ES02 Containment

UNIVERSITY OF LEICESTER

Document Control

Rev	Date	By	Comments
A	Jun'16	L. Davies	Technical update review
B	Oct'17	L. Davies	Technical update review
C	Dec 17	UoL	Sign off for release
D	Apr 19	L. Davies	Technical update review
E	Mar'20	J Thrupp	March 2020 Issue~~Technical update review~~

Design Guidance

1. Ladder rack containment shall be medium duty return flange as a minimum and shall be used in LV switchrooms and for all primary routes greater than 450mm in width.
2. Trunking within wet laboratories shall be anti-bacterial for 3 compartment dado and bench mounted containment. The trunking shall be white plastic c/w DDA contrasting faceplate frames/ inserts. Where local RCD's are provided these shall be mounted adjacent to the dado containment served in proprietary housings with protective cover.
3. All dado and bench containment shall be Cat 6A compliant and include provision for Approved Document Pt. M outlet identification via faceplate surrounds or inserts. Change of faceplate colour is not preferred.
4. Galvanised conduits shall be used wherever services are exposed and visible including floors, walls and soffits. Where galvanised conduits are installed in surface/ exposed areas standard manufacturers installation methods shall be used throughout including the use of threaded couplers. Running couplers will not be permitted in surface exposed installations. Where galvanised conduit is utilised, it shall be threaded to form a continuous fixed wiring system. Where recessed, conduits may be installed using high impact PVC. The University's preference is to use Rigid conduits on all projects. However, on refurbishment projects only, where this may prove difficult and only where written confirmation is agreed with the University, flexible conduits may be used
5. Galvanised surface conduits shall utilise distance saddles throughout.
6. No inverted containment shall be installed without prior consent from university maintenance based on circumstantial considerations.
7. Trunking connections to final DB's and Control panels shall incorporate pin racks as standard to facilitate the separation of terminating circuits for ease of future maintenance and to alleviate strain on cabling.
8. Basket containment may be used for Data, ELV cabling and T&E (6242Y) cabling only. Where basket is utilised, this shall be installed in accordance with the manufacturers details only including the use of couplers, bends, sets and flanges.

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Design Components

	Manufacturer	Comments
Tray / Trunking	Simplex Davis Swifts	Galvanised Medium duty, return flange cable tray shall be installed for LV submain cabling installations up to 450mm. Where greater than 450mm the use of heavy duty ladder racking will be utilised. In addition, where local to mains LV switchpanels, ladder racking shall be used as standard to facilitate ease of cable installation and terminations. Medium duty basket containment shall be used for all ELV cabling serving TV, security, data and controls cabling. Separate baskets in all cases shall be utilised for routing of independent specialist trade cabling systems (i.e. security/ IT/ TV etc.) Where fillet dividers are utilised, these shall be continuous in length including bends and shall be minimum 1.5mm in thickness. Multi-compartment galvanised trunking shall be installed for LV and ELV cabling systems in surface/ exposed installations. Individual compartmentation shall be used for LV and ELV circuits with multiple compartments being provided for independent specialist trade cabling systems. A minimum of 25% wiring capacity shall be provided in all containment systems applicable to each individual compartment Manufacturers fixing support recommendations shall be met. Generally, trapeze style site fabricated Unistrut bracketry shall be used throughout. Alternative fixing and support methods must be presented for university approval prior to specification.
Dado Containment	MK Prestige 3D Marshall Tufflex Odyssey	Dado containment to be white Cat 6A compliant using all manufactured bends, sets and tees to form a complete enclosed installation. Approved Document Pt. M compliance shall be achieved using charcoal grey accessory faceplate surrounds as a preference. Coloured faceplates are not preferred. Alternative products may be presented for consideration at design stage.
Bench Trunking	MK Pinnacle Marshall Tufflex	Bench containment to be white Cat 6A compliant using all manufactured bends, sets and tees to form a complete enclosed installation. DDA compliance shall be achieved using charcoal grey accessory faceplate surrounds/ coloured lid.

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Design Components

	Manufacturer	Comments
Conduits	Simplex Davis Walsall Airedale Swifts	Steel/ Galvanised conduit to Bs 4568 shall be installed to all exposed areas including walls, floors and soffits. PVC conduit will only be considered for recessed installations. PVC, where recessed, shall comply with Bs 4607 and 6099 and shall be heavy duty, white utilising all manufactured couplings, bends and sets and forming a completely enclosed conduit system.
Flexible conduit (All Projects - Final Connections Only)	Kopex Adaptaflex Flexicon	Where flexible conduit is used this shall be limited to final connections only up to a maximum length of 500mm and shall be cleated where appropriate. Plant/ exposed areas – Metallic flexible conduit to be used with PVC/rubber outer sheath. General – PVC flexible conduit may be used as above.
Flexible Conduit – Main Conduit Routes (Generally Refurbishment Projects Only and Where agreed with University)	Kopex Adaptaflex Flexicon	Final installation details of Flexible Conduit shall be agreed with the University prior to any installation taking place. Agreement of installation details will form part of the process of obtaining agreement from the University

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