#### **Energy Information Form TGD 006**

#### This form shall be completed and submitted at Stage 3

1. School:		
Project Title:		
Type of Project <sup>1</sup> :		
School Roll Number:		
School Ron Number.		
D 11E 1 12		
Pupil Enrolment <sup>2</sup> :		
1		•
Total unheated floor Area <sup>2</sup>	n	n <sup>2</sup>
Total heated floor Area <sup>2</sup> :	n	n²
Total Heaved Hoof Them .	-	-
No. of storeys <sup>2</sup> :		
ino. of storeys:		
		3
<b>Total Enclosed Volume<sup>2</sup>:</b>		$\frac{n^3}{n^3}$
	n	11
2		
Floor to ceiling <sup>2</sup> Min.		m
Height <sup>2</sup> Max.		m

2. Element:	(A)	(B)	(C) = (A)x(B)
2. 22	Area:	Design U Value <sup>3</sup> :	Heat Losses:
	m <sup>2</sup>	W/m <sup>2</sup> °C	W/°C
I Ground Floor:			
ii External Wall <sup>4</sup> Opaque Surface 1:			
iii External Wall <sup>4</sup> Opaque Surface 2:			
iv External Wall <sup>4</sup> Opaque Surface 3:			
v) External Doors:			
vi Roof Opaque Surface 1:			
vii Roof Opaque Surface 2:			
viii Roof <sup>4</sup> Opaque Surface 3:			
ix Glazing Windows:			
x Glazing Clerestory:			
xi Glazing Other Vertical:			
xii Glazing Horizontal:			
xiii Glazing Near-Horizontal <sup>5</sup> :			
(D) Total:		(E) Total:	
		70~	
Whole Building U value: = (E) =	W	$I/m^{2}$ OC Aspect = $\underline{I}$	<u>)</u> ) =
Whole Building U value: = (E) (D)	W	$\frac{\text{C/m}^2  ^{\circ}\text{C}}{\text{Ratio}^6} = \frac{\text{CI}}{\text{R}}$	_
(D)	W	Ratio <sup>6</sup> (A	)i
Vertical Glazing:		Ratio <sup>6</sup> (A	)i azing:
(D)  Vertical Glazing:  (A)ix + x + xi	%   (A	Ratio <sup>6</sup> (A  Horizontal Gla  A)xii + xiii + xi X	azing: 100 = %
Vertical Glazing:	%   (A	Ratio <sup>6</sup> (A	azing: 100 = %
(D)  Vertical Glazing:  (A)ix + x + xi	%   (A	Ratio <sup>6</sup> (A  Horizontal Gla  A)xii + xiii + xi X	azing: 100 = %
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Vertical Glazing:  (A)ix + x + xi	%   (A	Ratio <sup>6</sup> (A  Horizontal Gla  A)xii + xiii + xi X	azing: 100 = %
Vertical Glazing: $ \underline{(A)ix + x + xi} \qquad X \ 100 \\ \underline{(A)ii + iii + iv + v + ix + x + xi} = \underline{\qquad} $ 3. Daylighting Design <sup>7</sup>	%   (A	Ratio <sup>6</sup> (A  Horizontal Gla  A)xii + xiii + xi X	azing: 100 = %
Vertical Glazing:  (A)ix + x + xi	%   (A	Ratio <sup>6</sup> (A  Horizontal Gla  A)xii + xiii + xi X	azing: 100 = %
Vertical Glazing: $ \underline{(A)ix + x + xi} \qquad X \ 100 \\ \underline{(A)ii + iii + iv + v + ix + x + xi} = \underline{\qquad} $ 3. Daylighting Design <sup>7</sup>	%   (A	Ratio <sup>6</sup> (A  Horizontal Gla  A)xii + xiii + xi X	azing: 100 = %

5. Ventilation Design	
Natural Ventilation Rate:	Litres per pupil
Mechanical Ventilation <sup>9</sup>	
Room / Space / Equipment	Design Ventilation Rate
6. Hot Water Services  No. of Outlets:  Method of Heating <sup>10</sup> :  Total Storage <sup>11</sup> :  Generation Rate/hour:	Litres
Estimated Load:	kW
7. Cold Water Services	
No. of storage tanks & areas served:	
Capacity of each tank:	

Storage capacity per pupil			
8. Heating services			
Type &No. of boilers <sup>12</sup> :			kW
Design heat losses:			
Boiler Loads <sup>13</sup> :			
Boiler(s) capacity <sup>14</sup> :			
Fuel Type:			
P.E. Hall heating details <sup>15</sup> :			
Fuel storage capacity <sup>16</sup> :			Litres
Type of Controls <sup>17</sup> :			
9. Lighting Services			
Design lighting level <sup>18</sup> :  Room / Space		Design Lighting Level Average l	ПX
TROOM / Space		Design Engineening Dever 11 verage 1	-

Total Connected Load:		
***	Percentage of total lighting	
High Frequency Fluorescents:	kW	
Compact Fluorescents: Low Pressure Sodium:	kW kW	
Other <sup>19</sup> :	kW	
Lighting Controls <sup>18</sup> :		
Room / Space	Lighting Control Type <sup>20</sup>	
Power:		
No. of general service outlets:		
Design general service load:	kW	
Total connected plant load:	kW	
List main items:		

#### **Energy Information Form – Notes:**

Please read these prior to completing the energy information form, if at Stage 4 the information contained in the completed Stage 3 form differs by greater than 10 % then this form should be resubmitted at Stage 4 with the differences highlighted.

- 1. Project type may be New School, Extension, Refurbishment or a combination of the latter two. Please be specific. Identify if school is a Primary or Post Primary School
- 2. Specify separately for new school, extension and refurbishment areas
- 3. The Design U Values required are the average U values for each element, taking account of any cold bridges etc
- 4. Surface areas: the value required is the total exposed external surface areas and not the nominal area of the various elements
- 5. Near horizontal may be taken as 45° or less
- 6. Aspect Ratio is the ratio of the total area of all enclosing elements of the building envelope (floor, walls, windows, roofs, etc.), to the ground floor area
- 7. Detail how the design has been developed in relation to the use of passive solar design
- 8. Give details of each value requested and name the room / space to which it applies.
- 9. Specify the room/ space and note equipment served if appropriate i.e. canopy etc. and detail flow rates in air changes per hour and m³/sec. Note P.E. Hall and changing rooms separately
- 10. Specify if an indirect hot water cylinder with an integral high recovery multi coil heat exchanger, a gas fired instantaneous hot water generator with minimum storage/buffer tank, electric water heaters or a hybrid of all three solutions. Identify P.E. Halls separately if appropriate
- 11. If applicable, identify P.E. Halls separately if appropriate
- 12. Identify P.E. Halls etc. separately if appropriate
- 13. Give details of boiler load make up, identifying hot water, variable temperature and constant temperature heating loads
- 14. Give details for each boiler and design safety margins
- 15. Give details of the type of heating to the P.E. Hall and ancillary areas including heat losses and heat generation plant sizes
- 16. If applicable, if mixed fuel types, specify each and identify the systems they serve.
- 17. Specify type of controls for the main plant and the distribution space heating, along with room controls where specified
- 18. List out for various room types i.e. General classrooms, Specialist rooms, P.E. Hall, Library, Corridors, toilets etc.
- 19. Specify type and area used
- 20. Specify type of lighting control i.e. manual, presence detection only, daylight sensing only, combined presence detection and daylight sensing