	10	5	15	S19.

Serial	To Ref	Task	Subjects	Training Centre Periods	Employer Training Periods	Total Periods	Remarks
78	6.18	(763) Install, construct, maintain, dismantle and remove temporary works	Work skills and knowledge 24	30	2	32	K12, S10.
79	6.19	(782) Locate and excavate to expose buried utility services	Work skills and knowledge 25	20	5	25	K11, S16.
Total section 6					23	245	

Serial	To Ref	Task	Subjects	Training Centre Periods	Employer Training Periods	Total Periods	Remarks
7 Addi	tional to	o match the apprentices	nip standard				
80	7.1	Groundworker technology	Work skills and knowledge 26	2	0	2	K4.
81	7.2	Modern and traditional construction methods	Work skills and knowledge 27	2	0	2	K5.
			4	0	4		

Summary:

Ref	Subject titles	Total Entries	Total Periods	Days
1	Interpret information	4	27	2 day (7)280 minutes
2	Problem solving	4	22	2 days (2)80 minutes
3	Reporting	4	21	2 days (1)40 minutes
4	Self-management	3	32	3 days (2)80 minutes
5	Health and safety	10	77	7 days (7)280 minutes
6	Workplace awareness	10	46	4 days (6)240 minutes
7	Environmental awareness	4	44	4 days (4)160 minutes
8	Selection and use of resources	9	111	11 days (1)40 minutes
9	Work skills and knowledge	27	291	29 days (1)40 minutes
10	Communication	3	31	3 days (1)40 minutes
11	Qualifications	3	48	4 days (8)320 minute
	Grand Total	81	750	71 days (40) = 75 days

Section Totals:

Section	Training Periods	Employer Training Periods	Total Periods	Days
1	28	7	35	
2	122	45	167	
3	94	29	123	

Totals

Training delivered at a training centre = 600 periods or 60 days

Training delivered at employers premises = 150 periods or 15 days

Total off-the-job training = periods 750 or 75 days.

This example shows layout and times, providers are required to develop a progressive programme using the Block Syllabus and Training Objectives.

	0800-0840	0845-0925	0930-1010		1040-1120	1125-1205	1210-1250	1250 1325	1330-1410	1415-1455	1455- 1510	1515-1555	1600-1640
Day1	A Theory subject	A Theory subject	A subject covering practical aspects of the theory		A Practical subject	Bluh	Bluh		A Practical subject	Bluh		Bluh	Clean and return equipment. Confirm by testing.
Location	Classroom	Classroom	Site visit		Yard	?	?		Yard	??		?	Classroom
Instructor	Mr X	Mr Y	Mr Z		Mr X				Mr Z				
Day 2													
Location								_					
Instructor				SRE				LUNC			SRE		
Day 3				BREAK				H			BREAK		
Location											-		
Instructor											-		
Day 4											-		
Location											_		
Instructor													
Day 5													
Location													
Instructor													

2019 TRAINING OBJECTIVES Version 3 Groundworker Apprenticeship ST0513 (England) AS @ 160419

Definitions for questions List - A simple list, numbered, list only what is required.

Define – *Provide a generally accepted definition.*

State – A single sentence, a less demanding form of 'define' or where there is no generally accepted definition.

Describe – Give a detailed word picture at least two sentences, a small explanation.

Explain – Give a clear account of, or reasons, include diagrams if appropriate.

Give - Provide without explanation (normally used with the instruction to give an example, or examples of...).

Identify – Select and name.

Outline – Give the most important features (less depth than either 'explain' or 'describe' but more depth than 'list').

1 Interpret Information (PC1)

Task	Conditions	Standards
1.1 Interpret information for the work K3, S4.	Theory: The student is given access to information and instruction on: a. how drawings, specifications, digital information, schedules, method statements, risk assessments and manufactures information are produced including reference to current standards and codes of practice b. how to read and extract information relevant to the Groundworker task c. the driving factors for clear unambiguous instruction and information d. the reason why following information and instructions is important e. the reason why accurate interpretation is important. Practical: The student is given practical instruction and practise on: f. how to interpret drawings, specifications, digital information, schedules, method statements, risk assessments and manufacturers' information.	Knowledge assessment: in groups of up to four 1.1.1. Complete a practical exercise on interpretation of information, list the information needed to support the Groundworker taken from examples of drawings, specifications, digital information, schedules, method statements, risk assessments and manufacturers' information, each group to feedback to the Instructor. Instructor to mark each group. Practical assessment: 1.1.2. Follow procedures and complete organisational documentation for at least two Groundworker related tasks: • Work portfolio cross referencing • Hazard reporting • A request for health and safety control equipment • A check list for loading or receiving stores and equipment.
1.2 Follow verbal work instructions S3.	Theory: The student is to be given instruction on: a. listening b. asking questions, what, why, who, how, when, where, what if, how well, how much c. breaking down instructions d eye contact Practical: e. an instructor designed exercise in giving verbal instructions	Knowledge assessment: 1.2.1. Instructor designed knowledge test covering points a, b, c and d

Task	Conditions	Standards
1.3 Know how to solve problems with information B6.	Theory: The student is to be given instruction on: a. typical problems found with information, poor electronic connections, dimensions and quantities that don't add up, undefined quality and unnamed contacts b. a typical organisational process for reporting and solving problems with information c. the importance of checking all the required information for the task is available d. asking questions, what, why, who, how, when, where, what if, how well, how much e. the consequence of not resolving problems with information Practical: f. working in small teams and given information with faults and/or problems students list	Knowledge assessment: 1.3.1 Instructor designed knowledge test covering all points in a, b, c, d and e Practical assessment: 1.3.2 Given information with at least ten problems each student to list identified problems and a potential solution for each.
	identified faults. g. group discussion on reporting problems and making suggestions on how problems with information could be overcome.	
1.4 Report and rectify inappropriate information K3.	Theory: The student is to be given instruction on: a. examples of inappropriate work and task information b. typical organisational reporting procedures c. the importance of following organisational reporting procedures and not guessing d. defined limits of individual responsibility to rectify inappropriate information.	Knowledge assessment: 1.4.1 Instructor designed knowledge test covering all points in a, b, c and d.
1.5 Identify types and sources of information K3, S3.	Theory: The student is to be given instruction on: a. how information is prepared, the job roles involved, e.g. manufacturer, designer, planner, surveyor and manager (See 1.1) b. information categories for a task including must know, should know and could know c. how to actively seek information for a task	Knowledge assessment: 1.5.1 Instructor designed knowledge test covering all points in a, b and c Practical assessment: 1.5.2 Instructor designed exercise to identify and list at least five types of information and their source.
	Practical: d. in groups of up to four complete an exercise to list the types and sources of information.	

2. (641) Comply with Legislation (PC2)

Task	Conditions	Standards
2.1. Know how to maintain health and wellbeing K1.2.1 Continued	Theory: The student is to be given instruction: a. on self-management including: • time and travel planning • diet and nutrition • fatigue, rest and sleep • personnel hygiene • maintenance and cleanliness of clothing, footwear and personal protective equipment • mental health, memory and thinking skills (cognitive impairment) • recognition of stress, anxiety and depression, potential sources of help • drugs and alcohol abuse b. the link between attitude and behaviour c. how Communication and Consultation in turn enables Cooperation, Coordination Collaboration, Control, Competence, establishing a Culture and Commitment at all levels (the 9 C's) d. Achieving Behavioural Change (ABC) including: dynamic risk assessment Stop, Think, Assess, Act, Report & Review (STAARR) and Think first, Act safe, Stop if hazardous and Keep safe (TASK).	Knowledge assessment: 2.1.1. Instructor designed knowledge test covering all points in a, b, c and d.
2.2. Avoid risks by following health and safety information K2, K7, S1, B10.	Theory: The student is to be given instruction on: a. risk assessment b. types of health and safety information, risk assessments, Control of Substances Hazardous to Health Assessments (COSHH), notices and signs c. the common hazards in groundwork and how these are controlled. Practical: d. interpret the meaning of pictorial warning and information signs. e. a live work environment f. recording equipment g. revision materials, hardcopies, web based systems and apps or a health, safety and environment e-learning package.	Knowledge assessment: 2.2.1. Successfully identify ten pictorial warning and information signs Practical assessment: 2.2.2. Working in pairs complete an exercise in a live working environment on hazard identification and reporting, risk assessment and the identification of the existing measures in place. Instructor to assess verbal feedback from each pair.

Task	Conditions	Standards
2.3. Know how to deal with substances hazardous to health (Asbestos) K2.	Theory: The student is to be given instruction that follows current legislation and Health and Safety Executive guidelines on: a. the definition of substance, "any natural or artificial substance, in solid, liquid, gaseous or vapour form and includes micro-organisms" b. how hazardous substances are categorised, e.g. very toxic, toxic, harmful, corrosive or irritant c. types of exposure, inhalation, absorption, injection and ingestion d. workplace exposure limits guidance note EH40 e. common effects of exposure f. how to read Control of Substances Hazardous to Health (COSHH) assessments g. the hierarchy of control including monitoring records and health surveillance h. products that asbestos can be found in i. how to identify asbestos.	Knowledge assessment: Instructor designed knowledge test: 2.3.1. Identify the category of hazardous substance shown as pictogram labels 2.3.2. Questions covering points a, c, d, e, f, g, h and i Practical assessment: 2.3.3. Given at least three contained and labelled substances complete with COSHH assessment sheets each student must explain the precautions that must be taken when the substance is used. (See 2.2 and 2.4)
2.4. Know why when and how health and safety control equipment should be used K4.	Theory and Practical: The student is to be given instruction on: a. health and safety control equipment, selection and maintenance including collective control measures, personal protective equipment, respiratory protective equipment, gas detectors, extraction and ventilation equipment, safety lighting and safety lines b. special health and safety measures for working with hazardous substances, on contaminated sites and near too or over water.	Knowledge and practical assessment: 2.4.1. Select, prepare and/or don health and safety control equipment for at least three Instructor defined tasks or situations 2.4.2. Explain the reason for the selection.

Task	Conditions	Standards
2.5. Work at height and use access equipment K9.	Theory: The student is to be given instruction that follows current legislation and Health and Safety Executive guidelines: a. the working at height hierarchy b. types, uses and characteristics of access equipment, working platforms, safety cages and edge protection c. types and uses of health and safety control equipment for working at height, including safety harnesses used as personnel protective equipment d. user inspection criteria for equipment used to work at height (Scaff-tags) e. equipment storage, maintenance and defect reporting f. on the overall consequence of error e.g. impact on family, relations, friends, work colleagues, site, company, legal implications and self. Practical: e. erect, dismantle and store at least three of the following: ladders, crawler boards, stepladders, platform steps, proprietary towers, trestle platforms, mobile scaffold towers, proprietary staging or podiums.	 Knowledge assessment: 2.5.1. The student must be able to: State the hierarchy of considerations for working at height List at least three types of access equipment and state their uses List generic storage, maintenance and defect reporting procedures for access equipment List at least three types of health and safety control equipment for working at height and state their limitations List at least three types of safety harness and state the criteria for use. Practical assessment: given a work at height scenario, each student is to: 2.5.2. Select, inspect and don personnel protective equipment for working at height including a selection of safety harnesses and lanyard's 2.5.3. Identify faulty equipment and complete the defect reporting process.
2.6. Know how and when to apply fire awareness K1, S1.	Theory and Practical: The student is to be give instruction on: a. how fire starts, spreads and the fire triangle b. types of signage and the importance of following instructions c. fire hazards d. action on discovering a fire, alarm, fire service, evacuation and exclusion zones e. actions to be taken when hearing a fire alarm f. the effects of fire on people, business and the environment g. fire prevention, storage, segregation, work permits and the role of fire wardens h. types of fire extinguishers and their uses for fighting a fire i. a list of typical fire hazards found in groundwork operations.	 Knowledge assessment: An Instructor designed knowledge test 2.6.1. to include questions on: The effects of fire Fire prevention The fire triangle 2.6.2. List types, uses and identify at least four fire extinguishers. Practical assessment: 2.6.3. Successfully complete a fire drill practice, one student to act as the Fire Marshall.

Task	Conditions	Standards
2.7. Carry out manual handling K6, S6.	Theory and Practical: delivered by a qualified manual handling Instructor to include: a. the current legislation for manual handling b. the definition of manual handling, lifting, putting down, pushing, pulling, carrying and moving c. muscular and skeletal disorders and the physiology of the spine d. assessment of manual handling tasks including risks, the dangers of poor manual handling, the types of injuries that can occur and the potential effects on health e. when mechanised lifting aids are appropriate f. how to control and complete individual manual handling tasks and tasks requiring more than one person. g. handle and move at least three of the following; sheet material, loose material, bagged or wrapped material, fragile material, tools and equipment, components or liquids	Knowledge assessment: 2.7.1. State the current legislation for manual handling 2.7.2. State the definition of manual handling 2.7.3. State the process for planning a manual handling task 2.7.4. List five dangers of manual handling and give examples of the injuries that can occur as a result of poor manual handling 2.7.5. Identify at least five types of mechanical lifting aids and state their uses. Practical assessment: 2.7.6. As an individual, complete at least three manual handling tasks for different loads, each task to be assessed by an Instructor 2.7.7. Move loads using mechanical aids 2.7.8. Students work together to handle and move an item requiring more than one person, task to be assessed by Instructor.
2.8. Store resources K6, S6.	Theory: The student is to be given instruction on: a. the typical resources used in groundwork b. typical storage methods, equipment and protection needs c. how resources including tools and equipment are stored d. how to make maximum use of space including resources to be used first, avoiding double handling and the consideration of preparation needs e. how to stack pallets Practical: f. prepare a storage area.	Knowledge assessment: 2.8.1. An Instructor designed knowledge test covering points a, b, c, d & e Practical assessment: 2.8.2. Stack items on a pallet 2.8.3. Define at least three items used in groundwork and give the storage requirements for each

Task	Conditions	Standards
2.9. Identify activities that may cause health problems K1, S1.	Theory: The student is to be given instruction on: a. activities that may cause health problems, noise, vibration, repetition and contamination b. the common causes of ill health in the construction industry c. typical risks to health caused by groundwork tasks deafness, white finger (hand arm vibration) and poisoning d. the importance of reporting unassessed hazards e. Achieving Behavioural Change (ABC) including: dynamic risk assessment Stop, Think, Assess, Act, Report & Review (STAARR) and Think first, Act safe, Stop if hazardous and Keep safe (TASK). Practical: Given copies of existing risk assessments: f. identify the reasons for specific control measures.	Knowledge assessment: 2.9.1. An Instructor designed knowledge test covering points a, b, c, d, e and f
2.10. Know the criteria for working below ground level K11.	Theory: The student is to be given instruction on: a. the training requirements including working at height (see 2.5), the danger of fumes (see 2.3) b. protection measures including barriers, vehicle stops, access and egress requirements c. the below ground environment, damp, low light and poor ventilation d. controlling groundwater e. the potential of collapse or cave in and the ideal angle of repose	Knowledge assessment: 2.10.1. An Instructor designed knowledge test covering points a, b, c, d & e
2.11. (641) Know how to identify and report new hazards K2.	Theory: The student is to be given instruction on: a. typical hazards caused by changes in the work environment b. a typical hazard reporting procedure c. dynamic risk assessment (see 2.1 and 2.2)	Knowledge assessment: 2.11.1. An Instructor designed knowledge test covering points a, b and c

Task	Conditions	Standards
2.12. Know the criteria for working in confined spaces K8.	Theory: The student is to be given instruction on: a. the definition of a confined space, the law b. the specific training requirements for working in a confined space c. what the dangers are d. safe systems of work e. emergency procedures	Knowledge assessment: 2.12.1. An Instructor designed knowledge test covering points a, b, c, d & e
2.13. Know how to comply with environmental responsibilities K2.	Theory: The student is to be given instruction on: a. a definition and the common terminology used with respect to the environment and environmental control b. the effects of groundwork on the environment c. the actions taken to reduce the effects of groundwork on the environment d. the potential costs to organisations for not being environmentally aware e. what types of precautions can be taken to protect the environment and how these are maintained f. effective waste management. Practical: The student is given practical instruction and practise on: g. storage of hazardous materials, suitable containers and building bunds h. clean up operations, use of spill kits, digging up and removing, absorbent granules, plant nappies and absorbent socks	Knowledge assessment: An Instructor designed knowledge test 2.13.1. State definitions for the environment and environmental control 2.13.2. List and describe at least three responses for the effects of groundwork on the environment and potential costs for not being environmentally aware 2.13.3. List at least three precautions that can be taken to protect the environment and explain how these can be maintained 2.13.4. Outline what effective waste management looks like. Practical assessment: as part of a team: 2.13.5. From containers and Control of Substances Hazardous to Health assessments identify the storage criteria for at least three contained hazardous materials or items (see 2.3) 2.13.6. Build a bund, the bund is to be tested by the Instructor using 'water' 2.13.7. Clean up the 'water' as if it was a hazardous liquid and dismantle the bund.
2.14. Maintain a clear and tidy workspace B7.	Theory: The student is to be given instruction on: a. why work areas must be kept clear and tidy, emergencies, evacuation and productivity (see 2.8) b. storage of tools, equipment, plant, machinery and resources in the workspace Practical: d. given a untidy workspace (instructor disrupts the classroom while students are out) students are tasked with making it clear and tidy in preparation for work.	Knowledge assessment: 2.14.1. An Instructor designed knowledge test covering points a, b, c & d

Task	Conditions	Standards
2.15. Dispose of waste K2, S2.	Theory: The student is to be given instruction that follows current legislation and Health and Safety Executive guidelines in: a. the legislative requirements b. effective waste management c. recycling criteria d. why and how to segregate waste e. how groundwork materials can be reused f. the consequences of poor waste disposal on the environment and the potential costs to the organisation in accordance with current legislation Practical: g. litter pick. h. access to a site with a waste sorting and recycling system	Knowledge assessment: 2.15.1. An Instructor designed knowledge test covering points a, b, c, d e, and f Practical assessment: 2.15.2. Students, working in groups of up to three, assess the waste disposal arrangements on a site and identify the process in place. 2.15.3. Students to present their observations to site staff responsible for waste disposal and make suggestions for potential improvements.
2.16. Respond to emergencies, fires, spillages and injuries relating to the Groundworker activities K1, S1.	Theory: The student is to be given instruction on: a. how operatives are expected to respond to emergencies including fires, spillages, injuries, falls and rescues b. the importance of seeking information on how to respond (see 2.6, 2.13 and 2.17) c. typical emergencies related to the occupational activity, how to respond and how to avoid them d. examples showing limits of organisational and individual authority	Knowledge assessment: 2.16.1. An Instructor designed knowledge test covering points a, b, c and d
2.17. Know how to report accidents K1.	Theory: The student is to be given instruction on: a. why accidents and near misses must be reported b. a typical accident reporting procedure c. how to report accidents and near misses d. the common causes of fatal accidents in the construction industry	Knowledge assessment: 2.17.1. An Instructor designed knowledge test covering points a, b, c and d
2.18. Follow organisational security procedures \$1, \$2.	Theory: The student is to be given instruction on: a. the cost of damage and theft on individuals and organisations b. typical organisational security procedures c. examples of incidents related to groundwork Practical: d. each student to provide evidence of how they follow their organisational security procedures	Knowledge assessment: 2.18.1. An Instructor designed knowledge test covering points a, b, c and d Practical assessment: 2.18.2 Instructor to check entry in work based portfolio

Task	Conditions	Standards
2.19. (641) Attend and contribute to site inductions K1, S1.	Theory: The student is to be given instruction on: a. the format of a typical site induction b. what is expected from the student at site inductions c. asking questions, what, why, who, how, when, where, what if, how well, how much Practical: d. each student to provide evidence of attending a site induction	Knowledge assessment: 2.19.1. An Instructor designed knowledge test covering points a, b and c Practical assessment: 2.19.2. Instructor to check entry in work based portfolio

3. Select and use resources (PC3)

Task	Conditions	Standards
3.1. Select specified quality and quantity of resources \$5.	Theory: The student is to be given instruction on: a. calculating quantity b. matching resource to specified quality requirements of a task c. the difference between quality control and quality assurance Practical: d. given a selection of the same resource and a task specification, select the required quality and quantity.	Knowledge assessment: 3.1.1. An Instructor designed knowledge test covering points a, b and c Practical assessment: 3.1.2. given a selection of resources and a task specification, select the required quality and quantity
3.2. Know the characteristics of resources S5.	Theory: The student is to be given instruction on: a. the characteristics of the typical resources used in groundwork b. how resources are used and the methods applied within groundwork	Knowledge assessment: 3.2.1. List characteristics and uses of typical resources
3.3. Report and rectify inappropriate resources B6.	Theory: The student is to be given instruction on: a. examples of inappropriate resources b. typical organisational reporting procedures to be followed when inappropriate resources are identified c. the importance of not using what is available to 'get the job done' without confirmation d. defined limits of individual responsibility to rectify inappropriate resources Practical: e. a group discussion on the use and misuse of resources f. a group discussion on organisational reporting procedures.	Knowledge assessment: 3.3.1. An Instructor designed knowledge test covering points a, b, c and d Practical assessment: 3.3.2. An exercise in the selection of resources (see 3.1.2)

Task	Conditions	Standards
3.4. Calculate quantities of resources S5.	Theory: The student is to be given instruction on: a. how to calculate quantity, length, volume and weight (see 3.1) b. how to estimate quantities from information (see 1.1) c. the cost incurred through waste and how to limit wasted resources Practical: d. an exercise focused on the calculation of quantities used in groundwork.	Knowledge assessment: 3.4.1. An Instructor designed knowledge test covering points a, b and c Practical assessment: 3.4.2. Calculation of quantities, lengths, volumes and weights of resources used in groundwork (prepare a cutting list)

3. Select and use resources (PC3)

Task	Conditions	Standards
3.1. Select specified quality and quantity of resources S5.	Theory: The student is to be given instruction on: a. calculating quantity b. matching resource to specified quality requirements of a task c. the difference between quality control and quality assurance Practical: d. given a selection of the same resource and a task specification, select the required quality and quantity.	Knowledge assessment: 3.1.1. An Instructor designed knowledge test covering points a, b and c Practical assessment: 3.1.2. given a selection of resources and a task specification, select the required quality and quantity
3.2. Know the characteristics of resources S5.	Theory: The student is to be given instruction on: a. the characteristics of the typical resources used in groundwork b. how resources are used and the methods applied within groundwork	Knowledge assessment: 3.2.1. List characteristics and uses of typical resources
3.3. Report and rectify inappropriate resources B6.	Theory: The student is to be given instruction on: a. examples of inappropriate resources b. typical organisational reporting procedures to be followed when inappropriate resources are identified c. the importance of not using what is available to 'get the job done' without confirmation d. defined limits of individual responsibility to rectify inappropriate resources Practical: e. a group discussion on the use and misuse of resources f. a group discussion on organisational reporting procedures.	Knowledge assessment: 3.3.1. An Instructor designed knowledge test covering points a, b, c and d Practical assessment: 3.3.2. An exercise in the selection of resources (see 3.1.2)

3.4. Calculate quantities of resources S5.	Theory: The student is to be given instruction on: a. how to calculate quantity, length, volume and weight (see 3.1) b. how to estimate quantities from information (see 1.1) c. the cost incurred through waste and how to limit wasted resources Practical: d. an exercise focused on the calculation of quantities used in groundwork.	Knowledge assessment: 3.4.1. An Instructor designed knowledge test covering points a, b and c Practical assessment: 3.4.2. Calculation of quantities, lengths, volumes and weights of resources used in groundwork (prepare a cutting list)
3.5. Apply resources as specified B7.	Theory and Practical: The student is to be given instruction on: a. identifying the appropriate specification for the resource b. methods of applying resources used in groundwork.	Knowledge assessment: 3.5.1. An Instructor designed knowledge test covering points a and b Practical assessment: 3.5.2. an exercise to match specifications to resources
3.6. Select, use and maintain hand and power tools S5, S7.	The student is to be given instruction on: a. how to use five common hand tools used in groundwork b. how to maintain hand tools Practical: The student to be given instruction that follows current legislation and the Health and Safety Executive guidelines delivered by a qualified approved instructor on: a. the legislative requirements for power tools b. the inspection criteria for three power tools used in groundwork c. the test criteria for power tools used in groundwork (Portable Appliance Testing) d. methods of record keeping. e. the operation and use of power tools.	Practical assessment: Instructor designed exercise: 3.6.1. Each student to select and use at least five hand tools for a given task 3.6.2. Each student to explain the maintenance criteria for each hand tool 3.6.3. Each student to complete an inspection of two power tools 3.6.4. Operate and use two power tools for a given task (link to 6.5)
3.7. Know the legal requirements for operating plant, machinery and equipment \$19.	Theory: The student is to be given instruction on: a. the legal criteria and requirements for operating groundwork plant, machinery and equipment b. plant, machinery and equipment terminology c. the role of the plant operator in Groundworker operations	Knowledge assessment: an Instructor designed knowledge test: 3.7.1. State the legal criteria for operating groundwork plant, machinery or equipment 3.7.2. Provide definitions for at least ten plant, machinery and equipment terms 3.7.3. State the role of the plant operator in groundwork operations

2.9. Carry out user	Theory and Bractical	Knowledge acceptant. An Instructor designed knowledge test
3.8. Carry out user maintenance on plant machinery and equipment S7.	Theory and Practical: The student is given access to at least two items of static Groundworker plant e.g. pump, generator, compressor, agitator, pressure washer, lighting set, including manufacturers' instructions and instruction on: a. inspection requirements, what, when, where and how b. pre-start checking to include coolant, oils (engine, hydraulic and grease), fuel, electrics (gauges, lights, indicators and alarms) on at least two items of plant c. start machines, practical instruction on at least two items d. complete functional and running checks on at least two items e. make operator adjustments (oils, grease points, refuel) on at least two items f. close down and prepare at least two items for reuse g. clean and prepare plant, machinery and equipment for transportation h. reporting faults and defects i. store plant, machinery and equipment j. what to do if there is a spillage, the potential effects on the environment and how to dispose of hazardous waste (linked to 2.13) k. the importance of maintenance including efficiency, effectiveness and economy l. the role of the plant mechanic.	Knowledge assessment: An Instructor designed knowledge test 3.8.1. Explain the importance of maintenance to include efficiency, effectiveness and economy 3.8.2. Explain how to report faults and defects 3.8.3. Explain how to recognise and determine when additional specialist skills and knowledge are required 3.8.4. Explain the role of the plant mechanic. Practical assessment: 3.8.5. By demonstration conduct and successfully complete prestart checks on one item of plant or machinery and: Successfully identify inspection requirements Start and complete running checks Make operator adjustments Maintain the item for continuous running (running checks and refuelling) Record information Prepare the machine for transportation Explain how to report faults and defects.
3.9. Operate and use machinery and equipment S7.	Theory and Practical: The student is given an item of pedestrian controlled plant e.g. whacker plate, compressor and tools, compacting equipment, pressure washer and instruction on: a. machine operation b. controlling pedestrian operated plant c. tool selection, fitting attachments, running checks and closing down d. operator maintenance.	Practical assessment: 3.9.1. Conduct and successfully complete prestart checks on one item of plant, machinery or equipment and: 3.9.2. Operate, control, fit tools or attachments and close down the machine in accordance with the manufacturers' instructions.
3.10. Operate abrasive wheels K14, S7	Theory and Practical: The student is to be given instruction on: a. hazards involved in the use of abrasive wheels b. type and speed markings including rpm compatibility c. the coding that identifies the composition of abrasive wheels, resin bonded and grain size d. a method of inspecting wheels for damage e. how to mount and fit abrasive wheels including instruction on the function of components f. how to make adjustments, dressing wheels, the rest g. operate the wheel to cut materials.	Practical assessment: 3.10.1. Identify damaged wheels 3.10.2. Change a wheel or disc, Instructor to check fitting before operation 3.10.3. Operate the disc cutter to cut or abrade material in accordance with manufacturer's instructions. Knowledge assessment: an Instructor designed knowledge test: 3.10.4. state the current hazards involved in using abrasive wheels 3.10.5. Interpret type, composition and speed markings for at least three different discs.

3.11. Know the criteria for ensuring sustainability K1	Theory: The student is to be given instruction on: a. the definition of sustainability e.g. economy, society and environment, "something that improves the quality of human life while supporting the ecosystem" b. the advantages and disadvantages of sustainability	Knowledge assessment: 3.11.1. State the definition of sustainability 3.11.2. Students to take part in a discussion on the advantages and disadvantages of sustainability led and monitored by the Instructor to include b, c d and e.
	c. at least three examples of using groundwork resources in a sustainable way d. the cost to organisations that do not apply sustainability e. segregation of waste (see 2.15).	

4. Follow Policies, Procedures and Documentation (PC4 and 6)

Task	Conditions	Standards
4.1. Meet and monitor quality requirements B7.	The student is to be given instruction on: a. the definition of quality. b. the contract process including, marketing, receipt of enquiries, tendering, design, drawing preparation, estimating, securing the contract, project purchasing, project documentation, mobilisation and set up, construction safe systems of work (permits, waste control, records), demobilisation, quantity surveying, remedial actions and client feedback. c. how to read a specification and interpret what quality is required. d. how to question the specification criteria and report discrepancies.	Knowledge assessment: 4.1.1. An Instructor designed knowledge test for conditions a, b, c and d Practical assessment: 4.1.2. Under Instructor control each student to complete a practical exercise extracting and interpreting information relating to quality from a task specification and seek further information by questioning the quality criteria. Students to feedback individually to the Instructor, the Instructor is to mark each student.
4.2. Supply information K3.	Theory: The student is to be given instruction on: a. types of records used in groundwork including; operational logs, plant maintenance logs, inspection check sheets, time sheets, Confirmation of Verbal Instructions (CVI), Request For information (RFI) and daily diary b. the importance of supplying accurate information c. who to report information too d. how information reported on groundwork activities is used e.g. progress, future planning, Building Information Modelling (BIM) (See 5.3), development and lessons learnt Practical: The student is given practical instruction and practise on: e. the use of recording equipment, recording and reporting information on groundwork activities on site. Completing a portfolio.	Knowledge assessment: 4.2.1. List three types of records used in groundwork. 4.2.2. State the reason why information must be accurate. 4.2.3. State who information is reported too. 4.2.4. List how reported information on Groundworker activities is used. Practical assessment: 4.2.5. Instructor to provide individual feedback on the portfolio and the information collected for condition, accuracy and presentation.

Task	Conditions	Standards
4.3 Record information K3.	Theory: The student is to be given instruction on: a. what, why, when and how to record information for groundwork b. working examples of information collection and recording c. why recorded information needs to be accurate Practical The student is given practical instruction and practise on: d. completing inspections, using recording equipment, how to inspect an item of plant machinery or equipment (see 3.6, 3.8)	Knowledge assessment: 4.3.1. List the types of information that needs to be collected and recorded during groundwork operations 4.3.2. State why recorded information needs to be accurate. Practical assessment: 4.3.2. Inspect equipment and complete a record of the inspection, Instructor to assess and mark completed records.
4.4 Communicate with others	Theory: The student is to be given instruction on: a. listening b. asking questions, what, why, who, how, when, where, what if, how well, how much c. interpretation of information and barriers to communication, psychological and technical d. dealing with conflict (Conflict modes instrument Thomas and Kilman) e. the importance of confirming and following work instructions.	Knowledge assessment: an Instructor designed knowledge test: 4.4.1. List the criteria for asking questions 4.4.2. List at least four of the psychological and technical barriers to communication 4.4.3. List the five recognised conflict handling methods. Practical assessment: an Instructor led exercise on: 4.4.4. Communication and listening skills
4.5. Build an evidence portfolio	Theory and Practical: The student is to be given administrative equipment and instruction on: a. collecting work place evidence that is valid, authentic, current and sufficient b. evidence collection planning c. how to present and reference evidence d. how to cross reference evidence by completing a cross referencing matrix e. how to produce and maintain a portfolio contents list.	Practical assessment: 4.5.1. Produce a portfolio containing:
4.6 Know how to complete card scheme registrations Additional	Theory: The student is to be given instruction on: a. the current card schemes available to Groundworker b. the reason and value of card registration schemes c. an explanation of the typical knowledge and revision required for successful registration and renewal Practical: d. sample application forms and writing equipment, or access to web based registration materials.	Knowledge assessment: 4.6.1. Assessment by Instructor questioning for conditions a, b and c. Practical assessment: 4.6.2. All required details entered on application for registration forms. Forms to be checked and constructive feedback given to each student by the Instructor.

Task	Conditions	Standards
4.7. Know how to achieve qualifications and keep skills and knowledge up to date Additional	Theory: The student is to be given instruction on: a. qualifications and progression routes available to the Groundworker b. accessing qualification registration systems c. types of vocational evidence d. instruction on how to collect, collate and present work based skills and knowledge evidence including how to write a curriculum vitae. e. how to cross reference evidence against different qualification criteria f. a demonstration on how prior learning can be used toward achievement of qualifications Practical The student is given practical instruction and practise on: g. portfolio building using administrative equipment, folders, prepared forms, divider sheets or h. access to an electronic recording system i. continuous professional development, knowledge and skills maintenance	Knowledge assessment: 4.71. List qualifications and progression routes available to the Groundworker 4.7.2. State how to register for qualifications 4.7.3. State methods of maintaining skills and knowledge by continuous professional development. Practical assessment: 4.7.4. Present work based skills and knowledge evidence for assessment. The evidence presented must contain cross referenced information and there must be at least one item that refers to prior learning.
4.8. Know employee behaviours and responsibility \$2.	Theory: The student is to be given instruction on: a. what is generally expected of the employee by employers b. the groundwork environment site security (see 2.18) c. protection of the general public d. the types and definitions of groundwork and employment contracts.	Knowledge assessment: an Instructor designed knowledge test: 4.8.1. List at least six employer expectations 4.8.2. List the general requirements for the security of a groundwork site 4.8.3. State at least five methods of providing protection to the general public 4.8.4. State and give a definition for at least two types of groundwork contract 4.8.5. State the definition of at least one type of employment contract.
4.9. Know employment rights and responsibilities \$2	Theory: The student is to be given instruction on: a. employment rights and responsibilities, to include the nine targets.	Knowledge assessment: an Instructor designed knowledge test: 4.9.1. List and provide examples for the nine targets of employment rights and responsibilities.

Task	Conditions	Standards
4.10. Protect work B7	Theory: The student is to given instruction on: a. why work needs to be protected b. common methods used to protect work in groundworks c. preparing completed work for transportation	Knowledge assessment: Instructor designed knowledge test: 4.10.1. List common methods used to protect work in groundworks.
4.11. Know how to solve problems B6	Theory: The student is to given instruction on: a. the seven steps to problem solving: • identify the issues • understand everyone's interests • list the possible solutions (options) • evaluate the options • select an option or options • document the agreement • agree contingencies, monitor and evaluate	Knowledge assessment: Instructor designed knowledge test: 4.11.1. List the steps to problem solving.
4.12. Complete work to programme S2	Theory: The student is to be given instruction on: a. work programming b. time scales c. productivity targets (see 4.13) d. how to estimate time (see 4.15) Practical: e. in groups of up to three given information for a task, estimate times and produce a programme.	Knowledge assessment: 4.12.1. List types of work programme 4.12.2. Explain how timescales are identified 4.12.3. Describe what a productivity target is and why they are used 4.12.4. Describe two methods of estimating time.
4.13. Interpret productivity targets S2	Theory: The student is to be given instruction on: a. how productivity targets are set b. what is output c. how productivity is expressed in construction d. tips for improving productivity	Knowledge assessment: 4.13.1. An instructor designed knowledge test for conditions a, b, c and d.

Task	Conditions	Standards
4.14. Report circumstances affecting the work programme	Theory: The student is to be given instruction on: a. the importance of reporting circumstances which affect the work programme b. typical organisational reporting procedures for circumstances which affect the work programme c. examples of groundwork circumstances that may affect the work programme	Knowledge assessment: 4.14.1. An Instructor designed knowledge test for conditions a, b and c.
4.15. Estimate time requirements B5	Theory: The student is to be given instruction on: a. getting and confirming the details of the task b. breaking the task down into stages (bottom-up) c. considering the whole time taken on previous tasks then breaking the task down (top-down) d. comparing task times	Knowledge assessment: 4.15.1. An Instructor designed knowledge test for conditions a, b, c and d.
4.16. Work as part of a team B4	Theory: The student is to be given instruction on: a. the definition of teamwork, cohesion, common goal, positive, supportive, enhance others b. what's needed for a team to work, communication (see 4.4) c. the advantages of working as a team, efficiency, task focus and mutual support Practical: d. as a group identify the qualities of a good team member and those of a successful team.	Knowledge assessment: 4.16.1. An Instructor designed knowledge test for conditions a, b and c.
4.17. Consider the needs of other occupations B2, B3.	Theory: The student is to be given instruction on: a. occupations related to and/or reliant upon the Groundworker b. specific activities that provide support c. examples of where things can go wrong and the consequences.	Knowledge assessment: 4.17.1 An Instructor designed knowledge test for conditions a, b and c.

5. Comply with Contract Information (PC5)

Task	Conditions	Standard
5.1. Demonstrate work skills S2, S8, S9, S10, S11, S12, S13, S14, S15, S16, S17, S18, S19.	Theory: By way of introduction the student is to be given instruction that: a. outlines all tasks a Groundworker will be expected to undertake including: gauge, mix, distribute, move, position, erect, secure, check, dismantle, store, remove, install, measure, mark out, sever, cut, drill, shape, lay, align, compact, spread, vibrate, finish, identify, protect, start, stop, replenish, fit, join, level, plumb, test, estimate, interpret, judge, explain, relay command, direct, guide, indicate, inform, instruct, sign, signal, construct, alter, assemble, adjust, reinforce, monitor and fix b. shows by film or pictures construction and civil engineering operations Practical: c. a site visit and group discussion on tasks identified.	Knowledge assessment: 5.1.1 An Instructor designed knowledge test for conditions a, b and c. Practical assessment: 5.1.2 Students to list tasks identified and present to instructor.
5.2. Apply knowledge to safely follow methods of work K5.	Theory: The student is to be given instruction on: a. thinking before acting b. planning tasks c. how to challenge behaviour that does not align to a safe method of work.	Knowledge assessment: 5.2.1 An Instructor designed knowledge test for conditions a, b and c.
5.3. Provide information for Building Information Modelling (BIM) K3.	Theory: The student is to be given instruction on: a. what is business information modelling (BIM) b. where BIM is appropriate in groundwork Practical: c. a demonstration of how BIM is used in groundwork.	Knowledge assessment: 5.3.1. An Instructor designed knowledge test for conditions a and b.
5.4. Recognise and determine when specialist skills and knowledge are required B9.	Theory: The student is to be given instruction on: a. knowing when something is beyond your capability, resilience, patience and humility b. developing a non-judgemental approach c. organisational procedures for requesting specialist assistance d. understanding confidentiality and professional boundaries e. discussion on Groundworker activities that may require specialist skills and knowledge.	Knowledge assessment: 5.4.1. An Instructor designed knowledge test for conditions a, b, c, d and e.

Task	Conditions	Standard
5.5. Determine specific requirements for heritage interests S3.	Theory: The student is to be given instruction on: a. the definition of heritage b. consideration of the heritage environment c. examples of when a Groundworker may find items of historical interest Practical: d. group discussion to identify situations where specialist heritage knowledge and skills will be required.	Knowledge assessment: 5.5.1. An Instructor designed knowledge test for conditions a, b and c.
5.6. Identify and follow the installation quality requirements S10, S11, S15.	Theory: The student is to be given instruction on: a. where to find quality criteria b. getting it right first time c. the cost of rework d. the difference between quality control and quality assurance.	Knowledge assessment: 5.5.1. An Instructor designed knowledge test for conditions a, b, c and d.
5.7. Work with, around and in close proximity to plant, machinery and vehicles \$19.	Theory: The student is to be given instruction on: a. the dangers of working with, around and in close proximity of moving plant, machinery and vehicles b. the duties, roles, responsibilities of the plant, machinery and vehicle operator c. signs and signals, emergency stop signal d. typical plant, machines and vehicle that support Groundworker tasks	Knowledge assessment: 5.7.1 An Instructor designed knowledge test for conditions a, b, c and d.

Task	Conditions	Standard
5.8. Direct and	Theory and practical:	Knowledge and practical assessment:
guide the operations	The student is to be given instruction by a qualified and registered plant, machinery and	6.2.1. Each student to complete a recognised and registered guide and
and movement of	vehicle guide or marshaller instructor on:	control the movement of plant, machinery and vehicles test.
plant, machinery and	a. duties, roles responsibilities and any limitations of guiding or marshalling	6.2.2. Each student to complete a recognised and registered guide the
vehicles	b. the differences between directing and guiding operations, directing and guiding	operation of plant and machinery test based upon excavators.
K6, S19.	movement and slinging and signalling	
	c. the hierarchy of control measures for plant, machinery and vehicle movement	
	d. examples of work management traffic plans	
	e. plant, machinery and vehicle access and egress to and from the public highway	
	f. the characteristics of typical plant, machinery and vehicles used in groundworks	
5.8. Continued	operations	
	g. examples of driver visibility aids	
	h. the effects that ground conditions, features, proximity hazards and weight has on plant,	
	machinery and vehicle movement	
	i. the position of the guide or marshaller	
	j. how to and the importance of briefing drivers and operators on the communication	
	methods in use	
	k. how to check marshalling areas and maintaining exclusion zones	
	l. communication methods, hand signals, hand signalling equipment, verbal and electronic	
	communication equipment	
	m. guide plant machinery and vehicles including articulated vehicles:	
	 into restricted areas, width, length and height 	
	forward	
	• reverse	
	into exact position	
	n. guide the operation of plant machinery e.g. excavators, dumpers.	

6 Operational (Modular pavement, Laying kerbs and channels, Drainage construction, Structural concreting, Construction operations, Excavation and reinstatement)

Task	Conditions	Standard
6.1. (36) Prepare, mix and distribute concrete and mortar K15, S8.	Theory: The student is to be given instruction on: a. health and safety considerations when working with concrete and mortar including high alkalinity, industrial dermatitis and Control of Substances Hazardous to Health b. the constituents of concrete and mortars, their roles, aggregates (types and sources), cement (including cement replacements Pulverised Fuel Ash and Ground Granulated Blast furnace Slag), sand and water c. concrete and mortar mix design, grade, sulphate resistance, self-compacting and concrete and mortar for special circumstances d. admixtures (retardants, accelerants and plasticisers) e. distribution methods	Practical assessment: in groups of up to three 6.1.1. Mix concrete or mortar to a given specification by hand 6.1.2. Mix concrete or mortar to given specification by machine.
6.2. (172) Reinstate ground condition K16, S18.	Theory and Practical: The student is to be given instruction on: a. backfilling materials including suitable excavated materials and new materials b. types of surfaces including. hard top; flags, blocks, concrete, blacktop c. replant cultivated areas and grassed areas, relay turf	Knowledge and Practical assessment: An instructor designed practical test in groups of up to three 6.2.1. Backfill a trench at least 0.6m wide x 3m long x 1.2 m deep by hand, compacting as required. 6.2.2. Replace hardtop surfaces at least 1.8m x 0.9m, flags, blocks, concrete (link to 6.1), blacktop 6.2.3. Replant cultivated areas.
6.3. (250) Erect and dismantle access and working platforms K9	The student is to be given instruction on the use of: a. measures for working at height (see 2.5) b. ladders and crawler boards c. stepladders and platform steps d. proprietary towers e. trestle platforms f. mobile scaffold towers g. proprietary staging and podiums	 Knowledge assessment: An instructor designed knowledge test: 6.3.1. Know the criteria for working at height (link to 2.5). Practical assessment: in groups of up to five erect, use and dismantle at least two of the following: Ladders and crawler boards Ladders and platform steps Proprietary towers Trestle platforms Mobile scaffold towers Proprietary staging and podiums.

Task	Conditions	Standard
6.4. (360) install, maintain and remove work area protection and safety equipment K10, S10.	Theory and Practical: The student is to be given instruction on the installation, maintenance and removal of: a. barriers and fences b. protection and safety notices c. safety lighting d. methods of reporting the work undertaken (link to 4.2)	Knowledge and Practical assessment: An instructor designed test, students in groups of up to five, given a drawing and method statement erect barriers and or fences and install: 6.4.1. protection and safety notices 6.4.2. Safety lighting 6.4.3. Report the work completed (link to 4.2).
6.5. (361) Cut, drill and shape construction related materials K14.	Theory and Practical: The student is to be given instruction on: a. how to select tools to cut, drill or shape (link to 3.6) b. how to read and transfer measurements c. how to interpret tolerances d. how to cut, drill or shape the following materials:	Knowledge and practical assessment: An instructor designed test, each student to: 6.5.1. Mark and cut one material 6.5.2. Mark and drill one material 6.5.3. Mark and shape one material.
6.6. (362)Lay, place or apply construction related materials K14, S12.	Theory and practical: The student is to be given instruction on laying, placing or applying construction materials by oneself or with the assistance of others: a. top soil or subsoil (linked to 6.2) b. granular fill (linked to 6.2) c. cohesive fill d. concrete (linked to 6.1) e. cementitious (linked to 6.1) f. bituminous g. geotextiles	Knowledge and Practical assessment: An instructor designed practical test, students in groups of up to four given a drawing and method statement 6.6.1. Lay materials, top soil or subsoil or granular fill 6.6.2. Place materials concrete or bituminous or geotextiles 6.6.3. Apply cementitious materials. (link to 6.1)

Task	Conditions	Standard
6.7. (366) Install street ironwork (metal, plastic and composite materials) S15.	Theory: The student is to be given instruction on the installation of street ironwork: a. types of street ironwork (metal, plastic, concrete and composite materials) b. examples of poorly installed ironwork and the consequences c. in new pavements and in reinstated pavements Practical: d. install access covers and frames e. install gully grates and frames	Knowledge and Practical assessment: An instructor designed practical test, students in groups of up to three are to install: 6.7.1. Access covers and frames (link to 6.16) 6.7.2. Gully grates and frames (link to 6.16).
6.8. (367) Lay modular paving S14.	Theory: The student is to be given instruction on: a. how to place bedding (link to 6.6) b. the differences and characteristic of bound or unbound pavement c. types of modular paving including; block paving, brick paving, stone and/or concrete setts, flags, natural stone rough cut (riven and/or cropped), natural stone uniformly cut (sawn in dimension) Practical: d. how to lay modular paving manually for new pavements e. how to reinstate modular paving (linked to 6.2)	Knowledge assessment: 6.8.1. An instructor designed knowledge test on conditions a, b and c, student in groups of up to four. Practical assessment: Students in groups of up to four 6.8.2. Reinstate an area, at least 2m x 2m, of modular paving (link to 6.2).
6.9. (368) Lay preformed kerbs and channels \$13.	Theory and Practical: The student is to be given instruction on: a. laying kerbs (link to 6.1, 6.5, 6.6 and 6.16) b. laying channels c. laying combined drainage and kerb systems (link to 6.1, 6.5, 6.6 and 6.16)	Knowledge and Practical assessment: An instructor designed practical test, students in groups of up to four: 6.9.1. Lay 12m of kerbs or channels or combined drainage and kerb systems (link to 6.1, 6.5, 6.6 and 6.16).
6.10. (370) Install, maintain and remove temporary excavation support K12, S17.	Theory and Practical: The student is to be given instruction on the installation, maintenance and removal of temporary excavation support systems: a. proprietary systems e.g. drag box, trench box, manhole box b. open and closed support systems c. piling systems e.g. diaphragm wall, trench sheets, sheet piles, secant support or contiguous support d. bespoke support systems	Knowledge and Practical assessment: An instructor designed practical test, students in group of up to four: 6.10.1. Questions on the installation, maintenance and removal criteria for proprietary, open and closed support, piling and bespoke systems 6.10.2. Install one proprietary system 6.10.3. Move the proprietary system in the trench 6.10.4. Complete a maintenance inspection on the installed system 6.10.5. Remove and clean the system ready for reuse.

Task	Conditions	Standard
6.11. (371) Pour concrete to form structures K15, S13.	The student is to be given instruction on: a. the importance of time management when working with concrete b. methods of transporting and placing concrete on site for groundwork operations including, pumping, wet tremie, dry tremie and skip c. curing behaviour of concrete, the effects of temperature and moisture d. how to protect concrete for curing e. how to clean equipment used to handle concrete.	Knowledge assessment: An Instructor designed knowledge test: 6.3.1. State at least three reasons for good time management when working with concrete 6.3.2. List at least three methods of transporting and placing concrete. Practical assessment: given a drawing and method statement as a team: 6.3.3. Move, handle, pour, position and lay concrete 6.3.4. Protect concrete for curing 6.3.5. Clean all equipment used to complete practical test.
	Practical: The student is given practical instruction and practise on: f. moving, handling, pouring, positioning and laying concrete g. protecting concrete for curing h. cleaning concrete handling equipment.	
6.12. (372) Identify and mark the location of utilities apparatus and sub-structures K11, S13.	The student is to be given instruction on: a. types of survey b. buried service plans c. visual checks how to identify utilities apparatus and substructures d. storage, functional check and use of electronic location instruments e. interpretation of signals f. how to locate service joints, changes of direction and depth g. all marking used to show the location of utilities apparatus and services.	Knowledge and Practical assessment: 6.12.1 Achievement of the Level 2 Award in Utility Location and Avoidance or agreed alternative.
6.13. (373) Form and finish excavations manually \$18.	The student is to be given instruction on: a. trench support (link to 6.10) b. working with plant, machinery and equipment (link to 5.8) c. how to recognise changes in ground conditions, ground water conditions, soil types and excavation stability d. how to monitor and check the accuracy of the excavation.	Knowledge and Practical assessment: An instructor designed practical test in groups of up to four: 6.13.1. Form and finish an excavation 0.6m wide x 3m long x 1.2 m deep (link to 6.2).

Task	Conditions	Standard
6.14. (400) Operate powered units, tools or pedestrian plant, machinery or equipment	Theory and Practical: See 3.9.	Practical assessment: See 3.9.
6.15. (401) Set out secondary dimensional work control S9.	Theory and Practical: The student is to be given instruction on setting out secondary dimensional control: a. the use of measuring and marking tools b. how to transfer and transpose measurements, levels and marks c. how to mark straight lines (180 degrees) d. how to mark levels e. how to mark depths f. how to mark areas g. how to mark heights h. how to mark angles, right angles (90 degrees), obtuse angles (between 90 and 180 degrees including batters) and acute angles (between 0 and 90 degrees).	Knowledge and Practical assessment: Given a site drawing and method statement, instructor to assess and mark each student: 6.15.1. Each student to set out a trench 0.6m wide x 3m long x 1.2 m deep (link to 6.13) 6.15.2. Each student to set out for the production of a batter.
6.16. (639) Install drainage K13, S11.	Theory and Practical: The student is to be given instruction on: a. excavation for this installation of drainage systems b. how to install, replace and test pipe work systems including clay, concrete, metal and plastic and their joints and connection c. inspection chambers including; brick, concrete, metal and plastic d. surface water systems including; cells, culverts, high capacity, linear, balancing ponds, interceptors, recycling equipment, soak-a-ways, sustainable urban drainage systems e. foul water systems including; cess pools, septic tanks, reed beds, treatment plants f. how to surround pipe with specified materials g. how to place backfill to trench using compacted and free drainage materials.	Knowledge and Practical assessment: An instructor designed practical test for each student given a drawing and method statement: 6.16.1 Set out (link to 6.15) 6.16.2. Install or replacing a drainage system to include pipework, three joints and an inspection chamber 6.16.3. Test the drainage system.

Task	Conditions	Standard
6.17. (760) Control, direct and guide the operation of plant or machinery \$19.	Theory and Practical: See 5.8.	Knowledge and Practical assessment: See 5.8
6.18. (763) Install, construct, maintain, dismantle and remove temporary works K12, S10	Theory and Practical: The student is to be given instruction on the installation, construction, maintenance, dismantling and removal of temporary works items to allow or enable permanent construction including: a. protective screens, hoardings and covers (link to 6.4) b. access and egress routes c. supports (link to 6.10) d. supporting structures e. removal equipment f. diverting equipment g. site facilities h. stabilisation	Knowledge and Practical Assessment: An instructor designed practical test, students in groups of up to four, given a site drawing and method statement: 6.18.1. Install protective screens (link to 6.10) 6.18.2. install trench support (link to 6.10) 6.18.3. Divert existing drainage for replacement work (link to 6.16)
6.19. (782) Locate and excavate to expose buried utility services K11, S16.	Theory and Practical: The student is to be given instruction on: a. identifying markings indicating buried utility services (link to 6.12) b. the operation and use of digging tools, plant, machinery and equipment around utility services (link to 5.8 and 6.13) c. using visual indicators and digging trial holes d. providing for the recognition and protection of the utility services, sub-structure and the natural environment during operational activities e. installing supports for exposed utility services.	Knowledge and Practical assessment: An instructor designed practical test, students in groups of up to three given a site drawing and method statement: 6.19.1. Identify the type of utility service from markings 6.19.2. Expose utility services 6.19.3. Install supports for exposed utility services

7. Additional Outcomes

Task	Conditions	Standard
7.1. Groundworks technology K4	Theory: The student is to be given instruction on: a. key factors and systems of work appropriate to different work environments and industry sectors including civil engineering, private residential and commercial	Knowledge assessment: An instructor designed knowledge test. 7.1.1. Questions on the following environments:
7.2. Modern and traditional construction methods K5	Theory: The student is to be given instruction on: a. the differences between modern and traditional construction methods and the physical and environmental factors when undertaking construction work and their potential impacts including but not limited to: • precast concrete • timber frame • cold formed steel • permanent modular • cavity wall • brick and block	Knowledge assessment: An instructor designed knowledge test. 7.2.1. questions on the following methods and their environmental impacts: Precast concrete Timber frame Cold formed steel Permanent modular Cavity wall Brick and block

Definitions for questions

List - A simple list, numbered, list only what is required.

Define – *Provide a generally accepted definition.*

State – A single sentence, a less demanding form of 'define' or where there is no generally accepted definition.

Describe – Give a detailed word picture at least two sentences, a small explanation.

Explain – Give a clear account of, or reasons, include diagrams if appropriate.

Give – Provide without explanation (normally used with the instruction to give an example, or examples of...).

Identify – Select and name.

Outline - Give the most important features (less depth than either 'explain' or 'describe' but more depth than 'list').