Ling Hall Solar Farm

PC9 External Finish Material Specifications

01 June 2017
## REVISION HISTORY

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Appendix A  
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1. **Introduction**

1.1 This Document has been prepared by REG Ling Hall Solar Ltd to discharge Condition 9 of Planning Permission RBC/14CM029 at Ling Hall Landfill Site, Coalpit Lane, Rugby, CV23 9HH.

1.2 Condition 9 of Planning Permission RBC/14CM02 requires:

   *None of the following types of plant and machinery:*
   - Substations
   - Transformers
   - Generators
   - Rack System
   - External cable trays

   *Shall be commenced until a schedule of all external finish material specifications for all examples of that type has been submitted to and approved in writing by the Country Planning Authority. The development shall then be carried out in full accordance with the approved schedule.*

2. **Substations**

2.1 The housing is a welded steel construction using zinc coated steel sheet to BSEN10346, with standard structural steel sections where the design dictates and contain a room enclosure (switchgear housing & Meter room). External surfaces finished in a heavy duty coating to provide a system compliant to atmospheric-corrosivity category C4 (high), with a durability performance greater than 15 years. The colour of the unit will be a dark green finish. Substation drawings can be found in Appendix A.

3. **Transformers**

3.1 The transformers are incorporated into the construction of the main unit of the solar farm. Transformer drawings can be found in the Appendix A.

4. **Generators/Inverter Stations**

4.1 Generators will only be used during the construction phase. The specification of the power will be determined by the contractors set up with in the construction compound and the size and amount of power they require. A diesel generator is the combination of a diesel engine with an electric generator (often an alternator) to generate electrical energy. The generator unit will be a powered by diesel and double bunded for safety.
4.2
The Inverter stations are located in the main units on the Solar Farm. Please see image 1 showing the inverters on the right-hand side in white. The inverter station is also shown in Appendix A.

5. Rack System

5.1 Design 1 - A single steel leg that supports the main table of the structure with 2 diagonal bars for rigidity. The table is joined from a series of 4 or 5 legs and then cross beams placed to support the full structure. The cross beams are made from aluminium. The modules the then are fastened to the cross beams via aluminium fixings and bolts.

5.2 Design 2 – shows how 2 legs can be used for the structural rigidity. However, the design of the horizontal running aluminium cross beams remains the same.
Appendix 2 also contains a design drawing of a proposed racking system.

6. **External Cable Trays**

6.1 The cabling on site will either be trenched and ducted to the units or run in trays underneath the modules themselves. The modules link together in a circuit via an MC3 or MC4 connection. These are then cable tied to the frame works.
APPENDIX A

Substation/Transformer/Inverter Drawing
APPENDIX B

Racking System
**TECHNICAL DETAILS INVERTER TRANSFORMER STATION**

**SCALE 1:100**

**FRONT VIEW - SCALE 1:100**

**BACK VIEW - SCALE 1:100**

**PLAN VIEW - SCALE 1:100**

**SIDE VIEW - SCALE 1:100**

*All dimensions shown are in millimeters*

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**PROJECT NAME & ADDRESS:**

Ling Hall, Coalpit Lane
Lawford Heath, Rugby
Warwickshire, CV23 9HH

**SCALE:**

1:100

**FORMAT:**

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**SHEET:**

1/1

**APPROVAL STAMP:**

13.06.2014

FIRST ISSUE

**REV**

**DRAWN**

**REVIEWED**

**APPROVED**

**CHANGE**

**DATE**

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**TECHNICAL DETAILS INVERTER TRANSFORMER STATION**

JW4 4020 XXXX PL005

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Front View

17830

3020 3020

600

* All dimensions shown are in millimeters *

Side View

3970

2610

1920

3300 360

* All dimensions shown are in millimeters *