



Redrow London- Tavistock Gardens- Metering cupboards

Revision 0 – 13.08.2024

Quality Management

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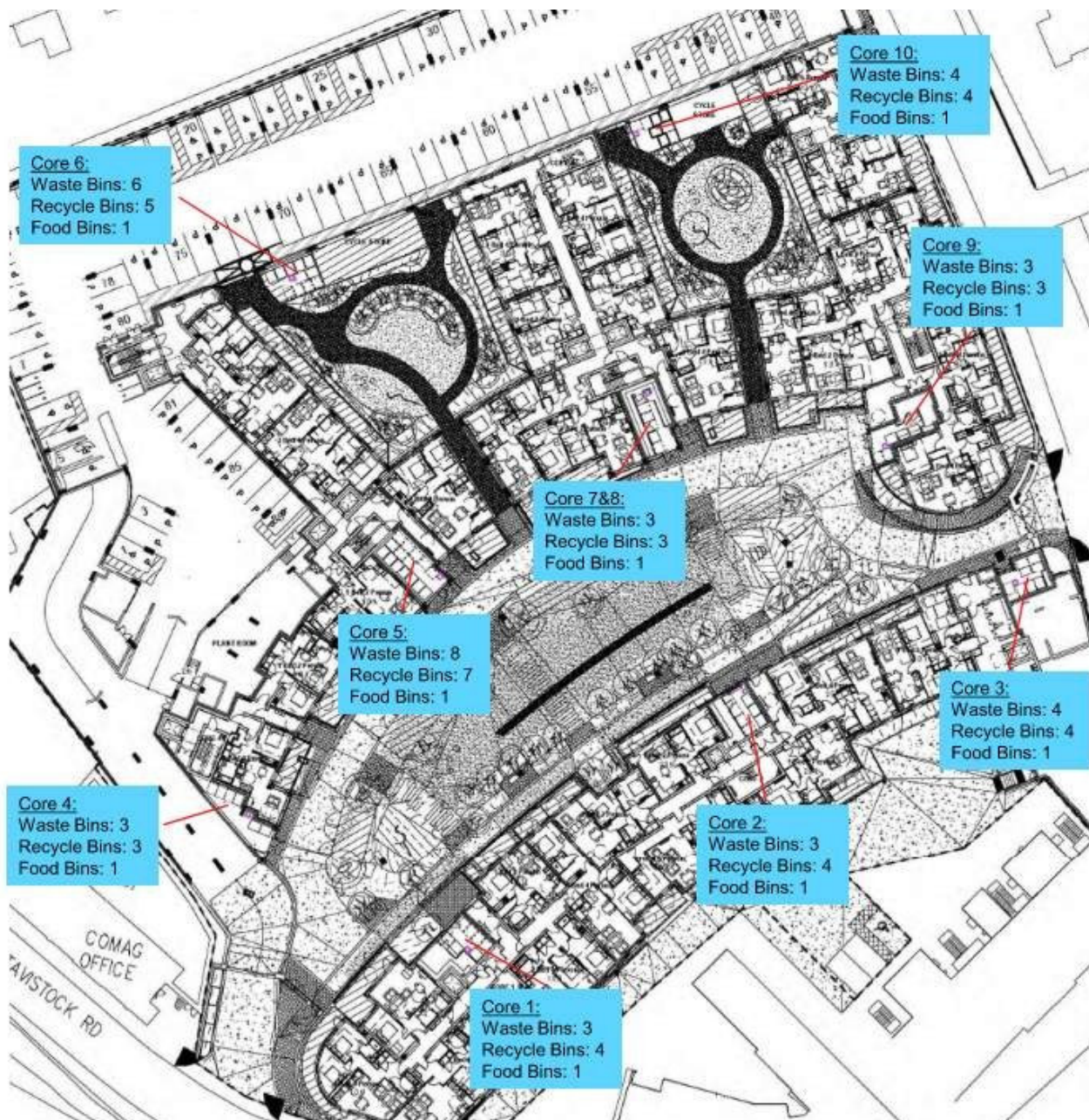
CONTENTS

1.	Introduction	4
1.	Site Review	5
1.1	Building 1- Technical Review (Core 1)	5
1.2	Building 2- Technical Review (Core 2)	7
1.3	Building 3- Technical Review (Core 3)	9
1.4	Building 4- Technical Review (Core 4)	10
1.5	Building 5- Technical Review (Core 5)	12
1.6	Building 6- Technical Review (Core 6)	14
1.7	Building 7&8- Technical Review (Core 7&8)	15
1.8	Building 9- Technical Review (Core 9)	19
1.9	Building 10 - Technical Review (Core 10)	21
2.	Technical Assessment	22
2.1	Building 1 (Core 1) - Options assessment	22
2.2	Building 2 (Core 2)- Options assessment	23
2.3	Building 3 (Core 3) - Options assessment	23
2.4	Building 4 (Core 4)- Options assessment	24
2.5	Building 5 (Core 5)- Options assessment	24
2.6	Building 6 (Core 6) - Options assessment	24
2.7	Building 7&8 (Core 7&8)- Options assessment	24
2.8	Building 9 (Core 9)- Options assessment	26
2.9	Building 10 (Core 10) - Options assessment	28
3.	Recommendations	29

1. Introduction

Loop Engineering have been requested by Redrow to review the current Meter Cupboard arrangements at Tavistock Gardens, with a view to understanding the feasibility and implications of moving these meters where they have been located adjacent or inside Bin store areas.

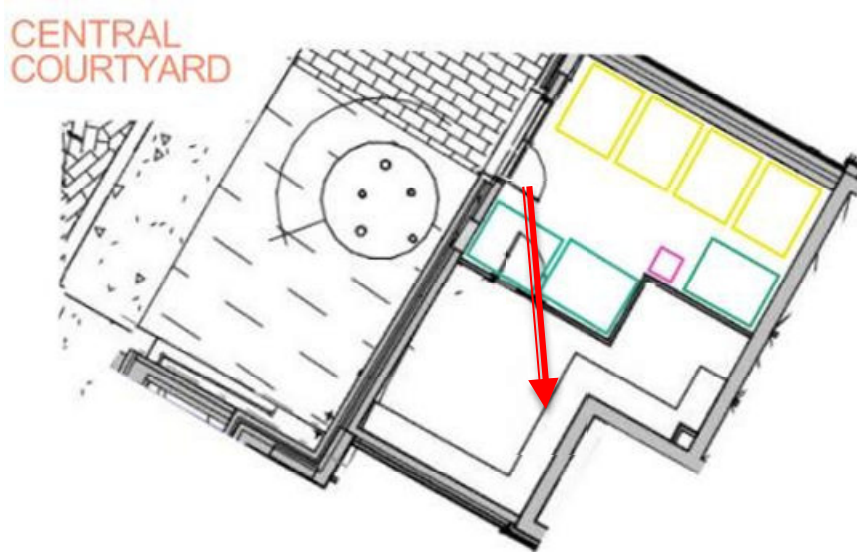
The below drawing extract shows bin-store locations across the site. Meters are located in Core 1, Core 2, Core 7&8 and Core 9.



1. Site Review

1.1 Building 1- Technical Review (Core 1)

The Building 1 meter cupboard is located off the side of the existing bin store of Yardley Court, 1 Garnet Place.



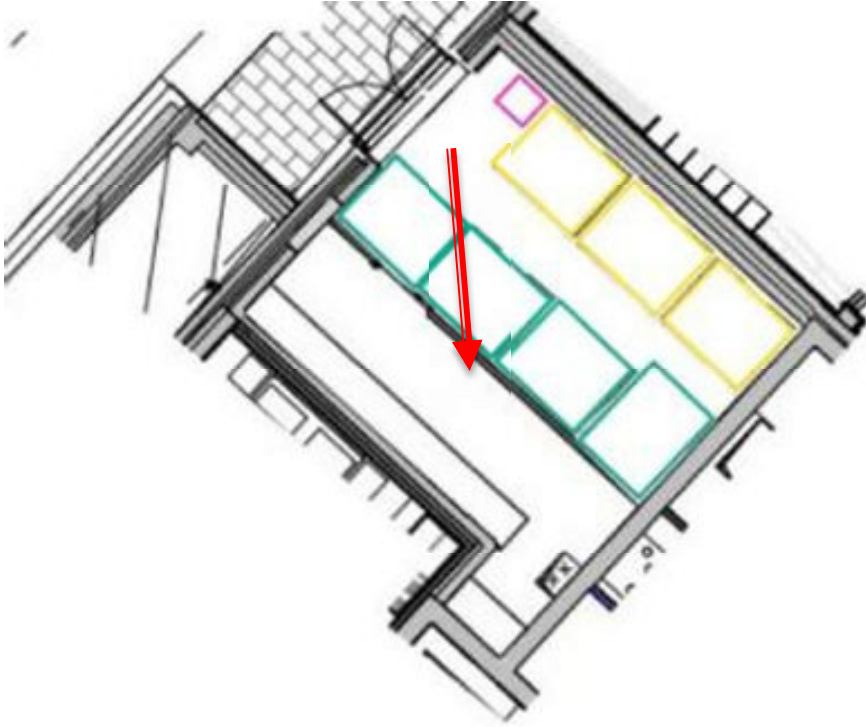
The room is heavily serviced and contains the following MEP systems:

- Incoming Main Service Distribution Board (MSDB)
- 37no apartment electrical meters. Each of these is supplied from the MSDB via the orange cabling. On the ply backboards there is the utility fusing followed by an in-line meter provided by the metering supplier and there is then an outgoing isolator. From the outgoing isolator there is then a supply to the tenants protection in the grey boxes above the meters. From this point the armoured cables are run to the apartments
- Landlords DB feeding small power and lighting to corridors
- Connections from the roof mounted PV system into the Landlords DB
- Drainage drops from above
- Access Control panels for all communal doors
- Comms Cabinets including incoming fibre connections.
- Incoming water connection



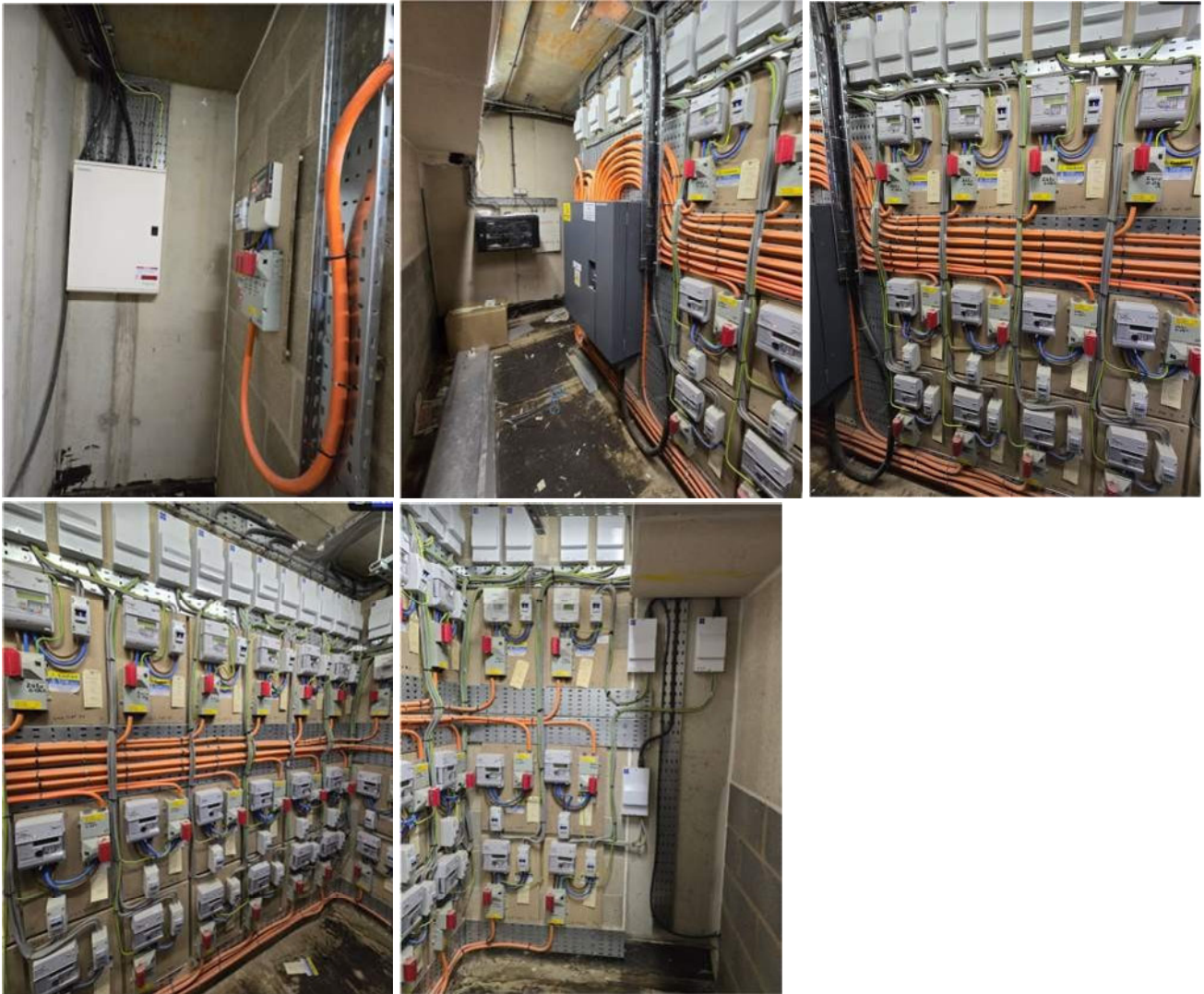
1.2 Building 2- Technical Review (Core 2)

The Building 2 meter cupboard is located off the side of the existing bin store of Yardley Court, 3 Garnet Place.



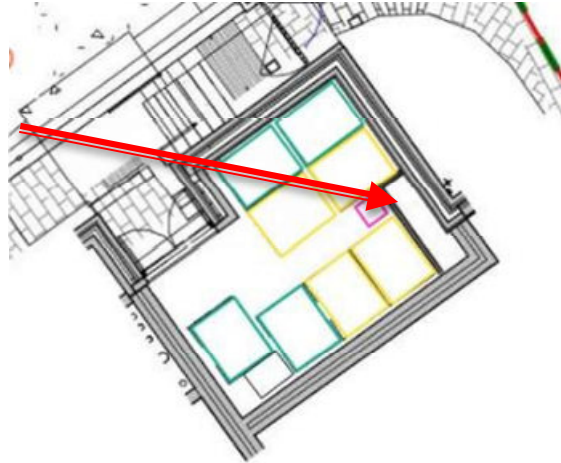
The room is heavily serviced and contains the following MEP systems:

- Incoming Main Service Distribution Board (MSDB)
- 30no apartment electrical meters. Each of these is supplied from the MSDB via the orange cabling. On the ply backboards there is the utility fusing followed by an in-line meter provided by the metering supplier and there is then an outgoing isolator. From the outgoing isolator there is then a supply to the tenants protection in the grey boxes above the meters. From this point the armoured cables are run to the apartments
- Landlords DB feeding small power and lighting to corridors
- Access Control panels for all communal doors
- Comms Cabinets including incoming fibre connections.



1.3 Building 3- Technical Review (Core 3)

Meters are located internally and not adjacent the bin-store in this block.



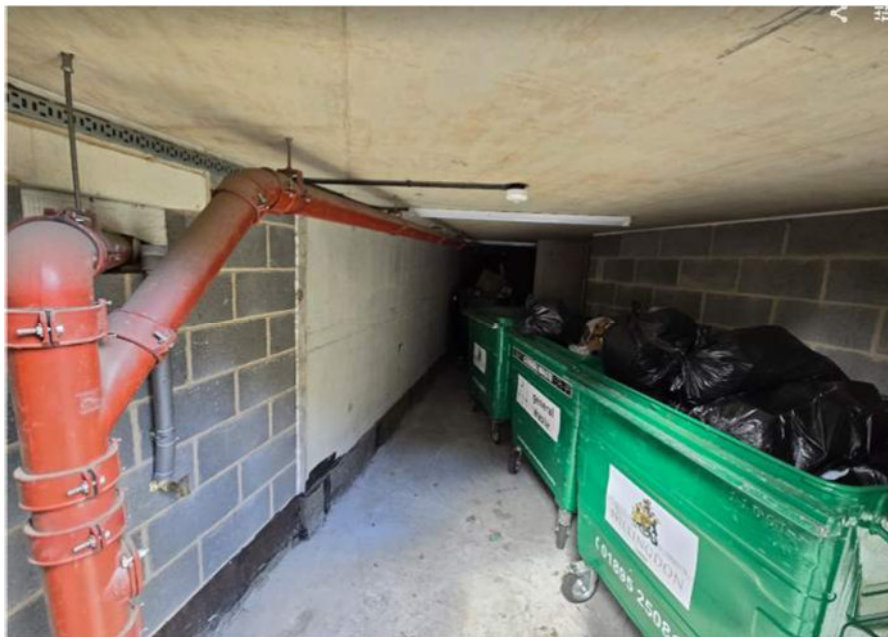
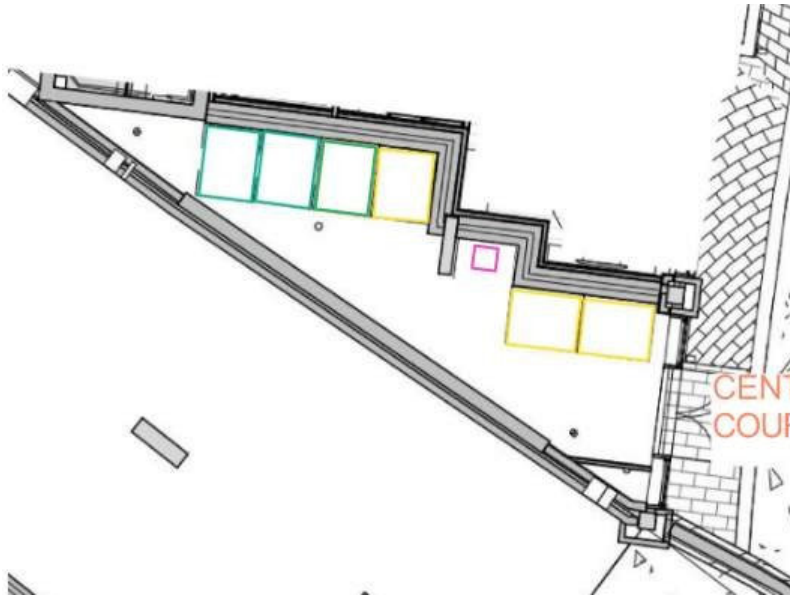
The room does contain the following MEP systems:

- Incoming water services
- Access control panels for all the communal doors
- Landlords DB feeding small power and lighting to corridors.
- Comms Cabinets including incoming fibre connections.



1.4 Building 4- Technical Review (Core 4)

Meters are located in the Plantroom and not within the bin-store in this block. There are no MEP services within the bin-store other than drainage.



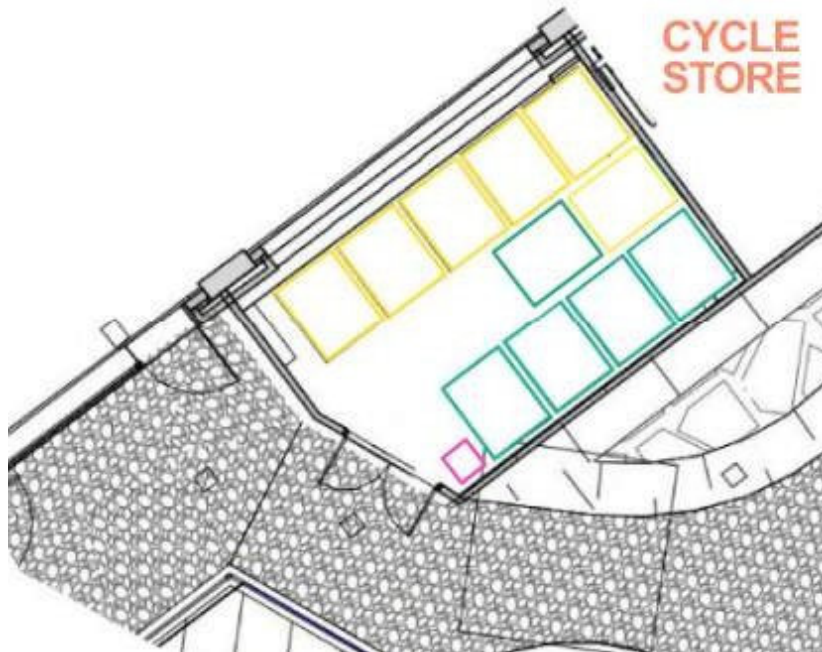
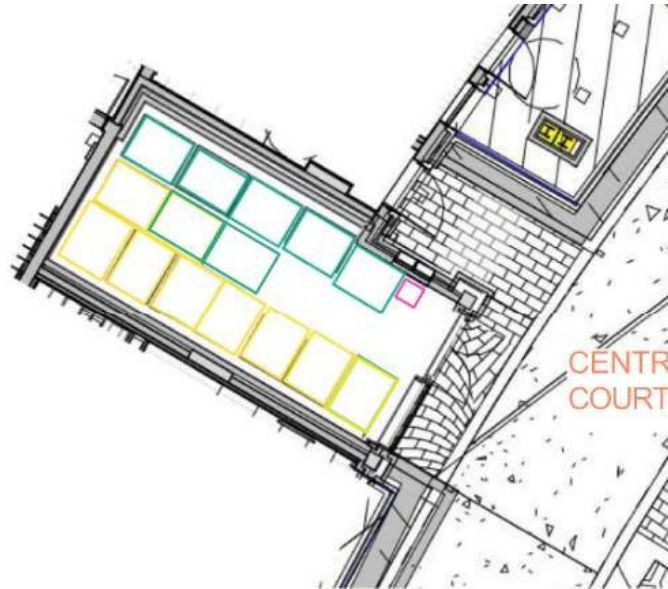
Block 4 Bin store



Separate plantroom with Block 4 meters in the basement.

1.5 Building 5- Technical Review (Core 5)

The Building 5 bin-store does not contain meters. The 29No electrical meters are located in a separate plant area in the basement.





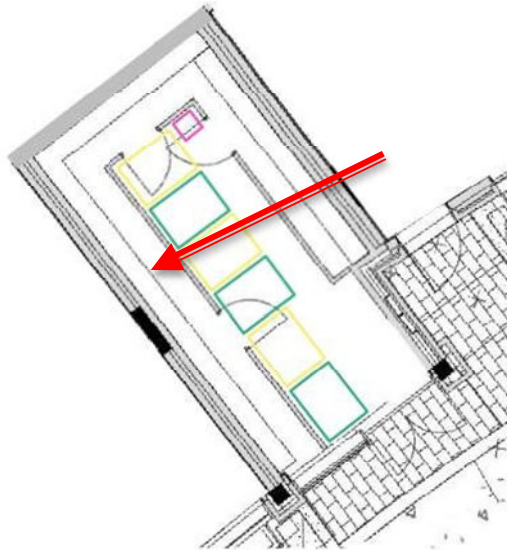
1.6 Building 6- Technical Review (Core 6)

The Building 6 bin-store is to the north of the development and does not house any MEP equipment. The Building 6 meters are located in the basement near the bottom of the ramp. There are 48 meters associated with Building 6.



1.7 Building 7&8- Technical Review (Core 7&8)

The Building 7&8 meter cupboard is located around the perimeter of the existing bin store of Alwyne Court, 6 Garnet Place, and separated by plasterboard partitions which run to approximately 2m AFFL.



The bin store contains:

- LTHW pipework
- Comms Cabinets including incoming fibre connections.
- Access Control panels for all communal doors



The room is heavily serviced and contains the following MEP systems:

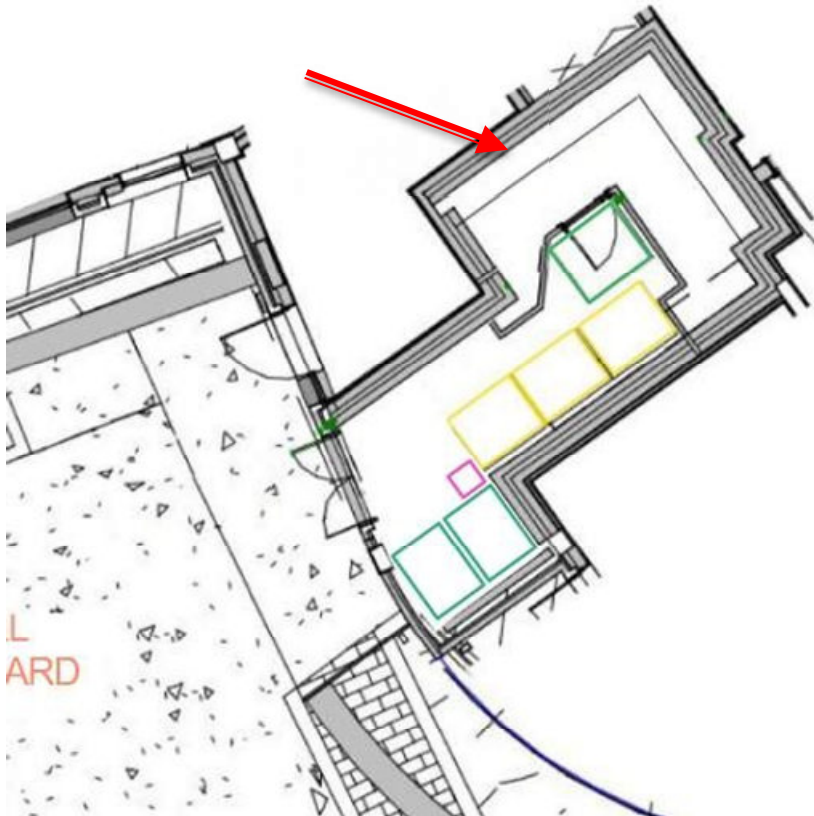
- 2no Incoming Main Service Distribution Boards (MSDB) for Block 7 & Block 8
- Circa 75no apartment electrical meters. Each of these is supplied from the MSDB via the orange cabling. On the ply backboards there is the utility fusing followed by an in-line meter provided by the metering supplier and there is then an outgoing isolator. From the outgoing isolator there is then a supply to the tenants protection in the grey boxes above the meters. From this point the armoured cables are run to the apartments
- Landlords DB feeding small power and lighting to corridors





1.8 Building 9- Technical Review (Core 9)

The Building 9 meter cupboard is located off the side of the existing bin store of Tweed Court, 8 Garnet Place.



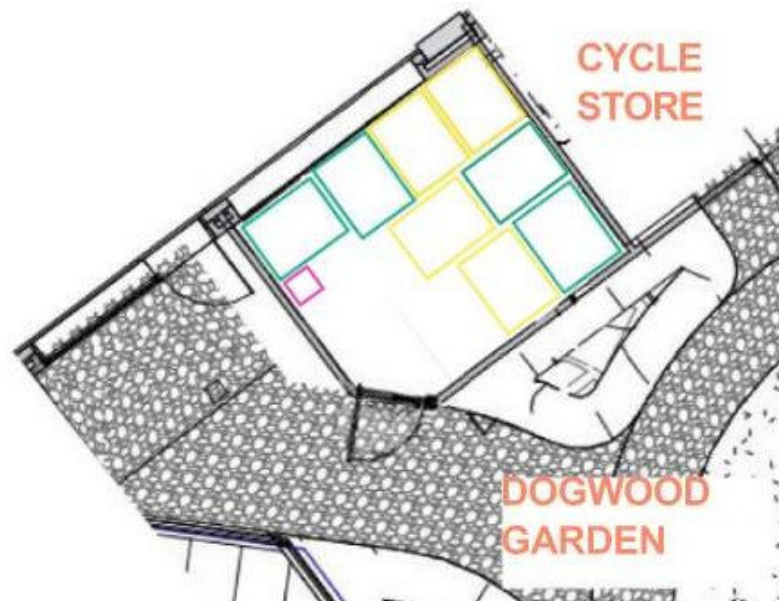
The room is heavily serviced and contains the following MEP systems:

- Incoming Main Service Distribution Board (MSDB)
- 45no apartment electrical meters. Each of these is supplied from the MSDB via the orange cabling. On the ply backboards there is the utility fusing followed by an in-line meter provided by the metering supplier and there is then an outgoing isolator. From the outgoing isolator there is then a supply to the tenants protection in the grey boxes above the meters. From this point the armoured cables are run to the apartments
- Landlords DB feeding small power and lighting to corridors
- Access Control panels for all communal doors
- Comms Cabinets including incoming fibre connections.



1.9 Building 10 - Technical Review (Core 10)

The Building 10 meters are located in the basement carpark adjacent the B10 stair. There are 17No meters located in this room.



2. Technical Assessment

The client has requested a high-level assessment of the options and impacts of relocating the meters and associated equipment from the bin-stores. It appears that the meters were not installed in the locations originally proposed on the design drawings.

2.1 Building 1 (Core 1) - Options assessment

There are limited options for relocating meters and equipment within Building 1 as there is no basement below this building and limited communal space. Risers are also restricted in size and would not have space for the meters.

The only viable option for Building 1 would be to relocate the meters into the individual apartments. The current utility cupboards are modular and can not easily accommodate the required meter unless the washing machines were relocated.

- Incoming Main Service Distribution Board (MSDB) would need to remain in place as this is the main incoming supply to the unit and relocation would entail external works to re-route the incoming supply, and would require the IDNO to undertake these works.
- 37no apartment electrical meters would need to be located into the utility cupboards within the apartments
- New cabling would be required from the MSDB to each of the apartments. The supply authority may allow the existing armoured cabling to be re-used from the current meter room
- Relocating the Landlords DB (possibly communal area) would require all the small power and lighting to be re-wired or jointed. The connections from the roof mounted PV system into the Landlords DB would need to be relocated.
- Drainage drops from above would need to remain in place and protected from bins
- Relocating access control panels for all communal doors would entail all equipment to be moved and the access control points would need to be rewired.
- Relocation of existing Comms cabinets including incoming fibre connections, would require relocation and rewiring on the IT infrastructure to the block.
- Incoming water connection cannot be relocated and would need to be protected in-situ

These works are significant and would entail work to all communal corridors and each of the apartments in this block. Power to the apartments would be lost during these works.

As the units are occupied, permission would be needed from the tenants for the work, all tenants would have to agree, grant access and go without power for significant periods of time.

2.2 Building 2 (Core 2)- Options assessment

Similar to Building 1, there are limited options for relocating meters and equipment within Building 2 as there is no basement below this building and limited communal space. Risers are also restricted in size and would not have space for the meters.

The only viable option for Building 2 would be to relocate the meters into the individual apartments. The current utility cupboards are modular and cannot easily accommodate the required meter unless the washing machines were relocated to a location elsewhere in the apartment.

- Incoming Main Service Distribution Board (MSDB) would need to remain in place as this is the main incoming supply to the unit and relocation would entail external works to re-route the incoming supply, and would require the IDNO to undertake these works.
- 30no apartment electrical meters would need to be located into the utility cupboards within the apartments
- New cabling would be required from the MSDB to each of the apartments. The supply authority may allow the existing armoured cabling to be re-used from the current meter room
- Relocating the Landlords DB (possibly communal area) would require all the small power and lighting to be re-wired or jointed. The connections from the roof mounted PV system into the Landlords DB would need to be relocated.
- Relocating access control panels for all communal doors would entail all equipment to be moved and the access control points would need to be rewired.
- Relocation of existing Comms cabinets including incoming fibre connections, would require relocation and rewiring on the IT infrastructure to the block.

These works are significant and would entail work to all communal corridors and each of the apartments in this block. Power to the apartments would be lost during these works.

As the units are occupied, permission would be needed from the tenants for the work, all tenants would have to agree, grant access and go without power for significant periods of time.

2.3 Building 3 (Core 3) - Options assessment

Meters are located internally and not adjacent the bin-store in this block.

- Incoming water services cannot be relocated
- Relocating access control panels for all communal doors would entail all equipment to be moved and the access control points would need to be rewired.
- Relocating the Landlords DB (possibly communal area) would require all the small power and lighting to be re-wired or jointed.
- Relocation of existing Comms cabinets including incoming fibre connections, would require relocation and rewiring on the IT infrastructure to the block.

2.4 Building 4 (Core 4)- Options assessment

Meters are located in the Plantroom below and not within the bin-store in this block. There are no MEP services within the bin-store other than drainage.

2.5 Building 5 (Core 5)- Options assessment

The Building 5 bin-store does not contain meters but houses high level LTHW pipework. The 29No electrical meters are located in a separate plant area in the basement.

2.6 Building 6 (Core 6) - Options assessment

The Building 6 bin-store is to the north of the development and does not house any MEP equipment.

2.7 Building 7&8 (Core 7&8)- Options assessment

To remove electrical switchgear from the current room would entail significant disruption to the tenants.

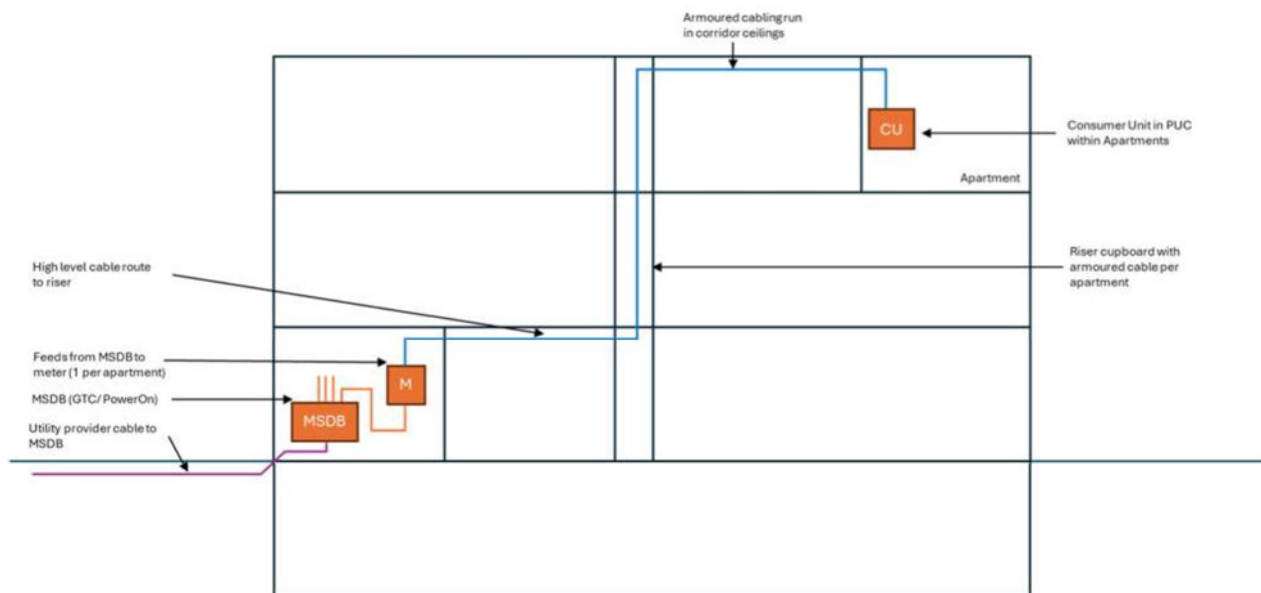
The works would require relocation of all the Building 7&8 meters into a new meter room in the basement below and re-house all the electrical meters. Please note that LV Infrastructure and metering would also need to be duplicated to reduce disruption and a new supply installed by PowerOn/ GTC.

- New basement meter room to be constructed, refer to original PowerOn drawings depicting size and location. There is the potential for any new space created to have knock on effects such as loss of car parking spaces for example.
- New Incoming MSDBs (2no) would need to be supplied from the Block 4 substation and would likely be provided as new. New armoured supply cables would need to be run across high level basement.
- The 75no apartments electrical meters would need to be located in the new meter room in the basement and supplied from the new MSDBs.
- Cabling to the apartments will be provided as new. The routes may need a new riser to be created to provide an alternate cable route as existing riser is at capacity
- New cabling would be required from the MSDB to each of the apartments. These will be run on new basement containment to new riser, then up new riser, along corridors (ceilings to be removed) and run into apartments to consumer units. This will require ceiling access to all apartments.

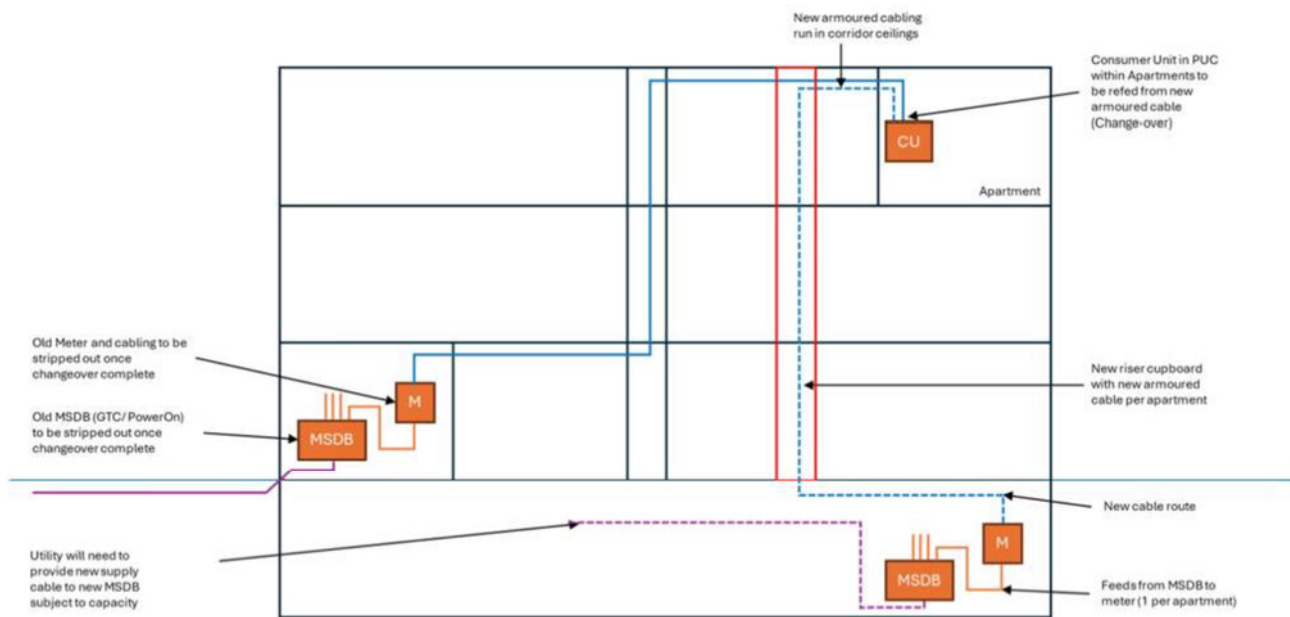
- Once new MSDB's are connected, individual changeovers will be required in each apartment in a phased manner. This will require isolation of existing meters and contract adjustments.
- Relocating the Landlords DB (possibly to communal area) would require all the small power and lighting to be re-wired or jointed. The connections from the roof mounted PV system into the Landlords DB would need to be relocated.
- Relocating access control panels for all communal doors would entail all equipment to be moved and the access control points would need to be rewired.
- Relocation of existing Comms cabinets including incoming fibre connections, would require relocation and rewiring on the IT infrastructure to the block.

It is our recommendations that with the significant works required and the disruption to the tenants that the existing meters are retained in their current positions.

Modifications would entail the construction of a new basement room, new cabling, core drilling of new risers with associated fire proofing. Works by PowerOn to provide concurrent supplies will be required and installation of concurrent replacement meters would be required. The works will affect all the units and will affect communal corridors and ceilings. Power to the apartments would be lost during these works and all apartments will lose power during power transfers.



Existing Power Distribution Diagram



New Power Distribution Diagram

2.8 Building 9 (Core 9)- Options assessment

To remove electrical switchgear from the current room would entail significant disruption to the tenants.

The works would require relocation of all the Building 9 meters into a new meter room in the basement below and re-house all the electrical meters. Please note that LV Infrastructure and metering would also need to be duplicated to reduce disruption and a new supply installed by PowerOn/ GTC.

- New basement meter room to be constructed.
- Incoming MSDB would need to be supplied from the Block 4 substation and would likely be provided as new.
- New armoured supply cables would need to be run across high level basement.
- The 45no apartments electrical meters would need to be located in the new meter room in the basement and resupplied from the new MSDBs.
- Cabling to the apartments will be provided as new. The routes may need a new riser to be created to provide an alternate cable route as existing riser is at capacity
- New cabling would be required from the MSDB to each of the apartments. These will be run on new basement containment to new riser, then up new riser, along corridors (ceilings to be removed) and run into apartments to consumer units. This will require ceiling access to all apartments.
- Once new MSDB's are connected, individual changeovers will be required in each apartment in a phased manner. This will require isolation of existing meters and contract adjustments.
- Relocating the Landlords DB (possibly to communal area) would require all the small power and lighting to be re-wired or jointed. The connections from the roof mounted PV system into the Landlords DB would need to be relocated.

- Relocating access control panels for all communal doors would entail all equipment to be moved and the access control points would need to be rewired.
- Relocation of existing Comms cabinets including incoming fibre connections, would require relocation and rewiring on the IT infrastructure to the block.

As above, it is our recommendation that with the significant works required and the disruption to the tenants that the existing meters are retained in their current positions.

Modifications would entail the construction of a new basement room, new cabling, core drilling of new risers with associated fire proofing. Works by PowerOn to provide concurrent supplies will be required and installation of concurrent replacement meters would be required. The works will affect all the units and will affect communal corridors and ceilings. Power to the apartments would be lost during these works and all apartments will lose power during power transfers.

2.9 Building 10 (Core 10) - Options assessment

- The Building 10 meters are located in the basement carpark adjacent the B10 stair and do not affect bin-store areas.

3. Recommendations

From our site review and assessments we would conclude that the relocation of existing electrical services from the bin stores is impractical and not recommended due to the extensive disruption that will be caused to the existing tenants.

These works are significant and would entail work to all communal corridors and each of the apartments in this block. Power to the apartments would be lost during these works.

As the units are occupied, permission would be needed from the tenants for the work, all tenants would have to agree, grant access and go without power for significant periods of time.

- Building 1 (Core 1) & Building 2 (Core 2)- There is no alternative location for meters other than the apartments which would require changes to the existing utility cupboards and likely entail the relocation of all washing machines in these blocks into kitchens with the loss of kitchen cupboards. Tenants will lose power during the power transfers.

Relocating the Landlords DB (possibly communal area) would require all the small power and lighting to be re-wired or jointed. The connections from the roof mounted PV system into the Landlords DB would need to be relocated.

Relocating access control panels for all communal doors would entail all equipment to be moved and the access control points would need to be rewired. Temporary security measures would be required during these works.

Relocation of existing Comms cabinets including incoming fibre connections, would require relocation and rewiring on the IT infrastructure to the block. This will disrupt all tenants internet and TV connections for an extended period of time.

- Building 3 (Core 3)- No works required unless IT and access control is required to be relocated (see implications above)
- Building 4 (Core 4)- There are no MEP services within the bin-store other than drainage.
- Building 5 (Core 5)- only contains high level LTHW pipework which does not impact bin storage
- Building 6 (Core 6)- Bin store does not house any MEP equipment.
- Building 7&8 (Core 7&8), and Building 9 (Core 9)- We would strongly recommend that an alternative strategy is sought to resolve the current challenges due to the extremely disruptive works required if these services are to be relocated. New meter rooms would be required and parallel metering and supply arrangements would need to be procured through the Utility provider. All corridors and risers will be impacted and works would be required within the apartments with power disruptions during these works.

Relocating access control panels for all communal doors would entail all equipment to be moved and the access control points would need to be rewired. Temporary security measures would be required during these works.

Relocation of existing Comms cabinets including incoming fibre connections, would require relocation and rewiring on the IT infrastructure to the block. This will disrupt all tenants internet and TV connections for an extended period of time