DCO5.005 Services for Construction Projects Co-taught with DAT5.104 Building Services

Assessment 1

Weighting

30%

Learning outcomes

1 Identify environmental impacts on building services.
2 Evaluate design and construction impacts that may apply by the installation of services.
3 Explain principles of coordination, placement, and reticulation of services for buildings.
4 Research and apply legislative requirements relevant to services in a building to three levels.

Instructions

Complete and submit your assessment according to the WITT Te Pūkenga's Library web page. This includes information on academic integrity, formatting, word limits and referencing.

- Include your name, student number and the assessment number.
- Number your pages.

Submission

- Submit your assessment in one file.
- Submit your work through your iQualify course.
- Emailed assessments will not be accepted.
- You will receive an automated notice advising you of your successful submission.

By submitting your assessment, you confirm that it is your own, original work.

Assessment instructions

Read the following scenario and complete the tasks that follow.

Scenario

A client has come to you with an enquiry about providing water services to a relocated dwelling on a cleared site.

Task overview

Prepare a report for the client to consider prior to applying for building consent. Your report will consist of Tasks 1-3.

Include annotated plans with labels and explanatory notes in your report to support your recommendations.

Task 1: Project overview

- Provide a brief description of the project and evaluation of the current water supply, foul water discharge and stormwater discharge systems in place on site.
- Provide a brief summary of your recommendations (from Task 3).

(Word count guideline: 200 words)

(30 marks)

Task 2: Drawings

Provide preliminary drawings to the client. **Note:** Hand-sketched mark up of existing drawings, using a ruler, or CAD drawings are acceptable for this assessment.

Indicate the following on a **site plan** of the house:

- cold water supply showing supply isolation valve and backflow protection
- wastewater discharge system
- surface water discharge system.

Indicate the following on a **floor plan** of the house:

- hot water heater inlet valves including non-return valve, pressure reducing valve and isolating valve to cylinder
- existing and proposed hot water heater delivery pipework including any relevant tempering valve

- existing and proposed waste pipes connecting sanitary fixtures to the drainage system.

Note: Attention should be given to the correct **use** and **placement** of symbols and labelling, in conjunction with the use of legends. Connection to the above pipework should be shown on a site plan and/or an internal layout plan to show how they connect to the relevant sanitary fixture or appliance.

(30 marks)

Task 3: Water supply, foul water discharge and stormwater discharge

a. Identify which system(s) you propose as a means of compliance for water supply, foul water discharge and stormwater discharge.

   Explain how the system(s) you are recommending suit this project.

b. Explain any regulatory requirements to connect, or extend existing services, to the Territorial Authority's mains system, or onsite wastewater treatment /septic tank system.

c. What contractors are to be engaged on the project for water supply, foul water and storm water discharge? What is required from each of them so the building can obtain the necessary consents and complies with the various Acts?

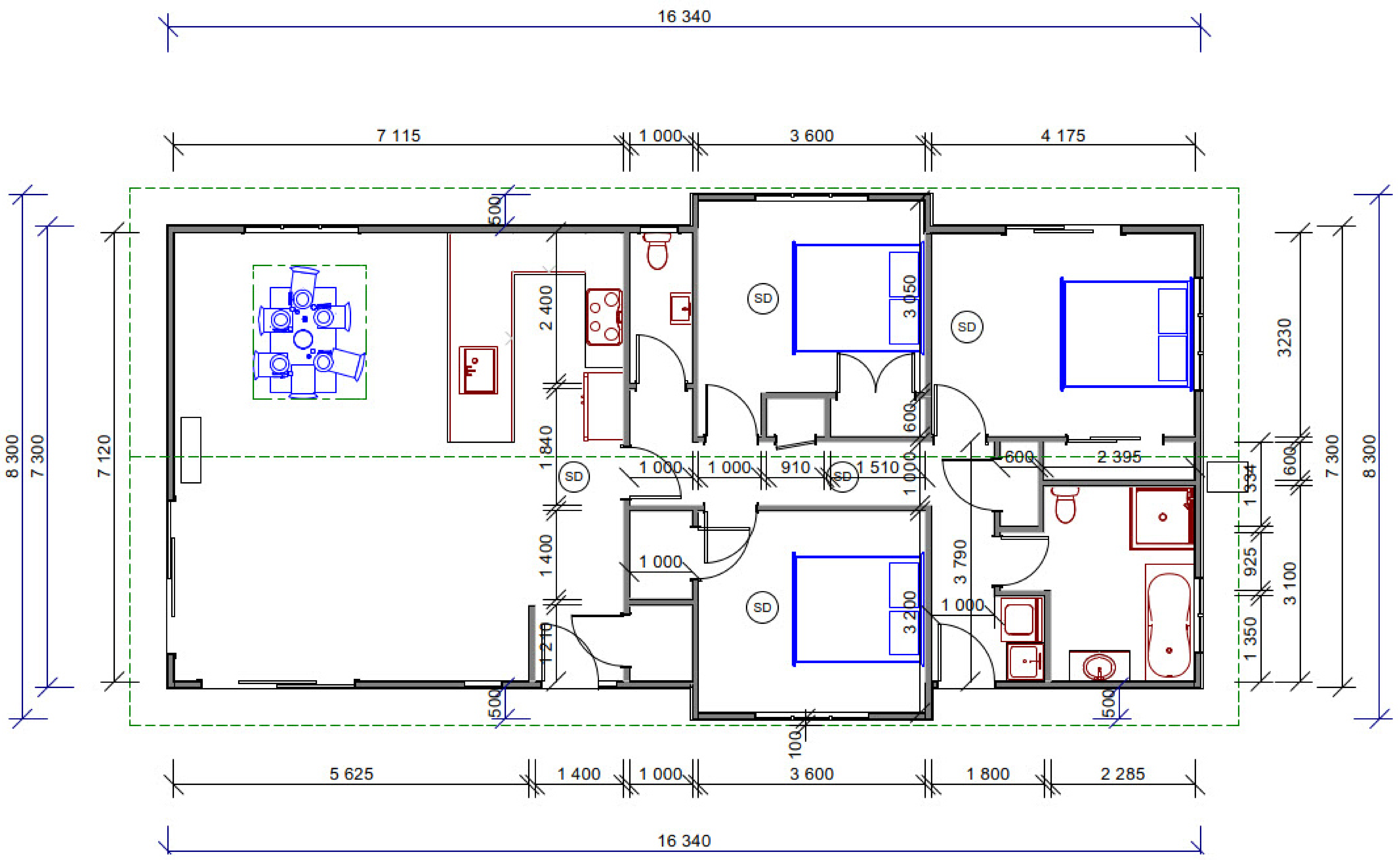
d. Describe the pipe materials you have selected for the project.

Note: you do not need to describe the sanitary fixtures for the new bathroom.

(Word count guideline: 1500 words)

(40 marks)

Note: Submit your answers as ONE file. There are free, online tools which can convert word to pdf and combine multiple pdfs to give one file for submission. For example,
https://www.pdfen.com/merge/merge-files-to-pdf
https://smallpdf.com/pdf-converter



16 340
7 115
1 000
3 600
4 175
8 300
7 300
7 120
500
2 400
1 840
1 400
1 210
SD
3 050
600
1 000
910
1 510
3230
2 395
1 334
925
3 790
3 200
1 350
3 100
100
5 625
1 800
2 285

Marking schedule

Task 1: Project overview	24 – 30 marks	19.5 – 23.5 marks	15 – 19 marks	12 – 14.5 marks	1 – 11.5 marks
• Provide a brief description of the project and evaluation of the current water supply, foul water discharge and stormwater discharge systems in place. • Provide a brief summary of your recommendations (from Task 3).	Report presents description of the project and evaluation of the existing systems in a concise and clearly written format. Includes clear summary of recommendations.	Report presents description of the project and evaluation of the existing systems in a clear, well-presented format. Includes summary of recommendations.	Basic description of the project and evaluation of the existing systems. Includes basic summary of recommendations.	Partial report describing the project and some of the existing systems. Answer may only either describe project or evaluate existing systems Summary of recommendations is included but is incomplete.	Limited information on the project or existing systems. Summary of recommendations missing.
Task 2: Drawings	**12.5 – 15 marks**	**10 – 12 marks**	**7.5 – 9.5 marks**	**6 – 7 marks**	**1 – 5.5 marks**
Provide preliminary drawings which include the proposed bathroom to the client. Indicate the following on a site plan of the house: • cold water supply showing supply isolation valve and backflow protection • wastewater discharge system • surface water discharge system.	Clear, accurate drawing of site plan showing location of all system components. Drawing of site plan is sufficiently detailed and legible. **Legends are provided.**	Clear drawing of site plan showing location of system components with minor omissions or errors. Drawing contains essential details and is legible. **Legends are provided.**	Includes marked up drawing of site plan showing location of essential system components. May include some irrelevant information and/or errors. Drawing contains essential details and is legible.	Includes marked up drawing of site plan showing the location of some system components. Drawing may contain significant errors or omissions or be barely legible. **No legend.**	No drawings or drawing of site plan do not contain any accurate, relevant information. OR Drawing is illegible. **No legend.**
	12.5 – 15 marks	**10 – 12 marks**	**7.5 – 9.5 marks**	**6 – 7 marks**	**1 – 5.5 marks**
Indicate the following on a floor plan of the house • hot water heater inlet valves including non-return valve,	Clear, accurate drawing of floor plan showing location of all system components. Drawing is sufficiently detailed and legible.	Clear drawing of floor plan showing location of system components with minor omissions or errors.	Includes marked up drawing of floor plan showing location of essential system components. May include some irrelevant	Includes marked up drawing of floor plan showing the location of some system components.	No drawings or drawing of floor plan do not contain any accurate, relevant information. OR Drawing is illegible. **No legend.**

pressure reducing valve and isolating valve to cylinder • hot water heater delivery pipework including any relevant tempering valve • waste pipes connecting sanitary fixtures to the drainage system.	**Legends are provided.**	Drawing contains essential details and is legible. **Legends are provided.**	information, omissions and/or errors. Drawing contains essential details and is legible.	Drawing may contain significant errors or omissions or be barely legible. **No legend.**	
Task 3: Water supply, foul water discharge and stormwater discharge	**12.5 – 15 marks**	**10 – 12 marks**	**7.5 – 9.5 marks**	**6 – 7 marks**	**1 – 5.5 marks**
a. Identify which system(s) you propose as a means of compliance for water supply, foul water discharge and stormwater discharge. Explain how the system(s) you are recommending suit this project.	Clear, concise description of the system(s) to be used as means of compliance for water supply, foul water discharge and stormwater discharge. Includes concise and accurate explanation of how the system(s) you are recommending suit the project.	Accurately identifies the system(s) to be used as means of compliance for water supply, foul water discharge and stormwater discharge. Includes explanation of how the system(s) you are recommending suit the project with minor omissions or errors.	Identifies the system(s) to be used as means of compliance for water supply, foul water discharge and stormwater discharge. Answer lacks detail about one and/or lacks balance over the three systems. Includes explanation of how the system(s) you are recommending suit the project with some errors or omissions. May include some irrelevant information.	Attempts to identify means of compliance but this may not be suitable or clear. Includes limited explanation of how the system(s) you are recommending suit the project. Answer contains significant errors / omissions. May include irrelevant information.	Does not clearly identify system to be used means of compliance for water supply, foul water discharge and stormwater discharge. Very limited explanation or very little accurate information on how the system(s) you are recommending suit the project.
	12.5 – 15 marks	**10 – 12 marks**	**7.5 – 9.5 marks**	**6 – 7 marks**	**1 – 5.5 marks**
b. Explain any regulatory requirements to connect or extend existing services, to the Territorial Authority's mains system, or onsite wastewater treatment /septic tank system.	Includes concise and accurate explanation of the compliance documentation required to connect or extend existing services, to the Territorial Authority's mains system or onsite	Includes explanation of the compliance documentation required to connect or extend existing services, to the Territorial Authority's mains system or onsite	Includes explanation of the compliance documentation required to connect or extend existing services, to the Territorial Authority's mains system or onsite	Includes explanation of the compliance documentation required to connect or extend existing services, to the Territorial Authority's mains system or onsite	Limited explanation or very little accurate information on the compliance documentation required to connect or extend existing services, to the Territorial Authority's

	wastewater treatment /septic tank system.	wastewater treatment /septic tank system.	wastewater treatment /septic tank system.	wastewater treatment /septic tank system.	mains system or onsite wastewater treatment /septic tank system.
	5 marks	**4 marks**	**3 marks**	**2 marks**	**1 mark**
c. What contractors are to be engaged on the project? What is required from each of them so the building can obtain the necessary consents and complies with the various Acts?	Accurately identifies all contractors that are required on the project and concisely explains the requirements so the building can obtain the necessary consents and complies with the various Acts.	Identifies contractors that are required on the project and explains the requirements so the building can obtain the necessary consents and complies with the various Acts with minor omissions or errors.	Identifies some of the contractors that are required on the project and explains some of the requirements so the building can obtain the necessary consents and complies with the various Acts with omissions and errors. May include some irrelevant information.	Identifies at least one contractor that is required on the project and explains one of the requirements so the building can obtain the necessary consents and complies with the various Acts with significant omissions and errors. May include irrelevant information.	Does not accurately identify the contractors required on the project. Limited explanation of any of the requirements so the building can obtain the necessary consents and complies with the various Acts with significant omissions and errors.
	5 marks	**4 marks**	**3 marks**	**2 marks**	**1 mark**
d. Describe the pipe materials you have selected.	Accurately describes the pipe materials selected and identifies pipe diameters.	Describes the pipe materials and pipe diameters selected with minor omissions or errors.	Describes the pipe materials selected and identifies pipe diameters with omissions or errors or some pipe materials are not suitable.	Attempts to describe the pipe materials selected but they may not be suitable. Answer contains significant errors / omissions.	Does not accurately describe the pipe materials selected or selects unsuitable pipe materials.