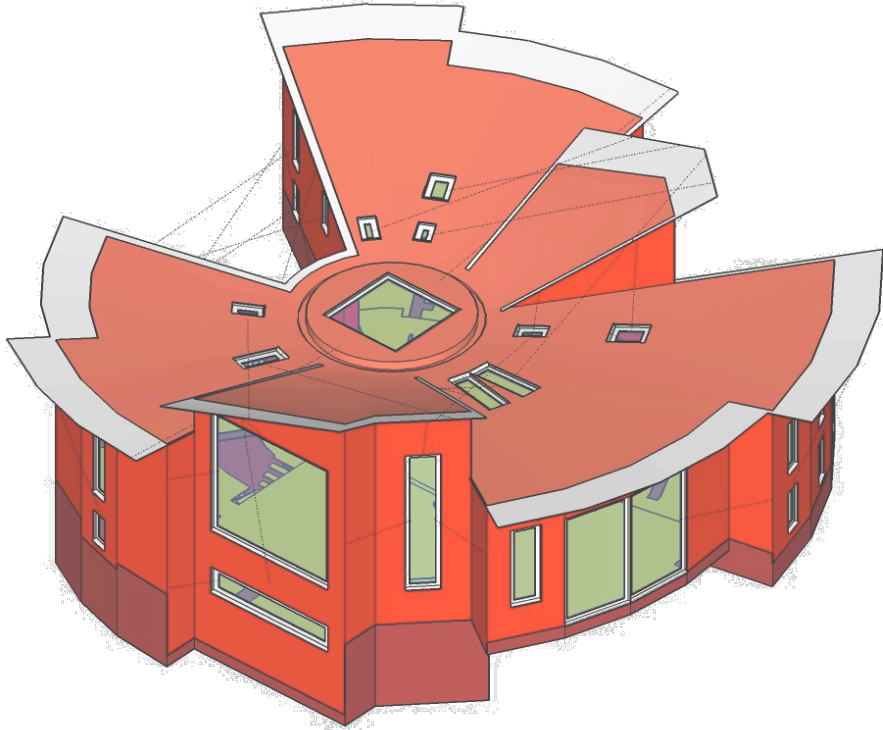


1. Previous Scheme:

Design PH Analysis:

Climate	London Gatwick
Treated Floor Area	429.88 m²
Annual Heat Demand	4974.89 kWh/a
Window Area	102.27 m²
Solar Heat Gains (Qs)	13.04 kWh/m²a
Specific Annual Heat Demand (Qh)	11.57
FHLF	3.32



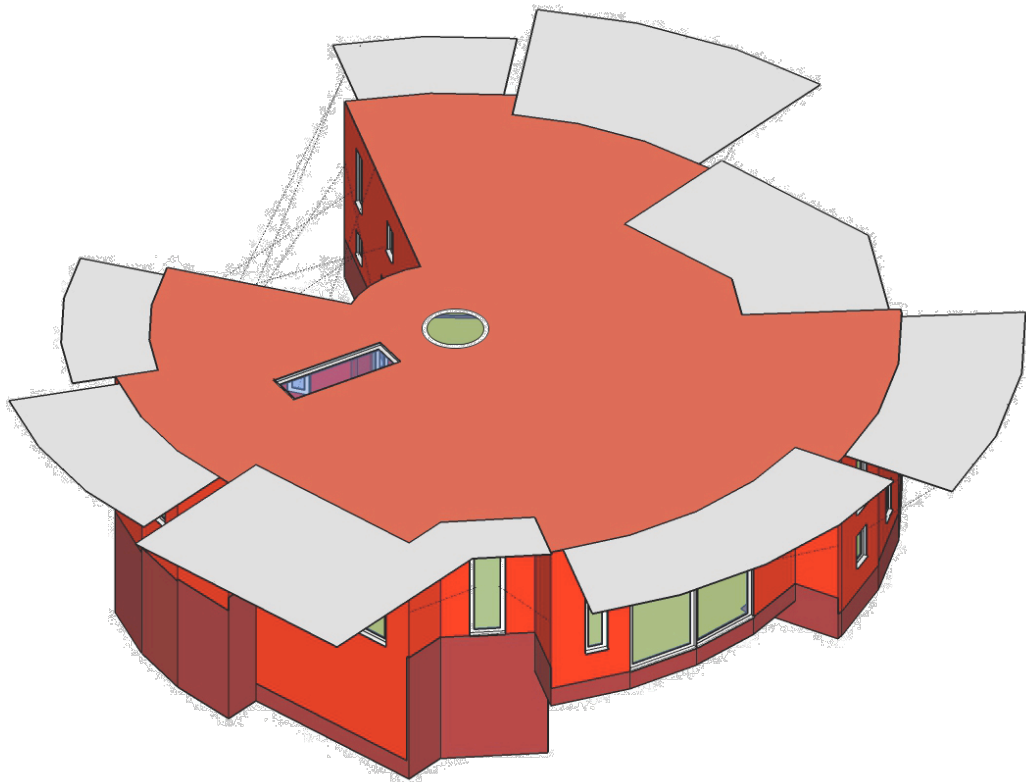
The proposal presented to the design review panel.
(11/07/23)

2. New Scheme Iteration 1:
(Eaves to provide full solar shading)

Design PH Analysis:

Climate	London Gatwick
Treated Floor Area	443.48 m²
Annual Heat Demand	5620.39 kWh/a
Window Area	80.95 m²
Solar Heat Gains (Qs)	8.45 kWh/m²a
Specific Annual Heat Demand (Qh)	12.67
FHLF	3.18

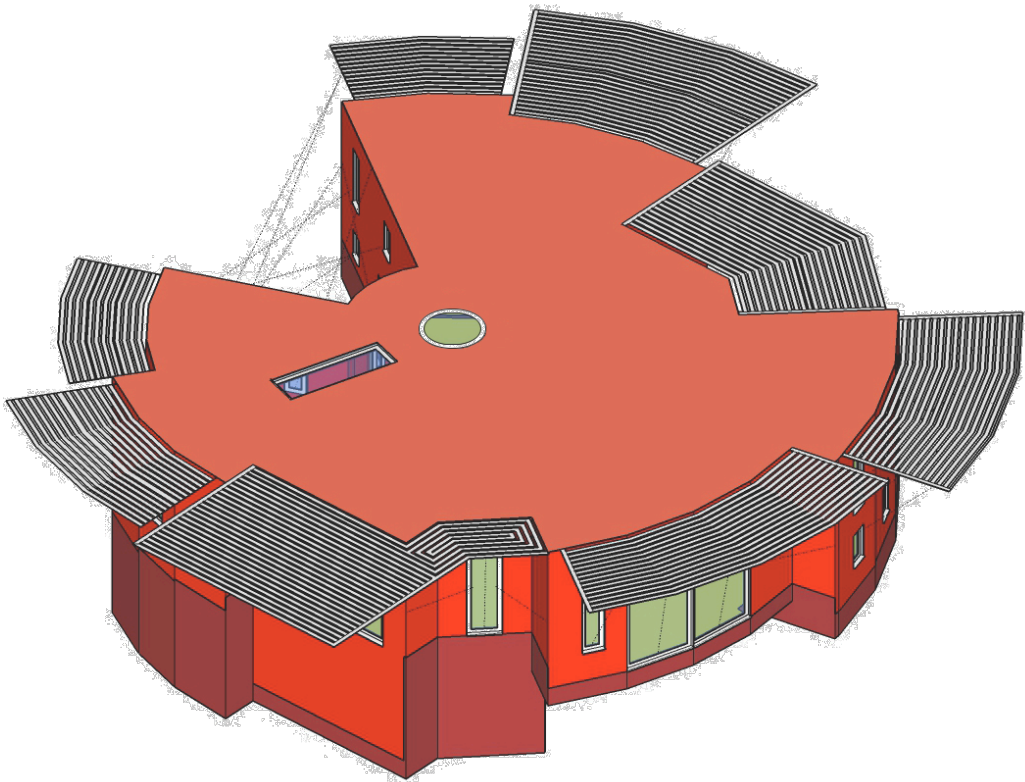
The increased solar shading has increased the annual heat demand, reducing the dwellings Passivhaus effectiveness/qualities.



3. New Scheme Iteration 2:
(Louvres to provide full solar shading)

Design PH Analysis:

Climate	London Gatwick
Treated Floor Area	443.48 m²
Annual Heat Demand	8099.72 kWh/a
Window Area	80.95 m²
Solar Heat Gains (Qs)	2.29 kWh/m²a
Specific Annual Heat Demand (Qh)	18.26
FHLF	3.18



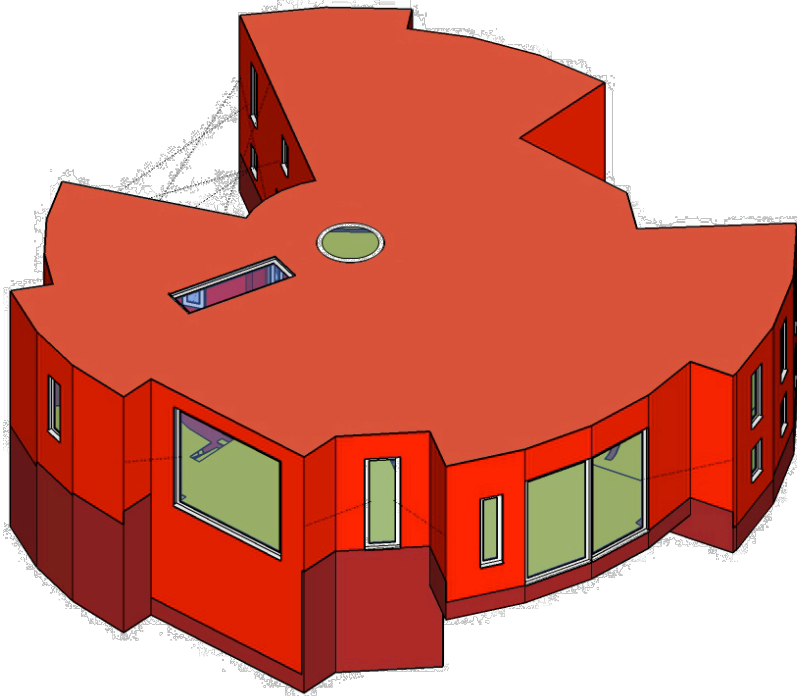
Again, the increased solar shading has increased the annual heat demand, reducing the dwellings Passivhaus effectiveness/qualities.

4. Final Scheme:

Design PH Analysis:

Climate	London Gatwick
Treated Floor Area	443.48 m²
Annual Heat Demand	4979.06 kWh/a
Window Area	80.95 m²
Solar Heat Gains (Qs)	10.24 kWh/m²a
Specific Annual Heat Demand (Qh)	11.23
FHLF	3.18

The removal of the eaves has reduced the dwellings annual heat demand [the lowest out of these tests], reducing the operational carbon and improving Passivhaus qualities. Other techniques are also proposed in response to potential solar gain overheating such as thermal massing and MVHR.



Proposed Passivhaus Analysis

GENERAL NOTE

Do not scale from this drawing Except for planning purposes

All Dimensions to be checked on site prior to commencing works

Any discrepancy between drawings must be reported to the Architect immediately

All materials and workmanship shall conform with the relevant British standard specifications and codes of practice

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No alteration shall be undertaken to the design and/or drawings without the prior written consent of the architect.

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NOT FOR CONSTRUCTION

A	24/10/23	Redesigned following the DRP Comments (11/07/23)
Rev	Date	Note

Plumpton Pit Stop,
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BN7 3AF

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Job Title		
Caldyne Park		
Drawing Title		
Proposed Passivhaus Analysis		
Client		
Caldyne Ltd		
Drawn	Checked	Date
HH	CH	03/08/23
Scale	Drawing No.	Revision
NTS	1608 - SK61	A