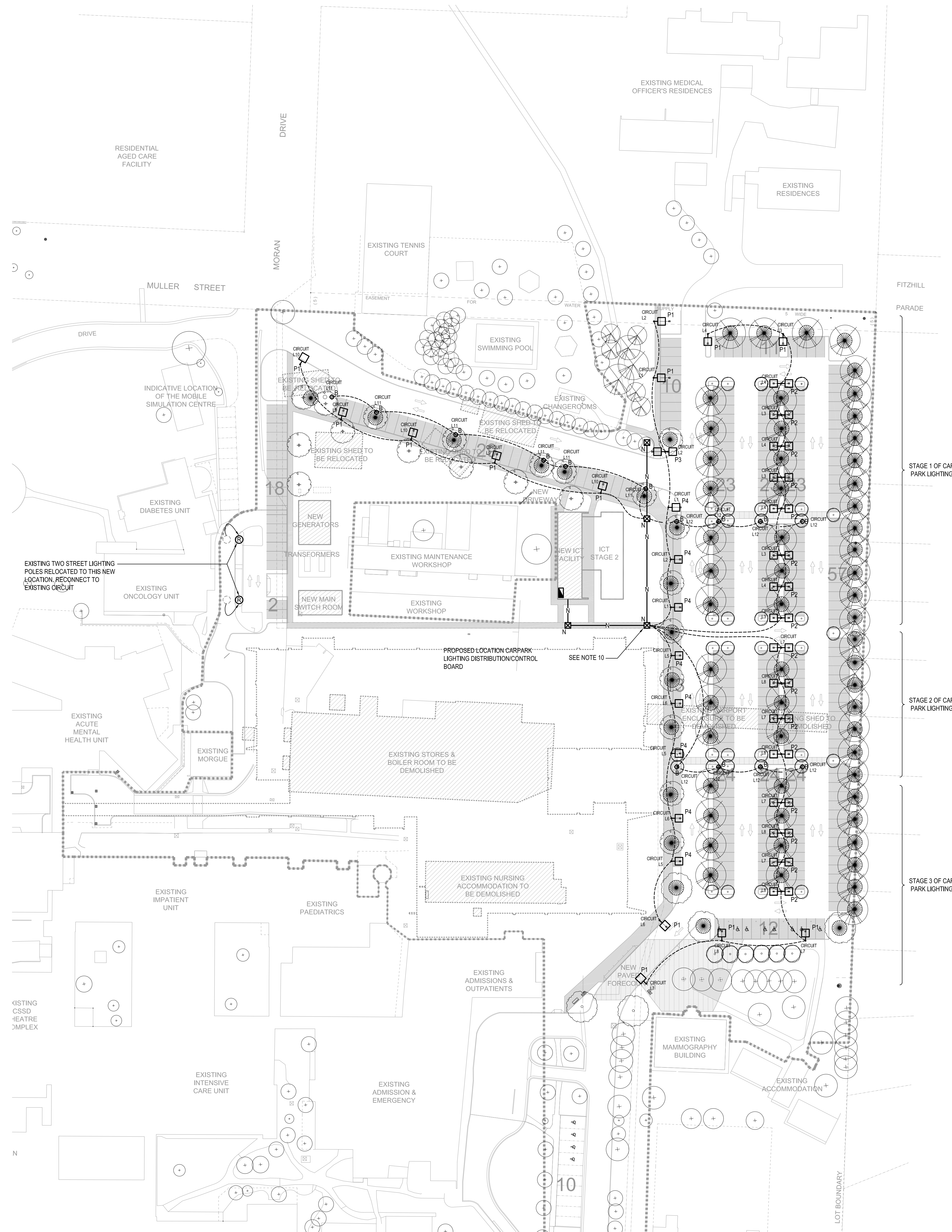




SITE SETOUT POINT
S.S.M. 57238

- ## BEDDING DENSITY TESTS
- TESTING AUTHORITY: HAVE DENSITY TESTS OF PIPE BEDDING CARRIED OUT BY AN AUTHORITY ACCREDITED BY NATA. TEST METHODS:
- FIELD DRY DENSITY: AS 1289.5.3.2 OR AS 1289.5.3.5.
 - STANDARD MAXIMUM DRY DENSITY: AS 1289.5.1.1.
 - DRY DENSITY RATIO: AS 1289.5.4.1.
 - DENSITY INDEX: AS 1289.5.6.1.
- ## 2. EXCAVATING
- ### EXISTING SURFACES
- BEFORE EXCAVATING TRENCHES, SAW-CUT EXISTING CONCRETE AND BITUMINOUS SURFACES ON EACH SIDE OF THE TRENCH TO PROVIDE A STRAIGHT EVEN JOINT. LIFT AND STORE UNIT PAVING FOR LATER REINSTATEMENT.
- ### EXCAVATION
- EXCAVATE FOR UNDERGROUND SERVICES, TO REQUIRED LINES, LEVELS AND GRADES. GENERALLY MAKE THE TRENCHES STRAIGHT BETWEEN PERSONNEL ACCESS WAYS, INSPECTION POINTS AND JUNCTIONS, WITH VERTICAL SIDES AND UNIFORM GRADES.
- ### SHORING AND LINING SYSTEMS
- STEEL SHORING AND TRENCH LINING SYSTEMS; TO AS 4744.1.
- ### TRENCH WIDTHS
- KEEP TRENCH WIDTHS TO THE MINIMUM CONSISTENT WITH THE LAYING AND BEDDING OF THE RELEVANT SERVICE AND CONSTRUCTION OF PERSONNEL ACCESS WAYS AND PITS.
- ### TRENCH LENGTHS
- EXCAVATE TRENCHES IN SECTIONS OF SUITABLE LENGTH.
- ### TRENCH DEPTHS
- GENERAL: AS REQUIRED BY THE RELEVANT SERVICE AND ITS BEDDING METHOD.
- NOTICE: IF AN EXCAVATION NECESSARY BELOW THE LEVEL OF ADJACENT FOOTINGS, GIVE NOTICE, AND PROVIDE NECESSARY SUPPORT FOR THE FOOTINGS.
- ### OBSTRUCTIONS
- CLEAR TRENCHES OF SHARP PROJECTIONS, CUT BACK ROOTS ENCOUNTERED IN TRENCHES TO AT LEAST 600 MM CLEAR OF SERVICES. REMOVE OTHER OBSTRUCTIONS INCLUDING STUMPS AND BOULDERS WHICH MAY INTERFERE WITH SERVICES AND BEDDING.
- ### DEWATERING
- KEEP TRENCHES FREE OF WATER, PLACE BEDDING MATERIAL, SERVICES AND BACKFILLING ON FIRM GROUND FREE OF SURFACE WATER.
- ### EXCESS EXCAVATION
- IF TRENCH EXCAVATION EXCEEDS THE CORRECT DEPTH, REINSTATE TO THE CORRECT DEPTH AND BEARING VALUE USING COMPACTED BEDDING MATERIAL OR GRADE NZ0 CONCRETE.
- ### WITNESS POINTS
- GIVE SUFFICIENT NOTICE SO THAT INSPECTION MAY BE MADE AT THE FOLLOWING STAGES:
- SERVICE TRENCHES EXCAVATED BEFORE LAYING THE SERVICE.
 - SERVICES LAID IN TRENCHES AND READY FOR BACKFILLING.
- ## 3. BORING
- ### SUBCONTRACTOR
- IF UNDER ROAD BORING IS REQUIRED IN LIEU OF TRENCHES, ENGAGE A SUITABLY QUALIFIED SUBCONTRACTOR TO DO THE WORK.
- ### PROCESS
- ENSURE A TIGHT FIT TO THE SERVICE PIPES, IF VOIDES ARE ENCOUNTERED, FILL BY PRESSURE GROUTING.
- ## 4. BACKFILLING
- ### GENERAL
- BACKFILL SERVICE TRENCHES AS SOON AS POSSIBLE AFTER THE SERVICE HAS BEEN LAID AND BEDDED. IF POSSIBLE ON THE SAME WORKING DAY, PLACE THE BACKFILL IN LAYERS 150 MM THICK AND COMPACT TO THE DENSITY WHICH APPLIES TO THE LOCATION OF THE TRENCHES TO MINIMISE SETTLEMENT, AND SO THAT PIPES ARE BUTTRESSED BY THE TRENCH WALLS.
- ### MARKING SERVICES
- UNDERGROUND MARKING TAPE: TO AS/NZS 2648.1.
- ### BACKFILL MATERIAL
- GENERAL: GENERAL FILL WITH NO STONES GREATER THAN 25 MM OCCURRING WITHIN 150 MM OF THE SERVICE, OR OTHER MATERIALS AS REQUIRED FOR PARTICULAR SERVICES OR LOCATIONS, WELL GRADED, INORGANIC, NON-PERISHABLE MATERIAL, MAXIMUM SIZE 75 MM, PLASTICITY INDEX 55%.
- UNDER ROADS AND PAVED AREAS AND WITHIN 4 M OF BUILDING: COARSE SAND, CONTROLLED LOW STRENGTH MATERIAL OR FINE CRUSHED ROCK.
- IN TPOIL AREAS: COMPLETE THE BACKFILLING WITH TPOIL FOR AT LEAST THE TOP 50 MM.
- IN REACTIVE CLAY: IN SITES CLASSIFIED M, H OR E TO AS 2870, PROVIDE AN IMPERVIOUS MATERIAL WHERE TRENCHES FALL TOWARDS FOOTINGS.
- ## 5. REINSTATEMENT OF SURFACES
- ### GENERAL
- REINSTATE EXISTING SURFACES REMOVED OR DISTURBED BY TRENCH EXCAVATIONS TO MATCH EXISTING AND ADJACENT WORK.
- ### LAWN AREAS
- PROVIDE 150 MM OF LOAM AND RESOW THE LAWN OVER THE TRENCH AND OTHER DISTURBED AREAS.
- ### PAVING AND ROADS
- REINSTATE TO MATCH ADJACENT WORK, PAVED SURFACES AND ASSETS DISTURBED OR REMOVED DURING EXCAVATION OF TRENCHING.
- ### CONCRETE SURFACES
- REINSTATE CONCRETE SURFACES TO THE ORIGINAL LEVEL, IF NECESSARY, PROVIDE STEEL REINFORCEMENT KEVED TO THE ADJACENT CONCRETE AND LAID TO PREVENT THE REINSTATEED CONCRETE FROM SUBSIDING AND CRACKING.
- ### BITUMINOUS SURFACES
- GENERAL: PROVIDE CRUSHED ROCK BASE AND SUB-BASE TO MATCH THE EXISTING PAVEMENT, PRIME COAT THE EDGES OF THE EXISTING SURFACING WITH BITUMEN, LAY AND COMPACT HOT-MIX ASPHALT SO THAT THE EDGES ARE FLUSH AND THE CENTRE IS CAMBERED 10 MM ABOVE THE EXISTING PAVEMENT. IF HOT PRE-MIX IS NOT AVAILABLE, COLD PRE-MIX MAY BE USED.
- MINIMUM ASPHALT THICKNESS: 50 MM OR THE ADJACENT PAVEMENT THICKNESS, WHICHEVER IS THICKER.
- ### UNIT PAVING
- PROVIDE SAND BEDDING AND, IF NECESSARY, COMPACTED CRUSHED ROCK BASE. REINSTATE THE PAVING UNITS.
- ## 6. CABLES IN TRENCHES
- ### SAND BED AND SURROUND
- PROVIDE CLEAN SHARP SAND AROUND CABLES AND CONDUITS INSTALLED UNDERGROUND.
- ### SEALING DUCTS AND CONDUITS
- SEAL BURIED ENTRIES TO DUCTS AND CONDUITS WITH WATERPROOF SEALS. SEAL SPARE DUCTS AND CONDUITS IMMEDIATELY AFTER INSTALLATION. SEAL OTHER DUCTS AND CONDUITS AFTER CABLE INSTALLATION.
- ## 7. CABLE PITS
- ### GENERAL
- DRAWN-A PITS: SIZES GIVEN ARE INTERNAL DIMENSIONS.
- ### PROPRIETARY CABLE PITS
- FOR PITS $\times 1.2 \times 1.2$ M. PROVIDE PROPRIETARY CONCRETE OR POLYMER MOULDED PITS.
- ### IN SITU CONSTRUCTION
- FOR PITS $\times 1.2 \times 1.2$ M. SELECT FROM THE FOLLOWING:
- PROPRIETARY CABLE PITS.
 - CONSTRUCT WALLS AND BOTTOMS FROM RENDERED BRICKWORK OR 75 MM THICK REINFORCED CONCRETE. INCORPORATE A WATERPROOFING AGENT IN THE RENDER OR CONCRETE.
- ### PIT COVERS
- GENERAL: PROVIDE PIT COVERS TO SUIT EXPECTED LOADS. FIT FLUSH WITH THE TOP OF THE PIT.
- STANDARD: TO AS 3996.
- MAXIMUM WEIGHT: 40 KG FOR ANY SECTION OF THE COVER.
- LIFTING HANDLES: PROVIDE A LIFTING HANDLE FOR EACH SIZE OF COVER SECTION.
- ### DRAINAGE
- GENERAL: PROVIDE DRAINAGE FROM THE BOTTOM OF CABLE PITS, EITHER TO ABSORPTION TRENCHES FILLED WITH RUBBLE OR TO THE STORMWATER DRAINAGE SYSTEM.
- ABSORPTION TRENCHES: MINIMUM SIZE 300 X 300 X 2000 MM.
- ## 8. UNDERGROUND CABLE ROUTES
- ### SURVEY
- ACCURATELY RECORD THE ROUTES OF UNDERGROUND CABLES BEFORE BACKFILLING.
- ### LOCATION MARKING
- GENERAL: ACCURATELY MARK THE LOCATION OF UNDERGROUND CABLES WITH ROUTE MARKERS CONSISTING OF A MARKER PLATE SET FLUSH IN A CONCRETE BASE.
- LOCATION: PLACE MARKERS AT EACH JOINT, ROUTE JUNCTION, CHANGE OF DIRECTION, TERMINATION AND BUILDING ENTRY POINT AND IN STRAIGHT RUNS AT INTERVALS OF NOT MORE THAN 100 M.
- CONCRETE BASES: 200 MM DIAMETER X 200 MM DEEP, MINIMUM.
- DIRECTION MARKING: SHOW THE DIRECTION OF THE CABLE RUN BY MEANS OF DIRECTION ARROWS ON THE MARKER PLATE, INDICATE DISTANCE TO THE NEXT MARKER.
- PLATES: BRASS, MINIMUM SIZE 75 X 75 X 1 MM THICK.
- PLATE FINISH: WATERPROOF ADHESIVE AND 4 BRASS OR STAINLESS STEEL COUNTERSUNK SCREWS.
- MARKER HEIGHT: SET THE MARKER PLATE FLUSH WITH PAVED SURFACES, AND 25 MM ABOVE OTHER SURFACES.
- ### MARKER TAPE
- WHERE ELECTRIC BRICKS OR COVERS ARE NOT PROVIDED OVER UNDERGROUND WIRING, PROVIDE A 150 MM WIDE YELLOW OR ORANGE MARKER TAPE BEARING THE WORDS "WARNING - ELECTRIC CABLE BURIED BELOW", LAID IN THE TRENCH 150 MM ABOVE GROUND LEVEL.
- ## 9. INITIALLY THE EXTERNAL LIGHTING DISTRIBUTION/CONTROL BOARD WILL NOT BE AVAILABLE FOR THE FIRST STAGE OF THE CAR PARK LIGHTING. THEREFORE CONNECT THE CAR PARK LIGHTING TO THE EXISTING MAINTENANCE WORKSHOP'S DISTRIBUTION BOARD ON A TEMPORARY BASIS UNTIL THE FINAL CAR PARK LIGHTING BOARD IS COMMISSIONED.
- ## 10. PROVIDE ADDITIONAL 20mm DIA PVC ORANGE CONDUITS FOR FUTURE POWER CONNECTION TO CAR PARK BOOM GATES. POWER SUPPLY, REFER TO ARCHITECT'S DRAWINGS FOR LOCATION OF SUCH BOOM GATES.

[illegible]

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The logo for COX, with the letters 'COX' in a bold, sans-serif font. The 'O' is stylized with a vertical line through it, and the 'X' is formed by two intersecting diagonal lines.

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Client



**Health
Infrastructure**



Health
Western NSW
Local Health District

Project No.

NB11464

Project

DUBBO BASE HOSPITAL
REDEVELOPMENT
MYALL STREET, DUBBO NSW

ELECTRICAL SERVICES

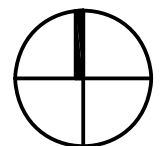
New Carpark Lighting Layout

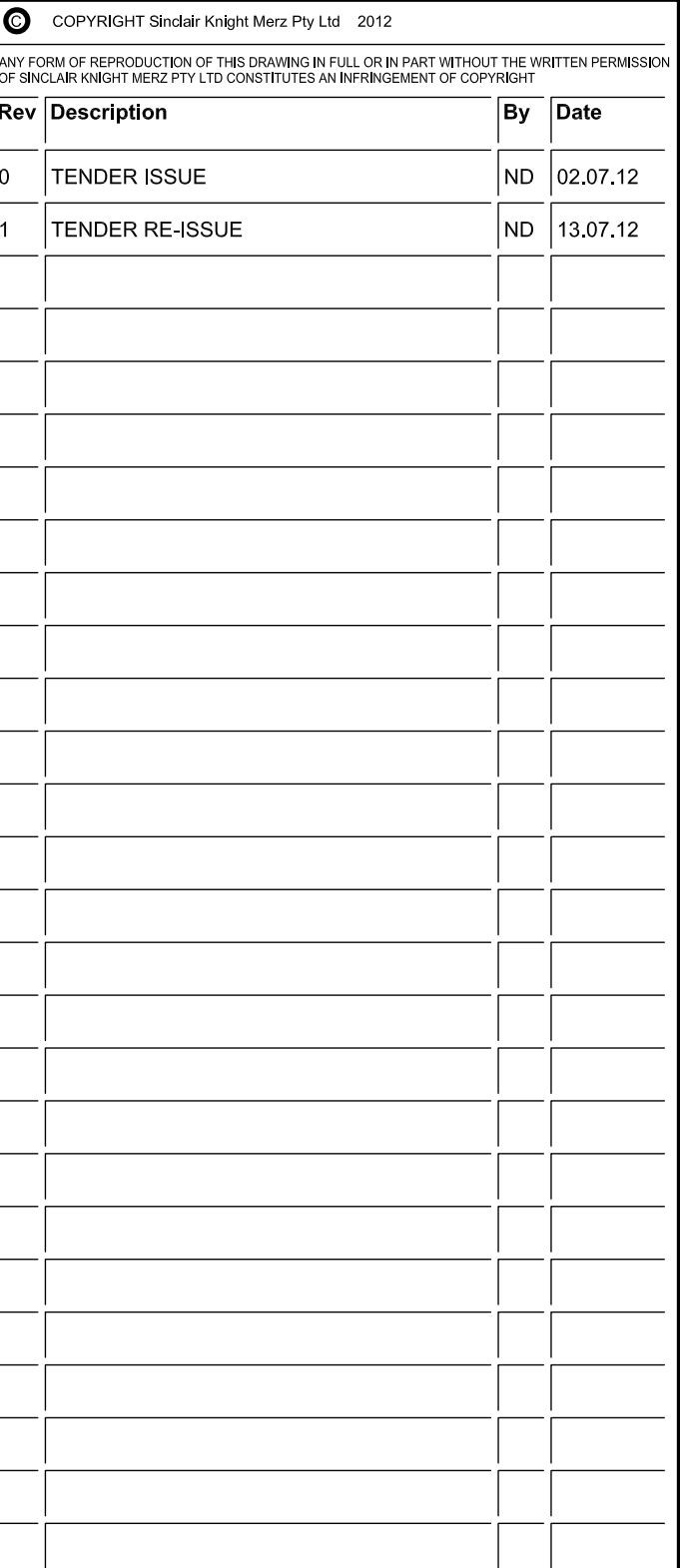
Document Control Status:

TENDER ISSUE

BY DRAWING SHEET		Drawn: JH
Co-ordinated:	RF	Scale: 1:500
Project Architect:	COX	Date: 25/06/2012
Project Director:	LM	Revision: 2
Drawing Number:		North:

ELE-SI-015	
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