



Manutec
L•I•M•I•T•E•D

Croke Park
Lighting & HVAC
Control Systems



Ballingarry, Co. Limerick
Tel: 069-68116

Overview



- **Phase 1: Lighting Control System**
- **Interface with existing manual system to provide full automation of all Lighting Circuits in the stadium**
- **This included a server version of the BMS that allowed web-users to access the system both on-site and offsite**

Overview



- **BMS server sits on the existing I.T. network so all users can access it through their own P.C.**
- **Component security allows for total control over user's access. A user can be allowed access to specific screens as dictated by the user administrator or users can be denied access to critical systems as required. E.g. Museum staff have access to the museum lights only (rest of site is hidden).**

Concourse Lights Sections 647-658

Office Lights Part 1

Office Lights Part 2

Lights Toilets Level 6

Lights Over Seats

Switchroom and Pantry Lights

Dispense Bar Lights

Box Lights 647-650

Box Lights 648-652

Box Lights 653-656

Box Lights 655-658

Generator Bar Area and Toilets

Generator Lights Boxes 647-658

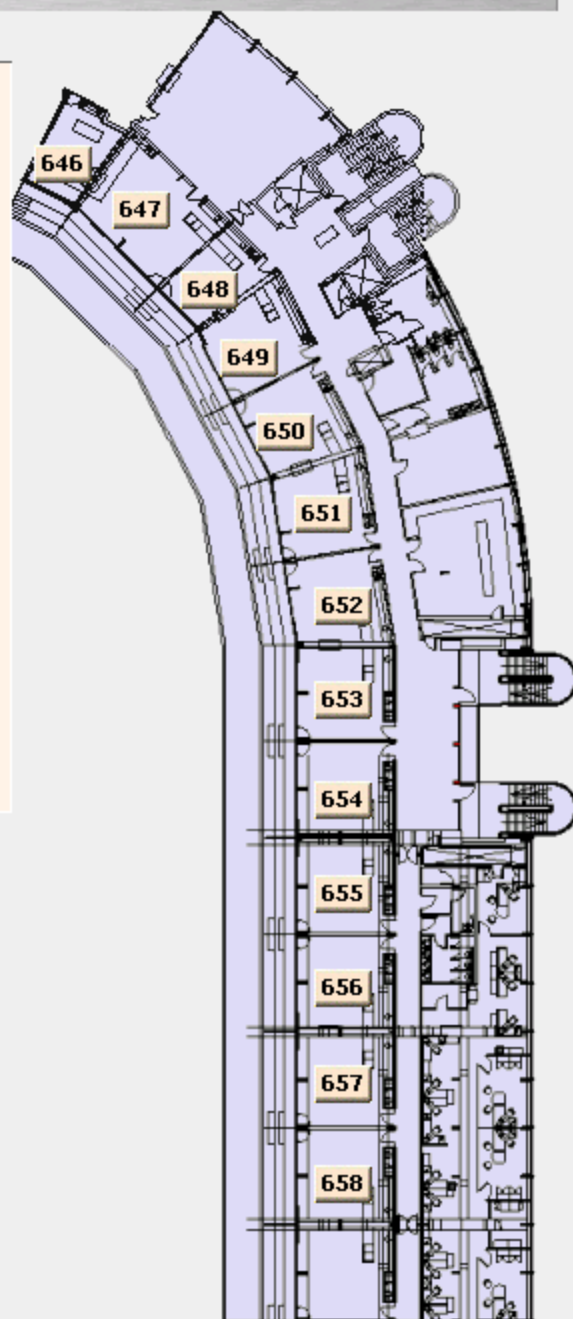
Generator Concourse Lights 647-658

Generator Lights Offices

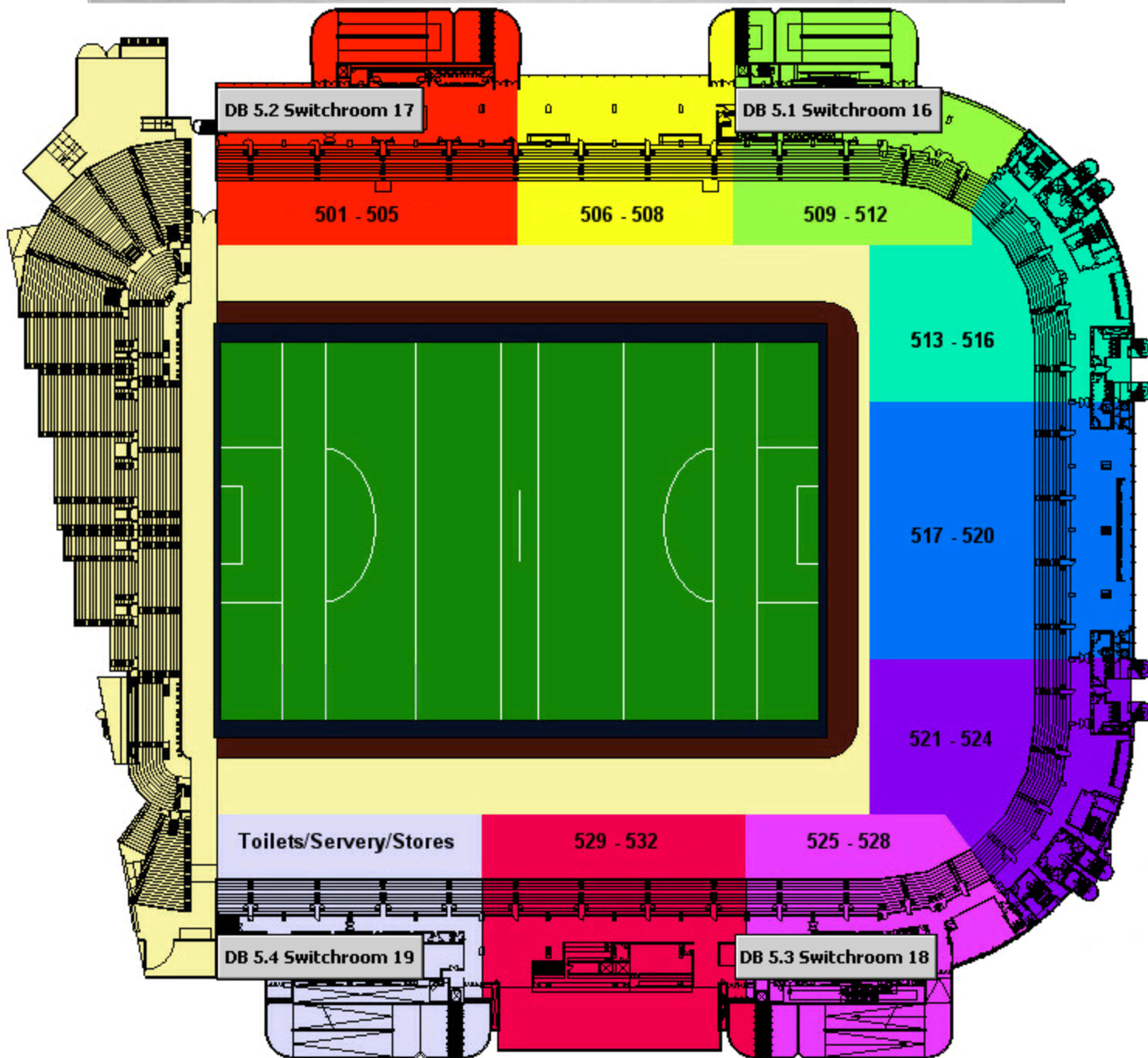
Generator Lights Over Seats

Exit Lights Level 06

Select	On
Select	On
Select	On
Select	On
Select	Off
Select	On
Select	Off
Select	On
Select	On
Select	On
Select	On
Select	Off
Select	On
Select	On
Select	Off
Select	On



Level 5 Layout



Overview



- **Phase 2: HVAC Control System**
- **Refurbishment of Hogan & Cusack Boiler house Control Systems.**
- **Removed stand-alone systems to allow for control from the I.T. network**
- **Added Duty/Standby, Lead/Lag controls for all Pumpsets, Boilers & ACV Burners with temperature monitoring on all circuits**

Overview



- **Variable Speed Drives were added to all Pumpsets to optimise pump usage and minimise energy usage**
- **Full graphics suite was added to BMS for HVAC system with data-logging and alarm monitoring**



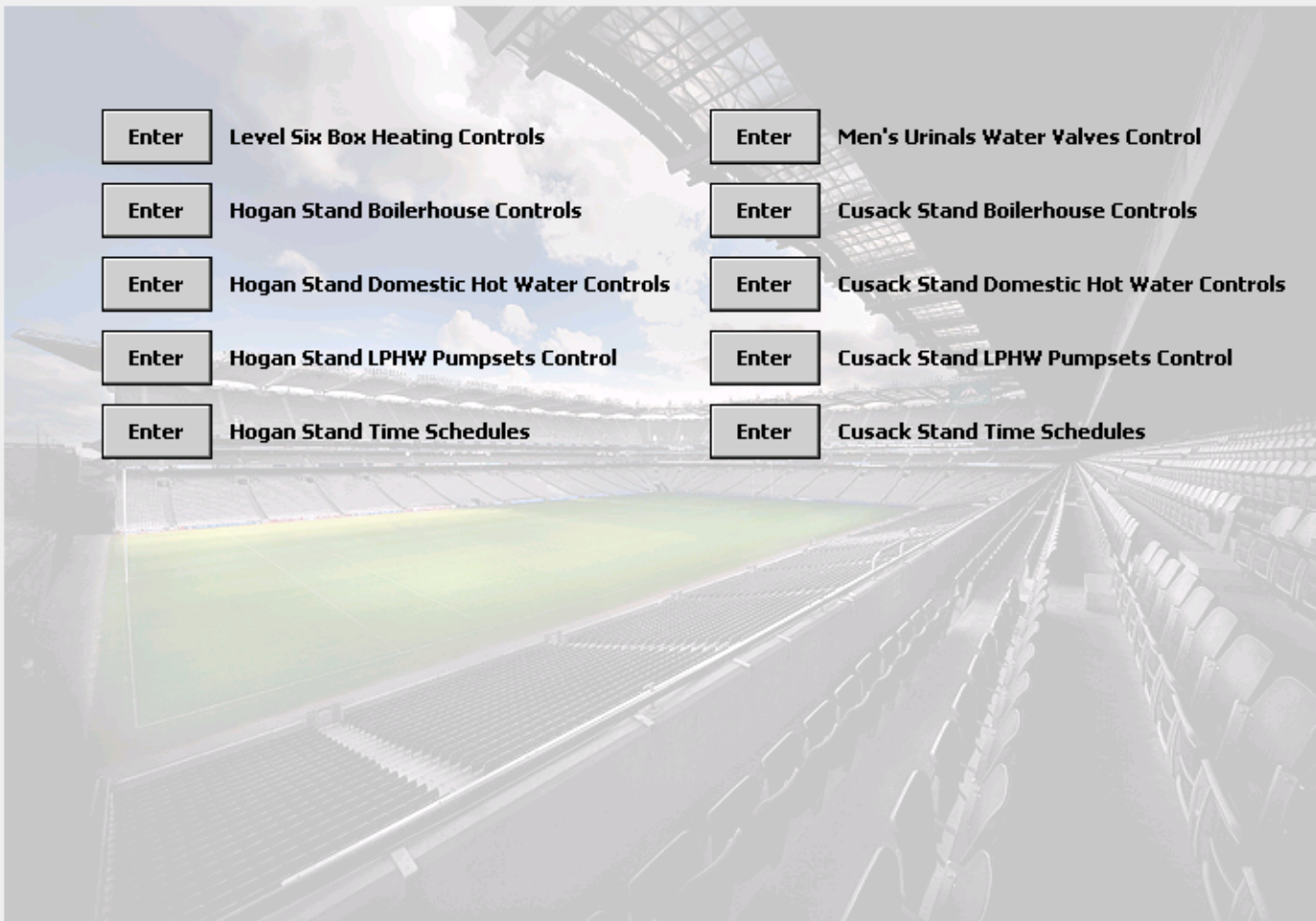
CROKE PARK STADIUM

PÁIRC AN CHRÓCAIGH



Lighting Control System

Building Management System



Menu

Cusack Stand Boilers Control

General Alarms

HWS Low Pressure Alarm	O.K.
HWS High Pressure Alarm	O.K.
Fire Alarm	O.K.
Gas Alarm	O.K.

Outside Air Temperature 8.6 °C

Booster Sets Alarm Indication

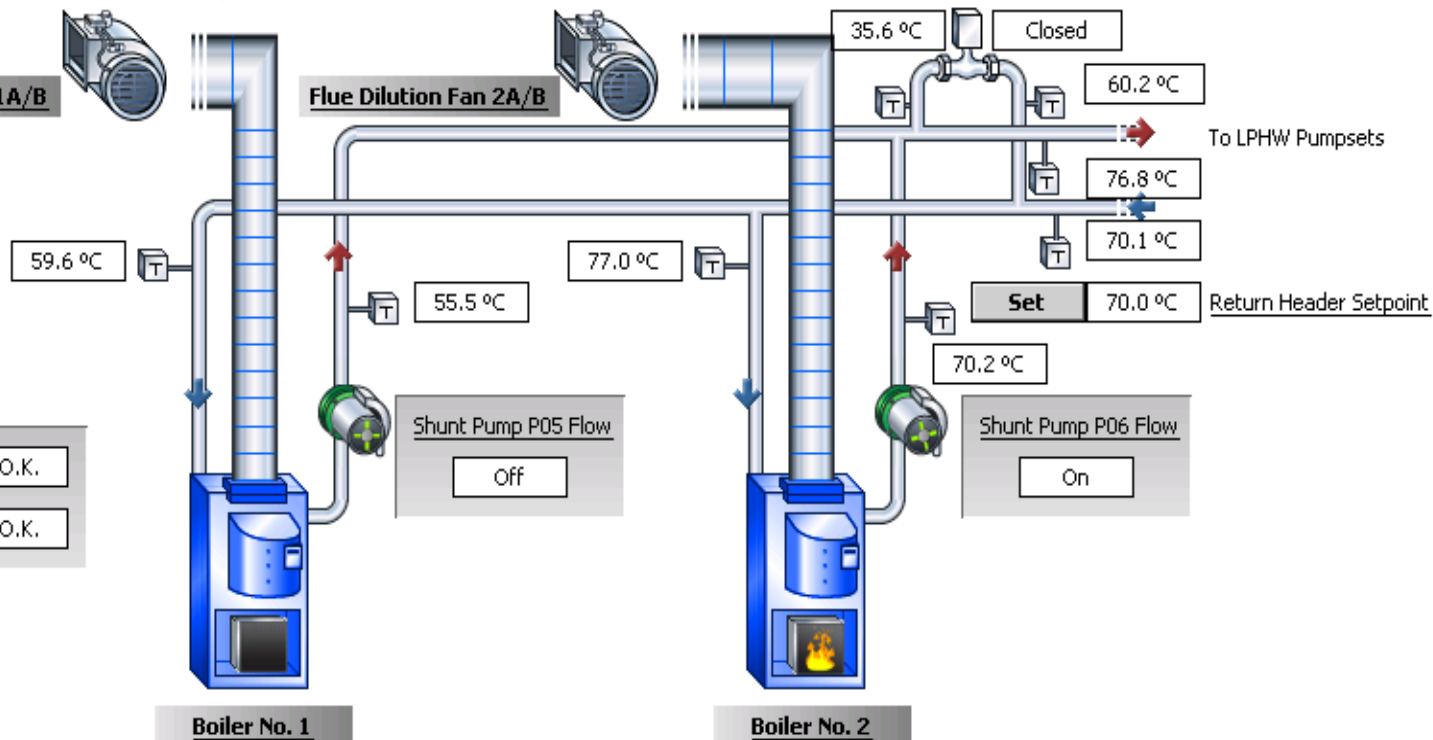
Mains Water Booster Fault Level 1-6	O.K.
Cold Water Booster Fault Level 4-6	O.K.
Hot/Cold Booster Fault Davin & Cusack L1	O.K.
South Cold Water Booster L3/7 Toilets	O.K.
Fire Hose Reel Booster Set	O.K.

Flue Fan Controls

Motor 1A Enable	Off	Motor 2A Enable	Off
Motor 1B Enable	On	Motor 2B Enable	On
Fan 1 Airflow	On	Fan 2 Airflow	On

Flue Dilution Fan 1A/B

Flue Dilution Fan 2A/B



Frost Alarms

LPHW Frost Condition	O.K.
Outside Frost Condition	O.K.

Boiler 1 Enable	Off
Boiler 1 Lockout	O.K.

Boiler 2 Enable	On
Boiler 2 Lockout	O.K.

General Alarms

HWS Low Pressure Alarm	O.K.
HWS High Pressure Alarm	O.K.
Fire Alarm	O.K.
Gas Alarm	O.K.

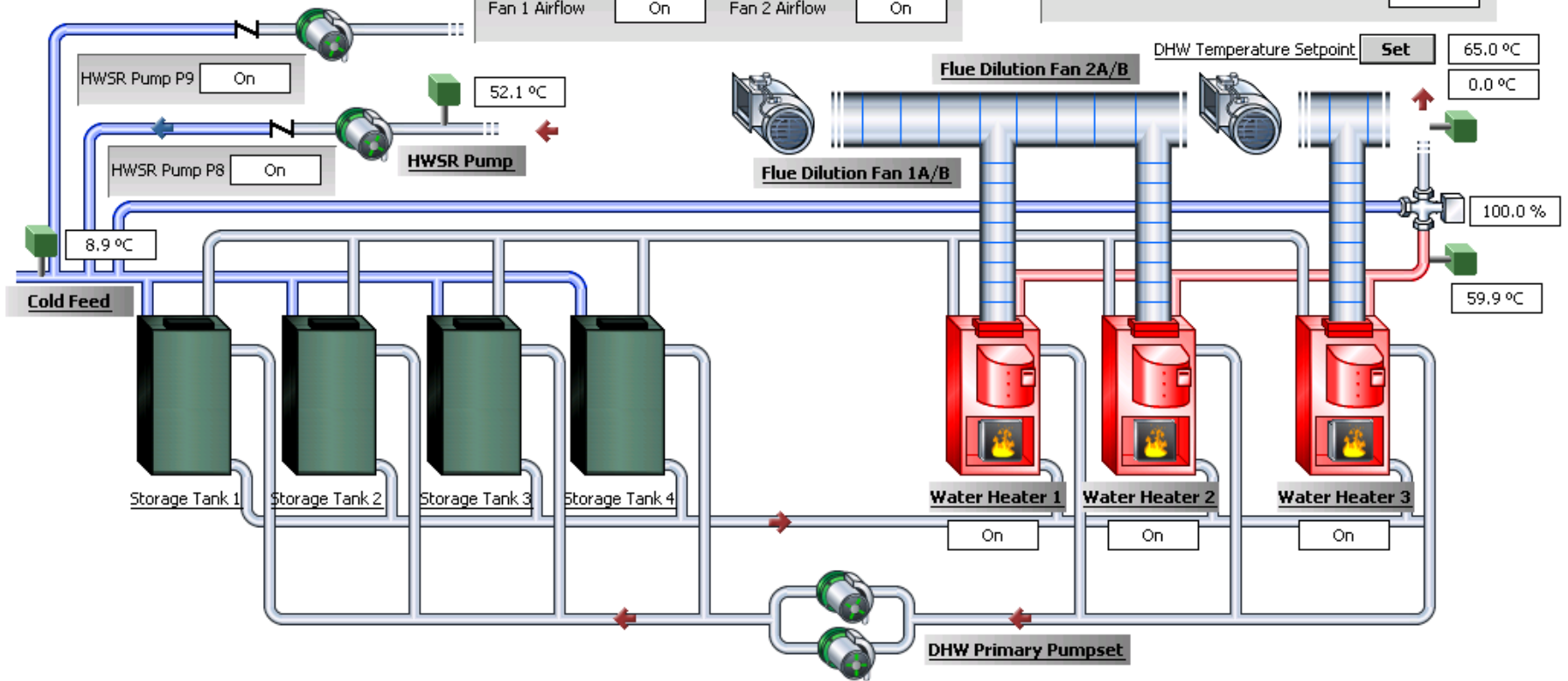
Domestic Hot Water Time Schedule On

Flue Fan Controls

Motor 1A Enable	Off	Motor 2A Enable	Off
Motor 1B Enable	On	Motor 2B Enable	On
Fan 1 Airflow	On	Fan 2 Airflow	On

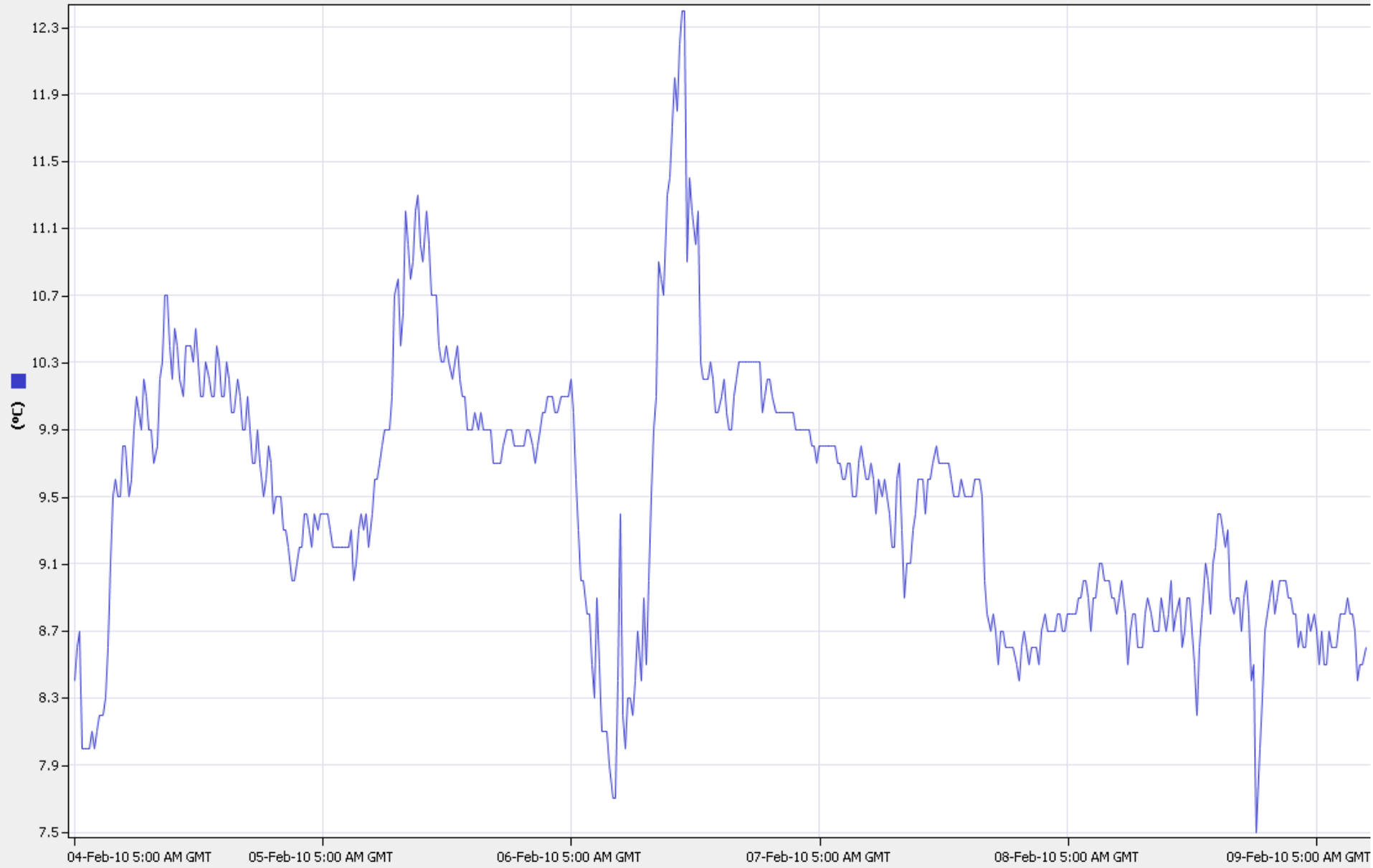
Booster Sets Alarm Indication

Mains Water Booster Fault Level 1-6	O.K.
Cold Water Booster Fault Level 4-6	O.K.
Hot/Cold Booster Fault Davin & Cusack L1	O.K.
South Cold Water Booster L3/7 Toilets	O.K.
Fire Hose Reel Booster Set	O.K.



DHW Primary Pump A Enable	On
DHW Primary Pump B Enable	Off
Pumpset Current Switch	On

/BMSSupervisor/Hogan Outside Air Temperature



Feb 2010						
s	m	t	w	t	f	s
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28						

Mar 2010						
s	m	t	w	t	f	s
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Apr 2010						
s	m	t	w	t	f	s
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

May 2010						
s	m	t	w	t	f	s
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Jun 2010						
s	m	t	w	t	f	s
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Jul 2010						
s	m	t	w	t	f	s
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Name	Summary
Out Of Service - Exam Block 07-12	Date: 7 Dec 2009
Out Of Service - Exam Block 08-12	Date: 8 Dec 2009
Out Of Service - Exam Block 09-12	Date: 9 Dec 2009
Out Of Service - Exam Block 10-12	Date: 10 Dec 2009
Out Of Service - Exam Block 11-12	Date: 11 Dec 2009
Cumann Luthchleas Gael 12-12	Date: 12 Dec 2009
CLG 05-12	Date: 5 Dec 2009
CLG 17-12	Date: 17 Dec 2009
Event	Date: 4 Jan 2009
Ubusiness Centre Request	Date: 4 Jan 2010
PCT Meeting	Date: 5 Jan 2010
CLG 12-01	Date: 12 Jan 2010
Cumann Luthchleas Gael 16-01	Date: 16 Jan 2010
PCT 19-01	Date: 19 Jan 2010
Cumann Luthchleas Gael 23-01	Date: 23 Jan 2010
Cumann Luthchleas Gael 25-01	Date: 25 Jan 2010
Cumann Luthchleas Gael 26-01	Date: 26 Jan 2010
Cumann Luthchleas Gael 28-01	Date: 28 Jan 2010
Cumann Luthchleas Gael 30-01	Date: 30 Jan 2010
Fitzers 31-01	Date: 31 Jan 2010
PCT 03-02	Date: 3 Feb 2010
Bord Bia 09-02	Date: 9 Feb 2010

Time	Status
3:00 AM	Unscheduled
6:00 AM	
9:00 AM	
12:00 PM	
3:00 PM	
6:00 PM	On
9:00 PM	

Event Start

Event Finish

Event Output null true

[+ Add](#)
[+ Edit](#)
[↑ Priority](#)
[↓ Priority](#)
[📄 Rename](#)
[✕ Delete](#)

Further Information



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