0174-38 Level 3 Advanced Technical Extended Diploma in Forestry and Arboriculture (1080)

2023

Contents

Introduction

This document has been prepared by the Chief Examiner and Principal Moderator; it is designed to be used as a feedback tool for centres in order to enhance teaching and preparation for assessment. It is advised that this document is referred to when planning delivery and when preparing candidates for City & Guilds Technical assessments.

This report provides general commentary on candidate performance in both the synoptic assignment and theory exam. It highlights common themes in relation to the technical aspects explored within the assessment, giving areas of strengths and weakness demonstrated by the cohort of candidates who sat assessments in the 2023 academic year. It will explain aspects which caused difficulty and potentially why the difficulties arose.

The document provides commentary on the following assessments:

Year 1
- Pathway 1 (Forestry) and Pathway 2 (Arboriculture)
  - 0174-012/512 Level 3 Forestry and Arboriculture – Theory exam (1)
    - March 203 (Spring)
    - June 2023 (Summer)
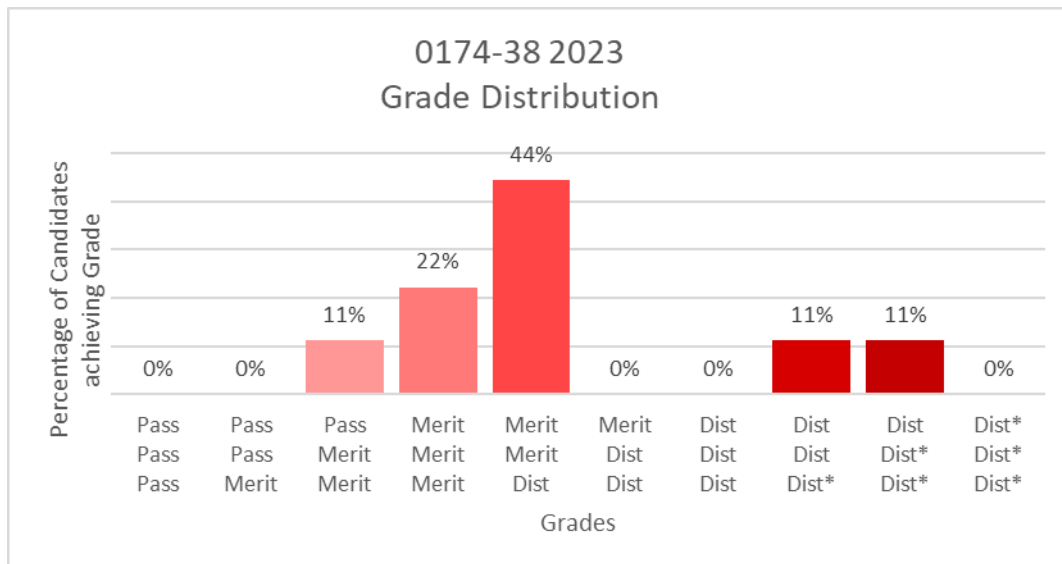 - 0174-011 Level 3 Forestry and Arboriculture – Synoptic Assignment (1)

Year 2
- Pathway 1 (Forestry) and Pathway 2 (Arboriculture)
  - 0174-014/514 Level 3 Forestry and Arboriculture - Theory exam (2)
    - March 2023 (Spring)
    - June 2023 (Summer)
 - 0174-013 Level 3 Forestry and Arboriculture - Synoptic assignment (2)

Qualification Grade Distribution

The grade distribution for this qualification is shown below:

Pathway 1 - Level 3 Advanced Technical Extended Diploma in Forestry and Arboriculture (Forestry) (1080)

Pathway 2 - Level 3 Advanced Technical Extended Diploma in Forestry and Arboriculture (Arboriculture) (1080)
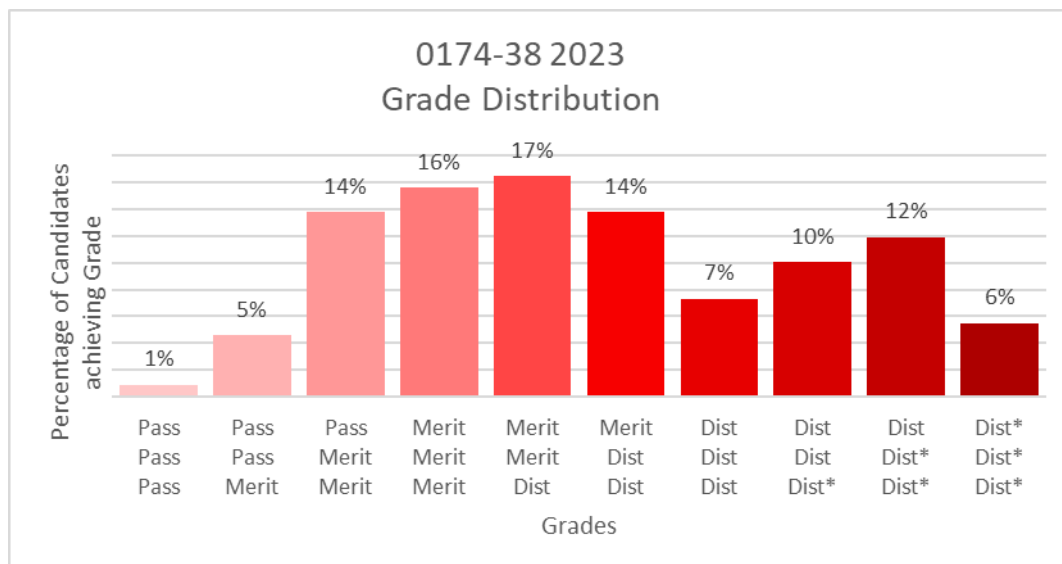
Please note City & Guilds will only report qualification grades for candidates who have achieved all of the required assessment components, including Employer Involvement, optional units and any other centre assessed components as indicated within the Qualification Handbook. The grade distribution shown above could include performance from previous years.

Theory Exams – Year 1

Grade Boundaries
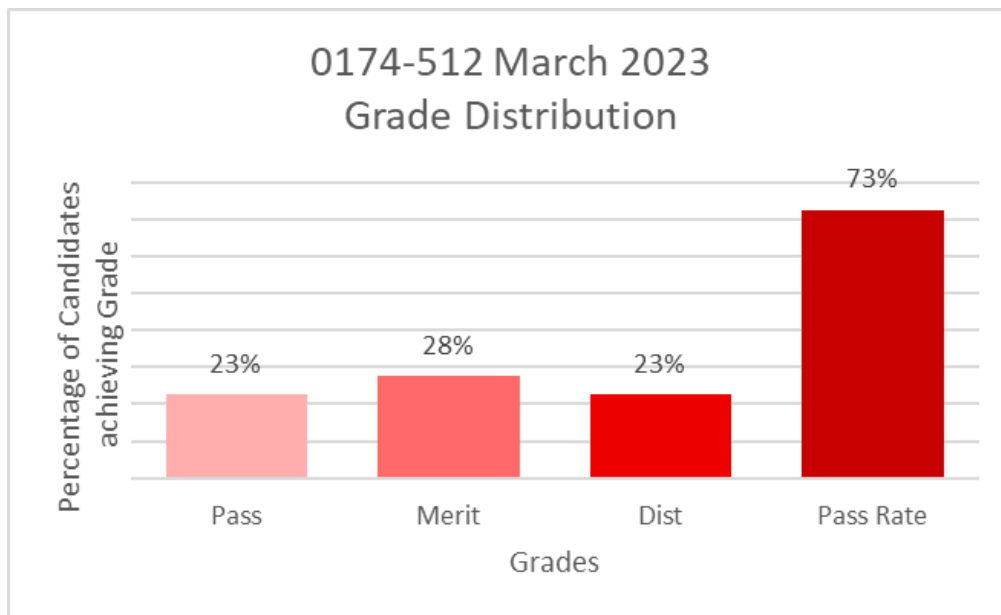
Assessment: 0174-512
Series: March 2023 (Spring)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Total marks available	60
Pass mark	28
Merit mark	35
Distinction mark	42

The graph below shows the approximate distributions of grades and pass rate for this assessment using the above boundary marks:

Assessment: 0174-512
Series: June 2023 (Summer)

Below identifies the final grade boundaries for this assessment.

Total marks available	60
Pass mark	28
Merit mark	35
Distinction mark	42

The graph below shows the approximate distributions of grades and pass rate for this assessment using the above boundary marks:
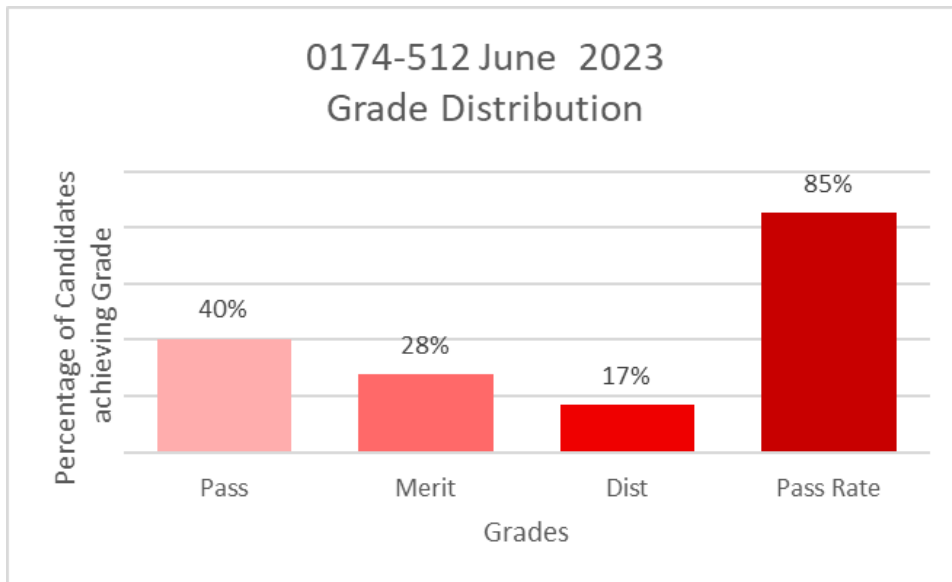
0174-512 June 2023
Grade Distribution

Percentage of Candidates achieving Grade

Pass	Merit	Dist	Pass Rate
40%	28%	17%	85%

Grades

Chief Examiner Commentary

0174-512 Level 3 Forestry and Arboriculture - Theory exam

Series 1 – March 2023

Candidates showed a good range of knowledge across the exam and produced a wide range of responses within the units being assessed. Most questions were answered with some degree of accuracy and depth, but not in all areas.

Candidates usually score well where questions are more practical in nature, however on this occasion, this was not evident on questions about post-start checks and methods for felling difficult trees. Candidates are advised to read the questions carefully before answering.

Once again, there was a general lack of knowledge regarding plant science. The question on topic of cell division was not answered well which continued the theme of previous series where candidates have struggled with the more detailed areas of this unit. There was also some confusion between soil types and soil characteristics that lead to marks being dropped by some candidates. Many candidates did not know what amelioration meant.

The extended response question (ERQ) provided an appropriate level of differentiation between different levels of candidate knowledge and understanding. Many gained some marks for demonstrating knowledge, however few demonstrated depth of knowledge focussing on causes or what to do in the given scenario and context. Few candidates drew the information together, whilst most candidates only focussed on one aspect. At the lower end, there was little detail. Most responses were in the middle bracket but capped by a lack of breadth or depth. The higher scoring candidates performed well, with very thorough responses showing a good range of depth and breadth.

Themes where most candidates did well:
- Almost all candidates scored well in questions relating to saw use and felling.
- Many candidates could name the pest affecting a given scenario.
- Most candidates scored well on the living and non-living causes of ill health, although some candidates showed some confusion.
- Unlike previous series, the questions relating to P&D were well answered.

Themes where most candidates struggled:
- Very few candidates could describe a type of cell division.
- Many candidates failed to score marks on structured questions, ie consisting of part a) and b). These questions were on the same topic but not directly linked and candidates were expected to be able to achieve marks on both. Many candidates provided irrelevant answers which were not linked to the questions.
- Some candidates confused flywheel with sprocket.
- Some candidates did not read the question around post-start checks or tended to describe the process rather than explain the importance.

The higher scoring candidates performed well across all areas. They read the questions carefully and gave appropriate responses.

Centres should encourage candidates to read the questions carefully in order to improve their chances of scoring full marks.

Centres are advised to help candidates develop their use and understanding of technical terminology across the qualification.

Candidates are also strongly advised to practice examination techniques when preparing for this exam to fully understand the requirements of the question before attempting to answer, particularly those that require candidates to demonstrate reasoning. Explain type of questions require candidates to demonstrate reasons and justifications to support the statements or cause and effect.

Past papers and marking schemes are available on the City and Guilds website which should be used for exam practice.

City & Guilds also offers a technical exam guide to support the work on the exam technique.

All documents are available to download from [Technicals in Horticulture and Forestry & Arboriculture qualifications and training courses | City & Guilds (cityandguilds.com)](https://www.cityandguilds.com)

Past papers and marking schemes: Documents – Level 3 – Assessment materials – Past Papers tabs
Exam guide: Documents – Level 3 – Assessment materials

Series 2 – June 2023

Candidates were able to pick up marks across a wide range of units and demonstrated good knowledge throughout the exam. A wide range of responses were produced, and most questions were answered with some degree of accuracy and depth, but not in all areas.

Candidates tended to score well on the more practical questions. This was seen with high marks awarded in all questions relating to unit 350. Some candidates talked about wider parts of the hung tree process, but this did not disadvantage them in this instance.

Once again, there was a lack of knowledge shown regarding plant science. The question on cell division was answered very poorly which continued the theme of previous years where candidates have struggled with the more detailed areas of this unit.

The higher ability candidates performed well in the ERQ, many gained some marks for demonstrating knowledge, however few demonstrated depth of knowledge focussing on 'causes' or 'what to do'. Few candidates drew the information together, whilst most candidates only focussed on one or two considerations with managing a tree in a public open space that is known to have internal decay.

Themes where most candidates did well:
- Almost all candidates identified three faults on a chainsaw.
- Many candidates described the two stages of dealing with a hung tree although some focused on the wider context rather than the operation itself.
- Most candidates scored quite well on PD question although, some talked about VTA in general terms rather than explaining the significance of a specific VTA symptom.
- The P&D question was well answered. This is most likely due to it being relatively straightforward rather than a sudden improvement in knowledge in this unit.

Themes where most candidates struggled:
- Very few candidates could explain differences between meiosis and mitosis.
- With some structured questions. This type of question does provide good stretch and challenge within the paper. While the question was structured, the parts were not actually linked so a lack of depth is present here.
- Some candidates did not read the question around dealing with a hung tree and tended to describe the process rather than explain the stages.

Themes that discriminated between candidates:
- The stronger candidates performed well across all areas. They read the question and gave appropriate responses.
- The stronger candidates scored well in question relating to tree ill health where they explained factors that predispose a tree to ill health. The weaker candidates stated factors or described symptoms and scored lower marks, as a result.
- As is intended, the EQR discriminated between different candidates' levels. At the lower end, there was little detail. Most responses were in the middle bracket but capped by a lack of breadth or depth. Some responses were very thorough with a good range of depth and breadth.

Centres should encourage candidates to read the questions carefully in order to improve their chances of scoring full marks.

Centres are advised to help candidates develop their use and understanding of technical terminology across the qualification.

Candidates are also strongly advised to practice examination techniques when preparing for this exam to fully understand the requirements of the question before attempting to answer, particularly those that require candidates to demonstrate reasoning. Explain type of questions require candidates to demonstrate reasons and justifications to support the statements or cause and effect.

Past papers and marking schemes are available on the City and Guilds website which should be used for exam practice.

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Past papers and marking schemes: Documents – Level 3 – Assessment materials – Past Papers tabs
Exam guide: Documents – Level 3 – Assessment materials
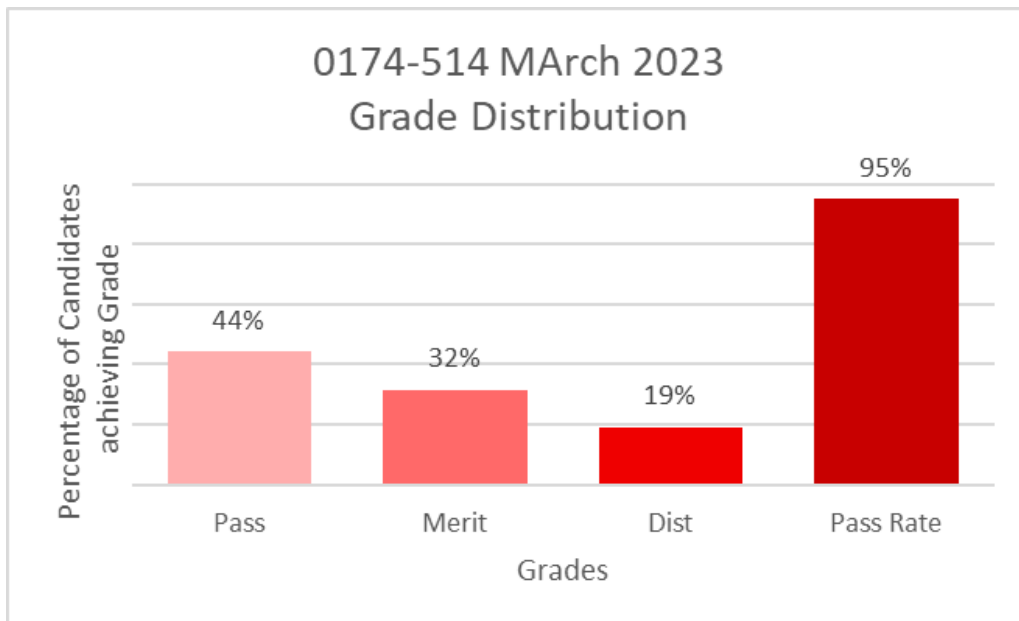
Theory Exams – Year 2

Grade Boundaries

Assessment: 0174-514
Series: March 2023 (Spring)

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel;

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	43

The graph below shows the approximate distribution of grades and pass rates for this assessment:
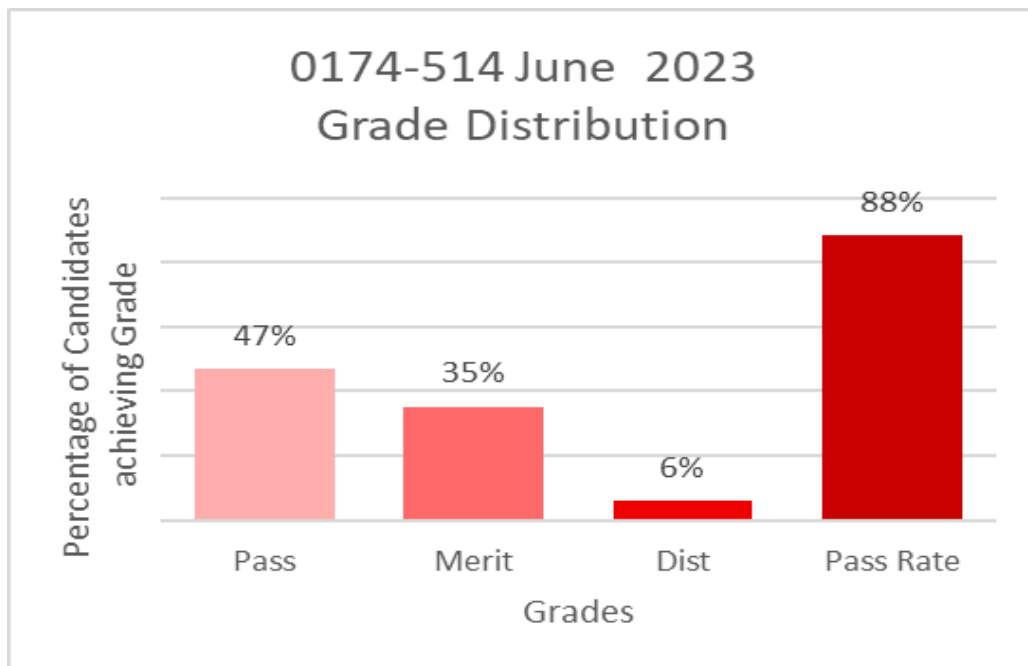

0174-514 MArch 2023 Grade Distribution

Assessment: 0174-514
Series: June 2023 (Summer)

Below identifies the final grade boundaries for this assessment.

Total marks available	60
Pass mark	24
Merit mark	33
Distinction mark	43

The graph below shows the approximate distributions of grades and pass rate for this assessment using the above boundary marks:

Chief Examiner Commentary

0174-514 Level 3 Forestry and Arboriculture - Theory exam

Series 1 – March 2023

Most candidates made an attempt at all questions, with greater success in the knowledge-based questions than those requiring explanations / descriptions, where some candidates failed to provide the details required to demonstrate their knowledge and understanding.

Strengths and weaknesses

Although there was a good range of knowledge and understanding shown across the units being tested, areas of particular strength included fundamental knowledge of the features that help with the identification of trees, factors to consider when planting trees, basic tree pathology and questions related to practical knowledge e.g. tools for coppicing in both the short and extended answer questions.

Questions relating to the more conceptual and theoretical aspects were answered less well, with many candidates appearing to be unfamiliar with the NVC classification system, implications of tree failure and being able to explain how self-optimisation assists in preventing failure in trees. Other areas of weakness related to mulch, the benefits many of which were overstated, and to some of the technical factors of tree inspection methods.

Extended answer question

The extended answer question was answered extensively by a small number of candidates, but many answers lacked sufficient breadth or depth to gain marks within the top band; some providing a reasonable amount of depth over a very limited subject matter whilst others covered a broad range of topics at a very superficial level. Most candidates linked their answers strongly to the scenario, but some strayed off the topic into other areas, which while relevant, were written about extensively to the detriment of other important factors. Many used some technical terminology, and a number of candidates presented excellent examples and detailed technical specifications of sophisticated analytical equipment. However, some provided a list of unsubstantiated facts which were also often incomplete, rather than a considered, structured response covering the main factors that was required. Legislation and safe working practices featured strongly in several of the ERQ responses, additionally there was a good understanding of practical factors and options in many papers. It was encouraging, however, to see that a large number of candidates had planned their responses, using bullet points / mind maps or similar approaches.

Advice on improving exam technique for centres to consider include:
- ensuring that candidates are familiar with the command word of the question and its subsequent requirement, with a number of detailed responses recorded for simple "state" or "identify" questions.
- the importance of reading and understanding the question accurately, this was seen in the incidence of answers from Q10 which clearly had not read or understood the term "implications" fully.

Centres should be familiar with the range of sample and past papers, and the exam guide, available to support exam readiness. These are available on our website here Technicals in Horticulture and Forestry & Arboriculture qualifications and training courses | City & Guilds (cityandguilds.com) under the 'Assessment Materials' tab.

Series 2 – June 2023

The question paper had an appropriate balance of questions with varied levels of demand from straightforward recall of technical terms to more searching responses of candidates detailed knowledge, and it accurately sampled a fair breadth of content from across the qualification.

Most candidates made an attempt at all questions with greater success achieved in the knowledge – based questions than those requiring explanations / descriptions, where some candidates failed to provide the details required to demonstrate understanding and so limited the range of marks they could access. However, there were clear gaps in knowledge from some candidates who failed to attempt several questions.

Strengths and weaknesses

Although there was, apart from some clear gaps from a limited number of candidates, a reasonable range of knowledge and understanding shown across the units being tested, areas of particular overall strength included the more applied questions on:
- Benefits of planting semi-mature trees
- Tools
- Importance of methods of aftercare for trees
- VTA
- Methods of managing a tree with weak structure

Questions relating to more theoretical or academic aspects were answered less well, and in many cases very poorly, indicative of a lack of depth of knowledge and understanding of the details in the scientific areas. These included:
- Botanical nomenclature
- Details on anatomical types of wood and structures

The question on silviculture was also poorly answered by a number of candidates.

Extended answer question

The extended answer question was only answered extensively by one candidate, and many other answers lacked sufficient breadth or depth to gain marks within the middle or top band. Many answers provided limited depth over a very narrow subject matter whilst others covered a broader range of topics at a very superficial level with little detail or linkage.

Most candidates linked their answers mainly to the scenario, but one strayed off the topic into applied areas of ecology, which while relevant, was written about to the detriment of other important factors. There were examples of the use of technical terminology, and some candidates presented relevant examples of analytical equipment.

However, a large proportion of the cohort provided only limited lists of factors with some bare detail within which were often incomplete, rather than a considered, structured response covering the main factors. Legislation and safe working practices were featured to some extent in the better responses but were absent from a lot of the others.

In general, the response to this ERQ was not as good as the spring series where some excellent examples were submitted. Planning was only evident in a limited number of the responses, many were clearly not planned or structured in any logical form.

The key messages from this exam series are that the knowledge of plant names, which is vital to anyone in the industry, needs to be reinforced. The depth of scientific knowledge also needs to be strengthened and given more prominence as this underpins many practical applications. Attention

to all aspects of the syllabus is required, as there were evident gaps in knowledge from candidates from some centres.

More explanation and training on the planning and structure of the ERQ question needs to be delivered to enable learners to construct better responses and gain higher marks.

Advice on improving exam technique for centres to consider include:
- ensuring that candidates are familiar with the command word of the question and its subsequent requirement, with a number of detailed responses recorded for simple "state" or "identify" questions.
- the importance of reading and understanding the question accurately, this was seen in the incidence of answers eg candidate had clearly had not read or understood the term "implications" fully in one question, which restricted the marks available.

Centres should be familiar with the range of sample and past papers, and the exam guide, available to support exam readiness. These are available on our website here Technicals in Horticulture and Forestry & Arboriculture qualifications and training courses | City & Guilds (cityandguilds.com) under the 'Assessment Materials' tab.
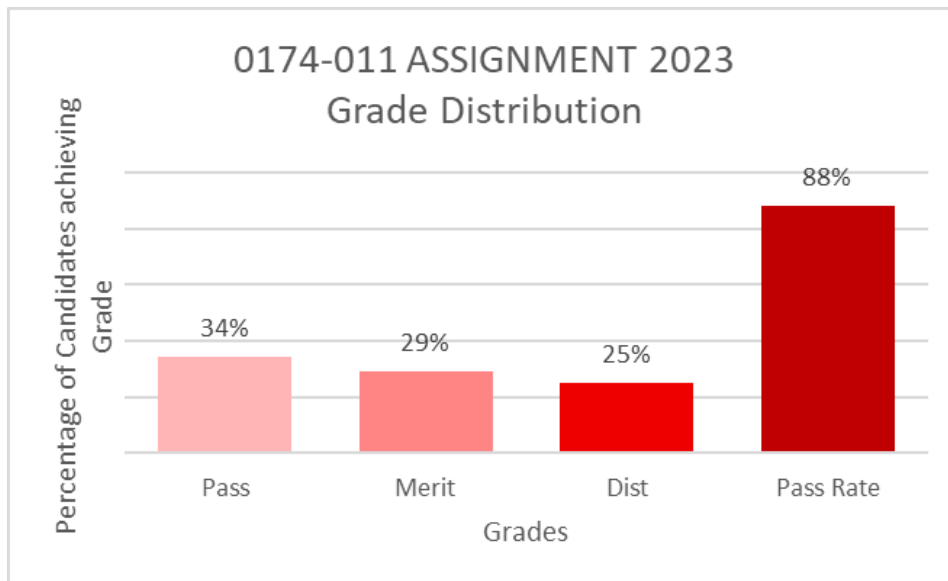
Synoptic Assignments – Year 1

Grade Boundaries

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 0174-011
Series: June 2023

Total marks available	60
Pass mark	25
Merit mark	34
Distinction mark	43

The graph below shows the approximate distributions of grades and pass rate for this assessment:

Principal Moderator Commentary

Comments on centre administration
Most Centres uploaded all evidence before the deadline, however this was not always the case. In a small number of cases, clerical work on candidate submissions (eg totalling of marks) were inaccurate.

Moderators noted that administration for most centres was good with some of the evidence missing and instances of declarations not being correctly completed when uploaded to the portal. Missing evidence was however promptly rectified by centres. The quality of feedback and accuracy of marking was on the whole good, however some of the AO's and POF's lacked detail on the assessment observed by the marker.
Important detail including Centre Name, Number, Date and names of both assessor and learner was missing from a number of AO's and POF's. This detail must be present on all assessment documentation.

Some of the feedback forms were not easily decipherable due to either the quality of handwriting or quality of scanning, in some cases due to pencil being used. Centre markers should also write the feedback in the Third Person, due to the feedback not being read by the learner. In a lot of examples, the feedback was written in the Second Person.

Overall performance of candidates compared to expectations
Learners evidence was appropriate for the task and contained the expected level's of ability suggesting they are operating at the appropriate level for some of the tasks if not all.

The synoptic assignment contained an appropriate range of practical tasks enabling learners to demonstrate the range of skills required in the work-place.

Provision of evidence for moderation
Photographic evidence was not used by every Centre, however where it was used the majority were not annotated providing no context to the picture provided.
Photographs must be accompanied by a brief statement confirming the activity and learner and how the activity relates to the learning outcomes. Without this detail, the photo is just an illustration.

Practical Observation Forms (POF's) were used with varying degrees of accuracy.
Some observers were still not providing adequate detail to the comments to support judgements on practical performance.

It was also noted that there were cases where marks were added to the POF's, the totals from each being averaged, and the mark reflected on the CRF. This led to inaccurate grades, and lacked detail on the learner's ability, more the score they achieved.
Some observers stated how the learners met the learning objectives, however they did not qualify these comments effectively.

Some of the stronger evidence provided accurate commentary in the third person, clearly linked to the Learning Objectives provided justifications of the decision, rather than providing feedback to the learner. This being irrelevant as the learner will not read the comments.

General overview of assessor alignment
The Moderation process demonstrated that most Centres and Markers are in alignment with national standards, with the exception of AO4 where in some cases, was noted as not being in kilter with the CRF, partially as a result of marks being the average of those placed incorrectly on the POF.

Performance of against Assessment Outcomes (AOs)

AO1 Recall of knowledge related to the qualification LO's

Learners in general provided evidence of a standard enabling judgements to be made against this outcome. The recall knowledge being demonstrated through Tasks 1 & 3, enabling the demonstration of knowledge within a written framework of research and reports. Verbal recall was evidence via comments on the POF. Task 3 (Tree Felling) allowed Markers to comment on the learners recall whilst observing a task of a more technical nature.

AO2 Understanding of concepts theories and processes relating to the LO's

The majority of marks available for this AO2 were from Tasks 1 and 4 allowing the learner to demonstrate a good level of understanding. Learners of a higher level of ability were able to make causal links between recall and understanding including the provision of accurate and relevant justifications.

The majority of learners were able to provide a good level of understanding for Task 3 whilst demonstrating practice felling skills.

AO3 Application of practical/technical skills

Correctly marked in most cases, with comments on the CRF being mostly aligned with information on the Practical Observation Forms (POF's). However, in some cases AO3 was marked lower than comments on the POF would suggest.

Task 3 required candidates to demonstrate practical skills for felling, stump removal and brush removal. Some of the evidence also included photographic evidence, however a significant proportion merely relied on the markers notes on the Practical Observation Form.

Invariably where photos were included very little, if any annotation was provided to confirm what was being illustrated, let alone how it linked to assessed outcomes or learning outcomes.

Marker comments regarding the lack of natural ability among some learners was notable suggesting they were not experienced in the practical task being carried out.
While this is understandable with certain learners, it is recommended that more time is allocated to practical skills.

AO4 Bringing it all together- coherence of the whole subject

The application of bringing theories into practice was sound with stronger candidates, who performed well through Tasks 1 and 4.Task 1 again providing the best opportunity for bringing the whole subject together as all aspects have an impact on tree health and management.

Lower banding learners did not cover some areas relating to tree care and management in depth with some not describing how the tree would respond. were many instances of candidates misinterpreting some questions, suggesting learners did not read the questions correctly or misinterpreted them.

AO5 Attending to detail/perfecting

It was noted that learners in a higher band continually reviewed and corrected work during practical activities, with the AO was being marked correctly in general by centres. Methodical learners were able to gain additional marks through this.
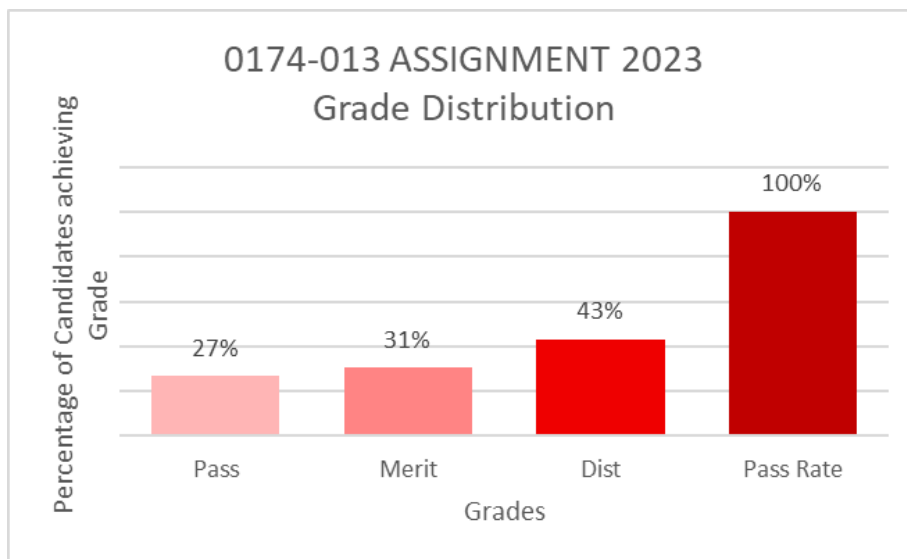
Synoptic Assignments – Year 2

Grade Boundaries

Below identifies the final grade boundaries for this assessment, as agreed by the awarding panel:

Assessment: 0174-013
Series: June 2023

Total marks available	60
Pass mark	24
Merit mark	32
Distinction mark	41

The graph below shows the approximate distributions of grades and pass rate for this assessment:

Principal Moderator Commentary

Comments on centre administration

Moderators reported that centre administration was generally good however some centre documents had to be requested as they were either missing or the quality of scanned evidence was poor, making it hard to decipher, particularly practical evidence.

The standard of marking was wide ranging, whilst some was exemplary, some of the AO's and POF's lacked detail on the assessment observed, as well as Centre Name, Number, Date and names of both assessor and learner.

Centre markers should also write the feedback in the Third Person, due to the feedback not being read by the learner. In a lot of examples, the feedback was written in the Second Person.

The majority of centre documents and candidate evidence was uploaded to the portal by the deadline.

Overall performance of candidates compared to expectations

Candidate performance overall was good, with evidence from each candidate mostly meeting expectations across an expected range of ability.

The quality of work for the site survey and proposal was generally of a high standard with the practical evidence demonstrating the learners ability to apply theoretical knowledge to practical skills learnt in year 1.

Provision of evidence for moderation

Some POFs contained terminology not aligning to the relevant banding, this making moderation of forms difficult. Photographic evidence used to support the candidates work was not always fully annotated which did match the written evidence. To avoid this type of evidence being little more than a collection of photographs and therefore being disregarded, a brief commentary must be provided for each photo confirming the activity and learners work, along with how it relates to each assessment or learning outcomes.

General overview of assessor alignment

Assessor/moderator alignment was within tolerance in most cases with the exception of AO4 which was, in some cases, marked down within the CRF.

Performance against Assessment Outcomes (AOs)

AO1 Recall of knowledge related to the qualification LO's

A range of written recall knowledge was available through Task 1 (Site Survey), while verbal recall was demonstrated through comments made on the POF within the practical assessments for Tasks 2 and 3. This allowed candidates to demonstrate an ability to apply knowledge and recall by selecting appropriate tools and equipment for the practical task.

AO2 Understanding of concepts theories and processes relating to the Los

Evidence of the learners ability to apply concepts and theories was embedded in Task 1 enabling learners to provide causal links between theoretical knowledge and understanding, justification of choices made, and the consideration of relevant alternatives.

Learners at the lower marks within the marking band grid were able to make straightforward links and provide some basic explanations and justifications, whereas those at the upper end of the marking band demonstrated a more in depth knowledge and understanding, consolidation and applying theory to practice.

AO3 Application of practical/technical skills

Marked correctly in the most of cases, the AO included accurate marker comments on the CRF which aligned with information in the Practical Observation Forms. There were few incidents where AO3 where comments did not correspond with the mark, and were lower than the POF would suggest.

The majority of candidates did not show natural practical abilities, indicating they were not experienced in the activities they were undertaking. However some comments were noted within Band 3 learners, relating to industry speed, while this is to be expected as in previous year's, it is strongly recommended that more time is allocated to practical skills where possible.

If photographs are used, they must be accompanied by adequate annotation, captions or direct links within the markers notes to outline what each of the photographs are showing, and how that provides evidence for the associated outcomes. Without any effective commentary moderators will not be able to assess the value of the photos against the outcomes being assessed. In future assessments, Centres are required to address this issue if providing photographs as supporting evidence of a learners performance against the outcomes.

AO4 Bringing it all together- coherence of the whole subject

Task 1 provided the best opportunities for AO4 as it gave the learners the opportunity to comment on a wide range of considerations, features, community needs, establishment challenges of a given site and the ability to research, review and provide evidence of the feasibility to change the site and any implications.

AO5 Attending to detail/perfecting

Markers noted that higher-level learners were able to continually review their work and make any adjustments during practical activities. This AO was generally marked correctly by markers within all Centres. Attention to detail was generally evidenced in Tasks 1 and 2 by comments made by Markers on POFs referring to the quality of finish and necessary adjustments made to working techniques in response to changing conditions or unforeseen problems. Candidates provided valuable evidence for this outcome in their proposals to a woodland area within Task 1 and through the Markers notes on the POFs.