

INSTRUCTION TO CONTRACTORS ON DISPOSAL OF SURPLUS CUT MATERIAL

- 1) Designated disposal sites shown on the drawings only indicate possible areas for disposal. The Contractor shall be responsible for locating disposal sites, be it on government land or private land.
- 2) The Contractor shall obtain the necessary approvals from the respective government agencies and private land owners for the use of the land as disposal site. All expenses incurred in making the necessary agreements including the claims arising from the use of such solid waste dumps shall be the use of such solid waste dumps shall be deemed to be included in the respective bill items.
- 3) The Contractor shall comply with statutory requirements such as payment of royalties, environmental protection etc. and shall keep the Government and the Engineer indemnified against all penalties and liability of every kind for breach of any such requirements.
- 4) The Contractor is to note that the Works are carried out in an environmentally sensitive location and as such the choice of the disposal sites and the works thereof shall uphold the environment in its pristine state with minimal environmental damage.
- 5) The earth works for the disposal sites shall be carried out in a systematic and orderly manner in phases so as to minimize ground surfaces from being exposed for long periods.
- 6) The disposal embankment shall be constructed evenly over their full width and shall be maintained at all times with sufficient camber to drain surface water away readily. Drainage shall be arranged towards the centre of the embankment with the necessary temporary channels.
- 7) Temporary ditches, watercourses, drains and pumping shall be provided to keep the disposal site free from water. Adequate means of trapping silt shall be provided on all temporary systems discharging into permanent drainage systems.
- 8) Any additional costs that may be required as a result of the diversion of the proposed stream / river diversions shown on the drawing, due to the disposal site, shall be borne by the contractor.
- 9) The Contractor shall ensure that the disposal embankment is stable. This is to minimize failures that may have a consequent environmental impact. Where disposal is carried out in existing ground with slopes >10%, benches shall be formed.
- 10) Suitable retaining structures shall be provided where required to maintain the stability of the embankment.
- 11) Embankment slopes shall be turfed as soon as possible. Where turfing cannot be carried out immediately, temporary protection (plastic sheet) shall be provided to the exposed slopes.
- 12) Where the disposal embankment is adjacent to the main highway embankment then it shall be compacted to a density equal to that of the highway embankment.
- 13) The Contractor shall comply with all the requirement of the JKR Specifications (Section 2 – Earthworks) when disposing adjacent to the main embankment.
- 14) Any increase in construction costs as a result of the disposal adjacent to the highway embankment shall be borne by the Contractor. These increase in costs inter-alia may include longer toe drain lengths and culverts.
- 15) The Contractor shall be responsible for additional land acquisition and cost implications thereof in respect acquisition costs and consequent delays in the completion of the Works. The Government shall not entertain any request for extension in time as a result of the additional land acquisition.
- 16) Where the disposal embankment is remote from proposed road and more than 10m high then it shall be compacted to a density equal to the proposed road embankment.
- 17) The proposed disposal embankment adjacent to existing/proposed road shall be 300mm below the formation level of existing / proposed road.

GENERAL NOTES :
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED

	PINDAAN	TARIKH	TANDA TANGAN



BAHAGIAN KEJURUTERAAN AWAM
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PENGARAH KAWAN: K. DR. ABDUL AZIZ BIN HJ. ARSHAD
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KETUA PENOLONG PENGARAH 1 : K. ATIKAH BINTI ABUL HANID
PENYEMPAK : MOHD AZLAN BIN NOBIRAN
PEREKA :

PROJEK : LUKISAN PIAWAI KERJA TANAH

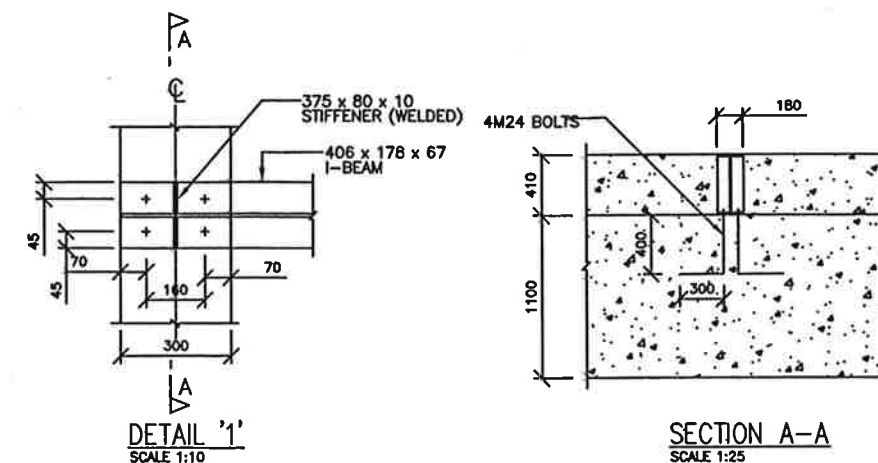
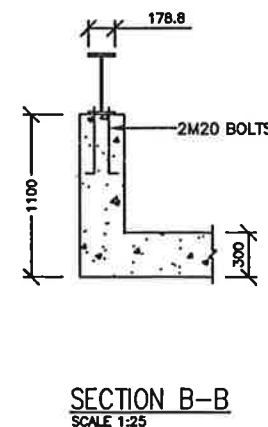
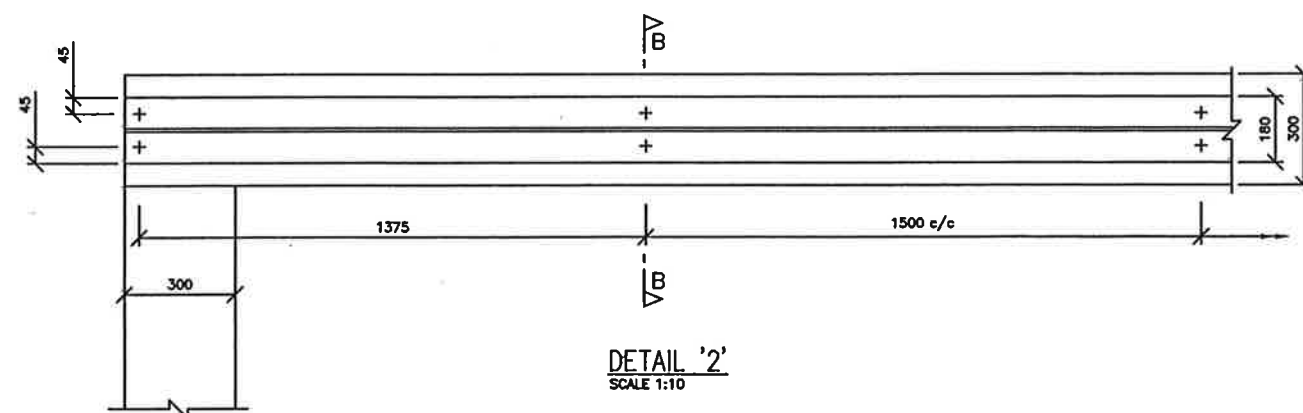
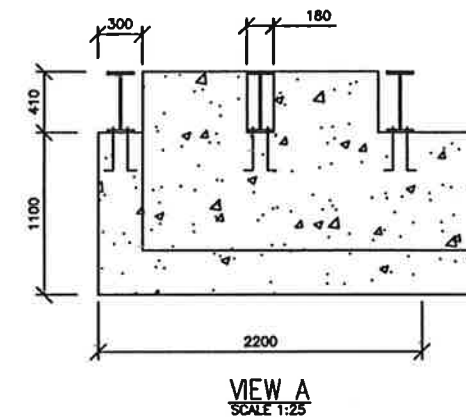
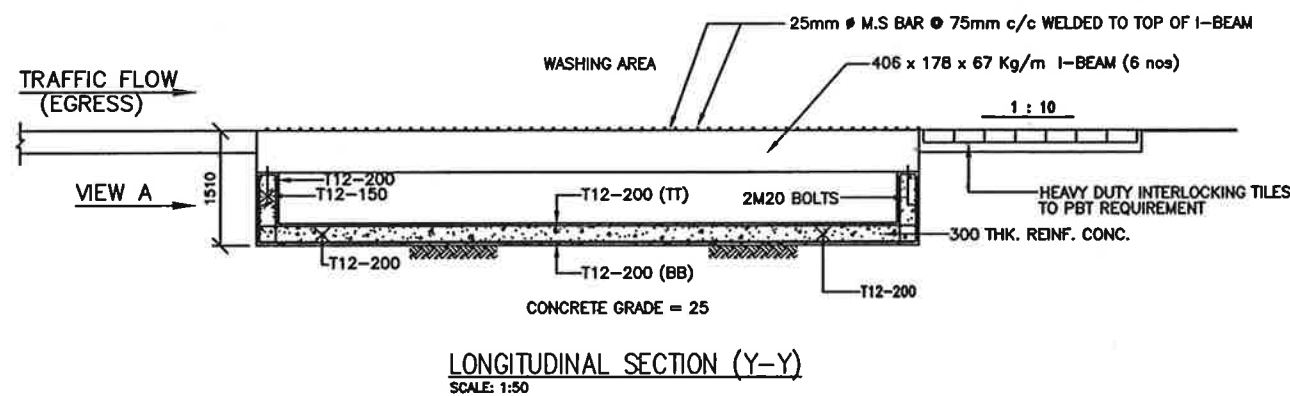
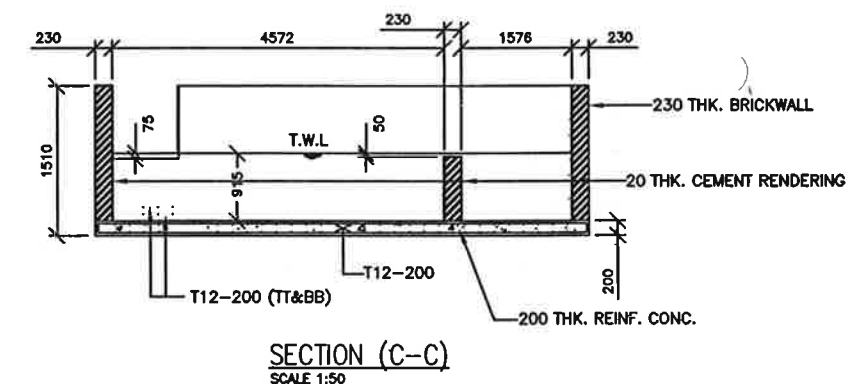
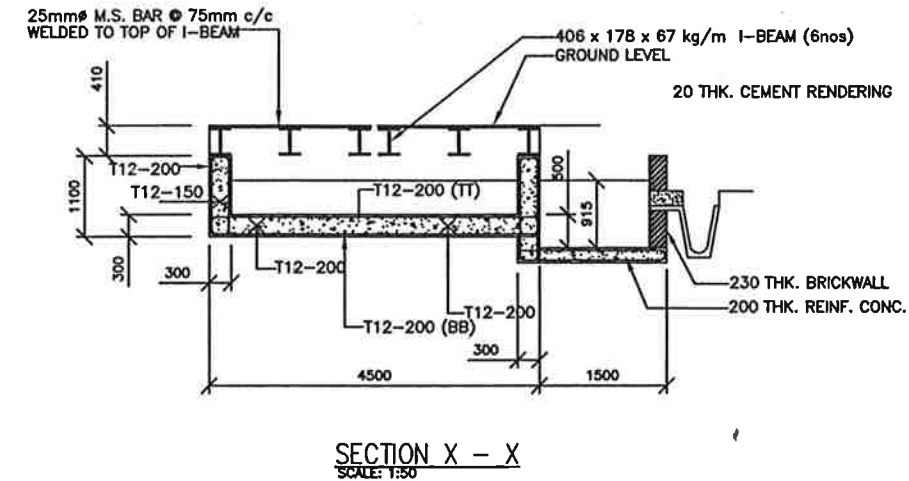
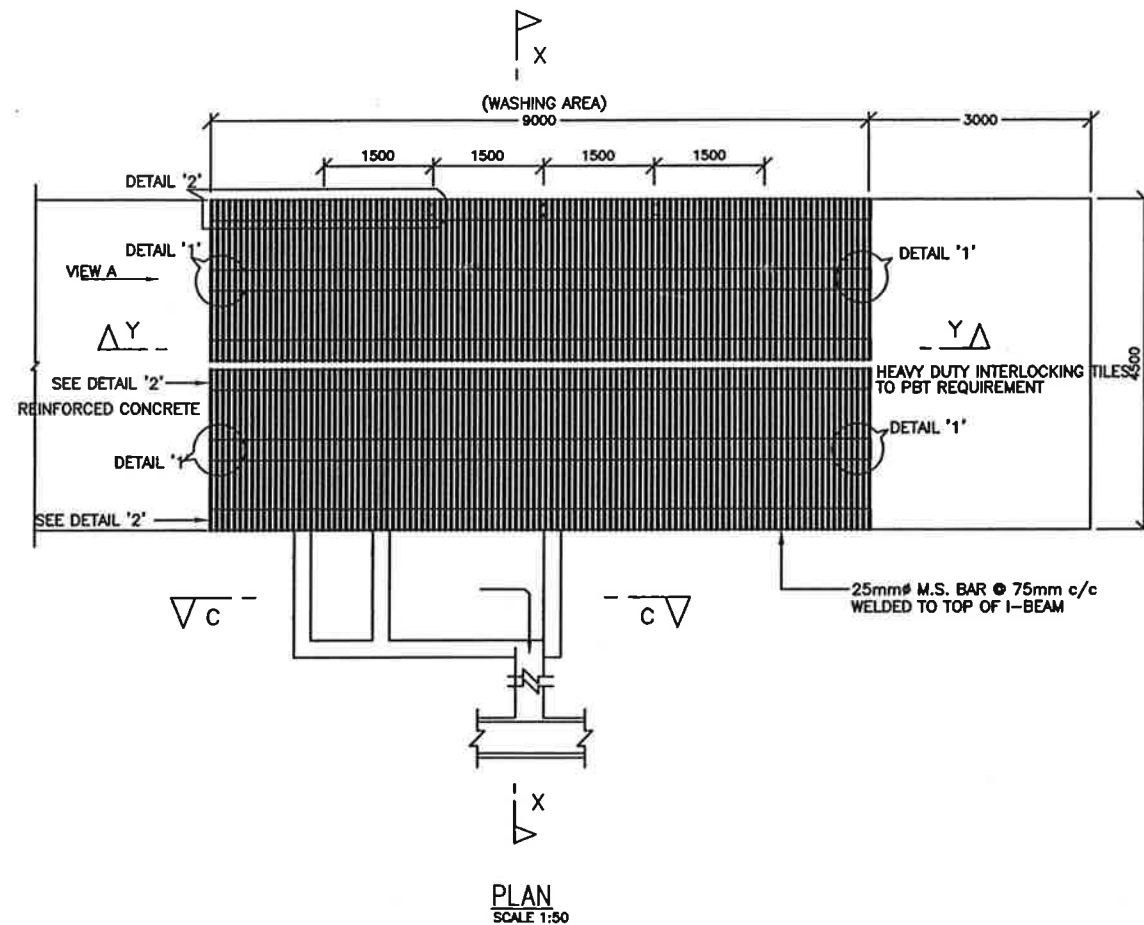
TAJUK LUKISAN : INSTRUCTION TO CONTRACTORS ON DISPOSAL OF SURPLUS CUT MATERIAL
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SKALA :	NOT TO SCALE
DISURUH :	DRAWING ARAHAN TEKNIK (JALAN) 16/03 (PINDAAN 2008)
TARIKH :	JUN 2011
FAIL KOMPUTER :	Standard earthwork.dwg

NO. LUKISAN : JKR/CKAS/J08/500/PEL/KT/01(15)	
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|--------------------------------|--|
| NO. LUKISAN : | |
| JKR/CKASJ/08/500/PEL/KT/02(15) | |



GENERAL NOTES :
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PENYEMAK: HASRUL NIZAM BIN ABUL RAHMAN
PEREKA: MURZALISA BINTI ABUL RAHM

PROJEK :

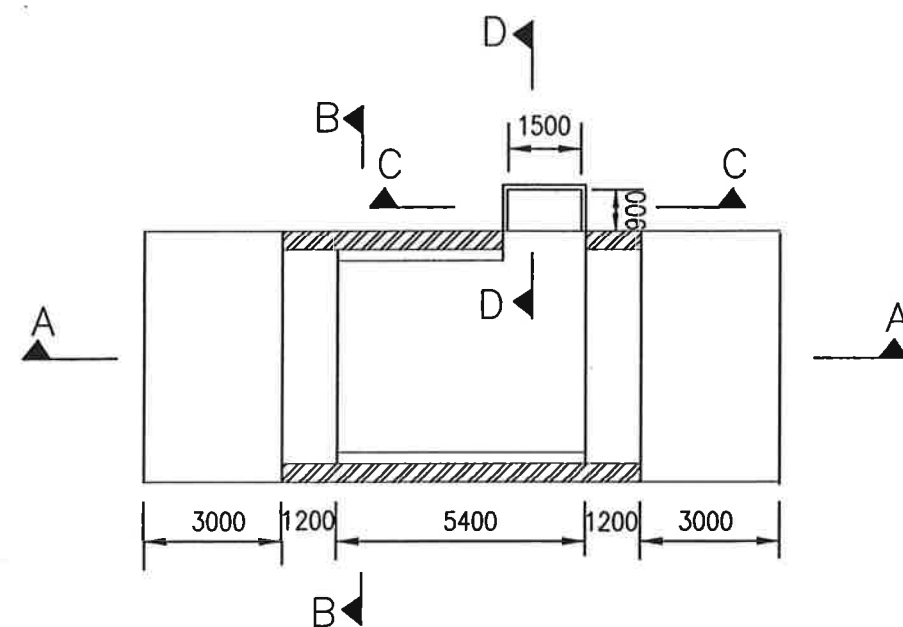
LUKISAN PIAWAI
KERJA TANAH

TAJUK LUKISAN :

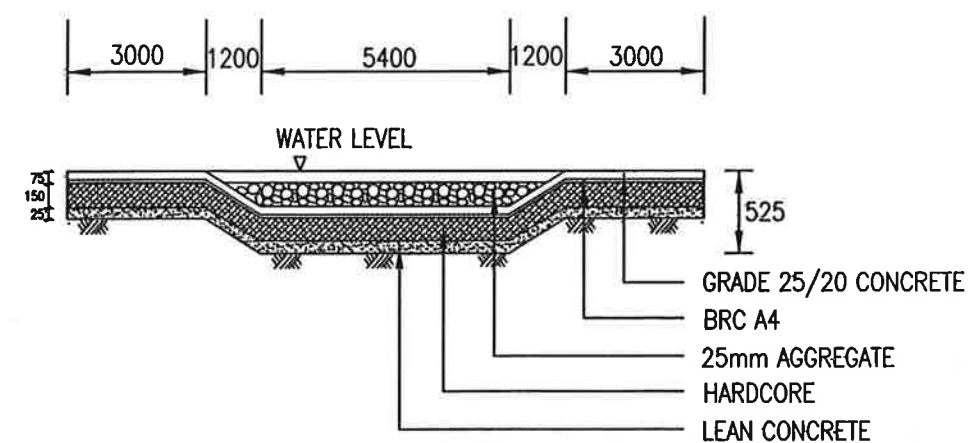
WASH TROUGH DETAILS
(URBAN AREA)

SKALA :	AS SHOWN
DILUKIS :	YATI/LINDA/ALIN/RUBY
TARIKH :	JUN 2011
FAIL KOMPUTER :	Standard earthwork.dwg

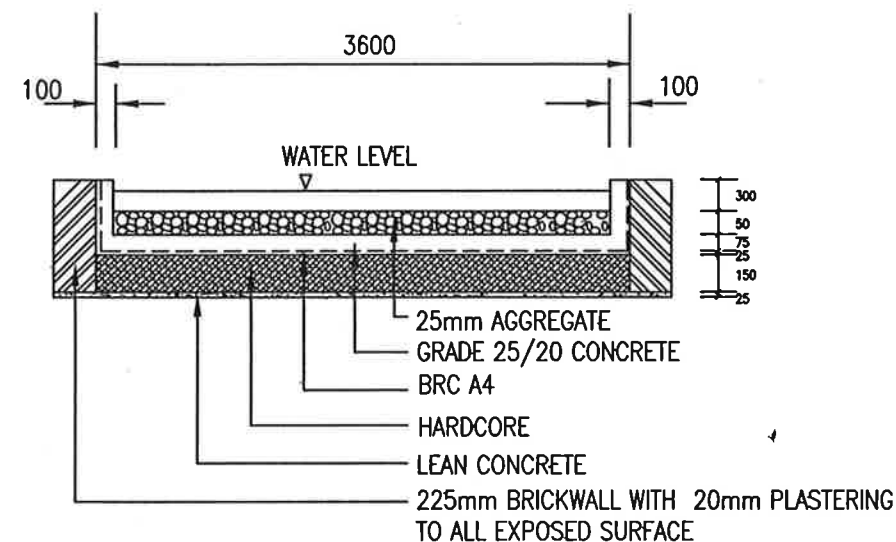
NO. LUKISAN :
JKR/CKASJ/08/500/PEL/KT/03(15)



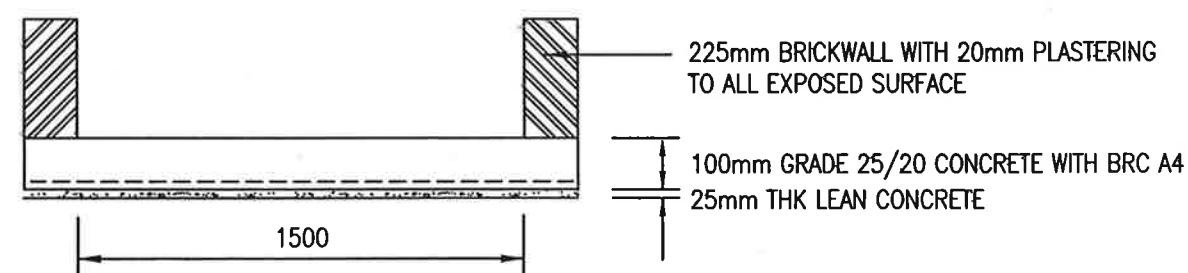
PLAN
VEHICLE WASHING TROUGH



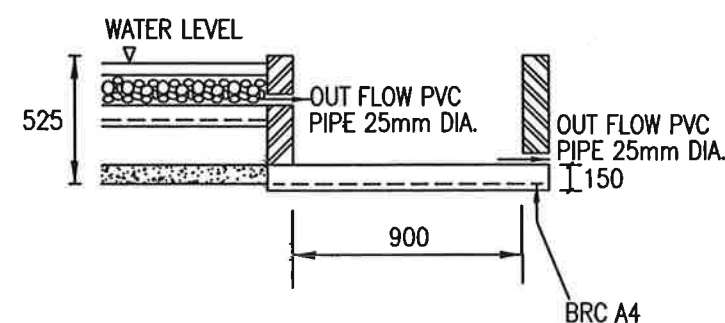
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

GENERAL NOTES :

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PINDAAN	TARIKH	TANDA



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Ir. ATRIAH BINTI ABUL HAMID

PENYEMPAK:
MOHD. AZLAN BIN MOHRAN

PEREKA:

PROJEK:

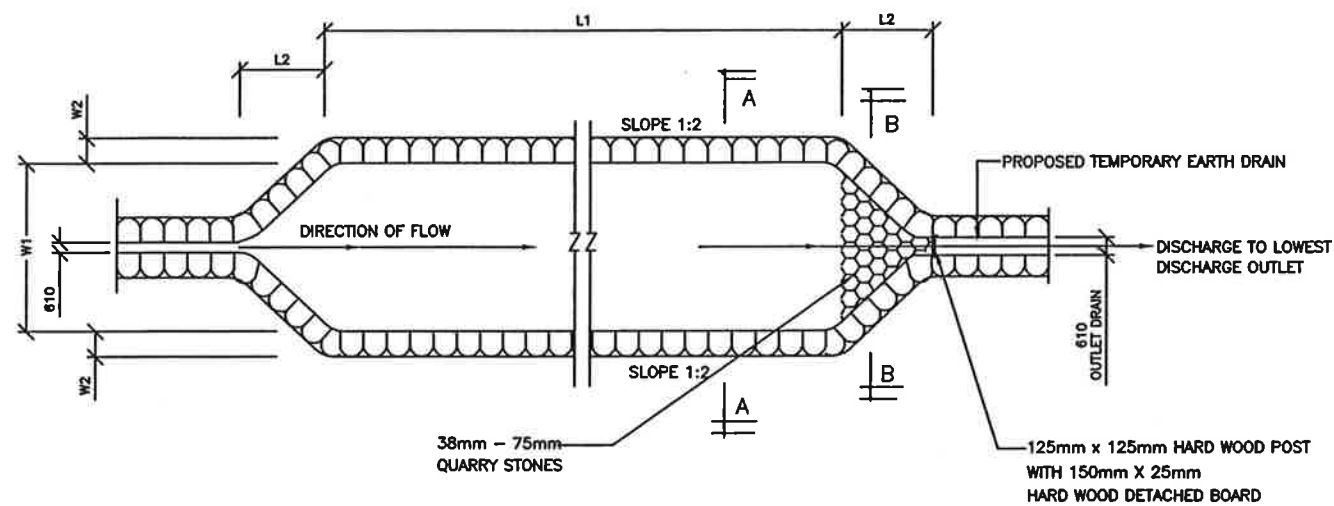
LUKISAN PIAWAI
KERJA TANAH

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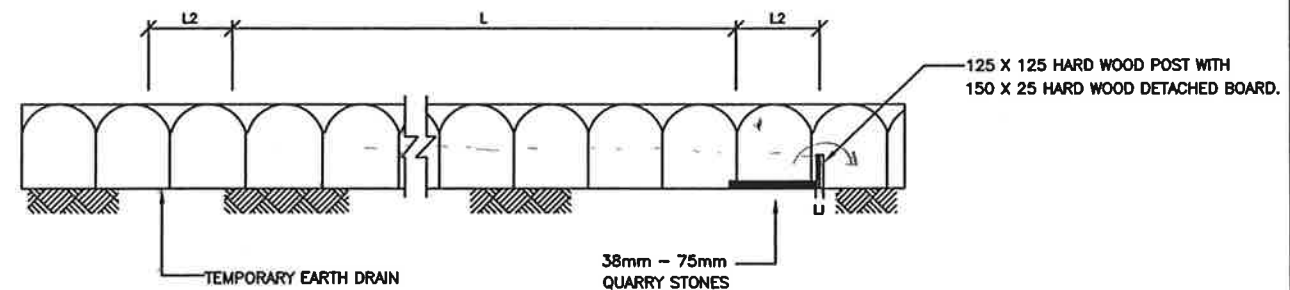
WASH TROUGH FOR CONSTRUCTION
SITE AT (RURAL AREA)

SKALA:	NOT TO SCALE
DISURUH:	DRAWING ARAHAN TEKNIK (JALAN) 16/03 (PINDAAN 2008)
TARIKH:	JUN 2011
FAIL KOMPUTER:	Standard earthwork.dwg

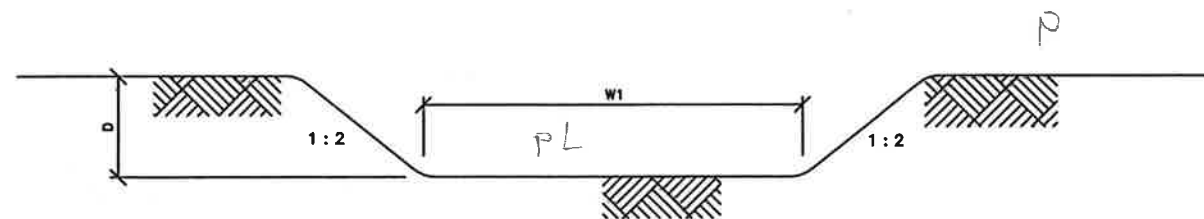
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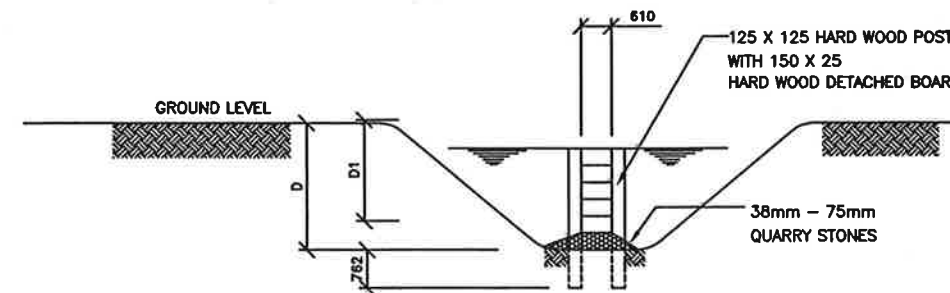
PLAN VIEW OF WET SEDIMENT BASIN
N.T.S.



LONGITUDINAL SECTION
N.T.S.



SECTION A-A
N.T.S.



SECTION B-B
N.T.S.

GENERAL NOTES :
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED

	PINDAAN	TARIKH	TANDA TANGAN



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KETUA PENOLONG PENGARAH 1 : Ir. ATIKAH BINTI ABUL RAMD
PENYEMPAK : HASRUL NIZAM BIN ABUL RAHMAN
PEREKA : MURZALISA BINTI ABUL RAHIM

PROJEK :

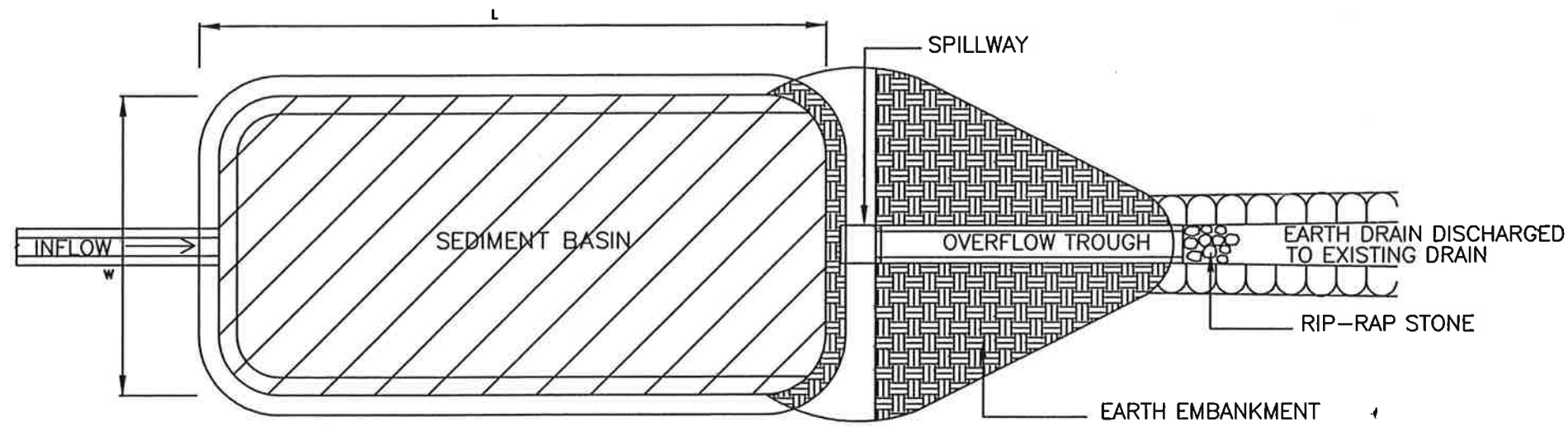
LUKISAN PIAWAI
KERJA TANAH

TAJUK LUKISAN :

WET SEDIMENT BASIN DETAILS
TYPE 1

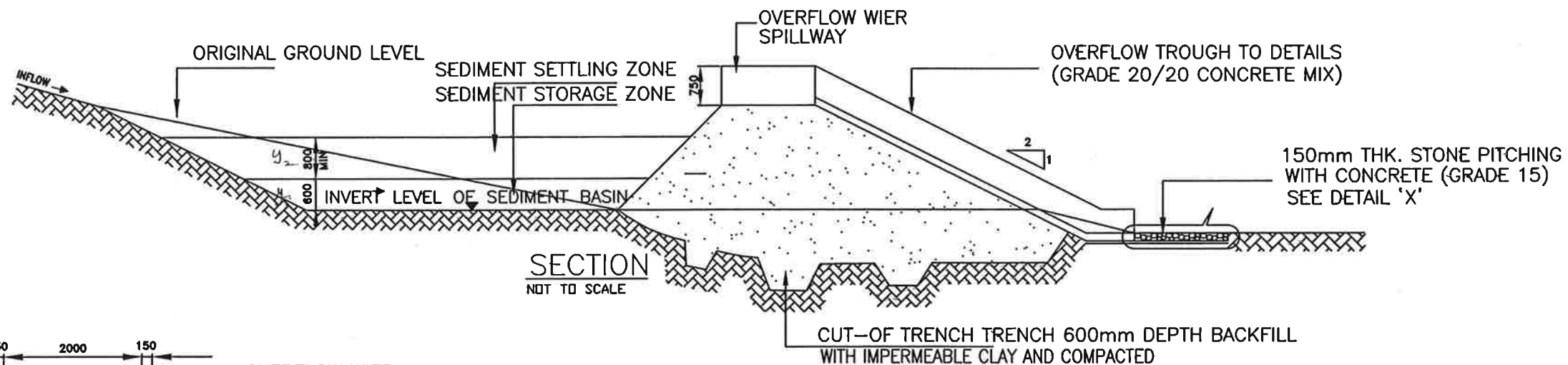
SKALA :	AS SHOWN
DILUKIS :	YATI/LINDA/ALIN/RUBY
TARIKH :	JUN 2011
FAIL KOMPUTER :	Standard earthwork.dwg

NO. LUKISAN :
JKR/CKASJ/08/500/PEL/KT/05(15)



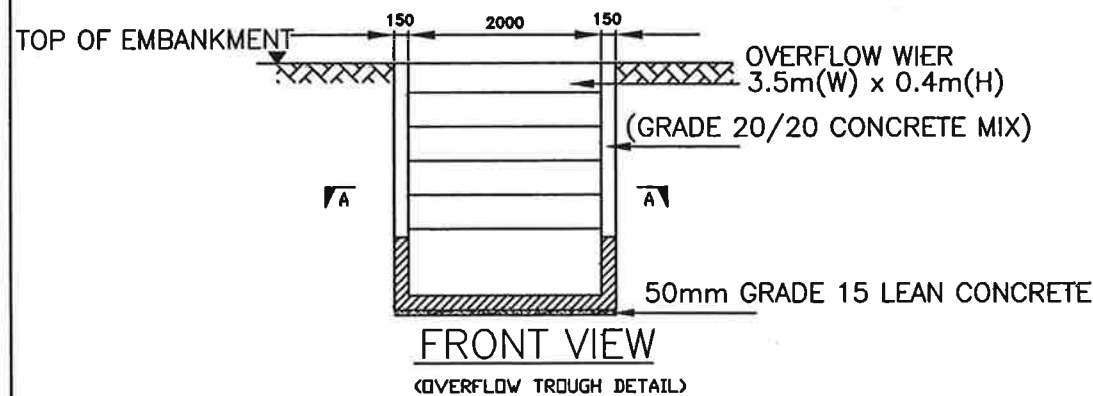
PLAN OF SEDIMENT BASIN

NOT TO SCALE



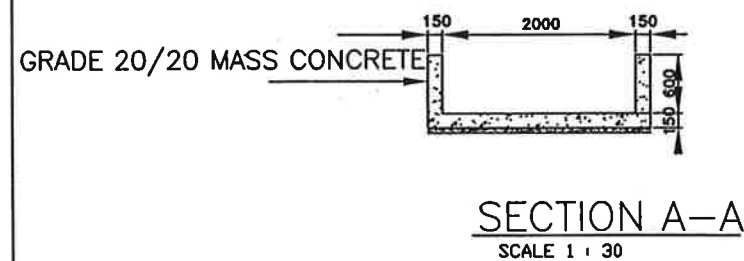
SECTION

NOT TO SCALE



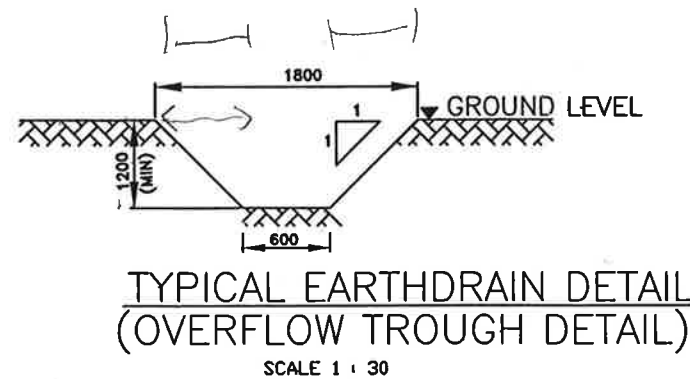
FRONT VIEW

(OVERFLOW TROUGH DETAIL)



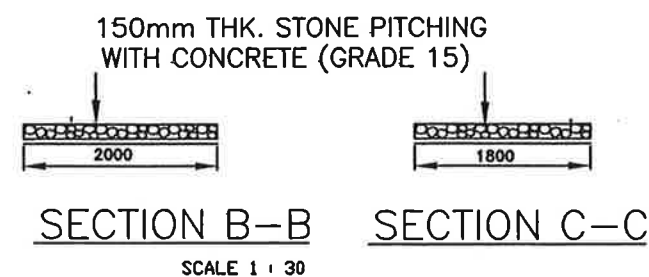
SECTION A-A

SCALE 1 : 30



TYPICAL EARTHRAIN DETAIL
(OVERFLOW TROUGH DETAIL)

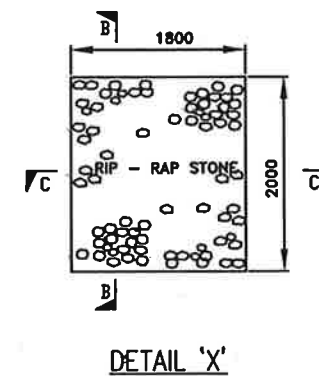
SCALE 1 : 30



SECTION B-B

SCALE 1 : 30

SECTION C-C



DETAIL 'X'

GENERAL NOTES :

CONSTRUCTION NOTES

1. REMOVED ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM THE STORAGE AREA.
2. EXCAVATE TO 300mm DEPTH FOR DAM BASE AND OR A LEVEL BASE FOR THE GABIONS.
3. LINE THE EXCAVATION WITH A NEEDLE-PUNCHED GEOTEXTILE ALLOWING SUFFICIENT GEOTEXTILE TO LINE FROM THE TOE OF THE DAM, UNDER THE WALL, OVER THE UPSTREAM GABIONS AND SPILLWAY TO 500mm BELOW THE SPILLWAY EXIT ON THE DOWNSTREAM FACE.
4. WALL PROFILE AND OUTLET PROTECTION SHALL BE MADE UP OF GABION UNITS FILLED WITH GRADED ROCK AS A SPECIFIED ON THE ESCP.
5. CONSTRUCT A SPILLWAY 500mm BELOW THE CREST OF THE DAM AND FOR WIDTH SPECIFIED ON THE ESCP.
6. LAP THE GEOTEXTILE OVER THE UPSTREAM FACE AND THROUGH THE SPILLWAY AND FIX IN PLACE WITH THE TOP ROW OF GABIONS.
7. COVER THE UPSTREAM FACE AND GEOTEXTILE WITH 20mm TO 30mm GRAVEL.
8. PLACE A "FULL OF SEDIMENT" MARKER TO SHOW WHEN LESS THAN DESIGN CAPACITY OCCURS AND SEDIMENT REMOVAL IS REQUIRED.
9. REPLACE UPSTREAM GEOTEXTILE LAYER IF DAMAGED OR PUNCTURED WHEN SEDIMENT IS REMOVED.
10. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.

	PINDAH	TARIKH	TANDA TANGAN



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PENGARAH 1:
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KETUA PENOLONG PENGARAH KAHAN :
WAN SOHAMI BIN WAN MOHAMMAD

KETUA PENOLONG PENGARAH 1:
Ir. ATRAKH BIN ABU HAMID

PENYEMPAK:
MOHD AZLAN NOBIRAN

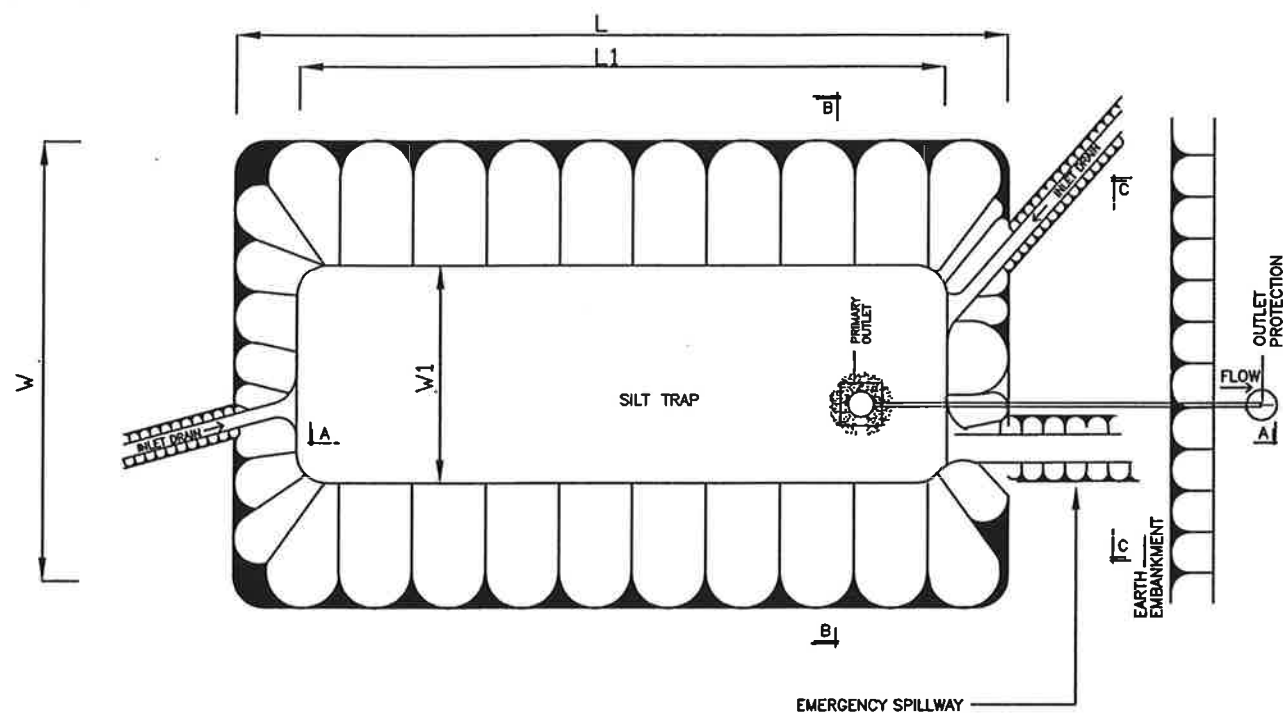
PEREKA:
AMILAH CHIKON

LUKISAN PIAWAI
KERJA TANAH

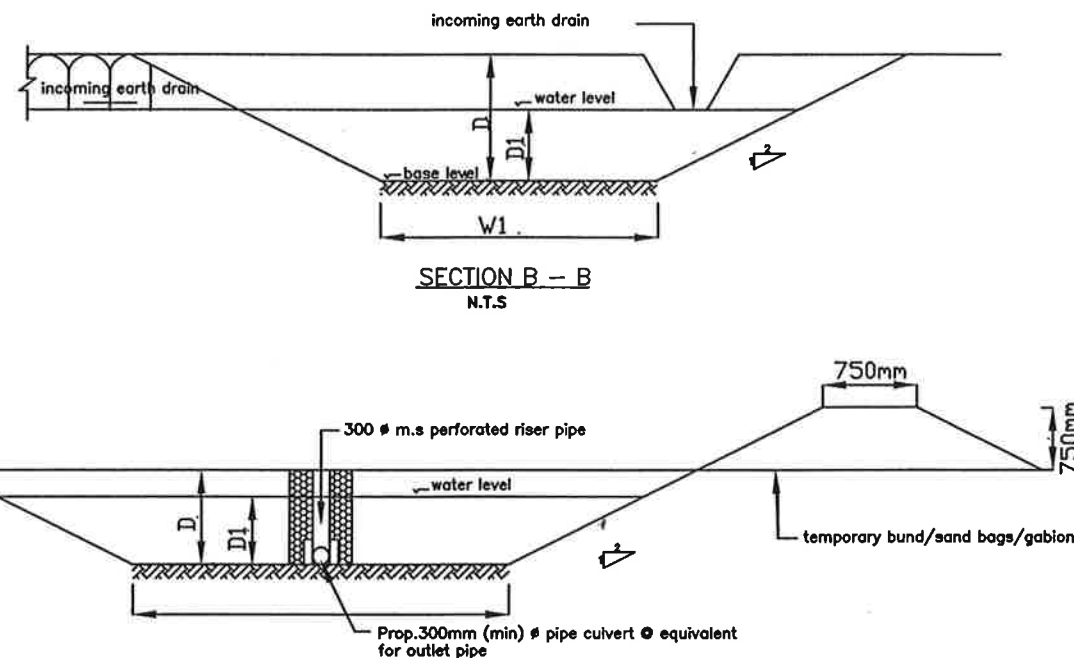
WET SEDIMENT BASIN DETAILS
TYPE 2

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DILUKIS : YATI/LINDA/ALIN/RUBY
TARIKH : JUN 2011
FAIL KOMPUTER : Standard earthwork.dwg

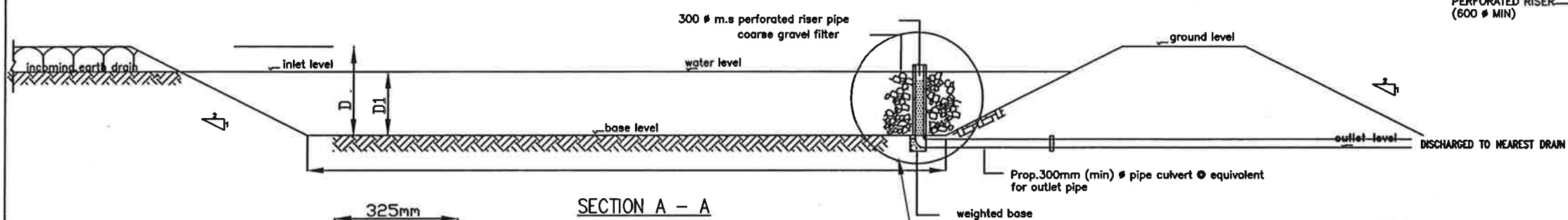
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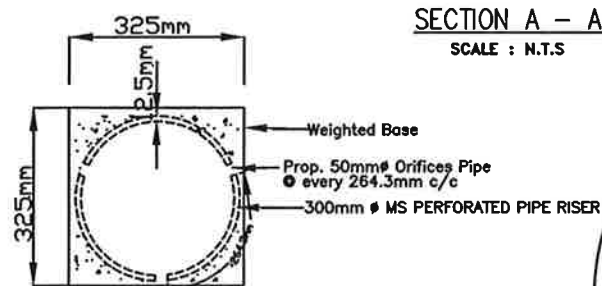
TYPICAL PLAN
SCALE N.T.S



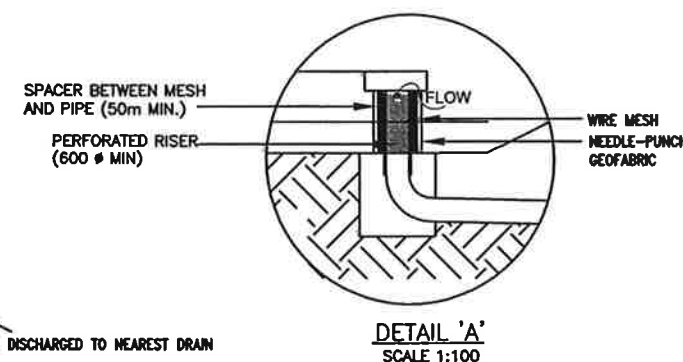
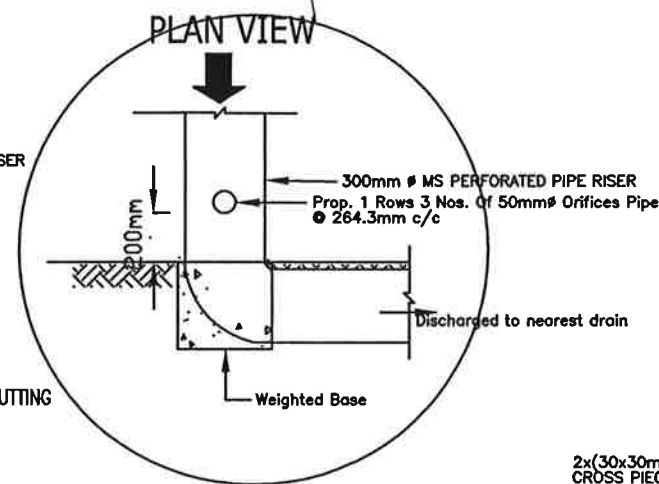
SECTION C - C
SCALE : n.t.s



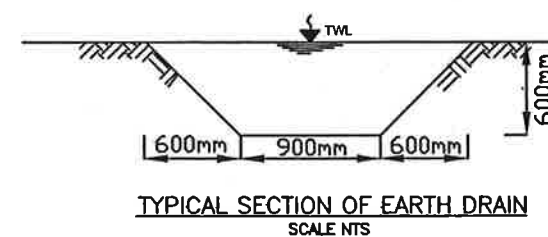
SECTION A - A
SCALE : N.T.S



PLAN VIEW
[PLAN OF MS PIPE RISER]
SCALE : N.T.S

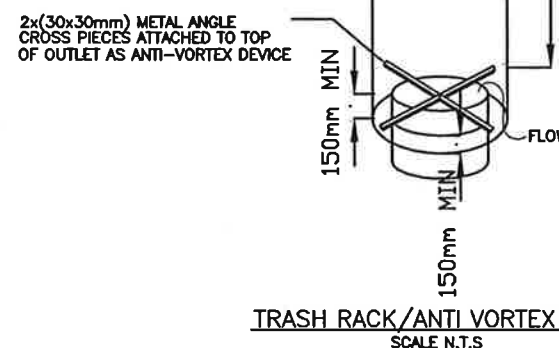


DETAIL 'A'
SCALE 1:100



TYPICAL SECTION OF EARTH DRAIN
SCALE NTS

- NOTE : 1. TRENCH STRUCTURE 200mm INTO GROUND SURFACE WHEREVER THE STRUCTURE CONTACTS THE GULLY BASE. FILL TRENCHES TO 100mm ABOVE GROUND SURFACE TO REDUCE RISK OF UNDERCUTTING
2. ENSURE HEIGHT OF SPILLWAY IS LESS THAN 1 METRE ABOVE THE GULLY FLOOR
3. SPARE CHECKS SO THE TOE OF THE UPSTREAM DAM IS LEVEL WITH THE SPILLWAY OF THE NEXT DOWNSTREAM DAM



TRASH RACK/ANTI VORTEX DEVICE
SCALE N.T.S

GENERAL NOTES :
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KETUA PENOLONG PENGARAH :

Ir. ATRIAH ABUL HANID

PENYEMAK :

HASRUL HIZAM BIN ABUL RAHMAN

PEREKA :

MOHD AZLAN BIN NOBRAN

PROJEK :

LUKISAN PIAWAI KERJA TANAH

LUKISAN :

DRY SEDIMENT BASIN

SKALA :

NTS

DILUKIS :

Standard earthwork.dwg

TARIKH :

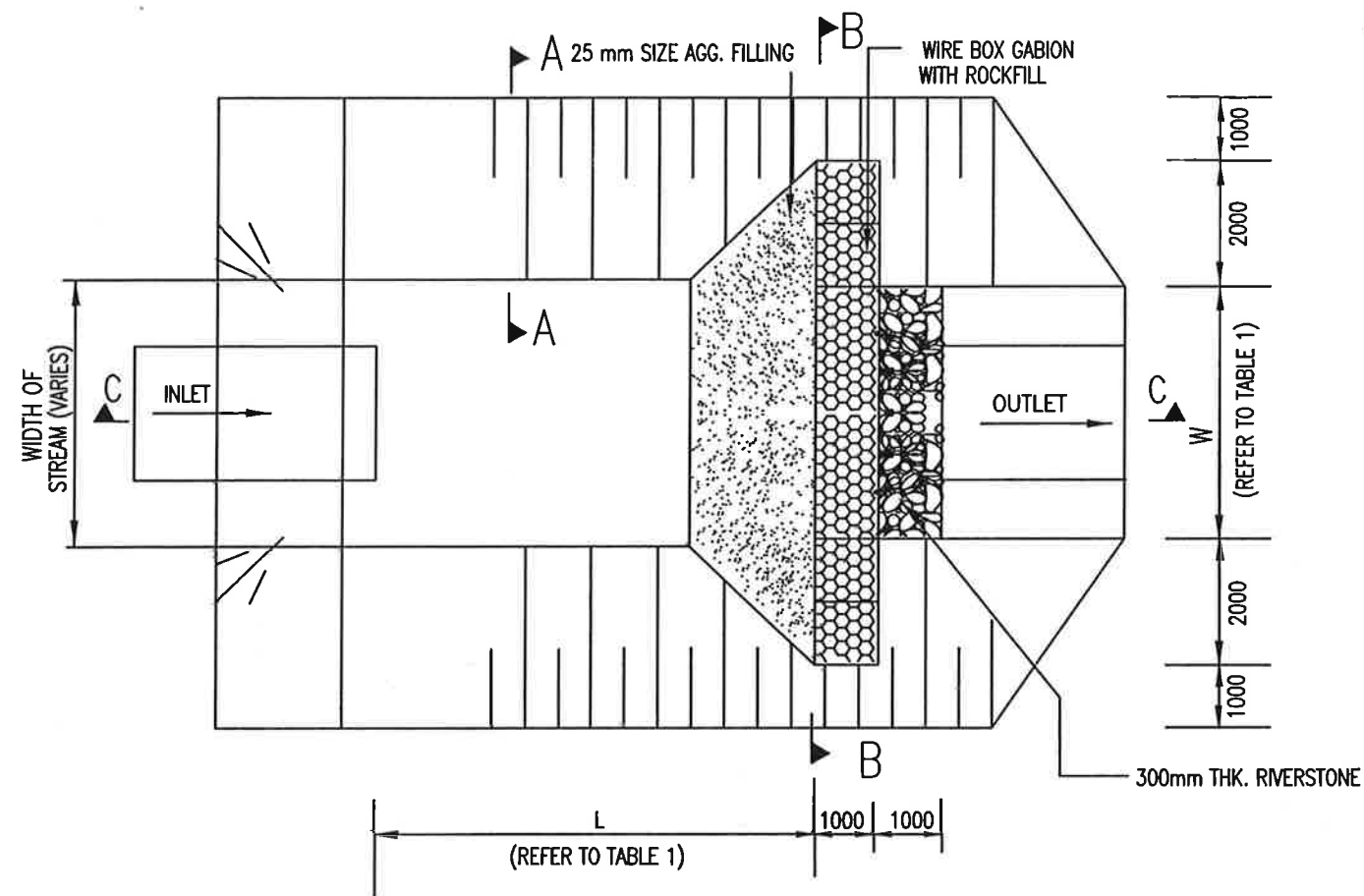
JUN 2011

FAIL KOMPUTER :

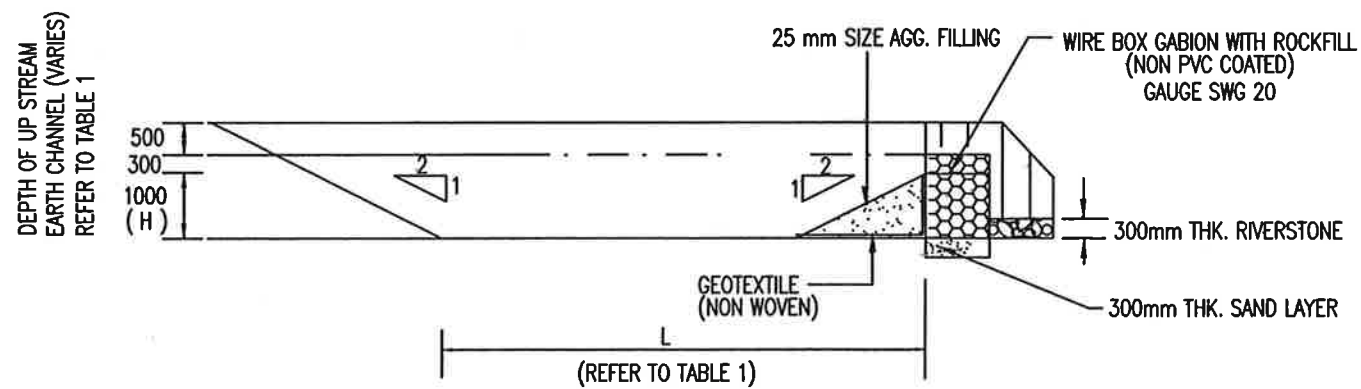
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NO. LUKISAN :

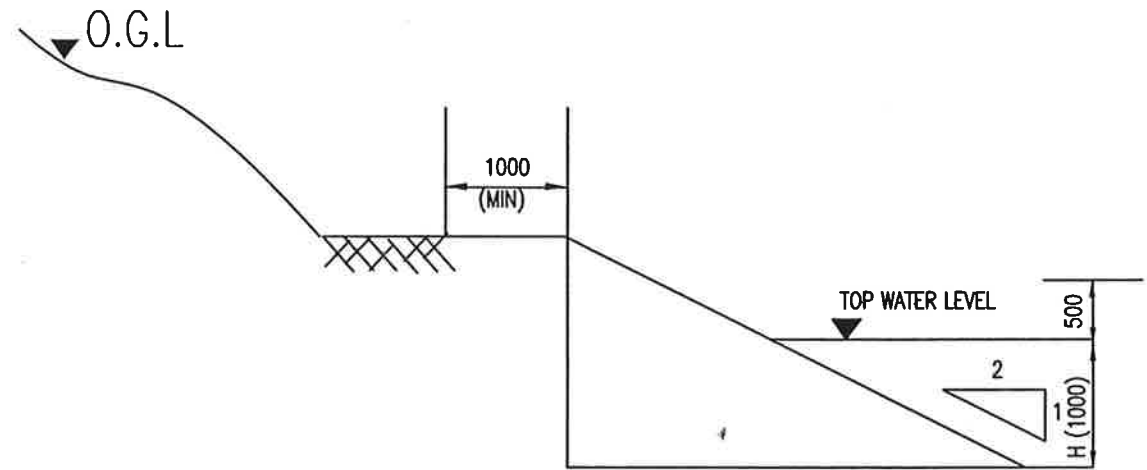
JKR CKAJ/08.500/PEL/KT/07(15)



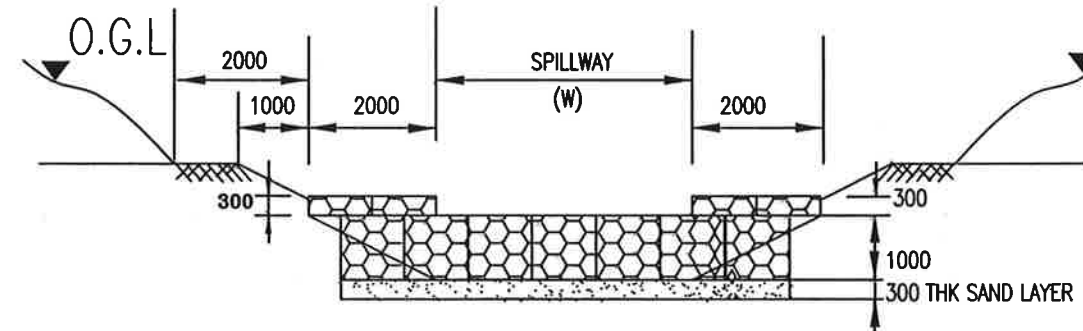
PLAN



SECTION C - C



SECTION A - A



SECTION B - B

CATCHMENT AREA (ACRE)	DIMENSION (m) (L x W)	DEPTH (m) (H)	DEPTH OF CLEANOUT LEVEL (m)	SPILLWAY HEIGHT (mm)
0.5	7 x 4	1.0	0.3	300
1.0	15 x 4	1.0	0.3	300
2.0	15 x 7	1.0	0.3	300
4.0	25 x 9	1.0	0.3	300

TABLE 1

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE STATED

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KETUA PENOLONG PENGARAH :

K. ATIKAH BINTI ABUL WAMID

PENYEMAK :

MOHD AZLAN BIN NOBIRAN

PEREKA :

PROJEK :

LUKISAN PIAWAI
KERJA TANAH

TARIK LUKISAN :

SILT TRAPS

SKALA :

NOT TO SCALE

DISURUH :

DRAWING ARAHAN TEKNIK (JALAN) 16/03 (PINDAAN 2008)

TARIKH :

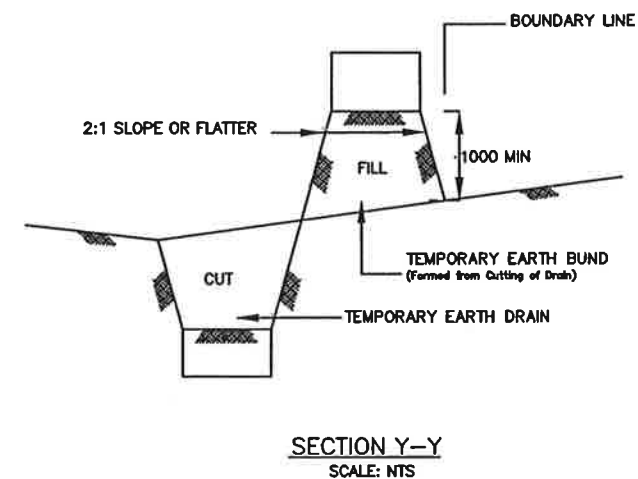
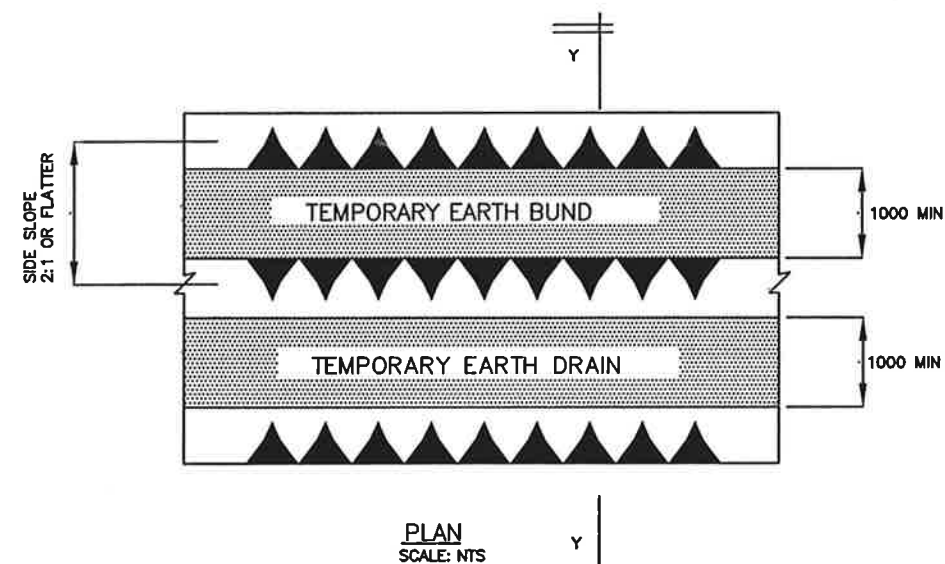
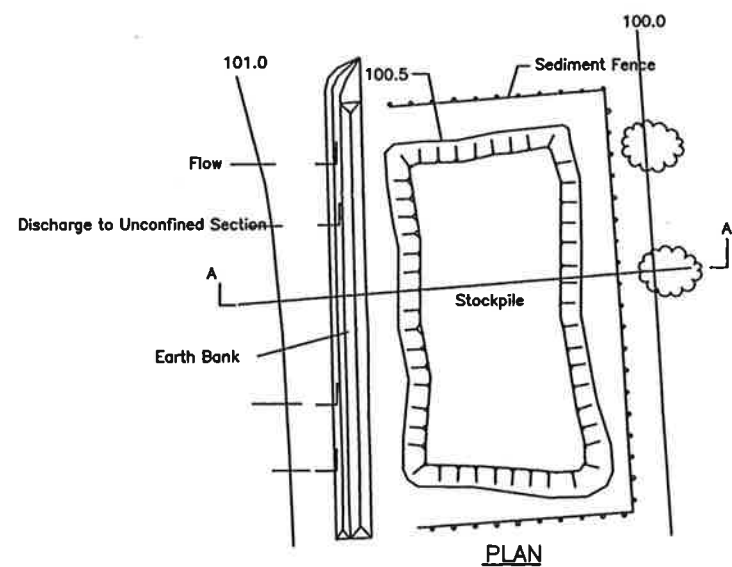
JUN 2011

FAIL KOMPUTER :

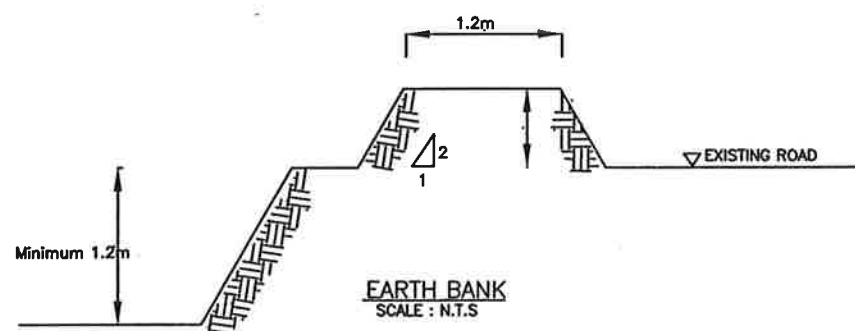
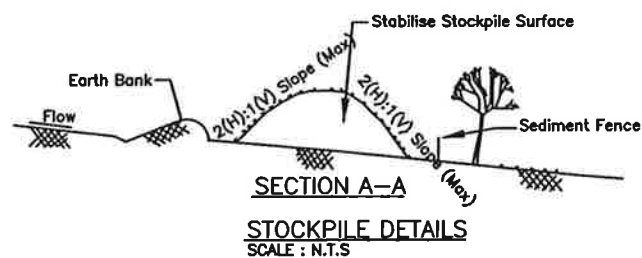
Standard earthwork.dwg

NO. LUKISAN :

JKR/CKASJ/08/500/PEL/KT/08(15)



PROPOSED TEMPORARY EARTH DRAIN & EARTH BUND



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IBU PEJABAT JKR MALAYSIA

PENGARAH KAWAN:

Ir. Dr. ABUL AZIZ B. HJ. ARSHAD

PENGARAH 1:

DATIN NORLAH BT AB. GHANI

KETUA PENOLONG PENGARAH KAWAN :

WAN SOHAMI BIN WAN MOHAMMED

KETUA PENOLONG PENGARAH :

Ir. ATIKAH ABDUL KAMID

PENYEMAK :

HASRUL NIZAM BIN ABDUL RAHMAN

PEREKA :

MOHD AZLAN BIN NOBIRAN

PROJEK :

LUKISAN PIAWAI KERJA TANAH

TAJUK LUKISAN :

BMP FOR ESCP

- STOCKPILE

- DRAIN & EARTH BUND

SKALA :

NTS

DILUKIS :

MOHD AZLAN BIN NOBIRAN

TARIKH :

JUN 2011

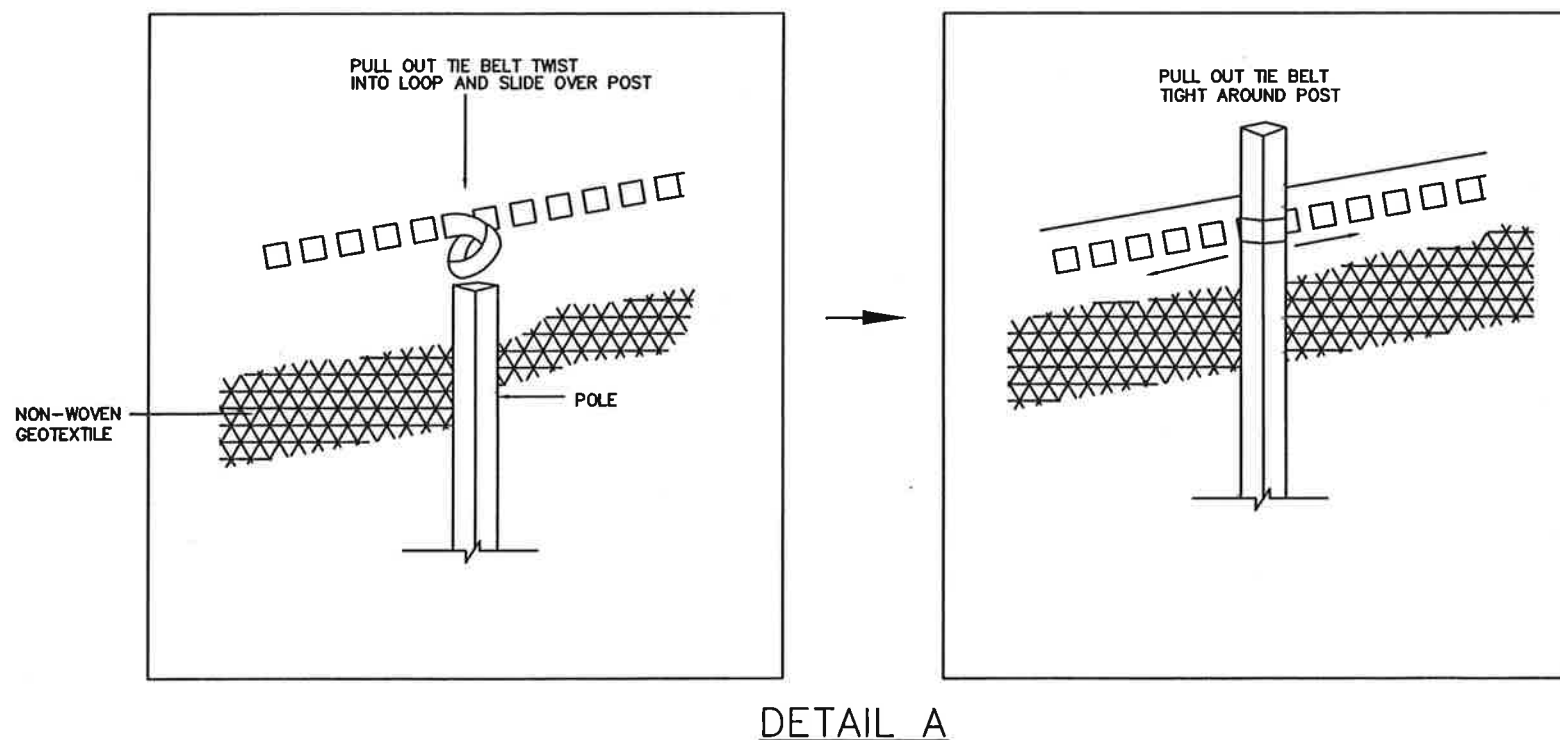
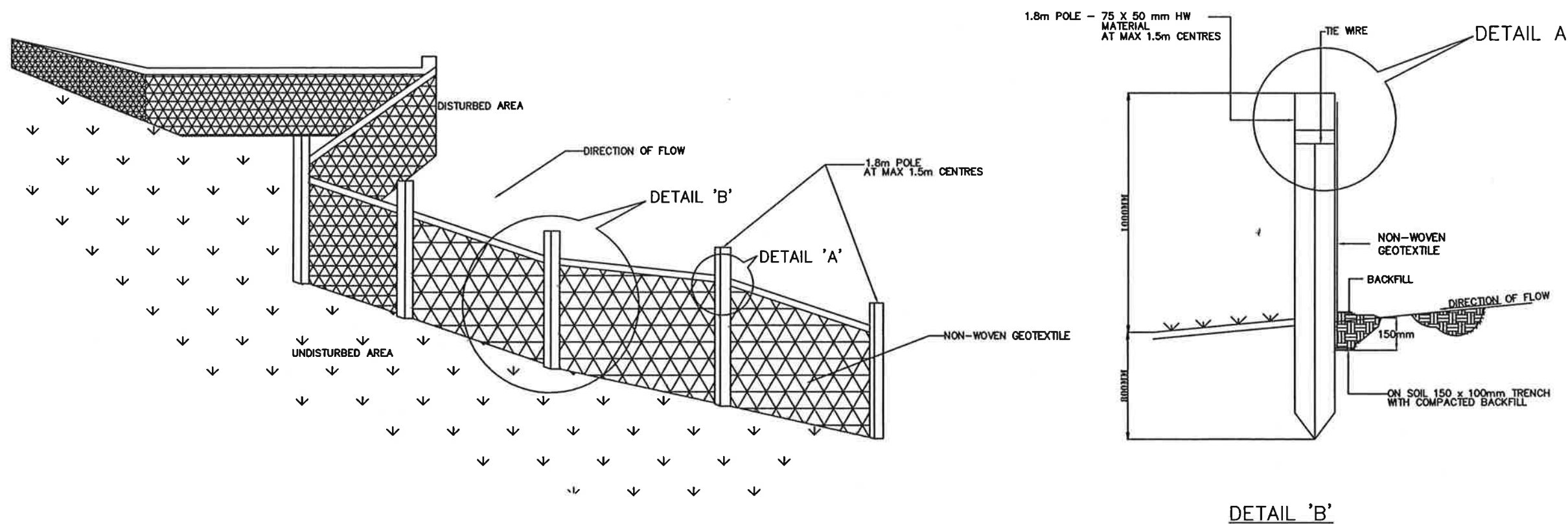
FAIL KOMPUTER :

Standard northward

NO. LUKISAN :

JKR CKAJ/08.500/PEL/KT/09(15)

GENERAL NOTES :
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED



CONSTRUCTION NOTES:

1. CONTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE, PARALLEL TO THE CONTOURS OF THE SITE WITH A SETBACK OF AT LEAST 0.9 M (3 FT) FROM THE TOE OF THE SLOPE.
2. DRIVE 1.8 METRE LONG POLE INTO GROUND, 1.5 METRES APART
3. DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRANCED.
4. BACKFILL TRENCH OVER BASE OF FABRIC (NON-WOVEN GEOTEXTILE)
5. FIX SEDIMENT FENCE TO UPSLOPE SIDE POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER
6. JOINT SECTION OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
7. REFERENCE URBAN STOR WATER MANAGEMENT MANUAL FOR MALAYSIA.

	PINDAH	TARIKH	TANDA TANGAN

JKR
BAHAGIAN KEJURUTERAAN AWAM
CAWANGAN KEJURUTERAAN AWAM,
STRUKTUR DAN JAMBATAN
IBU PEJABAT JKR MALAYSIA

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PENYEMAK :
MOHD AZLAN BIN NOBRHAN
PERIKSA :

PROJEK :

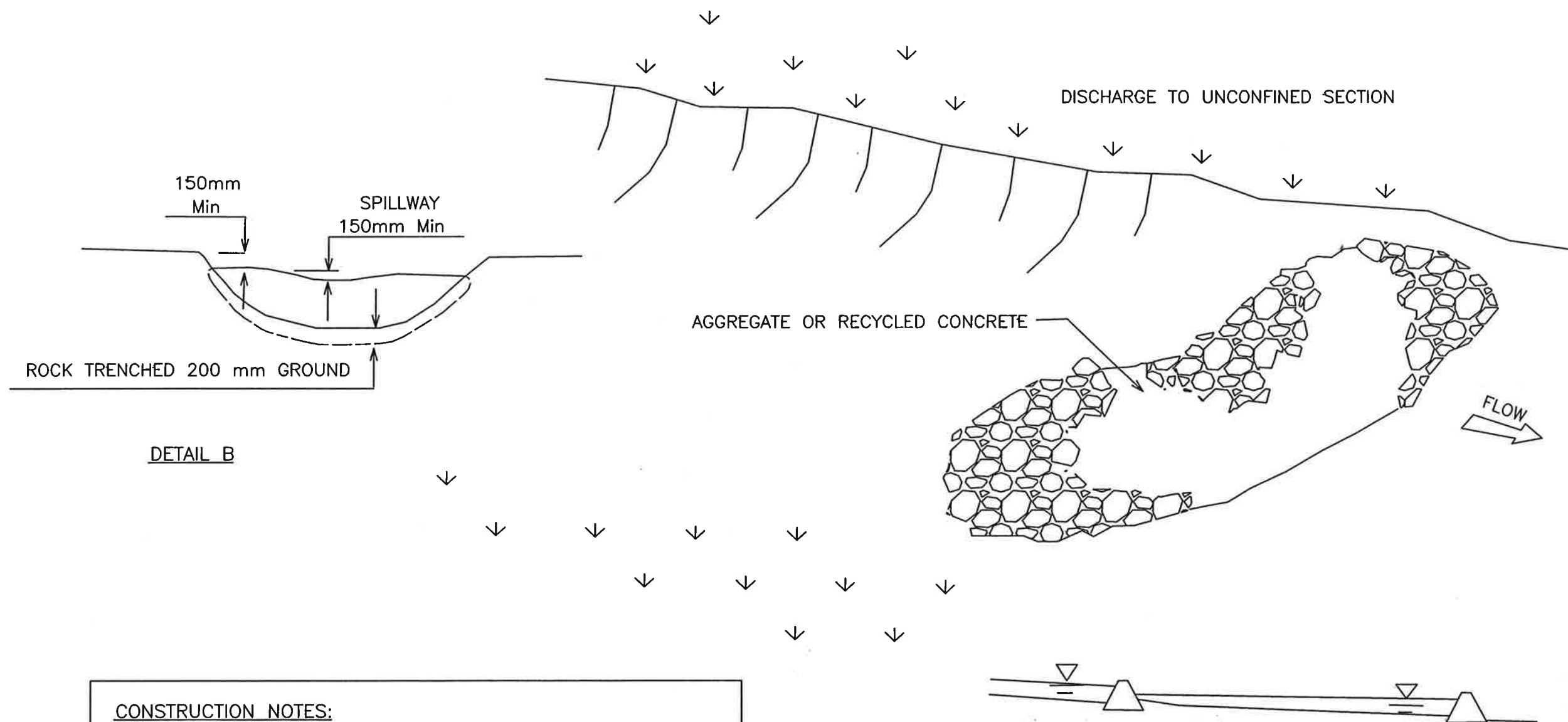
LUKISAN PIAWAI
KERJA TANAH

TAJUK LUKISAN :

BMP FOR ESCP
- SILT FENCE

SKALA : NOT TO SCALE
DISURUH : DRAWING ARAHAN TEKNIK (JALAN) 16/03 (PINDAMAN 2008)
TARIKH : JUN 2011
FAIL KOMPUTER : Standard earthwork.dwg

NO. LUKISAN :
JKR/CKASJ/08/500/PEL/KT/10(15)



DETAIL B

DETAIL A

CONSTRUCTION NOTES:

1. TRENCH STRUCTURE 200mm INTO GROUND SURFACE WHEREVER THE STRUCTURE CONTACTS THE GULLY BASE. FILL TRENCHES TO 100mm ABOVE GROUND SURFACE TO REDUCE RISK OF UNDERCUTTING.
2. ENSURE HEIGHT OF SPILLWAY IS LESS THAN 1 METRE ABOVE THE GULLY FLOOR.
3. SPACE CHECKS SO THE TOE OF THE UPSTREAM DAM IS LEVEL WITH THE SPILLWAY OF THE NEXT DOWNSTREAM DAM AS PER DETAIL A.
4. ENSURE HEIGHT OF CHECK DAM IS MAINTAINED TO BE 150MM FROM GROUND LEVEL AS PER DETAIL B.

SPACING OF CHECK DAMS ALONG CENTRELINE AND SCOUR PROTECTION BELOW EACH CHECK DAM TO BE SPECIFIED ON ESCP

GENERAL NOTES :

ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED

	PINDAAN	TARIKH	TANDA TANGAN



BAHAGIAN KEJURUTERAAN AWAM
CAWANGAN KEJURUTERAAN AWAM,
STRUKTUR DAN JAMBATAN
IBU PEJABAT JKR MALAYSIA

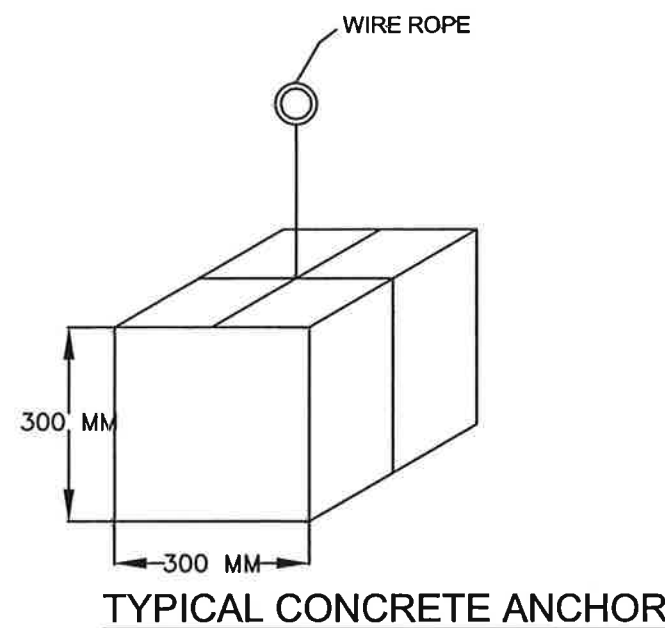
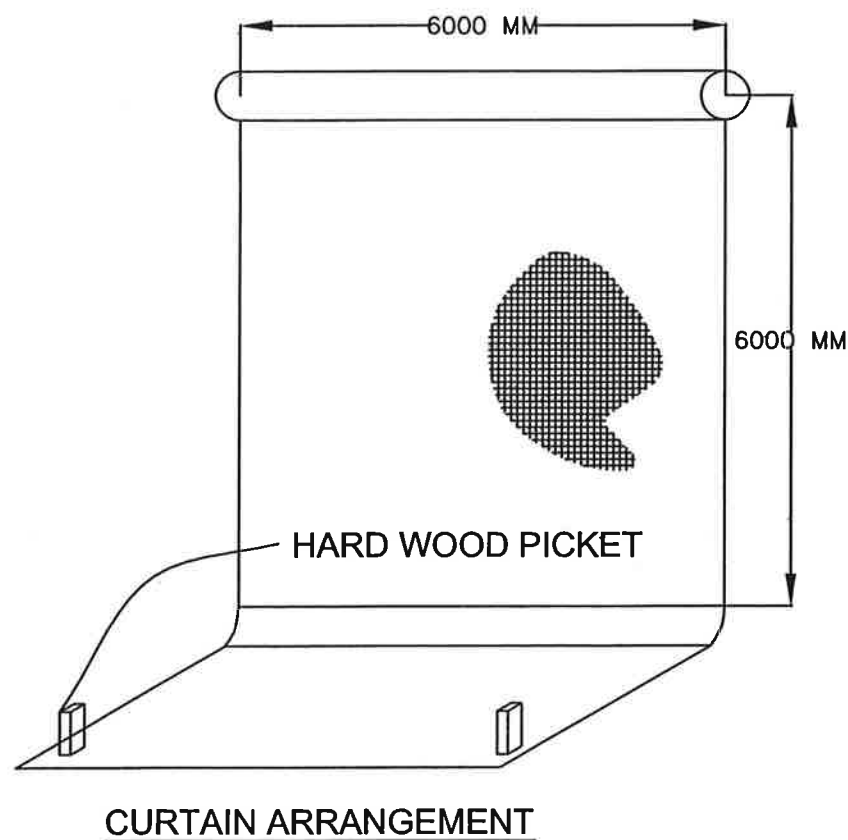
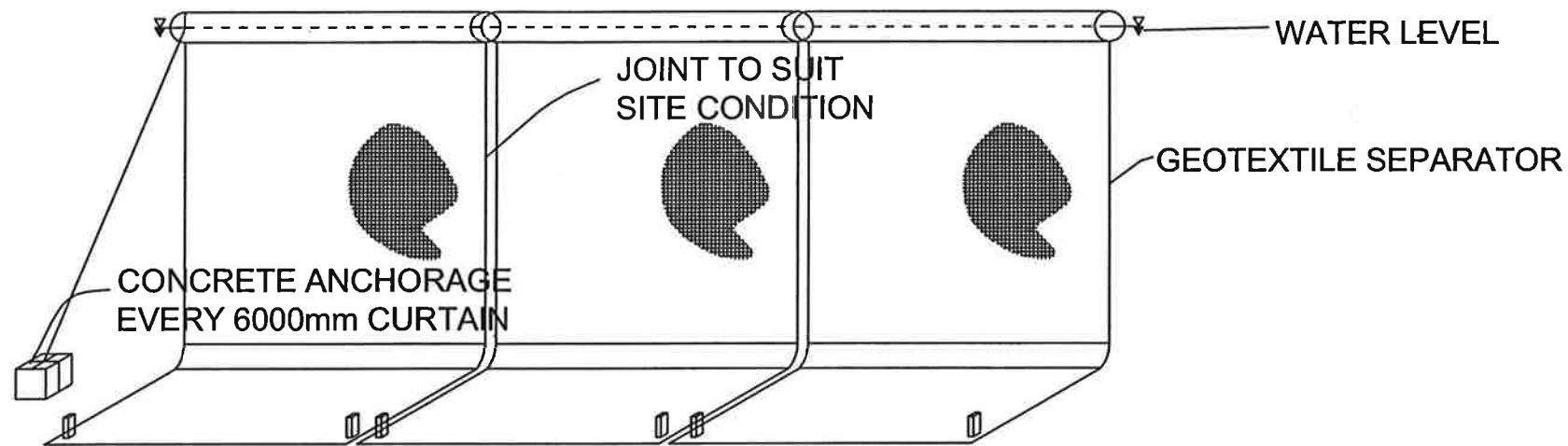
PENGARAH KANAN: Ir. DR. ABDUL AZIZ BIN HJ ARSHAD
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KETUA PENOLONG PENGARAH : Ir. ATIKAH BINTI ABDUL HAMID
PENYEMPAK : MOHD AZLAN BIN NOBIRAN
PEREKA :

PROJEK :
LUKISAN PIAWAI KERJA TANAH

TAJUK LUKISAN :
BMP FOR ESCP - CHECK DAM

SKALA :	NOT TO SCALE
DISURUH :	DRAWING ARAHAN TEKNIK (JALAN) 16/03 (PINDAAN 2008)
TARIKH :	JUN 2011
FAIL KOMPUTER :	Standard eartwork.dwg

NO. LUKISAN :	JKR/CKASJ/08/500/PEL/KT/11(15)
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NOTES :
ALL DIMENSION ARE IN MILIMETRE UNLESS OTHERWISE STATED

GENERAL NOTES :
 ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED

	PINDAAN	TARIKH	TANDA TANGAN



BAHAGIAN KEJURUTERAAN AWAM
 CAWANGAN KEJURUTERAAN AWAM,
 STRUKTUR DAN JAMBATAN
 IBU PEJABAT JKR MALAYSIA

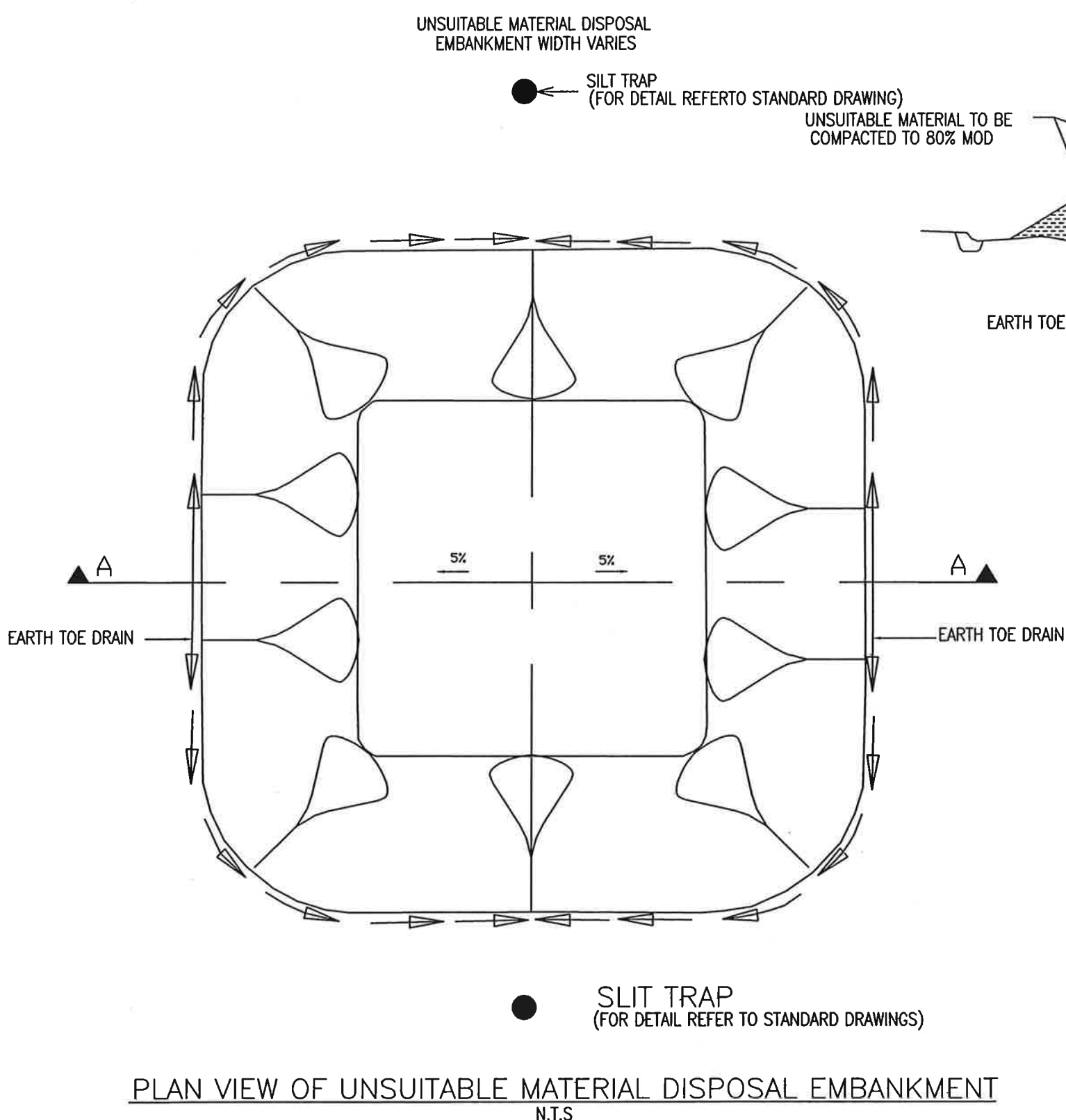
PENGARAH KANAN: Ir. DR. ABUL AZIZ BIN HJ. ARSHAD
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KETUA PENOLONG PENGARAH 1 : Ir. ATIKAH BINTI ABUL HANID
PENYEMPAK : MOHD AZLAN BIN NOORAN
PEREKA :

PROJEK : LUKISAN PIAWAI KERJA TANAH

TAJUK LUKISAN : BMP FOR ESCP - SILT CURTAIN

SKALA :	NOT TO SCALE
DISURUH :	DRAWING ARAHAN TEKNIK (JALAN) 16/03 (PINDAAN 2008)
TARIKH :	JUN 2011
FAIL KOMPUTER :	Standard earthwork.dwg

NO. LUKISAN : JKR/CKASJ/08/500/PEL/KT/12(15)	
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NOTES

1. THE UNSUITABLE MATERIAL EMBANKMENT SHALL ONLY BE PLACED ON FLAT GROUND AND SHALL BE COMPACTED TO 80% MAXIMUM DRY DENSITY
2. THE CONTRACTOR SHALL IDENTIFY DISPOSAL SITES FOR UNSUITABLE MATERIAL AND OBTAIN THE ENGINEERS APPROVAL PRIOR TO DISPOSING ANY UNSUITABLE MATERIAL.
3. ALL THE SURFACE DRAINAGE ON THE DISPOSED EMBANKMENT SHALL FLOW INTO SILT TRAPS PRIOR TO DISCHARGE INTO STREAM/RIVERS.
4. WATER QUALITY MONITORING SHALL BE CARRIED OUT DOWNSTREAM OF THE SILT TRAPS OR AT LOCATIONS AS DIRECTED BY THE ENGINEER.
5. UNSUITABLE MATERIAL EMBANKMENT SLOPES SHALL NOT BE STEEPER THAN 1 VERTICAL TO 3 HORIZONTAL.
6. THE CONTRACTOR SHALL CARRY OUT A SURVEY OF THE AREA HE INTENDS TO USE AS DISPOSAL SITE AND USE THIS SURVEY AS THE BASIS OF DESIGN OF THE DISPOSAL SITE.
7. THE CONTRACTOR SHALL SUBMIT HIS PROPOSED METHOD FOR FORMING THE EMBANKMENT TOGETHER WITH THE RELEVANT DRAWINGS TO THE ENGINEER FOR APPROVAL.
8. ALL EXPOSED SURFACES ON DISPOSAL EMBANKMENT TO BE CLOSE TURFED.

PINDAAN	TARIKH	TANDA TANGAN

JKR

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PENGARAH KAWAN:
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WAN SOHABI BIN WAN MOHAMED

KETUA PENOLONG PENGARAH:
Ir. ATIKAH BINTI ABDUL HAMID

PENYEMAK:
MOHD AZLAN BIN NOORAN

PEREKA:

PROJEK:

LUKISAN PIAWAI
KERJA TANAH

TAJUK LUKISAN:

BMP FOR ESCP
- UNSUITABLE MATERIAL
DISPOSAL EMBANKMENT

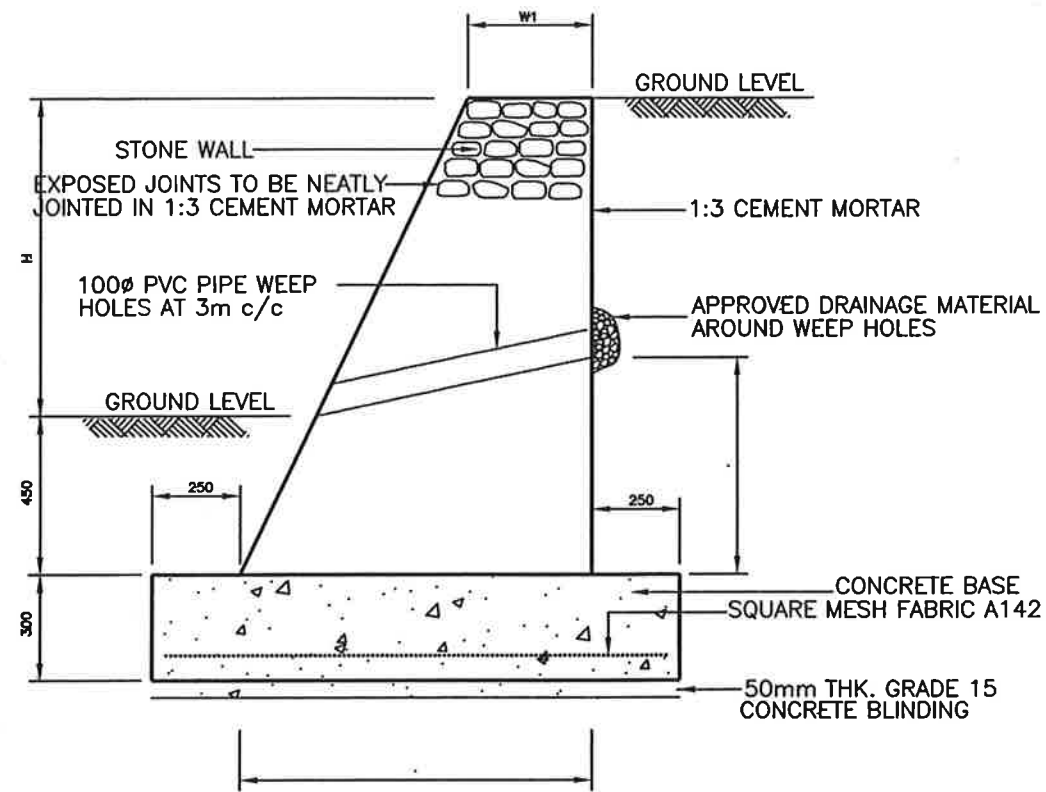
SKALA: NOT TO SCALE

DISURUH: DRAWING ARAHAN TEKNIK (JALAN) 16/03 (PINDAAN 2008)

TARIKH: JUN 2011

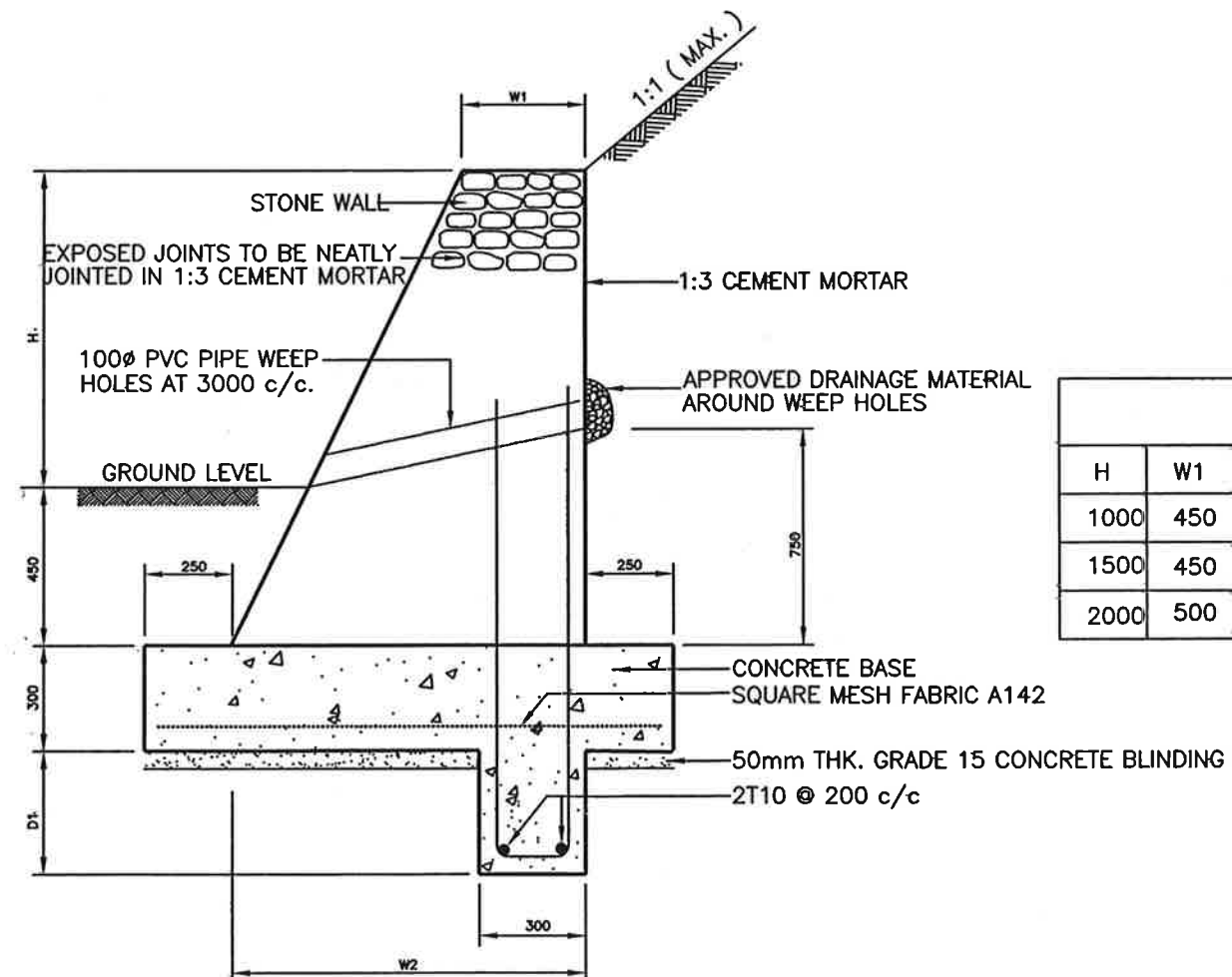
FAIL KOMPUTER: Standard earthwork.dwg

NO. LUKISAN: JKR/CKASJ/08/500/PEL/KT/13(15)



TYPE 1 (LEVEL BACKFILL)
STONE RETAINING WALL

TYPE 1		
H	W1	W2
1000	300	450
1500	300	600
2000	300	800



TYPE 2 (SLOPING BACKFILL)
STONE RETAINING WALL

TYPE 2				
H	W1	W2	D1	AS
1000	450	900	250	T10 @ 350 c/c
1500	450	1050	250	T10 @ 300 c/c
2000	500	1300	350	T10 @ 250 c/c

GENERAL NOTES :

- SAFE BEARING PRESSURE OF SOIL IS ASSUMED TO BE 100 KN/m².
- ALL STONE RUBBLE AND BRICKS SHALL BE BONDED WITH 1:3 CEMENT MORTAR.
- ALL EXPOSED JOINTS ARE TO BE NEATLY POINTED IN 1:3 CEMENT MORTAR.
- STONE RUBBLE (SIZE MUST BE >150mm < 300mm) AND BRICK SHALL BE ARRANGED AND MIXED IN SUCH MANNER AS TO PRESENT A STABLE STRUCTURE THE FINISHED WALL SHALL BE SOLID AND DEVOID OF ANY CAVITY.
- RACKFILL AT HELL OF RETAINING WALL SHALL ONLY BE CARRIED CUT AFTER THE BACKFILL AT THE TOE HAS BEEN COMPLETE.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
- CONCRETE FOR CONCRETE BASE SHALL BE GRADE 15/25 AND CONCRETE BLINDING SHALL BE GRADE 10/25.
- COVER TO ALL STEEL SHALL BE 50mm.
- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED

PINDAAN	TARBIH	TANDA TANGAN



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KETUA PENOLONG PENGARAH :

Ir. ATRAKH BINTI ABDUL HAMID

PENYEMAK :

MOHD AZLAN BIN MOBRAN

PERIKSA :

AMALLUDDIN BIN ZULKIFLI

PROJEK :

LUKISAN PIAWAI
KERJA TANAH

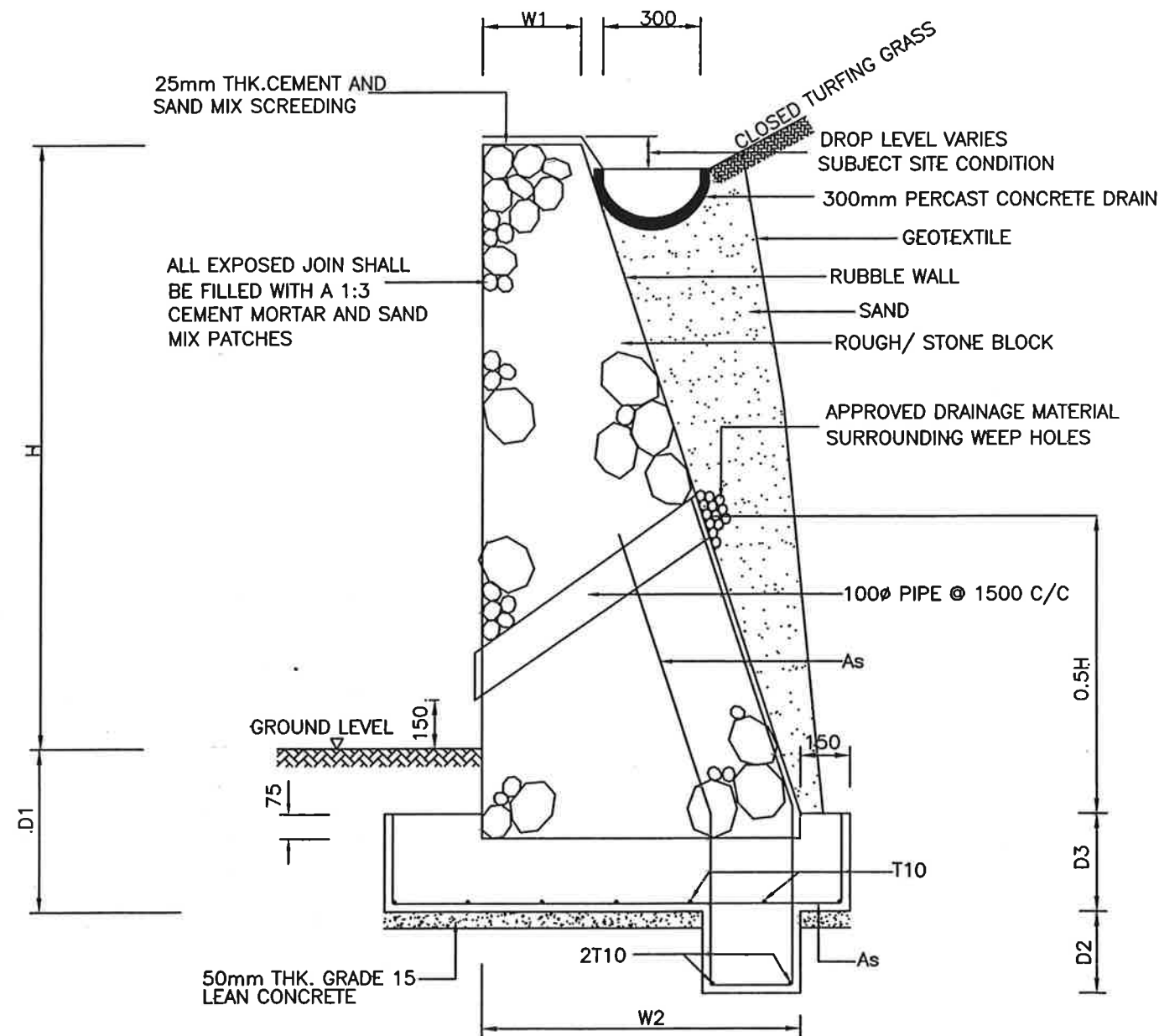
TAJUK LUKISAN :

GRAVITY RETAINING WALL.

SKALA :	N.T.S
DILUKIS :	YATIE/LINDA/RUBY/ALIN
TARBIH :	JUN 2011
FAIL KOMPUTER :	

NO. LUKISAN :
JKR/CKASJ/08/500/PEL/KT/14(15)

MAXIMUM SLOPE
1 : 1.5 TRIM
1 : 2 FILL



WALL TYPICAL CROSS SECTION

H	W1	W2	D1	D2	D3	As
> 900 < 1200	250	600	300	250	200	T10 @ 300/C/C
> 1200 < 1500	250	750	400	250	200	T10 @ 300/C/C
> 1500 < 1850	300	975	500	300	250	T10 @ 250/C/C
> 1850 < 2150	300	1200	600	350	250	T10 @ 200/C/C

GENERAL NOTES :

1. ASSUMED BEARING LOAD IS 48 kN/M²
2. ALL CONCRETE USE ON THE CONSTRUCTION OF SLOPE SHALL BE GRADE 30 AND WITH MINIMAL CEMENT CONTENT 360kg/M³
3. ALL CEMENT USE FOR THIS RETAINING WALL CONSTRUCTION MUST BE ORDINARY PORTLAND CEMENT (OPC) AND SHALL COMPLY TO MS522 CONCRETE WORKS
4. LEAN CONCRETE MUST BE GRADE 15
5. ALL STEEL REINFORCEMENT BAR THAT WILL BE USE FOR THIS CONSTRUCTION SHALL CONFORM TO MS 146 WITH STEEL HIGH YIELD STRENGTH OF 460 N/mm²
6. REBAR COVER SHALL BE 40mm
7. IF DO NOT SHOWN IN THE DRAWING THE DETAIL OF REBAR OVERLAPPING ARE AS FOLLOWS:-
a) STEEL REINFORCEMENT IN STRESS = 65°
b) STEEL REINFORCEMENT IN COMPRESSION = 40°
8. ALL ROUGH STONE BLOCK MUST BE FROM GRANITE OR OTHER TYPES APPROVED BY S.O
9. ALL ROUGH STONE BLOCK SHALL BE BINDED WITH A MORTAR MIXTURE OF CEMENT AND SAND WITH A RATIO OF 1:3
10. ALL EXPOSED JOINTING SHALL BE PATCH AND FILL WITH A MORTAR CEMENT AND SAND MIXTURE WITH 1:3 RATIO
11. ROUGH STONE BLOCK THAT WILL BE USED MUST BE OVER TAHH 150mm BUT NOT EXCEED 300mm PLACED THE STONE BLOCK SHALL BE PLACED OR STACKED PRIOR TO ENSURE THE SLOPE'S WALL IS STRUCTURALLY STABLE. THE FINISHES OF THE WALL MUST BE FIRM AND SOUND AND ALL THE VOIDS OR CAVITY SHALL BE PATCHES OR FILLED IN
12. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED

	PINDAH	TARIKH	TANDA TANGAN



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PENYEMPAK :

MOHD AZLAN BIN NOBRAN

PEREKA :

AMALLUDIN BIN ZULKIFLI

PROJEK :

LUKISAN PIAWAI
KERJA TANAH

TAJUK LUKISAN :

STANDARD DRAWING RUBBLE
BLOCK RETAINING WALL

SKALA :	N.T.S
DILUKIS :	YATIE/LINDA/RUBY/ALIN
TARIKH :	JUN 2011
FAIL KOMPUTER :	

NO. LUKISAN :
JKR/CKASJ/08/500/PEL/KT/15(15)