

## Amendment Record

05/06/2017

Version 21

<b>Section</b>	<b>Drawing Number and Revision</b>	<b>Comment</b>
<b>C2 – Trenching &amp; Excavation</b>	C2-2.1-2 D C2-4.1-3 C C2-4.1-5 A	Updated note for clearance to gas Updated pillar entry conduits to allow for 1200mm 45° radius bends
<b>C3 – Padmount Transformers</b>	C3-1.1-1 G C3-2.6-1 C C3-2.6-2 C C3-2.6-3 C C3-2.6-4 C C3-3.6-1 C C3-3.6-2 C C3-3.6-3 C C3-3.6-4 C	Updated note on proximity of HV equipment to fire booster. Updated reinforcing and mesh specification for retaining walls.
<b>C4 – Ground Mounted Plant</b>	C4-1-2 C	Update dimension to 3100 x 3000 in line with C&I manual, update plinth dimensions
<b>C5 – Pits</b>	C5-1.4-3 D C5-3.3-1 A	Include large and small insulator stock codes New drawing for bedding in polycrete and plastic pits.
<b>C6 - Cables</b>	C6-2.5-1 A	Cable gland and gland plate details
<b>E1 – Assemblies</b>	E1-2.8-1 E	Remove glove from 16sqmm cable on fuse panel
<b>E2 – Padmount Transformers</b>	E2-1.1-1 C E2-1.1-2 C E2-1.1-3 C E2-1.11.1 C E2-2.13-1 A E2-4.1-1 E E2-4.2-1 D E2-4.3-1 E E2-4.4-1 D E2 4.5-1 B E2-4.6-1 A	Updated transformer descriptions for Siemens 8DJH RMU Updated earth grid drawings for new earth rods New earth grid drawing for double padmount
<b>E3 – Ground Mounted Plant</b>	E3-1.1-1 C	Site dimensions changed 3100 x 3000
<b>E5 – LV Joints and Terminations</b>	E5-2.9-3 C E5-2.9-4 C E5-3.6-1 D	Remove tape around cores on tee joints (non re-entenable) Added tightening torque and neutral bridge cable size.
<b>E6 – HV Joints &amp; Terminations</b>	E6-1.1 J E6-3.2-3 C E6-3.2-4 C E6-3.3-4 D	Updated CU to DIN C bushing kit Updated strip dimensions for new Siemens surge arresters on pole terminations.

10/01/2017

Version 20

### **C2 – Excavation & Reinstatement**

UDC-C2-2-2-1C – Update Pillar and Trench Locations

UDC-C2-2.3C - Council drawings & requirements updated

UDC-C2-4-1-1B – Change Maintenance Zone Note

UDC-C2-4-1-2B – Remove Reference Flat Area Around Pillar Update Notes

### **C3 - Padmount Transformer Sites**

UDC-C3-2-1-1C – Cut and Fill Notes Altered

### **E1 – Assemblies**

E1-6.-1-1B Added Consumer Mains and Conduit

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08/09/2016

Version19

### **C2 – Excavation & Reinstatement**

4.1-3B Additional Notes Added

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24/08/2016

Version18

### **E1 – Assemblies**

2.8-3E Added 125 Amp fuse

07/05/2016

Version 17

### **C4 – Other Ground Mounted Plant**

0-1-E Index updated Added 3.1 LV Regulators

3.1-A Added GRIDCO LV Regulator

### **E3. Other Ground Mounted Plant**

0-1D Index updated Added 3.1 LV Regulators

3.1-A Added GRIDCO LV Regulator

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29/12/2015

Version 16

### **C1 - Conduits**

1-1C Added 1200mm Rad 45 Deg Bend

2-1D Added 125mm HD Bend

2-2D Added 125mm Conduit and adaptor

4-1B Installation notes updated

### **C2 – Excavation & Reinstatement**

0-1C Index Updated with 14.4

1-1B Note 1 Added

1-2B Note 1 Added

1-3C Dewatering Expanded

1-4B Updated notes

1-5B Updated notes

1-6B Updated notes

1-7B Updated notes

3.2-1B Updated notes

3.2-2C Trench mesh changes to SL81

3.2-3C Trench mesh changes to SL81

3.3-1B Reference to local council re-instatement added

- 3.3-2B Reference to local council re-instatement added
- 4.1-4B Updated notes
- 4.14-1A LV Pillar arrangement for Narrow Laneway Developments added

#### **C4 – Other Ground Mounted Plant**

- 0-1-D Index updated 1.2 added
- 1.2-1A Square Padmount plus 3 Way RMU Earthing Added

#### **C5 – Pits**

- 0-1D 1.14 Added to Index
- 1.1-2B Updated Notes
- 1.1-3B Reinforcement Note Added
- 1.2-1B Updated Notes
- 1.2-2B Updated Notes
- 1.3-1B Updated Notes
- 1.3-2B Updated Notes
- 1.3-3B Updated Notes
- 1.4-1C Note 5 Added
- 1.4-2C Note 1 & 2 Added
- 1.4-3C Mounting Bolt Detail Added
- 1.6-4C Updated Notes
- 1.6-5C Use Ductile Iron for Class D Lids
- 1.7-1C Update Cover to Metric Ductile Iron
- 1.7-2B Update Number of Steps and Update Cover to Metric Ductile Iron
- 1.8-1C Lid Change to Metric Ductile Iron
- 1.8-2B Lid Change to Metric Ductile Iron and Steps to 10
- 1.9-1C Change Pit to Metric Ductile Iron
- 1.9-2B Update Number of Steps and Update Cover to Metric Ductile Iron
- 1.10-1C Lid Change to Metric Ductile Iron
- 1.10-2B Lid Change to Metric Ductile Iron and Steps to 10
- 1.11-1C Lid Change to Metric Ductile Iron
- 1.11-2C Lid Change to Metric Ductile Iron
- 1.13-1B Lid Change to Metric Ductile Iron
- 1.13-2B Lid Change to Metric Ductile Iron and Steps to 10
- 1.14-1A Reinforced Concrete Pits for Square Padmounts Added
- 1.14-2A Reinforced Concrete Pits for Square Padmounts Added
- 2.1-1C Note 1 Added

#### **C6 – Cables**

- 1.1-1B Updated Notes
- 1.1-3B Updated Notes Asbestos Reference
- 1.2-1E Added CBD 4c 240 LV
- 1.2-1F Added page numbering
- 2.2-1C Updated Hole Diameter for Assembly 1350-4
- 2.3-2C Updated Notes

#### **E1 – Assemblies**

- 2.8 2C Cable and Fuse Size Changed

#### **E2 – Padmount Transformers**

- 0-1D Index Updated with 2.12
- 1.6-1C Added LV Fuse Switch Parallel Kit
- 1.10-1C Areva FBX Stockcode Added
- 2.12-1A Summary of Switch Sizes for Loads

#### **E4 – Cable Installation and Testing**

- 0-1D Index Updated with 1.2-1 and 1.2-2

- 1.1 Sheets 1-6 D Section 7-13 added
- 1.2-1A LV Ratings and Fuse Sizes Added
- 1.2-2A Crimp & Dies Sizes and Shear Bolt Connectors
- 1.3-1A Removal of Screen from XLPE Cables
- 2.1 Sheets 1-9 G Section 1.4(c) new table for aged cables, remove sheath test for N/S cables

### **E5 – LV Joints and Terminations**

- 3.3-3C LV Links Added
- 3.4-4C LV Links Added
- 4.1-1B CU details added
- 5.5-1B Remove glove and replace termination with crimp lugs
- 5.9-1B Added 4C 185 XLPE Cable
- 5.10-1B 70SQMM Term changed to 4C XLPE

### **E6 – HV Joints and Terminations**

- 1.1 Sheets 1 – 17 Updated Various CUs
- 3.3-4C Removed earth lead to crossarm

### **E7 – Earthing**

- 1.1 Sheets 1 – 2 Additional earthing circumstances Sect 2.

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02/11/2015

Version 15

### **C3 - Padmount Transformer Sites**

- Siting information for transformers in relation to hazardous areas and hydrants added.
- Clarification of enclosures around padmounts and access to padmount transformers.
- Clarification of structures adjacent to and overhanging padmounts
- Design for 2 x square padmount transformers on a single site.
- Requirements for customers requesting artwork/different paint requirements for padmount transformers.
- Confirmation of 2m clear work space in front of square padmount for landlocked sites
- Changes to cabling arrangements to padmounts on suspended slabs.

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17/09/2015

Version 14

### **E1 - Electrical Assemblies**

- 6229-A4-E1-0-3D Index Updated to include 6.1
- 6229-A4-E1-6.1-1A LV Service Pit Added

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20/04/2015

Version 13

### **C3 - Padmount Transformer Sites**

- 6229-A4-C3.0.1C Updated Index to reflect change to subsection 2.1
- 6229-A4 C3.2.1-2A New Drawing Added for Dual PMT SQ Sloping Site

### **Section E1 - Assemblies**

- 6229-A4-E1-2.3-1B Add Heatshrink tube for phase connection

## **Section E2 - Padmount Transformers**

6229-A4-E2-0.1C	Updated to include new drawing E2-4.5.1A
6229-A4-E2-1.1-3D	Change description 22545 to single cable connection
6229-A4-E2-4.5-1A	New Drawing Added Dual PMT SQ Common Earth Arrangement

## **Section E4 - Cable Installation and Testing**

6229-A4-E4-0-1C	Updated to reflect subsection E4-2 1F now only 9 pages
6229-A4-E4-2 1F Note 5	Section 12 added LV testing. Test adaptor for elbow added sheet 9

## **E5. LV Joints & Terminations**

6229-A4-E5-0-1H pages	Updated to reflect subsection E5-1.1D now 10 pages and E5-7H now 4
6229-A4-E5.1.1D	Added P10 connectors for repairs
6229-A4-E5-3.6C	Added heatshrink tube over lug
6229-A4-E5-7.1B	Added link pillar details
6229-A4-E5-7.2B	Added link pillar details
6229-A4-E5-7.3B	Added heatshrink tube & glove to cable term
6229-A4-E5-7.4A	New Drawing 250A Link pillar
6229-A4-E5-14.1B	Frame earth bond & insulated top bar added

17/09/2014

Version 12

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## **E2. Padmount Transformers**

6229-A4-E2-1.1-3C	Corrected Stock Code 22545 with 22546 for 160A, 3- Pole Fuse Switch
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## **E5. LV Joints & Terminations**

6229-A4 UDC-E5-0-1G	5.15 added
6229 A4 UDC-E5-5.15-1A	New Drawing LV Disconnection Box 2 Way & 4 Way

04/08/2014

Version 11

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## **Civil Works Section C2 Excavation and Reinstatement**

6229-A4 C2-2.1-1D	Changed Max depth in footpath 1400mm
6229-A4 C2-2.1-2C	Notes 13 & 14 added
6229-A4 C2-3 2-2C	Additional resurfacing Layer between asphalt and concrete slab
6229-A4 C2-3.2-3B	Note for Storm water added. Notes updated

23/07/2014

Version 10

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## **E4. Cables**

UDC-E4-2 1E – Replaced missing notes to Sheet 9 omitted in version D & E

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05/06/2014  
Version 9

### **Electrical Section E1 - Electrical Assemblies**

UDC-E1-2.7-3D      Replace Shroud with Heatshrink Sleeve

### **E5. LV Joints & Terminations**

UDC-E5-5.13-1A      2 ½ Way Link Pillar

UDC-E5-5.14-1A      3 Way Link Pillar

### **E6. HV Joints & Terminations**

UDC-E6-3.3-2C      Type 4 guard for 400Al cable to allow for added LV Cable

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02/05/2014

Version 8

Updated Version and Manual Number

### **C4. Other Ground Mounted Plant**

UDC-C4-0-1C      Add LV Distribution Supply Cabinets

Added new drawings as below for new LV Distribution Supply Cabinets

UDC-C4-2.1-1A

UDC-C4-2.1-2A

UDC-C4-2.1-3A

UDC-C4-2.1-4A

UDC-C4-2.1-5A

UDC-C4-2.1-6A

UDC-C4-2.1-7A

### **Electrical Section E1 - Electrical Assemblies**

UDC-E1-2.6-1D      LV Term Kits Replaced with Crimp Plugs

UDC-E1-2.7-1D      Removed Contact Washer Replace Belleville with Split Washer

UDC-E1-2.7-2D      Remove Contact Washer and Belleville Washers

UDC-E1-2.7-3C      Remove Contact Washer and Belleville Washer

UDC-E1-2.7-4D      Spring Washer Added

UDC-E1-2.7-5C      Remove Contact Washer and Add Split Washers

UDC-E1-2.7-6D      Remove Contact Washer Insert Spring Washer

UDC-E1-3.2-1C      Remove Contact Washer

### **E3. Other Ground Mounted Plant**

UDC-E3-0-1C Add LV Distribution Supply Cabinets

Added new drawings as below for new LV Distribution Supply Cabinets

UDC-E3-2.1-1A

UDC-E3-2.1-2A

UDC-E3-2.1-3A

UDC-E3-2.1-4A

UDC-E3-2.1-5A

### **E4. Cables**

UDC-E4-2 1D      Reference WP1072 Revised Selection Criteria

## **E7. Earthing**

UDC-E7-0-1B	Index updated
UDC-E7-1.1- 1_2C	Added LV Supply Cabinets Earthing Info
UDC-E7-2.1-1D	Added LV Supply Cabinets Earthing Info

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15/01/2014  
Version 7

Updated to major version number to suit new document management system  
No change to content

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24/12/2013  
Version 6.6  
Revised Version

## **E5. LV Joints & Terminations**

6229-A4 E5-5.12-1A	AFLC Filter Pillar Added
6229-A4 E5-5.12-2A	AFLC Filter Pillar Added

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24/09/2013  
Version 6.5  
Revised Version

## **Civil Works Section C1 Conduits**

6229-A4 C1-2.2-2C	Added White Split Conduit
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## **Civil Works Section C2 Excavation and Reinstatement**

6229-A4 C2-2.1-1C	Clearance to gas revised 250mm
6229-A4 C2-2.2-1B	Clearance to gas revised 250mm

## **Civil Section C6 - Cables**

6229 A4 C6-1.1-4B	Added notes 4 and 5
6229 A4 C6-1.2-1D	Added 4c 185 LV

## **Electrical Section E1 - Electrical Assemblies**

6229-A4 E1-2.3-2A	New Pillar assembly 400A CFS Unit and Frame
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12/12/2012  
Version 6.4  
Revised Version

## **Electrical Section E1 - Electrical Assemblies**

6229-A4 E1-2.5-1B	Replace SC15726 with SC20365
6229-A4 E1-2.6-1C	Replace SC15726 with SC20365
6229-A4 E1-2.8-1D	Replace SC15726 with SC20365
6229-A4 E1-2.8-3D	Replace SC15726 with SC20365
6229-A4 E1-4.1-1C	Replace SC15726 with SC20365

## **E2. Padmount Transformers**

6229-A4 E2-4.1-1D	Change Earth Rod SC to SC22946
6229-A4 E2-4.2-1C	Change Earth Rod SC to SC22946
6229-A4 E2-4.3-1D	Change Earth Rod SC to SC22946
6229-A4 E2-4.4-1C	Change Earth Rod SC to SC22946

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### **E5. LV Joints & Terminations**

6229-A4 E5-5.8-2C                      Replace SC15726 with SC20365

### **E6. HV Joints & Terminations**

6229-A4 E6-1.1H                      Correct Various CU's

### **E7. Earthing**

6229-A4 E7-2.1-1C                      Change length of Earth Rod to 1.44m

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09/11/2012

Version 6.3

Revised Version

### **Civil Section C5 – Pits**

Updated Drawing and Notes

6229-A4 C5-1-13-3B                      Earth Rod Length Updated

### **Electrical Section E1 - Electrical Assemblies**

Updated Drawings

6229-A4 E1-2.1-1C                      Earth Rod Updated to SC22946

6229-A4 E1-2.1-2D                      Earth Rod Updated to SC22946

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16/06/2012

Version 6.2

Revised Version

### **Civil Section C5 – Pits**

Updated Drawing and Notes

6229-A4 C5-1-13-3B                      Civil Works - Pits. Concrete. Reinforced Concrete Pit – RMU

### **Electrical Section E1 - Electrical Assemblies**

Updated Drawings – Corrected reference to E5-1.1-9

6229-A4 E1-2.7-1C                      Electrical – Electrical Assemblies LV Pillars – Shear Head Lugs

6229-A4 E1-2.7-2C                      Electrical – Electrical Assemblies LV Pillars – Shear Head Lugs

6229-A4 E1-2.7-4C                      Electrical – Electrical Assemblies LV Pillars – Shear Head Lugs

6229-A4 E1-2.7-5C                      Electrical – Electrical Assemblies LV Pillars – Shear Head Lugs

6229-A4 E1-2.7-6C                      Electrical – Electrical Assemblies LV Pillars – Shear Head Lugs

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28/05/2012

Version 6.1

Revised Version

Drawings added as below

### **C5 – Pits**

<b><u>Drawing No</u></b>	<b><u>Description</u></b>
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6229-A4 C5-0-1C	Index updated to reflect new drawings
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6229-A4 C5-1.13-1A	Civil Works - Pits. Concrete. Reinforced Concrete Pit – RMU.
6229-A4 C5-1.13-2A	Civil Works - Pits. Concrete. Reinforced Concrete Pit – RMU.
6229-A4 C5-1.13-3A	Civil Works - Pits. Concrete. Reinforced Concrete Pit – RMU.

08/02/2012

Version 6.0

Revised Version

Numerous changes have been implemented including updates resulting from Standards Alerts and the following summarises the changes:

### **Section 0 (Reference Guide)**

This section has been removed in its entirety

### **Civil Section**

#### **C1. Conduits**

- C1-0 Alter the index to reflect changes in this section
- C1-1 Sh1 Change LV bend angle (degrees) for 100mm conduit from 75 to 90deg.
- C1-2 Sh1 Add 50mm White Comms conduit bends to matrix.  
Update notes  
Complete white conduit table
- C1-2 New Sh2. Add conduit table with size, description, store code, class, ID, OD, wall size & diameter over socket.  
Update notes  
Complete white conduit table

#### **C2. Excavation & Reinstatement**

- C2-0 Alter the index to reflect changes in this section
- C2-1 Sh3 Update AS 1289 reference
- C2-3.1 Correct spelling in note 6
- C2-3.4 Sh1&2 Add Energex Telecommunications conduit to trench sections with HV conduits  
Remove Sheet 2 – Trench sections showing Direct Laid Cables.
- C2-3.5 Sh1-4 Create 4 new sheets/layouts for 6, 9, 12 & 15 Duct/Conduit system
- C2-4.8 Sh1 Change Section 1 – with Kerb detail to show 900mm level working area from pillar at top bank, reference to safety fence requirements/standards and show fence in section 1
- C2-4.9 Sh1 Change Section 1 – with Kerb detail to show 900mm level working area from pillar at top bank, reference to safety fence requirements/standards and show fence in section 1

#### **C3 – Padmount Transformer Sites**

- C3-0 Alter the index to reflect changes in this section
- C3-1-5 Change Plinth outline to reflect new contract
- C3-1-8 Correct AS2189
- C3-2.1 Sh1 Change Section A and plan view to show new PMT & plinth outline/detail  
Drawn to Scale.
- C3-2.2 Sh1 Change Section A, B and plan view to show new PMT & plinth outline/detail.  
Drawn to Scale.  
Change drawing description from 'Uniculvert Foundation Details – Standard' to 'Foundation Details – Uniculvert'
- C3-2.3 Sh1 Change dimension from footpath RP to pier 2 & 4 from 1435mm to 2555mm and look at possibility of scaling the drawing. Drawn to Scale  
Change drawing description from 'Uniculvert Foundation Details – Pier' to 'Foundation Details – Pier'  
Change Plinth outline/detail in Plan & Section A

- C3-2.3 Sh2 Change drawing description from 'Uniculvert Foundation Details – Pier' to 'Foundation Details – Pier'
- C3-2.5 Sh1 Change Section A, B and plan view to show new PMT & plinth outline/detail  
Drawn to Scale
- C3-2.6 Sh1 Change Section A to show new PMT & plinth outline/detail  
Move unculvert to reflect a more realistic location to the front and rear site boundary. This drawing not to scale
- C3-2.6 Sh2 Change Section A to show new PMT & plinth outline/detail  
Move unculvert to reflect a more realistic location to the front and rear site boundary. This drawing not to scale
- C3-2.6 Sh3 Change Section A to show new PMT & plinth outline/detail  
Move unculvert to reflect a more realistic location to the front and rear site boundary. This drawing not to scale
- C3-2.6 Sh4 Change Section A to show new PMT & plinth outline/detail  
Move unculvert to reflect a more realistic location to the front and rear site boundary. This drawing not to scale
- C3-2.7 Sh1 Change detail for new PMT & plinth footprint. Investigate the standards group thoughts for removing this type of construction practice due to difficulties and complications in developer & Energex construction.
- C3-3.2 Sh1 Change drawing description from 'Uniculvert Foundation Details – Standard' to 'Foundation Details – Uniculvert'
- C3-3.3 Sh1 Change drawing description from 'Uniculvert Foundation Details – Pier' to 'Foundation Details – Pier'
- C3-3.3 Sh2 Change drawing description from 'Uniculvert Foundation Details – Pier' to 'Foundation Details – Pier'
- C3-3.6 Sh2 Update concrete strengths reference

#### **C4. Other Ground Mounted Plant**

- C4-0 Sh1 Add newly formed sheets transferred from section C3
- C4-1 Sh1-4 Remove Merlin Gerin CB spec and insert ABB free standing spec similar to C&I manual. Reference C&I duplication. Name this 11kV RMU section C4-1.1 to all for future 11kV switchgear to be added

#### **C5. Pits**

- C5-0 Sh1 Text correction for Sub Section E5-1.1 and add Sub Section C5-1.13
- C5-1.5 Sh1 Updated lids to metric
- C5-1.6 Sh5 SC22625 class D pit lid added
- C5-1.6 Sh6 SC19615 class D pit lid added
- C5-1.7 Sh1 Move Access steps to road side of pit details
- C5-1.8 Sh1 Move Access steps to road side of pit details
- C5-1.9 Sh1 Move Access steps to road side of pit details
- C5-1.10 Sh1 Move Access steps to road side of pit details
- C5-1.11 Sh1&2 Move Access steps to road side of pit details
- C5-1.12 Sh1 Move Access steps to road side of pit details  
Direct purchase notes updated

#### **C6. Cables**

- C6-0 Sh1 Change Sub Section 2 name 'Protection & Identification' to 'Mechanical Protection & Identification'
- C6-1.2 Sh1 Add 400mm Al 3 x 1C TR XLPE/SCR/MDPE 11kV cable
- C6-2.1 Sh1-4 Change Sub Section 2 name 'Protection & Identification' to 'Mechanical Protection & Identification'
- C6-2.2 Sh1 Change Sub Section 2 name 'Protection & Identification' to 'Mechanical Protection & Identification'  
Remove retro-fit assemblies

- C6-2.2 Sh2 Change Sub Section 2 name 'Protection & Identification' to 'Mechanical Protection & Identification'
- C6-2.3 Sh1&2 Change Sub Section 2 name 'Protection & Identification' to 'Mechanical Protection & Identification'
- C6-2.4 Sh1&2 Change Sub Section 2 name 'Protection & Identification' to 'Mechanical Protection & Identification'

## **Electrical Section**

### **E1. Assemblies**

- E1-0 Alter the index to reflect changes in this section
- E1-1.1 Remove Sheet 2
- E1-2.1 Sh2 3-way MEN pillar earthing assembly 1011-2-2 removed and tightening torque added
- E1-2.6 Add heatshrink tube & glove to term. Change assembly code. Remove sheet 2
- E1-2.7 Sh1 New drawings for shearhead lugs. Move obsolete drawings to section 2.11
- E1-2.7 Sh2 New drawings for shearhead lugs. Move obsolete drawings to section 2.11
- E1-2.7 Sh3 New drawings for shearhead lugs. Move obsolete drawings to section 2.11
- E1-2.7 Sh4 New drawings for shearhead lugs. Move obsolete drawings to section 2.11
- E1-2.7 Sh5 New drawings for shearhead lugs. Move obsolete drawings to section 2.11
- E1-2.7 Sh6 New drawings for shearhead lugs. Move obsolete drawings to section 2.11
- E1-2.8 Sh1 Heatshrink glove added
- E1-2.8 Sh3 Update CU's
- E1-2.11 Sh1 Move drawing from section 2.7 and made obsolete
- E1-2.11 Sh2 Move drawing from section 2.7 and made obsolete
- E1-2.11 Sh3 Move drawing from section 2.7 and made obsolete
- E1-2.11 Sh4 Move drawing from section 2.7 and made obsolete
- E1-2.11 Sh5 Move drawing from section 2.7 and made obsolete
- E1-2.11 Sh6 Move drawing from section 2.7 and made obsolete
- E1-3.2 Sh1 Update CU's
- E1-3.2 Sh2 Update CU's
- E1-3.5 Sh1 Update CU's
- E1-4.1 Sh1 Update CU's
- E1-5.1 Sh1 Remove pack quantity
- E1-5.3 Sh1 Add rubber protective insert to universal clamp

### **E2. Padmount Transformers**

- E2-0 Sh1 Alter the index to reflect changes in this section
- E2-1.1 Sh1 Update new contract items and stockcodes.  
Move original drawings to section 1.3
- E2-1.1 Sh2 Update new contract items and stockcodes.  
Move original drawings to section 1.3
- E2-1.1 Sh3 Update new contract items and stockcodes.  
Move original drawings to section 1.3
- E2-1.2 Sh1 Update new contract items and stockcodes.  
Move original drawings to section 1.3
- E2-1.2 Sh2 Update new contract items and stockcodes.  
Move original drawings to section 1.3
- E2-1.2 Sh3 Update new contract items and stockcodes.  
Move original drawings to section 1.3
- E2-1.3 Sh1 Drawings moved from sections 1.1 and 1.2, then made obsolete
- E2-1.3 Sh2 Drawings moved from sections 1.1 and 1.2, then made obsolete
- E2-1.3 Sh3 Drawings moved from sections 1.1 and 1.2, then made obsolete
- E2-1.3 Sh4 Drawings moved from sections 1.1 and 1.2, then made obsolete
- E2-1.3 Sh5 Drawings moved from sections 1.1 and 1.2, then made obsolete
- E2-1.3 Sh6 Drawings moved from sections 1.1 and 1.2, then made obsolete

E2-1.4 Sh1	Drawing made obsolete
E2-1.5 Sh1	Add special use text to title
E2-1.6 Sh1	Add old contract text to title
E2-1.8 Sh1	Drawing made obsolete
E2-1.9 Sh1	Add old contract text to title
E2-1.10 Sh1	ABB DFD RMU replaced with AREVA/Schneider FBX RMU
E2-1.11 Sh1	Update notes. Title Change. Table updated to TSD0013d
E2-2.1 Sh1	Changed to Wilson PMT – Old drawing moved to 2.11 Sh1
E2-2.1 Sh2	New sheet – Wilson PMT
E2-2.1 Sh3	New sheet – Wilson PMT
E2-2.3 Sh1	Add old contract text to title
E2-2.4 Sh1	Add old contract text to title
E2-2.5 Sh1	Add old contract text to title
E2-2.6 Sh1	Add old contract text to title
E2-2.7 Sh1	Add old contract text to title
E2-2.8 Sh1	Add old contract text to title
E2-2.9 Sh1	Add old contract text to title
E2-2.11 Sh1	Moved from 2.1 Sh1 – Paralleling cable up to 240 sqmm for ABB
E2-4.1 Sh1	Alter Plinth to new contract. Correct CU
E2-4.2 Sh1	Alter Plinth to new contract. Correct CU
E2-4.3 Sh1	Correct CU
E2-4.4 Sh1	Correct CU

### **E3. Other Ground Mounted Plant**

E3-0 Sh1	Add newly formed Sheets
E3-1.1 Sh1	Remove Merlin Gerin CB. Show ABB safelink outdoor RMU detail
E3-1.1 Sh2	New sheets – ABB safelink RMU's
E3-1.1 Sh3	New sheets – ABB safelink RMU's
E3-1.1 Sh4	New sheets – ABB safelink RMU's
E3-1.1 Sh5	New sheets – ABB safelink RMU's
E3-1.1 Sh6	New sheets – ABB safelink RMU's

### **E4. Cables**

Cover Sheet	Change name of Section E4 – from 'Cables' to 'Cable Installation & Testing'
E4-0	Update Section Index with section name change
E4-1.1 Sh1-3	Change Section Name text on all sheets
E4-2.1 Sh1-10	Change Section Name text on all sheets
E4-2.1 Sh2	Change Text – The word 'Loop' in the LV Phasing Test paragraph to be replaced with 'link'

### **E5. LV Joints & Terminations**

E5-0	Update index to cover all changes
E5-1.1	Move Sub-section 1.3 to Sub section 1.1. Remove existing 1.1 Details of kits
E5-2.2 Sh1	Drawing made obsolete
E5-2.2 Sh2	Add new note
E5-2.3 Sh1	Add note 5. Update CU
E5-2.5 Sh1	Drawing made obsolete
E5-2.5 Sh2	Drawing made obsolete
E5-2.5 Sh3	Add new note
E5-2.6 Sh1	Drawing made obsolete
E5-2.6 Sh2	Add new note
E5-2.7 Sh1	Drawing made obsolete
E5-2.7 Sh2	Drawing made obsolete
E5-2.8 Sh1	Drawing made obsolete
E5-2.8 Sh2	Drawing made obsolete
E5-2.9 Sh1	Drawing made obsolete. Add new note
E5-2.9 Sh2	Drawing made obsolete. Add new note

- E5-2.9 Sh3 Drawing made obsolete. Add new note
- E5-2.9 Sh4 Drawing made obsolete. Add new note
- E5-3.1 Sh1 Update CU
- E5-3.3 Sh1 Alter wording in title
- E5-3.3 Sh2 Alter wording in title
- E5-3.3 Sh3 Alter wording in title
- E5-3.4 Sh1 Alter wording in title
- E5-3.4 Sh2 Alter wording in title
- E5-3.4 Sh3 Alter wording in title
- E5-3.4 Sh4 Alter wording in title
- E5-3.4 Sh5 Alter wording in title
- E5-3.5 Sh1 Alter wording in title
- E5-3.6 Sh1 Add heatshrink tube and glove to cable termination
- E5-3.7 Sh1 Update CU
- E5-4.1 Sh1 Correct Spelling
- E5-5.1 Sh2 Add heatshrink tube and glove to cable termination. Modify pillar base & fuse panel wiring
- E5-5.2 Sh2 Add heatshrink tube and glove to cable termination. Modify pillar base & fuse panel wiring
- E5-5.3 Sh1 Add heatshrink tube and glove to cable termination. Modify pillar base & fuse panel wiring
- E5-5.3 Sh2 Add heatshrink tube and glove to cable termination. Modify pillar base & fuse panel wiring
- E5-5.4 Sh1 Update CU
- E5-5.4 Sh2 Add heatshrink tube and glove to cable termination.
- E5-5.5 Sh1 Add heatshrink tube and glove to cable termination. Modify pillar base
- E5-5.6 Sh1 Remove reference to tape set on lugs and show heatshrink
- E5-5.7 Sh3 Add heatshrink tube and glove to cable termination
- E5-5.8 Sh4 Update stockcodes
- E5-5.9 Sh2 Text change
- E5-5.10 Sh1 Text change

**E6. HV Joints & Terminations**

- E6-0 Sh 1-2 E6-0 Sh 2-2 Update index to cover all changes
- E6-1.1 All Sheets Update to include all new stockcodes and CU's  
Change Areva to Areva/Schneider on sheets's13,14,15
- E6-2.1 Sh1 Drawing now obsolete
- E6-2.1 Sh2 Drawing now obsolete
- E6-2.1 Sh3 Drawing now obsolete
- E6-2.2 Sh1 Drawing now obsolete
- E6-2.2 Sh2 Drawing now obsolete
- E6-2.2 Sh3 Drawing now obsolete
- E6-2.3 Sh1 Drawing now obsolete
- E6-2.3 Sh2 Drawing now obsolete
- E6-2.4 Sh1 Drawing now obsolete
- E6-2.4 Sh2 Drawing now obsolete
- E6-2.5 Sh1 Drawing now obsolete
- E6-2.5 Sh2 Drawing now obsolete
- E6-2.6 Sh1 Drawing now obsolete
- E6-2.6 Sh2 Drawing now obsolete
- E6-2.7 Sh1 Drawing now obsolete
- E6-2.7 Sh2 Drawing now obsolete
- E6-2.8 Sh1 Drawing now obsolete
- E6-2.8 Sh2 Drawing now obsolete
- E6-2.8 Sh3 Drawing now obsolete
- E6-2.9 Sh1 Drawing now obsolete

E6-2.9 Sh2	Drawing now obsolete
E6-2.9 Sh3	Drawing now obsolete
E6-2.10 Sh1	Drawing now obsolete
E6-2.10 Sh2	Drawing now obsolete
E6-3.1 Sh1	Update table
E6-3.1 Sh2	Add columns for 150 sqmm cable
E6-3.1 Sh3	Update notes
E6-3.1 Sh4	CCT Bridging used and notes added
E6-3.1 Sh5	CCT Bridging used and notes revised
E6-3.2 Sh1	Correct lugs
E6-3.2 Sh2	Update table
E6-3.2 Sh3	Update notes
E6-3.2 Sh4	Update Notes
E6-3.2 Sh5	CCT Bridging used and notes revised
E6-3.3 Sh1	Moved to 3.4 to allow for Triplex
E6-3.3 Sh2	Moved to 3.4 to allow for Triplex
E6-3.3 Sh3	Moved to 3.4 to allow for Triplex
E6-3.3 Sh4	Moved to 3.4 to allow for Triplex
E6-3.3 Sh5	Moved to 3.4 to allow for Triplex
E6-3.3 to E6-3.20	Renumber all sheets from E6-3.3 to 3.20 to allow for new Triplex drawings. Triplex information added to drawings
E6-10.1 Sh1	Correct CU's
E6-10.1 Sh2	Correct CU's
E6-10.1 Sh3	Correct CU's
E6-10.1 Sh4	Correct CU's
E6-16.1 Sh1	Drawing now obsolete
E6-16.1 Sh2	Drawing now obsolete

## **E7. Earthing**

E7-1.1 Sh1	Replace reference to Supply & Planning Manual with Distribution Earthing Manual – BMS 03535
E7-2.1 Sh1	Update Notes

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01 April 2010  
Version 5.1  
Revised Version

Revised Electrical Section E5 – LV Joints and Terminations. Added Sub-Section 1.3 Selection Matrix.

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17 November 2009  
Version 5.0  
Revised Version

Numerous changes have been implemented including updates resulting from Standards Alerts and the following summarises the changes:

- Excavation and Reinstatement
  - C2.2.1 ENERGEX comms conduit note revised (Sht 1) and note 13 revised (Sht 2)
  - C2.2.3 Sunshine Coast & Pine Rivers alignments revised
- Padmount Transformer Sites
  - C3.2.3 “Includes Plinth” added to Section A
  - C3.2.4 General Arrangement note for lifting & handling of square padmounts added
  - C3.2.7 Basement ceiling dims amended, see plan view, note 6 added

- Pits
  - C5.1.4 Sheet 3 redrawn
  - C5.2.1 Notes updated & reference to OHCM added
  - C5.2.2 Drawing revised
- Cables
  - C6.2.1 Note 5.5 added on sheet 3
- Assemblies
  - E1.2.1 3-way MEN pillar earthing assembly 1011-2-2 removed & tightening torque added
  - E1.2.8 Slotted holes added to fuse panels
- Padmount Transformers
  - E2.4.1 Earth rod dims & earth connection revised
  - E2.4.3 Earth rod dim. 400 was 100
- Cables
  - E4.2.1 All sheets revised for VLF test
- LV Joints and Terminations
  - E5.5.3 MEN pillar earthing assembly removed (3-way pillar)
  - E5.5.8 Slotted holes added to fuse panels
- HV Joints and Terminations
  - E6.3.17 Raychem boot & new tables added, sheet 3 removed

31 May 2009  
Version 4.1  
Revised Version

Revised several sections for introduction of 11kV triplex cables and new HV joint and termination CUs. Changes to sections E1, E4, E6, C6.

10 October 2008  
Version 4.0  
Revised Version

Major reformatting of the Underground Distribution Construction Manual was carried out, splitting the document into Civil and Electrical parts to correspond with the needs of different user groups in the field. However, no significant changes were made to content. A single drawing number (6229-A4) was taken out to cover the document in lieu of the individual sheet drawing numbers.

22 May 2008  
Version 3.0  
Revised Version

A major review of the Underground Distribution Construction Manual is complete. It has been compiled in conjunction with various stakeholders, in particular the Underground WIPT. Section 9 "Gas" has been removed after sale of AllGas. Numerous minor changes have been implemented and the following summarises major changes:

- Assemblies

- 7230-A4 Torque note added
  - 7231-A4 Torque note added
  - 7341-A4 Assembly 1350-4 and 1350-5 added
  - 7344-A4 Extension detail, dimensions & hand grip points shown.
  - 7350-A4 Torque note added
  - 7377-A4 Torque note added
  - 7496-A4 Assembly 1320-1 Step Rung (Cast in-situ) removed.
  - 7543-A4 Torque note added
  - 7544-A4 Torque note added
  - 7545-A4 Torque note added
  - 7547-A4 Torque note added
  - 7563-A4 Torque note added
- Conduits and Joint Use Trenching
    - 7714-A4 Altered (Contents sheet)
    - 7454-A4 Altered clauses 4, 10 & 11.
    - 7455-A4 White conduits and reducers added
    - 7456-A4 Notes 1.1, 1.3, 2.1 altered. Deleted Gas references. Reformatted.
    - 7458-A4 Reference to Logan City Council added (Clause 2). Deleted 5.2, 6.2 and part 23. Reformatted drawing.
    - 7503-A4 SHT 1 Exclusion zone shading for alignment and each side of pillars. Note added. Gas main shown.
    - 7503-A4 SHT 2 Gas main shown.
    - 7504-A4 SHT 1 Primary and Secondary Communication Pit locations shown for the situation where conduits service corridor allows both electricity and communication in same space. Alternative dimensions added.
    - 7505-A4 SHT 2 Primary and Secondary Communication Pit locations shown for the situation where conduits service corridor allows both electricity and communication in same space.
    - 7506-A4 SHT 1 Primary and Secondary Communication Pit locations shown for the situation where conduits service corridor allows both electricity and communication in same space.
    - 7506-A4 SHT 2 Adjusted exclusion zone.
    - 7513-A4 SHT 1 Redrawn to scale. New trench section shown. Dimensions altered. Notes moved to new sheet and 10 to 13 added.
    - 7513-A4 SHT 2 New Drawing. Notes (only) from 7513-A4 added.
    - 7515-A4 Note 6 added. Note 9 revised. Common Service Corridor changed from 1000 to 1500mm.
    - 7516-A4 Reinstate Drawing. Construction Direct Laid Cable. Note 4 added.
    - 7517-A4 Reinstate Drawing. Construction Direct Laid Cable. Note 4 added.
    - 7526-A4 Reinstated Drawing. Conduits in footpaths. Cable protection reduced depth. Conduit separation changed to 50mm minimum. Bedding material changed.
    - 7527-A4 Conduit separation changed to 50mm minimum and title changed.
    - 7527-A4 SHT 2 New Drawing. Conduits in minor roadways. Cable protection for reduced depths. Conduit separation changed to 50mm minimum. Dimension added fro reinforcing.
  - Conduits and Joint Use Trenching (Continued)
    - 7576-A4 Cable Protection to Warning Tape dimension altered from 75mm to 100mm. Notes altered.
    - 9309-A4 New Drawing. Council alignments for new (Amalgamated) Councils.
    - 9310-A4 New Drawing. Distribution Cables in Logan City Council roads.
    - 9310-A4 SHT 2 New Drawing. Distribution Cables in other Council roads.
  - Concrete Pits
    - 7485-A4 SHT 2 Removed SC06908c dwg. Introduced SC19606 dwg. Installation notes.
    - 7487-A4 SHT 1 Assembly 1320-1 Removed. Assembly 1320-3 Added. Dimension "W" altered. Pit end to lid increased from 2300 to 2500mm max
    - 7487-A4 SHT 2 Assembly 1320-1 Removed. Assembly 1320-3 Added. Dimension "W" altered.

- 7488-A4 SHT 1 Assembly 1320-1 Removed. Assembly 1320-3 Added. Dimension “W” altered. Dim. Pit end to lid increased from 2300 to 2500mm max
  - 7488-A4 SHT 2 Assembly 1320-1 Removed. Assembly 1320-3 Added. Dimension “W” altered.
  - 7489-A4 SHT 1 Assembly 1320-1 Removed. Assembly 1320-3 Added. Dim. Pit end to lid increased from 2300 to 2500mm max.
  - 7489-A4 SHT 2 Assembly 1320-1 Removed. Assembly 1320-3 Added. Hauling eyes to be located centre of dimension “H”, Dimension “W” altered.
  - 7490-A4 SHT 1 Assembly 1320-1 Removed. Assembly 1320-3 Added. Dimension “W” altered. Dim. Pit end to lid increased from 2300 to 2500mm max
  - 7490-A4 SHT 2 Assembly 1320-1 Removed. Assembly 1320-3 Added. Dimension “W” altered.
  - 7491-A4 SHT 1 Plastic coated steel pit step added. Dim Altered. Dim. Pit end to lid increased from 2300 to 2500mm max
  - 7491-A4 SHT 2 Assembly 1320-1 Removed. Assembly 1320-3 Added. Dimension “W” altered. Step rungs modified.
  - 7492-A4 SHT 1 Assembly 1320-1 Removed. Assembly 1320-3 Added. Note for civil design added.
  - 7492-A4 SHT 2 Assembly 1320-1 Removed. Assembly 1320-3 Added. Dimension “W” altered.
  - 7715-A4 Contents. Removed reference to 8588-A4
  - 8588-A4 Removed drawing – Pit Type 3/4
- Transformers
    - 7464-A4 All estates clear road reserves table changed. (extended) Wall Flat Site / With Retaining Wall
    - 7468-A4 Road reserve boundary changed to 4800mm x 5000mm.
    - 7470-A4 SHT 1 Dimensions altered.
    - 7472-A4 Dimensions altered and rescaled drawing
    - 7473-A4 SHT 1 Width of 4100mm x 4400mm changed to 4800mm x 5000mm. Concrete footing extended.
    - 7473-A4 SHT 2 Width of 4100mm x 4400mm changed to 4800mm x 5000mm Alt internal dim added
    - 7474-A4 SHT 1 Road reserve boundary changed to 4100mm x 4400mm. NGL changed for filled sites.
    - 7474-A4 SHT 2 Road reserve boundary changed to 4800mm x 5000mm.
    - 7475-A4 Typo “full sites” to be “fill sites”. Note 3 added.
    - 7478-A4 Note 3 changed. Earth notes changed. Clearance zone changed to 4800mm x 5000mm. Repositioned earth position to property side of trench.
    - 7479-A4 HV Earth rod note. Scale for 5600mm behind grid corrected. Repositioned earth position to property side of trench. Earth cables to and outside of Clearance zone insulated.
    - 7581-A4 All new information (old deleted) replaced AutoCAD with WORD. Title change.
    - 7574-A4 Dimensions altered.
    - 7575-A4 Full redraw, sub base extended for clarity. Added - plan view, notes, extra dim.
    - 7586-A4 Phase terminal markings shown on transformer
    - 7578-A4 Dim. Reserve increased. Repositioned earth position to property side of trench.
    - 7579-A4 Dimensions altered. Repositioned earth position to property side of trench. Earth cables to and outside of Clearance zone insulated.
    - 7581-A4 Replaced entire table (1 sheet previously)
    - 7771-A4 Clearance zone R.P to property boundary changed from 4300mm to 5000mm. Altered reinforcing. Note 3 altered.
    - 8409-A4 Dimensions altered.
    - 8410-A4 Stock codes added for culvert
    - 8411-A4 Dimensions altered.
    - 8412-A4 SHT 1 Dimensions altered. Alt internal dim added
    - 8412-A4 SHT 2 Dimensions altered.
    - 8413-A4 SHT 1 Dimensions altered.
    - 8413-A4 SHT 2 Dimensions altered.

- 8415-A4 Dimensions altered.
- 8416-A4 Full redraw, sub base extended for clarity. Added - plan view, notes, extra dim.
  
- Earthing
  - 7463-A4 Notes Added to 7.1 & 7.2
  
- Cables and Testing
  - 7717-A4 Altered (Contents sheet)
  - 8419-A4 Note 1.9 Added. Note 2.1 Revised for team leader duties. Title changed.
  - 7462-A4 Note 1.0, 2.0, 3.0 Removed (SHT 1 to 3). 3 new cables added. Title changed. Supplier and validity date altered. Pulling tension note removed.
  - 7457-A4 Notes 3.1, 6.2 revised. Title changed. Code of Practice ref. added. Gas references removed. reformatted
  - 7187-A4 Title changed.
  - 7461-A4 Note Revised Sht 7/10. Remove reference to krone's. Title changed.
  - 7459-A4 Title Changed. Reference to Technical Stands. Changed to Systems Engineering Group.
  - 7525-A4 Title Changed.
  - 7343-A4 Title Changed.
  
- LV Joints and Terminations
  - 7718-A4 SHT 1 Altered (Contents sheet)
  - 7718-A4 SHT 2 Altered (Contents sheet)
  - 7529-A4 SHT 1 No Change. Existing Drawing included.
  - 7529-A4 SHT 2 No Change. Existing Drawing included.
  - 7382-A4 SHT 2 Enclosure height note added.
  - 7383-A4 SHT 2 Enclosure height note added.
  - 7606-A4 SHT 2 Spelling correction
  - 7518-A4 SHT 1 Exclusion zone dim. made approx.
  
  - 7376-A4 Extended conduit to 100mm clearance of gaurd ends.
  - 9526-A4 New Drawing
  
- HV Joints and Terminations
  - 7719-A4-1 Altered (Contents sheet) Added new drawing 9527-A4
  - 7719-A4-2 Altered (Contents sheet) Added new drawing 18079-A4
  - 9527-A4 New Drawing
  - 18079-A3 SHT 1 New Drawing
  - 18079-A3 SHT 2 New Drawing
  - 18079-A3 SHT 3 New Drawing
  
- Gas
  - Section removed in entirety due to sale of AllGas.

13 May 2005  
 Version 2.1  
 Revised Version

This interim issue of Underground Construction Manual includes the following amendments:

- Assemblies
  - 7537-A4 3 way MEN pillar earthing added.
  - 7350-A4 4 x 240 sqmm added.
  - 7454-A4 Requirements for HD conduits removed.

- Conduits/Trenching/Cables
  - 7454-A4 Requirements for HD conduits removed.
  - 7513-A4 Gas main & trench dimensions from property peg clarified.
  - 7527-A4 300mm Conduit spacing modified to 50mm minimum.
  - 7576-A4 300mm Conduit spacing modified to 50mm minimum.
  - 7464-A4 Note added to include metal retaining wall fences.
  - 7771-A4 Dimensions changed
- Transformers
  - 7464-A4 Note added to include metal retaining wall fences.
  - 7771-A4 Dimensions changed.
  - 7468-A4 Stock codes added for unculvert
  - 7473-A4 External site dimension modified from 4400mm to 4300mm.
  - 8410-A4 Stock Codes Added for the unculvert.
- Earthing
  - 7463-A4 Earthing Clarified.
- Cables and Testing
  - 8419-A4 Section 1.9 Added.
  - 7459-A4 Cable ID may be performed by any qualified person.
- LV Joints and Terminations
  - 7718-A4 Overhead to underground service 7529-A4.
  - 7219-A4 120sqmm Cable no longer current.
  - 7220-A4 120/240sqmm Combination no longer current.
  - 7221-A4 Note 5 added.

The manual will be reviewed again in August 2005. Anticipated updates include:

- standardised 400A link pillar (possible simple retrofit for 250A link pillars).
- single cable reference table including all cables; size, rating, impedance, sheath fault rating, bending radii and application guidelines (refer Technical Instruction TSD0027).
- updates from award of transformer contracts
- review of detailed comments received for the interim revision.

12 January 2005  
Version 2.0  
Revised Version

A major review of the Underground Distribution Construction Manual is complete. It has been compiled in conjunction with various stakeholders, in particular the Underground WIPT. The previous manual's 14 sections have been consolidated into 9 sections. Numerous minor changes have been implemented and the following summarises major changes:

- Assemblies
  - Removed Belleville washers instead standardising on 2 flats and a spring.
  - New Lite Lift access covers included.
  - New Plasticised pit steps included.
- Conduits/Trenching/Cables
  - Bending radii and bends reviewed.
  - 300mm spacing between conduits implemented to improve cable ratings.
  - New conduit caps included.

- Reduced-depth conduit design for roadways revised.
- Pillars and Pits
  - Exclusion zone around pillars clarified.
  - Concrete pit included for padmount substations in CBD type situations.
  - Termination of conduits in pillars has been reviewed in line with conduit bends.
  - 3-Way MEN Pillar and Earth included.
- Padmounts
  - Clearance zones have been rationalised and standardised.
  - 300mm spacing between conduits implemented to improve cable ratings.
- Joints and Terminations
  - Missing joints included from Underground Jointing Manual.
  - Interim joints and terminations included prior to awarding new cable accessories contract CK09 (previously identified as CJ33).

The manual will be reviewed again in July/August 2005. Anticipated updates include:

- standardised 400A link pillar (possible simple retrofit for 250A link pillars).
- single cable reference table including all cables; size, rating, impedance, sheath fault rating, bending radii and application guidelines (refer Technical Instruction TSD0027).
- updates from award of cable accessories contract.
- updates from award of transformer contracts.

5 June 2002  
Version 1.0  
Initial Release

Construction details are provided for all low voltage and 11kV underground work to be carried out on the ENERGEX network. Although pre-existing designs and construction work may be under way, all effort shall be made to carry out new designs and construction in accordance with the issued documents from 1 August 2002.

The UDC documents supersede the following ENERGEX manuals and Standards Alert:

- Underground Jointing Manual
- Specification URD
- Supplement to Spec URD
- Guide to Design of Electricity Reticulation in Residential Estates
- Sect 1A & 1B of previous issue of Ground Type Distribution Substation Construction & Estimating Manual
- Standards Alert on Safelink RMU's No SAA01.1

The Technical Standards Department welcomes constructive feedback from all stakeholders.