

## DESC Meeting 6<sup>th</sup> June 2013 Background Briefing Note

Note from Met Office:

### **Background**

We have agreed to tie the ranking of substitute stations to temperature, so that the ranking for all variables will be based on the correlation coefficient for temperature. There are a number of stations which have not recorded hourly temperature, but do have records of hourly wind, solar radiation or precipitation. These stations can be included in the ranking using estimated correlation coefficients calculated using Equation 1 from the report. These stations are listed in the accompanying spreadsheet, as long as they have an estimated correlation of at least 0.95 (Class 4) with at least one target station.

### **Question**

Should these be available for use as substitute stations when generating the final datasets?

### **Advantages and Disadvantages**

The advantage of including these stations is that it will lead to better correlated stations being used for some periods, and will result in fewer gaps in the final datasets. Examples of particularly useful substitute stations in this list include Aberdeen Mannofield for Dyce (solar radiation and precipitation), Cawood for Church Fenton (solar radiation) and Edinburgh Blackford Hill for Edinburgh (wind).

A disadvantage may be that using these stations is likely to lead to more inconsistencies between weather variables in the substitute stations used for certain periods and target stations. Note that the reverse is also true, i.e. some stations which have reported temperature have not reported some of the other variables, so there will still be some unavoidable inconsistencies in the substitutes used.