List of Requirements for Electrical, CCTV, Data and Local Area Network Cable Installations in Group Properties

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Contents:

1. Installation Requirements of the Installing Contractor 3
2. Building User's Responsibilities 6
3. General Requirements 7
4. O&M Manual 8
5. Contact Details 8

Appendix:

Appendix One: 'QualFire' High Expansion Intumescent Sealant. 10

Appendix Two: 'QualFire' Fire Batt 11

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1. Installation Requirements of the Installing Contractor

General Requirements:

a) All cable installations will be installed in accordance with the following notes and as stated within the 'Requirements for Electrical Installations'; IET Wiring Regulations Eighteenth Edition, BS 7671: 2018 as published by The Institute of Electrical Engineering and Technology with the BSI.

b) The contractor must be aware that all our properties will be trading during the installation period. Therefore, their work must be structured in such a way so as not to inconvenience the operation anyway.

c) As the premises will be trading, the installations must be completely safe at the end of each working day so that the building is safe for our staff, contractors and the public.

d) The areas within the premise's being worked in must be left clean on completion. For the avoidance of doubt this will mean all rubbish removed, dust cleaned away and floor coverings hoovered.

e) Storage of any equipment or materials must be with prior permission of the building management and only in locations agreed with them for the times agreed and as stated within the pre-start meeting.

f) Many of our buildings are listed under the Town and Country Planning Act. Therefore, it is essential that all cables and equipment are concealed wherever possible.

g) The installing contractor is responsible for checking the competed installation to ensure the layout and quality of work is as agreed and in accordance with this document. Any errors or omission will be rectified by the contractor at his cost.

h) All contractors working at the venue will be responsible for the security of any external door they open as part of their load in or rubbish removal activities.

General Health and Safety Requirements:

a) The principal contractor for the scheme will be the electrical, telecoms, cabling, or data cabling contractor.

b) The principal contractor will review the proposed void access during his pre-tender survey to ensure that there is safe access and egress.

c) Ensure that all areas of work are segregated to prevent our staff, other contractors or visitors entering the working area.

d) Working at height or on roofs will require careful consideration and must be adequately assessed within the plan.

e) Following the pre-start meeting and the building walk around when applicable pre-construction information will be issued to the principal

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Site Number: 91034
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Site Address: Whitworth St W, Manchester, M1 5NQ

Spec Sheets

Drawing Number:
91034_NET_VMO2_DDR_52

contractor. The contractor, or his consultant, are to develop this information into a construction phase health and safety plan.

f) When applicable the construction phase plan must be issued at least two and no more than four weeks before the proposed start date. Work will not be allowed to start until the plan has been approved and deemed suitable and sufficient for the intended work.

g) The PD will review the proposed plan and comment accordingly. Any changes requested by the PD must be incorporated into the plan immediacy. Work will not start on site until the PD approves the plan.

h) When applicable the construction plan will include the information from the pre-start meeting, the revised survey as appropriate together with all necessary risk assessments and method statements (RAMS). Special attention is to be paid to working in voids and where applicable, lone working.

i) On completion of the construction plan, the principal contractor, or his consultant, will issue the completed construction phase health and safety plan to the principal designer who will issue to the venue on completion.

j) The principal contractor is to ensure that all people working within the building have successfully completed an appropriate asbestos awareness training course.

k) The principal contractor shall undertake his own random audits to ensure his installation teams are following the document health and safety plan.

Installation:

a) All cables are to be low smoke and zero halogen and certified accordingly. **PVC is not acceptable.** Data cabling should be to BS EN 50173 and BS EN 50288-1-3-1.

b) All data cabling will be tested and certified. Cables must be installed by a Leviton or Excel certified or approved contractor.

c) All data cabling should be Leviton or Excel Cat6 cabling unless otherwise agreed.

d) All cables within the building are to be installed out of sight and ideally within voids and storerooms out of public areas.

e) Cables need to be installed in the natural creases of the building, in other words:

- Along wall and ceiling joints or directly beneath cornice where fitted.
- As close to internal corners where cables need to transit vertically up walls.

f) All existing cables and equipment which are being replaced must be removed. It may not be practicable to completely remove all cables back to source; but they should be removed back to voids etc. and be secured accordingly.

g) All cables are to be secured to walls with black plastic-coated copper 'P' clips or coated copper saddle clips or similar approved spaced equally at minimum 300mm centres.

h) Where cables are to be bundled together, they are to be clipped with plastic coated metal saddle clips or tied together with metal cable ties then fixed to the building with metal saddle clips. Note, they should only be grouped together in locations out of public sight.

i) It is not acceptable to clip one cable then cable tie several other cables to that single cable unless it is locally where service join for example. In such circumstances it will be acceptable for cables to be tied to other service with metal cable ties for no more than 1m in any single occurrence.

j) Where cables run vertically or horizontally along cable tray, they can be cabled tied with plastic cable ties; however, every fourth tie must be a metal cable tie so that at all times and in all situations, cables remain secure.

k) Cable types (Band I ELV – fire alarm, data, DMX and Band II – mains voltage) must be segregated are not to be tied to any other existing services such as steel wired armour cable, other electrical or data cables, pipe work or other conduits other than locally as mentioned in item 'g' above.

l) Cables are not to use existing or new capping for containment. For Clarity capping means plastic mini trunking in any colour either square or rectangular. All cables must be clipped or on cable tray. In some circumstances, steel box trunking may be acceptable; however, this must be approved in advance with property services.

m) Clips are to be fixed with screws and raw plugs appropriately sized.

n) Plastic 'knock-ins' are not acceptable.

o) All cables should ideally be black wherever possible excepting that in some cases this will be more obvious and require painting out by the venue. Generally, for installations within the auditorium where they cannot be hidden.

p) Where necessary, and only were it is impractical to replace the cable, it is acceptable to joint cables. Where this is the only viable alternative, joints can be made to cables using a suitably sized (red, blue or yellow) 600V Insulated Butt Crimps with the crimp covered with a coloured heat shrink appropriate to the conductor colour, conforming to UL224 VW1 600V Def Stan 59-9 Type 3 VG 95343 Part 7. The heat shrink protection must cover the crimp and overlap the cable by at least 15mm either side.

q) Where cables pass through a wall, the cables should be sealed both sides with intumescent sealant around the cable sealing the hole without overspill on to the painted surface. **Note:** the principal contractor is to ensure that the sealant and cables are compatible. The approved intumescent sealant is **Quelfire Intumescent Acoustic Acrylic Sealant.** Please see the appendices.

r)

s) Where there are a number of cables passing through a wall, ceiling or fire compartment, the hole should be made good with 'Quelfire – Quelstop Fire Batt.' Please see the appendices.

t) The installation of new capping or plastic mini trucking (uPVC) flat or box conduit **will not be permitted.** If there are instances where a form of box trunking would be beneficial, these are to be identified and expressly agreed with Property Services prior to the start of the installation and ideally at the pre-start meeting.

u) If necessary, and where the risk of impact damage is high, cables should be contained within PVC tubular plastic conduit however this conduit is to be secured using plugs and screws together with metal clips. The location of these conduits is to be agreed with Property Services prior to the start of the installation and ideally at the pre-start meeting.

v) External cables are to be the appropriate exterior grade and installed in hi impact resistant, black, uPVC tubular conduit and protected by galvanised steel sheathing up to a height above pavement level of 4M. Again, this must be secured using metal clips. Where cables are installed above 4M they can run without protection but must be clipped with metal 'P' clips as above or similar approved and installed sympathetically with the building's architectural features.

Electrical Work

a) All wiring of any type is to be installed in accordance with the 'Requirements for Electrical Installations;' IET Wiring Regulations Eighteenth Edition, BS 7671: 2018 as published by The Institute of Electrical Engineering and Technology with the BSI.

b) Any mains alterations are only to be undertaken by NICEIC contractors. This will be Fagan Electrical Ltd; where appropriate, alternative contractors may be used with expressed approval from Property Services.

c) All small power cables must be in FP200 or similar approved and are to be low smoke and zero halogen and certified accordingly. Note no cable are to be PVC.

d) Any mains isolation is to be timed with the venue so that it has minimum effect on the venues trading ability and is timed at a mutually convenient time.

e) On completion of the mains alterations, they are to be tested and certified using an NICEIC Electrical Installation Certificate or Minor Electrical Installation Works Certificate, a paper copy is to be left with the Maintenance Manager at the Venue and an electronic copy is to be sent to Russ Duly or Keith Forshaw at Property Services.

2. Building User's Responsibilities:

a) To review the survey notes and walk the proposed cable routes ahead of the proposed pre-start meeting and subsequent installation to identify any potential problems prior to commencement of work.

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Drawing Number:
91034_NET_VMO2_DDR_53

List of Requirements for Electrical Data and Other Cable Installations V17 3-8-2023

b) Be mindful of the visual appearance of the installation and location of the final equipment. As mentioned above, ideally, we should try to ensure all cables are routed sympathetically to the aesthetics of the building especially if the building is listed.

c) To ensure the actual installation is installed to meet the requirements of this document and as agreed during the pre-start meeting.

d) To review the asbestos register and asbestos log within the building and compare this to the proposed cable routes.

e) To induct each contractor into the building using the company daily contractor's forms and ensuring the safe working agreement forms are also signed by the contractor, ensure the contractor is made aware of the emergency evacuation procedures including the fire alarm and identifying doors which may not be in use during the day. Simply, the building induction should cover the following items as a minimum:

- Rules for Contractors working in LN property.
- Contractors daily forms
- Work permits.
- Hot work permits.
- Asbestos survey and register
- Fire alarm systems
- Means of escape, and, which exit routes are available whilst the contractor is working in the venue as not all exits will be open whilst the public are not in the building.
- Available welfare facilities for all contractors.

f) Contractors must supply their own tools and access equipment to carry out the task and must not use or rely on the building to supply or loan equipment.

g) Ensure contractor is made aware of any known site hazards including but not limited to voids, friable surfaces such as ceilings etc, specialised equipment, business critical equipment, and general confined spaces.

h) Review on site with the contractor their risk assessments and method statements paying attention to void access and asbestos containing areas.

i) Review the asbestos survey reports and asbestos logs with the contractor before any work commences.

j) Ensure that all cables are installed in accordance with good practice, current regulations and the notes above.

k) All cable routes are identified in advance using the survey notes.

l) Where necessary, and in public areas, paint out the newly installed cables so that they match the background wall colour where possible.

m) An inspection is made by the Asbestos Representative within each venue of the chosen cable routes and any voids to ensure that there are no asbestos materials within that area and if there are, they are in good condition and encapsulated as necessary.

n) If asbestos materials are found which are not on the asbestos survey and asbestos register, the work must stop until arrangements are made with our retained consultant, SB Asbestos Management Ltd, to undertake additional

sampling and inspections as necessary. Contact details can be found at the end of this document.

o) If asbestos is found, it must also be reported immediately to Property Services.

3. General Requirements:

a) All alterations to the electrical installation including the addition of extra sockets are only to be undertaken by a registered NICEIC contractor and are to be undertaken in accordance with the IET Eighteenth Edition Regulations. All such work is to be tested and certified on NICEIC approved stationary with paper copies left with the venue and PDF electronic copies sent to Property Services.

b) All data cabling will be tested and certified.

c) All data cabling should be Leviton Cat6 cabling unless otherwise agreed.

d) The installation dates must be planned around shows and events the venues may have booked. This will also include stopping work whilst sound checks are being undertaken.

e) Any changes to the proposed layout are to be agreed by Property Services before they are implemented within the building.

f) Copies of Insurance certificates will be required by Property Services before commencement of work.

4. O&M Manual

a) On completion of the work, an O&M manual should be completed by the principal contractor which should include all necessary details required to maintain the installation going forward.

b) This manual should include the following as a minimum:

- All test certificates.
- Operating instructions
- Installation instructions
- Maintenance information and instructions
- Ordering details should there be consumable elements.
- Colour details as necessary
- General finishes.
- Material and product specifications, maintaining and cleaning instructions etc.

c) Depending on the type of installation, it may be necessary to withhold some of these details. If so, a note should be inserted within the appropriate section of the manual explaining who should be contacted to request this information or discuss concerns etc.

5. Contact Details:

a) **Contractors & Consultants:**

Fagan Electrical Ltd:
Mike Savage
Managing Director
Highfield, School Lane
Knowsley Village
Prescot
MERSEYSIDE
L34 9ER

Office: 0151 548 9816
Mobile: +44 7824436004
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b) **SB Asbestos Management Ltd**
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