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| | Inspection & Test Plan - General Electrical Works | Revision No.: 0 | | Document Ref.: PD-REC-ITPGEW |

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| Customer Name: | Project: | ITP No: | Date: |
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| ITEM | INSPECTION/TEST STAGE | REQUIREMENT AND ACCEPTANCE CRITERIA | FREQUENCY | ACTION | | | INSPECTION RECORD / FORM NO. | NOTES |
|----------|--|--|------------------------------|----------|-----|--------|------------------------------|-------|
| | | | | HEXATECH | PMC | CLIENT | | |
| A | APPROVAL | | | | | | | |
| A1 | Shop Drawings | | Before to start the activity | P | A | A | Approved Shop Drawings | |
| A2 | Method Statements | Tender Specifications | Before to start the activity | P | A | A | Approved MS | |
| A3 | Equipment & material catalogues including technical engineering documents | Tender Specifications | Before to start the activity | P | A | A | Approved Catalogues | |
| B | MATERIALS RECEIVING INSPECTION | | | | | | | |
| B1 | Visual Inspection of Cables, Trays, Distribution Boards, MCC Panels, VSD Panels, Sub Switchboards, Canopy Genset including arcoustic equipment, UPS, Busway, SSO, Light Fittings, etc.: - as approved. - no paint/surface coating damages. - no dents, etc. | Approved Shop Drawings & Accepted Materials | Before Installation | I, P | A | A | RFIT MRIR | |
| C | INSTALLATION MOCK UP | | | | | | | |
| C1 | For on-site installation, mock up to be installed prior to start any new activities. | Approved Shop/ Mock Up Drawings, Catalogues & Method Statement | Before Installation | I, P | A | A | RFIT | |

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| D | INSTALLATION | | | | | | | |
| D1 | Underground cables: - cables laid as per route & procedures. - individual backfill levels as per approved method statement and shop drawing. - cables labelled. - route markers placed. | Approved Shop/ Mock Up Drawings, Catalogues & Method Statement | Before Testing | I, P | A | A | RFIT IC/E/F4/R1 | |
| D2 | Compound/Street Lighting: - installed as per drawings. - labelled as per drawings. - Individual backfill levels as per approved method statement. | Approved Shop/ Mock Up Drawings, Catalogues & Method Statement | Before Testing | I, P | A | A | RFIT IC/E/F8/R1 | |
| D3 | Busway: - installed as per drawings. - labelled as per drawings. - verify continuity and insulation resistance progressively during installation/coupling. | Approved Shop Drawings, Catalogues & Method Statement | Before Testing | I, P | A | A | RFIT QMS/TRE1 | |
| D4 | Electrical Distribution Boards : - installed as per plan/drawings. - damaged wall/floor repaired (if applicable). - touch up paint completed. - labelled correctly. - earthing connected to board. - cables glands & earthing completed. - cables cores terminated with lugs & feruled as per drawings. - MCBs/MCCBs installed, labelled & functions checked. | Approved Shop Drawings, Catalogues & Method Statement | Before Testing | I, P | A | A | RFIT IC/E/F5/R1 | |

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| D4 | Electrical Distribution Boards : - installed as per plan/drawings. - damaged wall/floor repaired (if applicable). - touch up paint completed. - labelled correctly. - earthing connected to board. - cables glands & earthing completed. - cables cores terminated with lugs & feruled as per drawings. - MCBs/MCCBs installed, labelled & functions checked. | Approved Shop Drawings, Catalogues & Method Statement | Before Testing | I, P | A | A | RFIT IC/E/F5/R1 | |
| D5 | Genset including arcoustic equipment: - installed as per drawings. - labelled as per drawings. | Approved Shop Drawings, Catalogues & Method Statement | Before Testing | I, P | A | A | RFIT IC/E/F12/R1 IC/E/F20/R1 | |
| D6 | UPS: - installed as per drawings. - labelled as per drawings. | Approved Shop drawings, Catalogues & Method Statement | Before Testing | I, P | A | A | RFIT IC/E/F11/R1 | |
| D7 | LV Cables & cable trays: - installed trays as per approved routes. - trays secured firmly to structure. - repairs to damaged walls, structure, floor, etc. completed. - cable laid & secured with cable ties to trays. - cables & trays labelled as per drawings ☐ | Approved Shop drawings, Catalogues & Method Statement | Before Testing | I, P | A | A | RFIT IC/E/F10/R1 | |
| D8 | Lightings, Switch Socket Outlets, Switches, etc.: - installed as per drawings. - labelled as per drawings. | Approved Shop drawings, Catalogues & Method Statement | Before Testing | I, P | A | A | RFIT IC/E/F6/R1 IC/E/F7/R1 IC/E/F8/R1 IC/E/F9/R1 | |

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| E | PRE-COMMISSIONING | | | | | | | |
| E1 | Underground Cables: - physical inspection. - visual inspection. - terminations as per drawings at both ends. - continuity tested & recorded. - IR tested (ph-ph, ph-earth) & recorded. | Approved Shop Drawings & Catalogue | Before Commissioning | I, P | A | A | RFIT QMS/TRE1 | |
| E2 | Busways / Busducts: - physical Inspection. - visual Inspection. - terminations as per drawings at both ends. - continuity tested & recorded. - IR tested (ph-ph, ph-earth) & recorded. | Approved Shop Drawings & Catalogue | Before Commissioning | I, P | A | A | RFIT QMS/TRE1 | |
| E3 | Electrical Distribution Boards: - physical Inspection. - visual Inspection. - terminations as per drawings at both ends. - cable continuity tested & recorded. - cable IR tested (ph-ph, ph-earth) & recorded. | Approved Shop Drawings & Catalogue | Before Commissioning | I, P | A | A | RFIT QMS/TRE1 | |
| E4 | Genset including arcoustic equipment: - physical Inspection. - visual Inspection. - terminations as per drawings at both ends. - cable continuity tested & recorded. - cable IR tested (ph-ph, ph-earth) & recorded. | Approved Shop Drawings & Catalogue | Before Commissioning | I, P | A | A | RFIT QMS/TRE1 | |

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| E5 | UPS: - physical Inspection. - visual Inspection. - terminations as per drawings at both ends. - cable continuity tested & recorded. - cable IR tested (ph-ph, ph-earth) & recorded. | Approved Shop Drawings & Catalogue | Before Commissioning | I, P | A | A | RFIT QMS/TRE1 Manufacturer's Service Report ☑ | |
| E6 | Lighting including Switches, Emergency Lights & Keluar Signs: - physical Inspection. - visual Inspection. | Approved Shop Drawings, Catalogue & Single Line Drawing | Before Commissioning | I, P | A | A | RFIT PD/ESTR | |
| E7 | Power Sockets: - physical Inspection. - visual Inspection. | Approved Shop Drawings, Catalogue & Single Line Drawing | Before Commissioning | I, P | A | A | RFIT PD/ESTR | |
| F | Commissioning | | | | | | | |
| F1 | Underground Cables: - physical inspection. - visual inspection. - verify terminations at both ends. - pressure test & recorded. - voltage tested & recorded. | Approved Shop Drawings & Catalogue | After Pre-Commissioning | I, P | A | A | RFIT QMS/TRE1 | |
| F2 | Busways/Busducts: - physical inspection. - visual inspection. - verify terminations at both ends. - contact resistance tested & recorded. - voltage tested & recorded. | Approved Shop Drawings & Catalogue | After Pre-Commissioning | I, P | A | A | RFIT QMS/TRE1 | |

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| F3 | Electrical Distribution Boards: - visual inspection. - verify terminations at both ends. - physical inspection. - functional test. - protection test. - voltage tested & recorded. - phase rotation tested & recorded. | Approved Shop Drawings & Catalogue | After Pre-Commissioning | I, P | A | A | RFIT QMS/TRE1 | |
| F4 | Genset including arcoustic equipment: - physical inspection. - visual inspection. - verify terminations at both ends. - votage tested & recorded. - phase rotation tested & recorded. - ATS functionality tested & recorded. | Approved Shop Drawings & Catalogue | After Pre-Commissioning | I, P | A | A | RFIT QMS/TRE1 | Note 1 |
| F5 | UPS: - physical inspection. - visual inspection. - verify terminations at both ends. - site functional test. - protection test. - voltage tested & recorded. | Approved Shop Drawings & Catalogue | After Pre-Commissioning | I, P | A | A | RFIT Manufacturer's Acceptance Certificate | |
| F6 | Lighting including Switches, Emergency Lights & Keluar Signs: - test lighting. - lux level test. | Approved Shop Drawings, Catalogue & Single Line Drawing | After Pre-Commissioning | I, P | A | A | RFIT QMS/TRE1 IC/E/F23/R1 | Note 1 |

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| F7 | Switch Socket Outlets: - test functionality. ☒ | Approved Shop Drawings, Catalogue & Single Line Drawing | After Pre-Commissioning | I, P | A | A | RFIT QMS/TRE1 | |
| G | FINAL INSPECTION & ACCEPTANCE | | | | | | | |
| G1 | Final inspection: - punch list cleared. | 100% | At work completion | I | A | A | Punchlist | |
| G2 | As Built Drawing. | Approved Shop Drawing, Tender Specs, IFC Drawings | At work completion | P | A | A | TN | |
| G3 | Dossier Compilation & Issuance. | Handover Requirement | At work completion | P | A | A | TN, CPC, Project Handover Form | |

Note 1: BOMBA Inspection

Abbreviations:

A Approval
R Review
I Inspection
W Witness
P Prepare Documentation
H Hold
TN Transmittal Note
CPC Certificate of Project Completion

RFIT Request For Inspection & Testing
MRIR Material Receiving Inspection Report
TRE1 Test Report Electrical No. 1
ESTR Electrical Services Test Report
MS Method Statement
PD Project Department
QMS Quality Management System