# END POINT ASSESSMENT PLAN FOR GEOSPATIAL SURVEY TECHNICIAN – LEVEL 3

Geospatial Survey Technicians collect geospatial data (data relating to geographic position on the earth's surface) for use in the creation of maps, satellite navigation systems (Satnavs), Global Positioning Systems (GPS), construction of infrastructure including roads, buildings, bridges, offshore construction such as wind turbines and oil rigs, the identification of local, suburban or international boundaries, military, mining and a wide range of other purposes. Geospatial Technicians use a wide range of technologies such as Geographic Information Systems (GIS) and electronic data capture tools and processes.

The Geospatial Survey Technician Apprenticeship has been designed by an employer working group which includes employers of varying sizes and disciplines, and has also included the professional bodies, the Royal Institution of Chartered Surveyors (RICS) and the Chartered Institution of Civil Engineering Surveyors (ICES). This Assessment Plan sets out the requirements for the End Point Assessment (EPA). The assessment process has been designed to:

- Be relevant to apprentice technician roles
- Provide a route to a professional qualification
- Provide access to opportunities for progression to further higher level study
- Position the apprenticeship as the starting point for a career in the geospatial sector
- Allow apprentices to demonstrate that they have achieved the occupational competence set out in the Standard
- Be accessible and relevant for employers of all sizes, disciplines and locations

## Summary of Assessment

In order to successfully achieve the Geospatial Survey Technician Apprenticeship apprentices must pass the End Point Assessment (EPA). Employers will develop their own apprenticeship programme and on programme assessment, usually in partnership with training providers, to allow apprentices to develop the required competency in the standard and to prepare for the EPA.

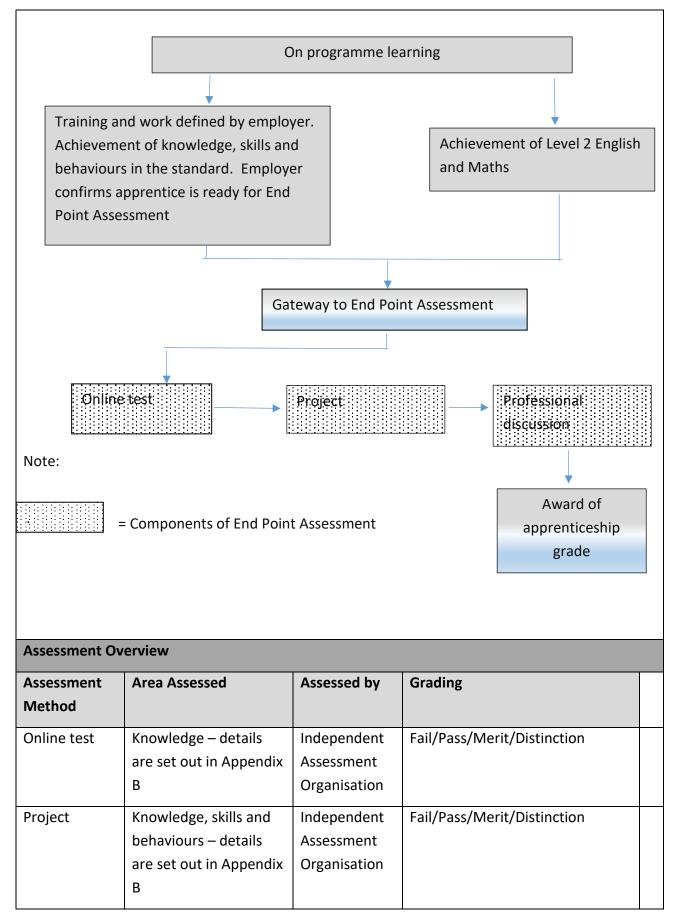
The EPA will include the following components:

- 1. Online test
- 2. Written project
- 3. Professional discussion

All of the above will be assessed by an Independent Assessment Organisation (IAO) which is on the Register of Apprentice Assessment Organisations. The employer will decide when the apprentice is ready to pass through the gateway to the EPA.

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Professional	Knowledge, skills and	Independent	Fail/Pass/Merit/Distinction	
discussion	behaviours – details	Assessment		
	are set out in Appendix	Organisation		
	В			

#### **On-programme Activities**

Each employer will develop their own apprenticeship programme. This can be by way of an external training provider, college or internal training. It is recommended that employers implement formative on programme assessment to help apprentices to demonstrate that they have developed the required knowledge, skills and behaviours before undertaking the end point assessment. Apprentices must undertake at least 20% of their apprenticeship as off the job training.

## Assessment Gateway

The apprentice must demonstrate the required skills, knowledge and behaviours in the standard before taking the EPA. The employer will take the final decision of whether their apprentice is ready to take the EPA. Employers may choose to work with a training provider to help to assess whether apprentices have satisfied the skills, knowledge and behaviours and are ready to take the EPA. The training provider must not be involved in the EPA for the apprentice. The employer will ensure that the apprentice has achieved Level 2 Maths and English prior to taking the EPA.

It is expected that an apprentice will typically complete the EPA within 6 months of passing through the gateway to the EPA.

#### End-point - Assessment

#### What

The EPA will assess all of the apprentice's knowledge, skills and behaviours across the apprenticeship standard. The details of what will be assessed by each method is set out in Appendix B.

#### How

The EPA will typically take 6 months. The flowchart in Appendix A summarises the process. There are three components to the EPA:

## <u>Online test</u>

A knowledge test consisting of 20 multiple choice questions on personal effectiveness and legal and regulatory compliance, each of which is followed by 5 possible answers. Questions will include scenario based questions. The IAO will develop a bank of at least 130 questions from which the 20 are randomly selected. Of the 20, 5 will relate to legal and regulatory compliance and 15 to personal effectiveness. 15 of the 20 questions (3 relating to legal and regulatory compliance and 12 relating to personal effectiveness) will be scenario based. The questions must allow the apprentice to demonstrate knowledge of personal effectiveness and legal and regulatory

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compliance. For each question there will be 1 'ideal' answer which accurately reflects best practice and is worth two points and one answer, which though not as good as the 'ideal' answer is still acceptable and worth one point. These one point questions will indicate appropriate actions or responses but do not fully reflect best practice. There will be a time limit of 40 minutes. Apprentices must score at least 75% (30 points) to pass the test and must pass this before being able to submit the project for assessment. Apprentices who fail the test are able to retake this up to three times and the question bank will provide different sets of questions for each retake. The test will be worth 20% of the final grade. The test will be undertaken under controlled conditions either at an assessment centre operated by the IAO or at the apprentice's place of work with former approval of the IAO. This approval must include arrangements for invigilation. These arrangements must be in place before the test takes place.

All tests must be invigilated and the identity of apprentices must be checked and confirmed prior to commencement of the test. If the test is undertaken at an employer's office after the test the invigilator must provide a report to the IAO confirming the arrangements that were used for the invigilation. This must be signed by both the invigilator and the apprentice. The invigilator must not have had any prior involvement with the apprentice.

Tests will be computer marked. Test questions will be reviewed and updated by the IAO at least every twelve months.

Example questions would be:

Why are ethical standards important?

a) They form an integral part of any good company's corporate responsibility strategy

b) They provide an absolute set of rules to follow

c) They provide a guide to help you act appropriately

d) They are helpful when disciplining a member of staff

*e)* They provide a quick reference guide to the rules.

Answer: c = 2 points, a = 1 point

Your client instructs you to act in conflict with legal requirements by using delaying tactics to defer implementation of new legislation. What should you do?

a) Act upon his instruction in order to maintain the professional relationship

*b)* Ignore the client's instruction

c) Explain to the client that acting on his instruction would lead to illegal activity. If he still wishes to proceed then advise him you will terminate your instruction

*d)* Inform the client that you decline to act in accordance with his instructions and that, if he delays implementation, you will report the matter to the relevant authorities

e) Report the client immediately to the relevant authorities

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d) 2 points and c =1 point

<u>Project</u>

Apprentices will undertake a work based project. All projects must be agreed by one of the Independent Assessors who will assess the project to ensure that apprentices are not disadvantaged by too narrow a scope and that their project is able to demonstrate all aspects of the standard required. This approval must be given within 2 weeks of submission of the project proposal by the apprentice to the IAO. Within two months of passing the gateway to the EPA apprentices should provide a project proposal including the following information as a minimum for approval:

- Project title
- 300 word synopsis including details of the apprentice's role
- The timeline for the project
- The date of the proposed submission of the written project

If a proposal is not accepted the apprentice may submit up to two alternative proposals. If a project is not accepted the independent assessor must provide feedback to the apprentice explaining the reasons.

The project should be completed within four months of the agreement of the project by the IAO. The project must cover all of the knowledge and skills in the standard and the behaviours set out in Appendix B and must be verified by the apprentice's employer that the project is a true reflection of the apprentice's involvement and the report is their own work.

The project will be presented as a 2500 word (with a 10% tolerance either way) written report and must include illustrations, calculations and plans. The project must include the following:

- The objective of the project
- The role the apprentice played and the contribution made
- The technical skills used
- The practical application of knowledge, skills and behaviours
- The overall outcome of the project
- Lessons learnt by the apprentice
- Verification by the apprentice's employer that the project is a true reflection of the apprentice's involvement and the report is their own work.

The following are examples of possible project proposals:

- Boundary dispute
- Survey of road bridge over railway to establish best position of new road into a proposed station

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- Survey of existing road and surrounding area to design a new bypass
- Survey site control, setting out and 'as built' data capture

The project will be assessed by two assessors. Each assessor will give a percentage mark in accordance with the grading criteria in Appendix C and the two marks will be averaged to give the apprentice's project grade. The grade must be advised to the apprentice within two weeks of submission of the project for assessment. This date must be at least two weeks before the date of the professional discussion.

Apprentices must pass the project before taking the professional discussion. See 'End Point – Grading' for information regarding retakes/resits.

## Professional discussion

The professional discussion will provide additional rigour for the EPA process by testing the apprentice's ability to provide further explanations of their actions and to verify their knowledge and understanding. Apprentices will be required to provide a summary of their experience in advance of the professional discussion. This will be a 3000 word (with a 10% tolerance either way) written report. The report should be presented with an introduction explaining the purpose of the summary, then with a heading and a summary for each of the knowledge, skills and behaviours of the standard showing how each of these have been achieved. The summary regarding knowledge should focus on the process of learning and the summary relating to skills and behaviours should focus on the apprentice's work experience. The summary must highlight the practical elements of an apprentice's experience and fieldwork identifying the equipment, instruments and technologies used and must be verified by the apprentice's employer as being a true reflection of the apprentice's experience. Appendix D provides an example of a template for the summary of experience. The summary of experience is started when the apprentice goes through the gateway and must be submitted to the IAO at least 2 weeks prior to the agreed professional discussion date. The summary of experience will be reviewed by two assessors who will together formulate the questions for the professional discussion. The questions must be consistent in terms of demand and level for all apprentices.

The professional discussion will be in the form of an interview with one assessor and will take one hour. IAOs must ensure that a second assessor is available on the day of the professional discussion in case the first assessor is unable to conduct the discussion for any reason. The professional discussion can be conducted face to face or via an online platform. The online platform must include a video link so that apprentices can see assessors and assessors can see the apprentice. The identity of the apprentice must be checked and confirmed. The location or platform will be sourced by the IAO. The professional discussion explores with the apprentice what has been produced in the project and summary of experience. The assessor will:

• Clarify the evidence in the summary of experience

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- Confirm and validate judgements made by the assessors about the quality and appropriateness of the information presented in the summary
- Confirm and validate understanding of the behaviours
- Explore aspects of the work more fully, including how it was carried out and the underpinning knowledge
- Explore the practical application of knowledge, skills and behaviours including the use of equipment, instruments and technologies
- Give a percentage mark in accordance with the grading criteria in Appendix C

## Who

The IAO) will provide independent assessment of the apprentices knowledge, skills and behaviour through the computer marked online test and assessment of the project and professional discussion. All IAOs must be on the Register of Apprentice Assessment Organisations. The independent assessors must:

- Have a minimum of 3 years post professional qualification experience and be working in relevant employment
- Be an Associate or chartered professional of the RICS or a Member or Fellow of the ICES
- Have evidence of up to date CPD (as required by the relevant professional body)
- Have experience of assessing learners or willingness to undertake training

## End-point – final judgement

The IAO will determine the final grade by using the percentage mark for the online test, the average of the two assessors' percentage marks for the project and the percentage mark for the professional discussion and applying the relevant weightings as set out in 'End Point – Grading' below. The resulting overall percentage will determine the apprentice's final grade.

#### Independence

The EPA will be assessed by independent assessors who work for an IAO on the Register of Apprentice Assessment Organisations. The independent assessors will have no previous relationship to the apprentice and will make a holistic judgement of each apprentice's work on the basis of the evidence supplied as set out above. The EPA is assessed and verified independently of the employer or any training provider.

All independent assessors must be managed by an IAO who will develop assessment materials.

The IAO must implement a Conflict of Interest policy which ensures that any assessor declares a known conflict of interest with an employer or apprentice. A conflict of interest can be defined as a person who is connected to the development and/or delivery of the assessments or has interests

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in any other activity which has the potential to lead that person to act contrary to his or her involvement in the development and/or delivery of the EPA.

#### End-point - Grading

Independent assessors will grade apprentices as Fail, Pass, Merit or Distinction using all the information gained in the EPA process described above and with reference to the grading criteria in Appendix C.

The apprenticeship grade will be based on the outcomes of the three EPA components: the online test, the project and the professional discussion.

The end point assessment components are weighted as follows:

- Online test 20 % of grade
- Project 50% of grade
- Professional discussion– 30% of grade

A Pass represents achievement of at least the minimum standard for the industry and for which apprentices have achieved all the knowledge and skills required within the standard and demonstrated a consistent level of behaviours. To achieve a pass or higher grade the apprentice must achieve a minimum of a pass in each of the end point assessment components. The following table provides the percentage marks to be achieved for each grade for each component of the standard.

EPA COMPONENT	PASS	MERIT	DISTINCTION
	Full competence	Performance	Performance
	against the	above the	significantly above
	standard	standard	the standard
Online test	<u>&gt;</u> 75 <80	<u>&gt;</u> 80 <85	≥85 - 100
Project	<u>&gt;</u> 50 <60	<u>&gt;</u> 60 <70	≥70 - 100
Professional discussion	<u>&gt;</u> 50 <60	<u>&gt;</u> 60 <70	≥70 - 100
OVERALL GRADE (with the above weightings applied for each element)	<u>&gt;</u> 55%-<64%	<u>&gt;</u> 64%<73%	<u>&gt;</u> 73%-100%

The Appendix provides the criteria for each of the grades for each element of the EPA. The final grade will then be decided by applying the above weighting to the online test, average mark given by the two assessors for the project and the mark for the professional discussion.

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## Example

An apprentice gains 80% for their online test, an average mark of 60% for their project and 70% for their professional discussion. These would then be weighted as follows:

80% x20% for the test = 16%

60% x 50% for project = 30%

70%x 30% for professional discussion = 21%

Total = 67% = Overall Merit for the EPA

Where an apprentice fails the online test this may be retaken/resat up to three times. Where an apprentice fails either the project and/or the professional discussion they may retake/resit the relevant component(s) once and this must be retaken/resat within a 3 month period. Where an apprentice retakes a component the apprentice can only be awarded a maximum grade of a pass for the apprenticeship. Retakes/resits will not be allowed to improve the apprenticeship grade (other than fail to pass).

End-point – Summary	y of roles and responsibilities in relation to the end point assessment
Stakeholder	Role
Employer	Decides when the apprentice is ready for the EPA
Training provider	• Supports the employer on deciding if the apprentice is ready for the EPA gateway
	<ul> <li>Supports the employer in contacting Independent Assessment Organisations</li> </ul>
Independent Assessment Organisation	<ul> <li>Delivers and assesses the EPA</li> <li>Conducts internal quality assurance</li> <li>Develops assessment processes and specifications based on the standard</li> <li>Develops assessment tools, materials and resources</li> <li>Registers apprentices for the EPA</li> <li>Manages assessment arrangements to enable apprentices to submit assessment documents</li> <li>Arranges retakes/resits of assessments for apprentices who fail the EPA and provides feedback to the employer</li> </ul>

	<ul> <li>Develops and implements an appeals process</li> </ul>
Professional bodies	Conduct external quality assurance of EPA
Quality Assurance – in	ternal

The IAO will internally provide quality assurance by:

- Providing assessor training at least once a year
- Arranging new assessors to undertake mock assessments
- Sampling of assessment decisions. A minimum of 20% of assessment decisions to be sampled. Sampling should be of all elements of the entire process of assessment including submissions and assessor feedback and should be used to review consistency of feedback and approach by assessors Requiring assessors to attend at least one standardisation event per year and delivering standardisation events
- Undertaking moderation of assessment decisions. The method used must ensure consistency of grading between assessors. Moderation should review all marks of all assessors to enable consideration of the overall standard and to enable comparison of the marking standards applied by different assessors and for different components of the EPA.
- Adopting a performance management process for assessors and using training to address poor performance
- Undertaking annual performance appraisals of assessors
- Appointing internal verifiers

## **Quality Assurance – external**

The professional body approach has been chosen for the external quality assurance. External quality assurance will be conducted on a non-profit basis by the RICS and the ICES in partnership. ICES will be the lead organisation, who will draw on the services of the RICS and oversee their input into the EQA model. ICES will also be the main point of contact.

#### Implementation

The costs of the EPA have taken into account the range and diversity of employers within the sector and the number of smaller businesses who are likely to employ apprentices.

Affordability was considered by the adoption of an online test and the use of online platforms for online professional discussion. This will also ensure feasibility of delivery across England and for apprentices in more remote locations.

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The cost of the end point assessment will be no more than 20% of the overall apprenticeship cost. The funding band is awaiting confirmation. The direct costs of assessment will include:

- Access to online test
- The cost of two assessors for 1 day (1 day being spread over the components of the EPA)
- Venue for professional discussion (if face to face)
- External quality assurance

## Professional body recognition:

Following successful completion (Pass or higher) of the EPA apprentices will become eligible to apply to become an Associate of the RICS and/or an Associate of the ICES.

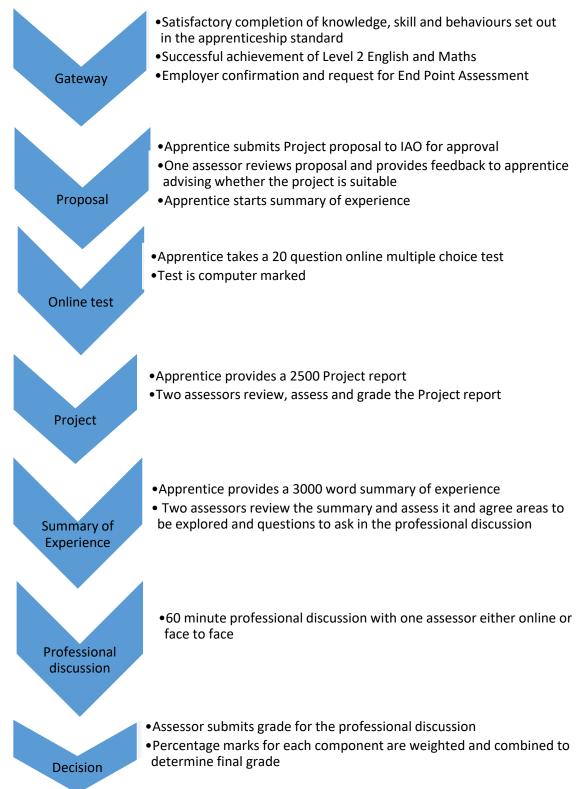
## Consistency:

Due to the nature of the EPA this will be deliverable across England and will be applicable to all employers regardless of their size. There are opportunities for assessment to be undertaken virtually which will ensure that the apprenticeship can be delivered across the different regions of England. Research has indicated sufficient numbers of assessors to assess the anticipated volume of apprentices. Management and feasibility was key to the development of this EPA Plan and the Plan presented offers the most viable and flexible solution whilst ensuring professional body recognition.

## Volumes

It is anticipated that there will be approximately 50 starts in the first year and 100 starts per year once the apprenticeship is fully established.

#### **APPENDIX A – SUMMARY OF EPA PROCESS**



# APPENDIX B – MAPPING OF EPA METHODOLOGY TO STANDARD

KNOWLEDGE TO BE ASSESSED	ONLINE TEST	PROJECT	PROFESSIONAL DISCUSSION
<b>Geospatial data</b> How to capture, process, manage and quality assure spatial data.		$\checkmark$	$\checkmark$
Health and safety The principles and responsibilities imposed by law, codes of practice and other regulations		√	~
<b>Cartography</b> The principles of mapping and geographic information sciences and accuracy, scale, currency and fitness for purpose of hardcopy and/or digital maps, drawings, imagery and plans.		~	~
Measurement The principles and limitations of measurement and the techniques used to gather spatial data. Be aware of the importance of co-ordinate systems, projec- tions, transformations and datums.		~	~
<b>Geospatial technology (including GIS)</b> Appropriate geospatial technologies (must include Geographic Information Systems) and the application of these systems		~	✓
Sustainability How and why sustainability seeks to balance eco- nomic, environmental and social objectives			~
<b>Legal and regulatory compliance</b> The principles of law relating to land ownership and boundaries and the appropriate permissions required to undertake geospatial survey work	~		~
<b>Personal effectiveness</b> How to manage their own time and tasks, communi- cate and negotiate effectively and know how to plan and prepare work to meet client and budgetary re- quirements	~		

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SKILLS TO BE ASSESSED	ONLINE TEST	PROJECT	PROFESSIONAL DISCUSSION
Geospatial data collection			
Capture, process, manage and quality assure spatial		$\checkmark$	$\checkmark$
data			
Health and safety			
Demonstrate the application of health and safety is-		$\checkmark$	$\checkmark$
sues and the requirements for compliance. Plan and			
prepare appropriate risk assessment and method			
statements			
Cartography			
Apply knowledge of the principles of mapping and		$\checkmark$	$\checkmark$
geographic information sciences in practice			
Measurement			
Use basic and/or advanced instrumentation, such as		$\checkmark$	$\checkmark$
an Electronic Distance Measurement devices, auto-			
matic levels, lasers, scanners, and Global Positioning			
Systems to collect data. Present appropriate infor-			
mation gained from measurement. Specify and plan			
surveys and the instrumentation needs.			
Geospatial technology			
Use appropriate methodology and technology to col-		$\checkmark$	$\checkmark$
lect relevant digital data. (must include use of Geo-			
graphic Information Systems).			
Legal and regulatory compliance			
Apply knowledge to comply with relevant legislation		$\checkmark$	$\checkmark$
and regulations when undertaking geospatial work			
Personal effectiveness			
Effectively manage time and tasks, communicate		✓	$\checkmark$
and negotiate effectively and plan and prepare ap-			
propriate methodologies and technologies. Use ef-			
fective techniques for conflict avoidance			

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BEHAVIOURS TO BE ASSESSED	ONLINE TEST	PROJECT	PROFESSIONAL DISCUSSION
Provide a high standard of service			
Provide the best possible service, with attention to		$\checkmark$	$\checkmark$
detail meeting all deadlines set			
Trust and integrity			
Develop trust by working in a professional and pos-		$\checkmark$	$\checkmark$
itive manner at all times and be honest and			
straightforward			
Treat others with respect			
Treat everyone with courtesy, politeness and re-			$\checkmark$
spect			
Take responsibility			
Be accountable for your own actions		✓	✓
Personal development			
Seek advice and explanation and seek feedback on			$\checkmark$
your own performance. Participate willingly in			
learning from and observing others			
Share knowledge			
Work with other parties from collection to delivery		$\checkmark$	$\checkmark$
of geospatial data ensuring the sharing of			
knowledge			

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#### **APPENDIX C**

#### **GRADING CRITERIA**

END POINT ELEMENT	FAIL	PASS	MERIT	DISTINCTION
ONLINE TEST (20% of overall grade)	< 75	<u>&gt;</u> 75 <80	<u>&gt;</u> 80 < 85	<u>&gt;</u> 85 - 100
PROJECT (50% of overall grade)	<50	<u>&gt;</u> 50 <60	<u>&gt;</u> 60 <70	<u>&gt;</u> 70 - 100
	Fails to provide sufficient evidence of all the knowledge, skills and be- haviours being assessed by this method	Provides evidence of all the knowledge, skills and behaviours being as- sessed by this method Demonstrates use of rel- evant technology Provides an explanation of the objective of the project Explains the role the ap- prentice played and their contribution to the pro- ject	Meets the pass criteria and also: Effectively analyses and interprets knowledge being assessed by this method to inform solu- tions Applies skills being as- sessed by this method to identify solutions Analyses the objective of the project Clearly explains the role the apprentice played	Meets the pass and merit criteria and also: Critically appraises knowledge relevant to the project Extensively applies skills be- ing assessed by this method to the project and to evalu- ate solutions Provides an articulate and fluent explanation of the role the apprentice played and evaluates their contri- bution to the project

	Provides a statement of the overall outcome of the project Provides an account of the lessons learnt Well structured and pre- sented report using headings and sections Complies with word length of 2500 words (subject to 10% tolerance either way) Includes relevant and clearly presented calcula- tions, illustrations and plans Use of appropriate pro- fessional and technical language	and analyses their con- tribution to the project Assesses and reflects on the lessons learnt and how to improve Explains the reasons for technologies and meth- ods used Attention to detail of presentation and struc- ture Demonstrates the abil- ity to work inde- pendently	Evaluates the effect of decisions that were made Evaluates the technologies and methods used Writes fluently and articu- lately throughout Extensive attention to presentation and structure Provides a professionally presented and structured report Works independently using own initiative

Professional discussion (30% of overall grade)	<50	<u>&gt;</u> 50 <60	<u>&gt;</u> 60 <70	≥70 to 100
	Fails to provide sufficient evidence of all the knowledge, skills and be- haviours being assessed by this method	Provides evidence to demonstrate all the knowledge, skills and be- haviours being assessed by this method Satisfactorily validates in- formation in the sum- mary of experience Accurately responds to questions	Meets the pass criteria and also: Analyses knowledge be- ing assessed by this method to provide solu- tions Uses examples of the application of skills be- ing assessed by this method to support an- swers to questions Clearly articulates the rationale for actions and decisions made	Meets the pass and merit criteria and also: Evaluates and critically ap- praises knowledge being as- sessed by this method to provide solutions Uses an extensive range of relevant examples of the use of skills being assessed by this method to support answers to questions Shows the ability to make robust decisions based on key information Assimilates and synthesises information Evaluates decisions made and actions taken

#### APPENDIX D

#### EXAMPLE TEMPLATE FOR THE SUMMARY OF EXPERIENCE

The Summary of Experience should reflect the role and level of the activities undertaken by the apprentice

KNOWLEDGE	APPRENTICE STATEMENT OF HOW KNOWLEDGE HAS BEEN GAINED (approximately 100 words per area of knowledge)	EXAMPLES OF WORK TASKS UNDERTAKEN THAT HAVE USED THIS KNOWLEDGE (approxi- mately 50 words per area of knowledge)
<b>Geospatial data</b> How to capture, process, manage and quality assure spatial data.		
Health and safety The principles and responsibilities imposed by law, codes of practice and other regulations		
<b>Cartography</b> The principles of mapping and geographic infor- mation sciences and accuracy, scale, currency and fitness for purpose of hardcopy and/or digital maps, drawings, imagery and plans.		
<b>Measurement</b> The principles and limitations of measurement and the techniques used to gather spatial data. Be aware of the importance of co-ordinate systems, projections, transformations and datums.		

<b>Geospatial technology (including GIS)</b> Appropriate geospatial technologies (must include Geographic Information Systems) and the applica- tion of these systems	
Sustainability How and why sustainability seeks to balance eco- nomic, environmental and social objectives	
<b>Legal and regulatory compliance</b> The principles of law relating to land ownership and boundaries and the appropriate permissions re- quired to undertake geospatial survey work	

SKILLS	APPRENTICE STATEMENT OF HOW SKILL HAS BEEN ACHIEVED THROUGH WORK EXPERIENCE (approximately 100 words per skill)	EXAMPLES OF WORK TASKS UNDERTAKEN AND ANY EQUIP- MENT OR INSTRUMENTS USED (approximately 50 words per skill)
Geospatial data collection		
Capture, process, manage and quality assure spatial		
data		
Health and safety		
Demonstrate the application of health and safety is-		
sues and the requirements for compliance. Plan and		
prepare appropriate risk assessment and method		
statements		

<b>Cartography</b> Apply knowledge of the principles of mapping and geographic information sciences in practice	
Measurement	
Use basic and/or advanced instrumentation, such as	
an Electronic Distance Measurement devices, auto-	
matic levels, lasers, scanners, and Global Positioning	
Systems to collect data. Present appropriate infor-	
mation gained from measurement. Specify and plan	
surveys and the instrumentation needs.	
Geospatial technology	
Use appropriate methodology and technology to col-	
lect relevant digital data. (must include use of Geo-	
graphic Information Systems).	
Legal and regulatory compliance	
Apply knowledge to comply with relevant legislation	
and regulations when undertaking geospatial work	
Personal effectiveness	
Effectively manage time and tasks, communicate	
and negotiate effectively and plan and prepare ap-	
propriate methodologies and technologies. Use ef-	
fective techniques for conflict avoidance	

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BEHAVIOURS	APPRENTICE STATEMENT OF HOW BEHAVIOUR HAS BEEN DEMONSTRATED THROUGH LEARN- ING AND WORK EXPERIENCE (approximately 100 words per behaviour)	EXAMPLES OF WHERE BEHAV- IOUR HAS BEEN ADOPTED (ap- proximately 50 words per be- haviour)
<b>Provide a high standard of service</b> Provide the best possible service, with attention to detail meeting all deadlines set		
<b>Trust and integrity</b> Develop trust by working in a professional and posi- tive manner at all times and be honest and straight- forward		
<b>Treat others with respect</b> Treat everyone with courtesy, politeness and respect		
Take responsibilityBe accountable for your own actions		
Personal development Seek advice and explanation and seek feedback on your own performance. Participate willingly in learning from and observing others		
Share knowledge Work with other parties from collection to delivery of geospatial data ensuring the sharing of knowledge		