Supporting Energy & Sustainability Statement

19th February 2020

Client: Mr Inderjit Garcha
Project: P183 – The Biddulph Arms, 171 Congleton Road, Biddulph, Staffordshire, ST8 6QJ

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1 INTRODUCTION

1.1 This energy and sustainability statement has been prepared by Epoch Architecture Ltd to support a full planning application for a proposed residential development at; The Biddulph Arms, 171 Congleton Road, Biddulph, Staffordshire, ST8 6QJ.

1.2 Planning permission is sought for the conversion of the existing public house into 9no. residential flats along with the conversion of the exiting outbuilding into 1no. dwelling.

1.3 The application consists of a series of supporting drawings and documents as follows;

Drawings;

Epoch Architecture	P183 – 200 Existing Lower Ground Floor Plan
	P183 – 201 Existing Ground Floor Plan
	P183 – 202 Existing First Floor Plan
	P183 – 203 Existing Second Floor Plan
	P183 – 204 Existing Elevations Sheet 1
	P183 – 205 Existing Elevations Sheet 2
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	P183 – 208 Coach House Existing Ground Floor Plan
	P183 – 209 Coach House Existing Elevations
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Documents;

Epoch Architecture	P183 – Supporting Design & Access Statement
Avalon Heritage	Supporting Heritage Statement
NLG Ecology	Ecology Report

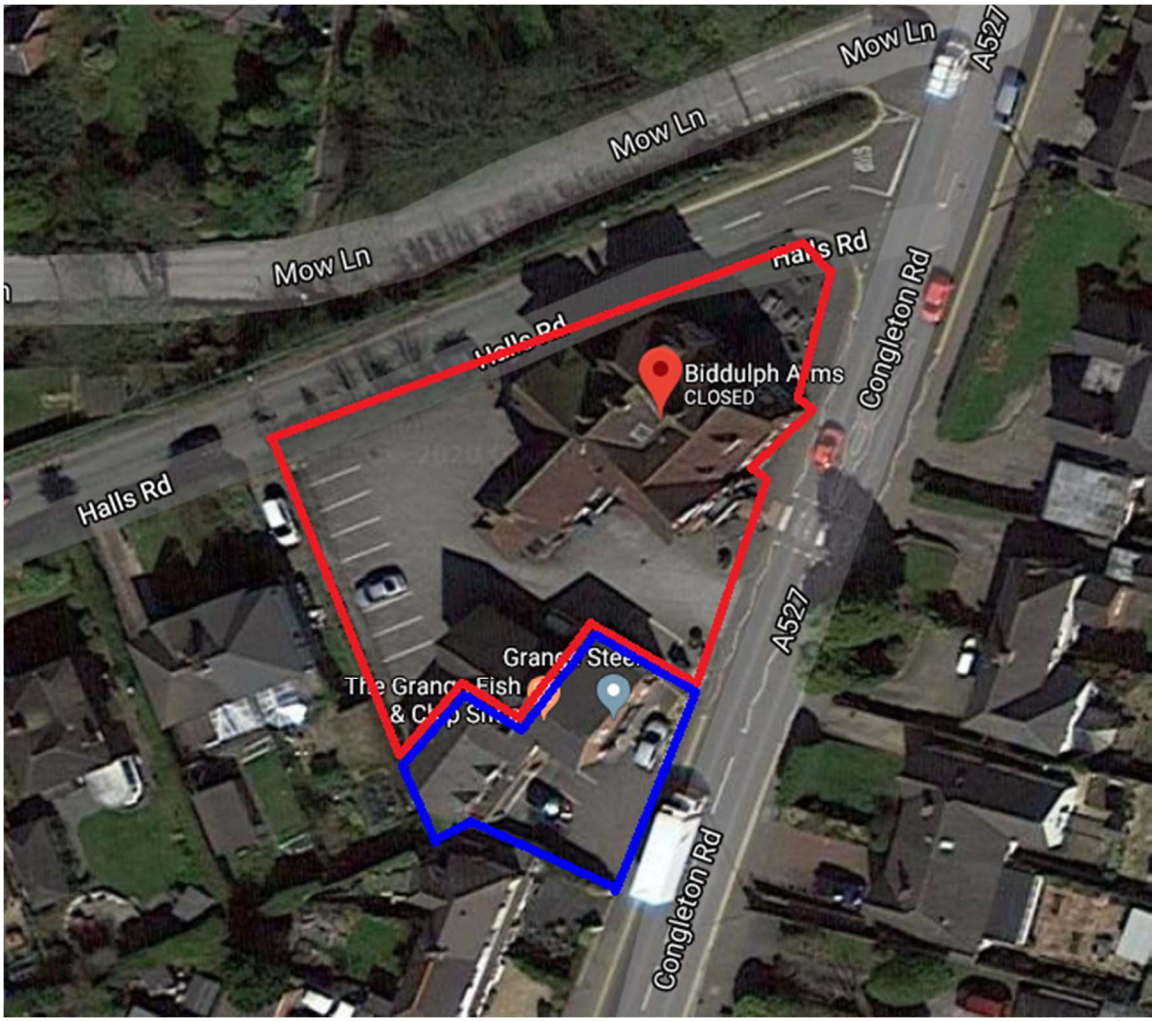

Image 1 – Application site edged red

2 ENERGY EFFICIENCY OF THE EXISTING BUILDING

2.1 The existing building construction dates back to circa. 1875 and it is evident that the building fabric is extremely in-efficient from a thermal perspective. There is no insulation present within the existing floor, wall or roof constructions and the existing windows are generally single glazed throughout.

2.2 The existing outbuilding having been used for storage purposes is again of the same construction and efficiency with no insulation present.

2.3 The existing buildings as a whole are extremely in-efficient when compared against modern requirements and have remained so since the original build date whilst operated as commercial premises and associated residential accommodation.

3 ENERGY EFFICIENCY OF THE PROPOSED BUILDING

3.1 It is proposed that the existing building shall be insulated in accordance with the current standards required by Approved Document L1B 2013. All properties shall take a fabric first approach to energy efficiency.

3.2 Under Approved Document L1B there is no requirement for the properties to be assessed using SAP software for energy efficiency. It is obvious however that the proposal to insulate the building to current building regulations requirements will make a significant improvement over the current buildings efficiency and CO2 emissions. The standards below taken from the approved document will be met;

Table 3 Upgrading retained thermal elements

Element[1]	(a) Threshold U-value W/(m²·K)[8]	(b) Improved U-value W/(m²·K)[8]
Wall – cavity insulation[2]	0.70	0.55
Wall – external or internal insulation[3]	0.70	0.30
Floor[4,5]	0.70	0.25
Pitched roof – insulation at ceiling level	0.35	0.16
Pitched roof – insulation between rafters[6]	0.35	0.18
Flat roof or roof with integral insulation[7]	0.35	0.18

1 'Roof' includes the roof parts of dormer windows and 'wall' includes the wall parts (cheeks) of dormer windows.

2 This applies only in the case of a wall suitable for the installation of cavity insulation. Where this is not the case, it should be treated as 'wall – external or internal insulation'.

3 A lesser provision may be appropriate where meeting such a standard would result in a reduction of more than 5% in the internal floor area of the room bounded by the wall.

4 The U-value of the floor of an extension can be calculated using the exposed perimeter and floor area of the whole enlarged building.

5 A lesser provision may be appropriate where meeting such a standard would create significant problems in relation to adjoining floor levels.

6 A lesser provision may be appropriate where meeting such a standard would create limitations on head room. In such cases, the depth of the insulation plus any required air gap should be at least to the depth of the rafters, and the thermal performance of the chosen insulant should be such as to achieve the best practicable U-value.

7 A lesser provision may be appropriate if there are particular problems associated with the load-bearing capacity of the frame or the upstand height.

8 Area-weighted average values.

Image 2 – Approved Doc. L1B U-value table for retained thermal elements

3.3 The proposed heating systems shall be individual boilers to each unit. It is not yet confirmed what fuel/energy source shall be used however gas or electric will be most likely with some form of combi-boiler/heating system with a min. 89.5% efficiency or higher if an electric system is used.

3.4 All new lighting within the units and communal circulation areas shall be low-energy in accordance with Approved Document L1B.

4 RENEWABLE TECHNOLOGIES

4.1 It is currently not part of these proposals to install any form of renewable technology.

4.2 A fabric first approach is to be adopted which shall provide an increased level of thermal efficiency to meet current building regulations requirements.

5 WATER CONSERVATION

5.1 Under current building regulations Approved Document G there is no requirement for existing buildings undergoing a ‘material change of use’ to meet stipulated water consumption targets. However dual flush toilets shall be provided throughout. Washbasin and shower fittings shall be provided shall be new and provided with either the ‘water efficient product label’ the ‘waterwise marque’ or the ‘energy saving recommended’ mark.

5.2 Approved Document G does place a requirement on material change of use projects to comply with requirements G1, G3(1 – 3), G4, G5 and G6 – which will be complied with.

6 FLOOD RISK AND DRAINAGE STRATEGY

6.1 A flood zone check has been completed on the governments website which confirms the site is in a ‘zone 1’ area and therefore has a low probability of flooding, having less than a 1 in 1000 annual probability of river of sea flooding.

6.2 It is not proposed to increase the amount of surface run-off from the site and therefore proposing no additional pressures on existing mains drainage systems. Unfortunately due to the extent of existing hardstanding across the site and lack of soft green landscape there is no opportunity to re-direct the run-off the natural ‘soakaway’ means.

7 COMMUNITY IMPACT

7.1 The applicant/developer has a team of local tradesmen from the Biddulph area that he has established through previous projects. The development of 10no. new dwellings shall therefore provide employment for local tradesmen/businesses as well as local businesses within the town throughout the construction phase and beyond once the units are occupied.

7.2 There is a shortage of good quality housing in the town of Biddulph and this proposal would provide a positive contribution to this shortfall. The proposal makes use of previously developed redundant and derelict land and buildings.

8 TRANSPORT TRAFFIC ASSESSMENT

8.1 Please see separate assessment prepared by Cameron Rose.

9 HEALTH AND WELLBEING

9.1 As confirmed previously the properties shall meet if not exceed current building regulations requirements for thermal insulation as proposed by the applicant. This shall provide a high level of thermal comfort for the future occupants.

9.2 Levels of natural ventilation and daylighting shall be in accordance with Approved Document F and BR 209 – Site layout planning for daylight and sunlight respectively.

10 ECOLOGICAL ASPECTS

10.1 A site survey has completed by NLG Ecology and accompany this application as a separate document.

11 CONCLUSION

11.1 The proposals contained within this document and associated drawings shall provide a considerable increase in the energy efficiency of the building.

11.2 Proposals are in place to ensure the impact on the local community is positive.

11.3 Proposals in respect of Ecology and transport are assessed in further accompanying documents.

11.4 Overall the proposal provides a positive impact on the environment and should be fully supported by the local authorities internal consultees.