

Company Directive

STANDARD TECHNIQUE: CAØV/2

Relating to Procedures for Making LV Service Cable Straight Joints

Policy Summary

This Standard Technique document contains all the approved LV Service cold applied/pour Straight Joints for PVC Plain or Split Concentric and PILC cables. It shall be implemented in conjunction with the appropriate General Requirements in ST: CAØC.

This ST has not been written as a training document. It is not intended to be exhaustive in content and you must refer to your supervisor if you require training or instruction.

You shall work safely and skilfully, utilising the training/instruction you have already received, relating to the contents of this document and its cross-references.

You must make sure that you understand your job instructions and that you have the necessary tools and equipment for the job.

Author: Richard Summers

Implementation Date: July 2014

Approved by



Policy Manager

Date:

8 September 2014

All references to Western Power Distribution or WPD must be read as National Grid Electricity Distribution or NGED

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IMPLEMENTATION PLAN

Introduction

This Standard Technique has been updated to correct errors in the numbering of the General Requirements and include the use of solvent wipes.

Main Changes

- General Requirement numbers amended
- SVJ 7.109.1 measurements amended
- Solvent wipes included in the Standard Techniques

Impact of Changes

Measurements for SVJ 7.109.1 now taken from the centre line of the joint.

Implementation Actions

Distribution Managers and Team Managers shall brief their teams on the contents of this policy to the relevant staff.

Word Processing to issue copies to paper manual holders (Midlands and South)

Implementation Timetable

Immediate

Document Revision & Review Table		
Date	Comments	Author
July 2014	<ul style="list-style-type: none"> • Correction of General Requirement Numbers. • SVJ 7.109.1 measurements amended • Inclusion of solvent wipes 	Richard Summers

ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE STRAIGHT JOINTS

INTRODUCTION

This Standard Technique document contains all the approved service cable straight joints, which shall be implemented in conjunction with the appropriate General Requirements contained in ST: CAØC, including: -

1. General Cleanliness and Accident Prevention
2. General Jointing Procedures - Dead Cables
3. General Jointing Procedures and Safety Precautions - Live Cables

If the need arises to undertake a straight joint configuration (i.e. non-standard) not covered within the Standard Technique the Policy Manager, Head Office, is to be consulted.

Resin encapsulated joints must not be broken down.

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**Note: - Any reference to plain concentric equally applies to hybrid.
The phase conductor insulation may be either XLPE or PVC.**

**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.101

**PVC PLAIN CONCENTRIC - PVC PLAIN CONCENTRIC
SERVICE CABLE STRAIGHT JOINT - SINGLE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.101

MATERIALS LIST

CABLE SIZES - 25/35mm² Hybrid or 4/16/25mm² Cu Plain Conc

Item	Quantity
Shell 1047	1
Resin	1.3 litre
Connector BTC-1-45W	2
Connector Shroud	1

35mm² Cu

Shell 1047	1
Resin	1.3 litre
Connector (Phase) BTC-3-60W	1
Connector (neu/earth) BTC-1-45W	1
Connector Shroud (Phase)	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
PVC tape
Emery cloth
De-solvit 1000FD
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

JOINTING PROCEDURE 7.101

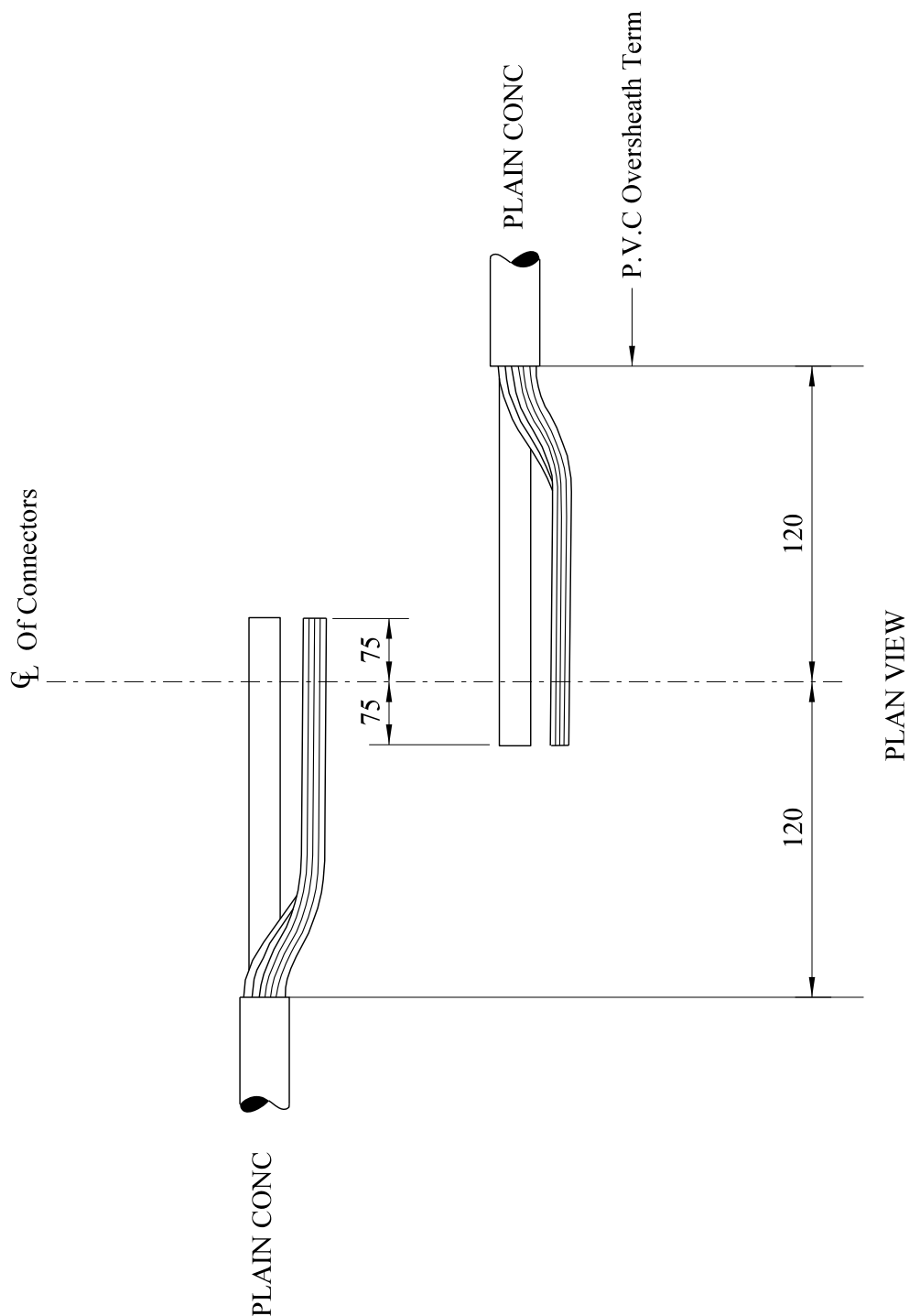
Actions


General Requirements (ST: CAØC)

Refer to Drawings **SVJ 7.101.1, 7.101.2** whilst undertaking this Jointing Procedure

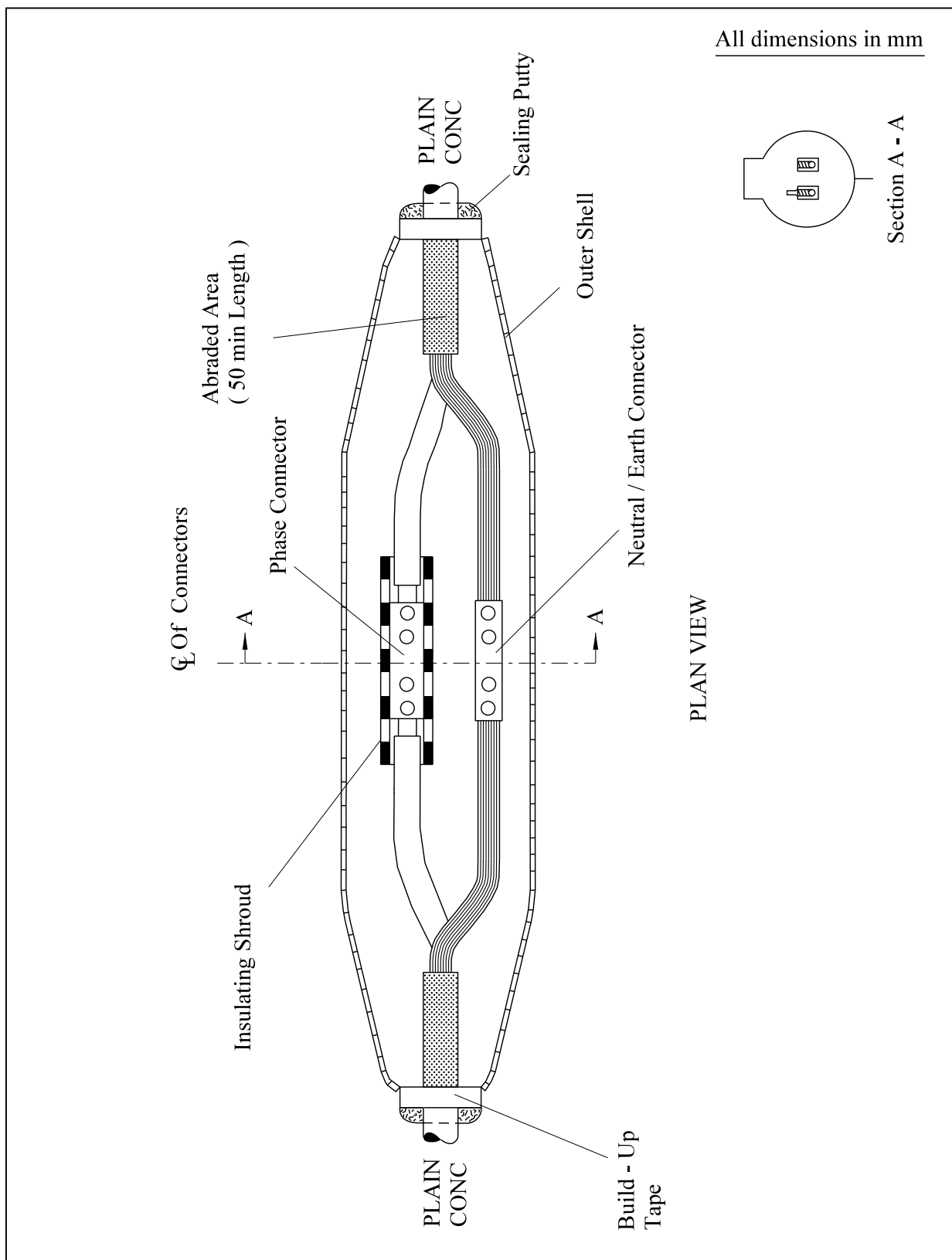
1.	Set up and mark cables	4
2.	Open and cut cable's in accordance with General Requirement 6.13	13
3.	Prepare neutral/earth wires for jointing	7
4.	Set cores in joint position	22
5.	Make neutral/earth connection	24
6.	Apply temporary shrouding	17
7.	Make and insulate phase connection	24/25
8.	Remove temporary shrouding applied in 6	--
9.	Form neutral/earth wires into their final positions	--
10.	Abrade and build up oversheaths	26
11.	Thoroughly degrease the joint	29
12.	Prepare and fit shell, ensuring 15mm clearance	30
13.	Mix and pour resin	31


All dimensions in mm



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Drawn	RJB	04/12			
Checked					
Approved					
SCALE		N.T.S.		Title	
				PVC PLAIN CONC	
				STRAIGHT JOINT - SINGLE PHASE	
				STRIPPING DIMENSIONS	
				Drg. No.	
				SVJ 7.101.1	
				Rev No	

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Drawn	RJB	04/12			
Checked					
Approved					
SCALE		N.T.S.		Title	
				PVC PLAIN CONC	
				STRAIGHT JOINT - SINGLE PHASE	
				GENERAL LAYOUT	
				Drg. No.	
				SVJ 7.101.2	
				Rev No	

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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.102

**PVC SPLIT CONCENTRIC - PVC SPLIT CONCENTRIC
SERVICE CABLE STRAIGHT JOINT - SINGLE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.102

MATERIALS LIST

CABLE SIZES - 4/16/25mm² Cu Split Conc

Item	Quantity
Shell 1047	1
Resin	1.3 litre
Connector BTC-1-45W(Phase/Neu/Earth)	3
Connector Shrouds (Phase/Neutral)	2

ADDITIONAL ITEMS FOR EACH JOINT

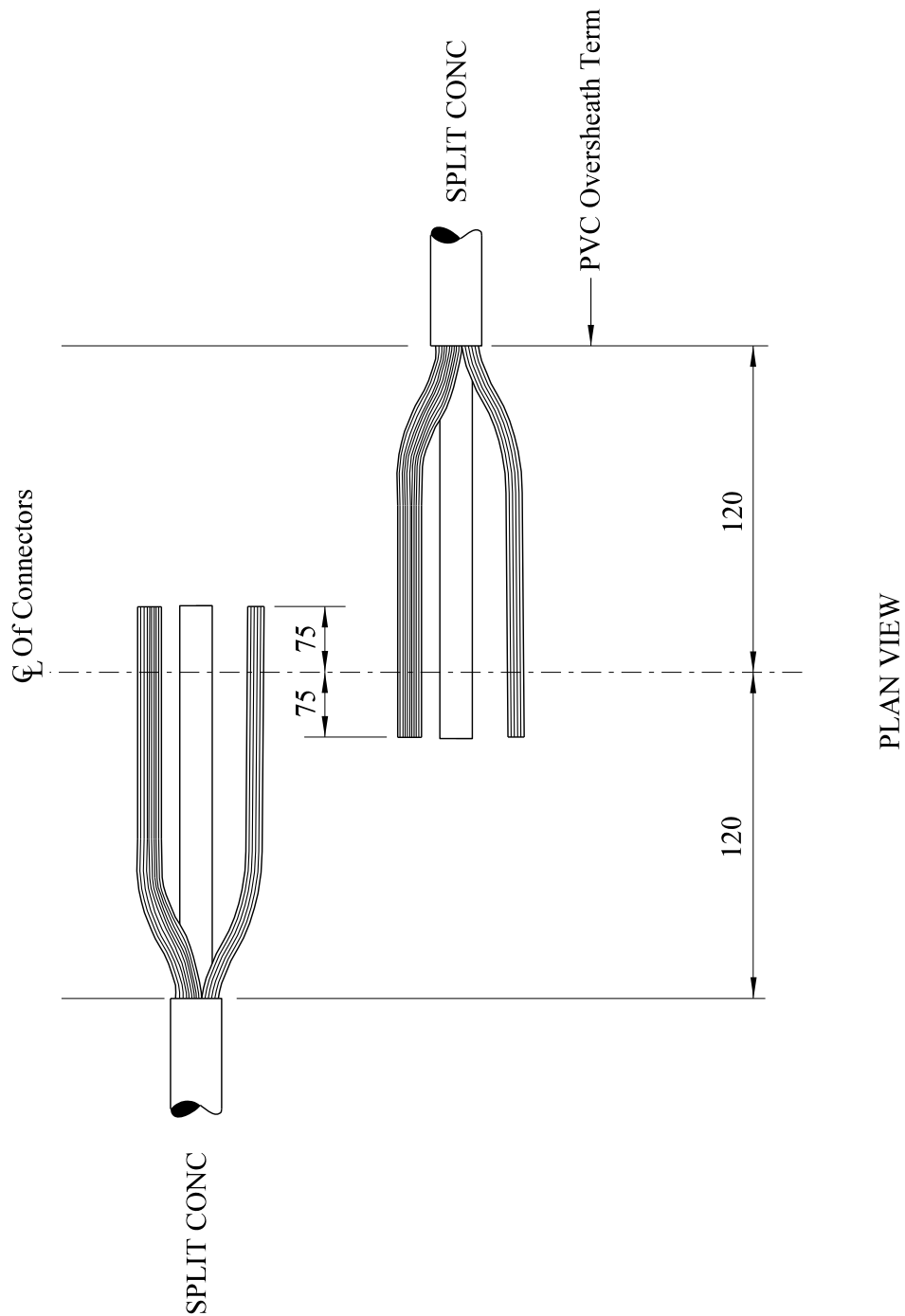
Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
PVC tape
Emery cloth
De-solvit 1000FD
Workhorse dry wipes
Cable solvent wipes


Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

JOINTING PROCEDURE 7.102

Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.102.1, 7.102.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
2. Open and cut cable's in accordance with General Requirement 6.13	13
3. Prepare neutral and earth wires for jointing	7
4. Set cores in joint position	22
5. Make earth connection	24
6. Apply temporary shrouding	17
7. Make and insulate neutral connection	24/25
8. Make and insulate phase connection	24/25
9. Remove temporary shrouding applied in 6	--
10. Form neutral and earth wires into their final positions	--
11. Abrade and build up oversheaths	26
12. Thoroughly degrease the joint	29
13. Prepare and fit shell, ensuring 15mm clearance	30
14. Mix and pour resin	31

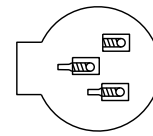
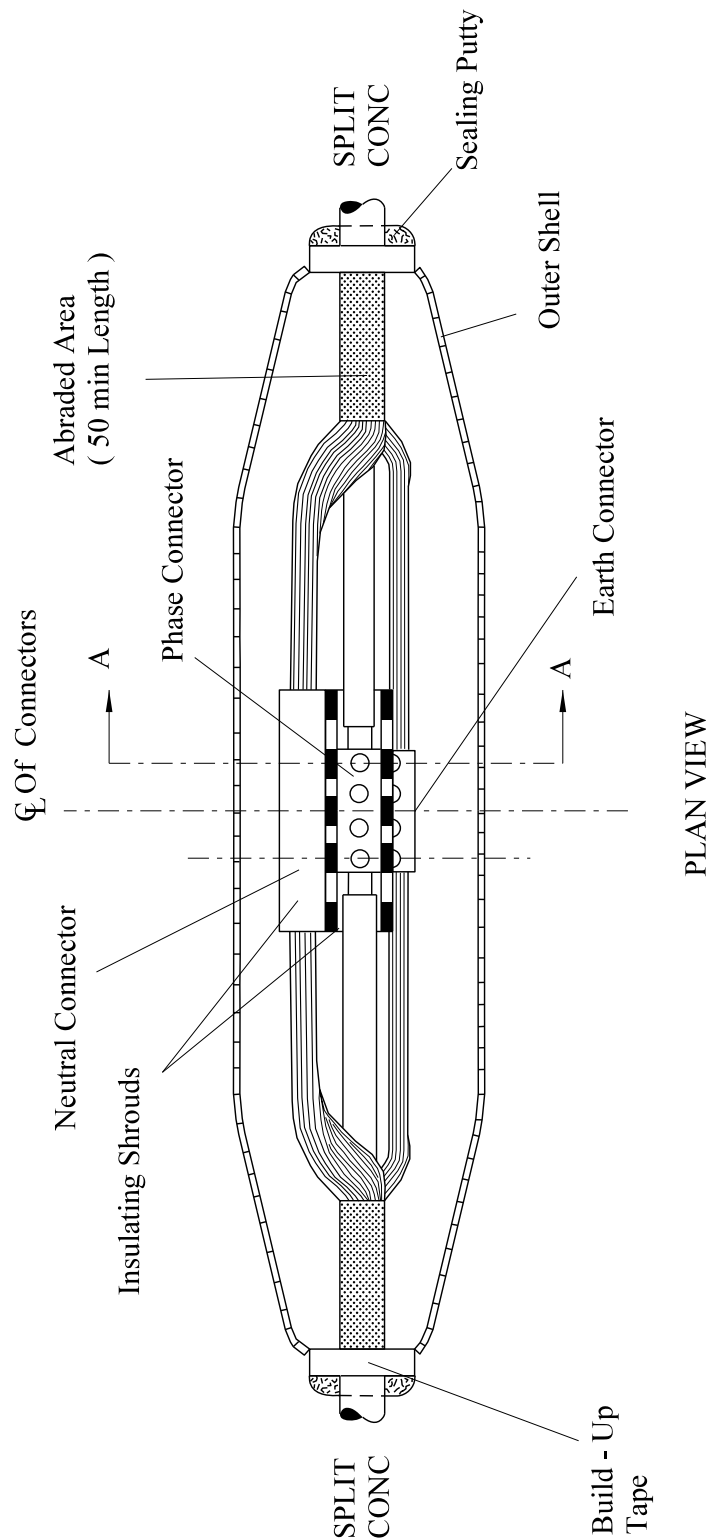
All dimensions in mm



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SCALE N.T.S.					

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All dimensions in mm



Section A - A

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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.103

**PVC PLAIN CONCENTRIC - PVC SPLIT CONCENTRIC
SERVICE CABLE STRAIGHT JOINT - SINGLE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.103

MATERIALS LIST

CABLE SIZES - 25/35mm² Hybrid or 4/16/25mm² Cu Plain Conc - 4/16/25mm² Cu Split Conc

Item	Quantity
Shell 1047	1
Resin	1.3 litre
Connector Shroud (Phase)	1
Connector (Neu/Earth) BTC-3-60W	1
Connector (Phase) BTC-1-45W	1

ADDITIONAL ITEMS FOR EACH JOINT

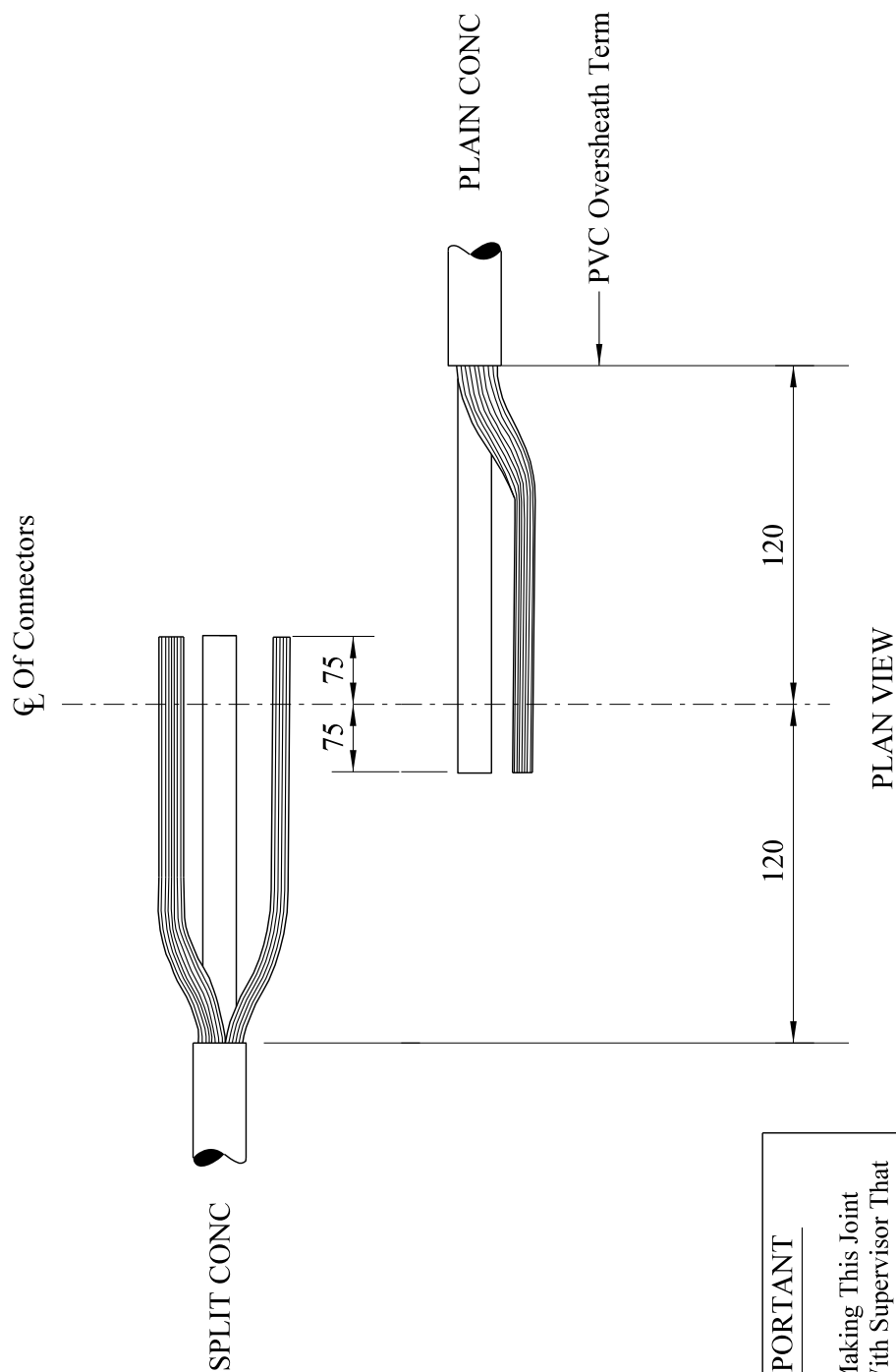
Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
PVC tape
Emery cloth
De-solvit 1000FD
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

JOINTING PROCEDURE 7.103


Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.103.1, 7.103.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
2. Open and cut cable's in accordance with General Requirement 6.13	13
3. Prepare neutral/earth wires (plain conc) and neutral and earth wires (split conc) for jointing	7
4. Set cores in joint position	22
5. Make neutral/earth connection	24
6. Apply temporary shrouding	17
7. Make and insulate phase connection	24/25
8. Remove temporary shrouding applied in 6	--
9. Form neutral/earth wires into their final positions	--
10. Abrade and build up oversheaths	26
11. Thoroughly degrease the joint	29
12. Prepare and fit shell, ensuring 15mm clearance	30
13. Mix and pour resin	31

All dimensions in mm



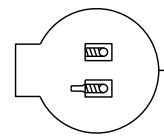
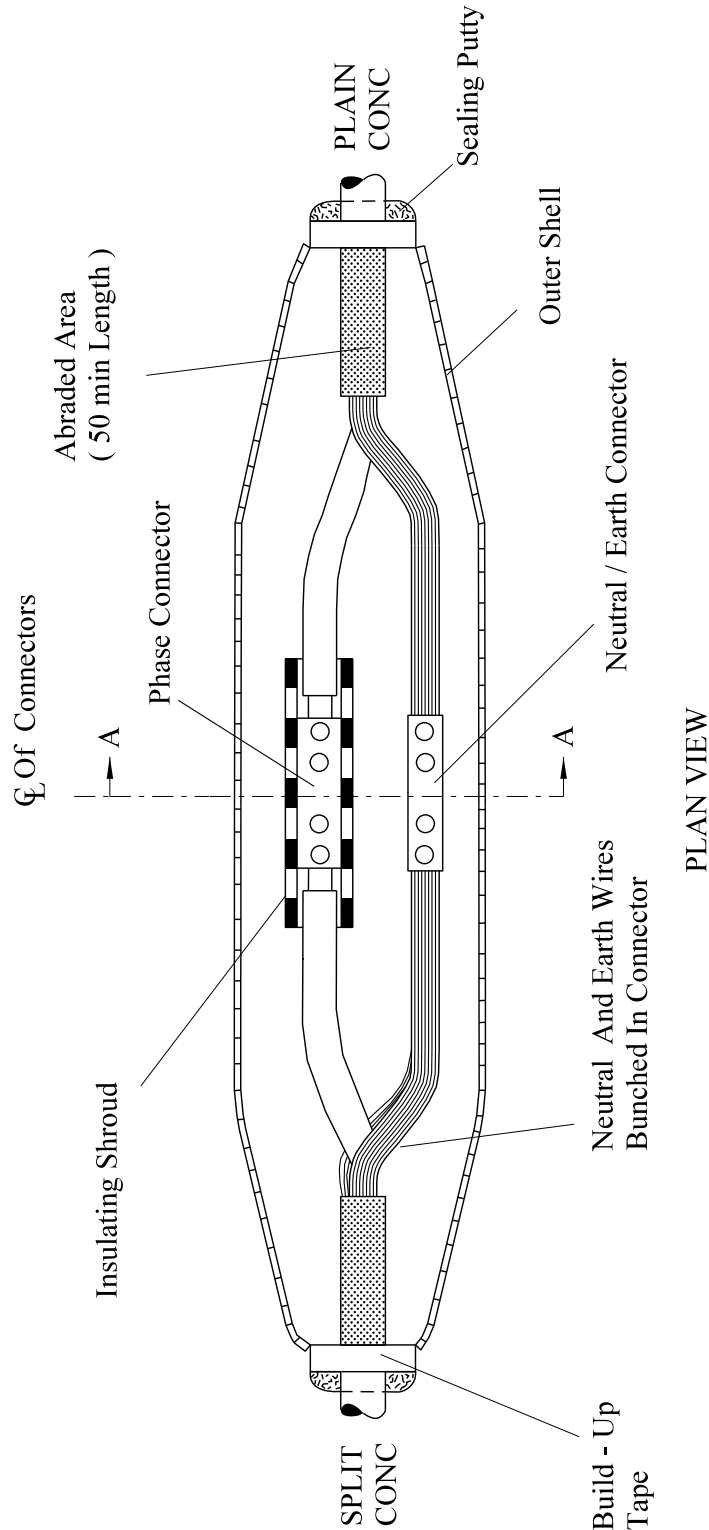
IMPORTANT

Before Making This Joint
Check With Supervisor That
Application Is Correct

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SCALE	N.T.S.					Rev No

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All dimensions in mm



Section A - A

PLAN VIEW

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SCALE		N.T.S.		Title		PVC PLAIN CONC - PVC SPLIT CONC STRAIGHT JOINT - SINGLE PHASE GENERAL LAYOUT		Drg. No. SVJ 7.103.2		Rev No	

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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.104

**PVC PLAIN CONCENTRIC - PILC SERVICE CABLE
STRAIGHT JOINT - SINGLE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.104

MATERIALS LIST

CABLE SIZES - 25/35mm² Hyb or 16/25mm² Cu Plain Conc - up to 25mm² PILC

Item	Quantity
Shell 1046	1
Resin	3.2 litre
Connector BTC-3-60W	2
Connector Shroud (Phase)	1
Armour/Earth Bond LVSB 18	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
Tinned copper braid (19x 2)
Heat shrink tubing
Whipping thread
PVC tape
Emery cloth
De-solvit 1000FD
De-solvit 1000
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

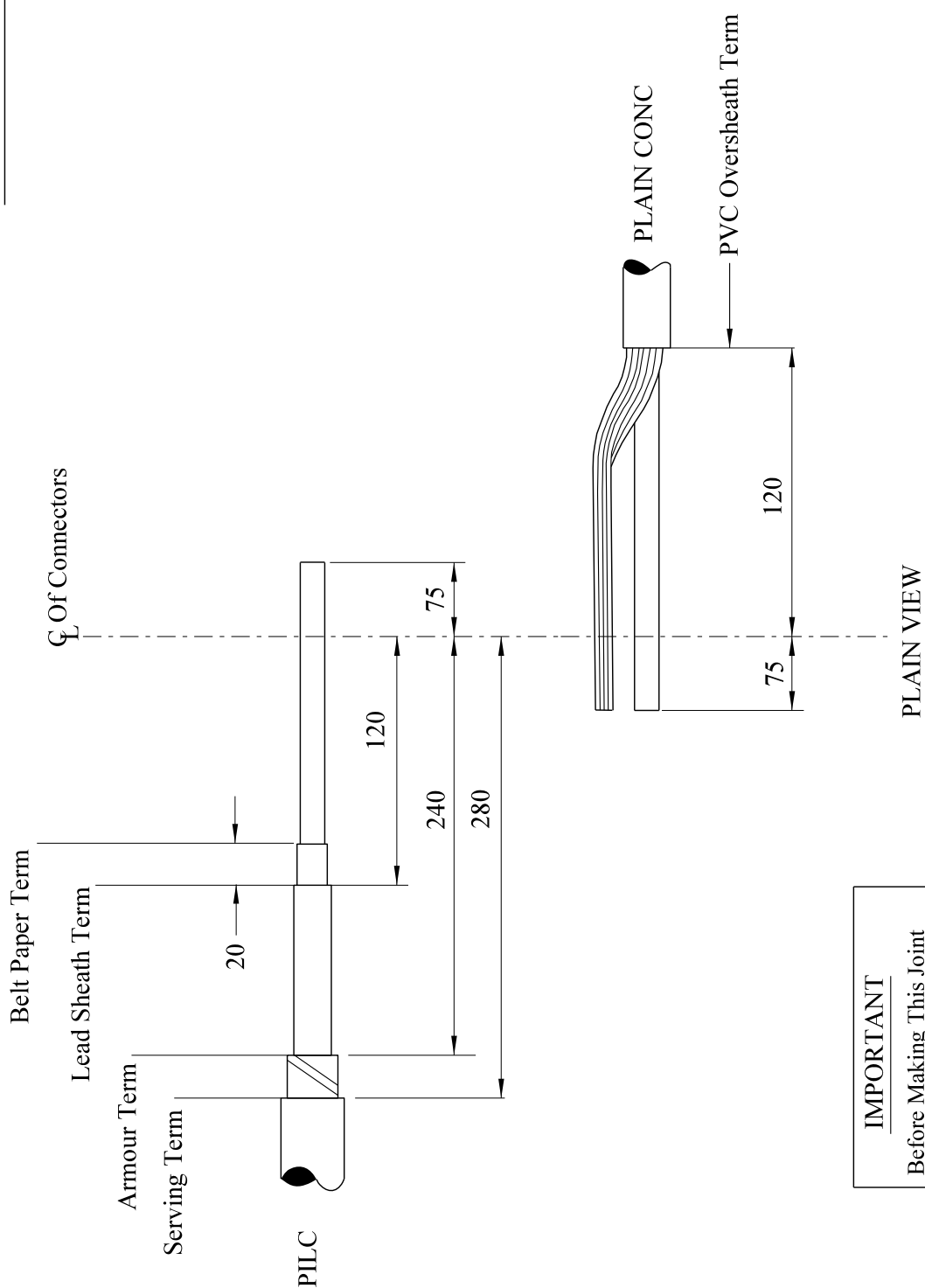
JOINTING PROCEDURE 7.104

Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.104.1, 7.104.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
PILC CABLE - Preparation	
2. Open and cut cable in accordance with General Requirement	11 / 12
3. Carry out moisture test	15
4. Apply core paper protection	20/21
5. Apply armour bond	18
6. Apply lead sheath bond	19
PLAIN CONC CABLE - Preparation	
7. Open and cut cable in accordance with General Requirement 6.13	13
8. Prepare neutral/earth wires for jointing	7
COMPLETION OF JOINT	
9. Set cores in joint position	22
10. Connect neutral/earth earth braid to lead sheath bond	19
11. Connect neutral/earth wires and neutral/earth braid to neutral core and insulate	24
12. Apply temporary shrouding	17
13. Make and insulate phase connection	24/25
14. Remove temporary shrouding applied in 12.	--
15. Form neutral/earth wires into their final positions	--
16. Abrade and build up oversheaths	26
17. Thoroughly degrease the joint	29

JOINTING PROCEDURE 7.104 - Continued

- | | | |
|-----|--|----|
| 18. | Apply mastic water block to lead sheath | 27 |
| 19. | Prepare and fit shell, ensuring 15mm clearance | 30 |
| 20. | Mix and pour resin | 31 |

All dimensions in mm

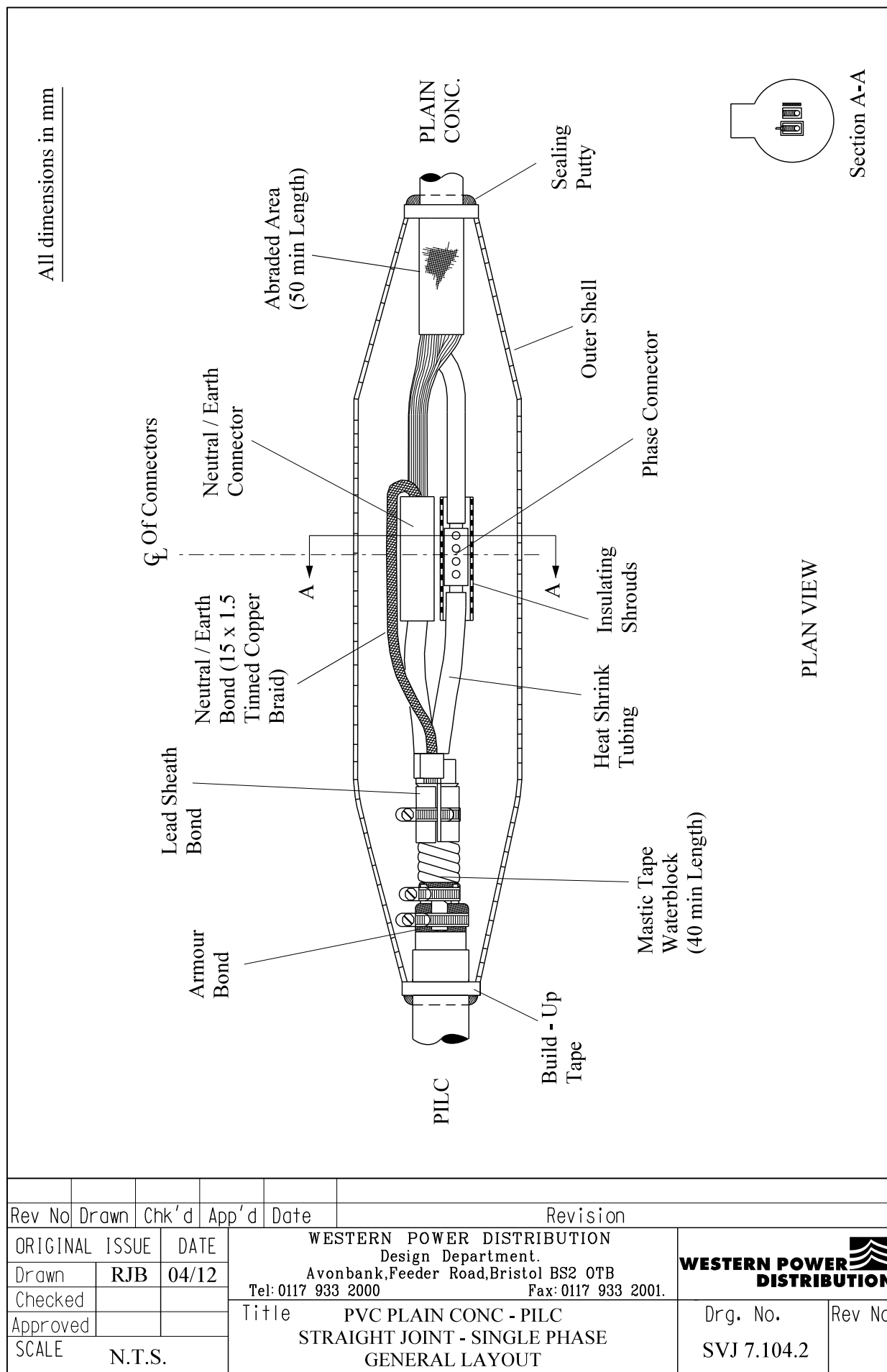



IMPORTANT

Before Making This Joint
Check With Supervisor That
Application Is Correct

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SCALE		N.T.S.		Title	
				PVC PLAIN CONC - PILC STRAIGHT JOINT - SINGLE PHASE GENERAL LAYOUT	
				Drg. No. SVJ 7.104.2	
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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.105

**PVC SPLIT CONCENTRIC - PILC SERVICE CABLE
STRAIGHT JOINT - SINGLE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.105

MATERIALS LIST

CABLE SIZES - 16/25mm² Cu Split Conc up to 25mm² PILC

Item	Quantity
Shell 1046	1
Resin	3.2 litre
Connector BTC-1-60W (Phase/Neutral)	2
Armour/Earth Bond LVSB 18	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
Heat shrink tubing
Whipping thread
PVC tape
Emery cloth
De-solvit 1000FD
De-solvit 1000
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

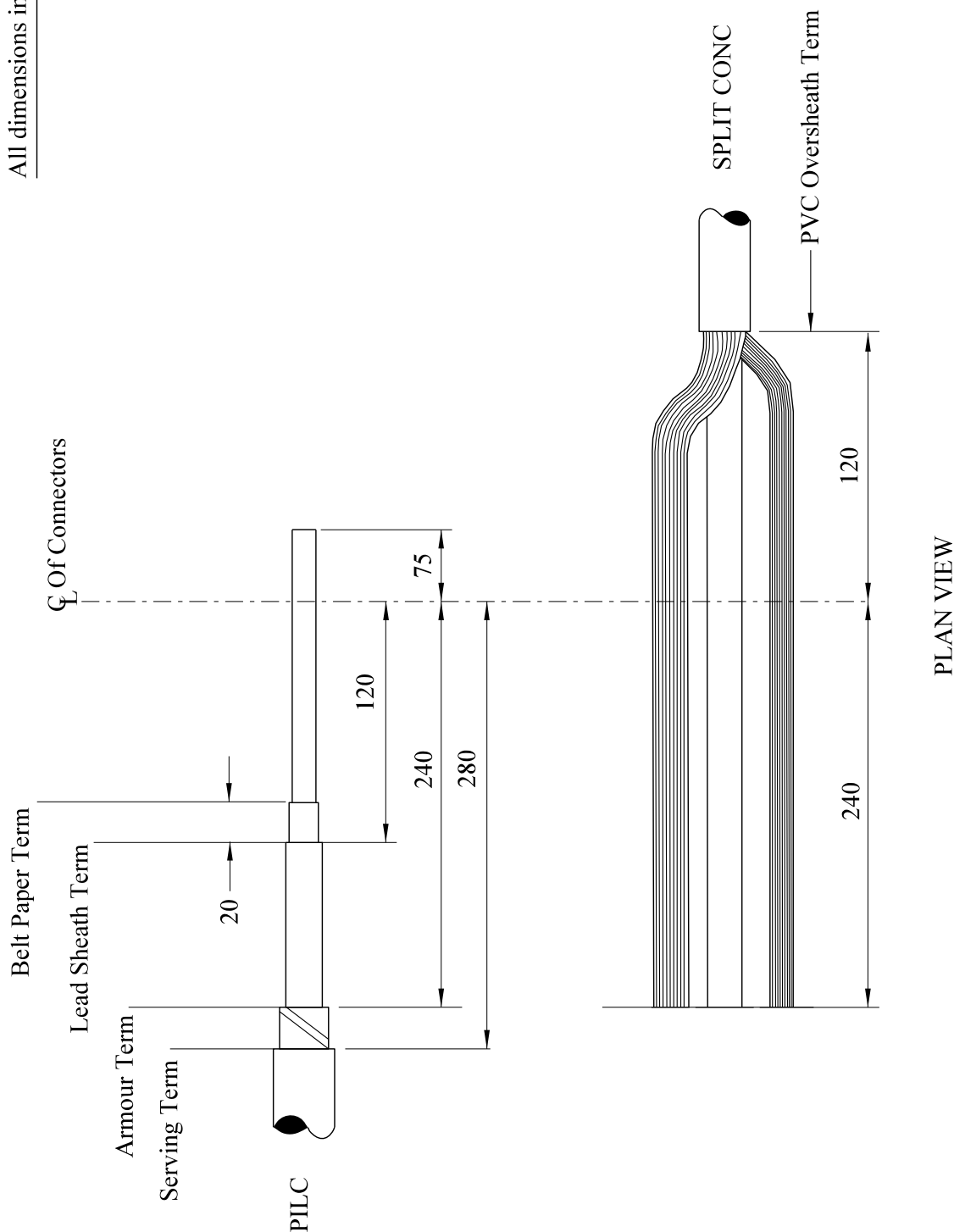
JOINTING PROCEDURE 7.105


Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.105.1, 7.105.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
PILC CABLE - Preparation	
2. Open and cut cable in accordance with General Requirement	11/12
3. Carry out moisture test	15
4. Apply core paper protection	20/21
5. Apply armour bond	18
6. Apply lead sheath bond	19
SPLIT CONC CABLE - Preparation	
7. Open and cut cable in accordance with General Requirement 6.13	13
8. Prepare neutral and earth wires for jointing	7
COMPLETION OF JOINT	
9. Set cores in joint position	22
10. Connect earth wires to lead sheath bond	19
11. Apply temporary shrouding	17
12. Make and insulate neutral connection	24/25
13. Make and insulate phase connection	24/25
14. Remove temporary shrouding applied in 11	--
15. Form earth wires into their final positions	--
16. Abrade and build up oversheaths	26
17. Thoroughly degrease the joint	29
18. Apply mastic water block to lead sheath	27

JOINTING PROCEDURE 7.105 - Continued

- | | | |
|-----|--|----|
| 19. | Prepare and fit shell, ensuring 15mm clearance | 30 |
| 20. | Mix and pour resin | 31 |

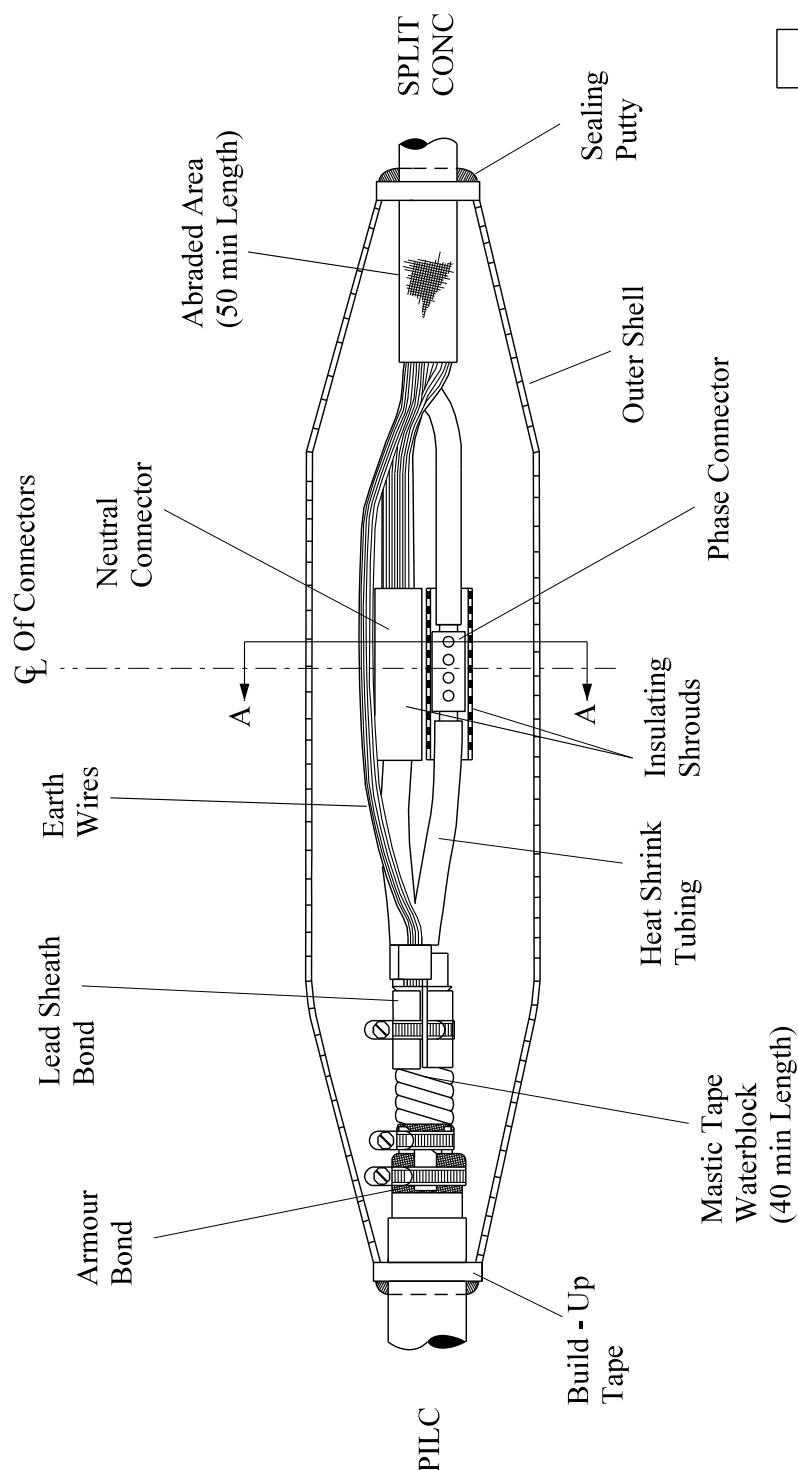
All dimensions in mm



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SCALE		N.T.S.		Title PVC SPLIT CONC - PILC STRAIGHT JOINT - SINGLE PHASE STRIPPING DIMENSIONS	
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				Rev No	


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All dimensions in mm



PLAN VIEW

Section A-A

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Drawn	RJB	04/12			
Checked					
Approved					
SCALE		N.T.S.		Title	
				PVC SPLIT CONC - PILC	
				STRAIGHT JOINT - SINGLE PHASE	
				GENERAL LAYOUT	
				Drg. No.	
				SVJ 7.105.2	
				Rev No	

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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.106

**PVC PLAIN CONCENTRIC - PVC PLAIN CONCENTRIC
SERVICE CABLE STRAIGHT JOINT - THREE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.106

MATERIALS LIST

CABLE SIZES - 25/35mm² Hybrid or 16/25mm² Cu Plain Conc

Item	Quantity
Shell 1048	1
Resin	5 litre
Connector BTC-1-45W (Phases/Neu/Earth)	4
Connector Shrouds (Phases)	3

ADDITIONAL ITEMS FOR EACH JOINT

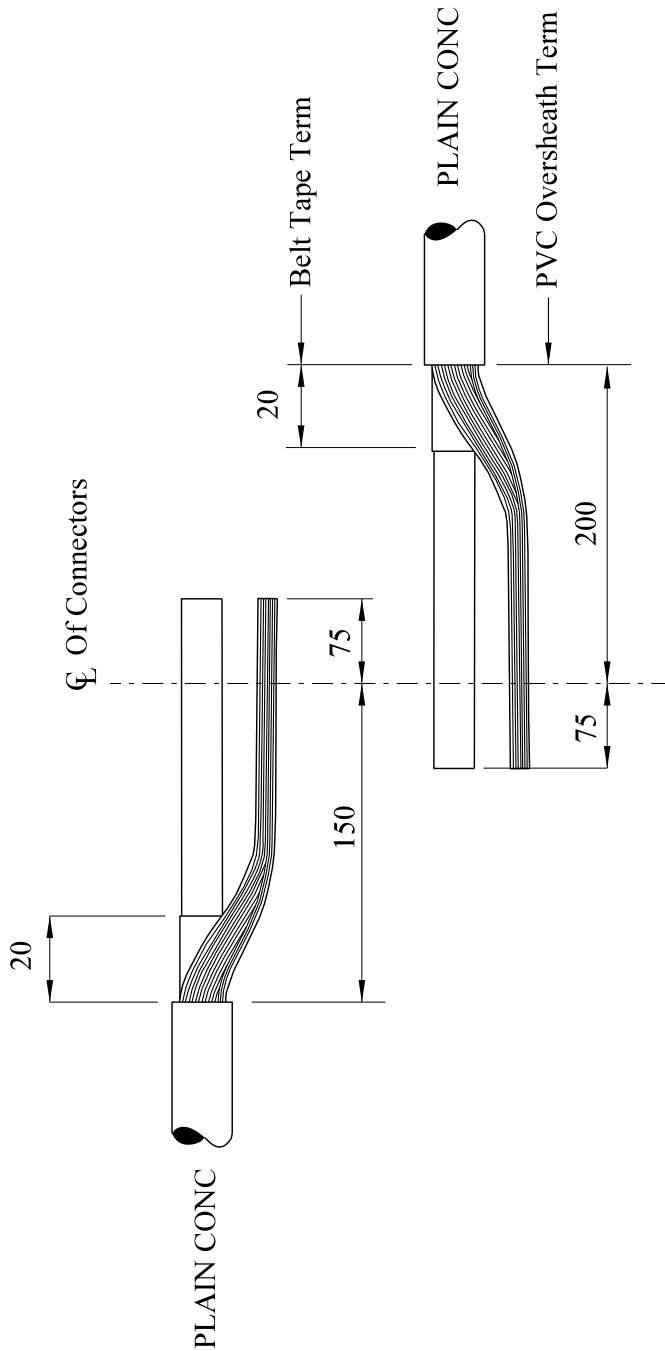
Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
PVC tape
Emery cloth
De-solvit 1000FD
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

JOINTING PROCEDURE 7.106


Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.106.1, 7.106.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
2. Open and cut cable's in accordance with General Requirement 6.13	13
3. Prepare neutral/earth wires for jointing	7
4. Set cores in joint position	22
5. Make neutral/earth connection	24
6. Apply temporary shrouding	17
7. Make and insulate phase connections	23/24/25
8. Remove temporary shrouding applied in 6.	--
9. Form neutral/earth wires into their final positions	--
10. Abrade and build up oversheaths	26
11. Thoroughly degrease the joint	29
12. Prepare and fit shell, ensuring 15mm clearance	30
13. Mix and pour resin	31

All dimensions in mm



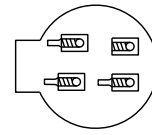
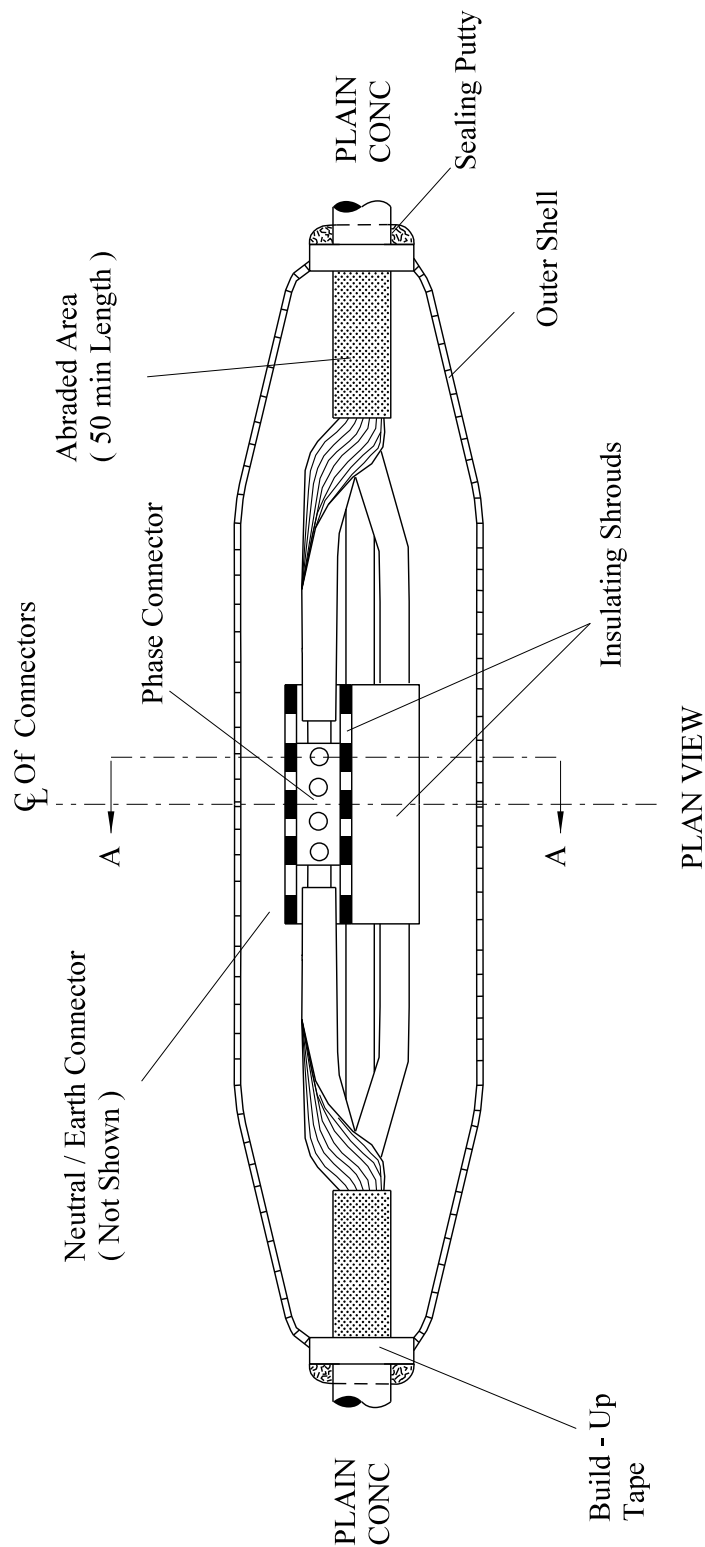
PLAN VIEW

NOTE :- Crossing Of Cores Will Be Undertaken In The Long Side Of The Joint

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ORIGINAL	ISSUE	DATE	<div>WESTERN POWER DISTRIBUTION Design Department. Avonbank, Feeder Road, Bristol BS2 0TB Tel: 0117 933 2000 Fax: 0117 933 2001.</div> <div><div>Title</div><div>PVC PLAIN CONC STRAIGHT JOINT - THREE PHASE STRIPPING DIMENSIONS</div></div>			
Drawn	RJB	04/12				<div>WESTERN POWER DISTRIBUTION</div> <div></div>
Checked						
Approved						
SCALE N.T.S.			Drg. No. SVJ 7.106.1		Rev No 1	

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All dimensions in mm



Section A - A

Rev No	Drawn	Chk'd	App'd	Date	Revision
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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.107

**PVC SPLIT CONCENTRIC - PVC SPLIT CONCENTRIC
SERVICE CABLE STRAIGHT JOINT - THREE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.107

MATERIALS LIST

CABLE SIZES - 25mm² Split Conc

Item	Quantity
Shell 1048	1
Resin	5 litre
Connector BTC-1-45W (Phases/Neu/Earth)	5
Connector Shrouds (Phases/Neutral)	4

ADDITIONAL ITEMS FOR EACH JOINT

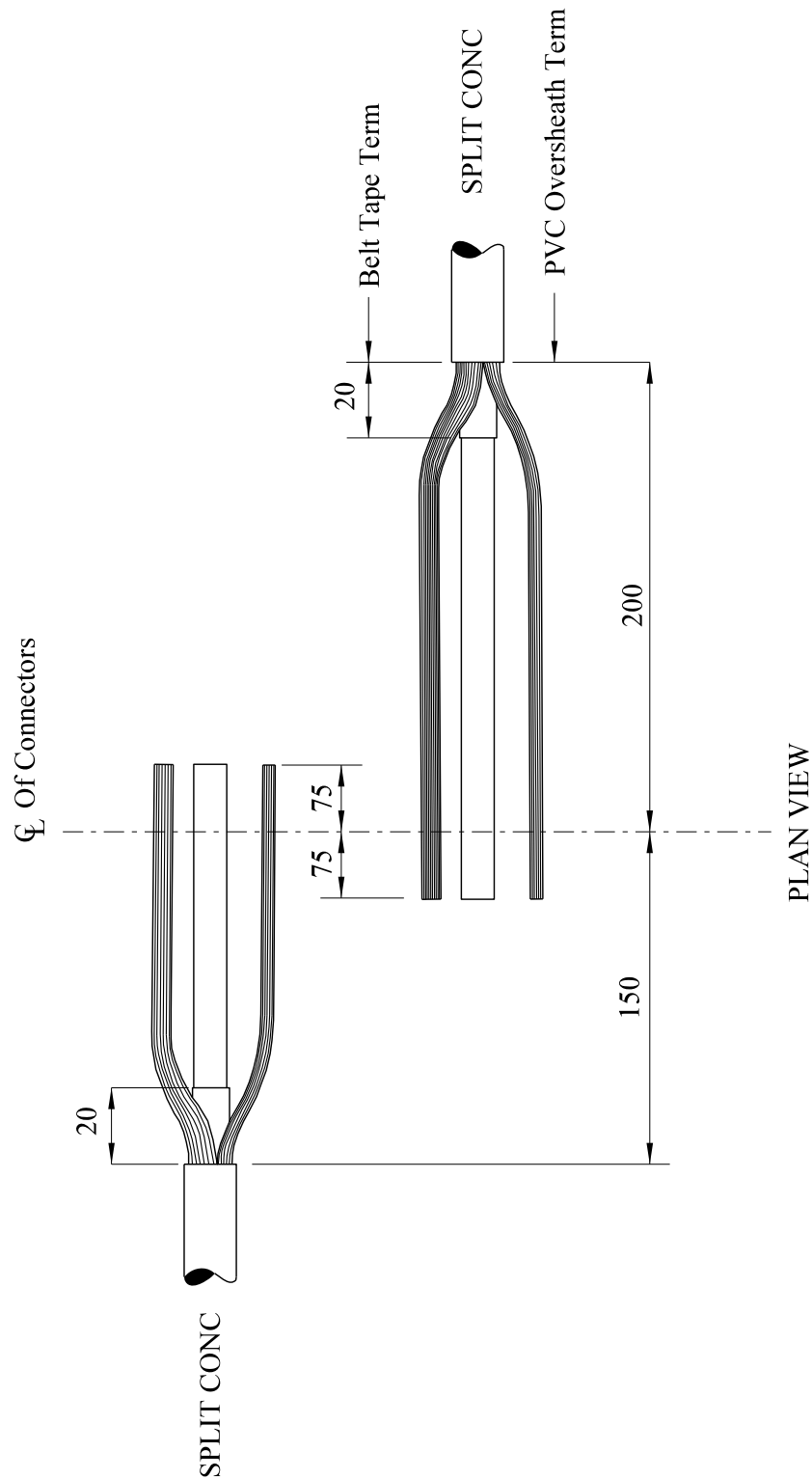
Insulation patch
Black cotton tape
Sealing putty
Cable Ties
Shell support
PVC tape
Emery cloth
De-solvit 1000FD
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.


JOINTING PROCEDURE 7.107

Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.107.1, 7.107.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
2. Open and cut cable's in accordance with General Requirement 6.13	13
3. Prepare neutral and earth wires for jointing	7
4. Set cores in joint position	22
5. Make earth connection	24
6. Apply temporary shrouding	17
7. Make and insulate neutral connection	23/24/25
8. Make and insulate phase connections	23/24/25
9. Remove temporary shrouding applied in 6	--
10. Form neutral and earth wires into their final positions	--
11. Abrade and build up oversheaths	26
12. Thoroughly degrease the joint	29
13. Prepare and fit shell, ensuring 15mm clearance	30
14. Mix and pour resin	31

All dimensions in mm

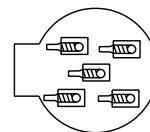
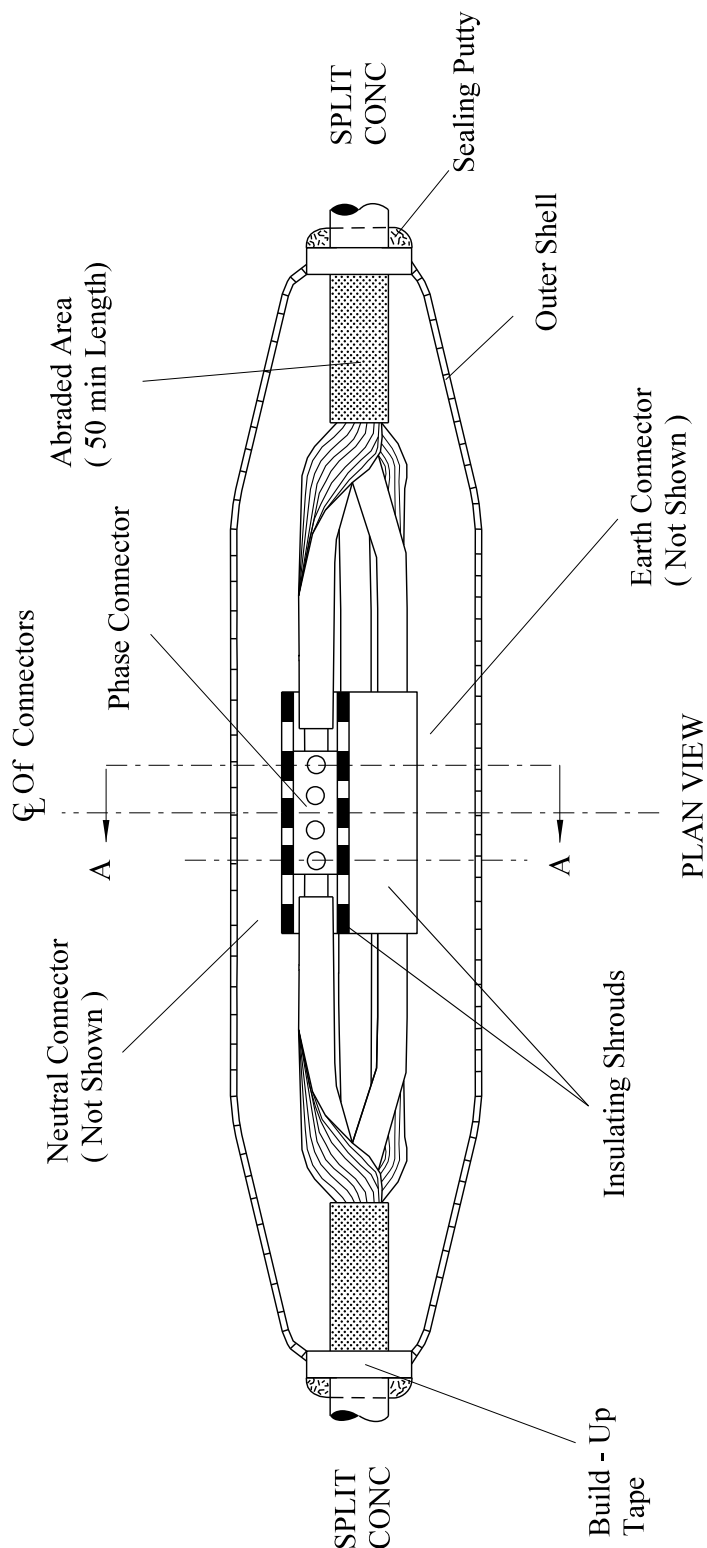


NOTE :- Crossing Of Cores Will Be Undertaken In The Long Side Of The Joint


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Approved							
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All dimensions in mm



Section A - A

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SCALE		N.T.S.		PVC SPLIT CONC STRAIGHT JOINT - THREE PHASE GENERAL LAYOUT	
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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.108

**PVC PLAIN CONCENTRIC - PVC SPLIT
CONCENTRIC SERVICE CABLE STRAIGHT
JOINT -THREE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.108

MATERIALS LIST

CABLE SIZES - 25/35mm² Hybrid or 16/25mm² Cu Plain Conc - 25mm² Cu Split Conc

Item	Quantity
Shell 1048	1
Resin	5 litre
Connector (Neu/Earth) BTC-3-60W	1
Connector (Phase) BTC-1-45W	3
Connector Shrouds (Phases)	3

ADDITIONAL ITEMS FOR EACH JOINT

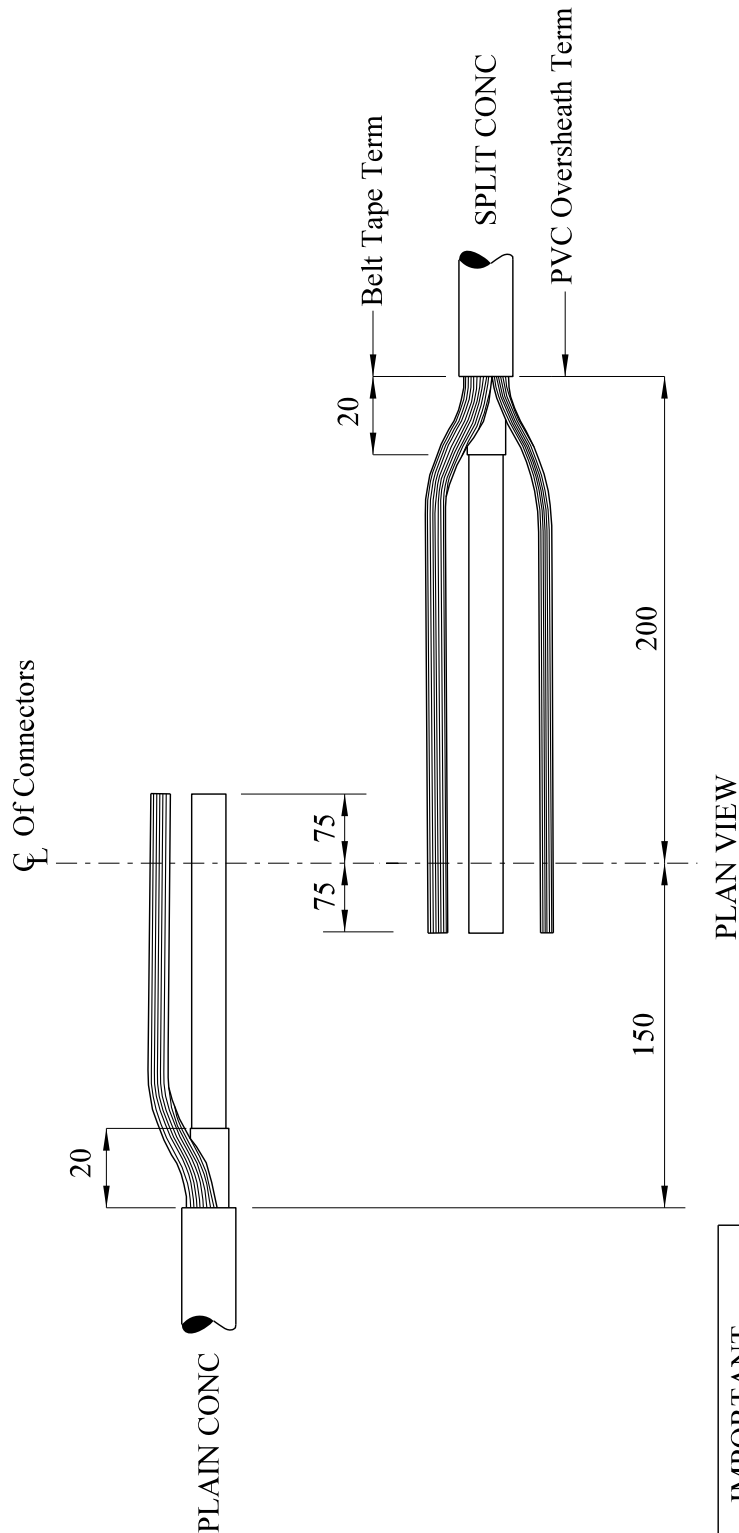
Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
PVC tape
Emery cloth
De-solvit 1000FD
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

JOINTING PROCEDURE 7.108

Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.108.1, 7.108.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
2. Open and cut cable's in accordance with General Requirement 6.13	13
3. Prepare neutral/earth wires (plain conc) and neutral and earth wires (split conc) for jointing	7
4. Set cores in joint position	22
5. Make neutral/earth connection	24
6. Apply temporary shrouding	17
7. Make and insulate phase connections	24/25
8. Remove temporary shrouding applied in 6	--
9. Form neutral/earth wires into their final positions	--
10. Abrade and build up oversheaths	26
11. Thoroughly degrease the joint	29
12. Prepare and fit shell, ensuring 15mm clearance	30
13. Mix and pour resin	31


All dimensions in mm



IMPORTANT

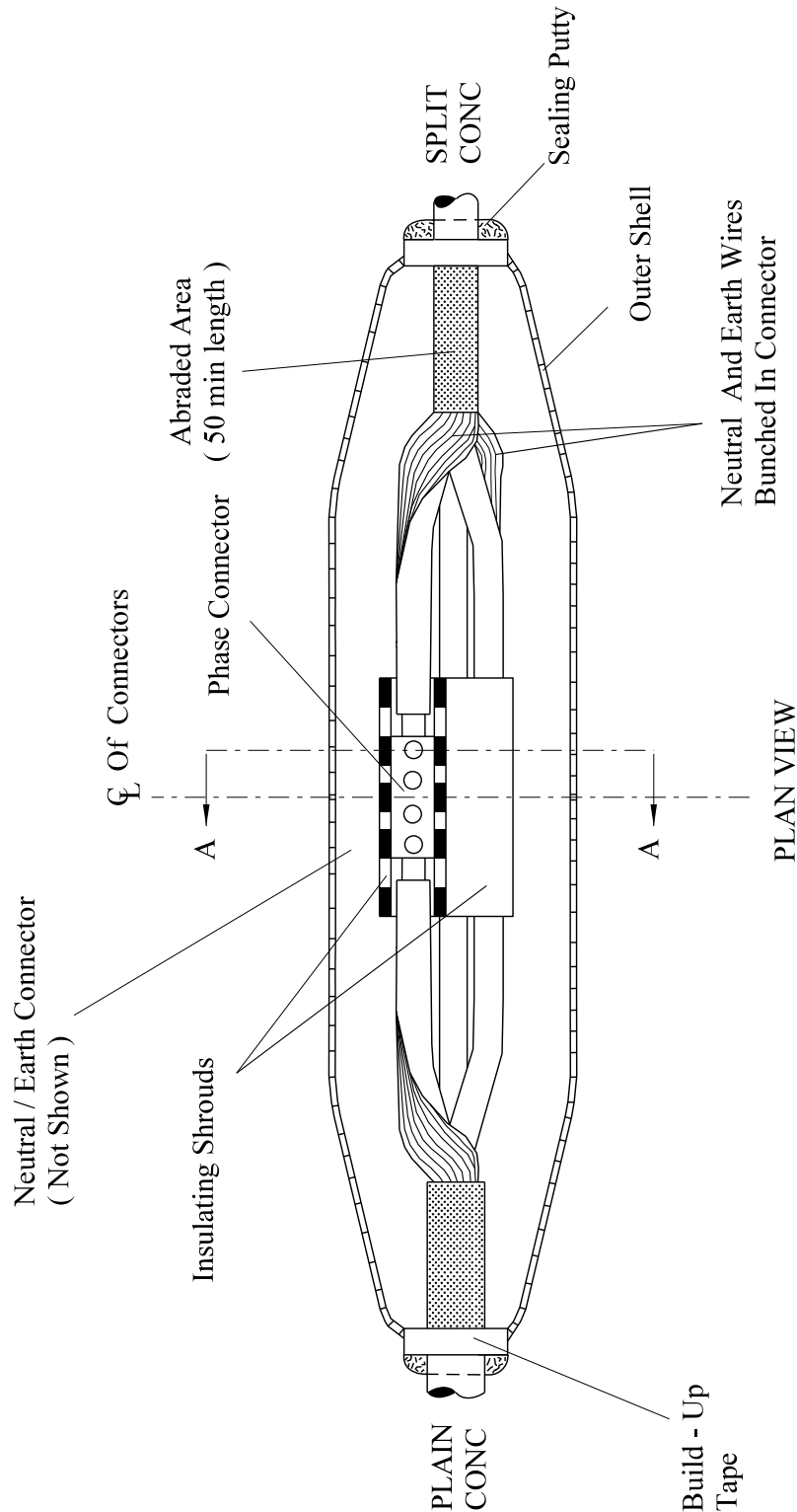
Before Making This Joint
Check With Supervisor That
Application Is Correct

NOTE :- Crossing Of Cores Will Be Undertaken In The Long Side Of The Joint


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SCALE		N.T.S.				

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All dimensions in mm



Section A - A

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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.109

**PVC PLAIN CONCENTRIC - PILC SERVICE CABLE
STRAIGHT JOINT - THREE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.109

MATERIALS LIST

CABLE SIZES - 25/35mm² Hybrid or 16/25mm² Cu Plain Conc up to 25mm² PILC

Item	Quantity
Shell 1048	1
Resin	5 litre
Connector (Phase) BTC-1-45W	3
Connector (neutral/earth) BTC-3-60W	1
Armour/Earth Bond LVSB 18	1
Connector Shrouds (Phases)	3

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
Tinned copper braid (19 x 2)
Heat shrink tubing
Whipping thread
PVC tape
Emery cloth
De-solvit 1000FD
De-solvit 1000
Workhorse dry wipes
Cable solvent wipes

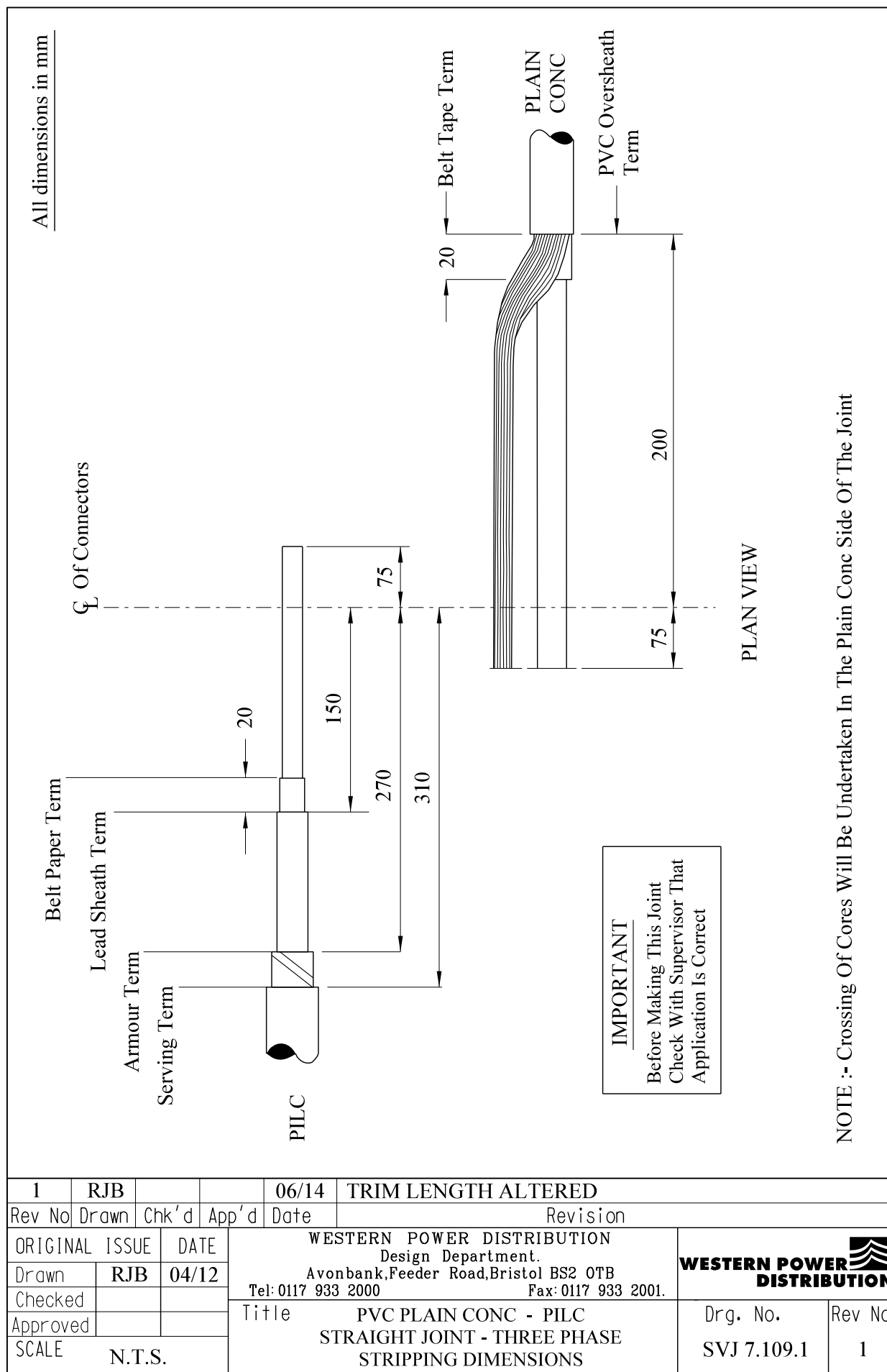
Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

JOINTING PROCEDURE 7.109

Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.109.1, 7.109.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
PILC CABLE - Preparation	
2. Open and cut cable in accordance with General Requirement	11/12
3. Carry out moisture test	15
4. Apply core paper protection	20/21
5. Apply armour bond	18
6. Apply lead sheath bond	19
PLAIN CONC CABLE - Preparation	
7. Open and cut cable in accordance with General Requirement 6.13	13
8. Prepare neutral/earth wires for jointing	7
COMPLETION OF JOINT	
9. Set cores in joint position	22
10. Connect neutral/earth braid to lead sheath bond	24/25
11. Connect neutral/earth wires and neutral/earth braid to neutral core and insulate	22
12. Apply temporary shrouding	15
13. Make and insulate phase connections	24/25
14. Remove temporary shrouding applied in 12.	--
15. Form neutral/earth wires into their final positions	--
16. Abrade and build up oversheaths	26

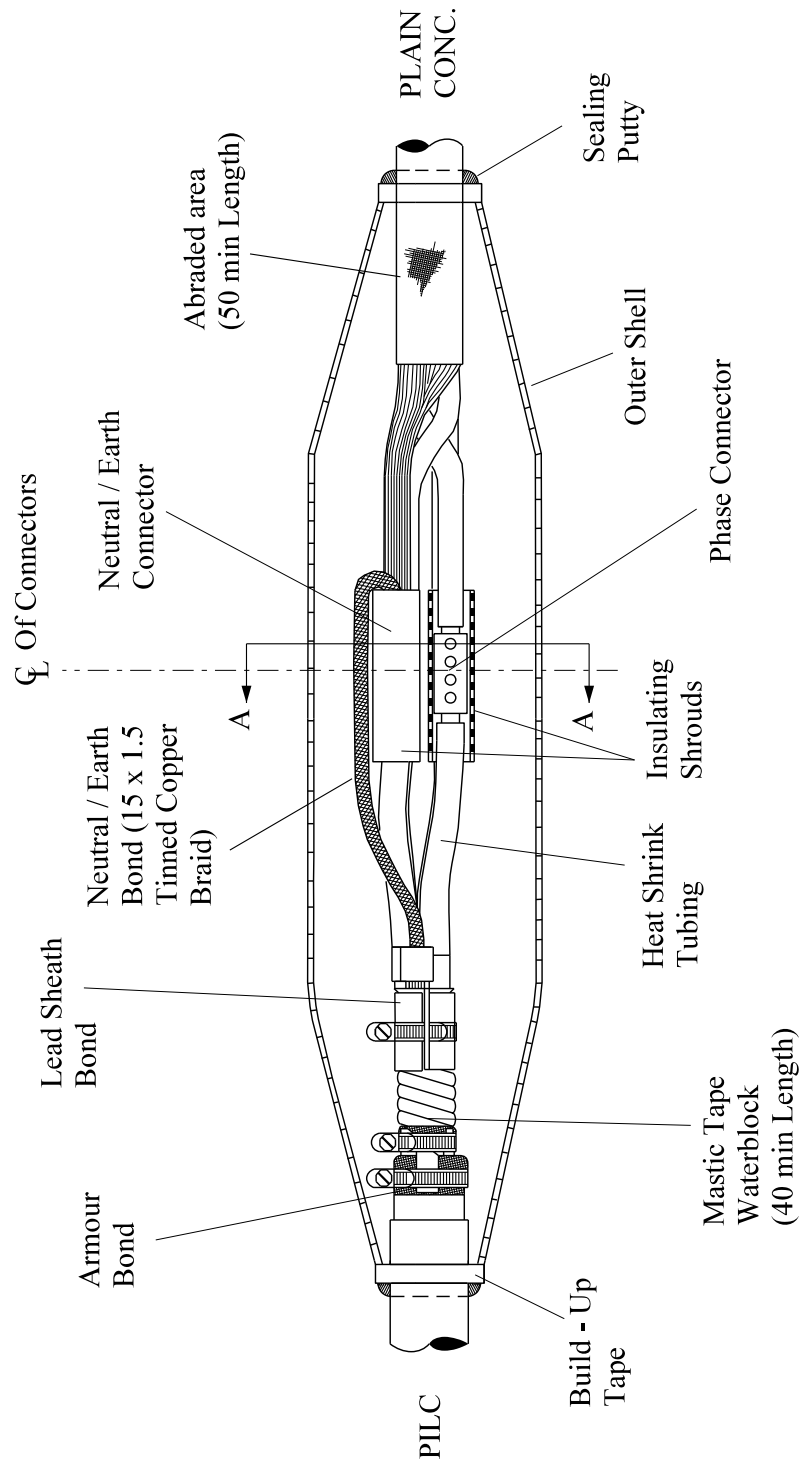
JOINTING PROCEDURE 7.109 - Continued

17.	Thoroughly degrease the joint	29
18	Apply mastic water block to lead sheath	27
19.	Prepare and fit shell, ensuring 15mm clearance	30
20.	Mix and pour resin	31




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All dimensions in mm



PLAN VIEW

Section A-A

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Checked					
Approved					
SCALE		N.T.S.		<div>Title PVC PLAIN CONC - PILC STRAIGHT JOINT - THREE PHASE GENERAL LAYOUT</div> <div>Drg. No. SVJ 7.109.2</div> <div>Rev No</div>	

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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.110

**PVC SPLIT CONCENTRIC - PILC SERVICE CABLE
STRAIGHT JOINT - THREE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.110

MATERIALS LIST

CABLE SIZES - 25mm² Cu Split Conc up to 25mm² PILC

Item	Quantity
Shell 1048	1
Resin	5 litre
Connector BTC-1-45W (Phases/Neutral)	4
Connector Shrouds (Phases)	3
Armour/Earth Bond LVSB 18	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
Heat shrink tubing
Whipping thread
PVC tape
Emery cloth
De-solvit 1000FD
De-solvit 1000
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

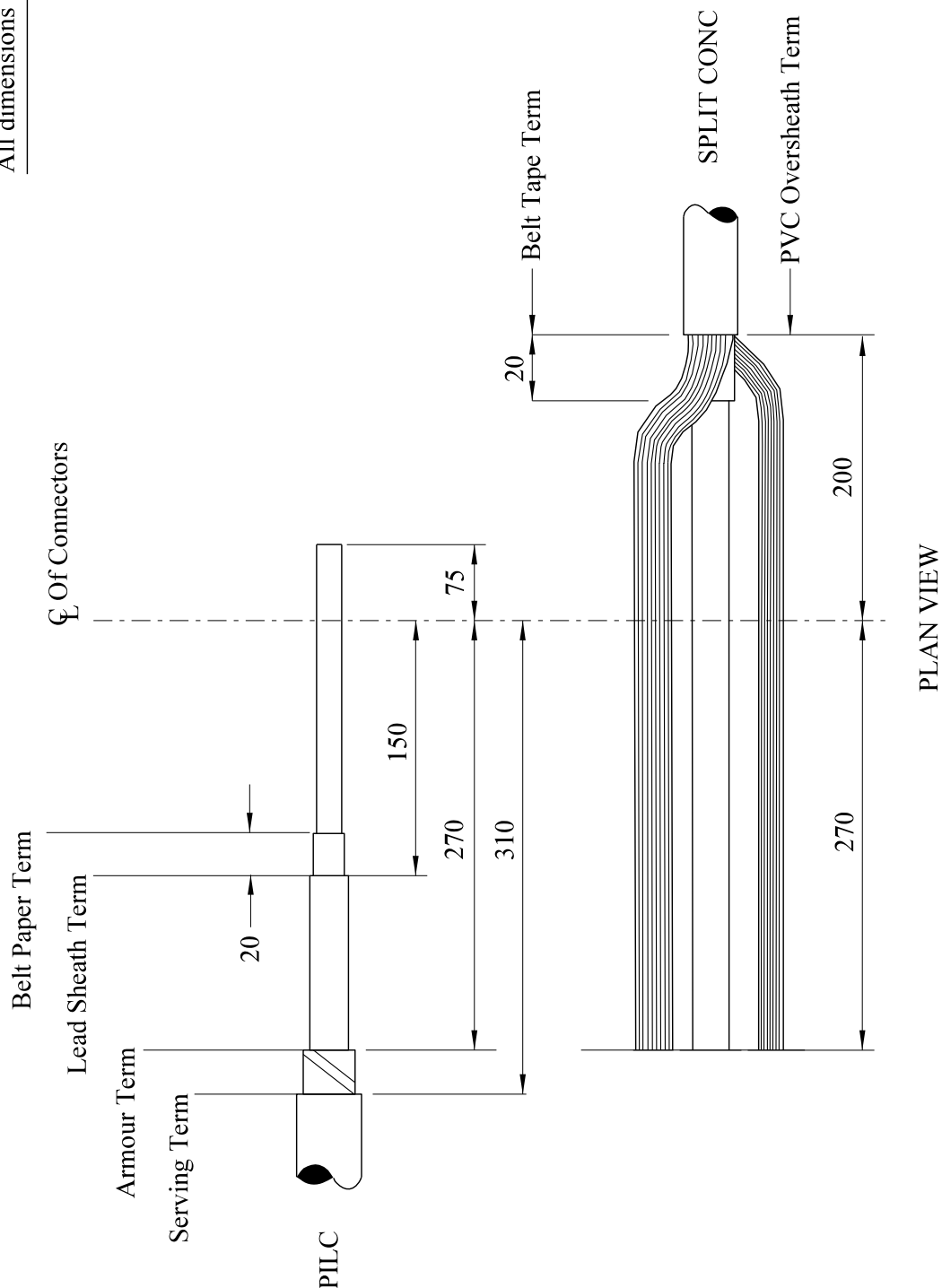
JOINTING PROCEDURE 7.110

Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.110.1, 7.110.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
PILC CABLE - Preparation	
2. Open and cut cable in accordance with General Requirement	11/12
3. Carry out moisture test	15
4. Apply core paper protection	20/21
5. Apply armour bond	18
6. Apply lead sheath bond	19
SPLIT CONC CABLE - Preparation	
7. Open and cut cable in accordance with General Requirement 6.13	13
8. Prepare neutral and earth wires for jointing	7
COMPLETION OF JOINT	
9. Set cores in joint position	22
10. Connect earth wires to lead sheath bond	19
11. Apply temporary shrouding	17
12. Make and insulate neutral connection	24/25
13. Make and insulate phase connections	24/25
14. Remove temporary shrouding applied in 11.	--
15. Form earth wires into their final positions	--
16. Abrade and build up oversheaths	26

JOINTING PROCEDURE 7.110 - Continued

17.	Thoroughly degrease the joint	29
18.	Apply mastic water block to lead sheath	27
19.	Prepare and fit shell, ensuring 15mm clearance	30
20.	Mix and pour resin	31

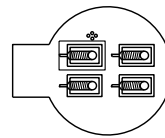
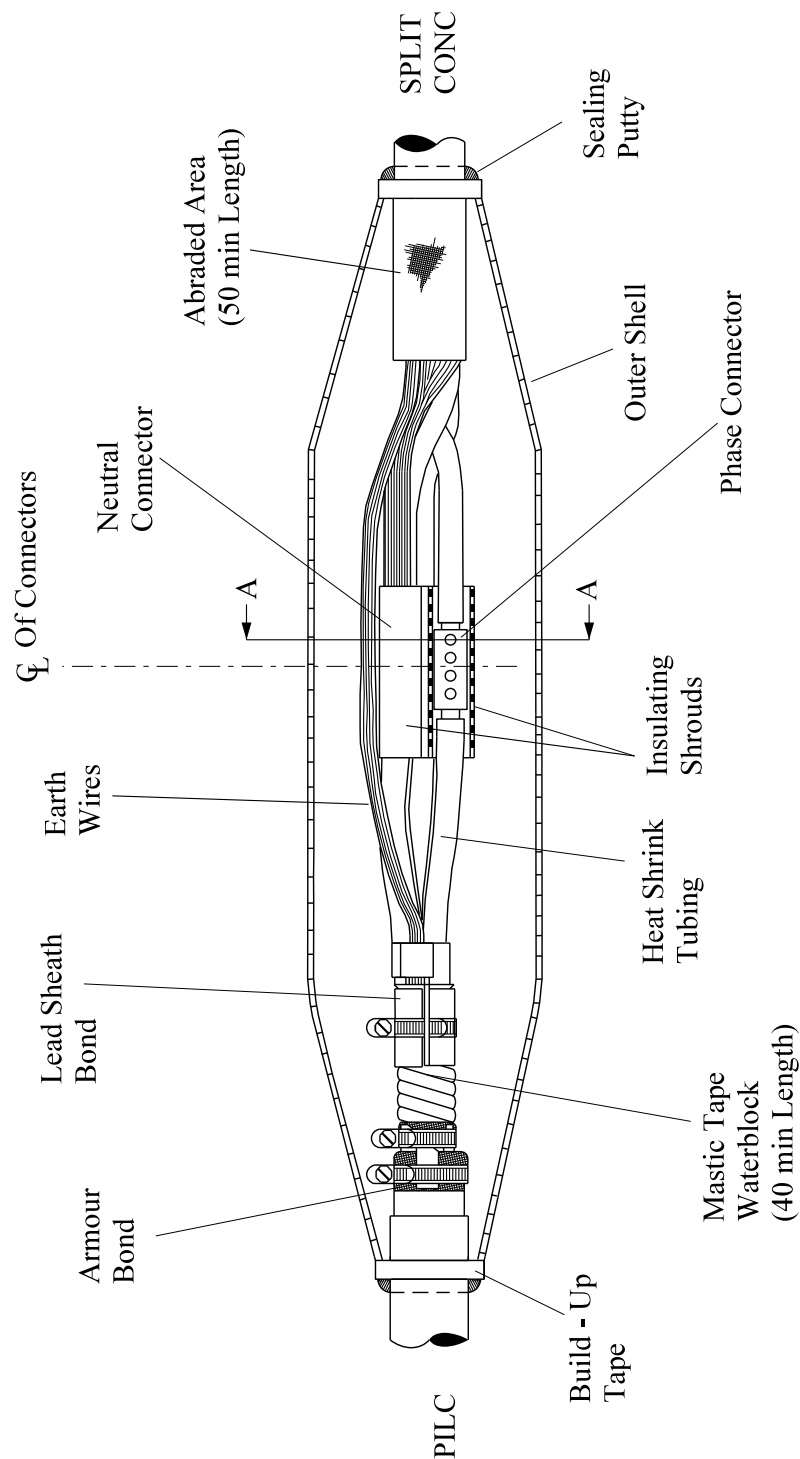
All dimensions in mm



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Drawn	RJB	04/12		Title PVC SPLIT CONC - PILC STRAIGHT JOINT - THREE PHASE STRIPPING DIMENSIONS	
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All dimensions in mm



Section A-A

PLAN VIEW

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Drawn	RJB	04/12			
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Approved					
SCALE		N.T.S.		Title	
				PVC SPLIT CONC - PILC STRAIGHT JOINT - THREE PHASE GENERAL LAYOUT	
				Drg. No. SVJ 7.110.2	
				Rev No	

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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.111

**PVC PLAIN CONCENTRIC – 35mm² CNE WAVECON
SERVICE CABLE STRAIGHT JOINT -THREE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.111

MATERIALS LIST

CABLE SIZES –25/35 Hybrid or 16/ 25mm² Cu Plain Conc to 35mm² Wavecon

Item	Quantity
Shell 1048	1
Resin	5 litre
Connector (Phase) BTC-1-45W	3
Connector Shrouds (Phases)	3
Connector (Neu/Earth) BTC-3-60W	1

ADDITIONAL ITEMS FOR EACH JOINT

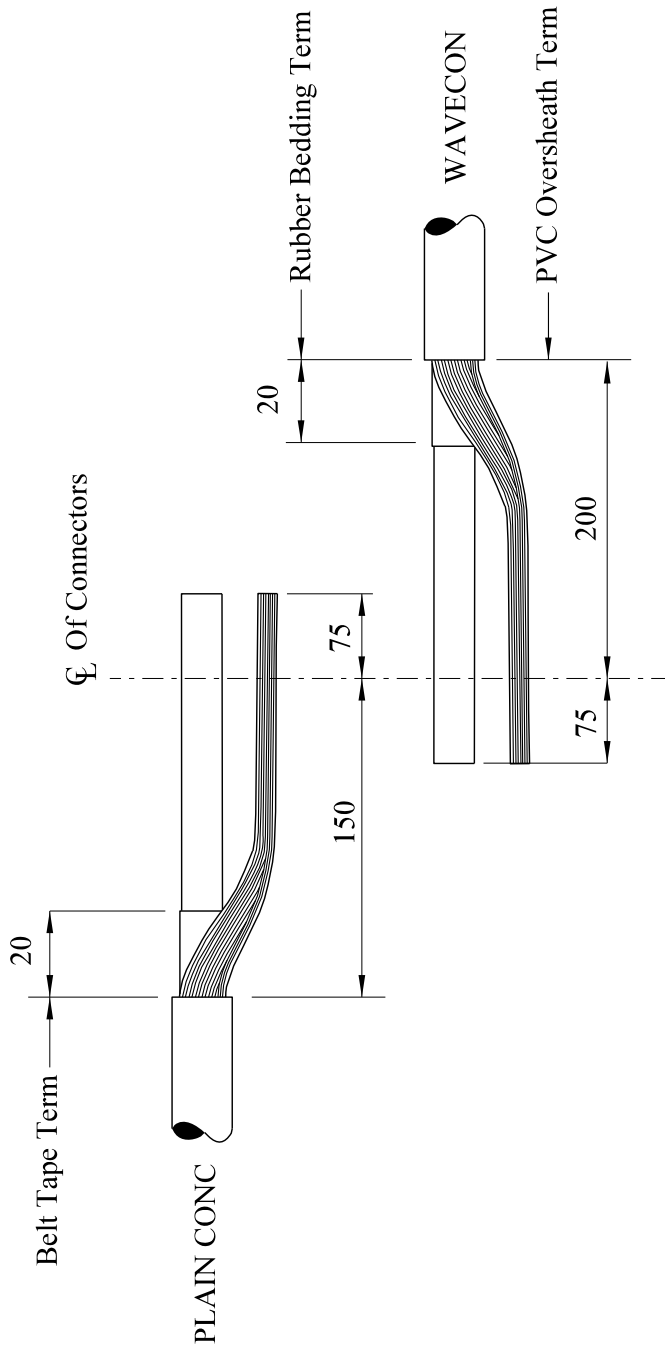
Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
PVC tape
Emery cloth
De-solvit 1000FD
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

JOINTING PROCEDURE 7.111


Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.111.1, 7.111.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
WAVECON CABLE - Preparation	
2. Open and cut cable in accordance with General Requirement 6.14	14
3. Prepare neutral/earth wires for jointing	7
PLAIN CONC CABLE - Preparation	
4. Open and cut cable in accordance with General Requirement	13
5. Prepare neutral and earth wires for jointing.	7
COMPLETION OF JOINT	
6. Set cores in joint position	22
7. Make neutral/earth connection	24
8. Apply temporary shrouding	17
9. Make and insulate phase connections	24/25
10. Remove temporary shrouding applied in 8	--
11. Form neutral/earth wires into their final positions	--
12. Abrade and build up oversheaths	26
13. Thoroughly degrease the joint	29
14. Prepare and fit shell, ensuring 15mm clearance	30
15. Mix and pour resin	31

All dimensions in mm



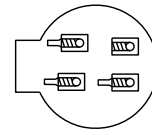
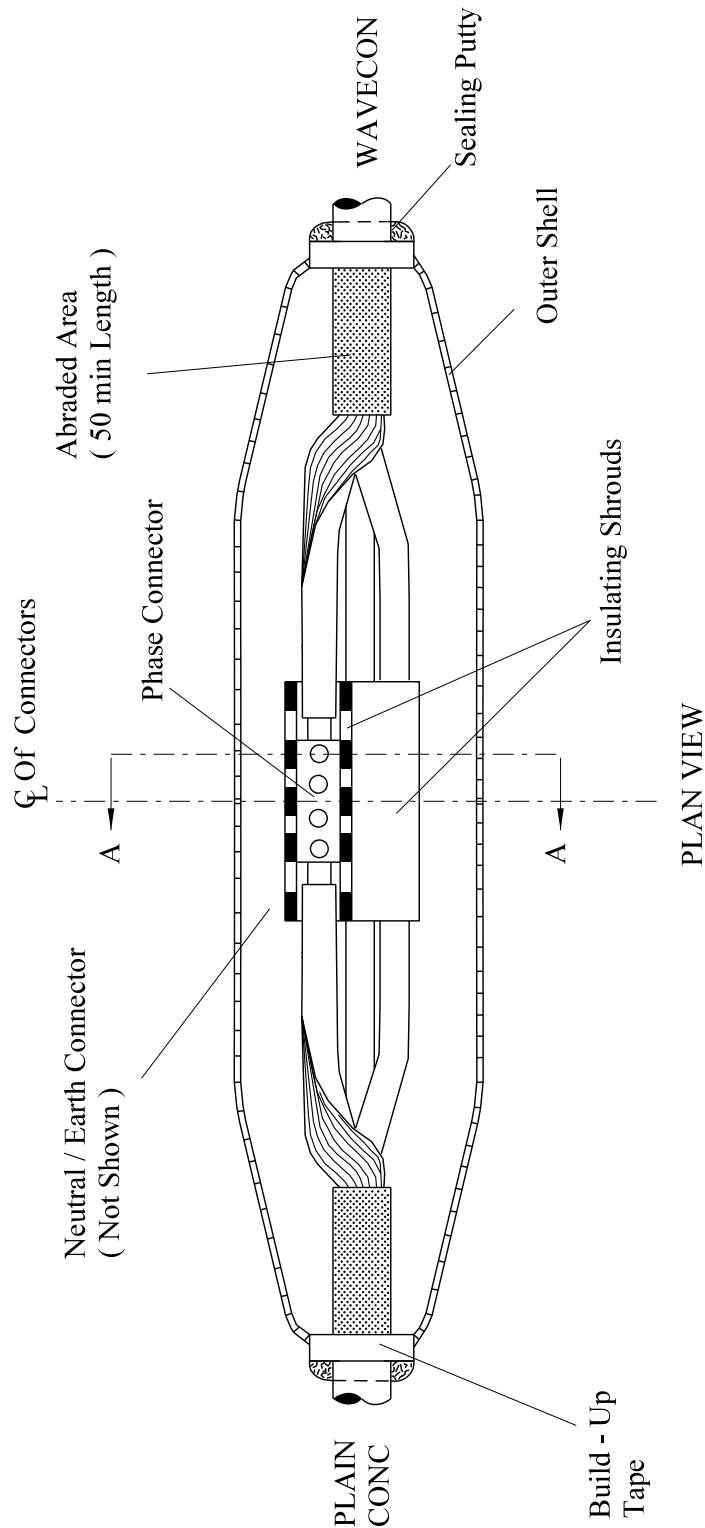
PLAN VIEW

NOTE :- Crossing Of Cores Will Be Undertaken In The Long Side Of The Joint


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Drawn	RJB	04/12					
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Approved							
SCALE		N.T.S.		Title		Drg. No.	Rev No
				PVC PLAIN CONC - 35mm ² CNE WAVECON STRAIGHT JOINT - THREE PHASE STRIPPING DIMENSIONS		SVJ 7.111.1	

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All dimensions in mm



Section A - A

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Checked				Title PVC PLAIN CONC - 35mm ² CNE WAVECON STRAIGHT JOINT - THREE PHASE GENERAL LAYOUT	
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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.112

**PVC SPLIT CONCENTRIC to 35mm² CNE WAVECON
SERVICE CABLE STRAIGHT JOINT -THREE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.112

MATERIALS LIST

CABLE SIZES – 25mm² Cu Split Conc to 35mm² Wavecon

Item	Quantity
Shell 1048	1
Resin	5 litre
Connector (Neu/Earth) BTC-3-60W	1
Connector (Phases) BTC-1-45W	3
Connector Shrouds (Phases)	3

ADDITIONAL ITEMS FOR EACH JOINT

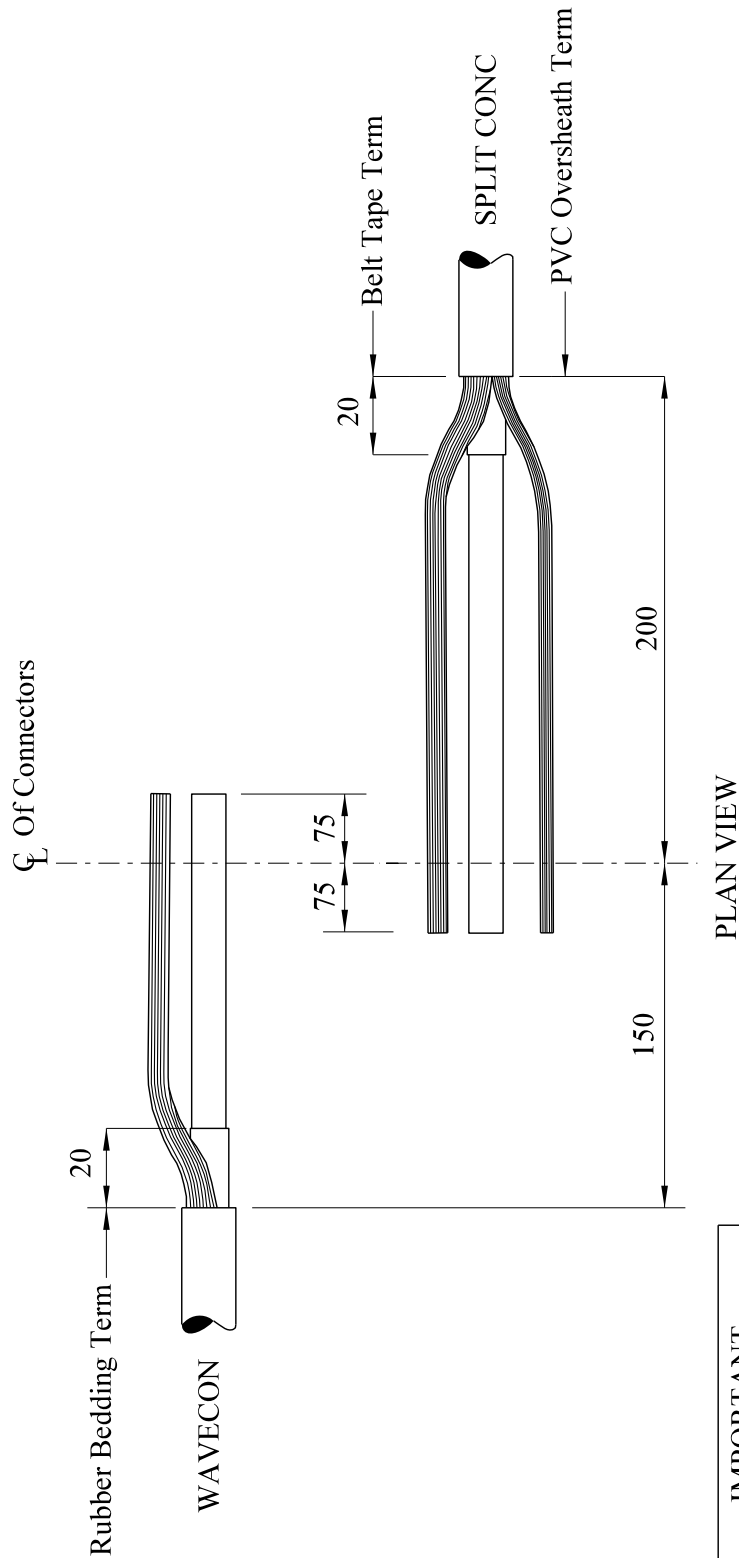
Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
PVC tape
Emery cloth
De-solvit 1000FD
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

JOINTING PROCEDURE 7.112

Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.112.1, 7.112.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
WAVECON CABLE - Preparation	
2. Open and cut cable in accordance with General Requirement 6.14	14
3. Prepare neutral/earth wires for jointing	7
SPLIT CONC CABLE - Preparation	
4. Open and cut cable in accordance with General Requirement	13
5. Prepare neutral and earth wires for jointing.	7
COMPLETION OF JOINT	
6. Set cores in joint position	22
7. Make neutral/earth connection	24
8. Apply temporary shrouding	17
9. Make and insulate phase connections	24/25
10. Remove temporary shrouding applied in 8	--
11. Form neutral/earth wires into their final positions	--
12. Abrade and build up oversheaths	26
13. Thoroughly degrease the joint	29
14. Prepare and fit shell, ensuring 15mm clearance	30
15. Mix and pour resin	31


All dimensions in mm



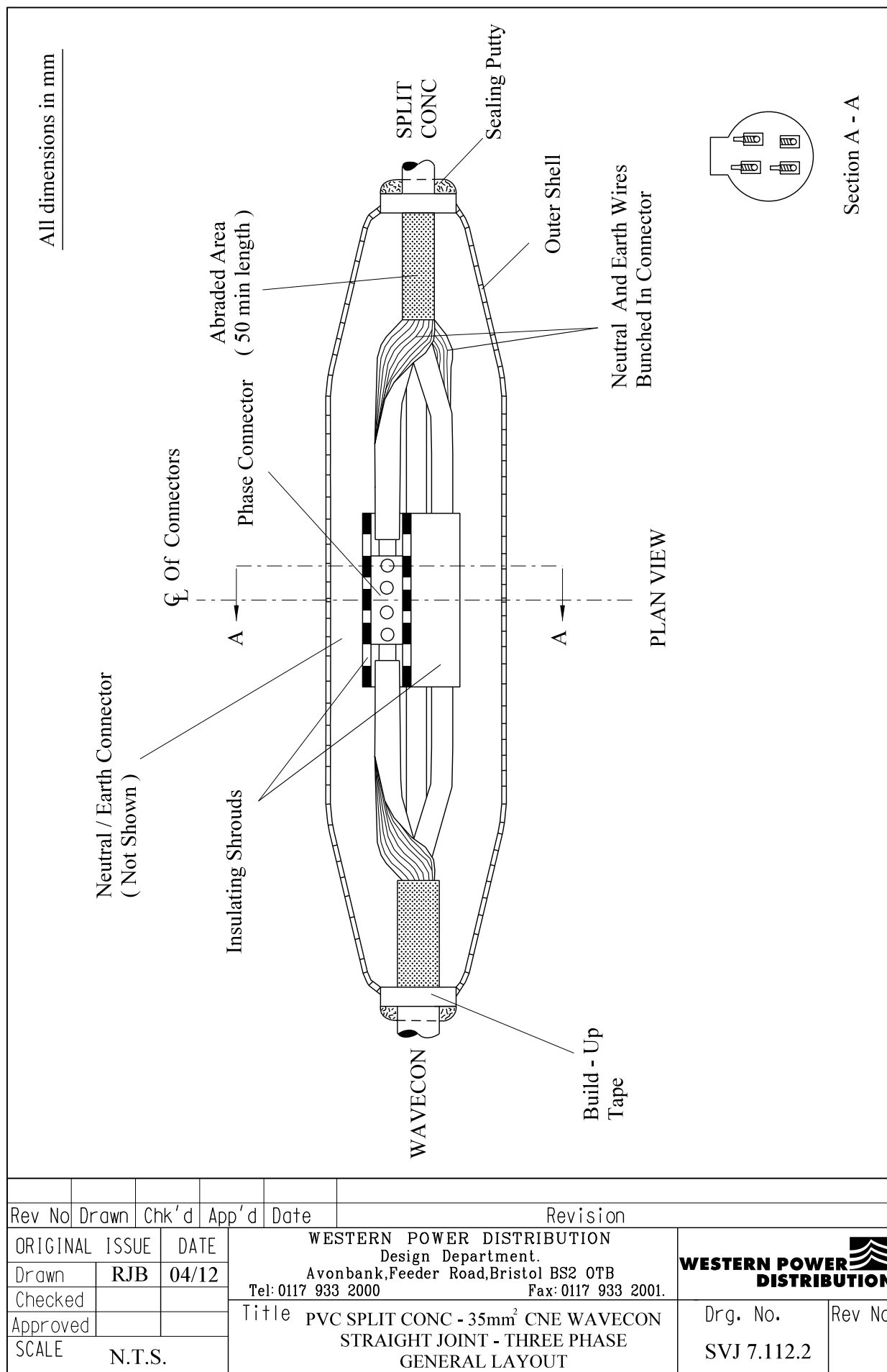
IMPORTANT

Before Making This Joint
Check With Supervisor That
Application Is Correct

NOTE :- Crossing Of Cores Will Be Undertaken In The Long Side Of The Joint

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Drawn	RJB	04/12	Title				
Checked			PVC SPLIT CONC - 35mm ² CNE WAVECON STRAIGHT JOINT - THREE PHASE STRIPPING DIMENSIONS			Drg. No. SVJ 7.112.1	Rev No
Approved							
SCALE		N.T.S.					

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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.113

**35mm² CNE WAVECON – 35mm² CNE WAVECON
SERVICE CABLE STRAIGHT JOINT -THREE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.113

MATERIALS LIST

CABLE SIZES – 35mm² Wavecon to 35mm² Wavecon

Item	Quantity
Shell 1048	1
Resin	5 litre
Connector (Neu/Earth) BTC-3-60W	1
Connector (Phases) BTC-1-45W	3
Connector Shrouds (Phases)	3

ADDITIONAL ITEMS FOR EACH JOINT

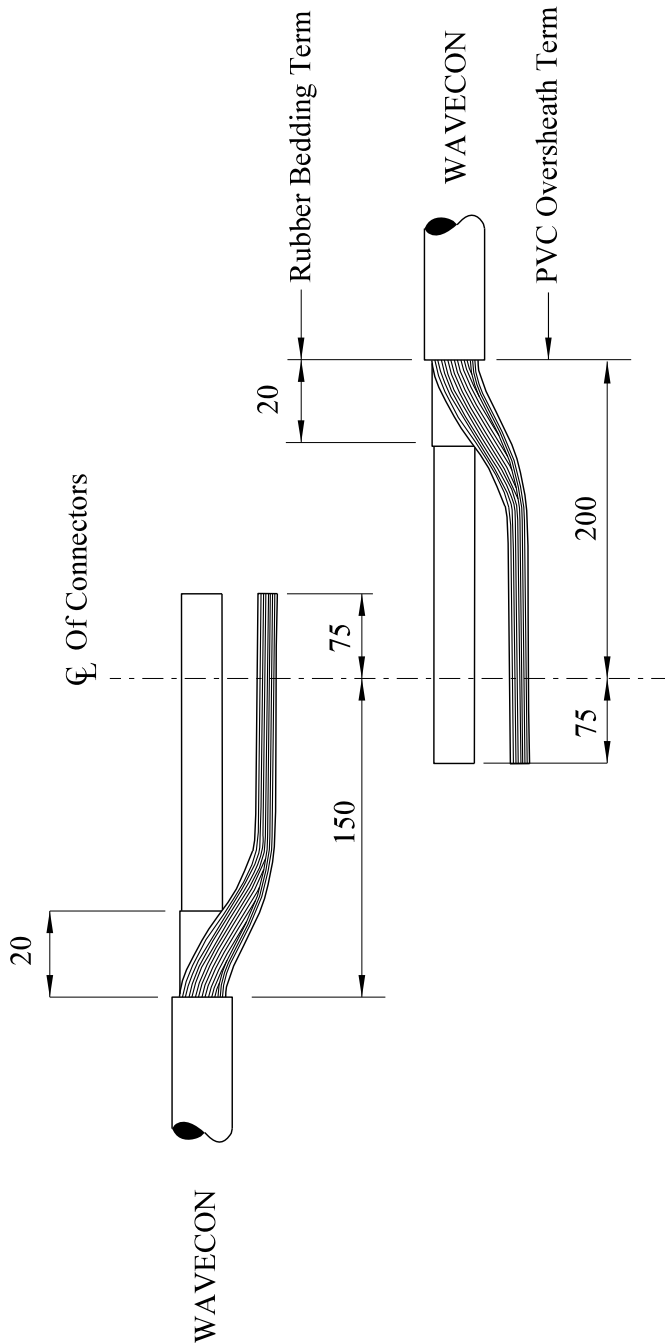
Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
PVC tape
Emery cloth
De-solvit 1000FD
Workhorse dry wipes
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

JOINTING PROCEDURE 7.113

Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.113.1, 7.113.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
WAVECON CABLE - Preparation	
2. Open and cut cable in accordance with General Requirement 6.14	14
3. Prepare neutral/earth wires for jointing	7
COMPLETION OF JOINT	
4. Set cores in joint position	22
5. Make neutral/earth connection	24
6. Apply temporary shrouding	17
7. Make and insulate phase connections	24/25
8. Remove temporary shrouding applied in 6	--
9. Form neutral/earth wires into their final positions	--
10. Abrade and build up oversheaths	26
11. Thoroughly degrease the joint	29
12. Prepare and fit shell, ensuring 15mm clearance	30
13. Mix and pour resin	31

All dimensions in mm

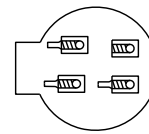
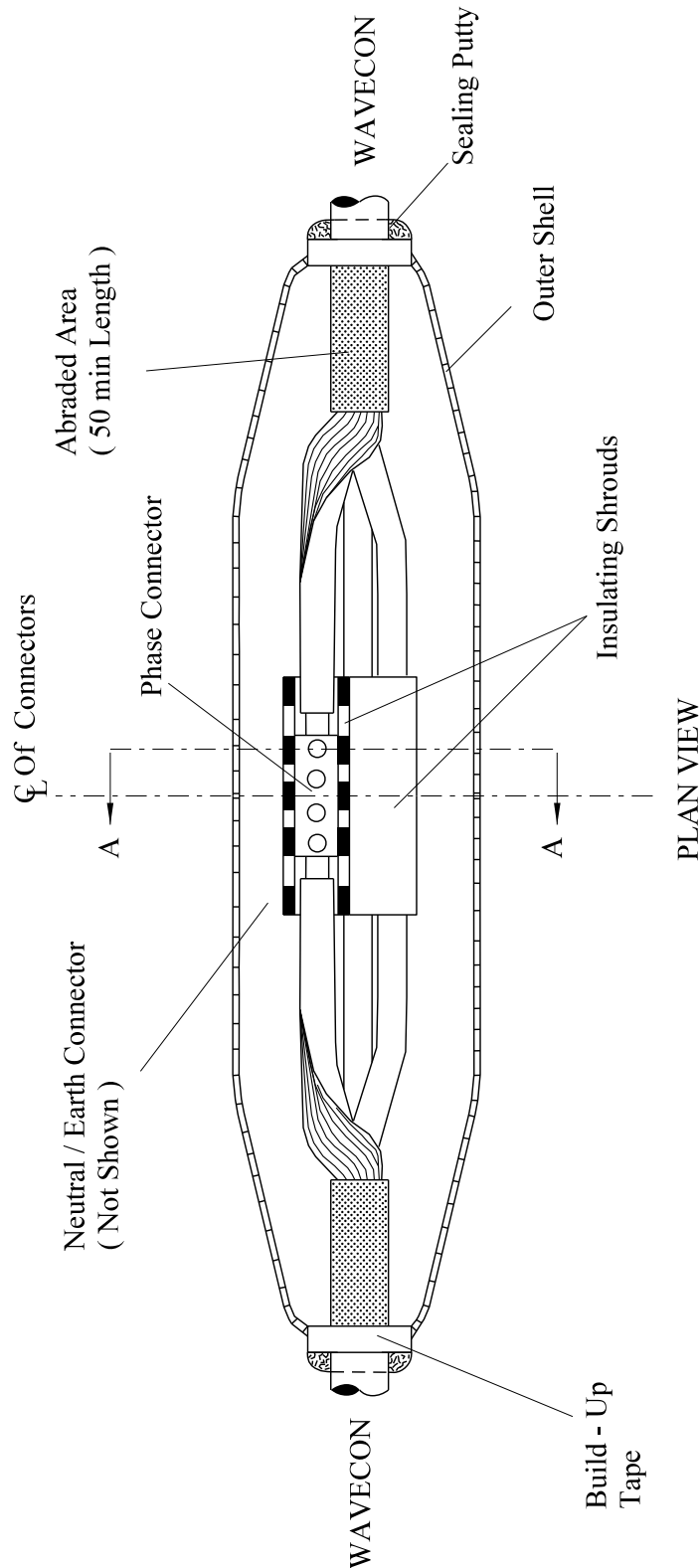


NOTE :- Crossing Of Cores Will Be Undertaken In The Long Side Of The Joint


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Drawn	RJB	04/12				<div>WESTERN POWER DISTRIBUTION</div> <div><div>Drg. No.</div><div>SVJ 7.113.1</div></div> <div>Rev No</div>
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All dimensions in mm



Section A - A

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Drawn	RJB	04/12			
Checked				<div>Title 35mm² CNE WAVECON - 35mm² CNE WAVECON STRAIGHT JOINT - THREE PHASE GENERAL LAYOUT</div> <div>Drg. No. SVJ 7.113.2</div> <div>Rev No</div>	
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**ST: CAØV/2 PROCEDURES FOR MAKING LV SERVICE CABLE
STRAIGHT JOINTS**

JOINTING PROCEDURE 7.114

**35mm² CNE WAVECON – PILC SERVICE
CABLE STRAIGHT JOINT - THREE PHASE**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CAØC Section 6
of the LV Service Cable Jointing Manual**

JOINTING PROCEDURE 7.114

MATERIALS LIST

CABLE SIZES – 35mm² Wavecon to up to 16/25mm² PILC

Item	Quantity
Shell 1048	1
Resin	5 litre
Connector (Neu/Earth) BTC-3-60W	1
Connector (Phase) BTC-1-45W	3
Connector Shrouds (Phases)	3
Armour/Earth Bond LVSB 18	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
Black cotton tape
Sealing putty
Cable ties
Shell support
Tinned copper braid (19 x 2)
Heat shrink tubing
Whipping thread
Cable solvent wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 of the LV Service Cable Jointing Manual.

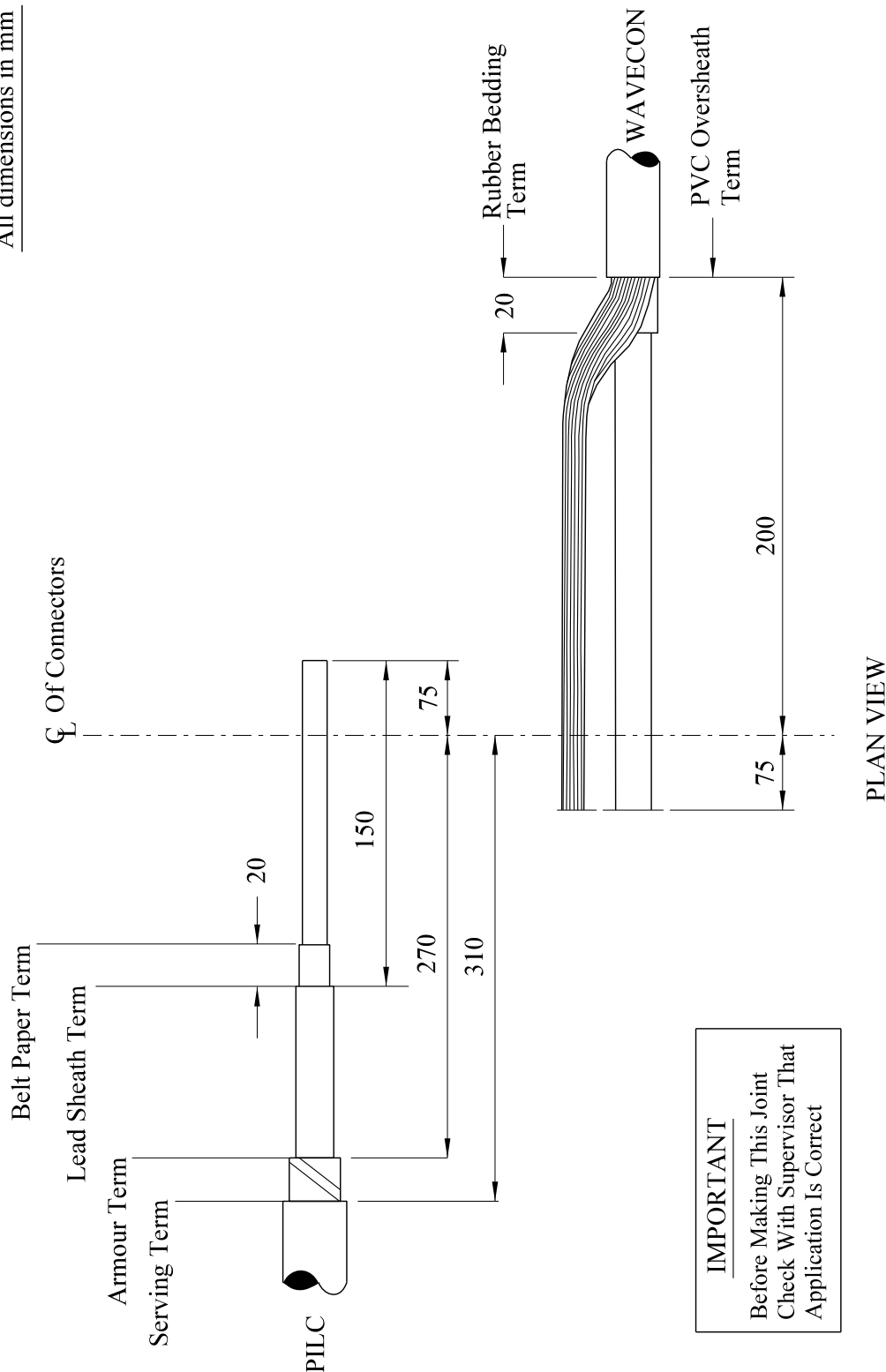
JOINTING PROCEDURE 7.114

Actions	General Requirements (ST: CAØC)
Refer to Drawings SVJ 7.114.1, 7.114.2 whilst undertaking this Jointing Procedure	
1. Set up and mark cables	4
PILC CABLE - Preparation	
2. Open and cut cable in accordance with General Requirement	12
3. Carry out moisture test	15
4. Apply core paper protection	20/21
5. Apply armour bond	18
6. Apply lead sheath bond	19
WAVECON CABLE - Preparation	
7. Open and cut cable in accordance with General Requirement 6.14	14
8. Prepare neutral/earth wires for jointing	7
COMPLETION OF JOINT	
9. Set cores in joint position	22
10. Connect neutral/earth braid to lead sheath bond	19
11. Connect neutral/earth wires and neutral/earth braid to neutral core and insulate	24
12. Apply temporary shrouding	17
13. Make and insulate neutral connection	24/25
14. Make and insulate phase connections	24/25
15. Remove temporary shrouding applied in 12.	--

JOINTING PROCEDURE 7.114 - Continued

16.	Form earth wires into their final positions	--
17.	Abrade and build up oversheaths	26
18.	Thoroughly degrease the joint	29
19.	Apply mastic water block to lead sheath	27
20.	Prepare and fit shell, ensuring 15mm clearance	30
21.	Mix and pour resin	31

All dimensions in mm

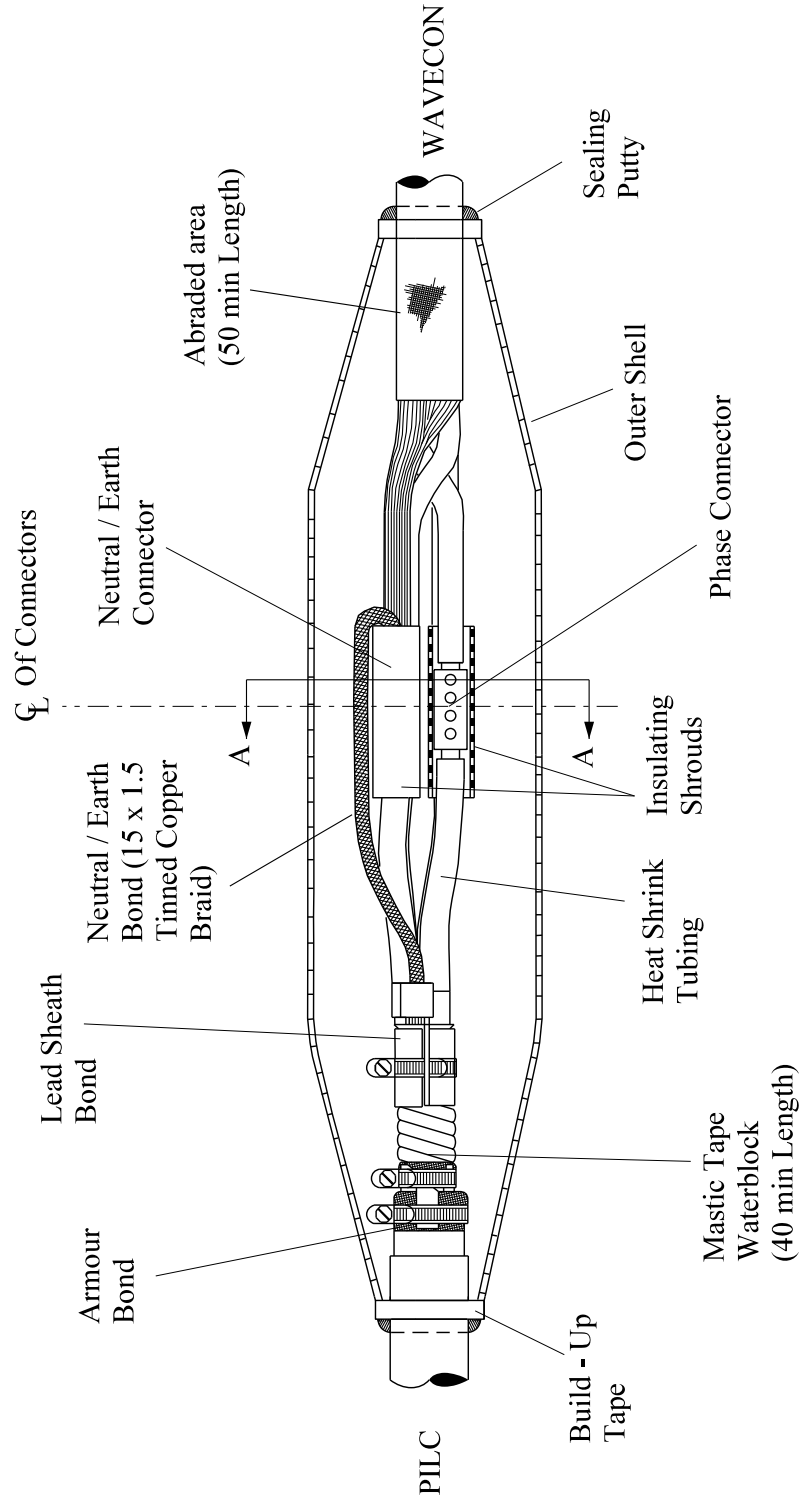


IMPORTANT
Before Making This Joint
Check With Supervisor That
Application Is Correct

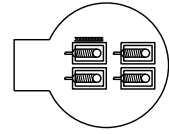
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All dimensions in mm



PLAN VIEW



Section A-A

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					 Drg. No. SVJ 7.114.2 Rev No

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APPENDIX A

SUPERSEDED DOCUMENTATION

This Standard Technique supersedes ST:CAØV/1 dated May 2012 which should now be withdrawn.

APPENDIX B

ASSOCIATED DOCUMENTATION

ST:CAØA, ST:CAØB, ST:CAØC, ST:CAØM, ST:CAØN, ST:CAØS, ST:CAØT, ST:CAØU, ST:CAØW, ST:CAØZ.

APPENDIX C

IMPACT ON COMPANY POLICY

None, as this document has just been updated to incorporate all the latest SHOPS numbers and other subtle minor changes.

APPENDIX D

IMPLEMENTATION OF POLICY

This Standard Technique shall be communicated to all relevant WPD engineers and site staff at the next Team Briefing by the Team Manager.

APPENDIX E

KEY WORDS

Straight Joints, Service Cable Straight Joints, Transition Straight Joints.