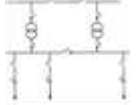




**DISTRIBUTION COMMISSIONING TEST SHEET – DISTRIBUTION SUBSTATION (NON-FIRE RATED)  
HPC-4DL-07-0003-2014**



This commissioning test sheet covers the checking that must be undertaken on all new distribution substations placed in the open.

**NOTE:** Tests must be carried out after the installation.  
**SAFETY:** At all times maintain suitable clearance to all other electrical equipment and verify planned escape routes. In preparation for the checks, wherever possible make the area safe.

<b>DATE:</b>		<b>Project No.</b>		<b>Name of Officer</b>	
<b>Location:</b>					

**1. VISUAL INSPECTION AND SAFETY CHECK (SUBSTATION ACCESS)**

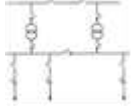
1	Check that the installation complies with the distribution construction standards and applicable design drawings (especially correct orientation as per DSM 3).	<input type="checkbox"/>
2	Check that the area immediately around the substation is level as per design and suitable for heavy vehicles to access.	<input type="checkbox"/>
3	Check that there is sufficient clearance to allow the installation of distribution transformer (size – 1.5 m high, 1.9 m wide and 1.6 m long, weighing 5,000 kg).	<input type="checkbox"/>
4	Check that there is 24 hr/day & 7 days/wk access for Horizon Power staff and equipment.	<input type="checkbox"/>
5	For sole use substations, check that the substation is not more than 30 m from the street boundary.	<input type="checkbox"/>

**2. VISUAL INSPECTION AND SAFETY CHECK (SUBSTATION SITE)**

1	Check that Public Safety has been considered (e.g. cabinets secured and locked, trip hazards removed where applicable).		<input type="checkbox"/>
2	Check that the substation is 1 m above the 100 year flood levels and not lower than the finished level of surrounding lots and adjacent road carriageways. (Only applicable if site pegged)	N/A <input type="checkbox"/>	<input type="checkbox"/>
3	Check that the substation has not been built in water course and that the drainage is suitable (if applicable).		<input type="checkbox"/>
4	Check that there are no other services (i.e. gas, telecommunications and water) either on or under or in close proximity to the site.		<input type="checkbox"/>
5	Check that the substation is not located within: 15 m from telecommunication facilities, 10 m from fire hydrants/brigade booster assemblies, 8 m from gas/petroleum dispensing or storage facility and away from noise sensitive premises.		<input type="checkbox"/>
6	Check that if substation is located in trafficable areas, suitable protective structures are installed to protect substation and operational personnel.		<input type="checkbox"/>
7	Check that the substation's exposed surface is suitable stabilised (e.g. crushed aggregate or blue metal) to prevent soil erosion, that allows ease of access to cables beneath.		<input type="checkbox"/>
8	Check that there is adequate earthing provided for the substation (minimum of two earths installed).		<input type="checkbox"/>
9	Check that the nearest conductive material is at least two (2) metres away from the earth ring/system (take a photo if possible)	Measured distance	m <input type="checkbox"/>
10	Check that the correct Labels and Danger Signs have been attached to switchgear, transformers and other equipment		<input type="checkbox"/>



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**3. VISUAL INSPECTION AND SAFETY CHECK (CONSUMER MAINS AND MAIN SWITCHES)**

1	Check that the consumer's mains is correct for the installation.	<input type="checkbox"/>
2	Check if the main switchboard is contiguous as required by load.	<input type="checkbox"/>
3	Check that mechanical interlocking has been provided where necessary.	<input type="checkbox"/>
5	Check that the earthing (minimum 70 mm cable) has been connected to all electrical equipment.	<input type="checkbox"/>
6	Is protection setting information provided? <input type="checkbox"/> Yes <input type="checkbox"/> No If "No" then record settings in Section 6 or take a photo of customer's main switch and send for verification.	<input type="checkbox"/>

**4. VISUAL INSPECTION AND SAFETY CHECK (SCREENING)**

1	Check that the proposed screening has been discussed and agreed to by Horizon Power. Note: installation of screening to take place after Horizon Power has finished on site.	<input type="checkbox"/>
2	Check that if full screening has been proposed, two openings have been provided (if applicable, doors supplied).	<input type="checkbox"/>
3	Check that if screening includes roofing, Horizon Power has been consulted regarding bonding to earth, ventilation and equipment access.	<input type="checkbox"/>
4	Check that if the screening is conductive (e.g. metallic, concrete) then: a) The screen has to be installed 2 m from any conductive equipment, or b) If the screen is installed on substation site boundary, it must be connected to the earthing system as well as to an extra earth ring installed 1 m around the screen. The screen must be isolated, and must not be continuous with other fencing.	<input type="checkbox"/>

**5. OPERATIONAL HANDOVER**

The commissioning officer must ensure that all checks are completed and the test results comply with the minimum standards.

I hereby certify that all sections have been completed with satisfactory results and transfer responsibility to the network operating authority. This equipment is ready to be **SAFELY** energised.

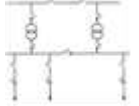
Commissioning Officer: \_\_\_\_\_ Pay Number: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date:     DD/MM/YY     Time:     HH:MM    

1. Ensure the work area is left tidy with no hazards to the public.
2. Hand over responsibility to the operating authority
3. Return this sheet to the project/working file as a record of commissioning and as a document required for the Handover Certificate.

**IMPORTANT: PLEASE ATTACH AS-BUILT DRAWINGS AND DATASHEETS TO THIS SHEET AND SEND TO RELEVANT ASSET MANAGER**



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**6. RECORD OF PROTECTION SETTINGS (IF APPLICABLE)**

Over Current (O/C) Setting					
Pick Up Current		Trip Time		Instantaneous Pick Up	
Earth Fault Current (E/F) Setting					
Pick Up Current		Trip Time		Instantaneous Pick Up	
Any Other Settings					