

Cliffs of Moher Visitor Centre Manager Greg Davidson

Installer Dunstar,
and John Horgan & Son







PRODUCT CODE



MODELLO RWC 170 PED R407C
MODEL



1115



OdL 77817344



MATRICOLA

SERIAL NUMBER

2761812103



ANNO DI COSTRUZIONE

2006

CARICA REFR.

CIRCUITO 1 2 3 4

REFRIGERANT CHARGE

R407C Kg 8.5 8.5

ALTA PRESSIONE
HIGH PRESSURE

(max) bar 28

BASSA PRESSIONE
LOW PRESSURE

(max) bar 18.6

ALIM. POTENZA
MAIN SUPPLY

V/PH/Hz 4/0 3 50

CORRENTE DI SPUNTO
LRA

(max) A 206

CORRENTE A PIENO CARICO

(max) A 108

POTEN. ORBITA

(max) Kw 60

PRESS. ESERC. ACQUA
WATER OPERATION PRESSURE

(max) bar 10

MASSA
MASS

(max) Kg 1062

ITELCO INDUSTRY S.r.l Via XXV Aprile 29 20030 BARLASSINA MI(ITALIA)
MADE IN ITALY
COD.035800452 - 000 A

RECUPERARE FLUIDO-NON DISPERDERE NELL'AMBIENTE-REGOLAMENTO CEE N° 3093/84





LPHW SYSTEM - GROUND SOURCE HEAT PUMP



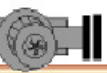
Fire Alarm Normal

HOT BUFFER PUMPS

CT SWITCH Off

26.8 DegC

A



B

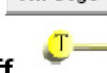


HOT WATER TANK

35.1 DegC



36.7 DegC



GSH Pump Heat Enable Off

Heating Demand > Than = 20.0 %
 Heating Demand = 0.0 %
 Cooling Demand > Than = 15.0 %
 Cooling Demand = 100.0 %

Ground Source Heat Pump

CHILLED BUFFER PUMPS

GSH Pump COOL Enable On

CT SWITCH On

5.9 DegC



A



B



6.5 DegC



5.9 DegC



CHW Header

CHILLED WATER TANK

Pressurisation Unit
 Low Pressure : Normal
 High Pressure : Normal

AHU PUMPS

LPHW Header Cont. From Boiler Page

LPHW Header

Main Index

Hot Water System

LPHW System

Monitoring

Ventilation System

Parameters

Site Metering Recording

Page 1

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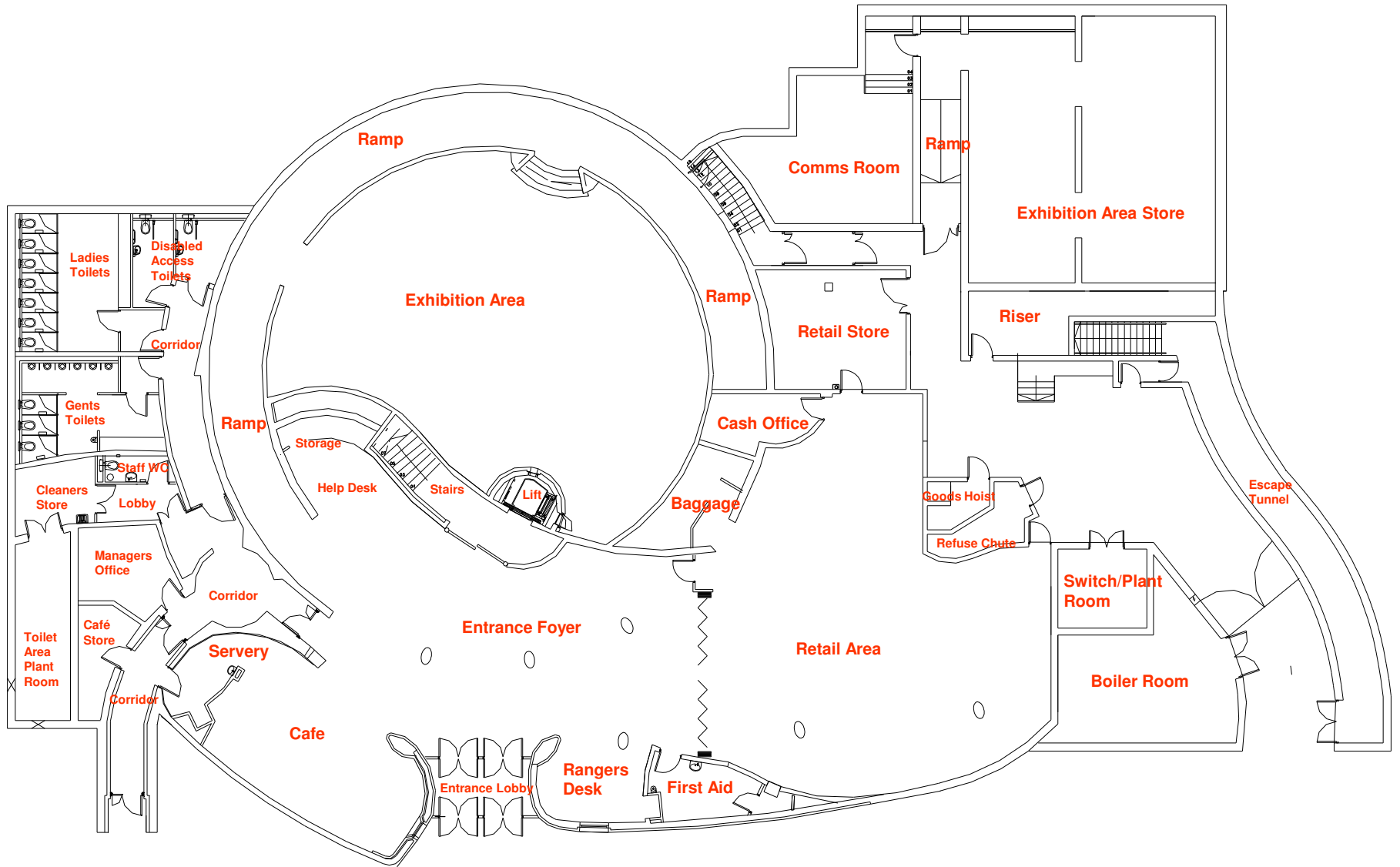


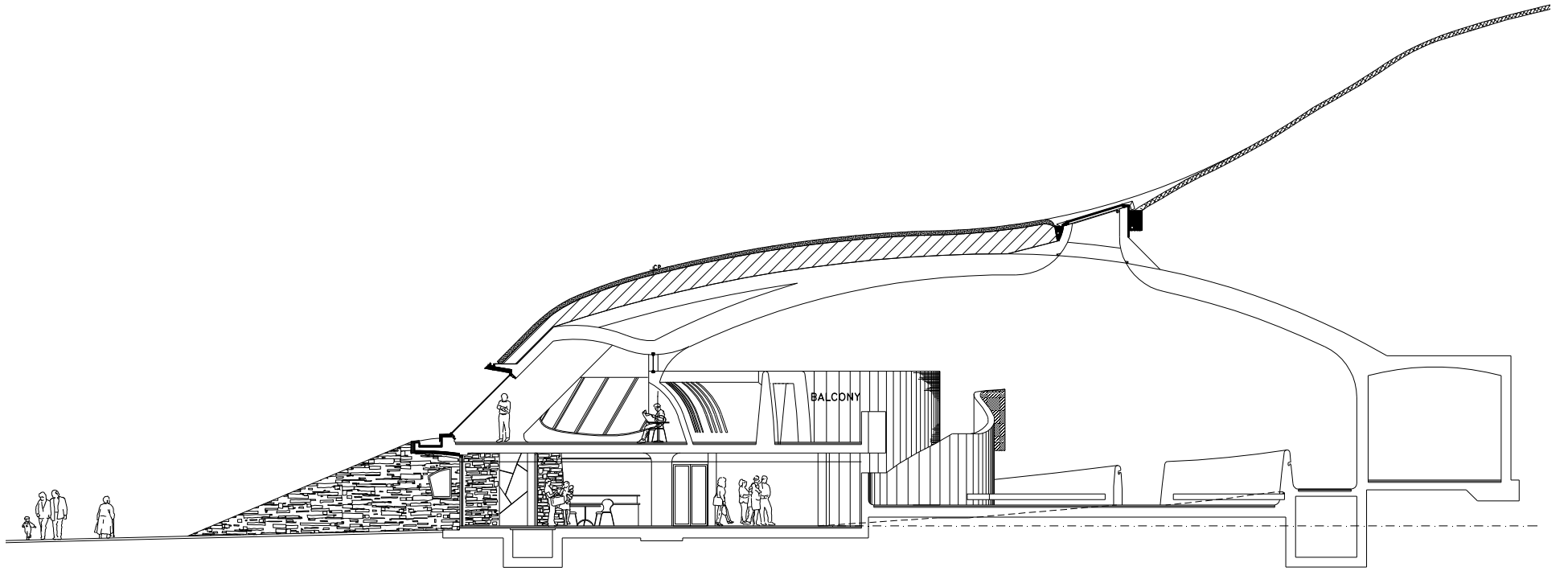
<u>METERS</u>	Total Month to Date	Last Months Total	Surge Arrest Alarm
Main ESB Incomer Meter	6048.00 Kwhr	52413.00 Kwhr	Normal
	Total Month to Date	Last Months Total	
Main Landlord DB Total	4614.00 Kwhr	39430.00 Kwhr	
	Total Month to Date	Last Months Total	
MCC 1 Electricity Meter	448.00 Kwhr	4545.00 Kwhr	
	Total Month to Date	Last Months Total	
MCC 2 Electricity Meter	77.00 Kwhr	692.00 Kwhr	
	Total Month to Date	Last Months Total	
MCC 3 Electricity Meter	6.00 Kwhr	2.00 Kwhr	
	Total Month to Date	Last Months Total	
F-SDB-04 Electricity Meter	374.00 Kwhr	3417.00 Kwhr	
	Total Month to Date	Last Months Total	
S-SDB-05 Electricity Meter	40.00 Kwhr	316.00 Kwhr	
	Total Month to Date	Last Months Total	
Geothermal Heatpump Electricity Meter	594.00 Kwhr	4460.00 Kwhr	
	Total Month to Date	Last Months Total	
Waste Water Plant Electricity Meter	842.00 Kwhr	6700.00 Kwhr	
	Total Month to Date	Last Months Total	
G-SDB-01 Electricity Meter	238.00 Kwhr	1879.00 Kwhr	
	Total Month to Date	Last Months Total	
G-SDB-02 Electricity Meter	1545.00 Kwhr	13415.00 Kwhr	
	Total Month to Date	Last Months Total	
G-SDB-03 Electricity Meter	451.00 Kwhr	4004.00 Kwhr	

- Main Index
- Hot Water System
- LPHW System
- Monitoring
- Ventilation System

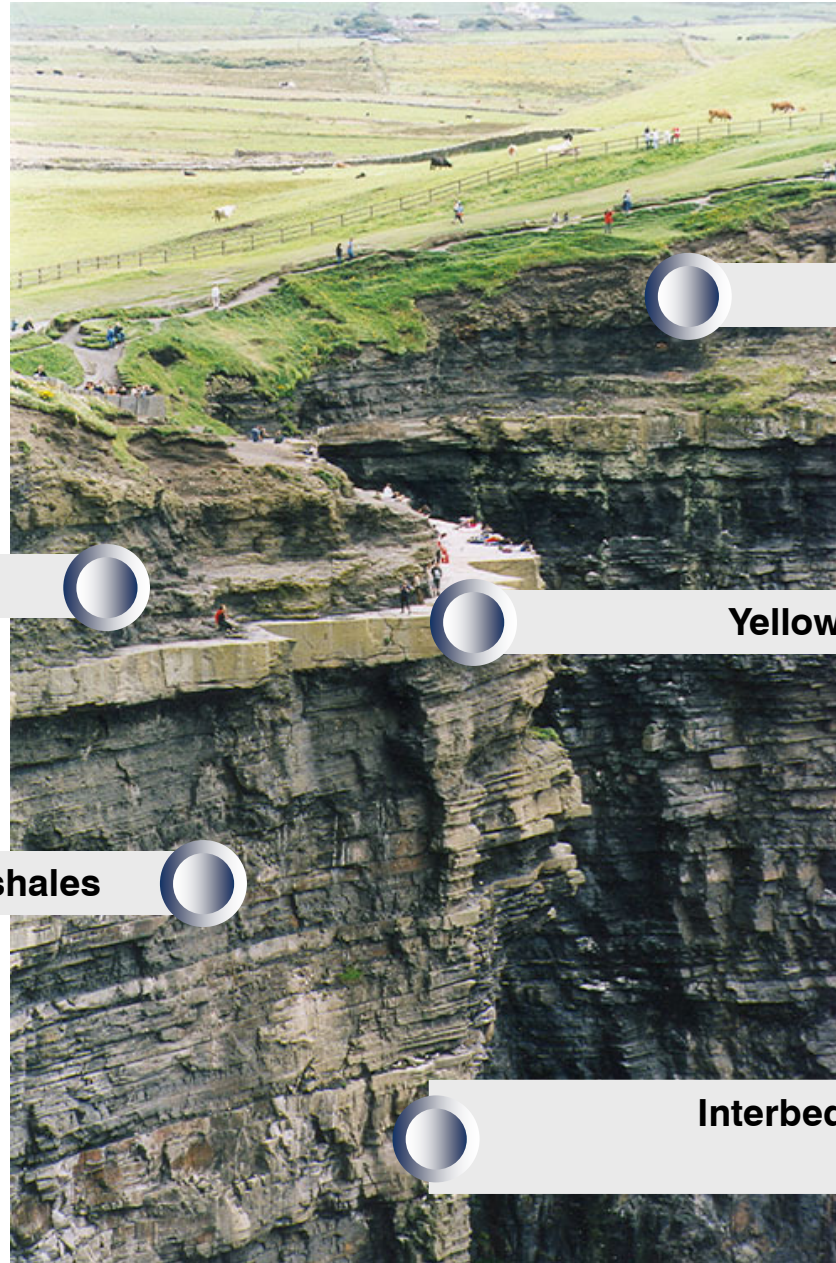
- Glossary

DATE : 04_10_13 TIME : 13_00_34





Geology of the Cliffs



Weathered shale

Shale

Yellow sandstone (Round Table)

Flaggy sandstones and shales

Interbedded strata of sandstones, siltstones and shales







Summary of relevant stats

Closed Loop Heating and Cooling

Horizontal array area – 2,500m²

39 circuits at 150m each

Peak Flow rate – 8 l/s

Size of heatpump – 1 * 160kW

Hours of operation – 3,640 hours/year

Energy Savings excl VAT- €11,280

Carbon Dioxide Savings – 30.8 tonnes / year

Improved level of comfort for visitors and staff

Waste heat from cooling provides heat to other spaces in the building.

The Geothermal Association of Ireland presents the winner of the 2013

Brecan Mooney Award

*for excellence in Geothermal Energy Transfer Systems in the category
of Closed Loop, Greater than 100kW thermal capacity, to*

The Cliffs of Moher Visitors Centre

Co. Clare

*Presented on Wednesday 13th November 2013, for an
efficient, high quality geothermal heating & cooling system
completed in August 2007 which succeeds in providing a
controlled, stable & comfortable indoor environment with
low associated energy, cost & CO₂ emissions.*

John Burgess - Chair of the GAI

Robin Curtis - Geoscience Ltd. Independent Adjudicator from UK