Mapping Document

This document shows that the enclosed learning materials have been mapped against the Unit of Competency.

Unit Code / Description: RIICBS202E - Hand spread asphalt (RIICBS202E Hand spread asphalt)

Application: This unit describes the skills and knowledge required to hand spread asphalt in civil construction. It applies to those working in operational roles. They generally perform routine tasks and work under direct supervision. Licensing, legislative and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

The information and questions contained in the Learner Guide and PowerPoint presentation have been mapped to the elements, performance criteria, and knowledge evidence for the unit of competency RIICBS202E Hand spread asphalt.



LEGEND:

PC = Performance Criteria

PE = Performance Evidence

KE = Knowledge Evidence

Q = Question

* Main Assessment Document

Documents Mapped to:

Knowledge Assessment - RIICBS202E Hand spread asphalt Marking Guide.v.2.1.docx
Knowledge Assessment - RIICBS202E Hand spread asphalt Student Copy.v.2.1.docx
Practical Training Assessment - RIICBS202E Hand spread asphalt - Marking guide v.2.1.docx
Practical Training Assessment - RIICBS202E Hand spread asphalt - Student Copy v.2.1.docx
*RIICBS202E Hand spread asphalt Learner Workbook Marking Guide.v.1.6.3 - Copy.docx
*RIICBS202E Hand spread asphalt Learner Workbook Student Copy.v.1.6.3.docx

Learner Guide

Learner Guide_Hand spread asphalt RIICBS202E.v.1.20.1.docx – Edition 1 Version 1

- Expected hours of delivery 8 hrs + 4 hrs assessment
- Total duration hours 12hrs

Element / Performance Criteria	Learner Guide / PowerPoint	Review Questions / Formative Assessment / Learner Workbook	Summative Assessment / Learner Work Book
1. Prepare to hand spread asphalt			
☐ 1.1 Obtain, interpret and confirm work requirements	Question/s: 1,2,3,4,5,6,7,9,8,10,11,12,13,14,15,16 ii, 17, 18, 19, 20, 21, 22, 57, 69, 70	Question/s: 1,2,3,4,5 ii, 6, 7, 8, 9, 10, 11, 12,13,14,15, 16i, 16ii, 16iii, 17,18,19, 20, 21, 22, 27, 28, 69, 70	Practical Assessment 1 Task 1, Task 2.
Types of asphalt::PE	What are the different layers in asphalt? (Page 11) What is asphalt? (Page 13) About asphalt binder and its relationship with petroleum (Page 15) Types of Asphalt? (Page 27)		
the properties of asphalt::KE	What are the properties of asphalt? (Page 16) What does it mean when it comes to density and viscosity with building a road in civil construction? (Page 31)		
calculating material requirements::KE	Calculating material (Page 29) How to calculate the density of cold mix asphalt (CMA) (Page 32) Calculations (Page 33) Calculating the quantity of asphalt binder required for building a road (Page 34)		
hand spreading techniques:: KE	Hand spread asphalt (Page 6)		

RIICBS202E Hand spread asphalt	Mapping Documer	nt	
	 Examples of hand spreading techniques for asphalt in civil construction (Page 37) Guide to using a lute or rake when hand spreading asphalt - (techniques) (Page 38) Guide to using a hand shovel when hand spreading asphalt - (techniques) (Page 39) Guide to using a screed when hand spreading asphalt - (techniques) (Page 43) Guide to using hand troweling and performing edge work when hand spreading asphalt - (techniques) (Page 44) Guide to using a taper (compactor) when hand spreading asphalt - (techniques) (Page 45) Guide to using cold asphalt mix to patch a pothole - (techniques) (Page 46) 		
Your job role with paver.:: PE	The basics of road construction (Page 18)		
longitudinal joint and transverse joints.::	What is working with a paver to lay at least 100 lineal metres of longitudinal joint and two transverse joints. (Page 47)		
using a range of communication techniques and systems::PE	Choosing the right communication method (Page 53) Communication techniques and systems (Page 55)		
Confirm work requirements::PE: communicating with others to receive and clarify work instructions	Introduction to hand spread asphalt (Page 6) What type of work would a person that does hand spreading asphalt do in civil construction? (Page 7) What are some of the tasks that a person might perform when hand spreading asphalt in civil construction? (Page 10)		

RIICBS202E Hand spread asphalt	Mapping Documer	nt	
	Collaborative tasks of a hand asphalt spreader with an asphalt paver in civil construction. (What is your job role with paver, an assistant to paver) (Page 50) Communication (Page 52) Communicating with people (Page 54)		
organising work activities to meet task requirements :: PE Q22	The basics of road construction (Page 18) Collaborative tasks of a hand asphalt spreader with an asphalt paver in civil construction. (What is your job role with paver, an assistant to paver) (Page 50)		
locate and apply legislation, documentation, policies and procedures required for hand spreading asphalt::PE	Worker's duty of care (Page 59) PCBU/Employer's duty of care (Page 60)		
☐ 1.2 Access, interpret and apply documentation required to hand spread asphalt and confirm work activity is compliant	Question/s: 17, 21, 24, 25, 26, 27, 28, 23, 24, 26 i, 26 ii, 27, 28, 48, 64, 69, 70	Question/s: 17, 21, 24, 25, 26, 27, 28, 23, 24, 26 i, 26 ii, 27, 28, 48, 64, 69, 70	Practical Assessment 1 Task 2, Task 14
confirm work activity is compliant::PE,KE	What is Compliant? (Page 6) How do we confirm work activity is compliant when hand spreading asphalt in civil construction? (Page 146)		TASK 14, Task 2.
key legislation for hand spreading asphalt ::PE	Standards (Page 65) Question 26 ii) What is the key legislation for hand spreading asphalt?. (Page 66)		Practical Assessment 1 Task 2,
safety data sheet (SDS) compliance processes::KE	SDS (Page 66)		Practical Assessment 1 Task 2,

locate and apply legislation , documentation, policies and procedures required for hand spreading asphalt :: KE	Standards (Page 65)		Practical Assessment 1 Task 2, Task 14
locate and apply legislation , documentation , policies and procedures required for hand spreading asphalt :: PE	What is Compliant? (Page 6) How do we confirm work activity is compliant when hand spreading asphalt in civil construction? (Page 146) Standards (Page 65) Question 26 ii) What is the key legislation for hand spreading asphalt?. (Page 66)		(Documentation) AT Site Safety Checklist. AT Review project specifications (work, thickness, grade, materials) BEFORE AT Site Placement checklist. Quality check. – (Compliant) AFTER
work quality :: ke	Work Quality (Page 131) Quality Inspection Process for Completed Asphalt Paving and Hand Spreading (Page 132) How do we confirm work activity is compliant when hand spreading asphalt in civil construction? (Page 146)		TASK 14
☐ 1.3 Identify environmental issues and potential hazards, and assess and address risks within scope of own role and according to workplace procedures	Question/s: 29, 30, 31, 32, 33, 34, 37, 38, 39, 40	Question/s: 29, 30, 31, 32, 33, 34, 37, 38, 39, 40	Practical Assessment 1 Task 3, Task 4.
Environment::organisational/project environmental management plan, waste management, water quality protection, noise, vibration, dust and clean-up management :: PE	Disposing of environmentally sensitive fluid (Page 73) What is environmental protection? (Page 74) How do we confirm and comply with environmental protection? (Page 74)		Practical Assessment 1 Task 3, Task 4.
assess and address risks::key components of job safety analyses (JSAs)/job safety	Job safety and environment analysis (JSEA) or Safe work method statement (SWMS) (Page 80)		Practical Assessment 1 Task 3, Task 4.

RIICBS202E Hand spread asphalt	Mapping Documer	nt	
environmental analyses (JSEAs)/safe work method statements (SWMs) :: KE, PE	Sample Job safety analysis (JSA) task - hand spreading asphalt (Page 84) Sample Safe Work Method Statement (SWMs) task -		AT: Create a JSA. Potential Hazards AT: Crate a SWMs similar
	hand spreading asphalt (Page 85) Sample Job Safety and Environmental Analysis (JSEA) task on environmental risk for hand spreading asphalt (Page 86)		AT: Create a JSEA
identify, report and record hazards and risks::PE	Hazards and Risks (Page 68) Assessing the risk involved — risk assessment (Page 69)		Task 3, Task 4.
☐ 1.4 Select and wear personal protective equipment required for work activities (PPE)	Question/s: Q38, 39, 40	Question/s: Q38, 39, 40	Practical Assessment 1 Task 5, Practical Assessment 2 Task 6.
Select appropriate PPE :: PE	Decibel levels of common sounds (Page 90)		Practical Assessment 1 Task 5, Practical Assessment 2 Task 6.
site and equipment safety requirements::KE	What is site Safety? (Page 87)		
1.5 Confirm and comply with environmental protection, safety and traffic management signage requirements	Question/s: 35, 36, 37, 40, 41, 42, 43, 44, 45, 46, 47, 48	Question/s: 35, 36, 37, 40, 41, 42, 43, 44, 45, 46, 47, 48	Practical Assessment 1 Task 4 Practical Assessment 2 Task 7.
Traffic::congested urban environments, low traffic rural areas, off-road untrafficked areas, buildings, parking sites, pedestrian areas	Confirm safety of site (Page 100)		Practical Assessment 2 Task 7.

RIICBS202E Hand spread asphalt	Mapping Docu	ument	
environmental protection ::KE ? PE			Practical Assessment 1 Task 4
establishing exclusion zones ::KE PE			Task 7. AT: Setup an exclusion zone.
Signage			
site and equipment safety requirements::(PC 1.5) PE	What is site Safety? (Page 87)		AT Create a onsite check list to ensure that all safety signs and equipment are in place according to traffic management plan
1.6 Select plant, tools and equipment required for tasks, check for faults, and report or rectify in scope of own role	Question/s: Q 49, Q 51, Q 52	Question/s: 49, 51, 52	Task 8.
equipment types, characteristics and limitations::KE			Task 8
operating and maintaining equipment:: KE, PE			AT Use tools to perform job 2.1 – 2.4
clean, check, perform maintenance on and store equipment::PE	Defective equipment (Page 105)		AT Source all tools and equipment for job. Task 8
1.7 Obtain and interpret ((emergency procedures and identify steps required in case of fire, accident and other emergencies))	Question/s: 53, 54, 55, 56	Question/s: 53, 54, 55, 56	Task 4, Task 9
fire, accident and other emergencies :: KE			Task 9
locate and apply legislation, documentation, policies and procedures required for hand spreading asphalt :: PE	Emergency's (Page 108, 109, 110) First aid and emergencies (Page 111)		AT Obtain, write or locate a sample fire, accident and

RIICBS202E Hand spread asphalt	Mapping Docume	nt	
			other emergencies, policy and procedure.
2. Spread asphalt			
2.1 Conduct hand asphalt spreading in safe proximity to the paver	Question/s: 58	Question/s: 58	Practical Assessmennt 2 Task 10
hand spread asphalt on at least two different occasions, including: • working with a paver to lay at least 100 lineal metres of longitudinal joint and two transverse joints. PE	Working around a paver while hand spreading asphalt (Page 117)		AT Work around paver, Safety zones.
locate and apply legislation, documentation, policies and procedures required for hand spreading asphalt::PE	Working around a paver while hand spreading asphalt (Page 117)		AT Work around paver, Safety zones. Task 10
2.2 Hand place asphalt to required level and line according to job requirements	Question/s: 15, 59, 60	Question/s: 15, 59, 60	Practical Assessmennt 2 Task 11.
hand spreading techniques:: KE	See section 1.1 hand spreading techniques		
hand spreading at least 5m2 of asphalt (per patch) to line and level without segregation, including: ~ two patches over 50mm thick, each with a different type of asphalt ~ two patches under 50mm thick, each with a different type of asphalt. :: PE	Sample policy procedures steps to follow when hand placing asphalt to the required level and lining it according to job requirements. (Page 119) Sample policy procedures steps to follow when hand placing asphalt to the required level and lining it according to job requirements. (Page 120) Job requirement asphalt placement checklist (Page 121)		Practical Assessmennt 2 Task 11.

2.3 Achieve even finish when raking and construct joints to correct level according to job requirements	Question/s: 16, 61	Question/s: 16, 61	Practical Assessmennt 2 Task 12.
Joints:: longitudinal, transverse, hot to hot, cold to hot :: KE	Guide to constructing transverse joints from cold to hot asphalt? - (techniques) (Page 124)		Practical Assessmennt 2 Task 12.
hand spreading at least 5m2 of asphalt (per patch) to line and level without segregation, including: ~ two patches over 50mm thick, each with a different type of asphalt	Guide to constructing transverse joints from cold to hot asphalt? - (techniques) (Page 124)		Practical Assessmennt 2 Task 12.
~ two patches under 50mm thick, each with a different type of asphalt. :: PE			
2.4 Identify, repair and report as required low spots, high spots and defects in the mat before and during operation	Question/s: 62, 63, 64	Question/s: 62, 63, 64	Practical Assessmennt 2 Task 13, Task 14
Defects:: bumps, segregation, blemishes, bony materials, voids :: KE	What is identify, repair and report as required low spots, high spots and defects in the mat before and during operation? (Page 126) Common defects found in asphalt paving in civil construction (Page 127) How to fix low spots, high spots and defects in the mat before and during operation? (Page 128, 129)		Task 13
operating and maintaining equipment::PE			Task 13
Work Quality::KE, PE	Work Quality (Page 131)		Task 13, Task 14

locate and apply legislation, documentation, policies and procedures required for hand spreading asphalt :: PE	Quality Inspection Process for Completed Asphalt Paving and Hand Spreading (Page 132)		AT Site Placement checklist. Quality check. Practical Assessmennt 2 Task 14
3. Clean up			
3.1 Clear work area and dispose of and recycle materials as required according to workplace procedures and environmental requirements	Question/s: 65, 66	Question/s: 65, 66	Practical Assessmennt 3 Task 15, Task 17
locate and apply legislation, documentation, policies and procedures required for hand spreading asphalt::PE	Sample Workplace Procedure: Clearing and Disposing of Materials in a Construction Area (Page 134) More about Materials - (Disposal guidelines) (Page 136, 137, 138) What is the best way to dispose of asphalt that is safe to the environment? (Page 139)		AT Clearing and disposal sign off. Practical Assessmennt 3 Task 17
3.2 Clean, check, perform maintenance on in scope of own role, and store tools and equipment	Question/s: 51, 52, 67, 68	Question/s: 51, 52, 67, 68	Practical Assessmennt 3 Task 16, Task 11
operating and maintaining equipment::KE PE	Question 67 What tasks are covered by cleaning, inspecting, conducting maintenance within the scope of one's role, and the storage of tools and equipment? (Page 142)		Task 11.
complete housekeeping activities :: PE	Question 68 What housekeeping might you need to do after hand spreading asphalt? (Page 143)		Task 11.
3.3 Carry out housekeeping to workplace requirements	Question/s: 68	Question/s: 68	Practical Assessmennt 3 Task 15, Task 17

housekeeping:: Q68 Question 68 What housekeeping might you need to do after hand spreading asphalt? (Page 143)	Practical Assessmennt 3 Task 17
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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit; including evidence of the ability to:

Requirement	Practical Assessment
hand spread asphalt on at least two different occasions, including:	Practical Assessmennt 2 Task/s: 10, 11, 12, 13, 14
hand spreading at least 5m2 of asphalt (per patch) to line and level without	
segregation, including:	
~ two patches over 50mm thick, each with a different type of asphalt	Practical Assessmennt 2 Task/s: 11, 12, 13, 14
~ two patches under 50mm thick, each with a different type of asphalt.	Practical Assessmennt 2 Task/s: 11, 12, 13, 14
working with a paver to lay at least 100 lineal metres of longitudinal joint and	Practical Assessmennt 2 Task/s: 10, 12, 13, 14
two transverse joints.	
During the above, the candidate must:	
locate and apply legislation, documentation, policies and procedures required for	Practical Assessmennt 1 Taks/s: 1,2, 14, 3, 4, 5
hand spreading asphalt	Practical Assessmennt 2 Taks/s: 6, 7, 8, 9, 10, 11, 12, 13, 14
	Practical Assessmennt 2 Taks/s: 15, 16, 11, 17
work with others to complete the hand spreading of asphalt that meets required	
outcomes, including:	
organising work activities to meet task requirements::1.1	Practical Assessmennt 1 Taks/s: 1, 2
• communicating with others to receive and clarify work instructions::1.1 - Q22	Practical Assessmennt 1 Taks/s: 1,2
using a range of communication techniques and systems	Practical Assessmennt 1 Taks/s: 2
using signage to advise others of work activity and exclusion zone::1.5	Practical Assessmennt 2 Taks/s: 7
identify, report and record hazards and risks::1.3	Practical Assessmennt 1 Taks/s: 3, 4
clean, check, perform maintenance on and store equipment	Practical Assessmennt 2 Taks/s: 8, 16, 11
complete housekeeping activities.	Practical Assessmennt 2 Taks/s: 15, 17

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

Requirement	Learner Guide / PowerPoint	Review Questions Learner Work Book	Summative Assessment / Learner Work Book
on site processes and responsibilities relating to	Question/s:	Question/s:	Learner Work Book
site isolation and traffic control	33, 36, 48, 41, 42, 45, 47 40, 43, 44, 46, 48	33, 36, 48, 41, 42, 45, 47 40, 43, 44, 46, 48	
safety data sheet (SDS) compliance processes::jq6	Question/s: 6, 26 i	Question/s: 6, 26 i	
key components of job safety analyses (JSAs)/job	Question/s: 34, 29, 30, 31	Question/s: 34, 29, 30, 31	
safety environmental analyses (JSEAs)/safe work method statements (SWMs)::(PC 1.3)			
the properties of asphalt::(PC1.1) What are the properties of asphalt	Question/s: 5, 6, 7, 8, 11	Question/s: 5, 6, 7, 8, 11	
key legislation for hand spreading asphalt:: (PC 1.2)	Question/s: 26 ii	Question/s: 26 ii	
key policies, procedures and established			
requirements for hand spreading asphalt, including those for:			
site and equipment safety requirements::(PC 1.5)	Question/s:	Question/s:	
	40, 42, 43, 44, 46, 48	40, 42, 43, 44, 46, 48	
work quality::PC(2.4)	Q64	Q64	
environmental protection::PC1.5	Question/s: 35, 36, 37	Question/s: 35, 36, 37	
calculating material requirements :: PC 1.1	Question/s: 12, 13, 14, 57	Question/s: 12, 13, 14, 57	
fire, accident and other emergencies:: PC 1.7	Question/s: 53, 54, 55	Question/s: 53, 54, 55	
establishing exclusion zones::PC1.5	Question/s: 41	Question/s: 41	
housekeeping::PC 3.3	Question/s: 68	Question/s: 68	
recycling and waste disposal	Question/s: 65, 66	Question/s: 65, 66	

operating and maintaining equipment::	Question/s: 51, 67	Question/s: 51, 67	
key factors affecting work activities described in			
performance evidence above, including:			
equipment types, characteristics and	Question/s: 49	Question/s: 49	
limitations::PC 1.6			
hand spreading techniques. :: PC 1.1	Question/s: 15	Question/s: 15	

Assessor Requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory competency standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing a high level of RII training product knowledge
- having an understanding and knowledge of legislations and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence as outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must hold the relevant vocational competencies and have current industry skills directly relevant to the training and assessment being provided and must work alongside a trainer and/or assessor to conduct the assessment. This means the industry subject matter expert should hold the unit being assessed (or an equivalent unit), and must also demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

RIICBS202E Hand spread asphalt	Mapping Document		
Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience	
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	1	1 year	
	2	2 years	
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 years	
Other sectors	Where this unit is being assessed outside of the resources and infrastructure sectors assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and where no industry standard is specified should comply with any relevant regulation.		

^{*}Guidance on simulated environments has been stipulated in the RII Companion Volume Implementation Guide located on VETNet.

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
- asphalt hand spreading equipment
- personal protective equipment

^{**}Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting a minimum number of site assessments as determined by the relevant industry sector, across various locations.

^{***} While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

- be conducted in a safe environment; and,
- be assessed in context of this sector's work environment; and,
- be assessed in compliance with legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.
- Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sectors workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272