

# Sustainable Statement for extensions and alterations Michael Lumley associates – March 2024

This document concerns the installation of PV panels in the garden of a listed building -  
Glenbrook, Gretton Fields, GL54 5HH

## 1. Energy efficiency

Have you maximised opportunities for natural solar gain and natural ventilation and minimised overheating risk through passive design and attention to building location, orientation and form?	Yes	No	N/A
	X		
See detail of PV application			

Have you designed the fabric of the building to be ultra-low in energy demand, achieving KPIs for space heating demand (kWh/m <sup>2</sup> /yr) and energy use intensity (kWh/m <sup>2</sup> /yr)?	Yes	No	N/A
			X
Careful consideration has been given to optimise appropriate insulation to the listed building. The proposed improvements will be a very considerable improvement on the existing uninsulated structure. The garage is unheated.			

## 2. Low carbon heat

Will the building be fossil-fuel free with low-carbon heat source independent of the gas network?	Yes	No	N/A
	<input type="checkbox"/>	X	<input type="checkbox"/>
It is practical to heat this structure by means of solar power. A heat pump is not an option due to the heat lost through the general fabric and the impracticability of large radiators and/or underfloor heating.			

## 3. Renewable energy

Has the design and shape of the roof been optimised for maximum output of a photovoltaic array?	Yes	No	N/A
			X

Does the building achieve a net zero-operational carbon balance and deliver 100% of its entire predicted energy consumption using renewables on-site?	Yes	No	N/A
	<input type="checkbox"/>	x	<input type="checkbox"/>

#### 4. Water

For dwellings: have water-efficiency measures been incorporated and will fixtures and fittings be specified to achieve water consumption of <105 l/p/d?	Yes	No	N/A
		x	N/A
There are no proposals for water consumption reduction or storage.			

#### 5. Transport & Travel

Reduced travel:

Have you made provision for home working in residential buildings?	Yes	No	N/A
			x

Is shared mobility encouraged within your transport plans for non-domestic buildings?	Yes	No	N/A
	<input type="checkbox"/>		x

Active travel:

Have you enabled sustainable travel choices with connections for cycling, walking and public transport, providing cycle parking and facilities to levels that sufficiently meets the needs of building occupants irrespective of age or ability?	Yes	No	N/A
	<input type="checkbox"/>		N/A
NB: There is adequate room for bicycle storage on the site and in the outbuildings			

Low-carbon transport infrastructure:

Have you provided active charging infrastructure for electric vehicles, meeting standards and sufficient for the needs of building occupants?	Yes	No	N/A
		X	

**6. Prevention of Flooding**

Have you carried out a flood risk assessment to ensure your development avoids areas at high risk of flooding?	Yes	No	N/A
	<input type="checkbox"/>	<input type="checkbox"/>	X
There is no history of flooding to the site nor is there any history of run-off causing a problem. The existing gardens drain well.			

Have measures to reduce flood risk been included in your proposals and are these designed using nature-based solutions and methods of sustainable urban drainage?	Yes	No	N/A
	<input type="checkbox"/>	<input type="checkbox"/>	X

**7. Ecology and biodiversity**

Do you know what ecology and biodiversity are on your site and beyond it, and have you taken steps to both preserve what is already there and enhance ecological value in the future?	Yes	No	N/A
	X		
The site is well served by garden area. The biodiversity of the garden will not be affected by the installation in an area laid to grass			

**Embodied carbon**

Have you minimised embodied carbon in the design of the building and in the selection of materials for its construction?	Yes	No	N/A
		X	<input type="checkbox"/>

Do your assessments of embodied carbon meet LETI targets and take full account of all construction elements including substructure, superstructure, mechanical, electrical and plumbing, products and finishes?	Yes	No	N/A
	<input type="checkbox"/>	X	<input type="checkbox"/>
Not practical in the existing structure but all new work will comply fully with current building regulations.			

**8. Waste**

Do you provide adequate space, both inside and outside the building, for waste recycling and storage?	Yes	No	N/A
	X	<input type="checkbox"/>	<input type="checkbox"/>
Existing facilities will be maintained in accordance with the service offered by TBC			

Have you incorporated targets and site management processes to minimise water consumption through construction and minimise and recycle waste, reducing waste going to landfill?	Yes	No	N/A
	<input type="checkbox"/>		X

END