Record of Lightning Protection System (LPS) Test

A. PARTICULARS OF THE INSTALLATION	
Project Name / Client	
Installation Address	
Block / Building No.	

B. TEST INSTRUMENTS USED				
Instrument	Brand	Model No.	Serial No.	Calibration Date
Earth Tester				
Continuity Tester				

C. DETAILS OF LIGHTNING PROTECTION SYSTEM *(Please tick (√) the relevant box)*		
Lightning Protection System Type	☐Faraday Cage / Franklin Rod ☐Early Streamer Emission (ESE) ☐Others :_____	
Total No of down conductors:	Total No of Earthing points :	Earth Rod Size :
Type of earth termination network	☐earth electrodes NOT connected to each other ☐earth electrodes connected to each other to form a ring	☐crows foot' ☐others (please state)
Rod to tape connection	☐CADWELD ☐Clamp	

D. TESTS *(please √ boxes to indicate inspection has been carried out and the result is **satisfactory**)*
*(please X boxes to indicate inspection has been carried out and the result is **unsatisfactory**)*

Continuity of air termination network (roof termination network) _____ ☐
Continuity of air termination network and the down conductors _____ ☐
Continuity of down conductors and earth electrodes _____ ☐
Continuity of earth termination network (for earth electrodes connected in a ring) _____ ☐
Lightning protection earth termination network bonded to the main earthing bar (MEB) _____ ☐Yes ☐No

E. REMARKS *(If Any)*

F. INDIVIDUAL EARTH ELECTRODE RESISTANCE

Earth Electrode No.	Resistance of one rod in isolation (with remaining earth disconnected) (ohms)			Average Value
	Test 1 (R1)	Test 2 (R2)	Test 3 (R3)	RA=(R1+R2+R3)/3
1				
2				
3				
4				

G. OVERALL TOTAL RESISTANCE

Combined Earth Resistance Of The Whole Earth Termination Network (bonding not included) (ohms)

Please Refer to Notes 5 & 6 on Page 2

H. PENGAKUAN ORANG KOMPETEN
(BAGI PIHAK KONTRAKTOR ELEKTRIK)

Diuji Oleh: _____
(Nama Pendawai)
Tandatangan _____
No. Kekompetenan: _____
Tarikh Ujian: _____
Nama & Cop Kontraktor:

I. PENGESAHAN JABATAN

Disaksi Oleh: _____
(Nama)
Tandatangan: _____
Jawatan: _____
Tarikh: _____

Notes On Resistance To Earth (Ref: BS 6651:1992)

1 An earth electrode should be connected to each down conductor

2 Each of these earths should have a resistance (in ohms) not exceeding the product given by 10 times the number of earth electrodes to be provided.

3 The whole of the earth termination network should have a combined resistance to earth not exceeding 10 ohms without taking account of any bonding to other services.

4 A resistance value lower than 10 ohms will help reduce the potential gradient (Touch and Step) around the earth electrodes under discharge conditions.

5 The test joint allows for the earthing system to be tested in isolation from the rest of the LPS.

6 For earth electrodes connected in parallel, the overall total resistance is proportional to the reciprocal of the number of earth electrodes and can be calculated by applying the rule for resistors in parallel.

(Example for 4 earth electrodes in parallel

$$RT = \frac{RA1\ RA2\ RA3\ RA4}{RA2\ RA3\ RA4 + RA1\ RA3\ RA4 + RA1\ RA2\ RA4 + RA1\ RA2\ RA3}$$

Where RT is the overall total resistance

RA1 is the average resistance for earth electrode No. 1

RA2 is the average resistance for earth electrode No. 2

RA3 is the average resistance for earth electrode No. 3

RA4 is the average resistance for earth electrode No. 4