

Kiran Singh

From: Alex Bosman
Sent: 31 July 2013 16:37
To: 'Sharon.Fisher@rbkc.gov.uk'
Cc: Siobhan Rumble; Sacha Jevans; Peter Maddison; Alasdair Manson
Subject: RE: Claim Reference: N3TPC000006
Attachments: Elec repair order 2.13 onwards.xlsx

Hi Sharon,

Please see attached Electrical repairs from February 2013 onwards relating to electrical works at Grenfell Tower.

Please let me know if there is any further information required.

Thanks,

Alex

Alex Bosman

Head of Contract Management
Kensington & Chelsea TMO
292a Kensal Road
W10 5BE



From: Alex Bosman
Sent: 29 July 2013 15:17
To: 'Sharon.Fisher@rbkc.gov.uk'
Cc: Siobhan Rumble; Sacha Jevans; Peter Maddison; Alasdair Manson
Subject: RE: Claim Reference: N3TPC000006

Hi Sharon,

Thanks for forwarding this letter; I am working to pull all the information together.

- Please see attached most recent block PIR which is dated 4.5.2010 and the completion certificate following the recent works. These were both carried out by our contractor RGE.
- We are currently preparing the repair history for the block and will be able to forward shortly.
- The Damage to the bus bars on the Ryfield boards was cause during investigation into the surges. These have now been made good.
- Grenfell Tower was built in 1975 and the electrics are original as installed at the time.

- The poor connection would arise over time; as the connection heats and cools depending on electrical load over the years the connection deteriorates.
- Following the reports on the 10.5 and the 16.5 electrical inspections were carried out within the individual flats with no faults found. UK Power Networks were contacted to investigate the reports of surges on the power supply side and reported that no faults could be found on the supply to the building. at this time it was not clear if the fault was within the individual properties or on the block supply.

I hope this information answers your questions and will forward the repair/compliant history once its compiled.

Please do not hesitate to contact me with any further questions.

Thanks,

Alex

Alex Bosman

Head of Contract Management
Kensington & Chelsea TMO
292a Kensal Road
W10 5BE



Address line 2	Repair number	Logged date	Repair header, Repair description	Current stage	Priority code	WFO name	Trade code, Description for location for code	Location code	SOR item no.	WO line, Repair description	Description line 1
GRENFELL ROAD	2013242764	04/02/2013	ATTEND SITE TO RENEW ELECTRICAL SUPPLY THE WATER BOOSTER SET	5	2	RGE SERVICES	ELECTRICAL PLANT ROOM		MANMA	SOR CODE FOR MANUAL WORKS ORDERS	SOR CODE FOR MANUAL WORKS ORDERS
LANCASTER WEST ESTATE	2013023391	13/04/2013	COHRS CALL NUM: [REDACTED] - DATE: 13/04/13 - TIME: 08:43	35	OH	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL SEE NOTE		ELE120	RCD SOCKET REF. CRA 2426/03B Gand TEST: SUPPLY AND INSTALL.	RCD socket Ref. CRA 2426/03B Gand test: Supply and install.
LANCASTER WEST ESTATE	201302523	17/04/2013	COHRS CALL NUM: [REDACTED] - DATE: 12/04/13 - TIME: 21:10	35	OH	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	2013037893	24/04/2013	RECTIFY FAULT IN POWER CIRCUIT	35	N	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	2014040424	01/05/2013	RECTIFY FAULT IN POWER CIRCUIT	19	N	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL BATHROOM		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	2013060422	13/05/2013	RECTIFY FAULT IN POWER CIRCUIT	15	E	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	2013066497	15/05/2013	COHRS CALL NUM: [REDACTED] - DATE: 11/05/13 - TIME: 22:03	35	OH	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201307084	20/05/2013	RECTIFY FAULT IN POWER CIRCUIT	35	U	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL BATHROOM		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201307179	20/05/2013	RECTIFY FAULT IN POWER CIRCUIT LIGHTS	35	U	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201307209	20/05/2013	RECTIFY FAULT IN POWER CIRCUIT AFFECTING LIGHTING THROUGHOUT	35	N	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
GRENFELL ROAD	201307655	22/05/2013	SUPPLY AND INSTALL ENERGY MONITORING EQUIPMENT	5	2	RGE SERVICES	ELECTRICAL ELECTRICAL INTAKE CB		MANMA	SOR CODE FOR MANUAL WORKS ORDERS	SOR CODE FOR MANUAL WORKS ORDERS
GRENFELL ROAD	201307823	23/05/2013	SUPPLY INSTALL COMMISSION SURGE PROTECTION EQUIPMENT	5	2	RGE SERVICES	ELECTRICAL ELECTRICAL INTAKE CB		MANMA	SOR CODE FOR MANUAL WORKS ORDERS	SOR CODE FOR MANUAL WORKS ORDERS
LANCASTER WEST ESTATE	201308003	28/05/2013	RECTIFY FAULT IN POWER CIRCUIT - BATHROOM	35	E	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL BATHROOM		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201308286	29/05/2013	RECTIFY FAULT IN POWER CIRCUIT	35	E	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201308272	29/05/2013	RECTIFY FAULT IN POWER CIRCUIT - LOST OF ELECTRICITY TO FLAT	35	E	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201308275	29/05/2013	RECTIFY FAULT IN POWER CIRCUIT	35	E	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL LIVING ROOM		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201308408	30/05/2013	RECTIFY FAULT IN POWER CIRCUIT	35	E	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL SEE NOTE		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201308427	30/05/2013	FAULTY ELECTRIC SHOWER	35	U	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL BATHROOM		MANMA	SOR CODE FOR MANUAL WORKS ORDERS	SOR CODE FOR MANUAL WORKS ORDERS
LANCASTER WEST ESTATE	201308462	30/05/2013	RECTIFY FAULT IN POWER CIRCUIT	35	E	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL KITCHEN		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201308495	29/05/2013	COHRS CALL NUM: [REDACTED] - DATE: 29/05/13 TIME: 18:27	35	OH	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		MANMA	SOR CODE FOR MANUAL WORKS ORDERS	SOR CODE FOR MANUAL WORKS ORDERS
LANCASTER WEST ESTATE	201308500	30/05/2013	RECTIFY FAULT IN POWER CIRCUIT	14	E	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201308504	29/05/2013	COHRS CALL NUM: [REDACTED] - DATE: 29/5/13 TIME: 20:11	35	OH	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		MANMA	SOR CODE FOR MANUAL WORKS ORDERS	SOR CODE FOR MANUAL WORKS ORDERS
LANCASTER WEST ESTATE	201308505	30/05/2013	RECTIFY FAULT IN POWER CIRCUIT	14	E	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201308588	30/05/2013	BATHROOM LIGHT NOT WORKING AFTER POWER PROBLEM	35	U	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL BEDROOM		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
GRENFELL ROAD	201309534	06/06/2013	EST LIGHT - EMERGENCY CALLOUT ATTEND IN 4HRS COMP IN 24HRS	5	6	RGE SERVICES	ELECTRICAL EXTERNAL		CLE002	EMERGENCY CALL OUT - ESTATE LIGHTING - ATTEND WITHIN 4 HRS -	EMERGENCY CALL OUT - ESTATE LIGHTING - ATTEND WITHIN 4 HRS -
LANCASTER WEST ESTATE	201310014	10/06/2013	RECTIFY FAULT IN POWER CIRCUIT	35	U	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201310939	14/06/2013	RECTIFY FAULT IN POWER CIRCUIT	18	U	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL BATHROOM		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201311067	17/06/2013	RECTIFY FAULT IN POWER CIRCUIT	35	MF	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL BATHROOM		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201311791	19/06/2013	DOH 19/6 NO POWER THROUGHOUT PROPERTY	35	OH	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	RECTIFY FAULT IN POWER CIRCUIT INCLUDING CHECK AND RESET FUS	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201312386	25/06/2013	FAULTY ELECTRICS IN FLAT TO RECTIFY - MOST PLUGS DONT WORK	35	N	WILLMOTT DIXON PARTNERSHIPS LT	ELECTRICAL THROUGHOUT		ELE013	Rectify fault in power circuitincluding check and reset fus	Rectify fault in power circuitincluding check and reset fus
LANCASTER WEST ESTATE	201312747	27/06/2013	ESTATE LIGHTING - URGENT ATTEND AND COMP WITHIN 5 DAYS	5	7	RGE SERVICES	ELECTRICAL EXTERNAL		CLE003	URGENT - ESTATE LIGHTING - ATTEND AND COMPLETE WITHIN 5 DAYS	URGENT - ESTATE LIGHTING - ATTEND AND COMPLETE WITHIN 5 DAYS
GRENFELL ROAD	201312947	28/06/2013	EST LIGHT - EMERGENCY CALLOUT ATTEND IN 4HRS COMP IN 24HRS	5	6	RGE SERVICES	ELECTRICAL COMMUNAL AREA		CLE002	EMERGENCY CALL OUT - ESTATE LIGHTING - ATTEND WITHIN 4 HRS -	EMERGENCY CALL OUT - ESTATE LIGHTING - ATTEND WITHIN 4 HRS -

ELECTRICAL INSTALLATION CERTIFICATE

Issued in accordance with British Standard BS 7671 - Requirements for Electrical Installations

Certificate Reference: Grenfell Tower / 145002

1. DETAILS OF THE CLIENT

Client Address: The Royal Borough of Kensington & Chelsea , TMO, Network Hub, 292a Kensal Road, London, W10 5BE

2. DETAILS OF THE INSTALLATION

Installation Address: Grenfell Tower, Grenfell Road, London, W11 1TQ

Extent of the installation covered by this certificate: New CC1H120mm MICC supply cable from domestic riser sub-mains service head 2.to riser enclosure in walkway riser cupboard.

The installation is: New N/A An addition N/A An alteration

3. DESIGN

I/We being the person(s) responsible for the design of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the design, hereby CERTIFY that the design work for which I/we have been responsible is to the best of my/our knowledge and belief in accordance with BS 7671:2008, amended to 2011 except for the departures, if any, detailed as follows.

Details of departures from BS 7671 (Regulations 120.3, 133.5): N/A

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate.

For the DESIGN of the installation:

Name: N/A Position: N/A Signature: N/A Date: N/A

Where there is divided responsibility for the design:

Name: N/A Position: N/A Signature: N/A Date: N/A

4. CONSTRUCTION

I/We being the person(s) responsible for the construction of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the construction, hereby CERTIFY that the construction work for which I/we have been responsible is to the best of my/our knowledge and belief in accordance with BS 7671:2008, amended to 2011 except for the departures, if any, detailed as follows.

Details of departures from BS 7671 (Regulations 120.3, 133.5): N/A

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate.

For the CONSTRUCTION of the installation:

Name: Bob Greene Position: Qualified Supervisor Signature:  Date: 09/07/2013

5. INSPECTION AND TESTING

I/We being the person(s) responsible for the inspection and testing of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the inspection and testing, hereby CERTIFY that the inspection and testing work for which I/we have been responsible is to the best of my/our knowledge and belief in accordance with BS 7671:2008, amended to 2011 except for the departures, if any, detailed as follows.


Details of departures from BS 7671 (Regulations 120.3, 133.5): N/A

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate.

For the INSPECTION AND TESTING of the installation:

Name: Bob Greene Position: Qualified Supervisor Signature:  Date: 09/07/2013

Report reviewed and confirmed by:

Name: Bob Greene Position: Qualified Supervisor Signature:  Date: 09/07/2013

6. DESIGN, CONSTRUCTION, INSPECTION AND TESTING

I/We being the person(s) responsible for the design, construction, inspection and testing of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the design, construction, inspection and testing, hereby CERTIFY that the design work for which I/we have been responsible is to the best of my/our knowledge and belief in accordance with BS 7671:2008, amended to 2011 except for the departures, if any, detailed as follows.

Details of departures from BS 7671 (Regulations 120.3, 133.5): N/A

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate.

For the DESIGN, the CONSTRUCTION, and the INSPECTION AND TESTING of the installation:


Name: N/A Position: N/A Signature: N/A Date: N/A

Report reviewed and confirmed by:

Name: N/A Position: N/A Signature: N/A Date: N/A

7. NEXT INSPECTION

I/We the designer(s), RECOMMEND that this installation is further inspected and tested after an interval of not more than: 2 Months

8. DETAILS OF THE ELECTRICAL CONTRACTOR			
Design (1)	Trading Title: RGE Services Ltd		
Address:	19-21 Roebuck Road		Registration Number (if applicable):
	Hainault Business Park		Telephone Number:
	Essex	Postcode: IG6 3TU	
	Trading Title:		
Address:			Registration Number (if applicable):
	Postcode:		Telephone Number:
Trading Title:			
Address:			Registration Number (if applicable):
	Postcode:		Telephone Number:
Trading Title:			
Address:			Registration Number (if applicable):
	Postcode:		Telephone Number:
Trading Title:			
Address:			Registration Number (if applicable):
	Postcode:		Telephone Number:

9. SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS				
System Type(s)	Number and Type of Live Conductors		Nature of Supply Parameters	Characteristics of Primary Supply Overcurrent Protective Device(s)
TN-S <input checked="" type="checkbox"/>	ac: <input checked="" type="checkbox"/> 1-phase (2 wire): N/A	dc: N/A 1-phase (3 wire): N/A	Nominal voltage(s): U: 400 V U ₀ : 230 V	BS(EN): 88-2 Fuse HRC Type: gG Rated current: 400 A Short-circuit capacity: 80 kA
TN-C-S <input type="checkbox"/>	2-phase (3 wire): N/A	2 pole: N/A	Nominal frequency, f: 50 Hz	
TNC <input type="checkbox"/>	3-phase (3 wire): N/A	3 pole: N/A	Prospective fault current, I _{pf} : 1.21 kA	
TT <input type="checkbox"/>	3-phase (4 wire): <input checked="" type="checkbox"/>	Other: N/A	External earth fault loop impedance, Z _e : 0.19 Ω	
IT <input type="checkbox"/>	Other: N/A	Confirmation of supply polarity: <input checked="" type="checkbox"/>	Number of supplies: 2	

10. PARTICULARS OF INSTALLATION AT THE ORIGIN			
Means of Earthing		Details of Installation Earth Electrode (where applicable)	
Distributor's facility: <input checked="" type="checkbox"/>	Type: N/A	Location: N/A	
Installation earth electrode: N/A	Electrode resistance, R _A : N/A Ω	Method of measurement: N/A	
Maximum Demand (Load): N/A N/A	Protective measure(s) against electric shock: ADS		
Main Switch or Circuit-Breaker		Earthing and Protective Bonding Conductors	
Type BS(EN): N/A	Voltage rating: N/A V	Earthing conductor	Continuity & connection verified: N/A
Number of poles: N/A	Rated current, I _n : N/A A	Conductor material: N/A	Conductor csa: N/A mm ²
Supply conductors material: N/A	RCD operating current: N/A mA	Main protective bonding conductors	Continuity & connection verified: N/A
Supply conductors csa: N/A mm ²	RCD operating time: N/A ms	Conductor material: N/A	Conductor csa: N/A mm ²
		Bonding of extraneous-conductive parts	
		Water service: N/A	Gas service: N/A
		Oil service: N/A	Lightning protection: N/A
		Structural Steel: N/A	Other incoming service(s): N/A

11. COMMENTS ON EXISTING INSTALLATION
Would suggest monitoring all rising main connections whilst surrounding building works ongoing. Vibration present. Existing

12. SCHEDULE OF ITEMS INSPECTED

Methods of protection against electric shock

Both basic and fault protection:

- N/A (i) SELV
- N/A (ii) PELV
- LIM (iii) Double or Reinforced Insulation

Basic protection:

- (i) Insulation of live parts
- LIM (ii) Barriers or enclosures
- N/A (iii) Obstacles **
- N/A (iv) Placing out of reach **

Fault protection:

(i) Automatic disconnection of supply

- Presence of earthing conductor
- N/A Presence of circuit protective conductors
- N/A Presence of main protective bonding conductors
- N/A Presence of earthing arrangements for combined protective and functional purposes
- N/A Presence of adequate arrangements for alternative source(s), where applicable
- N/A FELV
- Choice and setting of protective and monitoring devices (for fault protection and/or overcurrent protection)

(ii) Non-conducting location **

- N/A Absence of protective conductors

(iii) Earth-free local equipotential bonding **

- N/A Presence of earth-free local equipotential bonding

(iv) Electrical Separation

- N/A Provided for 'one item' of current-using equipment
- N/A Provided for 'more than one item' of current-using equipment **

Additional protection:

- N/A Presence of residual current device(s)
- N/A Presence of supplementary bonding conductors

**** For use in controlled supervised/conditions only**

Prevention of mutual detrimental influence

- (a) Proximity of non-electrical services and other influences
- N/A (b) Segregation of Band I and Band II circuits or use of Band II insulation
- N/A (c) Segregation of safety circuits

Identification

- N/A Presence of diagrams, instructions, circuit charts and similar information
- N/A Presence of danger notices and other warning notices
- N/A Labelling of protective devices, switches and terminals
- N/A Identification of conductors

Cables and Conductors

- N/A Selection of conductors for current carrying capacity and voltage drop
- N/A Erection methods
- N/A Routing of cables in prescribed zones or within mechanical protection
- LIM Cables incorporating earthed armour or sheath, or run within an earthed wiring system, or otherwise adequately protected against nails, screws and the like
- N/A Additional protection provided by 30mA RCD for cables in concealed walls (where required in premises not under the supervision of skilled or instructed persons)

- Connection of conductors

- Presence of fire barriers, suitable seals and protection against thermal effects

General

- Presence and correct location of appropriate devices for isolation and switching
- Adequacy of access to switchgear and other equipment
- N/A Particular protective measures for special installations and locations
- N/A Connection of single-pole devices for protection or switching in line conductors only
- Correct connection of accessories and equipment
- Presence of undervoltage protective devices
- N/A Selection of equipment and protective measures appropriate to external influences
- N/A Selection of appropriate functional switching devices

13. SCHEDULE OF ITEMS TESTED

- External earth fault loop impedance, Ze
- N/A Installation earth electrode resistance, RA
- Continuity of protective conductors
- N/A Continuity of ring final circuit conductors
- Insulation resistance between live conductors
- Insulation resistance between live conductors and earth
- N/A Protection by separation of circuits
- N/A Protection against direct contact by barrier or enclosure provided during erection
- N/A Insulation of non-conducting floors or walls
- Polarity
- Earth fault loop impedance, Zs
- Verification of phase sequence
- N/A Operation of residual current device(s)
- Functional testing of assemblies
- Verification of voltage drop

All boxes must be completed. 'tick' indicates that an inspection or test was carried out and that the result was satisfactory. 'X' indicates that an inspection or test was carried out and the result is not satisfactory. 'N/A' indicates that an inspection or test was not applicable to the particular installation. 'LIM' indicates that, exceptionally, a limitation agreed with the person ordering the work prevented the inspection or test being carried out.

PERIODIC INSPECTION REPORT
(BS 7671:2008 as amended)

292623 - Maclar

DETAILS OF THE CLIENT

Client	Kensington & Chelsea TMO	Address	Charles house 375 Kensington high street London W14 8QH
Purpose of this report	Clients request		

DETAILS OF THE INSTALLATION

Occupier	Kensington and Chelsea TMO	Description of premises	Domestic <input checked="" type="checkbox"/>	Commercial <input checked="" type="checkbox"/>	Industrial <input checked="" type="checkbox"/>
Address	Grenfell tower Grenfell tower Grenfell road Lancaster west estate London W11 1TG	Other	Communal areas		
		Estimated age of the electrical installation		12	yrs
		Evidence of alterations or additions	<input checked="" type="checkbox"/>	If yes estimated age	N/A yrs
Date of previous inspection	Not Known	Electrical Installation Certificate No or previous Periodic Inspection Report No	N/A		
Records of installation available	<input checked="" type="checkbox"/>	Records held by	N/A		

EXTENT AND LIMITATIONS OF THE INSPECTION

Extent of electrical installation covered by this report

FIXED WIRING AND FUSE BOARDS

Agreed limitation of the inspection and testing

All areas of no access

This inspection has been carried out in accordance with BS7671:2008(IEE Wiring Regulations), as amended. Cables concealed within trunking and conduits, or cables and conduits concealed under floors, in roof space and generally within the fabric of the building or underground have not been inspected.

DECLARATION

I/We, being the person(s) responsible for the inspection and testing of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the inspection and testing, hereby declare that the information in this report, including observations overleaf and the attached schedules, provide an accurate assessment of the condition of the electrical installation taking into account the stated extent of the installation and the limitations of the inspection.

INSPECTION, TESTING AND ASSESSMENT BY:		REPORT REVIEWED AND CONFIRMED BY:	
Signature	<i>M Chessher</i>	Signature	<i>D Stead</i>
Name	M.Chessher	Name	D STEAD
Position	ENGINEER		
Date	02/04/2010	Date	04/05/2010

SCHEDULES AND ADDITIONAL PAGES

Schedule of items inspected and schedules of items tested:	Page 4	Additional pages, including additional source(s) data sheets	Pages NONE
Schedule of Circuit Details for the installation	5 - 13 (odd)	Schedule of Test Results for the installation	6 - 14 (even)

NEXT INSPECTION

We recommend that this installation is further inspected and tested after an interval of not more than **5 Years**

Provided that any observations which have been attributed recommendation code 1 (requires urgent attention) are remedied without delay. Observations attributed recommendation code 2 or 3 should be acted on as soon as is practical.

DETAILS OF THE INSPECTION AND TEST COMPANY

Trading Title: **RGE Services**

Address: **19-21 Roebuck road
Hainault
Ilford
Essex
IG6 3TU**

Telephone number: [Redacted]

Fax number: [Redacted]

NICEIC Enrolment No.: [Redacted]

Branch No. (if applicable): **N/A**

SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS

* System Type(s)	* Number and Type of Live Conductors				Nature of Supply Parameters				* Supply protective device characteristics
TN-S <input checked="" type="checkbox"/>	a.c. <input checked="" type="checkbox"/>			d.c. <input checked="" type="checkbox"/>	Nominal Voltage U	400 V	U ₀	230 V	BS(EN)
TN-C-S <input checked="" type="checkbox"/>	1-Phase (2 wire) <input checked="" type="checkbox"/>	1-Phase (3 wire) <input checked="" type="checkbox"/>	2 Pole <input checked="" type="checkbox"/>		Nominal frequency f	50 Hz			1361 Fuse HBC
TN-C <input checked="" type="checkbox"/>	2-Phase (3 wire) <input checked="" type="checkbox"/>		3 Pole <input checked="" type="checkbox"/>		Prospective fault current I _{pf}	2.09 kA		Type	2
TT <input checked="" type="checkbox"/>	3-Phase (3 wire) <input checked="" type="checkbox"/>	3-Phase (4 wire) <input checked="" type="checkbox"/>	Other <input checked="" type="checkbox"/>		External loop impedance Z _e	0.11 Ω		Nominal current rating	400 A
IT <input checked="" type="checkbox"/>	Other	N/A			Number of supplies	1		Short circuit capacity	88 kA

PARTICULARS OF INSTALLATION REFERRED TO IN THE CERTIFICATE

* Means of Earthing		Details of Installation Earth Electrode (where applicable)			
Distributor's facility <input checked="" type="checkbox"/>	Installation earth electrode <input checked="" type="checkbox"/>	Type (eg rod(s), tape etc)	N/A	Location	N/A
		Electrode resistance, R _A	N/A Ω	Method of measurement	N/A

* Main Switch or Circuit-Breaker				Maximum Demand (load)		Protective measure(s) against electric shock																																													
Type BS(EN)	5419 Isolator	Voltage rating	400 V	280 Amps		ADS																																													
No of poles	3	Current rating	400 A	Earthing and Protective Bonding Conductors <table border="1"> <tr> <th colspan="2">Earthing Conductor</th> <th colspan="2">Main protective bonding conductors</th> <th colspan="2">Bonding of extraneous conductive parts</th> </tr> <tr> <td>Material</td> <td>Copper</td> <td>Material</td> <td>Copper</td> <td>Water</td> <td>Gas</td> </tr> <tr> <td>Supply conductors material</td> <td>Copper</td> <td>RCD Operating current, I_{Δn}</td> <td>N/A mA</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Supply conductors csa</td> <td>16 mm²</td> <td>RCD Operating time at I_{Δn}</td> <td>N/A ms</td> <td>Oil</td> <td>Steel</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>Lightning</td> <td>Other</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>N/A</td> <td>N/A</td> </tr> </table>						Earthing Conductor		Main protective bonding conductors		Bonding of extraneous conductive parts		Material	Copper	Material	Copper	Water	Gas	Supply conductors material	Copper	RCD Operating current, I _{Δn}	N/A mA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Supply conductors csa	16 mm ²	RCD Operating time at I _{Δn}	N/A ms	Oil	Steel					N/A	N/A					Lightning	Other					N/A	N/A
Earthing Conductor		Main protective bonding conductors								Bonding of extraneous conductive parts																																									
Material	Copper	Material	Copper	Water	Gas																																														
Supply conductors material	Copper	RCD Operating current, I _{Δn}	N/A mA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																														
Supply conductors csa	16 mm ²	RCD Operating time at I _{Δn}	N/A ms	Oil	Steel																																														
				N/A	N/A																																														
				Lightning	Other																																														
				N/A	N/A																																														
				Material	Copper	Material	Copper	Lightning	Other																																										
				csa	90 mm ²	csa	50 mm ²	N/A	N/A																																										
				Continuity check	<input checked="" type="checkbox"/>	Continuity check	<input checked="" type="checkbox"/>																																												

* Where a number of sources are available to supply the installation, and where the data given for the primary source may differ from other sources, a separate sheet must be provided which identifies the relevant information relating to each additional source.

SCHEDULE OF ITEMS INSPECTED		† see note below	
PROTECTIVE MEASURES AGAINST ELECTRIC SHOCK		Prevention of mutual detrimental influence	
Basic and fault protection		<input checked="" type="checkbox"/>	Proximity of non-electrical services and other influences
<input checked="" type="checkbox"/>	SELV	<input checked="" type="checkbox"/>	Segregation of Band I and Band II circuits or Band II insulation used.
<input type="checkbox"/>	PELV	<input type="checkbox"/>	Segregation of Safety Circuits
<input type="checkbox"/>	Double or Reinforced insulation	Identification	
Basic protection		<input checked="" type="checkbox"/>	Presence of diagrams, instructions, circuit charts and similar information
<input checked="" type="checkbox"/>	Insulation of live parts	<input checked="" type="checkbox"/>	Presence of danger notices and other warning notices
<input checked="" type="checkbox"/>	Barriers or enclosures	<input checked="" type="checkbox"/>	Labelling of protective devices, switches and terminals
<input type="checkbox"/>	Obstacles **	<input checked="" type="checkbox"/>	Identification of conductors
<input type="checkbox"/>	Placing out of reach **	Cables and Conductors	
Fault protection		<input checked="" type="checkbox"/>	Selection of conductors for current-carrying capacity and voltage drop
Automatic disconnection of supply		<input checked="" type="checkbox"/>	Erection methods
<input checked="" type="checkbox"/>	Presence of earthing conductor	<input type="checkbox"/>	Routing of cables in prescribed zones
<input checked="" type="checkbox"/>	Presence of circuit protective conductors	<input checked="" type="checkbox"/>	Cables incorporating earthed armour or sheath or run in an earthed wiring system, or otherwise protected against nails, screws and the like.
<input checked="" type="checkbox"/>	Presence of main protective bonding conductors	<input type="checkbox"/>	Additional protection by 30mA RCD for cables concealed in walls (where required, in premises not under the supervision of skilled or instructed persons)
<input type="checkbox"/>	Presence of earthing arrangements for combined protective and functional purposes	<input checked="" type="checkbox"/>	Connection of conductors
<input type="checkbox"/>	Presence of adequate arrangements for alternative source(s), where applicable	<input checked="" type="checkbox"/>	Presence of fire barriers, suitable seals and protection against thermal effects
<input type="checkbox"/>	FELV	General	
<input checked="" type="checkbox"/>	Choice and setting of protective and monitoring devices (for fault protection and/or overcurrent protection)	<input checked="" type="checkbox"/>	Presence and correct location of appropriate devices for isolation and switching
Non-conducting location **		<input checked="" type="checkbox"/>	Adequacy of access to switchgear and other equipment
<input type="checkbox"/>	Absence of protective conductors	<input checked="" type="checkbox"/>	Particular protective measures for special installations and locations
Earth-free equipotential bonding **		<input checked="" type="checkbox"/>	Connection of single-pole devices for protection or switching in line conductors only
<input type="checkbox"/>	Presence of earth-free equipotential bonding	<input checked="" type="checkbox"/>	Correct connection of accessories and equipment
Electrical separation		<input type="checkbox"/>	Presence of undervoltage protective devices
<input type="checkbox"/>	For one item of current-using equipment	<input checked="" type="checkbox"/>	Selection of equipment and protective measures appropriate to external influences
<input checked="" type="checkbox"/>	For more than one item of current-using equipment **	<input checked="" type="checkbox"/>	Selection of appropriate functional switching devices
Additional protection		** For use in controlled supervised/conditions only	
<input checked="" type="checkbox"/>	Presence of residual current device(s)	<input type="checkbox"/>	Basic protection by barrier or enclosure provided during erection
<input checked="" type="checkbox"/>	Presence of supplementary bonding conductors	<input type="checkbox"/>	Insulation of non-conducting floors or walls
SCHEDULE OF ITEMS TESTED		† see note below	
<input checked="" type="checkbox"/>	External earth fault loop impedance, Z_e	<input type="checkbox"/>	Polarity
<input type="checkbox"/>	Installation earth electrode resistance, R_A	<input checked="" type="checkbox"/>	Earth fault loop impedance, Z_s
<input checked="" type="checkbox"/>	Continuity of protective conductors	<input checked="" type="checkbox"/>	Verification of phase sequence
<input type="checkbox"/>	Continuity of ring final circuit conductors	<input checked="" type="checkbox"/>	Operation of residual current devices
<input checked="" type="checkbox"/>	Insulation resistance between live conductors	<input checked="" type="checkbox"/>	Functional testing of assemblies
<input checked="" type="checkbox"/>	Insulation resistance between live conductors and Earth	<input checked="" type="checkbox"/>	Verification of voltage drop
<input type="checkbox"/>	Protection by separation of circuits		

† All boxes must be completed

✓ to indicate an inspection has been carried out and the result was satisfactory

* to indicate an inspection has been carried out and the result is not satisfactory

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N/A to indicate the inspection is not applicable to a particular item
LIM to indicate that exceptionally, a limitation agreed with the person ordering the work prevented the inspection being carried out

BOARD DETAILS		ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION			
TO BE COMPLETED IN EVERY CASE					
Location of distribution board	Main intake room ground floor	Supply to distribution board is from	N/A		Associated RCD (if any)
Distribution board designation	DB 1 GL/1	No of phases	N/A	Nominal Voltage	N/A V
		Overcurrent protective device for the distribution circuit			RCD No of poles
		Type BS(EN)	N/A	Rating	N/A A
					RCD rating, $I_{\Delta n}$
					N/A mA

Circuit number and phase	Circuit designation	Type of wiring	Reference method	No of points served	Circuit conductors csa		Max permitted disconnection time s	Overcurrent protective device				RCD $I_{\Delta n}$	Max permitted Zs Ω	
					Live mm ²	cpc mm ²		BS(EN)	Type No	Rating A	Short circuit capacity kA			Op. current $I_{\Delta n}$
1/L1	1st flr lift lobby lights	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
1/L2	2nd flr lift lobby lights	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
1/L3	3rd flr lift lobby lights	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
2/L1	4th flr lift lobby lights	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
2/L2	5th flr lift lobby lights	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
2/L3	6th flr lift lobby lights	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
3/L1	7th flr lift lobby lights	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
3/L2	8th flr lift lobby lights	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
3/L3	9th flr lift lobby lights	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
4/L1	10th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
4/L2	11th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
4/L3	12th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
5/L1	13th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
5/L2	14th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
5/L3	15th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
6/L1	16th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
6/L2	17th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
6/L3	18th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
7/L1	19th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
7/L2	20th flr lift lobby light	B	B	7	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
7/L3	1st-5th flr main stairs	B	B	10	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
8/L1	6th-10th flr main stairs	B	B	10	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
8/L2	11th-15th flr main stairs	B	B	10	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	
8/L3	16th-20th flr main stairs	B	B	10	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71	

WIRING CODE								
A	B	C	D	E	F	G	H	O
PVC/PVC cables	PVC cables in metallic conduit	PVC cables in non-metallic conduit	PVC cables in metallic trunking	PVC cables in non-metallic trunking	PVC/SWA cables	XLPE/SWA cables	Mineral insulated cables	Other

BOARD TESTS						TEST INSTRUMENTS (SERIAL NUMBERS) USED					
ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION						Earth fault loop impedance	9571044.	RCD	9571044.		
Zs	N/A	Ω	Operating times of associated RCD (if any)	All Δ_n	N/A	ms	Insulation resistance	9571044.	Other	N/A	
Ipf	N/A	kA		$5I\Delta_n$ (if applicable)	N/A	ms	Continuity	9571044.	Other	N/A	
Confirmation of Supply polarity						N/A					

Circuit number and phase	Circuit impedances					Insulation resistance				Polarity	Maximum measured earth fault loop impedance	RCD operating times	
	Ring final circuits only (measured end to end)			All circuits (At least one column to be completed)		Line/Line	Line/Neutral	Line/Earth	Earth/Neutral			At Δ_n	At $5I\Delta_n$
	r_1 (Line)	r_n (Neutral)	r_2 (cpc)	R_1+R_2	R_2	MΩ	MΩ	MΩ	MΩ			ms	ms
1/L1	N/A	N/A	N/A	0.71	N/A	N/A	200>	200>	200>	✓	1.00	N/A	N/A
1/L2	N/A	N/A	N/A	0.60	N/A	N/A	200>	200>	200>	✓	0.89	N/A	N/A
1/L3	N/A	N/A	N/A	0.65	N/A	N/A	200>	200>	200>	✓	1.12	N/A	N/A
2/L1	N/A	N/A	N/A	0.53	N/A	N/A	200>	200>	200>	✓	1.14	N/A	N/A
2/L2	N/A	N/A	N/A	0.67	N/A	N/A	200>	200>	200>	✓	1.08	N/A	N/A
2/L3	N/A	N/A	N/A	0.90	N/A	N/A	200>	200>	200>	✓	1.09	N/A	N/A
3/L1	N/A	N/A	N/A	0.83	N/A	N/A	200>	200>	200>	✓	1.16	N/A	N/A
3/L2	N/A	N/A	N/A	0.57	N/A	N/A	200>	200>	200>	✓	1.23	N/A	N/A
3/L3	N/A	N/A	N/A	0.60	N/A	N/A	200>	200>	200>	✓	1.19	N/A	N/A
4/L1	N/A	N/A	N/A	0.69	N/A	N/A	200>	200>	200>	✓	1.07	N/A	N/A
4/L2	N/A	N/A	N/A	0.81	N/A	N/A	200>	200>	200>	✓	1.11	N/A	N/A
4/L3	N/A	N/A	N/A	0.90	N/A	N/A	200>	200>	200>	✓	1.13	N/A	N/A
5/L1	N/A	N/A	N/A	0.77	N/A	N/A	200>	200>	200>	✓	1.18	N/A	N/A
5/L2	N/A	N/A	N/A	0.83	N/A	N/A	200>	200>	200>	✓	1.30	N/A	N/A
5/L3	N/A	N/A	N/A	0.68	N/A	N/A	200>	200>	200>	✓	1.06	N/A	N/A
6/L1	N/A	N/A	N/A	0.71	N/A	N/A	200>	200>	200>	✓	1.74	N/A	N/A
6/L2	N/A	N/A	N/A	0.82	N/A	N/A	200>	200>	200>	✓	1.66	N/A	N/A
6/L3	N/A	N/A	N/A	0.74	N/A	N/A	200>	200>	200>	✓	1.17	N/A	N/A
7/L1	N/A	N/A	N/A	1.08	N/A	N/A	200>	200>	200>	✓	2.00	N/A	N/A
7/L2	N/A	N/A	N/A	1.03	N/A	N/A	200>	200>	200>	✓	1.80	N/A	N/A
7/L3	N/A	N/A	N/A	0.86	N/A	N/A	200>	200>	200>	✓	1.94	N/A	N/A
8/L1	N/A	N/A	N/A	0.92	N/A	N/A	200>	200>	200>	✓	1.86	N/A	N/A
8/L2	N/A	N/A	N/A	1.00	N/A	N/A	200>	200>	200>	✓	2.02	N/A	N/A
8/L3	N/A	N/A	N/A	0.89	N/A	N/A	200>	200>	200>	✓	2.16	N/A	N/A

Signature	<i>M Chessher</i>	Position	ENGINEER
Name	M.Chessher	Date of testing	04/05/2010

BOARD DETAILS		ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION	
TO BE COMPLETED IN EVERY CASE			
Location of distribution board	Main intake room ground floor	Supply to distribution board is from	N/A
Distribution board designation	DB 1 GL/1	No of phases	N/A
		Nominal Voltage	N/A V
		Overcurrent protective device for the distribution circuit	
		Type BS(EN)	N/A
		Rating	N/A A
		Associated RCD (if any)	
		BS(EN)	N/A
		RCD No of poles	N/A
		RCD rating, I _{Δn}	N/A mA

Circuit number and phase	Circuit designation	Type of wiring	Reference method	No of points served	Circuit conductors csa		Max permitted disconnection time s	Overcurrent protective device				RCD Op. current I _{Δn}	Max permitted Zs Ω
					Live mm ²	cpc mm ²		BS(EN)	Type No	Rating A	Short circuit capacity kA		
9/L1	Lights in intake main	B	B	2	4	2.5	0.4	3871 MCB	2	32	10	30	1.07
9/L2	Lift lobby sockets 1-4	B	B	4	4	2.5	0.4	3871 MCB	2	32	10	30	1.07
9/L3	Lift lobby sockets 5-8	B	B	4	4	2.5	0.4	3871 MCB	2	32	10	30	1.07
10/L1	Lift lobby sockets 9-12	B	B	4	4	2.5	0.4	3871 MCB	2	32	10	30	1.07
10/L2	Lift lobby sockets 13-16	B	B	4	4	2.5	0.4	3871 MCB	2	32	10	30	1.07
10/L3	Lift lobby sockets 17-20	B	B	4	4	2.5	0.4	3871 MCB	2	32	10	30	1.07
11/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
11/L2	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
11/L3	Lights office staircase	B	B	6	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71
12/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
12/L2	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
12/L3	Socket intake main	B	B	1	2.5	1.5	0.4	3871 MCB	2	20	10	N/A	1.71
13/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
13/L2	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
13/L3	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
14/L1	BT socket riser deck leve	H	C	1	2.5	1.5	0.4	60898 MCB	B	10	10	N/A	4.60
14/L2	Air con unit 2	F	C	1	4	35	0.4	60898 MCB	B	20	10	N/A	2.30
14/L3	Air con unit 1	H	C	1	4	35	0.4	60898 MCB	B	20	10	N/A	2.30
15/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
15/L2	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
15/L3	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
16/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
16/L2	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
16/L3	SPARE	-	-	-	-	-	-	-	-	-	-	-	-

WIRING CODE								
A	B	C	D	E	F	G	H	O
PVC/PVC cables	PVC cables in metallic conduit	PVC cables in non-metallic conduit	PVC cables in metallic trunking	PVC cables in non-metallic trunking	PVC/SWA cables	XLPE/SWA cables	Mineral insulated cables	Other

BOARD TESTS

ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION						TEST INSTRUMENTS (SERIAL NUMBERS) USED				
Zs	N/A	Ω	Operating times of associated RCD (if any)	At Δn	N/A	ms	Earth fault loop impedance	9571044.	RCD	9571044.
Ipf	N/A	kA		Sl Δn	N/A	ms	Insulation resistance	9571044.	Other	N/A
Confirmation of Supply polarity						N/A	Continuity	9571044.	Other	N/A

CIRCUIT TESTS

Circuit number and phase	Circuit impedances					Insulation resistance				Polarity	Maximum measured earth fault loop impedance	RCD operating times	
	Ring final circuits only (measured end to end)			All circuits (At least one column to be completed)		Line/Line	Line/Neutral	Line/Earth	Earth/Neutral			At Δn	Sl Δn
	r_1 (Line)	r_n (Neutral)	r_2 (cpc)	$R_1 + R_2$	R_2	MΩ	MΩ	MΩ	MΩ			ms	ms
9/L1	N/A	N/A	N/A	0.42	N/A	N/A	200>	200>	200>	✓	0.60	N/A	N/A
9/L2	N/A	N/A	N/A	0.39	N/A	N/A	200>	200>	200>	✓	0.48	18.0	17.3
9/L3	N/A	N/A	N/A	0.43	N/A	N/A	200>	200>	200>	✓	0.51	17.0	16.6
10/L1	N/A	N/A	N/A	0.46	N/A	N/A	200>	200>	200>	✓	0.52	19.1	17.6
10/L2	N/A	N/A	N/A	0.48	N/A	N/A	200>	200>	200>	✓	0.52	18.9	17.4
10/L3	N/A	N/A	N/A	0.44	N/A	N/A	200>	200>	200>	✓	0.64	17.8	16.0
11/L1	-	-	-	-	-	-	-	-	-	•	-	-	-
11/L2	-	-	-	-	-	-	-	-	-	•	-	-	-
11/L3	N/A	N/A	N/A	0.46	N/A	N/A	200>	200>	200>	✓	0.53	N/A	N/A
12/L1	-	-	-	-	-	-	-	-	-	•	-	-	-
12/L2	-	-	-	-	-	-	-	-	-	•	-	-	-
12/L3	N/A	N/A	N/A	0.24	N/A	N/A	200>	200>	200>	✓	0.31	N/A	N/A
13/L1	-	-	-	-	-	-	-	-	-	•	-	-	-
13/L2	-	-	-	-	-	-	-	-	-	•	-	-	-
13/L3	-	-	-	-	-	-	-	-	-	•	-	-	-
14/L1	N/A	N/A	N/A	0.39	N/A	N/A	200>	200>	200>	✓	0.48	N/A	N/A
14/L2	N/A	N/A	N/A	0.42	N/A	N/A	200>	200>	200>	✓	0.56	N/A	N/A
14/L3	N/A	N/A	N/A	0.47	N/A	N/A	200>	200>	200>	✓	0.60	N/A	N/A
15/L1	-	-	-	-	-	-	-	-	-	•	-	-	-
15/L2	-	-	-	-	-	-	-	-	-	•	-	-	-
15/L3	-	-	-	-	-	-	-	-	-	•	-	-	-
16/L1	-	-	-	-	-	-	-	-	-	•	-	-	-
16/L2	-	-	-	-	-	-	-	-	-	•	-	-	-
16/L3	-	-	-	-	-	-	-	-	-	•	-	-	-

TESTED BY

Signature	<i>M. Chessher</i>	Position	ENGINEER
Name	M. Chessher	Date of testing	04/05/2010

TO BE COMPLETED IN EVERY CASE		ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION			
Location of distribution board	14st floor riser cupboard	Supply to distribution board is from	N/A		Associated RCD (if any)
Distribution board designation	DB LL1	No of phases	N/A	Nominal Voltage	N/A V
		Overcurrent protective device for the distribution circuit			RCD No of poles
		Type BS(EN)	N/A	Rating	N/A A
					RCD rating, $I_{\Delta n}$

Circuit number and phase	Circuit designation	Type of wiring	Reference method	No of points served	Circuit conductors csa		Max permitted disconnection time s	Overcurrent protective device				RCD Op-current $I_{\Delta n}$	Max permitted Zs Ω
					Live mm ²	cpc mm ²		BS(EN)	Type No	Rating A	Short circuit capacity kA		
1/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
2/L1	Lights to staff room	B	B	6	1.5	1.0	0.4	3871 MCB	2	6	6	N/A	5.71
3/L1	Lights floods adj staffro	B	B	3	1.5	1.0	0.4	3871 MCB	2	6	6	N/A	5.71
4/L1	Lights w/way deck level	B	B	5	1.5	1.0	0.4	3871 MCB	2	6	6	N/A	5.71
5/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
6/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
7/L1	Lights deck level	B	B	5	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71
8/L1	Lights bottom of stairs	B	B	3	1.5	1.0	0.4	3871 MCB	2	6	10	N/A	5.71
9/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
10/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
11/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-
12/L1	SPARE	-	-	-	-	-	-	-	-	-	-	-	-

WIRING CODE								
A	B	C	D	E	F	G	H	O
PVC/PVC cables	PVC cables in metallic conduit	PVC cables in non-metallic conduit	PVC cables in metallic trunking	PVC cables in non-metallic trunking	PVC/SWA cables	XLPE/SWA cables	Mineral insulated cables	Other

BOARD TESTS						TEST INSTRUMENTS (SERIAL NUMBERS) USED					
ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION						Earth fault loop impedance	9571044.	RCD	9571044.		
Zs	N/A	Ω	Operating times of associated RCD (if any)	At ¹ Δn	N/A	ms	Insulation resistance	9571044.	Other	N/A	
Ip	N/A	kA		St ¹ Δn	N/A	ms	Continuity	9571044.	Other	N/A	
Confirmation of Supply polarity						N/A					

Circuit number and phase	Circuit impedances					Insulation resistance				Polarity	Maximum measured earth fault loop impedance	RCD operating times	
	Ω			All circuits (At least one column to be completed)		Line/Line	Line/Neutral	Line/Earth	Earth/Neutral			At ¹ Δn	St ¹ Δn
	r ₁ (Line)	r _n (Neutral)	r ₂ (cpc)	R ₁ +R ₂	R ₂	MΩ	MΩ	MΩ	MΩ			ms	ms
1/L1	-	-	-	-	-	-	-	-	-	-	-	-	-
2/L1	N/A	N/A	N/A	0.78	N/A	N/A	200>	200>	200>	✓	1.08	N/A	N/A
3/L1	N/A	N/A	N/A	0.70	N/A	N/A	200>	200>	200>	✓	1.11	N/A	N/A
4/L1	N/A	N/A	N/A	0.58	N/A	N/A	200>	200>	200>	✓	1.16	N/A	N/A
5/L1	-	-	-	-	-	-	-	-	-	-	-	-	-
6/L1	-	-	-	-	-	-	-	-	-	-	-	-	-
7/L1	N/A	N/A	N/A	0.74	N/A	N/A	200>	200>	200>	✓	1.24	N/A	N/A
8/L1	N/A	N/A	N/A	0.80	N/A	N/A	200>	200>	200>	✓	1.00	N/A	N/A
9/L1	-	-	-	-	-	-	-	-	-	-	-	-	-
10/L1	-	-	-	-	-	-	-	-	-	-	-	-	-
11/L1	-	-	-	-	-	-	-	-	-	-	-	-	-
12/L1	-	-	-	-	-	-	-	-	-	-	-	-	-

Signature	<i>M. Chessher</i>	Position	ENGINEER
Name	M. Chessher	Date of testing	04/05/2010

BOARD TESTS

ONLY TO BE COMPLETED IF THE DISTRIBUTION BOARD IS NOT CONNECTED DIRECTLY TO THE ORIGIN OF THE INSTALLATION						TEST INSTRUMENTS (SERIAL NUMBERS) USED				
Zs	N/A	Ω	Operating times of associated RCD (if any)	At Δn	N/A	ms	Earth fault loop impedance	9571044.	RCD	9571044.
Ip	N/A	kA		SI Δn	N/A	ms	Insulation resistance	9571044.	Other	N/A
Confirmation of Supply polarity			N/A	(if applicable)			Continuity	9571044.	Other	N/A

CIRCUIT TESTS

Circuit number and phase	Circuit impedances					Insulation resistance				Polarity	Maximum measured earth fault loop impedance	RCD operating times	
	Ω			All circuits (At least one column to be completed)		Line/Line	Line/Neutral	Line/Earth	Earth/Neutral			At Δn	At SI Δn
	r_1 (Line)	r_n (Neutral)	r_2 (cpc)	$R_1 + R_2$	R_2	M Ω	M Ω	M Ω	M Ω			ms	ms
1/L1	N/A	N/A	N/A	0.67	N/A	N/A	200>	200>	200>	✓	1.00	N/A	N/A
1/L2	N/A	N/A	N/A	0.70	N/A	N/A	200>	200>	200>	✓	0.86	N/A	N/A
1/L3	N/A	N/A	N/A	0.69	N/A	N/A	200>	200>	200>	✓	0.94	N/A	N/A
2/L1	-	-	-	-	-	-	-	-	-	*	-	-	-
2/L2	-	-	-	-	-	-	-	-	-	*	-	-	-
2/L3	-	-	-	-	-	-	-	-	-	*	-	-	-
3/L1	0.38	0.40	0.41	0.41	N/A	N/A	200>	200>	200>	✓	0.56	N/A	N/A
3/L2	0.46	0.45	0.50	0.38	N/A	N/A	200>	200>	200>	✓	0.46	N/A	N/A
3/L3	0.60	0.58	0.49	0.42	N/A	N/A	200>	200>	200>	✓	0.64	N/A	N/A
4/L1	0.50	0.51	0.55	0.43	N/A	N/A	200>	200>	200>	✓	0.55	N/A	N/A
4/L2	N/A	N/A	N/A	0.51	N/A	N/A	200>	200>	200>	✓	0.72	N/A	N/A
4/L3	N/A	N/A	N/A	N/A	0.33	N/A	200>	200>	200>	✓	0.39	N/A	N/A

TESTED BY

Signature	<i>M Chessher</i>	Position	ENGINEER
Name	M.Chessher	Date of testing	04/05/2010

ELECTRICAL INSTALLATION CERTIFICATE

Issued in accordance with British Standard BS 7671 - Requirements for Electrical Installations

Certificate Reference: Grenfell Tower / 145002

1. DETAILS OF THE CLIENT

Client Address: The Royal Borough of Kensington & Chelsea , TMO, Network Hub, 292a Kensal Road, London, W10 5BE

2. DETAILS OF THE INSTALLATION

Installation Address: Grenfell Tower, Grenfell Road, London, W11 1TQ

Extent of the installation covered by this certificate: New CC1H120mm MICC supply cable from domestic riser sub-mains service head 2.to riser enclosure in walkway riser cupboard.

The installation is: New N/A An addition N/A An alteration **3. DESIGN**

I/We being the person(s) responsible for the design of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the design, hereby CERTIFY that the design work for which I/we have been responsible is to the best of my/our knowledge and belief in accordance with BS 7671:2008, amended to 2011 except for the departures, if any, detailed as follows.

Details of departures from BS 7671 (Regulations 120.3, 133.5):

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate.

For the DESIGN of the installation:Name: Position: Signature: Date: **Where there is divided responsibility for the design:**Name: Position: Signature: Date: **4. CONSTRUCTION**

I/We being the person(s) responsible for the construction of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the construction, hereby CERTIFY that the construction work for which I/we have been responsible is to the best of my/our knowledge and belief in accordance with BS 7671:2008, amended to 2011 except for the departures, if any, detailed as follows.

Details of departures from BS 7671 (Regulations 120.3, 133.5):

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate.

For the CONSTRUCTION of the installation:Name: Position: Signature: Date: **5. INSPECTION AND TESTING**

I/We being the person(s) responsible for the inspection and testing of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the inspection and testing, hereby CERTIFY that the inspection and testing work for which I/we have been responsible is to the best of my/our knowledge and belief in accordance with BS 7671:2008, amended to 2011 except for the departures, if any, detailed as follows.

Details of departures from BS 7671 (Regulations 120.3, 133.5):

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate.

For the INSPECTION AND TESTING of the installation:Name: Position: Signature: Date: **Report reviewed and confirmed by:**Name: Position: Signature: Date: **6. DESIGN, CONSTRUCTION, INSPECTION AND TESTING**

I/We being the person(s) responsible for the design, construction, inspection and testing of the electrical installation (as indicated by my/our signatures below), particulars of which are described above, having exercised reasonable skill and care when carrying out the design, construction, inspection and testing, hereby CERTIFY that the design work for which I/we have been responsible is to the best of my/our knowledge and belief in accordance with BS 7671:2008, amended to 2011 except for the departures, if any, detailed as follows.

Details of departures from BS 7671 (Regulations 120.3, 133.5):

The extent of liability of the signatory/signatories is limited to the work described above as the subject of this certificate.

For the DESIGN, the CONSTRUCTION, and the INSPECTION AND TESTING of the installation:Name: Position: Signature: Date: **Report reviewed and confirmed by:**Name: Position: Signature: Date: **7. NEXT INSPECTION**

I/We the designer(s), RECOMMEND that this installation is further inspected and tested after an interval of not more than:

8. DETAILS OF THE ELECTRICAL CONTRACTOR

Design (1)	Trading Title: RGE Services Ltd	Registration Number (if applicable):	
Address:	19-21 Roebuck Road Hainault Business Park Essex Postcode: IG6 3TU	Telephone Number:	
			
Design (2)	Trading Title:	Registration Number (if applicable):	
Address:		Telephone Number:	
	Postcode:		
Construction	Trading Title:	Registration Number (if applicable):	
Address:		Telephone Number:	
	Postcode:		
Inspection and Testing	Trading Title:	Registration Number (if applicable):	
Address:		Telephone Number:	
	Postcode:		

9. SUPPLY CHARACTERISTICS AND EARTHING ARRANGEMENTS

System Type(s)	Number and Type of Live Conductors	Nature of Supply Parameters	Characteristics of Primary Supply Overcurrent Protective Device(s)
TN-S <input checked="" type="checkbox"/>	ac: <input checked="" type="checkbox"/> 1-phase (2 wire): N/A 1-phase (3 wire): N/A dc: N/A	Nominal voltage(s): U: 400 V Uo: 230 V	BS(EN): 88-2 Fuse HRC
TN-C-S <input type="checkbox"/>	2-phase (3 wire): N/A 3-phase (3 wire): N/A	Nominal frequency, f: 50 Hz	Type: gG
TNC <input type="checkbox"/>	3-phase (4 wire): <input checked="" type="checkbox"/> Other: N/A	Prospective fault current, Ipf: 1.21 kA	Rated current: 400 A
TT <input type="checkbox"/>	Other: N/A	External earth fault loop impedance, Ze: 0.19 Ω	Short-circuit capacity: 80 kA
IT <input type="checkbox"/>	Confirmation of supply polarity: <input checked="" type="checkbox"/>	Number of supplies: 2	

10. PARTICULARS OF INSTALLATION AT THE ORIGIN

Means of Earthing	Details of Installation Earth Electrode (where applicable)		
Distributor's facility: <input checked="" type="checkbox"/>	Type: N/A	Location: N/A	
Installation earth electrode: N/A	Electrode resistance, RA: N/A Ω	Method of measurement: N/A	
Maximum Demand (Load): Refer to	Protective measure(s) against electric shock: ADS		
Main Switch or Circuit-Breaker		Earthing and Protective Bonding Conductors	
Type BS(EN): N/A	Voltage rating: N/A V	Earthing conductor	Continuity & connection verified: N/A
Number of poles: N/A	Rated current, In: N/A A	Conductor material: N/A	Conductor csa: N/A mm ²
Supply conductors material: N/A	RCD operating current: N/A mA	Main protective bonding conductors	Continuity & connection verified: N/A
Supply conductors csa: N/A mm ²	RCD operating time: N/A ms	Conductor material: N/A	Conductor csa: N/A mm ²
		Bonding of extraneous-conductive parts	Lightning protection: N/A
		Water service: N/A	Gas service: N/A
		Oil service: N/A	Other incoming service(s): N/A
		Structural Steel: N/A	

11. COMMENTS ON EXISTING INSTALLATION

Would suggest monitoring all rising main connections whilst surrounding building works ongoing. Vibration present. Existing

12. SCHEDULE OF ITEMS INSPECTED**Methods of protection against electric shock****Both basic and fault protection:**

N/A (i) SELV

N/A (ii) PELV

LIM (iii) Double or Reinforced Insulation

Basic protection:

✓ (i) Insulation of live parts

LIM (ii) Barriers or enclosures

N/A (iii) Obstacles **

N/A (iv) Placing out of reach **

Fault protection:**(i) Automatic disconnection of supply**

✓ Presence of earthing conductor

N/A Presence of circuit protective conductors

N/A Presence of main protective bonding conductors

N/A Presence of earthing arrangements for combined protective and functional purposes

N/A Presence of adequate arrangements for alternative source(s), where applicable

N/A FELV

✓ Choice and setting of protective and monitoring devices (for fault protection and/or overcurrent protection)

(ii) Non-conducting location **

N/A Absence of protective conductors

(iii) Earth-free local equipotential bonding **

N/A Presence of earth-free local equipotential bonding

(iv) Electrical Separation

N/A Provided for 'one item' of current-using equipment

N/A Provided for 'more than one item' of current-using equipment **

Additional protection:

N/A Presence of residual current device(s)

N/A Presence of supplementary bonding conductors

**** For use in controlled supervised/conditions only****Prevention of mutual detrimental influence**

✓ (a) Proximity of non-electrical services and other influences

N/A (b) Segregation of Band I and Band II circuits or use of Band II insulation

N/A (c) Segregation of safety circuits

Identification

N/A Presence of diagrams, instructions, circuit charts and similar information

N/A Presence of danger notices and other warning notices

N/A Labelling of protective devices, switches and terminals

N/A Identification of conductors

Cables and Conductors

N/A Selection of conductors for current carrying capacity and voltage drop

N/A Erection methods

N/A Routing of cables in prescribed zones or within mechanical protection

LIM Cables incorporating earthed armour or sheath, or run within an earthed wiring system, or otherwise adequately protected against nails, screws and the like

N/A Additional protection provided by 30mA RCD for cables in concealed walls (where required in premises not under the supervision of skilled or instructed persons)

✓ Connection of conductors

✗ Presence of fire barriers, suitable seals and protection against thermal effects

General

✗ Presence and correct location of appropriate devices for isolation and switching

✗ Adequacy of access to switchgear and other equipment

N/A Particular protective measures for special installations and locations

N/A Connection of single-pole devices for protection or switching in line conductors only

✓ Correct connection of accessories and equipment

✓ Presence of undervoltage protective devices

N/A Selection of equipment and protective measures appropriate to external influences

N/A Selection of appropriate functional switching devices

13. SCHEDULE OF ITEMS TESTED✓ External earth fault loop impedance, Z_e N/A Installation earth electrode resistance, R_A

✓ Continuity of protective conductors

N/A Continuity of ring final circuit conductors

✓ Insulation resistance between live conductors

✓ Insulation resistance between live conductors and earth

N/A Protection by separation of circuits

N/A Protection against direct contact by barrier or enclosure provided during erection

N/A Insulation of non-conducting floors or walls

✓ Polarity

✓ Earth fault loop impedance, Z_s

✓ Verification of phase sequence

N/A Operation of residual current device(s)

✓ Functional testing of assemblies

✓ Verification of voltage drop

All boxes must be completed. 'tick' indicates that an inspection or test was carried out and that the result was satisfactory. 'X' indicates that an inspection or test was carried out and the result is not satisfactory. 'N/A' indicates that an inspection or test was not applicable to the particular installation. 'LIM' indicates that, exceptionally, a limitation agreed with the person ordering the work prevented the inspection or test being carried out.

CONTINUATION FOR GENERAL COMMENTS

GENERAL COMMENTS

General Comments for the Installation or Inspection of the report:

Recordings taken after 2 months of install.

Service Head 1.

L1=36.45a

L2=38.21a

L3=36.46a

Service Head 2.

L1=33.32a

L2=36.60a

L3=34.39a

All recordings taken on 4th September 2013 between 08:30 to 09:30.