

TRENCH LOCATION	MIN. DEPTH OF COVER TO TOP OF DUCTS (C)	TRENCH BACKFILL DETAILS	DUCT SURROUND MATERIAL
EXISTING FOOTPATH (NON HOUSING ESTATE)	450 mm	CL 804	ESB N APPROVED SAND
NEW ESTATE & NON ESTATE FOOTPATH	600 mm	CL 804	ESB N APPROVED SAND
NEW & EXISTING ESTATE ROADS, ESTATE GRASS VERGES & ADJOINING ROADS	600 mm	CL 804	ESB N APPROVED SAND
ESTATE OPEN GRASSED AREAS	600 mm	SUITABLE BACKFILL MATERIAL	CBGM B
NEW & EXISTING NON ESTATE ROADS	750 mm	CL 804	ESB N APPROVED SAND
FARM LAND, FOREST TRACK, BOG LAND, PUBLIC OPEN GRASSED AREAS & PRIVATE PROPERTY	750 mm	CL 804	CBGM B

- NOTES:**
1. RED CBGM B BACKFILL IN ACCORDANCE WITH CLAUSE 822 AND COMPACTED TO CLAUSE 813.10 AND TABLE 84 OF N.R.A. SPECIFICATION FOR ROADWORKS (15 N/mm<sup>2</sup> AFTER 7 DAYS)
  2. ESB N APPROVED WELL COMPACTED NATURAL UNWASHED SAND TO BS 882 OR EQUIVALENT MATERIAL APPROVED BY ESB NETWORKS. MAXIMUM THERMAL RESISTIVITY OF THE SURROUND MATERIAL SHALL BE 1.0 K.m/W AT 0% MOISTURE CONTENT

**ESB International**

ESB International, Stephen Court, 48-54 St. Stephen's Green Dublin 2, Ireland. Tel: (01 703 8000 Fax: +353 (0)1 703 8086 Email: marketing@esb.ie Web: www.esb.ie

ESB International is a trading name of ESB Engineering & Facility Management Limited. Registered Office: as above Registered in Ireland No. 305248

1	28/11/13	BACKFILL AND SURROUND MATERIALS REVISED					
0	05/06/13	ISSUED FOR CONSTRUCTION		GR	GR	TS	MA
Rev	Date	Revision Description	Dm	Prod	Ver	App	
Purpose of Issue - Preliminary unless indicated							
Tender <input type="checkbox"/> Client Approval <input type="checkbox"/> Construction <input checked="" type="checkbox"/> As-built <input type="checkbox"/> Revised <input type="checkbox"/>							

Drawn G.Ryan	Produced G.Ryan	Verified M.Amet	Approved T.Sheridan	Approved date 02/12/13
Client Ref TC210096			No. of Shts -	Size A4
				Scale N.T.S.

Drawing Number **PE424-D7002-008-001-001** SHEET REV

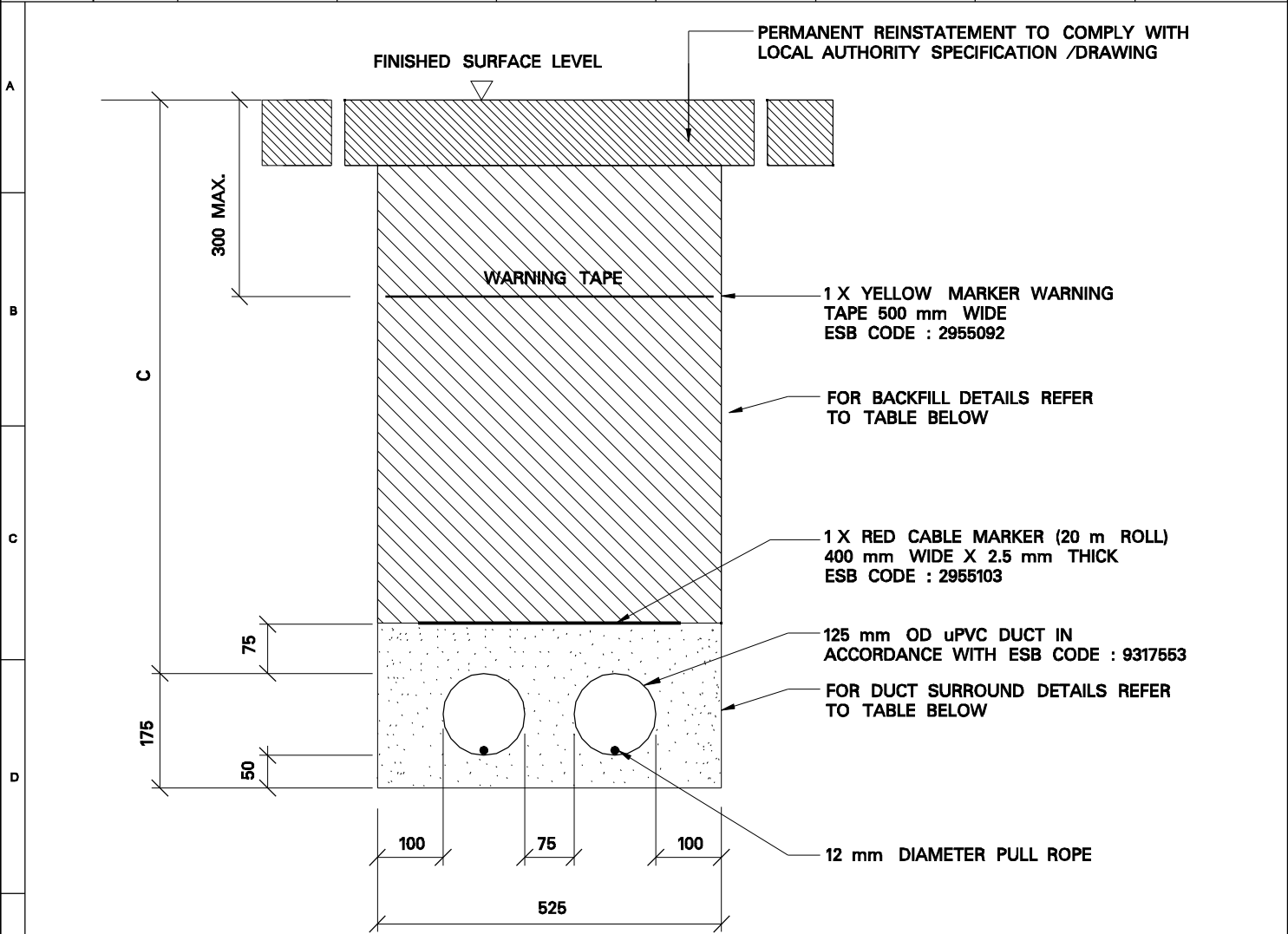
Client **ESB NETWORKS**

Project **MV Standard Drawings**

Drawing Title **MV SINGLE CIRCUIT TRENCH CROSS SECTION 1 WAY DUCT FORMATION**

Contract **MV CABLES STANDARDS**

Production Unit **Civil Building and Environmental**



TRENCH LOCATION	MIN. DEPTH OF COVER TO TOP OF DUCTS (C)	TRENCH BACKFILL DETAILS	DUCT SURROUND MATERIAL
EXISTING FOOTPATH (NON HOUSING ESTATE)	450 mm	CL 804	ESB N APPROVED SAND
NEW ESTATE & NON ESTATE FOOTPATH	600 mm	CL 804	ESB N APPROVED SAND
NEW & EXISTING ESTATE ROADS, ESTATE GRASS VERGES & ADJOINING ROADS	600 mm	CL 804	ESB N APPROVED SAND
ESTATE OPEN GRASSED AREAS	600 mm	SUITABLE BACKFILL MATERIAL	CBGM B
NEW & EXISTING NON ESTATE ROADS	750 mm	CL 804	ESB N APPROVED SAND
FARM LAND, FOREST TRACK, BOG LAND, PUBLIC OPEN GRASSED AREAS & PRIVATE PROPERTY	750 mm	CL 804	CBGM B

**NOTES:**

- RED CBGM B BACKFILL IN ACCORDANCE WITH CLAUSE 822 AND COMPACTED TO CLAUSE 813.10 AND TABLE 8/4 OF N.R.A. SPECIFICATION FOR ROADWORKS (15 N/mm<sup>2</sup> AFTER 7 DAYS)
- ESB N APPROVED WELL COMPACTED NATURAL UNWASHED SAND TO BS 882 OR EQUIVALENT MATERIAL APPROVED BY ESB NETWORKS. MAXIMUM THERMAL RESISTIVITY OF THE SURROUND MATERIAL SHALL BE 1.0 K.m/W AT 0% MOISTURE CONTENT

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Rev	Date	Revision Description	Dm	Prod	Ver	App
1	28/11/13	BACKFILL AND SURROUND MATERIALS REVISED				
0	16/06/13	ISSUED FOR CONSTRUCTION		GR	GR	TS MA

Purpose of Issue - Preliminary unless indicated

Tender  Client Approval  Construction  As-built  Revised

Drawn G.Ryan	Produced G.Ryan	Verified M.Amet	Approved T.Sheridan	Approved date 02/12/13
Client Ref TC210096			No. of Shets -	Size A4
			No. of Shets -	Scale N.T.S.

Client **ESB NETWORKS**

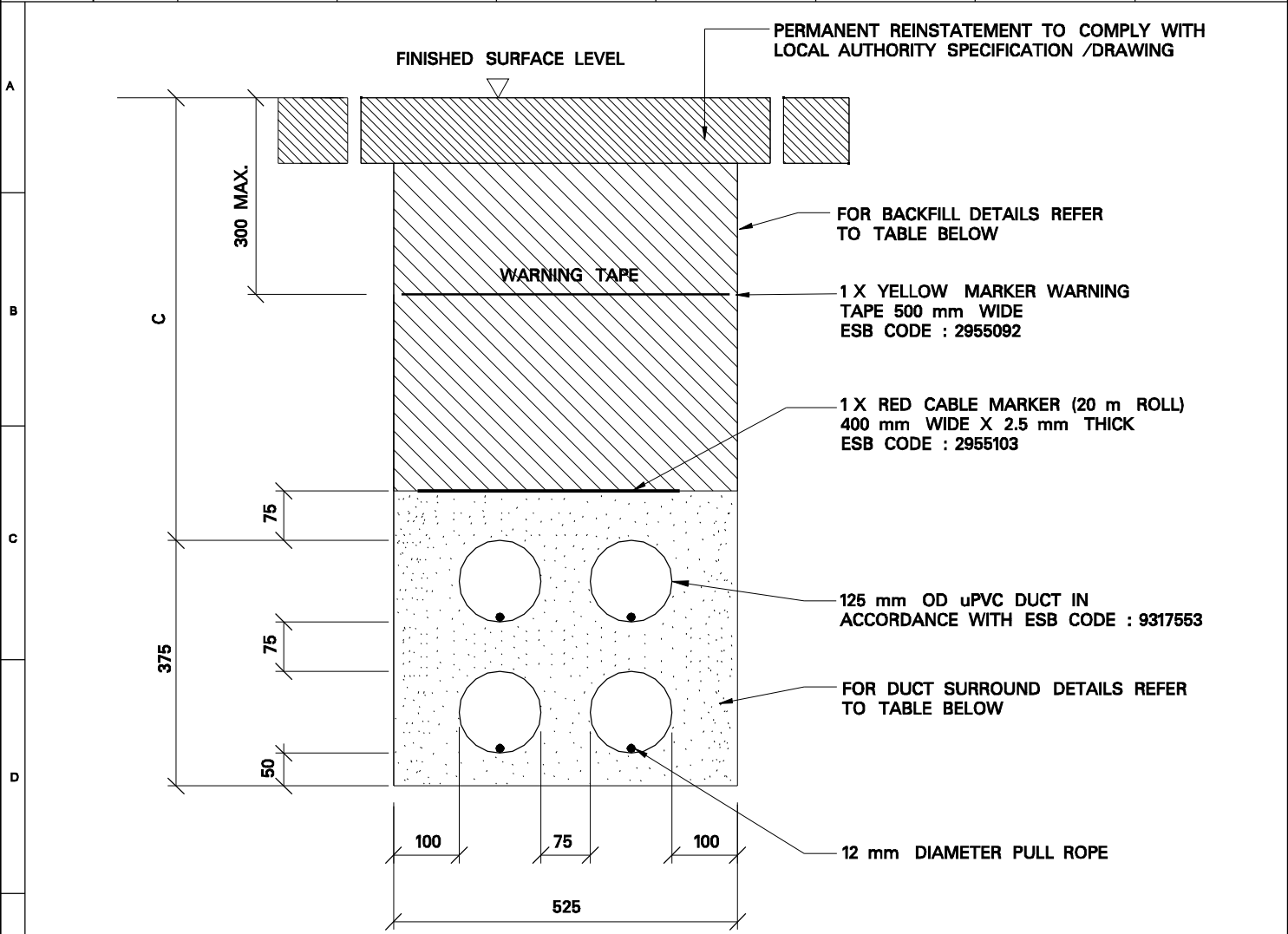
Project **MV Standard Drawings**

Contract **MV CABLES STANDARDS**

Production Unit **Civil Building and Environmental**

Drawing Number **PE424-D7002-008-002-001**

Drawing Title **MV DOUBLE CIRCUIT TRENCH CROSS SECTION 2 WAY DUCT FORMATION**



TRENCH LOCATION	MIN. DEPTH OF COVER TO TOP OF DUCTS (C)	TRENCH BACKFILL DETAILS	DUCT SURROUND MATERIAL
EXISTING FOOTPATH (NON HOUSING ESTATE)	450 mm	CL 804	ESB N APPROVED SAND
NEW ESTATE & NON ESTATE FOOTPATH	600 mm	CL 804	ESB N APPROVED SAND
NEW & EXISTING ESTATE ROADS, ESTATE GRASS VERGES & ADJOINING ROADS	600 mm	CL 804	ESB N APPROVED SAND
ESTATE OPEN GRASSED AREAS	600 mm	SUITABLE BACKFILL MATERIAL	CBGM B
NEW & EXISTING NON ESTATE ROADS	750 mm	CL 804	ESB N APPROVED SAND
FARM LAND, FOREST TRACK, BOG LAND, PUBLIC OPEN GRASSED AREAS & PRIVATE PROPERTY	750 mm	CL 804	CBGM B

**NOTES:**

- RED CBGM B BACKFILL IN ACCORDANCE WITH CLAUSE 822 AND COMPACTED TO CLAUSE 813.10 AND TABLE 84 OF N.R.A. SPECIFICATION FOR ROADWORKS (15 N/mm<sup>2</sup> AFTER 7 DAYS)
- ESB N APPROVED WELL COMPACTED NATURAL UNWASHED SAND TO BS 882 OR EQUIVALENT MATERIAL APPROVED BY ESB NETWORKS. MAXIMUM THERMAL RESISTIVITY OF THE SURROUND MATERIAL SHALL BE 1.0 K.m/W AT 0% MOISTURE CONTENT

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Rev	Date	Revision Description	DR	GR	TS	MA
1	20/11/13	BACKFILL AND SURROUND MATERIALS REVISED				
0	05/09/13	ISSUED FOR CONSTRUCTION				

Purpose of Issue - Preliminary unless indicated

Tender  Client Approval  Construction  As-built  Revised

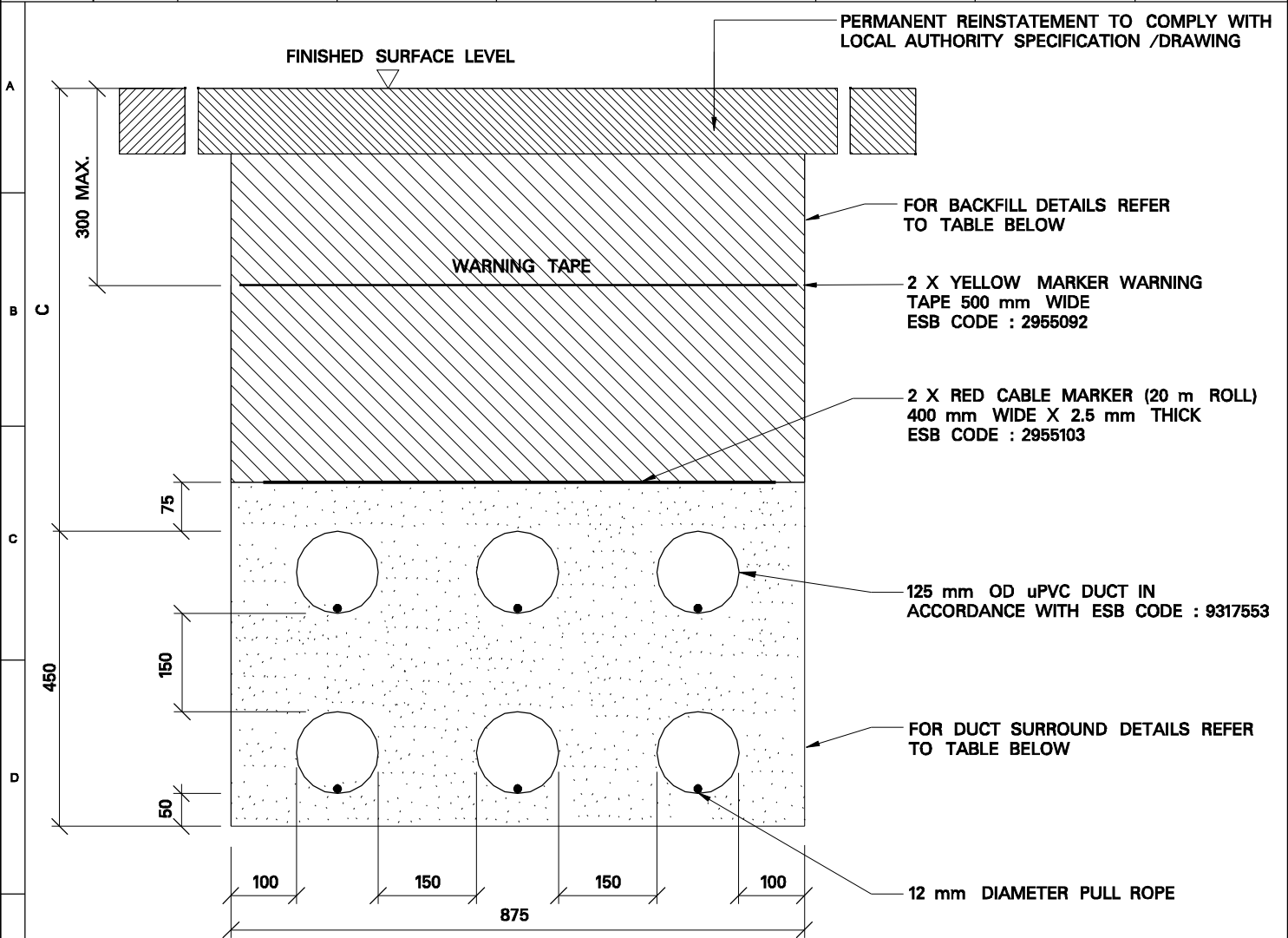
Drawn G.Ryan	Produced G.Ryan	Verified M.Amet	Approved T.Sheridan	Approved date 02/12/13
Client Ref TC210096			No. of Shts -	Size A4
Drawing Number PE424-D7002-008-003-001			SHEET	REV
Drawing Title MV CIRCUIT TRENCH CROSS SECTION 4 WAY DUCT FORMATION			Scale N.T.S.	

Client **ESB NETWORKS**

Project **MV Standard Drawings**

Contract **MV CABLES STANDARDS**

Production Unit **Civil Building and Environmental**



TRENCH LOCATION	MIN. DEPTH OF COVER TO TOP OF DUCTS (C)	TRENCH BACKFILL DETAILS	DUCT SURROUND MATERIAL
EXISTING FOOTPATH (NON HOUSING ESTATE)	450 mm	CL 804	ESB N APPROVED SAND
NEW ESTATE & NON ESTATE FOOTPATH	600 mm	CL 804	ESB N APPROVED SAND
NEW & EXISTING ESTATE ROADS, ESTATE GRASS VERGES & ADJOINING ROADS	600 mm	CL 804	ESB N APPROVED SAND
ESTATE OPEN GRASSED AREAS	600 mm	SUITABLE BACKFILL MATERIAL	CBGM B
NEW & EXISTING NON ESTATE ROADS	750 mm	CL 804	ESB N APPROVED SAND
FARM LAND, FOREST TRACK, BOG LAND, PUBLIC OPEN GRASSED AREAS & PRIVATE PROPERTY	750 mm	CL 804	CBGM B

**NOTES:**

- RED CBGM B BACKFILL IN ACCORDANCE WITH CLAUSE 822 AND COMPACTED TO CLAUSE 813.10 AND TABLE 84 OF N.R.A. SPECIFICATION FOR ROADWORKS (15 N/mm<sup>2</sup> AFTER 7 DAYS)
- ESB N APPROVED WELL COMPACTED NATURAL UNWASHED SAND TO BS 882 OR EQUIVALENT MATERIAL APPROVED BY ESB NETWORKS. MAXIMUM THERMAL RESISTIVITY OF THE SURROUND MATERIAL SHALL BE 1.0 K.m/W AT 0% MOISTURE CONTENT

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Client Ref TC210096			No. of Sheets -	Size A4
			Scale N.T.S.	

Drawing Number **PE424-D7002-008-004-001** SHEET REV

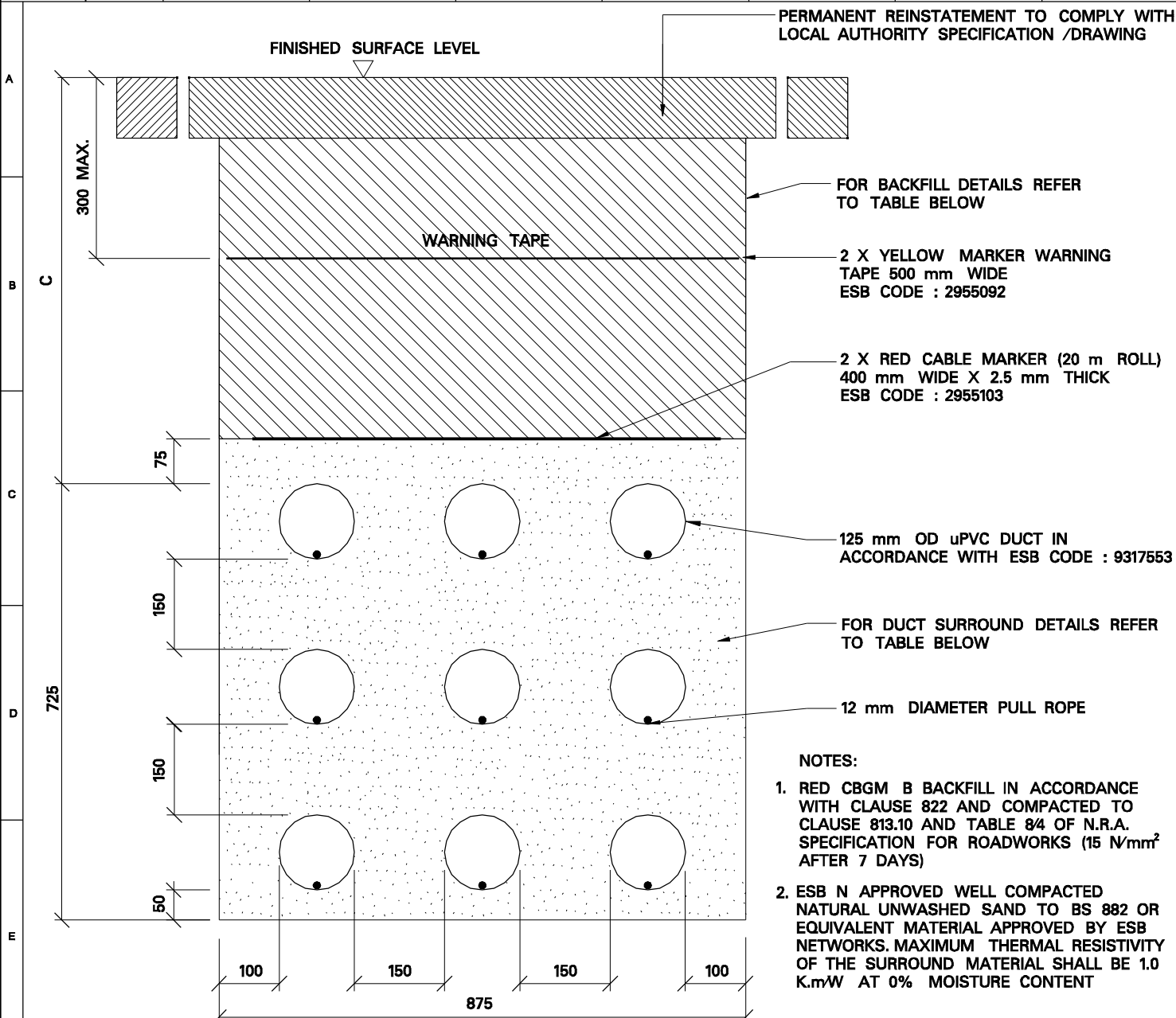
Drawing Title  
**MV CIRCUIT TRENCH CROSS SECTION 6 WAY DUCT FORMATION**

Client **ESB NETWORKS**

Project **MV Standard Drawings**

Contract **MV CABLES STANDARDS**

Production Unit **Civil Building and Environmental**



TRENCH LOCATION	MIN. DEPTH OF COVER TO TOP OF DUCTS (C)	TRENCH BACKFILL DETAILS	DUCT SURROUND MATERIAL
EXISTING FOOTPATH (NON HOUSING ESTATE)	450 mm	CL 804	ESB N APPROVED SAND
NEW ESTATE & NON ESTATE FOOTPATH	600 mm	CL 804	ESB N APPROVED SAND
NEW & EXISTING ESTATE ROADS, ESTATE GRASS VERGES & ADJOINING ROADS	600 mm	CL 804	ESB N APPROVED SAND
ESTATE OPEN GRASSED AREAS	600 mm	SUITABLE BACKFILL MATERIAL	CBGM B
NEW & EXISTING NON ESTATE ROADS	750 mm	CL 804	ESB N APPROVED SAND
FARM LAND, FOREST TRACK, BOG LAND, PUBLIC OPEN GRASSED AREAS & PRIVATE PROPERTY	750 mm	CL 804	CBGM B

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1	28/11/13	BACKFILL AND SURROUND MATERIALS REVISED				
0	05/06/13	ISSUED FOR CONSTRUCTION				

Purpose of Issue - Preliminary unless indicated

Tender  Client Approval  Construction  As-built  Revised

Drawn G.Ryan	Produced G.Ryan	Verified M.Amet	Approved T.Sheridan	Approved date 02/12/13
Client Ref TC210096			No. of Sheets -	Size A4
Drawing Number PE424-D7002-008-005-001			SHEET	REV
Drawing Title MV CIRCUIT TRENCH CROSS SECTION 9 WAY DUCT FORMATION			Scale N.T.S.	

Client **ESB NETWORKS**

Project **MV Standard Drawings**

Contract **MV CABLES STANDARDS**

Production Unit **Civil Building and Environmental**