

Our ref: DM/ls/160047

Development Management Section
Northumberland National Park Authority
Eastburn
South Park
Hexham
Northumberland
NE46 1BS

21 April 2017

Dear Sir or Madam



Tims Morris Ltd
la Meal Market
Hexham
Northumberland
NE46 1NF

Brown Rigg Lodges, Bellingham Application Ref No 16NP0118 – Discharge of Condition 16

It is noted that one of the core principles running through both the NPPF and NPA's Core Strategy is encouraging renewable energy measures to be incorporated into any approved scheme for development. The estate at Brown Rigg Lodges, however, presents a very unique set of circumstances. This is due to the nature and layout of the buildings; the relatively small size / volume of individual buildings distributed over a comparatively large site; the age and timber construction of the buildings together with the variable nature of the site occupancy etc and its geographical location. As a result it is considered that it would not be feasible / viable for renewable energy measures to be incorporated into the proposed works because:

1. The nature and construction of the estate would render ground source heating ineffective and prohibitively expensive. Effectively for a system such as this to work a small district heating system would be required. This would be entirely impractical and unrealistic to achieve. It would also result in a huge amount of disruption to the site as the engineering operations required would be very significant. Furthermore, ground source heat pumps work particularly well with underfloor heating but due to the construction of the buildings, this could not be achieved at Brown Rigg Lodges. The existing radiators and pipework etc which were designed to work with heat from a traditional boiler at around 85°C would also not work with heat from a ground source heat pump which is delivered at a much lower temperature (typically 45°C - 50°C).
2. Solar panels would not provide an effective or efficient source of heating / power because the nature of the occupancy i.e. demand and weather conditions are so widely variable and uncontrollable. Further, the timber construction and, in some cases, the orientation of the buildings would render them unsuitable for solar panels. Seeking to install panels remotely away from the buildings would massively increase installation costs and reduce efficiency. The combination of these issues means that in the current market solar power / heating would not be viable.

3. The alternative to ground source or solar power would be biomass. The arrangement and nature of the buildings on the site would, however, mean that a huge amount of expenditure and engineering infrastructure would be required to install and operate such a system. This would invariably result in major disruption of the site and would also be unrealistic, uneconomical and ineffective / inefficient due to the unique characteristics of the site and the extremely variable / short term fluctuations in heating requirements across the site.

Whilst these issues would currently render any significant renewable energy measures unfeasible and / or economically unviable, where possible measures have been incorporated into the works approved under Planning Application Ref: 16NP0118 and previous Planning Application Ref: 16NP0024, to help improve the energy efficiency of the site. These measures would include the following:

- The use of solar powered external lights as part of the proposed redevelopment of the site.
- Significant improvements to the thermal insulation and air leakage of existing buildings that are to be redeveloped.
- Significant upgrade and improvement to the electrical infrastructure that serves the buildings around the site as per previous planning approval 16NP0024. These works have helped to improve the efficient use and distribution of electricity throughout the site.
- The installation of modern, efficient LPG boilers into both the existing buildings and, in due course, into any buildings that are to be redeveloped.
- Bottled gas supplies that used to be used to heat various buildings around the site have been removed. This system was both energy inefficient and environmentally damaging relative to the centralised LPG tank and gas distribution infrastructure that has now been installed in accordance with the proposals approved under Planning Application Ref: 16NP0024. The centralised gas installation that now exists on site results in far fewer vehicle movements; more effective and efficient management of gas supply services; less pollution (both in terms of escaping gas and deliveries etc) and on the whole, offers significant energy and environmental benefits over to the original bottled gas arrangement that existed when Mr & Mrs Hunter first purchased the site in March 2016.

- One of the proposed hot tubs that were approved as part of the recent planning application (16NP0118) is to be heated by way of log burners and all timber will be locally sourced. (The second hot tub is to be a 'spa' hot tub and this will therefore need an electrical supply for it to function.)

I trust the information provided is sufficient to allow Condition 16 to be discharged but please advise if you have any queries or require anything further.

Yours sincerely



David Morris MRICS
Director