

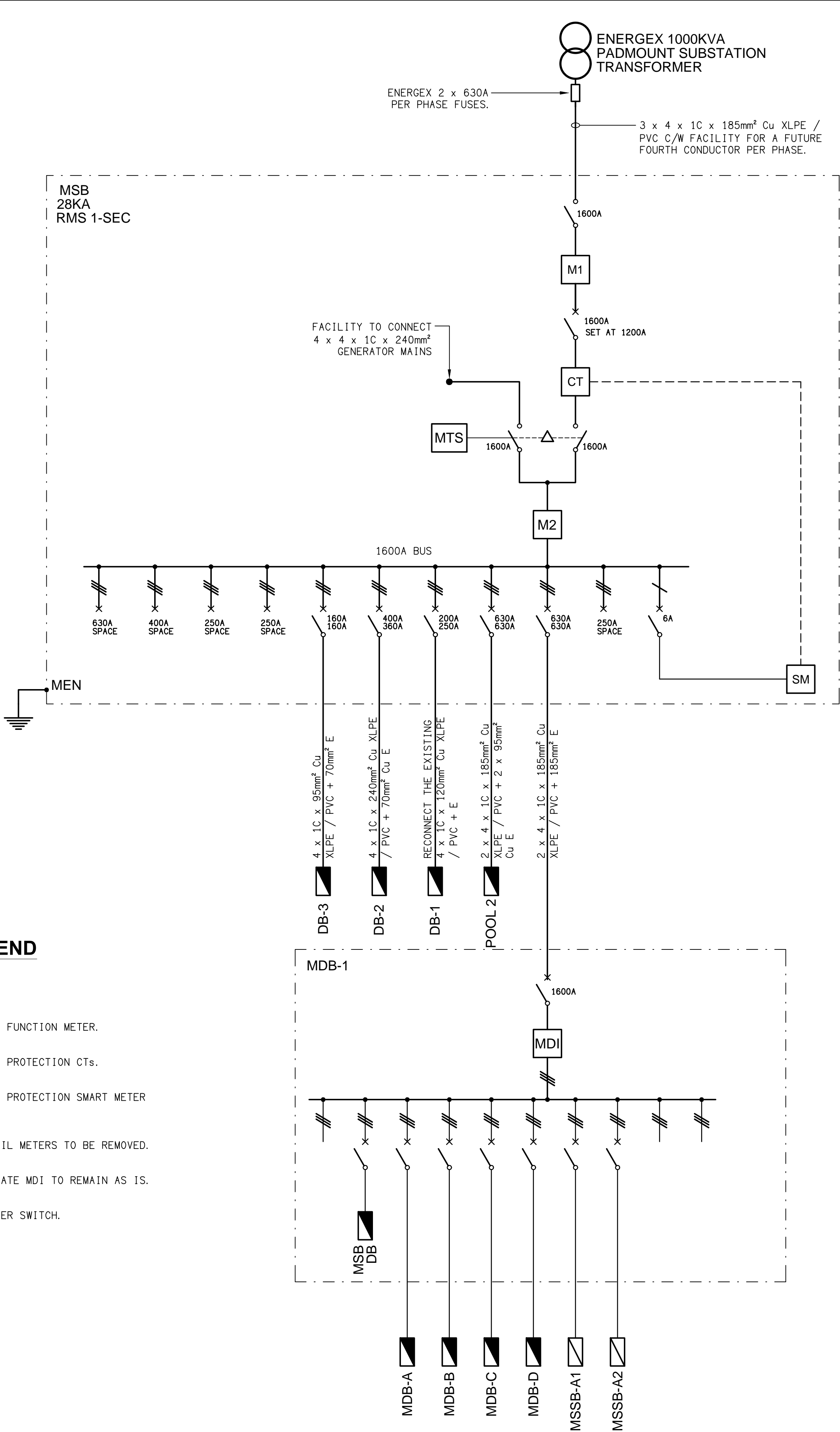
**EXISTING SCHEMATIC**  
MAIN SWITCHBOARD CONFIGURATION  
NOT TO SCALE

**MSB LEGEND**

- ELECTRICAL SWITCHBOARD.
- ELECTRICAL CONTROL PANEL BY OTHERS.
- FUSE.
- CIRCUIT BREAKER.
- LOAD BREAK NON-AUTO ISOLATOR.
- CONTACTS.
- SINGLE PHASE.
- THREE PHASE.

**MSB LEGEND**

- RETAIL METER.
- PRIVATE MULTI FUNCTION METER.
- SOLAR NETWORK PROTECTION CTs.
- SOLAR NETWORK PROTECTION SMART METER (WIRELESS).
- EXISTING RETAIL METERS TO BE REMOVED.
- EXISTING PRIVATE MDI TO REMAIN AS IS.
- MANUAL TRANSFER SWITCH.



**PROPOSED SCHEMATIC**  
MAIN SWITCHBOARD CONFIGURATION  
NOT TO SCALE

**MSB NOTES**

- MSB EXTENT OF WORKS  
UPGRADE THE EXISTING SUPPLY IN ACCORDANCE WITH THE ENERGEX CONNECTION OFFER CX 23COL1059225A INCLUDING ALL ENERGEX AND CLIENT RETAILER NEGOTIATIONS AND PAPERWORK  
PROVIDE A NEW MAIN SWITCHBOARD WITH FACILITY TO ACCOMMODATE THE CONNECTION OF A BACKUP GENERATOR VIA A MANUAL TRANSFER. THE EXISTING MSB IS TO BE SUPPLIED AS A SUB BOARD KNOWN AS MDB-1. THE FOLLOWING EXISTING SERVICES ARE TO BE REMOVED FROM MDB-1:
  - RETAIL METERS.
  - MEN LINK.
  - EARTH CONNECTION.
  - MSB AND ENERGEX LABELS.
  - CONSUMERS MAINS.
  - DB-1 SUBMAIN.
  - SOLAR GRID PROTECTION EQUIPMENT.PROVIDE A NEW UNDERGROUND PIT AND CONDUIT SYSTEM INCLUDING:
  - CONSUMERS MAINS CONDUITS.
  - MSB ROOM TRENCH.
  - CONDUITS FROM THE MSB ROOM TRENCH TO THE EXISTING TRENCH UNDER MDB-1.
  - A NEW 1600 X 1600 INSITU PIT IN THE LANDSCAPE ON THE NORTHERN SIDE OF THE TOP CARPARK.
  - CONDUITS FROM THE MSB ROOM TRENCH TO THE NEW 1600 X 1600 PIT.
  - CONDUITS FROM THE NEW 1600 X 1600 PIT TO THE EXISTING PIT ADJACENT THE DRIVEWAY.CUT OVER THE POWER SUPPLY FROM THE EXISTING MSB TO THE MSB DURING SCHOOL HOLIDAYS. ENSURE THE INTERRUPTION TO THE POWER TO THE SCHOOL IS LESS THAN 24 HOURS. PROVIDE THE SCHOOL WITH TWO MONTHS NOTICE IN WRITING OF THE DATE OF THE INTERRUPTION.  
THE MSB WORKS INCLUDES THOUGH IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:
  - UNDERGROUND PITS AND CONDUITS.
  - ARRANGE THE ENERGEX SUPPLY CONNECTION AND METERING.
  - UNDERGROUND CONSUMERS MAINS FROM THE ENERGEX PADMOUNT SUBSTATION TO THE MSB.
  - MAIN SWITCHBOARD (MSB).
  - UNDERGROUND SUBMAIN FROM THE MSB TO MDB-1.
  - MODIFICATIONS TO MDB-1 INCLUDING REMOVAL OF REDUNDANT COMPONENTS.
  - REDIRECT THE EXISTING DB-1 SUBMAIN FROM THE MDB-1 INTO THE NEW MSB
  - A NW SUBMAIN FROM THE MSB TO DB-2
  - A NEW SUBMAIN FROM THE MSB TO DB-3
  - A NEW SUBMAIN FROM THE MSB TO THE POOL SWITCHBOARD
  - EARTHING.
  - TESTING AND COMMISSIONING.
  - REMOVAL OF ALL EXISTING SERVICES MADE REDUNDANT BY THE WORKS.
  - THERMOSCAN ALL OF THE SWITCHBOARDS SUPPLIED OR MODIFIED AS PART OF THE WORKS WITHIN THE FIRST WEEK SCHOOL HAS COMMENCED FOLLOWING THE CUT OVER TO THE NEW ENERGEX SUPPLY AND SUBMIT THE THERMOSCAN FOR APPROVAL.
  - REINSTATE THE SOLAR PV GRID PROTECTION SYSTEM INTO THE NEW MSB.
- MAIN SWITCHROOM  
PROVIDE THE MAIN SWITCHROOM (MSB) AS FOLLOWS:
  - PLINTH MOUNTED MECHANICALLY FIXED TO THE WALL.
  - QECM V4 COMPLIANT.
  - IP44 POWDER COATED LIGHT GREY C/W INTERNAL TEMPERATURE CONTROLLED ANTI CONDENSATION HEATERS IN EACH CUBICAL.
  - ENSURE THE MSB IS DESIGNED TO OPERATE IN AN AMBIENT TEMPERATURE OF 40 DEGREES.
  - WHITE ESCUTCHEON.
  - BOTTOM ENTRY CABLE ACCESS ONLY.
  - DOORS ARE NOT REQUIRED AS THE MSB WILL BE LOCATED IN A LOCKABLE ROOM.
  - LIFT OFF HINGES ON ALL PANELS AND ESCUTCHEONS.
  - 1/4 TURN LATCHES AND D HANDLES ON ALL PANELS AND ESCUTCHEONS.
  - ALL SWITCHGEAR TO BE SCHNEIDER.
  - PROVIDE SHOP DRAWINGS FOR APPROVAL.
  - OBTAIN APPROVAL FROM ENERGEX OF THE NEW MSB SHOP DRAWINGS.
  - PROVIDE A COPY OF THE ENERGEX APPROVAL OF THE MSB.
- MAIN SWITCHROOM  
PROVIDE THE MAIN SWITCHROOM WITH THE FOLLOWING:
  - TWO DOUBLE GPDS ON A DEDICATED RCBO PROTECTED CIRCUIT FROM THE EXISTING DISTRIBUTION BOARD IN THE MDB ROOM.
  - THREE L17 FITTINGS EACH WITH A NON-MAINTAINED AS2293 EMERGENCY PACK ONT EH SAME CIRCUITS AS THE MDB-1 ROOM LIGHTS.
  - AN AUTOMATIC SUMP PUMP SUPPLIED VIA A DEDICATED RCBO PROTECTED CIRCUIT FROM THE EXISTING DISTRIBUTION BOARD IN THE MDB ROOM. CONFIGURE THE SUMP PUMP TO DRAIN TO STORM WATER.
  - A 1200 DEEP INSITU TRENCH THE SAME LENGTH AND WIDTH AS THE MSB ROOM.
  - GALVANIZED STEEL STRUCTURE MECHANICALLY FIXED TO THE TRENCH WALLS TO SUPPORT THE MAIN SWITCHBOARD AND PIT LIDS.
  - 25MM THICK MARINE PLY PIT LID C/W NON-SLIP FINISH IN SECTIONS NO MORE THAN 25KG PER SECTION. DO NOT MECHANICALLY FIX THE SECTIONS OF LID IN PLACE. PROVIDE EACH SECTION WITH A 30MM DIA HOLE TO ALLOW THE SECTION TO BE LIFTED.
  - PROVIDE FIBREGLASS SUPPORTS ON THE PIT FLOOR TO SUPPORT THE CABLING 50MM OFF THE PIT FLOOR.
  - PROVIDE ALL CONDUITS ENTERING THE MSB TRENCH AND THE NEW PIT WITH BELL MOUTHS OR CUT THE CONDUITS OFF FLUSH WITH THE PIT WALL AND FILE THE CONDUIT EDGES SUCH THAT THEY ARE ROUNDED WITH NO SHARP EDGES OR BURRS.