

SULIT



**BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI
KEMENTERIAN PENGAJIAN TINGGI**

JABATAN KEJURUTERAAN AWAM

PEPERIKSAAN AKHIR

SESI II : 2021/2022

DCQ50244: BUILDING WORKS MEASUREMENT 5

TARIKH : 28 JUN 2022

MASA : 11.30 – 1.30 PETANG

Kertas ini mengandungi **ENAM (6)** halaman bercetak.

Bahagian A: Struktur (3 soalan)

Bahagian B: Esei (1 soalan)

Dokumen sokongan yang disertakan : **DRAWING**

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

SECTION A: 75 MARKS**BAHAGIAN A: 75 MARKAH****INSTRUCTION:**

This section consists of **THREE (3)** structured essay questions. Answer **ALL** questions.

ARAHAN:

*Bahagian ini mengandungi **TIGA (3)** soalan esei berstruktur. Jawab **SEMUA** soalan.*

Notes:

1. Taking off refers to the rules in Standard Method of Measurement for Building Works Second Edition (SMM2).

Pengiraan hendaklah merujuk kepada Kaedah Pengukuran Kuantiti Piawai Edisi Kedua (SMM2).

2. Candidate is allowed to make any assumption if the information given in the drawing is inadequate.

Pelajar boleh membuat andaian yang munasabah jika maklumat di dalam lukisan tidak memadai.

QUESTION 1**SOALAN 1**

- (a) By referring to SMM 2, explain clause N.3 which refers to particulars in steelworks.

Merujuk kepada SMM 2, terangkan klausa N.3 yang menerangkan bahagian kerja-kerja besi.

[5 marks]

[5 markah]

CLO 1

C2

CLO 1
C3

- (b) Based on Drawing No. **DCQ50244/ WATERRETICULATION/Q1B/01-02**, carry out the quantities measurement for water reticulation works for item 600mm diameter High Density Polyethylene (HDPE) pipe, hydrant and thrust block.

*Merujuk kepada lukisan No. **DCQ50244/ WATERRETICULATION/Q1B/01-02**, ukur kuantiti untuk kerja sistem bekalan air untuk item 600mm diameter paip High Density Polyethylene (HDPE), pili bomba dan 'thrust block'.*

[12 marks]

[12 markah]

CLO 1
C4

- (c) Conclude all the measured quantities in question 1(b) as the bill of quantities.

Rumuskan semua kuantiti terukur dalam soalan 1(b) sebagai senarai kuantiti

[8 marks]

[8 markah]

QUESTION 2**SOALAN 2**CLO 1
C2

- (a) By referring to SMM2, conclude the table below with reference to the provisions in SMM2.

Merujuk kepada SMM 2, ringkaskan jadual di bawah dengan merujuk kepada peruntukan di dalam SMM2.

No/Bil	List of work / <i>Senarai Kerja</i>	Unit/ Unit	Description of Works / <i>Keterangan Kerja</i>
1	Gates / <i>Pagar</i>		
2	Special post for gates / <i>Tiang khas untuk Pagar</i>		

[5 marks]

[5 markah]

CLO 1
C3

- (b) Based on Drawing No. **DCQ50244/LANDSCAPE/Q2B/01**, carry out the quantities measurement for item tree hole excavation Roystsone Oleracoe and Rim Tree only.

Merujuk kepada lukisan No. DCQ50244/LANDSCAPE/Q2B/01, ukur kuantiti bagi item pengorekan lubang pokok 'Roystsone Oleracoe' and 'Rim' Tree sahaja.

[12 marks]

[12 markah]

CLO 1
C4

- (c) Conclude all the measured quantities in question 2 (b) as the bill of quantities.

Rumuskan semua kuantiti terukur dalam soalan 2 (b) sebagai senarai kuantiti

[8 marks]

[8 markah]

QUESTION 3**SOALAN 3**

CLO 1
C2

- (a) By referring to SMM2, explain clause C.3.1 which refers to method of measurement of demolition works.

Merujuk kepada SMM 2, terangkan klausa C.3.1 yang menerangkan kaedah pengukuran bagi kerja-kerja perobohan.

[5 marks]

[5 markah]

CLO 1
C3

- (b) Based on Drawing No. **DCQ50244/DRAINAGE/Q3B/01**, carry out the quantities measurement for surface water drainage works for item brickwall and concrete cover for the proposed 900mm reinforced concrete drain from S4-S6 only.

*Merujuk kepada lukisan No. **DCQ50244/DRAINAGE/Q3B/01**, ukur kuantiti untuk kerja-kerja saluran air permukaan untuk item dinding bata dan penutup konkrit untuk cadangan 900mm longkang konkrit bertetulang bermula S4-S6 sahaja.*

[12 marks]

[12 markah]

CLO 1
C4

- (b) Conclude all the measured quantities in question 3 (b) as the bill of quantities.
- Rumuskan semua kuantiti terukur dalam soalan 3 (b) sebagai senarai kuantiti*

[8 marks]

[8 markah]

SECTION B: 25 MARKS**BAHAGIAN B: 25 MARKAH****INSTRUCTION:**

This section consists of **ONE (1)** essay question. Answer **ALL** questions.

ARAHAN :

Bahagian ini mengandungi SATU (1) soalan esei. Jawab SEMUA soalan.

QUESTION 1**SOALAN 1**

CLO 1
C3

- (a) Based on Drawing No. **DCQ50244/SEWERAGE/Q1A/01**, carry out the quantities measurement for sewerage works for item 225mm Vitrified Clay Pipe, lean concrete and manhole covering.

Merujuk kepada lukisan No. DCQ50244/SEWERAGE/Q1A/01, ukur kuantiti bagi kerja pembentungan untuk item 225mm Vitrified Clay Pipe, alas konkrit dan penutup untuk lurang.

[15 marks]

[15 markah]

CLO 1
C4

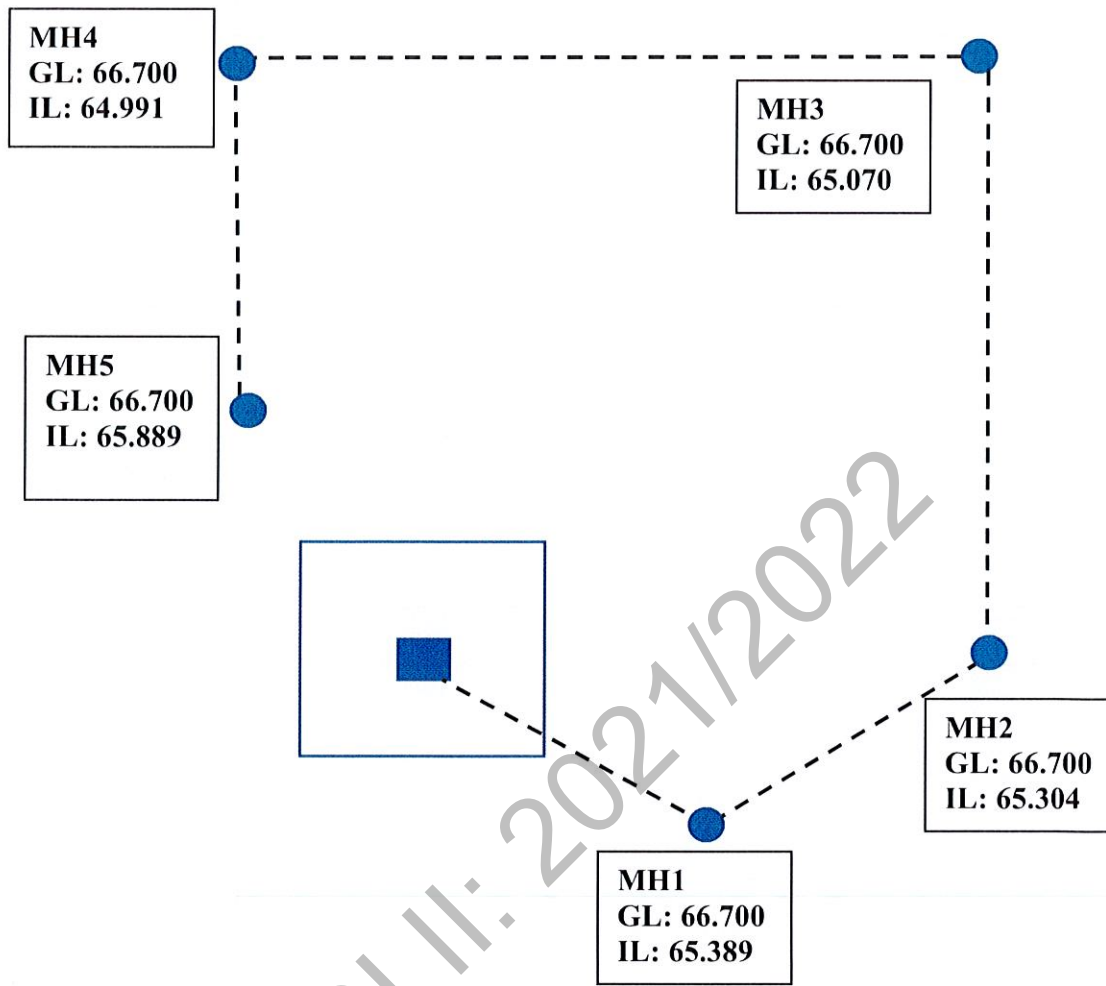
- (b) Conclude all the measured quantities in question 1(a) as the bill of quantities.

Rumuskan semua kuantiti terukur dalam soalan 1(a) sebagai senarai kuantiti

[10 marks]

[10 markah]

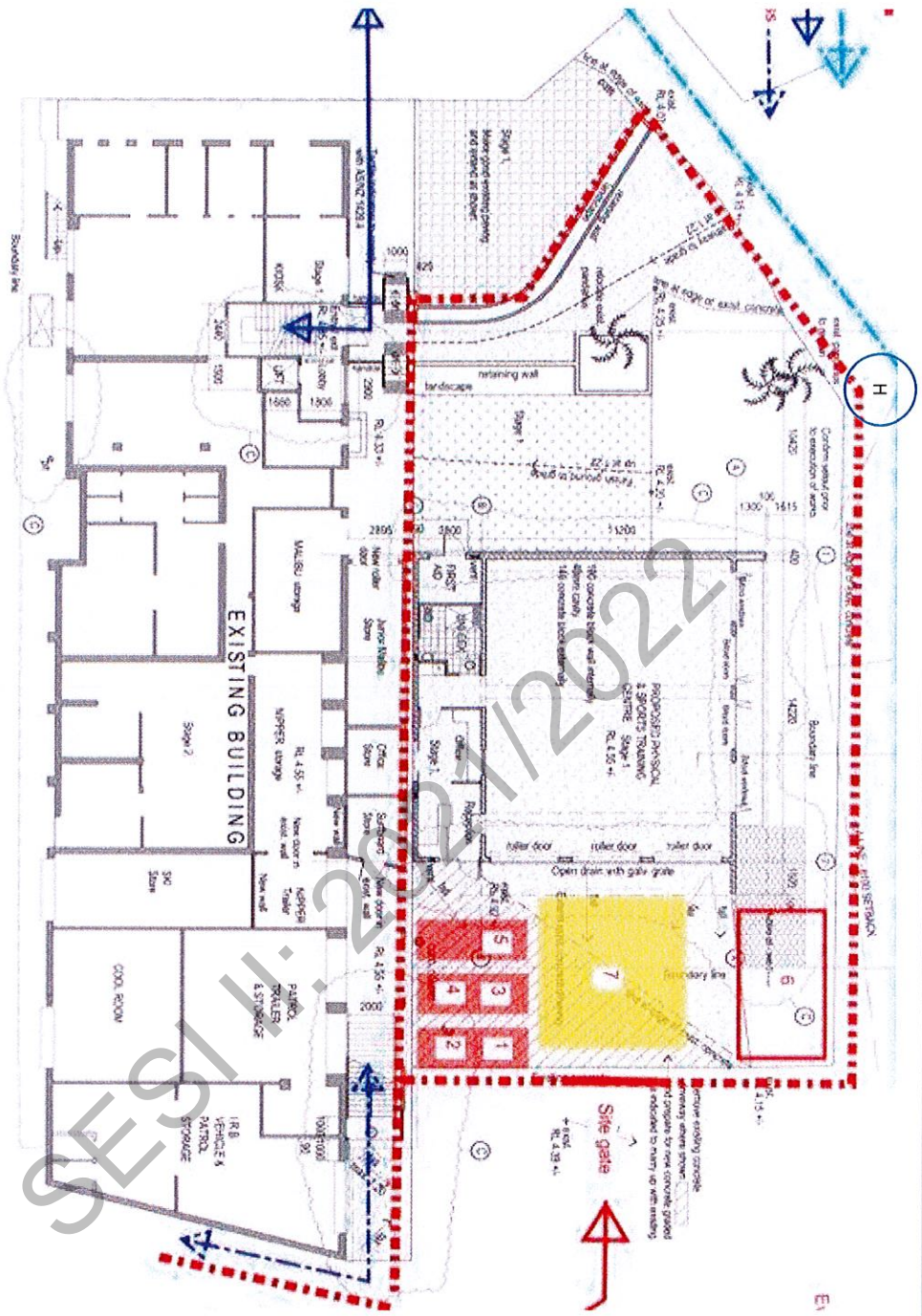
SOALAN TAMAT



SEWERAGE LAYOUT PLAN
Scale 1:300

Legend

225mm VCP Ø - - - - -



LEGEND:

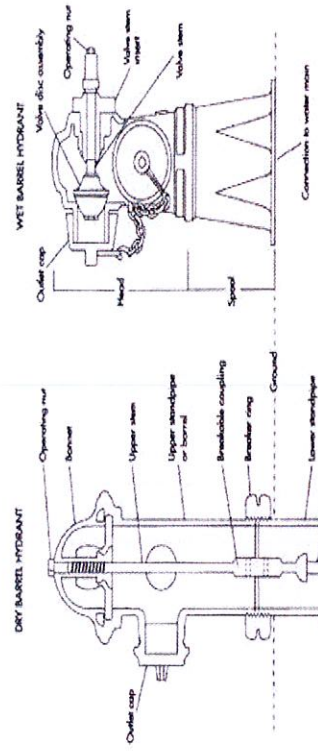
600mm HDPE Pipe

Fire Hydrant

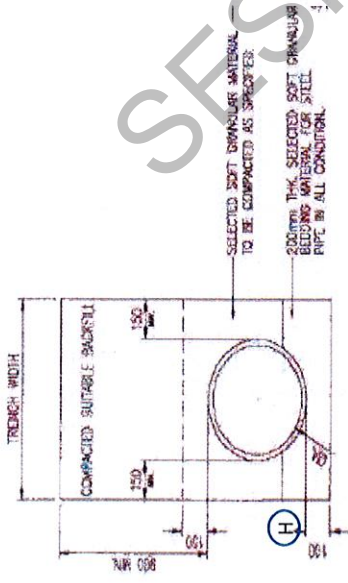
Scale 1:300



DRAWINGS NO: DCQ50244/WATERRETICULATION/Q1B/01

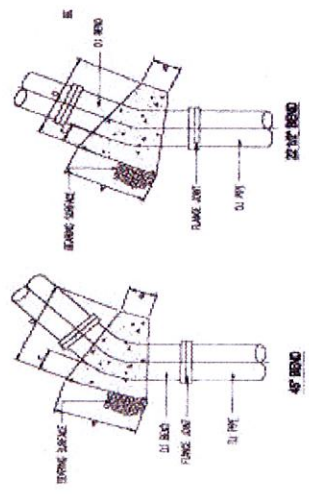
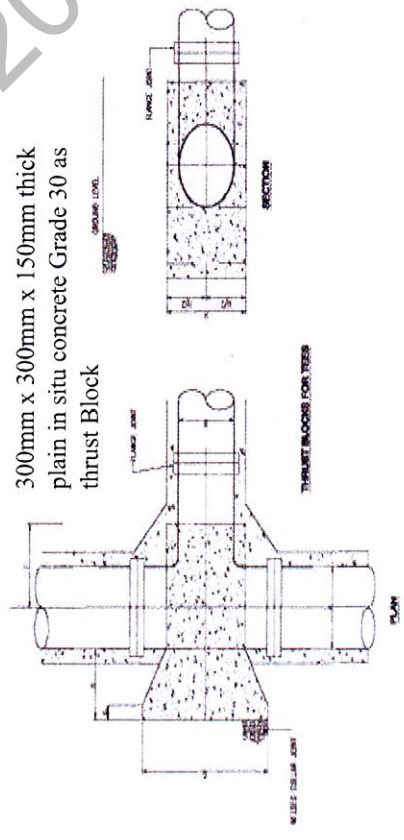


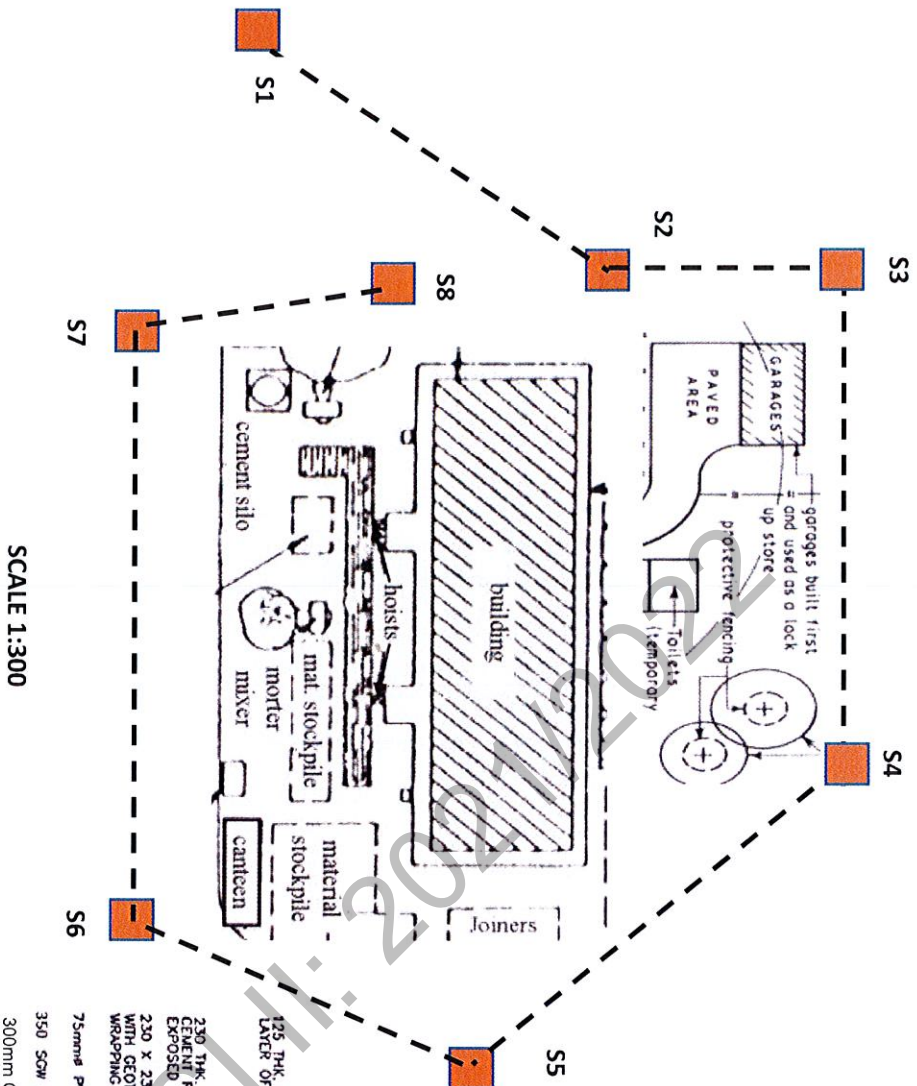
80mm diameter approved double flange pillar stand post hydrant pipe with 60mm



BEDDING DETAIL
Scale: N.T.S

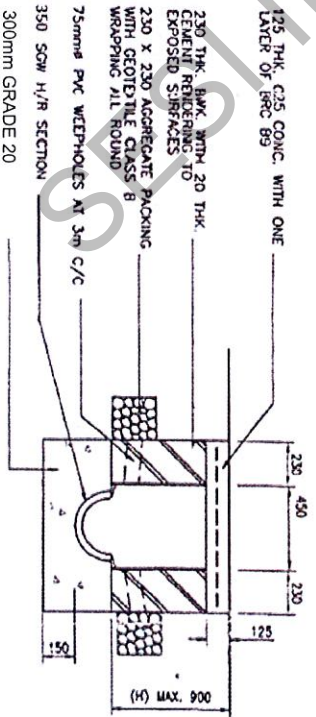
300mm x 300mm x 150mm thick plain in situ concrete Grade 30 as thrust Block



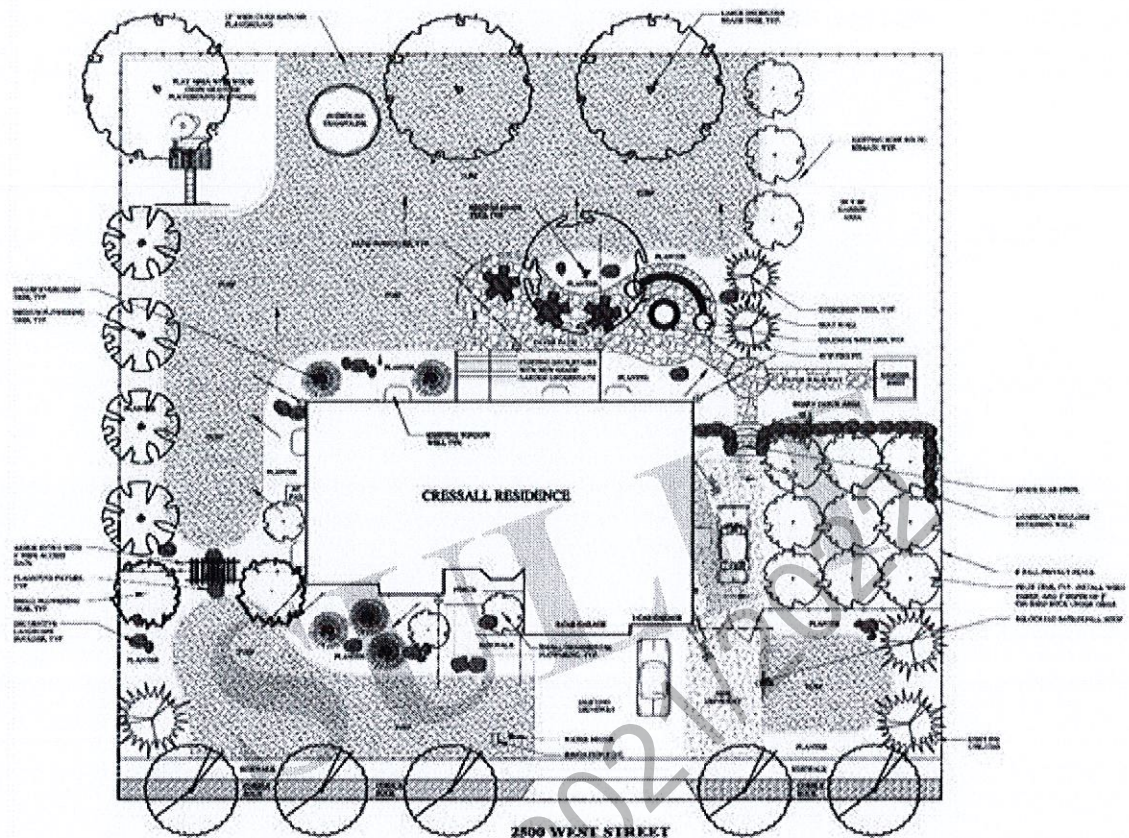


SCALE 1:300

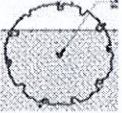
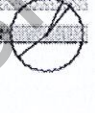
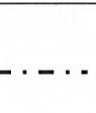
SUMP	REDUCE LEVEL RL	INVERT LEVEL IL
S1	64.00	63.47
S2	64.00	63.44
S3	64.00	63.41
S4	64.00	63.40
S5	64.00	63.39
S6	64.00	63.37
S7	64.00	63.36
S8	64.00	63.35



DRAWINGS NO: DCQ50244/DRAINAGE/Q3B/01



Legend:

	Accent Tree overall height 2.50m, 1.00m x 1.00m x 1.00m size of subvention root system, 0.75m girth		Ricidious Tree overall height 2.50m, 1.00m x 1.00m x 1.00m size of subvention root system, 0.72m girth		Omamental overall height 3.00m, 1.00m x 1.00m x 1.00m size of subvention root system, 0.72m girth
	Roystone Oleracoe overall height 3.00m, 1.00m x 1.00m x 1.00m size of subvention root system, 0.72m girth		Rim overall height 3.00m, 1.00m x 1.00m x 1.00m size of subvention root system, 0.72m girth		Chain link fencing

DRAWINGS NO: DCQ50244/LANDSCAPE/Q2B/01