

Company Directive

STANDARD TECHNIQUE : CA1I/4

Relating to the Procedures for Making Low Voltage Mains Cable Service Branch Joints

This Standard Technique document contains the various approved LV mains cable service branch joints, which shall be implemented in conjunction with the appropriate General Requirements contained in ST: CA1C/4.

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: **Peter White**

Implementation Date: **June 2012**

Approved by:



Policy Manager

Date:

1 June 2012

ST: CA1I/4 PROCEDURES FOR MAKING LV MAINS CABLE SERVICE BRANCH JOINTS

INTRODUCTION

This Standard Technique document contains the various approved LV mains cable service branch joints, which shall be implemented in conjunction with the appropriate General Requirements contained in ST: CA1C/4, including: -

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

Resin encapsulated joints are not to be broken down.

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

CONTENTS

- 7.601 Three Core Wavecon
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- 7.604 Consac
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- 7.606 PILC – CNE

Note: - Any reference to hybrid equally applies to plain concentric.

**ST: CA1I/4 PROCEDURES FOR MAKING LV MAINS CABLE
SERVICE BRANCH JOINTS**

JOINTING PROCEDURE 7.601

**THREE CORE WAVECON MAINS CABLE
SERVICE BRANCH JOINT**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CA1C/4 Section 6 Pt 1
of the LV Jointing Manual**

JOINTING PROCEDURE 7.601

JOINT KIT REFERENCES

CABLE SIZE	JOINT KIT REFERENCES (HYBRID SERVICES)							
	1 x 1 ph	2 x 1 ph	3 x 1 ph	4 x 1 ph	1 x 3 ph	2 x 3 ph	1 x 1 ph + 1 x 3 ph	2 x 1 ph + 1 x 3 ph
95W	MSB 1	MSB 4	MSB 7	MSB 10	MSB 13	MSB 16	MSB 19	MSB 22
185W	MSB 2	MSB 5	MSB 8	MSB 11	MSB 14	MSB 17	MSB 20	MSB 23
300W	MSB 3	MSB 6	MSB 9	MSB 12	MSB 15	MSB 18	MSB 21	MSB 24

Note: - 70mm² and 120mm² Wavecon used in South Wales will be sized as 95mm² (70) and 185mm² (120)

Key: - 95W = 95mm² Wavecon
185W = 185mm² Wavecon
300W = 300mm² Wavecon

JOINTING PROCEDURE 7.601

JOINT KIT MATERIALS

KIT REF.	SHELL		RESIN	CONNECTORS			EARTH TAIL
	1583	1582	5 litre	MSIP 185	MSIP 300	BCNE 3	LVCU 1700/5
MSB1	1		2	1		2	1
MSB2	1		2	1		2	1
MSB3		1	3		1	2	1
MSB4	1		2	1		2	1
MSB5	1		2	1		2	1
MSB6		1	3		1	2	1
MSB7		1	3	2		2	1
MSB8		1	3	2		2	1
MSB9		1	3		2	2	1
MSB10		1	3	2		2	1
MSB11		1	3	2		2	1
MSB12		1	3		2	2	1
MSB13		1	3	3		2	1
MSB14		1	3	3		2	1
MSB15		1	3		3	2	1
MSB16		1	3	3		2	1
MSB17		1	3	3		2	1
MSB18		1	3		3	2	1
MSB19		1	3	3		2	1
MSB20		1	3	3		2	1
MSB21		1	3		3	2	1
MSB22		1	3	3		2	1
MSB23		1	3	3		2	1
MSB24		1	3		3	2	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
 Black cotton tape
 Sealing putty
 Cable ties
 Shell support
 Tinned copper braid (15 x 1.5)
 16 swg tinned copper wire
 PVC tape
 Emery cloth
 De-solvit 1000FD
 Workhorse dry wipes

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

JOINTING PROCEDURE 7.601

Actions

General Requirements (ST: CA1C/4)

Refer to Drawing LVJ **7.601.1**, **7.601.2** whilst undertaking this Jointing Procedure

1. Set up and mark the cables

SERVICE CABLE(s) - Preparation 4

2. Open and cut cable(s) 17
3. Prepare neutral/earth wires for jointing 8

WAVECON CABLE - Preparation

4. Remove PVC oversheath
5. Prepare neutral/earth wires for jointing 8
6. Remove rubber bedding 9

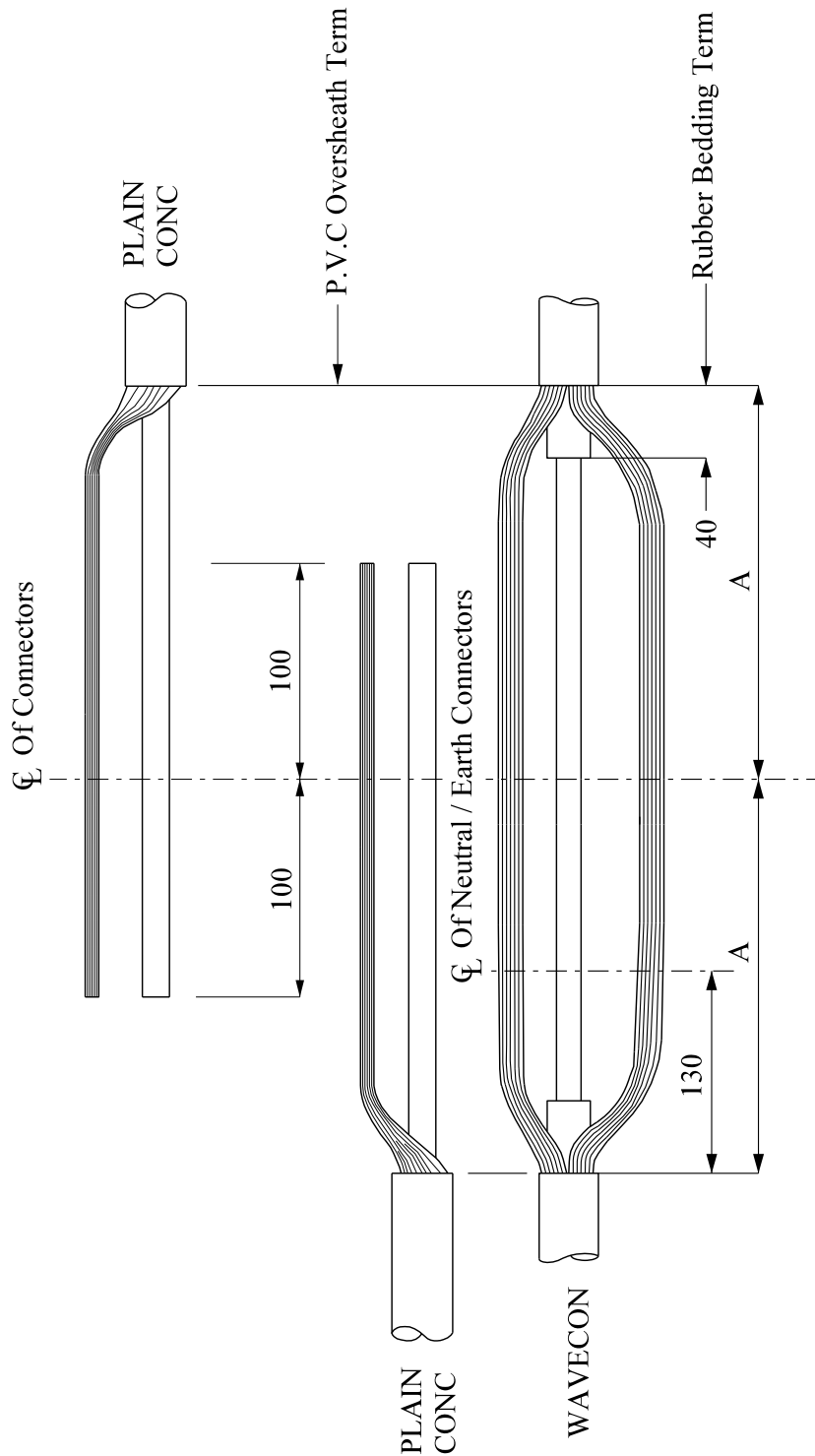
COMPLETION OF JOINT

7. Set cores in joint position 27
8. Make neutral/earth connection(s) including equalisation bond and copper earth tail 29
9. Apply temporary shrouding 21
10. Make phase connection(s) 29
11. Remove temporary shrouding applied in 9 --
12. Form neutral/earth wires into their final positions --
13. Abrade and build up oversheaths 32
14. Thoroughly degrease the joint 35
15. Apply mastic water block to copper earth tail 33

JOINTING PROCEDURE 7.601 - Continued

Actions	General Requirements (ST: CA1C/4)
16. Remove temporary binders	--
17. Prepare and fit shell, ensuring 15mm clearance	36
18. Mix and pour resin	37

All dimensions in mm

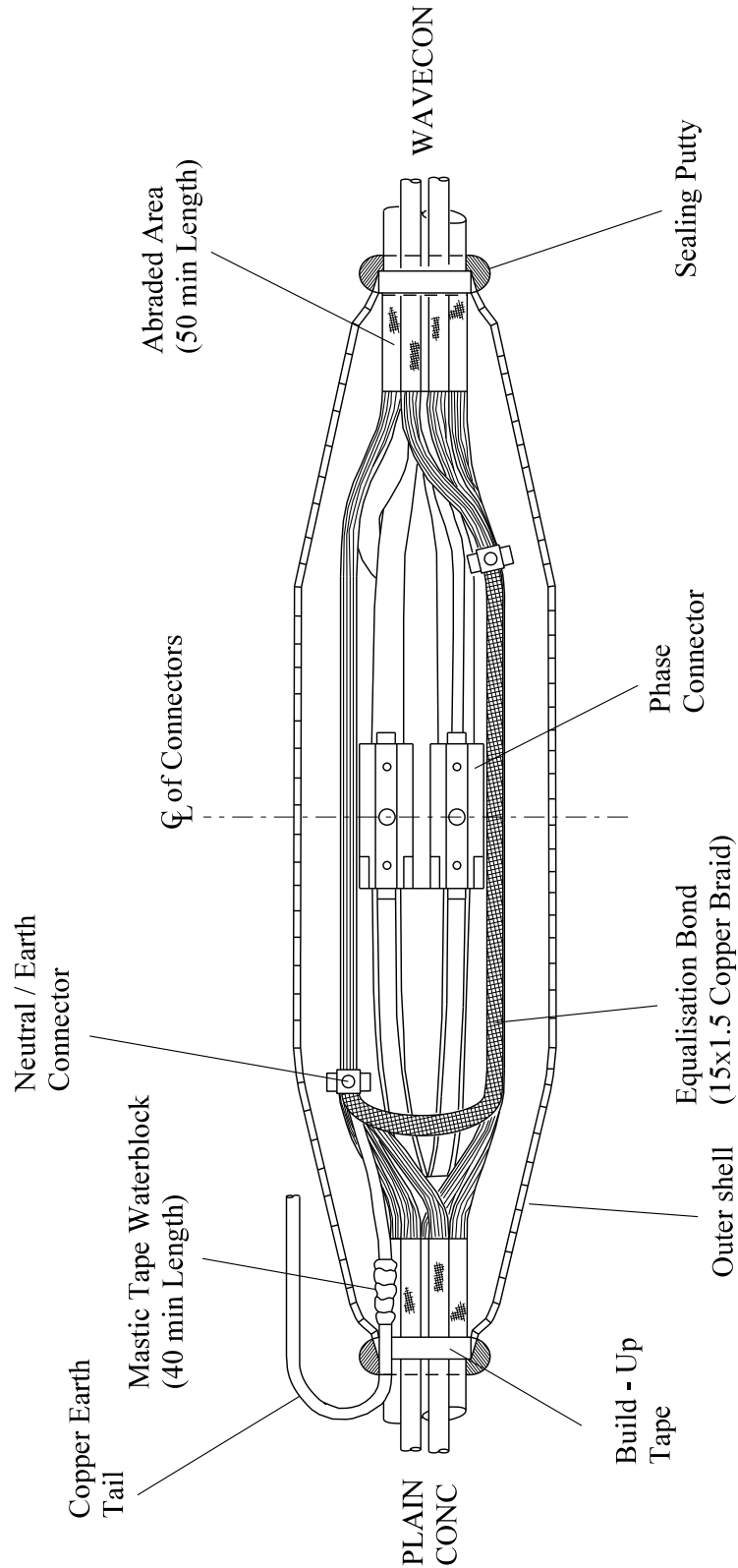


WAVECON	No: of Services	Dimension 'A'
70 - 185mm	1 or 2 single phase	175
70 - 185mm	3 or 4 single phase	200
300mm	Any three phase	
	Any service	

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All dimensions in mm



PLAN VIEW

NOTE:- Ensure Separation Between All Cables And The Copper Earth Tail.

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**ST: CA1I/4 PROCEDURES FOR MAKING LV MAINS CABLE
SERVICE BRANCH JOINTS**

JOINTING PROCEDURE 7.602

**FOUR CORE WAVECON MAINS CABLE
SERVICE BRANCH JOINT**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CA1C/4 Section 6 Pt 1
of the LV Jointing Manual**

JOINTING PROCEDURE 7.602

JOINT KIT REFERENCES

CABLE SIZE	JOINT KIT (SPLIT CONC SERVICES)				1 x 1 ph + 1 x 3 ph
	1 x 1ph	2 x 1 ph	1 x 3ph	2 x 3 ph	
95W	MSB 25	MSB 28	MSB 31	MSB 34	MSB 37
185W	MSB 26	MSB 29	MSB 32	MSB 35	MSB 38
300W	MSB 37	MSB 30	MSB 33	MSB 36	MSB 39

Key: - 95W = 95mm² Wavecon
185W = 185mm² Wavecon
300W = 300mm² Wavecon

JOINTING PROCEDURE 7.602

JOINT KIT MATERIALS

KIT REF.	SHELL		RESIN		CONNECTORS			EARTH TAIL
	1581	1580	5 litre	6.5 litre	MSIP 185	MSIP 300	BCNE 3	LVCU 1700/5
MSB25	1		2	1	2		2	1
MSB26		1		3	2		2	1
MSB27		1		3		2	2	1
MSB28	1		2	1	2		2	1
MSB29		1		3	2		2	1
MSB30		1		3		2	2	1
MSB31	1		2	1	4		2	1
MSB32		1		3	4		2	1
MSB33		1		3		4	2	1
MSB34	1		2	1	4		2	1
MSB35		1		3	4		2	1
MSB36		1		3		4	2	1
MSB37	1		2	1	4		2	1
MSB38		1		3	4		2	1
MSB39		1		3		4	2	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
 Black cotton tape
 Sealing putty
 Cable ties
 Shell support
 Tinned copper braid (15 x 1.5)
 16 swg tinned copper wire
 Emery cloth
 De-solvit 1000FD
 Workhorse dry wipes

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

JOINTING PROCEDURE 7.602

Actions	General Requirement (ST: CA1C/4)
---------	-------------------------------------

Refer to Drawing **LVJ 7.602.1, 7.602.2** whilst undertaking this Jointing Procedure

- | | | |
|----|----------------------------|---|
| 1. | Set up and mark the cables | 4 |
|----|----------------------------|---|

SERVICE CABLE(s) - Preparation

- | | | |
|----|------------------------------------------|----|
| 2. | Open and cut cable | 17 |
| 3. | Prepare neutral/earth wires for jointing | 8 |

WAVECON CABLE - Preparation

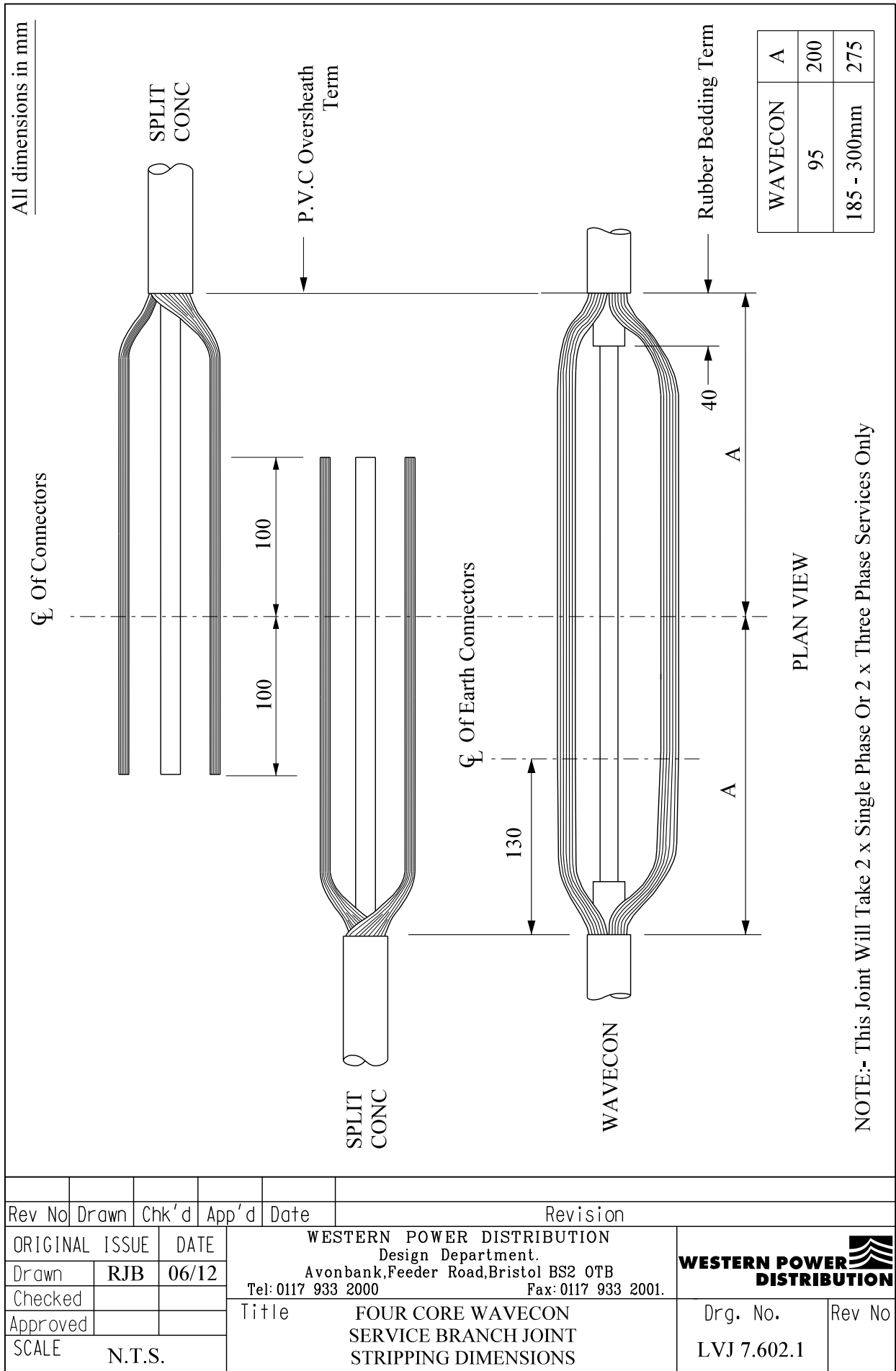
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|----|------------------------------------------|---|
| 4. | Remove PVC oversheath | 6 |
| 5. | Prepare neutral/earth wires for jointing | 8 |
| 6. | Remove rubber bedding | 9 |

COMPLETION OF JOINT

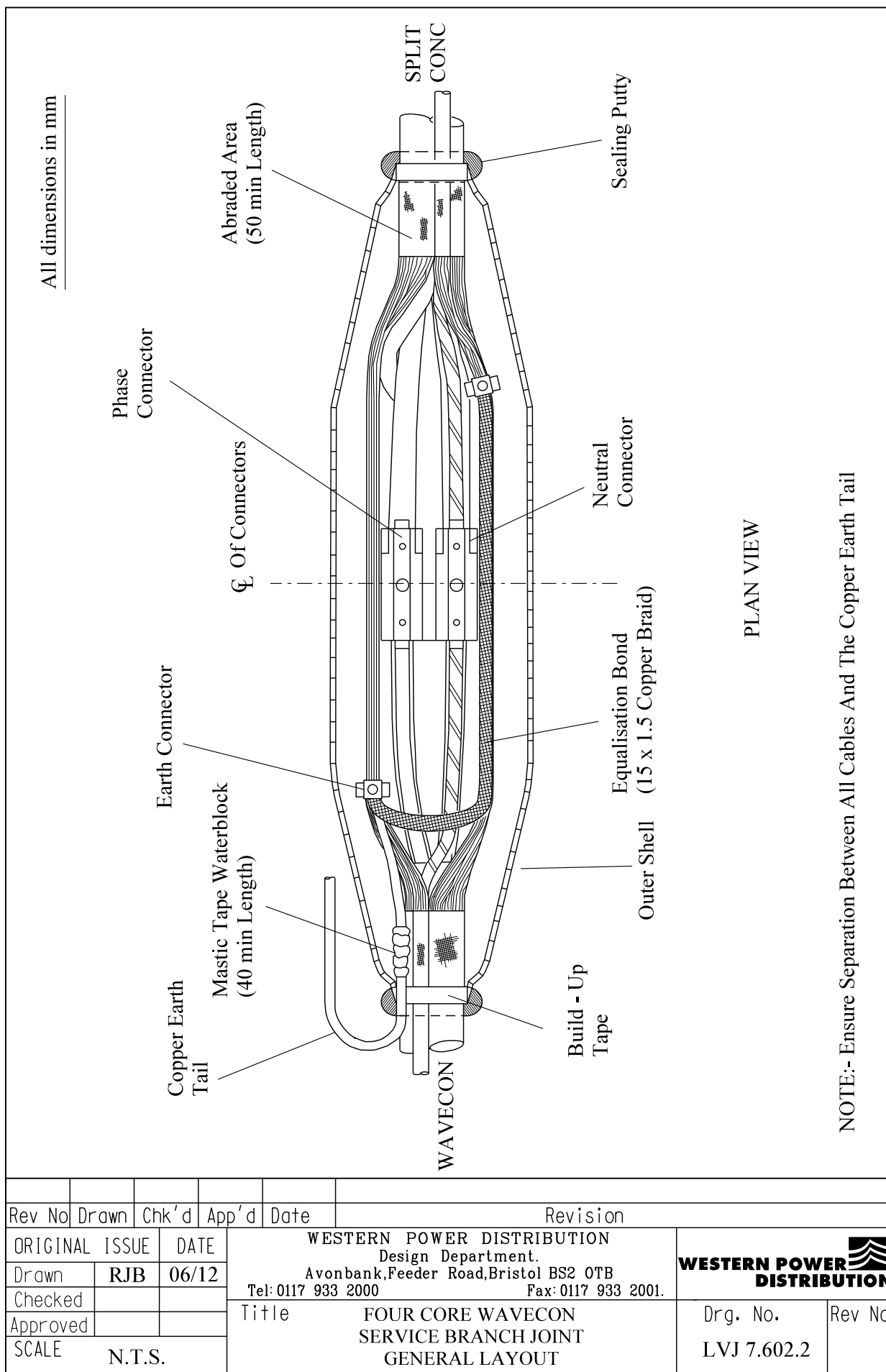
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|-----|-----------------------------------------------------------------------|----|
| 7. | Set cores in joint position | 27 |
| 8. | Connect earth wires including equalisation bond and copper earth tail | 29 |
| 9. | Apply temporary shrouding | 21 |
| 10. | Make neutral connection(s) | 29 |
| 11. | Make phase connections(s) | 29 |
| 12. | Remove temporary shrouding applied in 9 | -- |
| 13. | Form earth wires into their final positions | -- |
| 14. | Abrade and build up oversheaths | 32 |
| 15. | Thoroughly degrease the joint | 35 |

JOINTING PROCEDURE 7.602 - Continued

Actions	General Requirements (ST: CA1C/4)
16. Apply mastic water block to copper earth tail	33
17. Remove temporary binders	--
18. Prepare and fit shell, ensuring 15mm clearance	36
19. Mix and pour resin	37



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**ST: CA1I/4 PROCEDURES FOR MAKING LV MAINS CABLE
SERVICE BRANCH JOINTS**

JOINTING PROCEDURE 7.603

**FOUR CORE WAVECON CNE MAINS CABLE
SERVICE BRANCH JOINT**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CA1C/4 Section 6 Pt 1
of the LV Jointing Manual**

JOINTING PROCEDURE 7.603

JOINT KIT REFERENCES

CABLE SIZE	JOINT KIT REFERENCES (HYBRID SERVICES)							
	1 x 1 ph	2 x 1 ph	3 x 1 ph	4 x 1 ph	1 x 3 ph	2 x 3 ph	1 x 1 ph + 1 x 3 ph	2 x 1 ph + 1 x 3 ph
95W	MSB 40	MSB 43	MSB 46	MSB 49	MSB 52	MSB 55	MSB 58	MSB 61
185W	MSB 41	MSB 44	MSB 47	MSB 50	MSB 53	MSB 56	MSB 59	MSB 62
300W	MSB 42	MSB 45	MSB 48	MSB 51	MSB 54	MSB 56	MSB 60	MSB 63

JOINTING PROCEDURE 7.603

JOINT KIT MATERIALS

KIT REF.	SHELL		RESIN		CONNECTORS			EARTH TAIL
	1581	1580	5 litre	6.5 litre	MSIP 185	MSIP 300	BCNE 3	LVCU 1700/5
MSB40	1		2	1	2		2	1
MSB41		1		3	2		2	1
MSB42		1		3		2	2	1
MSB43	1		2	1	2		2	1
MSB44		1		3	2		2	1
MSB45		1		3		2	2	1
MSB46	1		2	1	3		2	1
MSB47		1		3	3		2	1
MSB48		1		3		3	2	1
MSB49	1		2	1	3		2	1
MSB50		1		3	3		2	1
MSB51		1		3		3	2	1
MSB52	1		2	1	4		2	1
MSB53		1		3	4		2	1
MSB54		1		3		4	2	1
MSB55	1		2	1	4		2	1
MSB56		1		3	4		2	1
MSB57		1		3		4	2	1
MSB58	1		2	1	4		2	1
MSB59		1		3	4		2	1
MSB60		1		3		4	2	1
MSB61	1		2	1	4		2	1
MSB62		1		3	4		2	1
MSB63		1		3		4	2	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
 Black cotton tape
 Sealing putty
 Cable ties
 Shell support
 16 swg tinned copper wire
 PVC tape
 35mm² PVC sheathed (green/yellow) copper
 Emery cloth
 De-solvit 1000FD
 Workhorse dry wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 - Part 1 of the LV Mains Jointing Manual.

JOINTING PROCEDURE 7.603

Actions	General Requirement (ST: CA1C/4)
---------	-------------------------------------

Refer to Drawing **LVJ 6.703.1, 6.703.2** whilst undertaking this Jointing Procedure

- | | | |
|----|----------------------------|---|
| 1. | Set up and mark the cables | 4 |
|----|----------------------------|---|

SERVICE CABLE(s) - Preparation

- | | | |
|----|------------------------------------------|----|
| 2. | Open and cut cable | 17 |
| 3. | Prepare neutral/earth wires for jointing | 8 |

WAVECON CABLE - Preparation

- | | | |
|----|------------------------------------------|---|
| 4. | Remove PVC oversheath | 6 |
| 5. | Prepare neutral/earth wires for jointing | 8 |
| 6. | Remove rubber bedding | 9 |

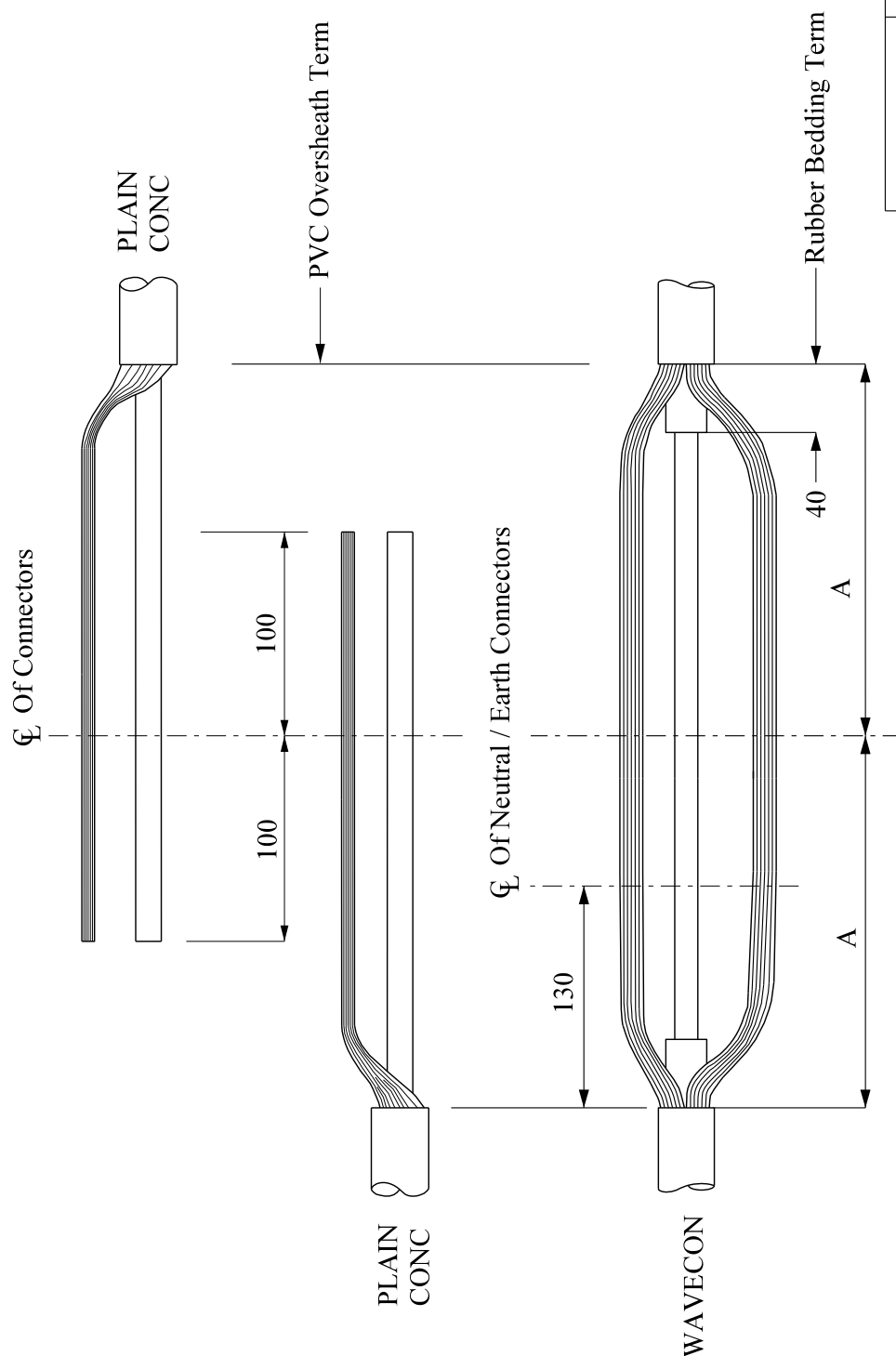
COMPLETION OF JOINT

- | | | |
|-----|-----------------------------------------------------------------------------------|----|
| 7. | Set cores in joint position | 27 |
| 8. | Connect 35mm ² neutral/earth bond to neutral conductor | 29 |
| 9. | Make neutral/earth connections including neutral/earth bond and copper earth tail | 29 |
| 10. | Apply temporary shrouding | 21 |
| 11. | Make phase connection(s) | 29 |
| 12. | Remove temporary shrouding applied in 10 | -- |
| 13. | Form neutral/earth wires into their final positions | -- |
| 14. | Abrade and build up oversheaths | 32 |


JOINTING PROCEDURE 7.603 - Continued

Actions	General Requirements (ST: CA1C/4)
16. Thoroughly degrease the joint	35
17. Apply mastic water block to copper earth tail	3
18. Remove temporary binders	--
19. Prepare and fit shell, ensuring 15mm clearance	36
20. Mix and pour resin	37

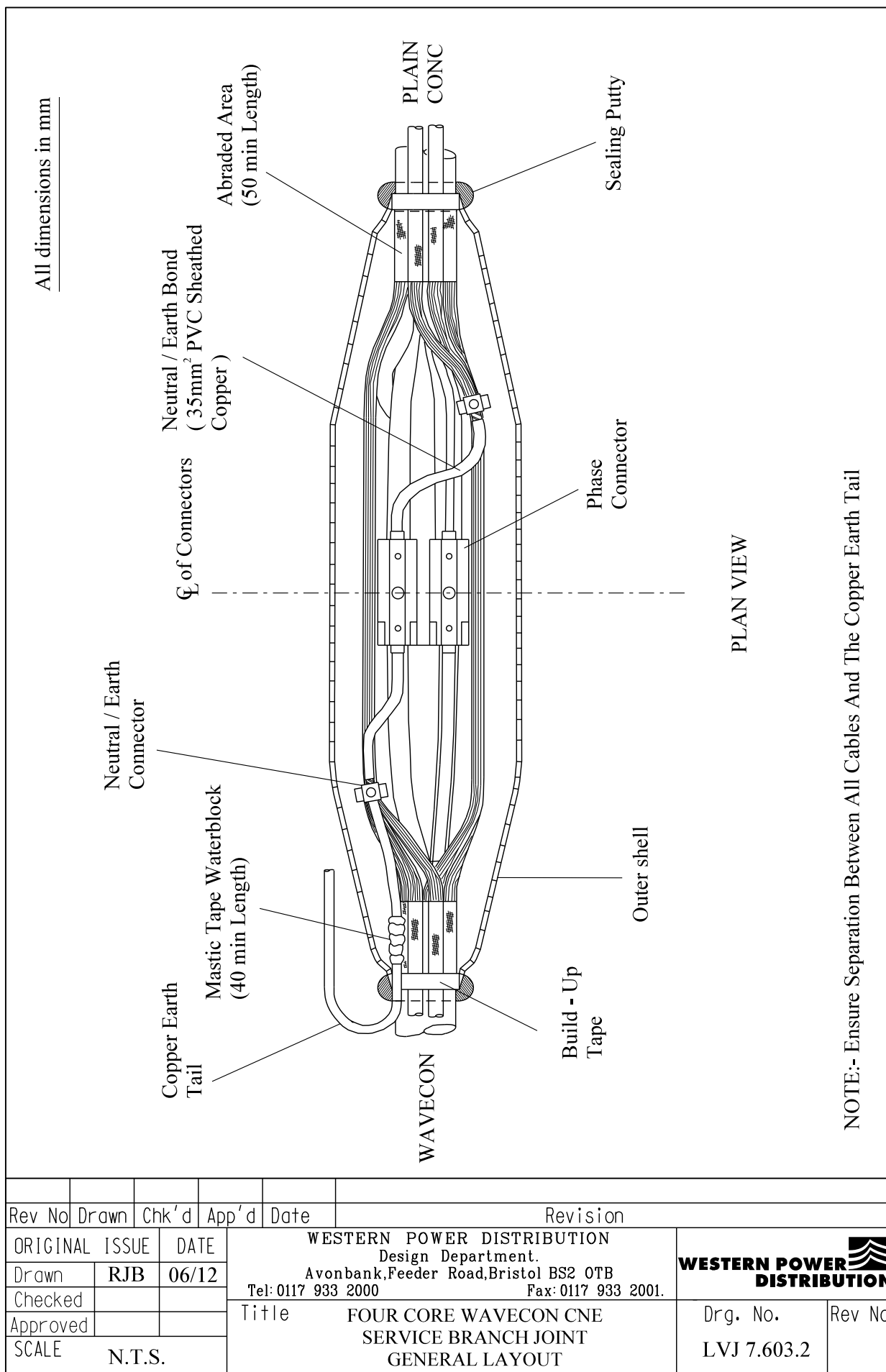
All dimensions in mm



WAVECON	A
95	200
185 - 300mm	275

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**ST: CA1I/4 PROCEDURES FOR MAKING LV MAINS CABLE
SERVICE BRANCH JOINTS**

JOINTING PROCEDURE 7.604

**CONSAC MAINS CABLE
SERVICE BRANCH JOINT**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CA1C/4 Section 6 Pt 1
of the LV Jointing Manual**

JOINTING PROCEDURE 7.604

JOINT KIT REFERENCES

CABLE SIZE	JOINT KIT REFERENCES (HYBRID SERVICES)							
	1 x 1 ph	2 x 1 ph	3 x 1 ph	4 x 1 ph	1 x 3 ph	2 x 3 ph	1 x 1 ph + 1 x 3 ph	2 x 1 ph + 1 x 3 ph
95C	MSB 64	MSB 66	MSB 68	MSB 70	MSB 72	MSB 74	MSB 76	MSB 78
185C	MSB 65	MSB 67	MSB 69	MSB 71	MSB 73	MSB 75	MSB 77	MSB 79
240C	MSB 80	MSB 81	MSB 82	MSB 83	MSB 84	MSB 85	MSB 86	MSB 87

Key: -

95C = 95mm² Consac

185C = 185mm² Consac

240C = 240mm² Consac

Note: - 240mm² Consac is only to be found in the Midlands Region of WPD.

JOINTING PROCEDURE 7.604

JOINT KIT MATERIALS

KIT REF.	SHELL		RESIN		CONNECTORS			EARTH TAIL
	1581	1580	5 litre	6.5 litre	MSIP 185	MSIP 300	TA3	LVCU 1700/5
MSB 64	1		2	1	1		2	1
MSB 65	1		2	1	1		2	1
MSB 66	1		2	1	1		2	1
MSB 67	1		2	1	1		2	1
MSB 68	1		2	1	2		2	1
MSB 69	1		2	1	2		2	1
MSB 70	1		2	1	2		2	1
MSB 71	1		2	1	2		2	1
MSB 72	1		2	1	3		2	1
MSB 73	1		2	1	3		2	1
MSB 74	1		2	1	3		2	1
MSB 75	1		2	1	3		2	1
MSB 76	1		2	1	3		2	1
MSB 77	1		2	1	3		2	1
MSB 78	1		2	1	3		2	1
MSB 79	1		2	1	3		2	1
MSB 80		1		3		1	2	1
MSB 81		1		3		1	2	1
MSB 82		1		3		2	2	1
MSB 83		1		3		2	2	1
MSB 84		1		3		3	2	1
MSB 85		1		3		3	2	1
MSB 86		1		3		3	2	1
MSB 87		1		3		3	2	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
 Black cotton tape
 Sealing putty
 Cable ties
 Shell support
 Whipping thread
 'H' metal
 Abrasive metal
 PVC tape

Mastic water block tape
Emery cloth
De-solvit 1000FD
De-solvit 1000
Workhorse dry wipes

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

Note: - 240mm² Consac is only to be found in the Midlands Region of WPD.

JOINTING PROCEDURE 7.604

Actions

General Requirement (ST: CA1C/4)

Refer to Drawing **LVJ 7.604.1, 7.604.2** whilst undertaking this Jointing Procedure

- | | | |
|----|------------------------|---|
| 1. | Set up and mark cables | 4 |
|----|------------------------|---|

SERVICE CABLE(s) - Preparation

- | | | |
|----|------------------------------------------|----|
| 2. | Open and cut | 17 |
| 3. | Prepare neutral/earth wires for jointing | 8 |

CONSAC CABLE - Preparation

- | | | |
|----|------------------------------------------------|----|
| 4. | Remove PVC oversheath | 6 |
| 5. | Open and prepare neutral/earth sheath | 12 |
| 6. | Remove belt papers and carry out moisture test | 19 |

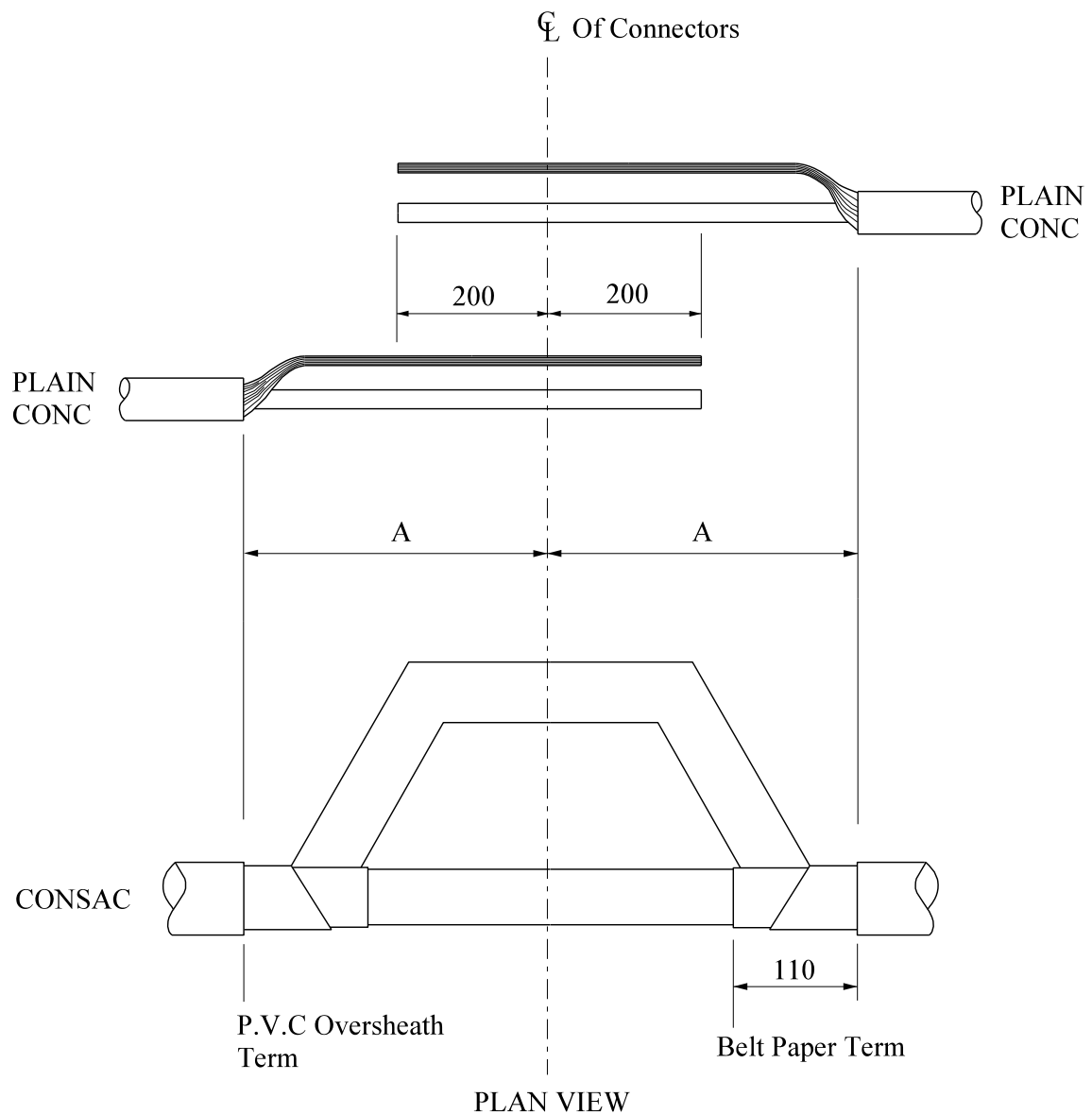
COMPLETION OF JOINT

- | | | |
|-----|-----------------------------------------------------------------------------|----|
| 7. | Set cores in joint position | 27 |
| 8. | Connect neutral/earth wires to neutral/earth sheath | 29 |
| 9. | Apply temporary shrouding | 21 |
| 10. | Make phase connections | 29 |
| 11. | Remove temporary shrouding applied in 10 | -- |
| 12. | Form neutral/earth wires and neutral/earth sheath into their final position | 31 |
| 13. | Connect copper earth tail to neutral/earth sheath | 29 |
| 14. | Abrade and build up oversheaths | |

JOINTING PROCEDURE 7.604 - Continued

Actions	General Requirements (ST: CA1C/4)
15. Thoroughly degrease the joint	35
16. Apply mastic water blocks to copper earth tail and Consac PVC oversheath termination	33
17. Prepare and fit shell, ensuring 15mm clearance	36
18. Mix and pour resin	37

All dimensions in mm

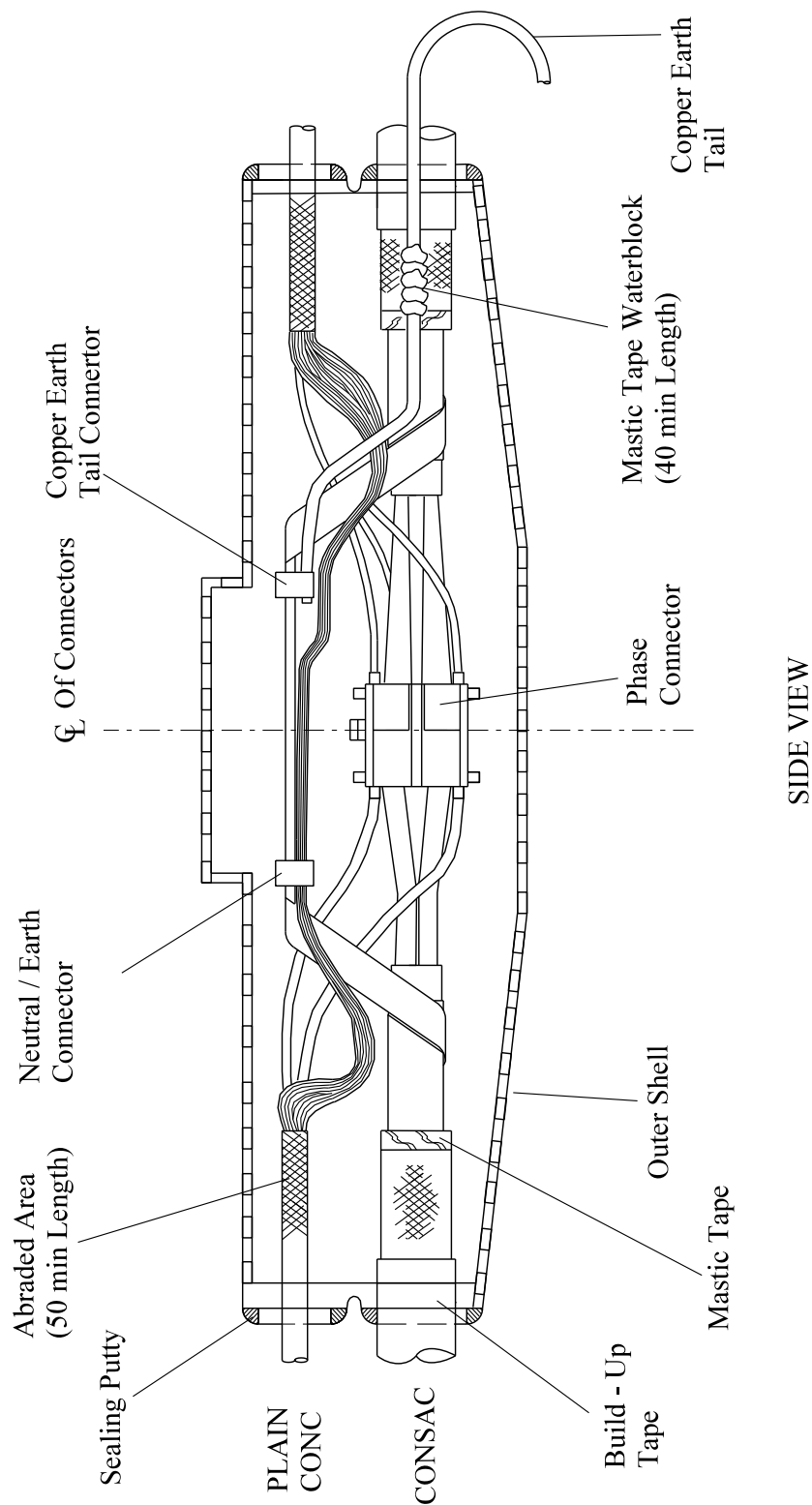


CABLE SIZE	A
95 - 185mm ²	240
240mm ²	310


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All dimensions in mm



NOTE:- Ensure Separation Between All Cables And The Copper Earth Tail

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				Drg. No. LVJ 7.604.2	
				Rev No	

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**ST: CA1I/4 PROCEDURES FOR MAKING LV MAINS CABLE
SERVICE BRANCH JOINTS**

JOINTING PROCEDURE 7.605

**PILC MAINS CABLE
SERVICE BRANCH JOINT**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CA1C/4 Section 6 Pt 1
of the LV Jointing Manual**

JOINTING PROCEDURE 7.605

JOINT KIT REFERENCES

CABLE SIZE	JOINT BOX REFERENCES (SPLIT CONC SERVICES)				
	1 x 1 ph	2 x 1ph	1 x 3ph	2 x 3ph	1 x 1ph + 1 x 3ph
50 – 120 PILC	MSB 88	MSB 90	MSB 92	MSB 94	MSB 96
185 – 300 PILC	MSB 89	MSB 91	MSB 93	MSB 95	MSB 97

JOINTING PROCEDURE 7.605

JOINT KIT MATERIALS

KIT REF.	SHELL		RESIN		CONNECTORS		EARTH BOND	EARTH TAIL
	1581	1580	5 litre	6.5 litre	MSIP 185	MSIP 300	LVEB 08	LVCU 1700/5
MSB 88	1		2	1	2		2	1
MSB 89		1		3		2	2	1
MSB 90	1		2	1	2		2	1
MSB 91		1		3		2	2	1
MSB 92	1		2	1	4		2	1
MSB 93		1		3		4	2	1
MSB 94	1		2	1	4		2	1
MSB 95		1		3		4	2	1
MSB 96	1		2	1	4		2	1
MSB 97		1		3		4	2	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation patch
 Black cotton tape
 Sealing putty
 Cable ties
 Shell support
 Whipping thread
 PVC tape
 35mm² PVC sheathed (green/yellow) copper
 Emery cloth
 De-solvit 1000FD
 De-solvit 1000
 Workhorse dry wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 – Part 1 of the LV Mains Jointing Manual.

Note: - 240mm² Consac is only to be found in the Midlands Region of WPD.

JOINTING PROCEDURE 7.605

Actions

General Requirement (ST: CA1C/4)

Refer to Drawing **LVJ 7.605.1, 7.605.2** whilst undertaking this Jointing Procedure

- | | | |
|----|----------------------------|---|
| 1. | Set up and mark the cables | 4 |
|----|----------------------------|---|

SERVICE CABLE(s) - Preparation

- | | | |
|----|----------------------------------------------|----|
| 2. | Open and cut cable | 17 |
| 3. | Prepare neutral and earth wires for jointing | 8 |

PILC CABLE - Preparation

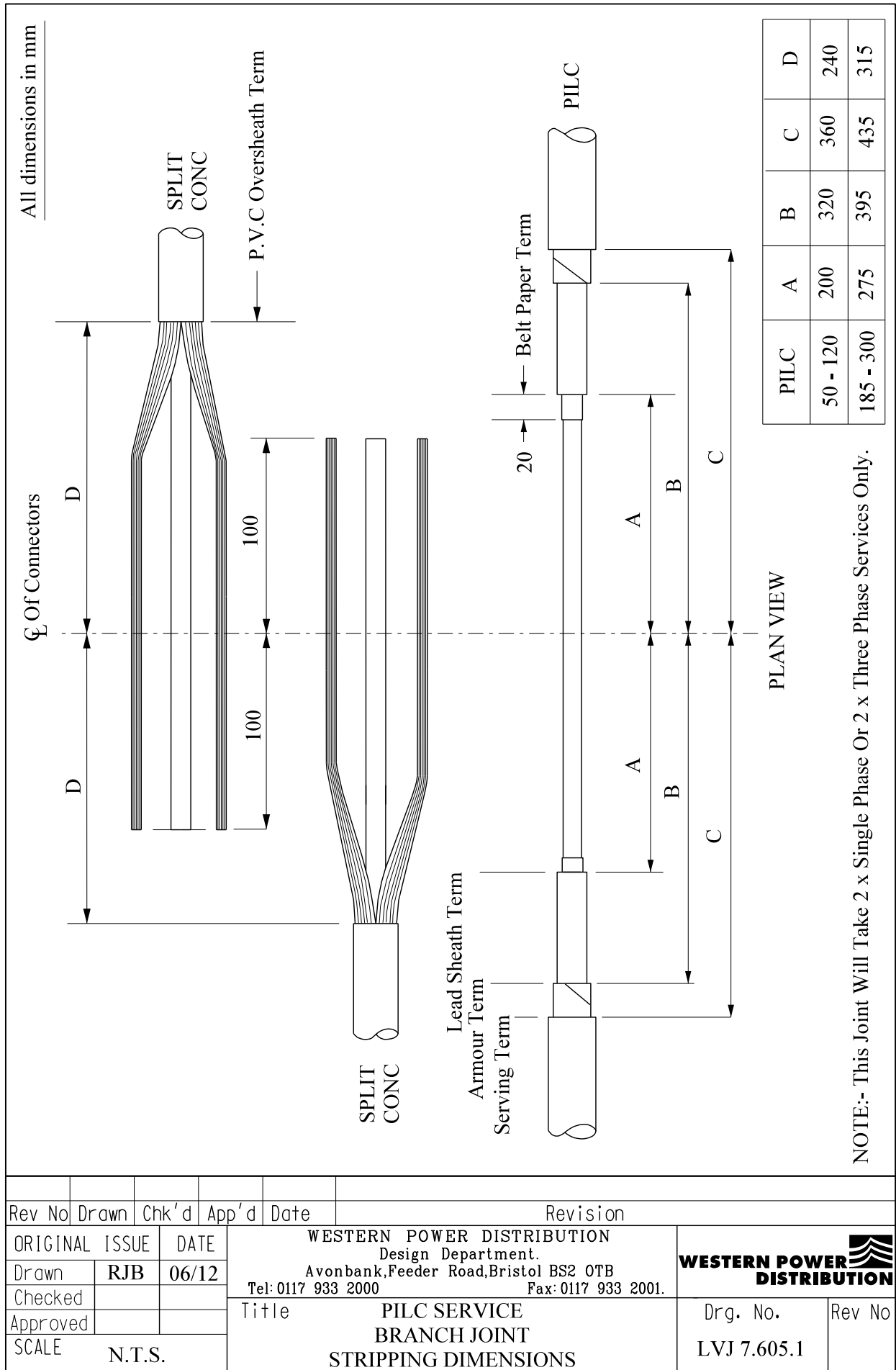
- | | | |
|----|--------------------------------------------------------------------------|----|
| 4. | Remove serving, armour and bedding then thoroughly clean the lead sheath | 10 |
| 5. | Apply armour bonds to lead sheaths | 23 |
| 6. | Fit temporary earth continuity bond to lead sheath | 11 |
| 7. | Remove lead sheath | 13 |
| 8. | Remove belt papers and carry out moisture test | 19 |
| 9. | Apply lead sheath bonds | 23 |


COMPLETION OF JOINT

- | | | |
|-----|--------------------------------------------------------------------------------------------------------------------------|----|
| 10. | Set cores in joint position | 27 |
| 11. | Connect a 35mm ² earth wire to lead sheath bonds including copper earth tail and earth wires of service cable | -- |
| 12. | Remove temporary earth continuity bond applied in 6 | -- |
| 13. | Apply temporary shrouding | 21 |
| 14. | Make neutral connection(s) | 29 |

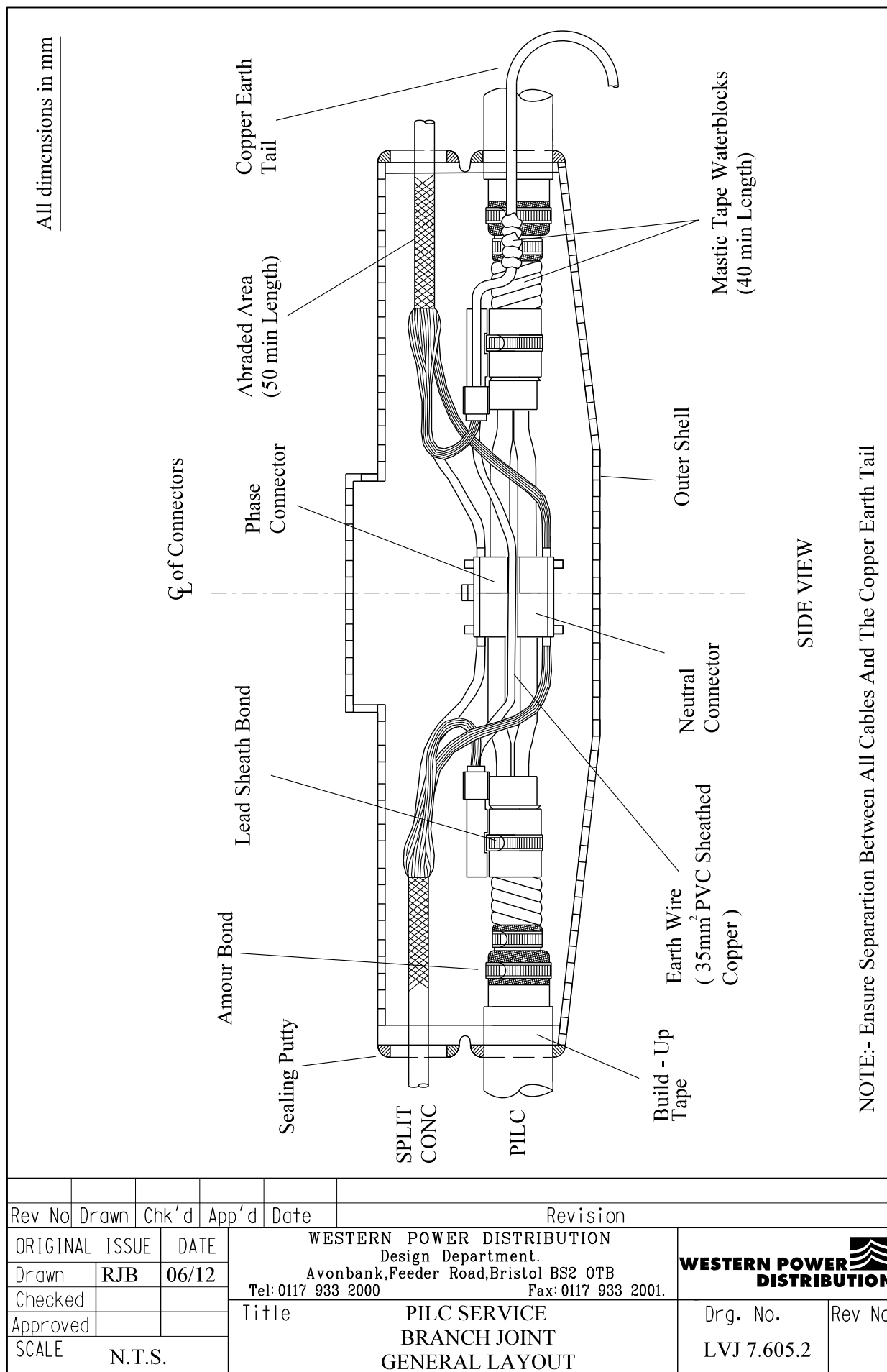
JOINTING PROCEDURE 7.605 - Continued

Actions	General Requirements (ST: CA1C/4)
15. Make phase connection(s)	29
16. Remove temporary shrouding applied in 13	--
17. Abrade and build up oversheaths	32
18. Thoroughly degrease the joint	35
19. Apply mastic water blocks to lead sheaths and copper earth tail	33
20. Prepare and fit shell, ensuring 15mm clearance	36
21. Mix and pour resin	37



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SCALE	N.T.S.		Title PILC SERVICE BRANCH JOINT STRIPPING DIMENSIONS			Drg. No. LVJ 7.605.1
						Rev No

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**ST: CA1I/4 PROCEDURES FOR MAKING LV MAINS CABLE
SERVICE BRANCH JOINTS**

JOINTING PROCEDURE 7.606

**PILC CNE MAINS CABLE
SERVICE BRANCH JOINT**

**This procedure is to be read in conjunction with the appropriate
General Requirements ST: CA1C/4 Section 6 Pt 1
of the LV Jointing Manual**

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JOINTING PROCEDURE 7.606

JOINT KIT REFERENCES

CABLE SIZE	JOINT BOX REFERENCES (HYBRID SERVICES)							
	1 x 1 ph	2 x 1 ph	3 x 1 ph	4 x 1 ph	1 x 3 ph	2 x 3 ph	1 x 1 ph + 1 x 3 ph	2 x 1 ph + 1 x 3 ph
50 – 120 PILC	MSB 98	MSB 100	MSB 102	MSB 104	MSB 106	MSB 108	MSB 110	MSB 112
185 – 300 PILC	MSB 99	MSB 101	MSB 103	MSB 105	MSB 107	MSB 109	MSB 111	MSB 113

JOINTING PROCEDURE 7.606

JOINT KIT MATERIALS

KIT REF.	SHELL		RESIN		CONNECTORS		EARTH BOND	EARTH TAIL
	1581	1580	5 litre	6.5 litre	MSIP 185	MSIP 300	LVEB 08	LVCU 1700/5
MSB98	1		2	1	2		2	1
MSB99		1		3		2	2	1
MSB100	1		2	1	2		2	1
MSB101		1		3		2	2	1
MSB102	1		2	1	3		2	1
MSB103		1		3		3	2	1
MSB104	1		2	1	3		2	1
MSB105		1		3		3	2	1
MSB106	1		2	1	4		2	1
MSB107		1		3		4	2	1
MSB108	1		2	1	4		2	1
MSB109		1		3		4	2	1
MSB110	1		2	1	4		2	1
MSB111		1		3		4	2	1
MSB112	1		2	1	4		2	1
MSB113		1		3		4	2	1

ADDITIONAL ITEMS FOR EACH JOINT

Insulation Patch
 Black cotton tape
 Sealing putty
 Cable ties
 Shell support
 Whipping thread
 PVC tape
 35mm² PVC sheathed (green/yellow) copper
 Emery cloth
 De-solvit 1000FD
 De-solvit 1000
 Workhorse dry wipes

Note: - Individual material item numbers (SHOPS) are to be found in Section 4 - Part 1 of the LV Mains Jointing Manual.

JOINTING PROCEDURE 7.606

Actions

General Requirement (ST: CA1C/4)

Refer to Drawing **LVJ 7.606.1, 7.606.2** whilst undertaking this Jointing Procedure

- | | | |
|----|----------------------------|---|
| 1. | Set up and mark the cables | 4 |
|----|----------------------------|---|

SERVICE CABLE(s) - Preparation

- | | | |
|----|------------------------------------------|----|
| 2. | Open and cut cable | 17 |
| 3. | Prepare neutral/earth wires for jointing | 8 |

PILC CABLE - Preparation

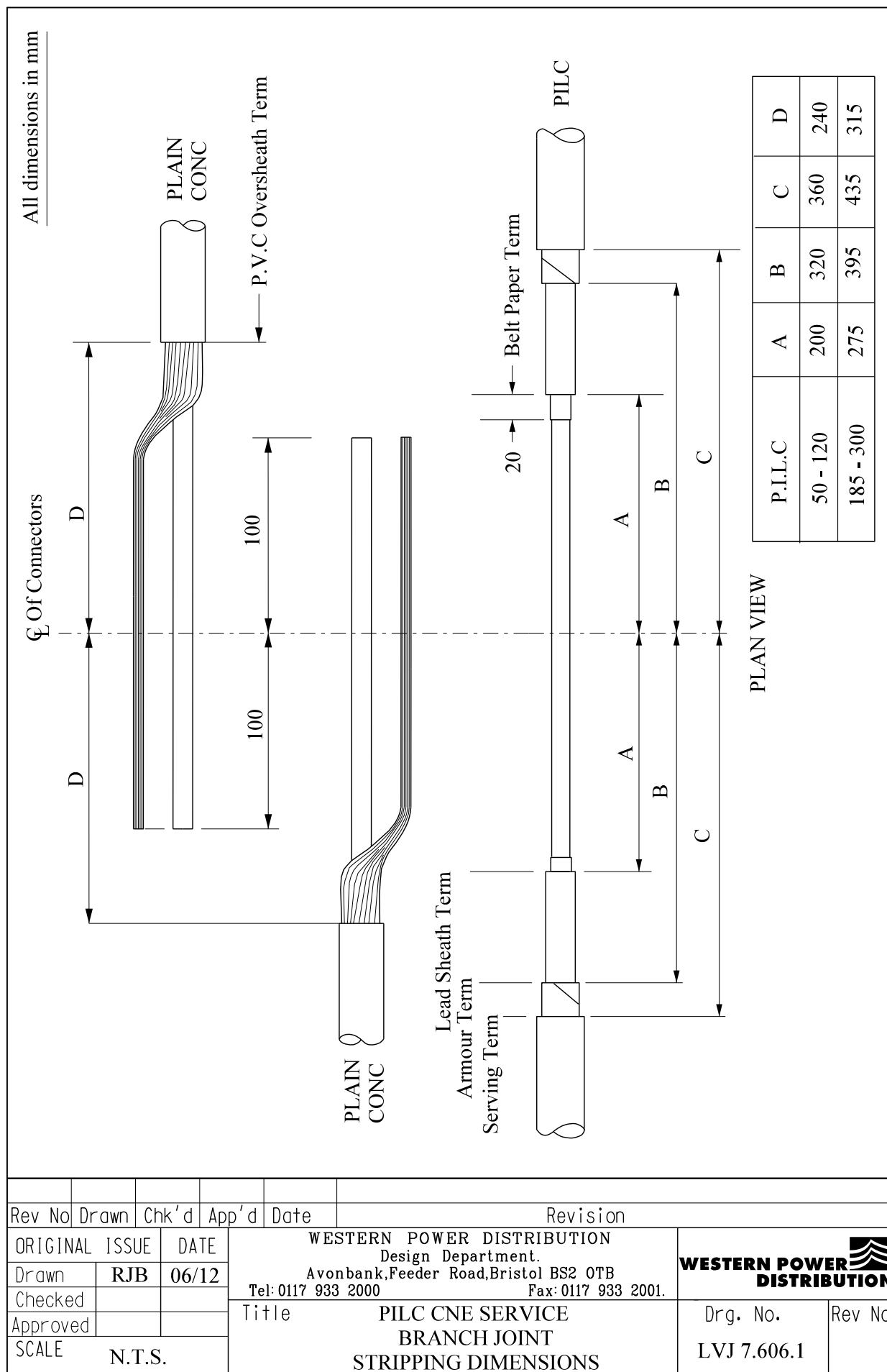
- | | | |
|----|--------------------------------------------------------------------------|----|
| 4. | Remove serving, armour and bedding then thoroughly clean the lead sheath | 10 |
| 5. | Apply armour bonds to lead sheaths | 23 |
| 6. | Fit temporary earth continuity bond to lead sheath | 11 |
| 7. | Remove lead sheath | 13 |
| 8. | Remove belt papers and carry out moisture tests | 19 |
| 9. | Apply lead sheath bonds | 23 |

COMPLETION OF JOINT

- | | | |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 10. | Set cores in joint position | 27 |
| 11. | Connect a 35mm ² neutral/earth bond to the neutral conductor | 29 |
| 12. | Connect a 35mm ² earth wire to lead sheath bonds including the neutral/earth bond, service neutral/earth wires and copper earth tail | 29 |
| 13. | Remove temporary earth continuity bond applied in 6 | -- |

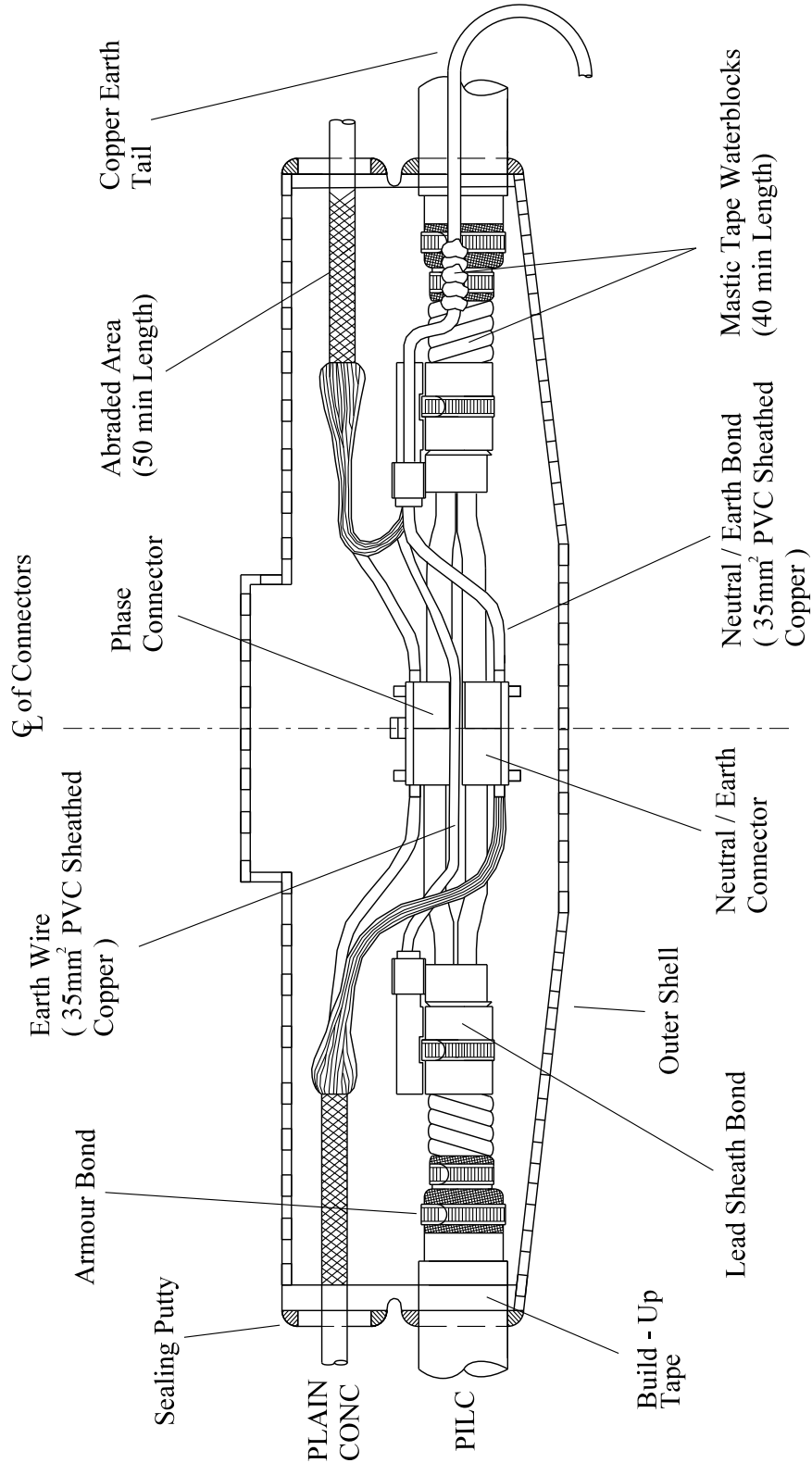
JOINTING PROCEDURE 7.606 - Continued

Actions	General Requirements (ST: CA1C/4)
14. Apply temporary shrouding	21
15. Make phase connection(s)	29
16. Remove temporary shrouding applied in 14	--
17. Abrade and build up oversheaths	32
18. Thoroughly degrease the joint	35
19. Apply mastic water blocks to lead sheaths and copper earth tail	33
20. Prepare and fit shell, ensuring 15mm clearance	36
21. Mix and pour resin	37




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All dimensions in mm



SIDE VIEW

NOTE:- Ensure Separation Between All Cables And The Copper Earth Tail

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Checked					
Approved					
SCALE		N.T.S.			
Title				PILC CNE SERVICE BRANCH JOINT GENERAL LAYOUT	
				Drg. No. LVJ 7.606.2	
				Rev No	

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APPENDIX A

SUPERSEDED DOCUMENTATION

This Standard Technique supersedes ST:CA1I/3 dated October 2001 which should now be withdrawn.

APPENDIX B

ASSOCIATED DOCUMENTATION

ST: CA1A, ST: CA1C/5, ST: CA1 D, ST: CA1E, ST: CA1F, ST: CA1G, ST: CA1H, ST: CA1U, ST: CA1W, ST: CA1X, ST: CA1Y, ST: CA1Z, ST: CA1AA, ST: CA1AB, ST: CA7A, ST: CA7B, ST: CA7C, ST: CA7D.

APPENDIX C

IMPACT ON COMPANY POLICY

None, as this document has just been updated to incorporate the latest ST: HS8H and other 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

LV Mains cable branch joint with services.

APPENDIX F

DOCUMENT LAST REVIEWED

June 2012