Sustainable Design & Construction Statement

11 Smithy Croft, Gargrave, North Yorkshire, BD23 3SL –

1. Introduction:

The proposed development has been designed to exceed the current environmental performance standards outlined in Part L1B of the Building Regulations 2010.

This project involves building a single storey extension to the rear of the property to provide an open plan kitchen/ living dining room with access to the garden. The proposal aims to achieve an overall improvement in regulated emissions, (Building Regulations Part L, through the introduction of insulation, increased performance in the new construction, more efficient heating system (if existing found to be below capacity) and low-energy natural ventilation.

2. Existing building:

11 Smithy Croft Gargrave is a two-storey terraced dwelling which is located on Smithy croft off Eshton Road. This row of houses have been constructed using pebbledash for the walls, the roof has been finished in natural stone slate.

The property has a good size driveway at the front with off-street parking for 2 cars, at the rear of the property there is a patio area which leads onto a garden.

The existing materials are pebble-dash elevations, natural stone slate pitched roof and white PVCu windows and doors.

3. Proposals:

Ground Floor Layout – Proposed single storey rear extension to the kitchen and dining room.

4. Planning Policy:

The site sits within Craven District Council.

Policies applicable:

Craven Local Plan Policies ENV3: Good Design, ENV8: Water Resources, Water Quality and Groundwater.

National Planning Policy Framework (NPPF)

5. Design Considerations

Development proposals should minimise carbon dioxide emission by using less energy, and supply energy efficiently. Water consumption to achieve a water efficiency target of 95 litres/person/day or less. Incorporate user friendly heating controls to ensure they are easy to understand and use and work effectively.

Use of energy efficient white goods, appliances and equipment - e.g. A-rated boiler. Buildings should be designed to use improved energy efficiency measures. This will reduce demand for heating, cooling, and lighting, and therefore reduce operational costs while also minimising associated carbon dioxide emissions.

6. Energy Saving Measures

The ground floor rooms will have natural ventilation in accordance with AD Part F; trickle ventilators, opening glazing and localised intermittent extract fans. The new single storey side extension will be construction traditionally and have PIR insulation within the floor, walls and roof. It is assumed that the existing gas central heating boiler will not be of sufficient capacity to adequately heat the existing and extended areas and provide hot water to additional appliances. If a new boiler is required in-line with current Building Regulations and Gas Safe standards and the system will be designed by a qualified Engineer.

The proposed extension fabric has been designed to incorporate insulation measures to exceed the u-values required by the Building Regulations:

(a) new wall construction to achieve U values of 0.20 or better.

(b) new roof structures will be insulated to a u-value of 0.12.

(c) the ground floor to the extension will achieve a minimum u value of 0.15.

(d) glazing for windows and doors will average U-Values of 1.4w/m2K or better.

(e) construction details will minimise heat loss via non-repeating thermal bridging by use of Accredited Construction Details.

(f) lighting and appliances will incorporate high efficiency light fittings utilising LED lamps with an efficacy at 85lm/w. The use of LED lighting will also minimise the internal gains associated with tungsten and fluorescent lighting systems. The residential spaces will have a 100% LED lighting installation.