WDS LTD

WHINBARROW DESIGN SERVICES LIMITED
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Our Ref: WDS/05/6865/LETT001

24th February 2021

12 Croft Foot
Sandwith
Whitehaven
Cumbria

For The Attention of Mr Musson

RE: Structural Design Lintels to Gable Opening, 12 Croft Foot

Dear Sir

As requested I have designed the lintel over the proposed gable opening and note the following:-

1. We recommend that 3No 152 UC 30kg/m grade S355 steel beams are inserted over the opening. Each beam should be given 150mm end bearing with 500x215x100mm deep concrete padstones at each end. The beams will need fixed together using M10 threaded bar at 450mm lateral centres complete with spacer tubes.
2. The design assumes the beam will have a maximum clear span of 3000mm.
3. The steels should be galvanised.
4. As stepped damp will need inserted in the wall over the lintel location.
5. The existing structures will need fully packed up off the new beams to ensure full load transfer prior to removing any temporary propping. Temporary propping should be provided to support a wall load of 3.0Te per metre.

I have attached a copy of our calculations for submission to Building Control however we suggest you use the above specification for the works on site.

I hope you find the above acceptable however should you have any queries please do not hesitate to contact me.

Yours Faithfully

[redacted]

Mr Tom Short B. Eng. (Hons), C. Eng., MICE
For WDS Limited
Enc

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STRUCTURAL CALCULATIONS

FOR

PROPOSED GABLE WALL DOOR LINTEL REQUIREMENT

AT

12 CROFT FOOT
SANDWITH
WHITEHAVEN

FOR

MR & MRS MUSSON

MOD A FEB 2021

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Project	12 Croft Foot Sandwith	Job No. 05-6865
Ref	Calculations By: T. Short / Checked By:	Calc sheet No. 1 of
Gable Lintols		Date: Feb 21

Ref	Calculations

Loading

Roof D 1.1 kN/m
L 0.75 kN

Ceiling 0.7 kN
L 0.25 kN

Wall . 0.55 × 2.5 × 20 = 27.5 kN

Lintol. Span 3.0m.

Roof D = 3 × 1.1 = 3.3
L 3 × 0.75 = 2.25

C D = 0.7 × 3 = 2.1
L 0.25 × 3 = 0.75

Wall = 27.5

TD = 33 ∴ ult 51 kN 3 beam
L = 3.0 ∴ ult/b = 1/2 = 26.5 kN

∴ BM = 33 kNm Le = 3.0 I nil wL

R = 57 × 3.1/2 = 80 kN

Blue Book: UKC 3 No 152 UC 30 (S275)