

**National Certificate in Building, Construction and Allied Trades Skills (BCATS)**  
Teacher Information & Resources

**Demonstrate knowledge of the  
civil infrastructure industry within  
a BCATS environment**

Unit Standard – 25320

Level 2, Credit 2





## Teaching and assessment tips

**Intent** – The intent of the unit standard is that the learner is able to demonstrate basic knowledge of the civil infrastructure industry including:

- major industry sectors
- industry work processes
- industry clients, supply and inter-trade relationships
- the impact of regulatory and trade bodies on the industry and
- industry jobs and their training requirements.

It is intended that a learner who has an interest in a particular industry can achieve credits for their exploration of that industry by completing the relevant unit.

### **Unit standard Interpretation**

No more than 2 of the Demonstrate Knowledge units that relate to BCATS industries can be incorporated in the qualification.

A worksheet that covers the assessment requirements for this unit standard is included in this document. Also included are model answers for that worksheet.

### **Assessment**



Assessment of this unit standard consists of:

- Completion of the worksheet

# Worksheet US 25320

**Student Name:** \_\_\_\_\_

1. Write 3 examples that explain the type of work a civil infrastructure worker would carry out for the 3 major sectors.

i)

Sector	Examples of the type of infrastructure work carried out for that sector
1. Private	
2. Central	
3. Local Government	



2. For 6 of the following processes in the table below:

- a) Briefly describe what happens within each work process.
- b) Give a reason for the process. Note: It may help you if you start each reason with the word *To....*

Process name	Description of the process	The reason for the process
demolition		
site clearing		
earthworks		
site preparation		
erection and construction of structures		



Process name	Description of the process	The reason for the process
road construction		
road maintenance		
bitumen surfacing		
culverts and drainage		
trenching		
kerb and channel		



Process name	Description of the process	The reason for the process
roadmarking		

*Student reasons and descriptions of each work process are to be sector relevant and technically accurate.*



- 3.** Complete the correct infrastructure client description for each of the following sentences
- The New Zealand Transport Agency **directly asks a company** to complete some work. That company is a \_\_\_\_\_ to the New Zealand Transport Agency.
  - A pipelayer is asked to help out on a project by a company who are already working for the New Zealand Transport Agency. What type of contractor is that pipelayer called?

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- 4.** Name a trade that can work in both infrastrucure and in other sectors.

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- 5.** In the following table, name the correct industry body from the description.

- NZ Transport Agency.
- Standards NZ.
- Local and Territorial Authorities.
- WorkSafe New Zealand.

There has been an accident in the workplace - which body will investigate the accident?	
Which body is responsible for land transport safety, new state highways and the maintenance of highways?	





7. Name **one** national association that companies in the infrastructure industry may belong to.

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8. Name one trade association and one professional association that people working in the civil infrastructure industry may belong to.

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## Worksheet Model Answers

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1. Write 3 examples that explain the type of work a civil infrastructure worker would carry out for the three major sectors.

*Student answer is to be sector-accurate and technically correct.*

Sector	Examples of the type of infrastructure work carried out for that sector
1. Private	
2. Central	
3. Local Government	

2. For 6 of the following processes in the table below:
- c) Briefly describe what happens within each work process.
  - d) Give a reason for the process. Note: It may help you if you start each reason with the word *To....*

Process name	Description of the process	The reason for the process
demolition		
site clearing		
earthworks		
site preparation		
erection and construction of structures		
road construction		
road maintenance		
bitumen surfacing		

Process name	Description of the process	The reason for the process
culverts and drainage		
trenching		
kerb and channel		
roadmarking		

*Student reasons and descriptions of each work process are to be sector relevant and technically accurate.*

- 3.** Complete the correct infrastructure client description for each of the following sentences

*The New Zealand Transport Agency directly asks a company to complete some work. That company is a Contractor to the New Zealand Transport Agency.*

- a. A pipelayer is asked to help out on a project by a company who are already working for the New Zealand Transport Agency. What type of contractor is that pipelayer called?

*A Sub contractor*

- 4.** Name a trade that can work in both infrastrucure and in other sectors.

*The trade named by the student is sector relevant, for example, drainlayers, surveyors, laboratory technicians.*

5. In the following table, name the correct industry body from the description.

- NZ Transport Agency.
- Standards NZ.
- Local and Territorial Authorities.
- WorkSafe New Zealand.

There has been an accident in the workplace - which body will investigate the accident?	<i>WorkSafe New Zealand</i>
Which body is responsible for land transport safety, new state highways and the maintenance of highways?	<i>NZ Transport Agency</i>
This body produces national documents that contain information such as specifications, dimensions, tolerances, materials that have to be used, or processes that need to be followed.	<i>Standards NZ</i>
This body contains City Councils, District Councils, Regional Councils.	<i>Local and Territorial Authorities.</i>

6. Name 4 job roles within the infrastructure industry.

For **each job** role you have named:

- d) Name the other members likely to be in the team.
- e) Explain the career path a person with that job role could follow.
- f) Describe the type of training or qualification a person in each job role would need to move on in their career.

*Student answers are to accurately reflect the information contained within the Job Role section.*

- a) The career paths described are a career progression, are sensible and achievable.*
- b) The training described is role and sector relevant and encompasses some or all of: on-job, ITO supplied, tertiary study via polytechnics or universities.*
- c) The training description identifies the names of national qualifications.*

7. Name **one** national association that companies in the infrastructure industry may belong to.

*The student names one relevant association, for example, Road Transport Association NZ, Civil Contractors NZ*

8. Name one trade association and one professional association that people working in the civil infrastructure industry may belong to.

*The student names one association from each of the two categories, for example:*

*Trade association: Plumbers, Gasfitters and Drainlayers Board.*

*Professional association: NZ Institute of Surveyors, IPENZ (Institute of Professional Engineers of New Zealand)*

## Examples of oral assessment questions

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9. Name 4 job roles within the infrastructure industry.

For **each job** role you have named:

- g) Name the other members likely to be in the team.
- h) Explain the career path a person with that job role could follow.
- i) Describe the type of training or qualification a person in each job role would need to move on in their career.

*The job roles and team structures named are to be sector appropriate.*

- d) *The career paths described are a career progression, are sensible and achievable.*
- e) *The training described is role and sector relevant and encompasses some or all of: on-job, ITO supplied, tertiary study via polytechnics or universities.*
- f) *The training description identifies the names of national qualifications.*

10. Explain why some trades can also work in other sectors as well as infrastructure.

*The answer will be in the students own words, but needs to identify relevant facts such as:*

*The tasks carried out in infrastructure, for example pipelaying, require the same skills and knowledge as other sectors, such as drainlaying.*

*Those tradespeople have qualifications and knowledge that are relevant to other sectors gained through study of a specialist topic at a polytechnic or university, as opposed to sector specific training.*

11. Name the industry training organisation for the infrastructure sector.

*Connexis*