SUNDERLAND PEACOCK ARCHITECTS SURVEYORS

NOISE IMPACT ASSESMENT
IN CONNECTION WITH
BARN AT HIGHER BOYCE FARM,
RIBCHESTER

ON BEHALF OF

MR M. SELLS AND MISS M. HOWORTH,
HIGHER BOYCE FARM,
STONEYGATE LANE, RIBCHESTER, PR3 3YN

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CONTENTS

1.0 INTRODUCTION

This noise impact assessment has been produced on the behalf of Mr M. Sells and Miss. M. Howorth by Sunderland peacock and Associates Ltd in support of an application for prior approval for the proposed conversion of an existing barn building at Higher Boyce Farm, Stoneygate Lane, Ribchester, PR3 3YN. It will assist in determining if any potential noise risk will be posed to the development and its future inhabitants from potential sources of noise pollution from within the proposed dwellings and surrounding activities.

2.0 SITE LOCATION

The application site is located at Higher Boyce Farm, Stoneygate Lane, Ribchester, PR3 3YN. The farm is located to the north of the small village of Ribchester within the Ribble Valley in Lancashire. It is located on the west side of Stoneygate Lane and is access via a communal access road that is shares with a neighbouring property.

3.0 SITE CHARACTERISTICS

The sites last use was agricultural and its setting is rural. The application site is surrounded by a paddock, yard and a neighbouring property.

4.0 DEVELOPMENT PROPOSALS

The application to which this document relates is for the proposed conversion of an existing barn building into 1no. 4 bedroom dwelling and 1no. 3 bedroom dwelling as well as associated external works i.e. gardens and parking areas.

5.0 NOISE LEVELS

The table below shows the acceptable sound insulation values that will be allowable with regards the proposed barn conversion.

Table 0.1a Dwelling-houses and flats – performance standards for separating walls, separating floors, and stairs that have a separating function

	Airborne sound insulation sound insulation $D_{nT,w} + C_{tr}$ dB (Minimum values)	Impact sound insulation $L'_{nT,w}$ dB (Maximum values)
Purpose built dwelling-houses and flats		
Walls	45	-
Floors and stairs	45	62
Dwelling-houses and flats formed by material change of use		
Walls	43	-
Floors and stairs	43	64

Extract of Table 0.1a from Approved Document E: Resistance to the Passage of Sound from the Building Regulations 2010

Regarding the barn conversion, the detailed design will achieve the acceptable levels for walls and floors (inc. stairs) stated at 43 dB and 64 dB for impact noise.

6.0 NOISE IMPACTS OF THE DEVELOPMENT

The proposed use of the application building is for residential purposes. The main noise generating activities resulting from the propsoed change of use is noise from vehicles accessing the manouevering (entering / leaving) around the proposed development site (not expected to be significant – see detailed Transport, Travel and Parking Assessment, dated 24/09/2015, version 1.00) as well as the external acitivites of the occupants of the 2no. dwellings which is likely to be minimal / insignificant background noise.

7.0 NOISE REDUCTION

Noise from within the 2no. dwellings resulting from the subsequent conversion of the existing barn will be reduced through the following means.

- The existing external walls of the barn will already have good sound insulation qualities as they are of solid stone construction. However this will be improved further with the introduction of a blockwork lining in order to create a cavity wall. Cavity wall insulation, internal plasterboard lining and plaster skim will further contribute to this and compliance with the above table 0.1a will be met as part of any future building regulations application in order to comply with the requriements of the Building Regulations 2000 (Approved Document E).

- The Windows and doors will consist of double galzed units in order to reduce the escape of noise from within. The edges of the door and window systems will be sealed at the wall junctions in order to further reduce the escape of noise.
- The exsiting roof structure will be improved through the introduction of a minimum of 100mm of thermal insulation as well as an internal plasterboard lining and plaster skim finish which will further add to the existing sound insulation of the roof structure and covering, again to comply with modern building regulations requriements.
- The new intermediate floor structure will consist of timber floor josits with appropriate boarding to both the top and underside of the joists. The spaces between the joists will be filled with a minimum of 100mm thick insulation in order to reudce the passage of sound between the ground floor and first floor. Prevention of sound flanking / transfer from both airbourne and impact sound will be achieved by constructing detailed and robust details at wall and floor junctions.
- The 2no. proposed dwellings will be seperated with a new internal blockwork cavity wall in order to reduce the passage of sound between the dwellings, again to comply with modern building regulations requriements.