## Seven Sisters Market - Supply recommendations

## 1. Switch cupboard arrangements

The existing three phase, 3 -way fuse board does not have enough capacity to supply the 15 sub boards located within the market. The existing main fuses each have two supplies connected causing overloading. The fuse board also has damaged components and exposed live conductive parts.

- Remove existing MEM3-way fuse board
- Remove existing fuse switches
- Remove existing trunking
- Install new 3 phase 12 -way MCCB distribution panel
- Install new trunking
- Tidy existing SWA cables on new cable tray
- Re-locate and arrange earth bar
- Install Labels
- Test and commission

Items marked red to be removed and new MCCB Distribution panel installed


Labour

- 2 operatives, 7 shifts
- Labour Total =

Materials

- 3 phase $-12-$ Way MCCB distribution panel with $16 \times$ single phase 100 A MCCBs and $1 \times$ three phase 100A MCCB
- $150 \times 150$ trunking $\times 2$ lengths \& end caps
- Paxolin
- SWA cable
- Labels
- Fixings, Unistrut, sundries, tray, SWA glands
- Materials Total =
- Total =

2. Sub Main DBs - Rectification proposal - All sub main cables to remain

Layout of S ub Boards - supplied from new 7-way Distribution Panel


New proposed MCCB Distribution Board Chart

| MCCB Panel 001 |  |  |  |
| :---: | :---: | :---: | :---: |
| 1L1 | DB1 | 5L1 |  |
| 1L2 | DB2 | 5L2 | DB11 |
| 1L3 | DB3 | 5L3 |  |
| 2L1 | DB4 | 6 L 1 | DB12 |
| 2L2 | DB5 | 6L2 | DB13 |
| 2L3 | DB6 | 6L3 | DB14 |
| 3L1 |  | 7L1 |  |
| 3L2 | DB7 | 7L2 | DB15 |
| 3L3 |  | 7L3 |  |
| 4L1 | DB8 |  |  |
| 4L2 | DB9 |  |  |
| 4L3 | DB10 |  |  |

1 L1 - DB 1 - Units $44,37,38,43$, (3)


There is not enough capacity for existing circuits, new $D B$ is required.

- Existing sub main cable to remain
- Remove existing DB
- Re-locate supply to unit 3 to DB1
- Install with new 8-way DB with MCBs
- Install entry stuffing glands for incoming cables to DB
- Install labels
- Test and commission

Labour

- 2 operatives, 1 shift
- Labour total =

Materials

- $1 \times$ single phase 8 -way DB with 63 A main switch with $6 \times 32$ A type C MCBs
2 blanks
- Entry stuffing glands
- Fixings
- Materials total =
- Total $=$


Bus bar missing, mixed manufacturer MCBs and evidence of burning. Adaptable box not joined correctly with single core cables entering meter.

- Sub Main cable to remain
- Remove existing DB
- Install fixed base connectors and DI tails to meter
- Install new 10-way split RCD board
- Install labels
- Test and commission


## Labour

- 2 operatives, 1 shift
- Labour total =

Materials

- $1 \times$ single phase 10 -way dual 30 mA RCD board with a 63A main switch and
$4 \times$ Type C -32A MCB
$1 \times$ Type C -40A MCB
$2 \times$ Type C -20A MCB
$1 \times$ Type C -16A MC B
$1 \times$ Type C -10A MC B
$1 \times$ Type C -6A MCB
- E ntry stuffing glands, DI tails, din rail connectors
- Labels
- Materials total $=$
- Total $=$


Distribution board used as joint boxes, mixed manufacturers MCBs, broken with exposed conductor parts

- Sub Main cable to remain
- Remove existing joint boxes and exposed parts
- Install new single phase 8-way MCB board with $6 \times 32 \mathrm{~A}$ MCBs
- Entry stuffing glands
- Install labels
- Test and commission

Labour

- 2 operatives, 1 shift
- Labour total $=$

Materials

- Single phase 8-way DB with 63 A main switch and $8 \times$ type $C$ MCBs
- Entry gland
- Labels test and commission
- Materials total =
- Total $=$


The DB has insufficient capacity with MCBs cut into the wood. The DB is damaged.

- Remove existing DB
- Remove boxing in
- Install new DB
- Install labels
- Test and commission


## Labour

- Materials total $=2$ operatives, 2 shifts
- Labour total =

Materials

- Single phase 63 A main switch metal 8-way MCB board with $7 \times$ Type C 32 A MCBs and 1 blank
- Entry stuffing gland
- Labels
- Test and commission
- Materials total =
- Total =


Arrangement of MCBs incorrect. IP 4X not achieved. These units have been suggested to be rewired, a new $D B$ would be recommended to remove existing sub boards within units.

- Existing SWA sub main to remain
- Remove existing DB
- Install new metal DB
- Entry stuffing glands
- Labels
- Test and commission

Labour

- 2 operatives, 1 shift
- Labour total =

Materials

- S ingle phase 8-way metal MCB board with 63 A main switch with $6 \times 32 \mathrm{~A}$ type C MCB's and $2 \times$ blanks
- Entry stuffing gland
- Labels
- Test and commission
- Materials total =
- Total = $\square$


Bus bar installed incorrectly and mixed manufacturers MCBs.

- Existing sub main cable to remain
- Remove DB
- Install new DB
- Install new labels
- Test and commission


## Labour

- 2 operatives, 1 shift
- Labour total =

Materials

- S ingle phase 8-way DB metal with 63A main switch with $6 x$ type C MCB's
- Entry gland
- Labels
- Materials total $=$
- Total $=$


## 3L1/2/3-DB7-units 4,5,6



- Existing SWA sub main to remain
- Existing $D B$ to remain


DB contains MCBs from mixed manufacturers. Holes in DB

- Existing SWA sub main to remain
- Remove existing DB
- Install new metal DB
- Entry stuffing glands
- Labels
- Test and commission


## Labour

- 2 operatives, 1 shift
- Labour total =

Materials

- S ingle phase 8-way MCB board with 63 A main switch with
$1 \times 16$ A type C MCBs
$2 \times 6$ type C MCBs
$3 \times 32$ A type C MCBs
$2 \times$ blanks
- Entry stuffing glands
- Labels
- Materials total =
- Total =

4L2-DB9-unit 48


IP 4X not achieved, mixed manufacturers MC Bs

- Existing SWA sub main to remain
- Remove existing DB
- Install new metal DB
- E ntry stuffing glands
- Labels
- Test and commission

Labour

- 2 operatives, 1 shift
- Labour total =

Materials

- S ingle phase metal MCB dual RCD 10-way board with 63A main switch with
$1 \times 40 \mathrm{~A}$ type C MCB
$4 \times 32 \mathrm{~A}$ type C MCB
$2 \times 20 \mathrm{~A}$ type C MC B
$3 \times 6$ type C MCBs
- Entry stuffing glands
- Labels
- Materials total $=$
- Total $=f$

4 L 3 - DB 10 - units, 50,51,54,55

$D B$ contains mixed manufacturers $M C B s$. Existing $D B$ is damaged. $D B$ is obsolete. Re-wire the configuration.

- Sub Main cable to remain
- Remove existing DB
- Remove existing isolator
- Install new metal DB
- Entry stuffing glands
- Labels
- Test and commission

Labour

- 2 operatives, 1 shift
- Labour total =

Materials

- S ingle phase 8-way metal MCB board with 63A main switch with $2 \times 32$ A type C MCBs
$4 \times 16$ A type C MCBs
$2 \times 6$ type C MCBs
- Entry stuffing glands
- Labels
- Materials total =
- Total $=$


DB damaged with exposed conductive parts and obsolete.

- Existing single core cables supplying board to remain
- Remove existing DB
- Install new three phase metal MCB board
- Entry stuffing glands
- Labels
- Test and commission
- 

Labour

- 2 operatives, 2 shifts
- Labour total =

Materials

- Three phase 6-way metal MCB board with 63A main switch with
$3 \times 40 \mathrm{~A}$ type C MCBs
$4 \times 32$ A type C MCBs
$4 \times 16$ A type C MC Bs
$3 \times 10 \mathrm{~A}$ type C MCBs
$4 \times 6$ A type C MCBs
- Entry stuffing glands
- Labels
- Materials total =
- Total =


$D B$ contains mixed manufacturers $M C B s$. Existing $D B$ is damaged. $D B$ is obsolete. Re-wire the configuration
- Remove existing single core cables run on tray supplying $D B$
- Install new sub main SWA cable
- Remove existing DB
- Install new metal DB
- Entry stuffing glands
- Labels
- Test and commission

Labour

- 2 operatives, 2 shifts
- Labour total $=\square$


## Materials

- Single phase 6-way MCB board with 63A main switch with
$4 \times 32 \mathrm{~A}$ type C MCBs
$1 \times 10 \mathrm{~A}$ type C MCB
$1 \times$ blanks
- Entry stuffing glands
- Labels
- Materials total =
- Total $=\square$


## 6L2-DB 13 - unit 10



DB is damaged, SWA not terminated correctly, mixed installation of different manufactured MCBs

- Existing SWA sub main to remain
- Remove existing DB
- Install new metal DB
- Entry stuffing glands
- Labels
- Test and commission

Labour

- 2 operatives, 1 shift
- Labour total =

Materials

- Single phase 6-way MCB board with 63A main switch with $2 \times 32 \mathrm{~A}$ type C MCBs and $2 \times 6$ A type C MCBs and 2 blanks
- Entry stuffing glands
- Labels
- Materials total =
- Total =


## DB 14-6L3

Distribution Board satisfactory no requirement to replace
Sub Main cable also to reman


Fuse board not enough capacity, exposed live parts and floating MCBs

- Remove existing fuse board
- Install new Three phase 10-way MCB board
- Re-wire contactors
- Re-locate local electrical equipment, switches, contactor, FCU's
- Install labels
- Re-test each individual circuit

The works are recommended because there is not enough capacity for existing circuits present. There are floating MCBs within the DB and exposed conductive parts with fuse carriers missing and no blanking plates fitted.

Labour

- 2 people, 4 shifts
- Labour total =

Materials

- 10-Way 3 phase DB and MCBs
- Trunking
- Materials total $=$
- Total =


