Battery life Considerations
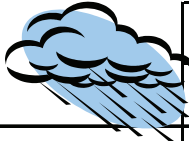
modem acitivity/day[4]		Days Without Sun[1]			
		Data on demand[2]		2/24hr access slot[3]	
		10 min	20 min	10 min	20 min
Loggers[5]	logging frequency				
0	n/a	21	19	97	57
1	1/hr	21	18	89	55
1	1/min	20	17	71	47
10	1/hr	18	16	53	39
10	1/min	12	11	21	19

This table may help you judge how frequently to log readings and download data.
These are approximate figures; performance will depend on local factors.

Notes

1:   Number of days the 10Ahr battery in the GSM Modem Box may last before it needs recharging.

It assumes 0.7 sun-hours (kilowatt-hrs/m^2/day) typical for mid Scotland
See also http://www.solar4power.com/map11-global-solar-power.html for maps of solar insolation.

Each logger is assumed connected to 2 ML2 sensors each taking 20 mA when read.

2:   Modem and GP1 external cabling network continuously powered i.e. not using a timer.

3:   Assumes timer is configured so that the modem is powered for 2 hours in every 24. External GP1 cabling network is powered continuously.

4:   One day's worth of GP1 data (logged every 1sec) should download via GSM (i.e. at 9600 baud) in under 7 minutes. A full GP1 may take 26 minutes.

5:    Number of GP1 loggers connected to the GSM Modem Box which are taking external power from the GSM Modem battery.
GP1 loggers take their power from the highest available voltage source. An external 12V battery will always be higher than their internal battery.
DL6 loggers cannot take external power and so have no impact.

External power to the GP1 loggers via the extension cabling may be disabled at the DIN rail in the Modem Box, leaving the loggers to rely on their internal batteries