

# Meeting of Freeland Village Hall

## Sustainability Sub-Group Wednesday 2<sup>nd</sup> June 2010

Present: Martin Shann, Neil Edwards, Martin Merritt, Ray Tollady, Jo Arbon, Colin Smith

The group met with Ray to confirm details of the design that effect energy efficiency and sustainability.

### 1. Air tightness

Ray confirmed that he would be designing detailing to current “robust standards”. This should result in levels of air tightness in excess of the 2010 regulations.

### 2. Ventilation

After discussion it was agreed that adequate ventillation could be obtained in both Winter and Summer by means of “high-low” opening windows. With this system, adequate cooling should be achieved in Summer by opening low level windows and doors. In Winter, opening the windows at both high and low level will create sufficient airflow to prevent build up of CO<sub>2</sub> with minimum heat loss.

Two Velux windows will be incorporated in the roof on the rear side. These will need to be motor driven and fitted with black-out blinds. The group discussed the window design. Tilt and twist windows offer more options but there were concerns that these might cause confusion. Ray prefers simple opening casements. This issue will be referred to the Working Group.

#### Actions:

1. Martin M will provide Ray with a specification of the size of the Velux windows
2. Working Group to discuss types of window.

### 3. Insulation Levels

Insulation levels should be sufficient to meet 2010 regulations or better.

#### Actions:

3. Ray will provide Martin M with the u-values for floor, ceiling and roof as currently proposed
4. Jo will get the 2010 values

### 4. Acoustics

Anticipating acoustic qualities is difficult. Martin M will consult with an expert in this field as to whether the proposed plasterboard finish, given the dimensions of the hall will give problems and if so what measures could be taken.

#### Action

5. Martin M will feedback to Ray and the sub-Group any conclusions

## **5. Heating and hot water**

Martin M has re-worked calculations and concluded that 2010 regulations can be met with a high efficiency gas boiler and so a Ground Source Heat Pump is unnecessary. It was noted that the Low Carbon Building Programme has been closed.

Hot water for showers would be met by means of a hot water tanks heated by the gas boiler. This would need to be manually controlled.

After discussion it was concluded that separate boilers would be provided for the two parts of the building for both under floor heating and hot water. Under floor heating with zone controls will be used throughout.

## **6. Lighting**

Ray is proposing lighting at eves level pointing up and down. The need for automatic dimmable daylight linking was discussed. These are common in schools.

### **Actions:**

6. Martin M will supply Ray with the 2010 Lux levels
7. Jo will find someone who can do a Lux model
8. Martin will provide Ray with more information on automatic lighting controls

## **7. Photo voltaic panels**

Martin has obtained quotes for the installation of Photo voltaic panels in two stages – on the south facing roofs of the entrance hall and the sports wing. The Government feed in tariffs make these cost effective over a long timescale. Payback will be under 15 years and the feed in tariffs operate for 25 years. It is possible that this could be funded by contributions from the Village.

### **Action:**

9. Colin will present figures to the Working Group

## **8. BREEAM**

### **Action:**

10. Jo will provide Ray with a summary of the main factors that effect BREEAM

## **Next Meeting**

No meeting was arranged but the sub-Group will continue working using email.