6715-03 Level 3 Diploma in Stonemasonry

August 2014 Version 1.0



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Candidate details



This *Practical task manual* is a record of your achievement in practical assessments. You must keep it in good condition and it must be stored in a safe place by your Assessor.

Please fill in all of your details before you carry out any assessments.

Candidate	e Details				
Surname		Forename(s)			
City & Guilds enrolment num	nber				
Centre De	etails				
Name		Centre No			
I understand must be my	I understand the requirements of the qualification and that all the work towards the assessments must be my own.				
Candidate sig	nature				
Assessor nam (please print)	ne	Signed			
		Date			

Unit assessment overview Practical task completion record

To be completed by Assessor:

For each task, the points for each grade are Pass = 1, Merit = 2, and Distinction = 3 points.

Conversion chart			
Average	Overall Grade		
1 – 1.5	Pass		
1.6 – 2.5 Merit			
2.6-3	Distinction		

Unit 325 Setting out and templet making for complex stonemasonry components

Task		Grade for task [†]	Points (graded tasks)
1. Set out complex stonemasonry components		P/M/D/X	
2. Set out full size details for circular tracery win	dow	P/M/D/X	
3. Produce templets and moulds for circular tra	cery window	P/M/D/X	
Internally marked questions		P/X	
		Total	
Assessor signature and date:	Divide total points from graded tasks by number of graded tasks		÷3
		Average =	
	(se	Overall grade e conversion chart)	

Unit 326 Working complex stonemasonry components

Task		Grade for task [†]
1. Work circular tracery window component		P/M/D/X
Internally marked questions		P/X
Assessor signature and date:	Overall grade	

[†]All tasks must be passed for the unit to be achieved.

Unit 327 Fixing complex stonemasonry components

Task	Grade for task [†]		
1. Set out and fix a circular tracery window into	1. Set out and fix a circular tracery window into surrounding masonry		
Internally marked questions	P/X		
Assessor signature and date:	Overall grade		

Unit 328 Conservation and restoration techniques for architectural heritage

Task	Grade for task [†]	
1. Carry out conservation and restoration work	on existing stonework	P/M/D/X
Internally marked questions		P/X
Assessor signature and date:	Overall grade	

Instructions to candidates

About this document

This *Practical task manual* contains all of the practical assessment for the 6715-03 Level 3 Diploma in Stonemasonry.

Practical tasks

These tasks let you show your practical skills and are usually graded pass, merit or distinction. These tasks will be assessed by your assessor watching how you carry out the tasks and checking your final pieces of work.

Before you carry out the task you will be told how it will be assessed and you should read the observation checklist at the end of each task so you know what you need to do to get each grade.

You can ask your assessor for help in understanding the task instructions, but all of the work must be your own.

Health and safety

You must use safe working practices at all times.

You are responsible for your own safety and the safety of others. If you behave in an unsafe way, you will be stopped and given a warning. If you do not meet all of the Health and Safety requirements, the assessment will be stopped. Your assessor will not be able to let you try the task again until they are sure you can work safely.

Time considerations

Each task shows how long it is likely to take. This is for guidance and so you can plan your work. If you have a good reason for needing more time you must explain this to your assessor as soon as possible so they can decide whether you can have more time.

Security

Where an assignment is taken over more than one session, all documentation, paperwork and work products must be labelled carefully with your name and kept securely at the centre. Your assessor will give you directions about how to leave your work.

Opportunities to repeat tasks

The tasks are 'end tests' so you will only be asked to take the assessment when you have had the chance to do all of the learning and practice you need. You will be able to try the whole task again if you do not pass, but you will not be able to take the assessment again just to try to get a better grade.

Feedback

As well as telling you the result for the task, your assessor will give you feedback. They will give you a feedback sheet with details of what you could do to improve, and also what you did well. This will help you to prepare for other assessments or to retake the assessment if you need to.

Unit 325 Setting out and templet making for complex stonemasonry components

Task 1 Set out complex stonemasonry components

Task coversheet

Expected time	11 hours
Task instructions	In this task you will be required to:
	 set out a rusticated four centred arch into surrounding masonry wall 2500 mm in length and 1500 mm high (1.5 hours)
	o prepare A3 drawing page
	o scale: 1:10
	o span: 1500 mm
	o rise: 650 mm
	o extrados: +350 mm
	 arch to be divided into at least eight equally-sized voussoirs plus keystone
	 draw a section through keystone and adjacent masonry
	 set out a column using the diagonal method (1 hours)
	o prepare A3 drawing page
	o scale: 1:10
	o base radius: 160 mm
	o height: 2240 mm
	o top radius: 120 mm
	 set out a column using the vertical method (1 hour)
	o prepare A3 drawing page
	o scale: 1:10
	o base radius: 160 mm
	o height: 2240 mm
	o top radius: 120 mm
	 set out the spiral of an ionic volute (2 hours)
	o prepare A3 drawing page
	o scale: 1:1
	o height: 200 mm
	 set out ramp and twist plinth with stoolings (3 hours)
	o prepare A3 drawing page
	o scale: 1:5
	o 90° internal joint angle
	• set out ball finial (1.5 hours)
	o prepare A3 drawing page
	o scale: 1:1
Diagrams	Figure 1: Ramp and twist, see page 24
	Figure 2: Ramp and twist section, see page 25
	Figure 3: Ball finial, see page 26
	Figure 4: Ball finial plan, see page 27

AC	The candidate has	Pass	Merit	Distinction
2.1	set out a rusticated four centred arch into surrounding masonry to include:			
	 clean drawing page prepared with border, legend, title, scale, date, revision, name 			
	accurate scaling	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	 accurately drawn arch, showing all construction lines 	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	accurately set out voussoirs and keystone	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	 accurately drawn section showing rustication 	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
2.2	set out a column using the diagonal method to include:			
	clean drawing page prepared with border, legend, title, scale, date, revision, name			
	accurate scaling	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	accurate setting out for entasis	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	accurately drawn column	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	set out a column using the vertical method to include:			
	clean drawing page prepared with border, legend, title, scale, date, revision, name			
	accurate scaling	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt

AC	The candidate has	Pass	Merit	Distinction
	accurate setting out for entasis	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	accurately drawn column	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
2.3	set out the spiral of an Ionic volute to include:			
	clean drawing page prepared with border, legend, title, scale, date, revision, name			
	 accurate setting out of Ionic volute, showing all construction lines 	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	accurately drawn Ionic volute	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	accurate dimensions	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
2.4, 2.9	set out ramp and twist to include:			
2.7	clean drawing page prepared with border, legend, title, scale, date, revision, name			
	accurate scaling	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	 accurately drawn external face mould, showing construction lines and boning lines 	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	 accurately drawn internal face mould, showing construction lines and boning lines 	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	accurately drawn top bed mould, showing construction lines and boning lines	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	accurately drawn section, showing construction lines	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
2.6, 2.7,	set out ball finial to include:			
2.7,	clean drawing page prepared with border, legend, title, scale, date, revision, name			

	Merit	Distinction
accurately drawn ball, showing all construction lines Corregions 3rd at	ect on Correct on ttempt 2nd attempt	Correct on 1st attempt
accurately drawn finial section, showing all construction lines Correspond and additional section and additi	ect on Correct on ttempt 2nd attempt	Correct on 1st attempt
accurately drawn top bed mould showing all hidden detail Corresord 3rd at	ect on Correct on ttempt 2nd attempt	Correct on 1st attempt
accurate dimensions. Corre 3rd at	ect on Correct on ttempt 2nd attempt	Correct on 1st attempt

Task grading rules		Task grade:
To achieve a pass :		
all pass criteria must be	met.	
To achieve a merit :		
a minimum of 16/22 men	it criteria must be met, and;	
all the remaining criteria pass standard, and;	must be achieved to at least a	
 candidates must not exc more than 50%. 	eed the expected task time by	
To achieve a distinction :		
 a minimum of 16/22 distinction criteria must be met, and; 		
 the remaining graded criteria must be achieved to a merit standard, and; 		
all the non-graded criter standard, and;	ia must be achieved to a pass	
 candidates must not exc more than 25%. 	eed the expected task time by	
Assessor Name		
Assessor Signature		
Date		

Unit 325 Setting out and templet making for complex stonemasonry components

Task 2 Set out full size details for circular tracery window

Task coversheet

Expected time	16 hours
Task instructions	 In this task you will be required to: interpret information from drawings set out full size details from drawings complete a job card.
Diagrams	Figure 5: Circular tracery window, see page 28

AC	The candidate has	Pass	Merit	Distinction
2.5, 2.7	set out circular tracery window, to include:			
2.7	clean drawing page prepared with border, legend, title, scale, date, revision, name			
	face mould drawn showing construction lines	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	sections drawn showing construction lines	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	accurate dimensions	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	• cavetto	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	• cyma recta	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
2.10	• ballflowers	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt

AC	The candidate has	Pass	Merit	Distinction
2.8	joggle drawn in correct location	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
3.1	completed a job card with required information and scale sketch.			

Task grading rules		Task grade:
To achieve a pass :		
all pass criteria must be	met.	
To achieve a merit :		
• a minimum of 5/7 merit of	criteria must be met, and;	
all the remaining criteria pass standard, and;	must be achieved to at least a	
 candidates must not exc more than 50%. 	eed the expected task time by	
To achieve a distinction :		
a minimum of 5/7 distinct	tion criteria must be met, and;	
 the remaining graded cri merit standard, and; 	teria must be achieved to a	
all the non-graded criter standard, and;	ia must be achieved to a pass	
 candidates must not exc more than 25%. 	eed the expected task time by	
Assessor Name		
Assessor Signature		
Date		

Unit 325 Setting out and templet making for complex stonemasonry components

Task 3 Produce templets and moulds for circular tracery window

Task coversheet

Expected time	4 hours
Task instructions	In this task you will be required to: • interpret information from a job card • complete a method statement and risk assessment • complete a resource checklist • transfer details from drawings • produce templets and moulds • keep a clean work area • work safely at all times.
Diagrams	Figure 5: Circular tracery window, see page 28

Assessment criteria checklist

AC	The candidate has	Pass	Merit	Distinction
3.2	completed a method statement for making complex templets and moulds			
3.3	completed a risk assessment for making complex templets and moulds			
3.4, 3.5, 3.6	completed a resource checklist for making complex templets and moulds			
3.7, 3.8	produced zinc section square	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	produced Zinc section to correct dimensions	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	produced section details in Zinc:			
	• cavetto	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	• cyma recta	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt

AC	The candidate has	Pass	Merit	Distinction
	• ballflowers	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	• joggle	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	produced reverse for cavetto	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	produced reverse for cyma recta	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	produced plastic face mould square	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	produced plastic face mould to correct dimensions	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	produced face mould details in:			
	section lines	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	mitre lines (external and internal)	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	• joggle	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	• cusps	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	deadeyes to correct depth	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
3.9	annotated templets with necessary information on the:			
	• section	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt

AC	The candidate has	Pass	Merit	Distinction
	• reverses	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
	• face mould	Correct on 3rd attempt	Correct on 2nd attempt	Correct on 1st attempt
3.10	stored templets correctly while not in use			
3.4, 3.11,	disposed of waste materials appropriately			
3.12, 3.13	followed current environmental and relevant health and safety regulations			
	used tools, equipment and materials in a safe manner			
	used and maintained PPE as appropriate			
	maintained a clean and safe working area			
	cleaned and returned all tools and equipment once the task is complete.			

Task grading rules		Task grade:
To achieve a pass :	To achieve a pass :	
all pass criteria must be	met.	
To achieve a merit :		
a minimum of 13/18 mer	it criteria must be met, and;	
all the remaining criteria pass standard, and;	must be achieved to at least a	
 candidates must not exc more than 50%. 	eed the expected task time by	
To achieve a distinction :		
a minimum of 13/18 distinction criteria must be met, and;		
 the remaining graded cri merit standard, and; 	teria must be achieved to a	
all the non-graded criter standard, and;	ia must be achieved to a pass	
 candidates must not exc more than 25%. 	eed the expected task time by	
Assessor Name		
Assessor Signature		
Date		

Unit 326 Working complex stonemasonry components Task 1 Work circular tracery window component

Task coversheet

Expected time	Between 35 and 45 hours (dependant on stone type and natural variations).
Task instructions	 In this task you will be required to: interpret information from a job card, drawings and templets complete a method statement and risk assessment complete a resource checklist
Diagrams	 work a circular tracery window component keep a clean work area work safely at all times. Figure 5: Circular tracery window, see page 28

AC	The candidate has	Pass	Merit	Distinction
2.1	interpreted information from a job card, drawings and specifications			
2.2	completed a risk assessment for working a circular tracery window component			
2.3	completed a method statement for working a circular tracery window component			
2.4, 2.5, 2.6	completed a resource checklist			
2.5	selected a stone as specified by assessor			
2.7	ensured the stone is true, out of twist, square and of correct dimensions (± 1 mm over 300 mm)			
2.6, 2.7	where applicable, identified any faults in the stone and recorded on the resource checklist and/or reported to the assessor			
2.8,	marked up the stone from templets			
2.10	run lines through with pencil and scriber where appropriate			
	worked face mould to include:			
	• position of joints (± 1mm)			
	• joints square to face (± 1mm)			
	outer curve (± 1mm)			

AC	The candidate has	Pass	Merit	Distinction
	• foils	No more than 2 errors	No more than 1 error	No errors
	sunk rebate to face of tracery	No more than 2 errors	No more than 1 error	No errors
	cut worked details to include:			
	• cavetto	No more than 3 errors	No more than 2 errors	No more than 1 error
	• cyma recta	No more than 2 errors	No more than 1 error	No errors
	 correct depth from tracery nose to cusp nose (± 1 mm) 			
	• cusp noses	No more than 2 errors	No more than 1 error	No errors
	• deadeyes	No more than 2 errors	No more than 1 error	No errors
	tracery nose	No more than 2 errors	No more than 1 error	No errors
	• position of joggle (± 1 mm)			
2.9	produced a rubbed surface finish to all visible surfaces (excluding ballflowers)	No more than 2 tool marks	No more than 1 tool mark	No tool marks
2.4, 2.11, 2.12, 2.13	followed current environmental and relevant health and safety regulations			
	used tools, equipment and materials in a safe manner			
	used and maintained PPE as appropriate			
	maintained a clean and safe working area			
	cleaned and returned all tools and equipment once the task is complete.			

Task grading rules		Task grade:
To achieve a pass :		
all pass criteria must be	met.	
To achieve a merit :		
• a minimum of 6/8 merit of	riteria must be met, and;	
all the remaining criteria pass standard, and;	must be achieved to at least a	
 candidates must not exc more than 50%. 	eed the expected task time by	
To achieve a distinction :		
a minimum of 6/8 distinction criteria must be met, and;		
 the remaining graded criteria must be achieved to a merit standard, and; 		
 all the non-graded criteria must be achieved to a pass standard, and; 		
 candidates must not exc more than 25%. 	eed the expected task time by	
Assessor Name		
Assessor Signature		
Date		

Unit 327 Fixing complex stonemasonry components

Task 1 Set out and fix a circular tracery window into surrounding masonry

Task coversheet

Expected time	4 hours	
Task instructions	 In this task you will be required to: interpret information from documents complete a method statement and risk assessment complete a resource checklist set out for fixing a circular tracery window into surrounding masonry fix a circular tracery window into surrounding masonry keep a clean work area 	
Diagrams	 work safely at all times. Figure 5: Circular tracery window, see page 28 	

AC	The candidate has	Pass	Merit	Distinction
2.1, 4.1, 6.1	interpreted drawings, specifications and manufacturer's documentation required for fixing stone on site, and confirmed understanding of the task			
2.2	completed a risk assessment for fixing stonemasonry components			
2.3	completed a method statement for fixing stonemasonry components			
2.5, 2.6, 2.7, 4.2	completed a resource checklist			
4.3, 4.4, 4.5,	gauged and mixed mortar for fixing circular tracery window			
4.6, 6.2, 6.3,	set out and positioned first stone	± 2 mm	± 1 mm	± 0 mm
6.4	fixed circular tracery window to plane	± 2 mm	± 1 mm	± 0 mm
	fixed circular tracery window to plumb and level	± 2 mm	± 1 mm	± 0 mm
	applied even joints to circular tracery window			
	ensured span of circular tracery window is correct			
2.4	completed a time sheet for fixing the circular tracery window			

AC	The candidate has	Pass	Merit	Distinction
2.8, 4.7,	followed current environmental and relevant health and safety regulations			
4.7, 6.5, 6.6, 6.7	used tools, equipment and materials in a safe manner			
	used and maintained PPE as appropriate			
	maintained a clean and safe working area			
	cleaned and returned all tools and equipment once the task is complete.			

Task grading rules		Task grade:	
To achieve a pass :			
• all pass criteria must be	met.		
To achieve a merit :			
all merit criteria must be	met, and;		
all the remaining criteria pass standard, and;	must be achieved to at least a		
 candidates must not exc more than 50%. 			
To achieve a distinction :			
• all distinction criteria mu	ıst be met, and;		
 all the remaining criteria pass standard, and; 	must be achieved to at least a		
 candidates must not exc more than 25%. 	eed the expected task time by		
Assessor Name			
Assessor Signature			
Date			

Unit 328 Conservation and restoration techniques for architectural heritage

Task 1 Carry out conservation and restoration work on existing stonework

Task coversheet

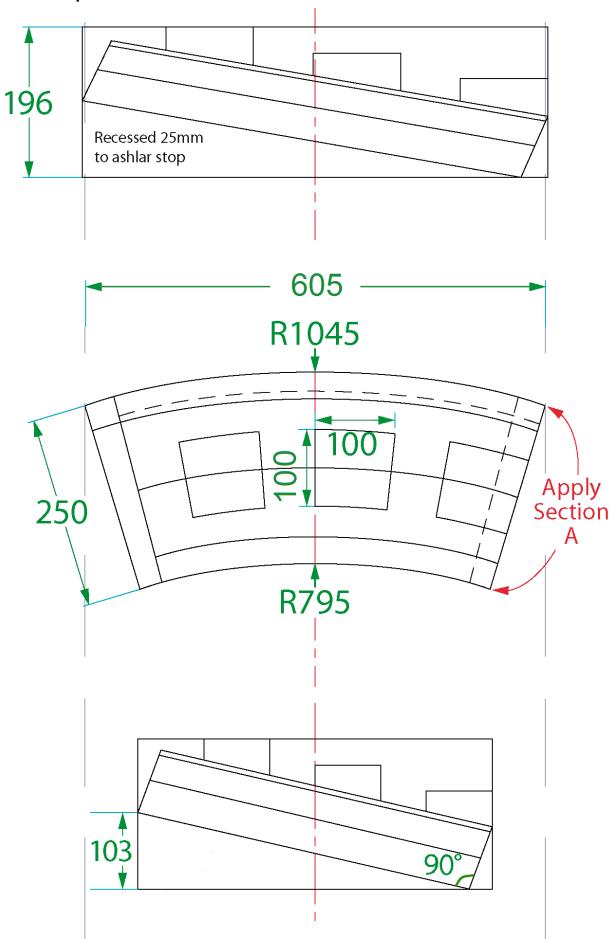
Expected time	16 hours
Task instructions	In this task you will be required to:
	work safely at all times.
Diagrams	n/a

AC	The candidate has	Pass	Merit	Distinction
2.1, 2.2, 2.3	completed survey document			
4.1	completed a method statement for conservation and restoration work			
4.2	completed a risk assessment for conservation and restoration work			
4.3, 4.4	completed a resource checklist			
4.7	carried out mortar repair on either an ovolo, cavetto, cyma recta or cyma reversa to:			
	fit profile of moulding	± 2 mm	± 1 mm	± 0 mm
	match existing colour			
	match existing finish			
4.8	carried out a full stone replacement of a wall, to include:			
	accurately cut out damaged stone	± 2 mm	± 1 mm	± 0 mm
	accurately produced new stone	± 2 mm	± 1 mm	± 0 mm
	gauged and mixed mortar for fixing new stone			

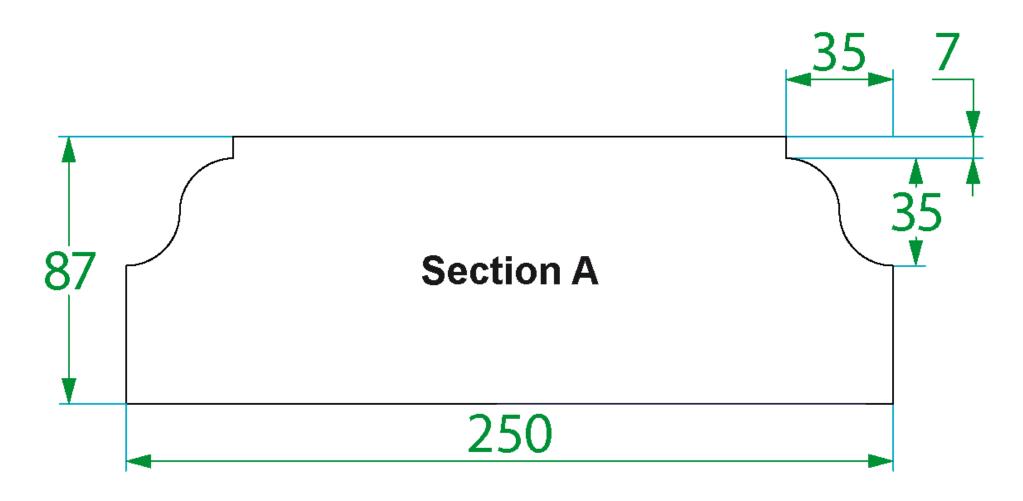
AC	The candidate has	Pass	Merit	Distinction
	accurately fixed new stone	± 2 mm	± 1 mm	± 0 mm
	 pointed new stone to match existing joints 			
4.5, 4.6, 4.9	carried out an indent repair on either an ovolo, cavetto, cyma recta or cyma reversa, to include:			
,	accurately cut out damaged stone	± 3 mm	± 2 mm	± 1 mm
	accurately worked new indent	± 3 mm	± 2 mm	± 1 mm
	accurately fixed new indent	± 3 mm	± 2 mm	± 1 mm
	accurately trimmed indent	± 3 mm	± 2 mm	± 1 mm
4.10	protected and tended work repair work to prevent damage or deterioration			
4.11	protected surrounding areas during conservation and restoration work			
4.3, 4.12	followed current environmental and relevant health and safety regulations			
	used tools, equipment and materials in a safe manner			
	used and maintained PPE as appropriate			
	maintained a clean and safe working area			
	cleaned and returned all tools and equipment once the task is complete.			

Task grading rules		Task grade:
To achieve a pass :		
all pass criteria must be	met.	
To achieve a merit :		
• a minimum of 6/8 merit of	riteria must be met, and;	
all the remaining criteria pass standard, and;	must be achieved to at least a	
 candidates must not exc more than 50%. 	eed the expected task time by	
To achieve a distinction :		
a minimum of 6/8 distinction criteria must be met, and;		
 the remaining graded criteria must be achieved to a merit standard, and; 		
 all the non-graded criteria must be achieved to a pass standard, and; 		
 candidates must not exc more than 25%. 	eed the expected task time by	
Assessor Name		
Assessor Signature		
Date		

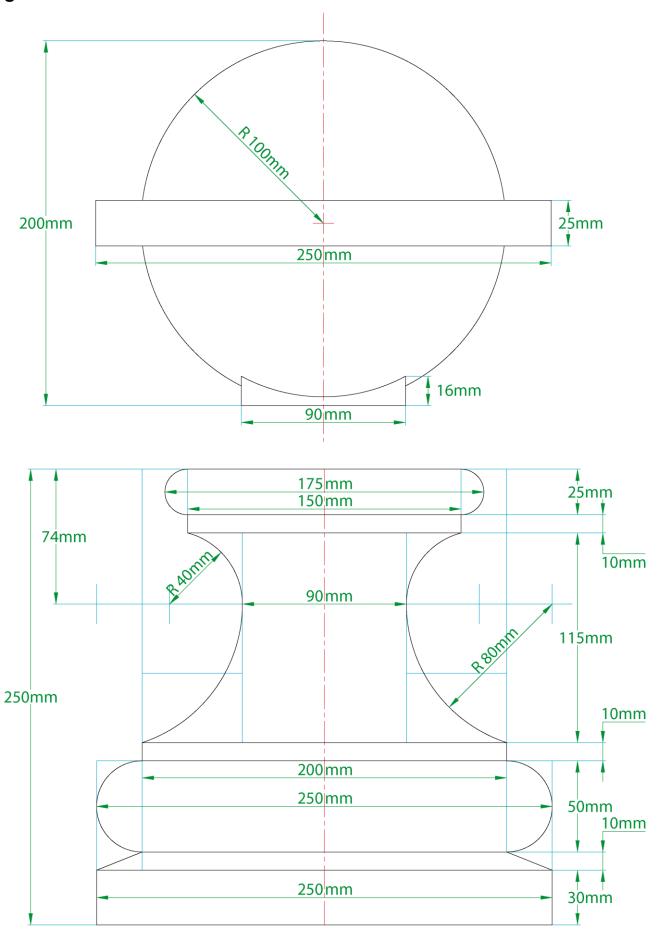
Drawings and diagrams
Figure 1: Ramp and twist



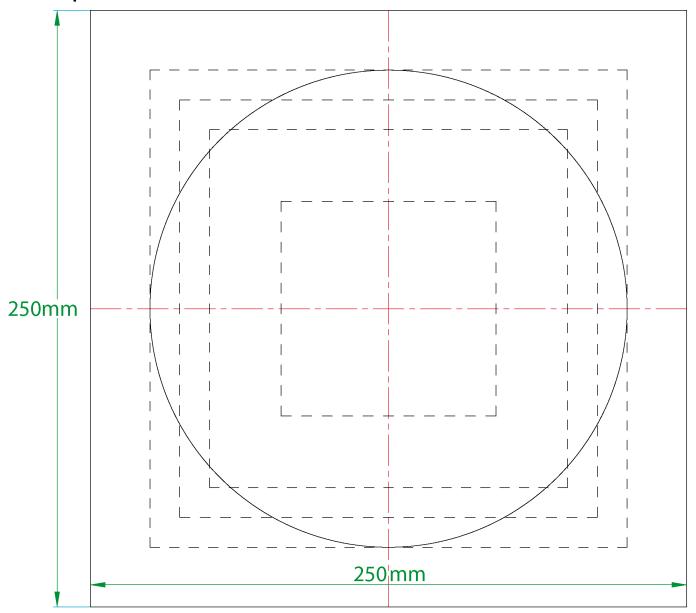
Drawings and diagrams
Figure 2: Ramp and twist section



Drawings and diagrams Figure 3: Ball finial



Drawings and diagrams Figure 4: Ball finial plan

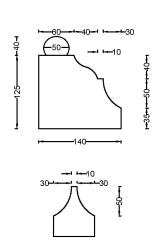


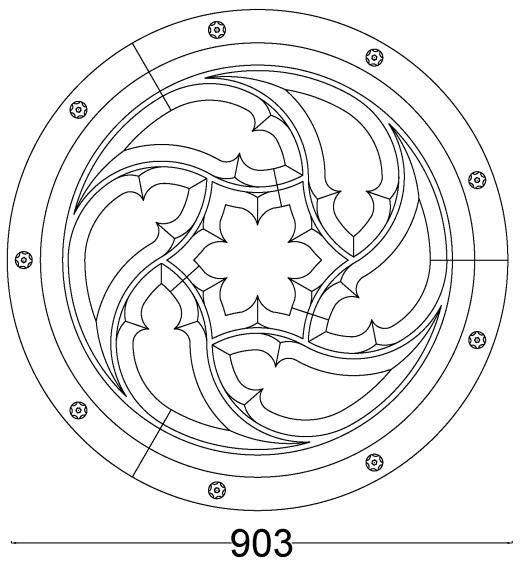
Drawings and diagrams

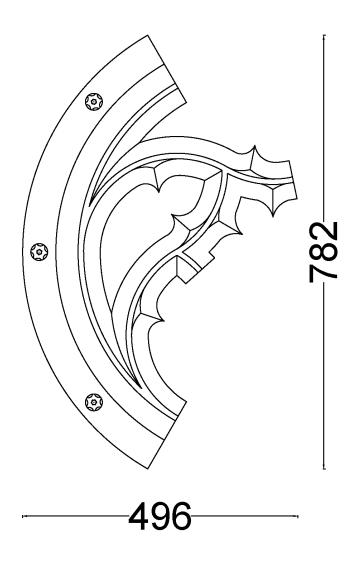
Figure 5: Circular tracery window

Specifications

- Stone type dependant on locality and availability
 Mortar mix dependent
- Mortar mix dependent on locality, availability and stone type
- Jointing (for tracery window): flush finish, 3 mm
- Jointing (for surrounding masonry): ashlar 3mm; rubble with appropriate joint size







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