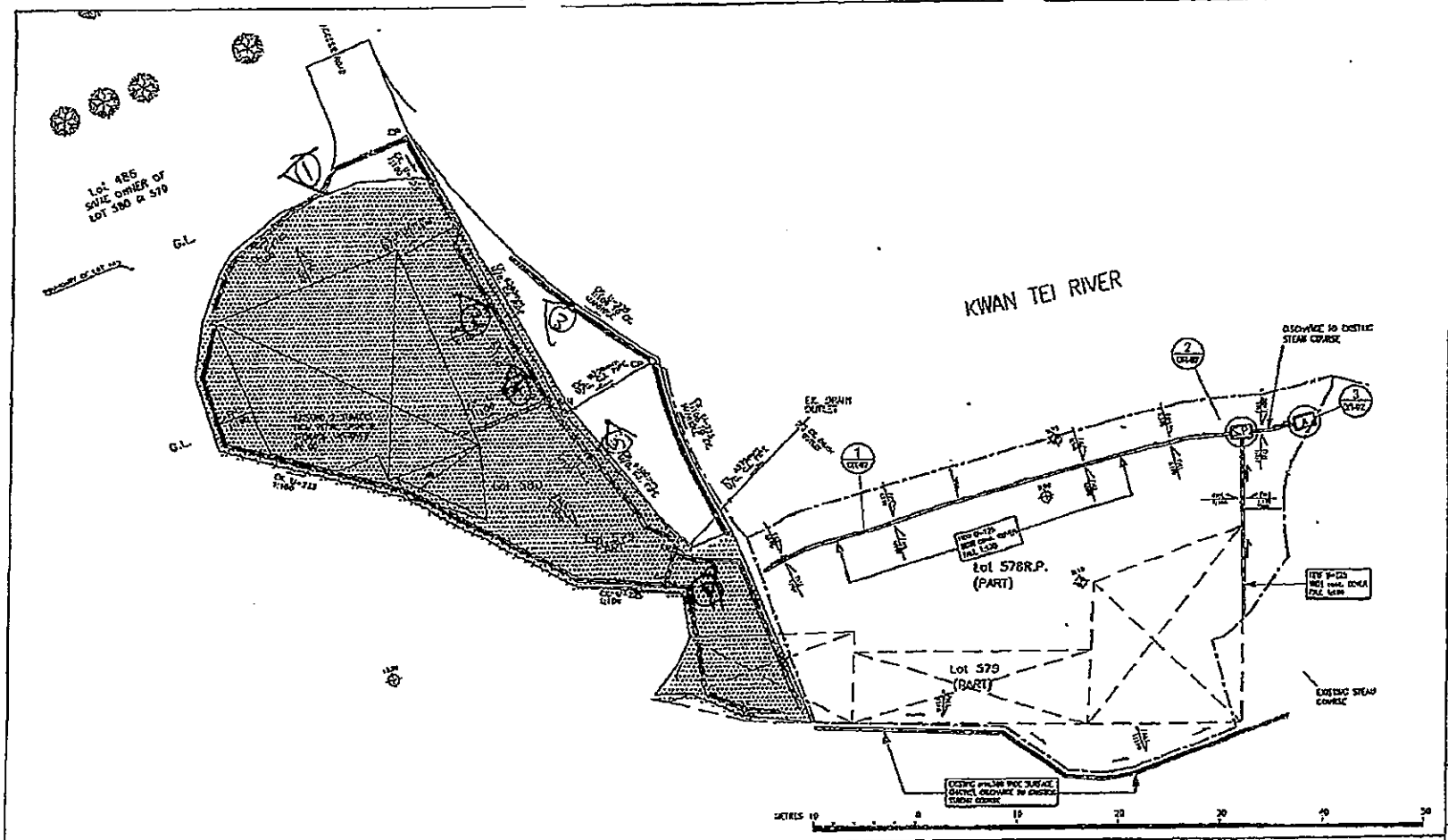

THE SURFACE WATER DISPOSAL CALCULATION

THE MAX. RUN-OFF ON SITE
LOT NO. 578RP & 579 (PART)
IN D.D. 03, KWAN TEI, SHA TAU KOK, N.T.

SITE AREA = 1470 sq.m.

THE MAX. RUN-OFF ON U-CHANNEL
(225mm U-CHANNEL IN FALL 1:100 min)

AREA OF 225 U-CHANNEL
$(1/2 \times \pi \times r) + (0.225 \times 0.1125)$
$(1/2 \times 3.1415 \times 0.0126) + (0.225 \times 0.1125)$
$= 0.045\ M$
$D = \sqrt{\frac{0.045M^2}{1/4\pi}}$
$D = 0.239\ M$

THE MAX. AREA TO BE SERVED BY 225 U-CHANNEL
a = 1/2 (SITE AREA)
= 1/2 (1470)
= 735 sq.m.
Q(L/s) = (K x a) / 3600
= (1 x 200 X 735) / 3600
= 40.833 L/s

BY CHEZY FIRMULA
$V(m/s) = 55\ (D/4) \times \text{GRADIENT}$
$V(m/s) = 55\ (0.239/4) \times (1/100)$
$= 1.364\ m/s$
Q(m/s) = V X AREA OF U-CHANNEL
= 1.364 X 0.045
= 0.061 m³/s
Q(L/s) = 0.061 X 1000
= 61 L/s > 40.833 L/s

LEGEND:

- PROPOSED GROUND LEVEL
- EXISTING GROUND LEVEL
- APRON OUTFALL REFER TO DR-02 FOR DETAILS
- EXISTING STORM MANHOLE
- PROPOSED SEDIMENT PIT REFER TO DR-02 FOR DETAILS
- EXISTING TEMPORARY OPEN-SIDED STRUC. FOR STORAGE OF BUILDING MATERIALS
- EXISTING STORM WATER U-CHANNEL
- PROPOSED STORM WATER U-CHANNEL REFER TO DR-02 FOR DETAILS
- EXISTING LOT BOUNDARY
- AREA APPROVED DRAINAGE WORKS BY BD & DSD REMAIN UNCHARGED (REF. NO: -TPB/R/NE-LYP/345)

B.D. Ref.No.
F.S.D.Ref.No.

Revision		
No.	Description	Date

PENTHOUSE ARCHITECTS LTD.

Drawn by | Date: APR 2010
Checked by | Scale: 1 : 400

Project:
PROPOSED DRAINAGE SYSTEM AT LOT 578RP & 579(PART) IN D.D.03 KWAN TEI, SHA TAU KOK, N.T.

Drawing title:
DRAINAGE LAYOUT PLAN

Drawing No. DR-01 | Rev. A

Drainage Photos

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6