

**HVAC Meeting**

Date - 9th June – 4pm

Location - Hugo’s office

Attending:- Andrew, Hugo, Assistant to Hugo, Americo, Jose Dias (Climalgarve)

The point discussed were as follows:-

1. Design and evaluation from Climalgarve was presented, which highlighted a few areas for improvement in the original specification presented by Penguin, mainly:-
	1. Have two separate external machines (Back up) for the pools and UFH and the domestic hot water, allowing a greater user flexibility and in turn efficiency. Schematic details to be presented by Climalgarve.
	2. An inclusion of a heat converter/de-humidification machine in the indoor pool areas rather than an AC unit.
	3. An increase in capacity of some of the AC units.
	4. A refrigeration machine was added for the wine cellar
2. It was agreed that the extra cost of putting the UFH pipework 10cm apart rather than the normal 15cm does not warrant the extra cost.
3. The basement ventilation system operates with a forced air being channelled through a central pipe and feeding each AC unit with fresh air to circulate in each room as required.
4. Only the master bathroom and will have a separate inlet for AC. The other bathrooms will remain without and use the cooling from the bedroom to filter into the bathroom when the door is opened.
5. Each bathroom will have a dedicated extraction, which will be connected to the domotica system to allow programmable control to suit the client’s requirements.
6. The Climalgarve system comes with thermostats for the UFH and a thermostat control for the AC. A joint solution using one wall control would be preferred. The standard thermostats are to be presented to AD to discuss with the client.
7. The date room may require an independent AC system to control a level temperature throughout. Best solution to be confirmed by Climagarve.
8. It was suggested then agreed that it would be a better solution to have the Photovoltaic panels connected directly to the house electrical circuit and not only used for the pool pump. This means that whether the pool pump is on or not the power generated is still being used for other appliances within the house.
9. Could Hugo advise on the most efficient pool pumps so we can be aware of the potential consumption.
10. It is suggested to have up to 6 photovoltaic panels each generating 1.5kw of power. This would provide a maximum of 9KW of power during sunlight to go towards the day to day power requirement of the house.
11. I suggest that we use Coollite glass (tinted) in all exposed south and west windows to prevent excessive heating of the rooms from the sun. This will help the efficiency of the HVAC system.
12. The AC in the sky light to be removed and a small unit added in the rooftop WC.
13. Jose Dias (Climagarve) will produce a revised specification taking on board the changes discussed in the meeting and present his quote to LUX to revise the price accordingly. By 16th June.
14. Lux will confirm to AD what, if any, cost difference.
15. On agreement of the specification and the acceptance of the work from Lux to Climalgarve, Climalgarve will adjust the existing HVAC execution plans to accurately include all the changes. Once this is done, the plans can be cross checked with Hugo to ensure no conflict with lighting and other elements and they can also be cross checked by Termoflux.