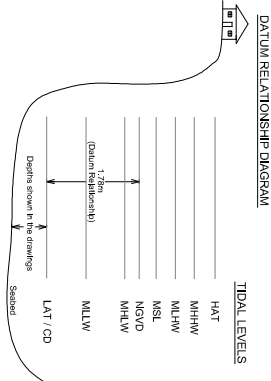


CONTOUR INTERVAL: 1METRE  
CHART DATUM

- LEGEND / NOTES :
- All measurements and in metres.
  - Coordinates is in MRSO.
  - All levels are based on Bench Mark No. BM 00311 (RL: 3.84km NGVD) (RL: 3.652m CD).
  - Chart Datum at Tanjung Gelang is 1.78m Below Mean Higher High Water (MHHW).
  - Chart Datum (CD) is 0.00m Below Mean Sea Level (MSL).
  - Land Survey Datum (MSD) is 0.21m Below Mean Higher Low Water (MHLW).
  - Mean Lower Low Water (MLLW) is -1.28m Below Mean Higher Low Water (MHLW).
  - Chart Datum (CD) is -1.78m Below Mean Higher Low Water (MHLW).

TIDAL LEVELS AT TANJUNG GELANG  
(Adapted from Royal Malaysian Navy, The Year 2010)

NSVD (m)	LAT/CD (m)
Highest Astronomical Tide (HAT)	3.84
Mean Higher High Water (MHHW)	3.34
Mean Lower High Water (MLHW)	2.28
Mean Sea Level (MSL)	1.92
Land Survey Datum (MSD)	0.00
Mean Higher Low Water (MHLW)	1.57
Mean Lower Low Water (MLLW)	-1.28
Chart Datum (CD)	-1.78
	0.00



GEODETIC INFORMATION :

**Geoidetic Data**

- Spheroid : Malayan Revised Everest
- Semi Major Axis : 6 377 304.063 metres
- Semi Minor Axis : 6 356 103.039 metres
- Eccentricity Squared : 0.006 637 846 6392
- Rectangular Flattening (1/f) : 300 801.7

**Origin of Meridian of Reference**

- Projection : Penang State Cassini
- Origin of Meridian : G. Sijung
- Longitude of Reference : E 102° 26' 10.24 E
- Latitude of Origin : N 05° 42' 39.50 N
- Falses Easting : 0 m
- Falses Northing : 0 m

CLIENT :

Muhibbah Engineering (M) Bhd

Lot 586 & 579, 2nd Mile  
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41300 Klang  
Selangor Darul Ehsan

Tel: (603) 3342 4223 Fax: (603) 3342 4227

PROJECT TITLE :

**MUHIBBAH KUANTAN  
MARITIME HUB**

DRAWING TITLE :

**HYDROGRAPHIC AND  
TOPOGRAPHIC SURVEY  
- CHART DATUM -**

Surveyed By: **Samuel, Ridwan, Amir, Saiful, Amir, Hisham, Bahari, Azhar, Arie, G. Cheong**

Plotted By: **Mastura**

Checked By: **Sharfzie / Haidil**

Date Of Survey: **29th June - 30th July 2016**

Drawn By: **Mastura**

Approved By: **Sr. Lee Cheuk Hock**

SCALE :

**1 : 1000**

Horizontal Scale: 1cm = 10m

Vertical Scale: 1cm = 1m

Surveyors Drawing No: **JPWS/16/PHG/633006/4**

Drawing Date: **22nd August 2016**

Client's Drawing No: **918/2016**

Sheet No: **Rev:**

REVISION: **DATE REPORT NO: 918/2016**

Chartered & Licensed Land Surveyors:

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