

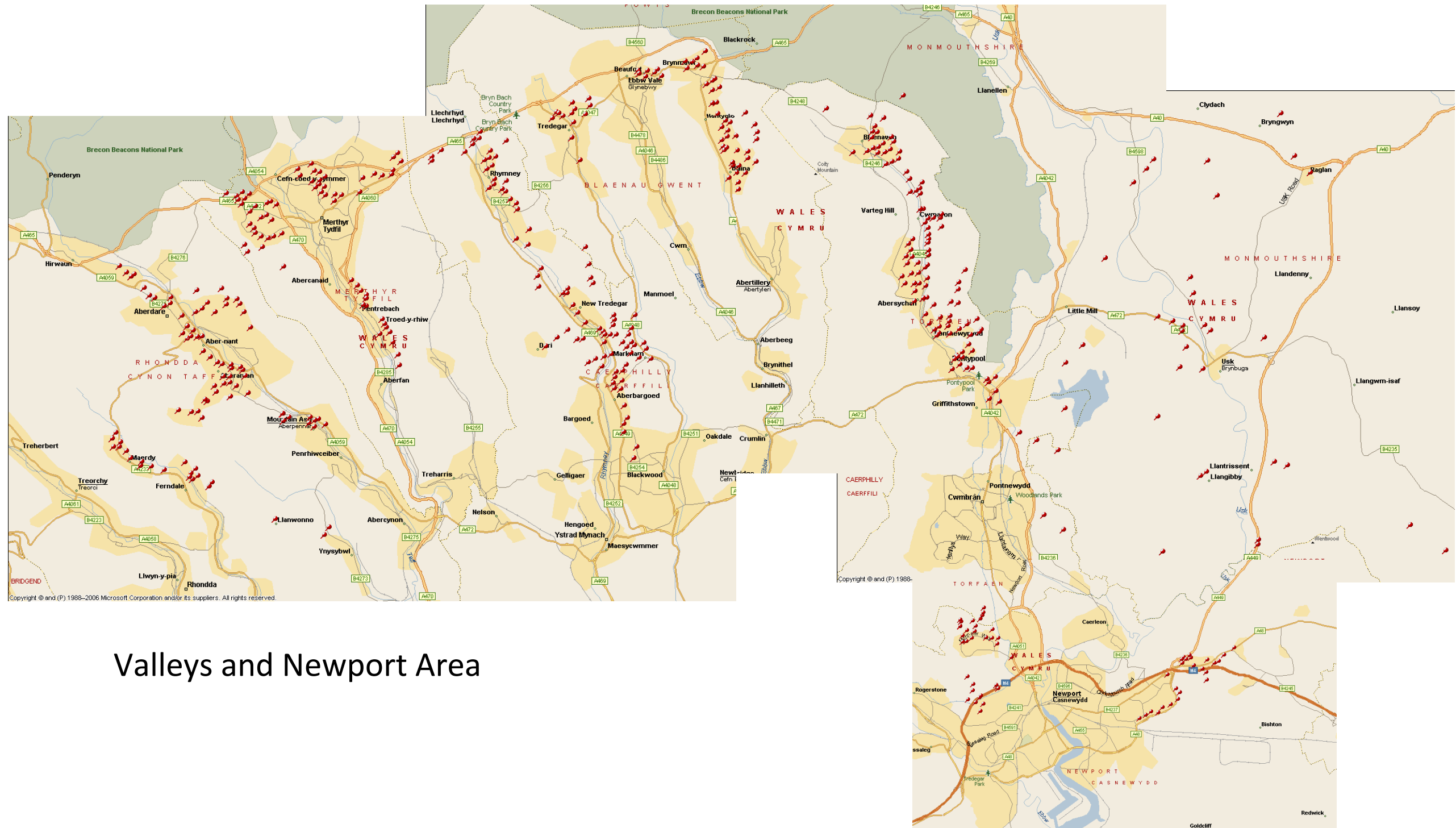
## WPD Low Carbon Networks Fund Project

### Tier 2 Appendices

Appendix A	Full Submission Spreadsheet
<b>Appendix B</b>	<b>Maps and network diagrams</b>
Appendix C	Organogram
Appendix D	Project plan
Appendix E	Information sources referenced in Box 15
Summary	If DNOs include further information attached to this Pro-forma than that required by Ofgem then they must provide an executive summary of that information in less than 1000 words which should be attached to this pro-forma after Appendix D, and before the numbered appendices. All further details in the numbered appendices must be clearly referenced in the text in the pro-forma.
Appendix 1	University of Bath letter of engagement and support, and their data analysis methodology
Appendix 2	Memorandum of Understanding between WPD and npower
Appendix 3	Customer communications pack
Appendix 4	Installing monitoring in LV substations
Appendix 5	Support letters – University of Bristol / WAG
Appendix 6	Sample extract of Arbed data (anonymised)
Appendix 7	RFQ issued to meter installers re the installation of voltage sensors at end of feeders / Provisional design of end-of-feeder voltage monitors
Appendix 8	An overview on the concept of network templates

## Appendix B: Maps and Network Diagrams

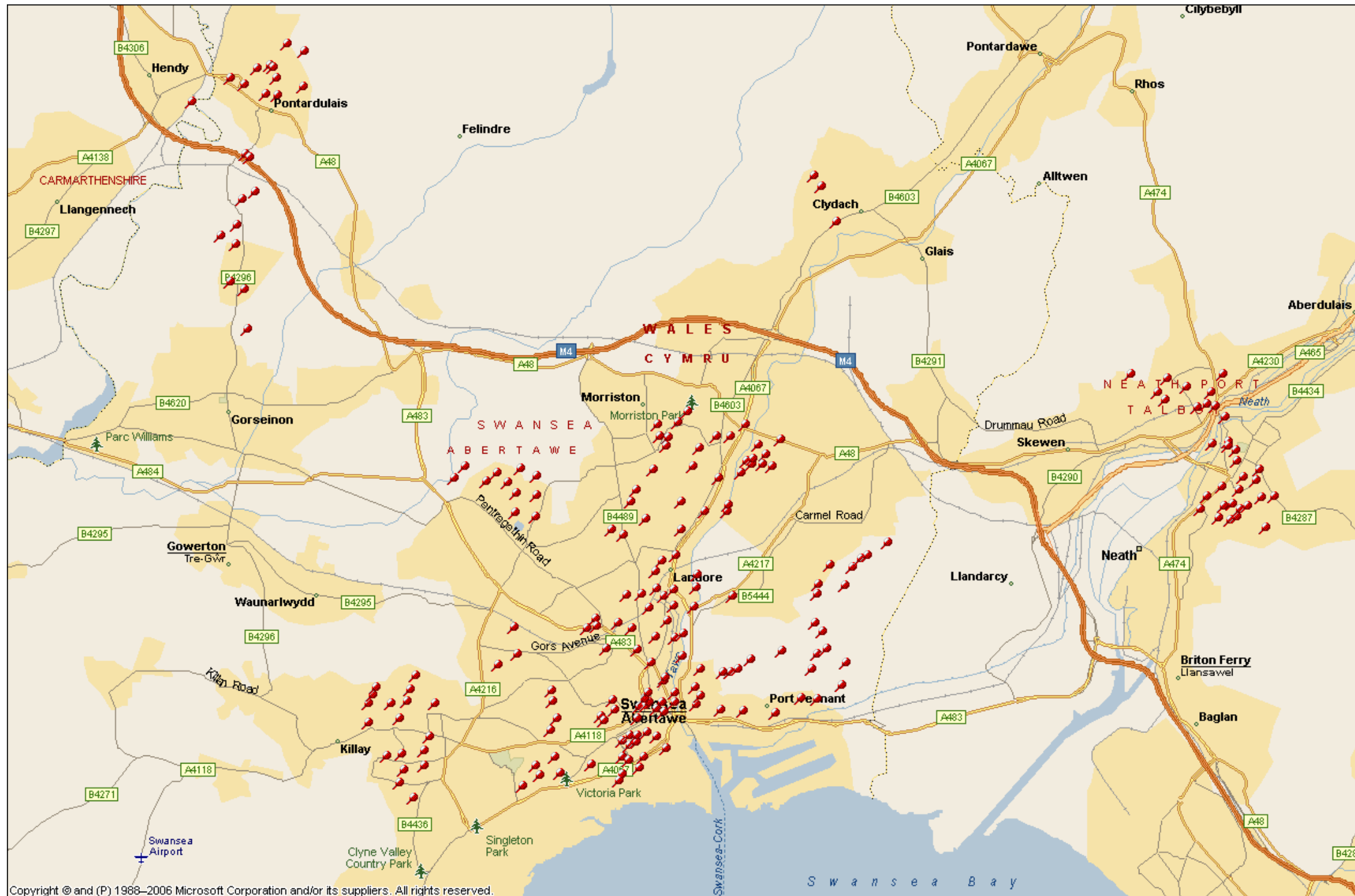
These maps show the location of the substations that will be monitored by WPD. Please see Box 2 for more information.







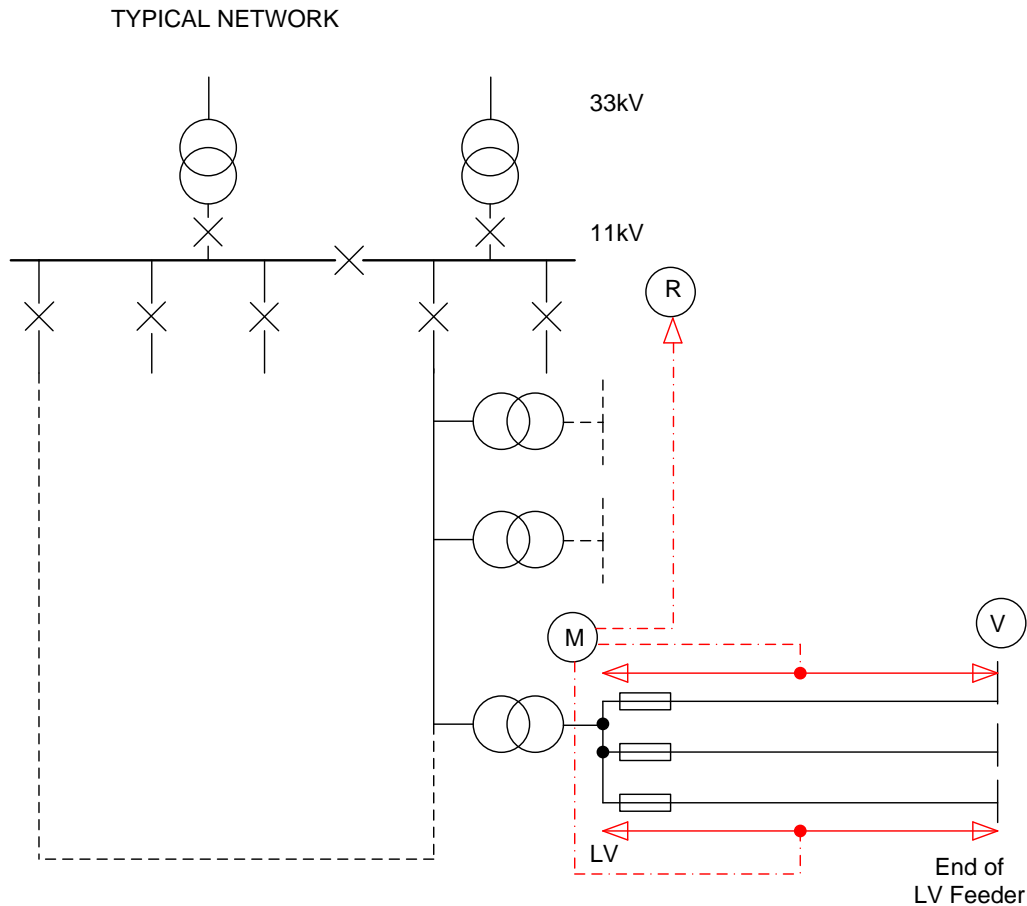
Bridgend Area









## Swansea

## Appendix B: Maps and Network Diagrams

The network diagram below demonstrates a typical arrangement of voltage meter at the end of feeder and a monitor in a distribution substation transformer.



- KEY:
-  Transformer
  -  11kV Circuit Breaker
  - LV 400V 3 phase, 230Volt, 1 phase
  -  Voltage Monitoring end of LV feeder
  -  Load, voltage, power quality monitoring at 11kV/LV substation on LV side and data aggregation
  -  RTU link into existing ENMAC SCADA system
  -  Communications link

NOTE: Distribution Substation Switchgear omitted for clarity