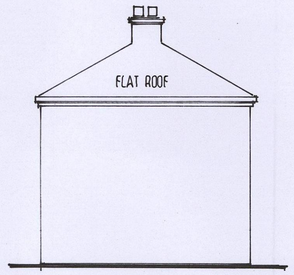
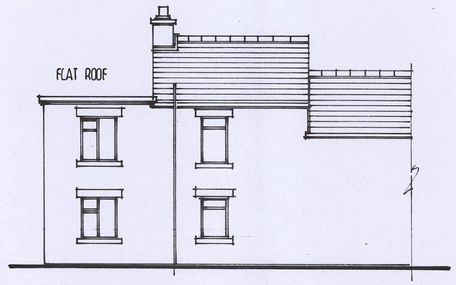


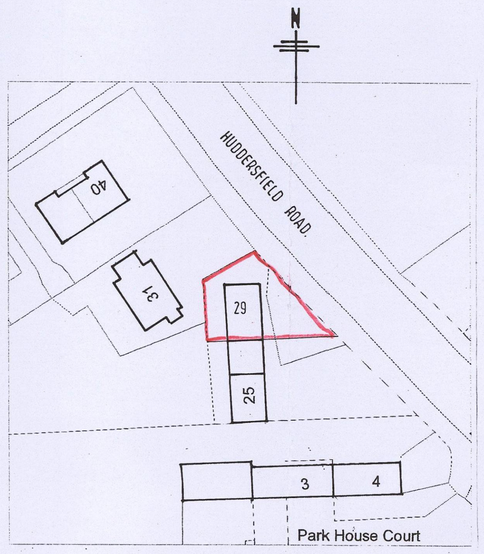
FRONT ELEVATION EXISTING



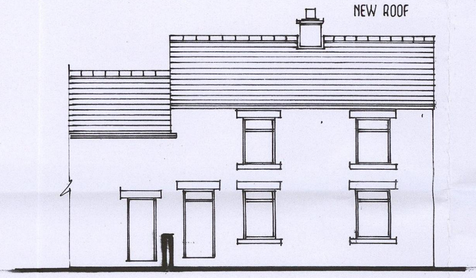
SIDE ELEVATION EXISTING



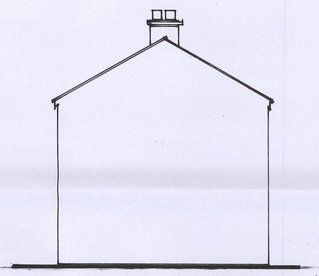
REAR ELEVATION EXISTING



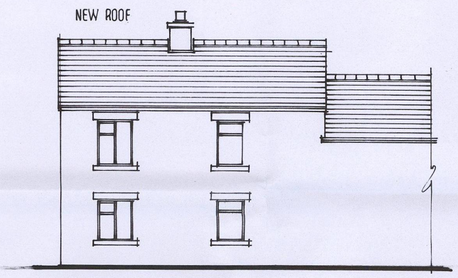
LOCATION PLAN 1:500



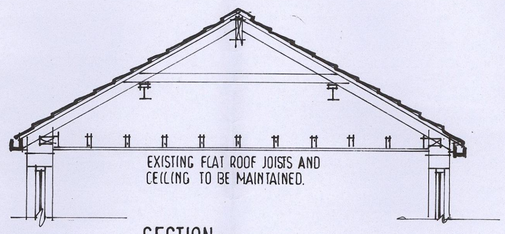
FRONT ELEVATION PROPOSED



SIDE ELEVATION PROPOSED



REAR ELEVATION PROPOSED.



SECTION
1:50

ROOF CONSTRUCTION. ROOF PITCH TO MATCH EXISTING

NEW PITCHED ROOF TO REPLACE EXISTING FLAT ROOF.
VENTILATED RIDGE TILES AND CONTINUOUS EAVES VENTILATION.
RECONSTITUTED STONE TILES TO MATCH EXISTING - ON SOFTWOOD TANALISED ROOFING
BATTENS TO SUIT - ON UNDERLAYABLE FELT TO B.S. 747. LAPPED INTO GUTTERS.
ON. 125 X 50 S/W RAFTERS AND COLLARS @ 400MM CENTRES. - TAKEN OUTO
100 X 75 S/W WALLPLATE, ANCHORED DOWN WITH M.S. ANCHORS.
200 X 38MM S/W RIDGE BOARD
STEEL PURLINS WITH 100 X 75 S/W SECTION TO TOP FLANGE
MIN 270MM INSULATION TO ROOF VOID.

CALCULATION FOR STEEL PURLIN

SPAN 3·2m
LOADING - ROOF. STONE TILES/RAFTERS/COLLARS - 1·5 KN/m² } TOTAL 2·25 KN/m².
LIFTER - 0·75 KN/m².
SELF WEIGHT. 0·3 KN/m × 3·2m.
ROOF 3·2 × 2·0m × 2·25 KN/m² = 14·4 KN
SELF WEIGHT 0·3 × 3·2 = 0·96 "
TOTAL LOAD W = 15·36 KN/m.

$M = W/8 = \frac{15·36 \times 3·2}{8} = 6·1$ KNm

$C_{cy} = \frac{3·2 \times 10^3}{3·05 \times f_c} < 104$ $f_c = 21·5$ $P_{bc} = 163$ N/mm².

$Z_{req} = M/P_{bc} = \frac{6·1 \times 10^3 \times 10^4}{163 \times 10^4} = 37·4$ cm³ (278 × 5cm ∴ OK)

$\delta = 5/384 \cdot \frac{Wl^3}{EI} = \frac{5 \times 15·36 \times 10^3 \times 3·2^3 \times 10^{15}}{384 \times 207 \times 10^3 \times 2880 \times 10^4}$

$= \frac{2516 \times 10^5}{2289 \times 10^5} = 1·09$mm (< 8·5mm ∴ OK)

∴ USE 203 × 133 × 30 KG UB. GRADE 43 STEEL, BOLT IN AT ENDS. TO PROVIDE TORSIONAL RESTRAINT & SUPPORTED ON 150MM CONCRETE PADSTONES.

WALL CONSTRUCTION.

NATURAL COURSED STONE OUTER LEAF TO MATCH EXISTING. - BUILT UP OFF EXISTING CAVITY WALL. EXISTING CAVITY MAINTAINED WITH 50MM KINGSPAN THERMAWALL RIGID INSULATION WITH ISOLIN PLASTERBOARD INNER BLOCKWORK.
STAINLESS STEEL DOUBLE TWIST WALL TIES 5 PER M² - 750MM HORIZONTALLY AND 450MM VERTICALLY.

Do not scale
REVISIONS

No	2014 : 22	

job	
title	NEW PITCHED ROOF TO PART OF EXISTING BUILDING TO REPLACE EXISTING FLAT ROOF
scale 1:100	FEB 2014 date

29 HUDDERSFIELD ROAD.
INGBIRCHWORTH
S 36 7GF

H.M.C.G. CORPORATE MAIL ROOM 03 MAY 2014 Received by ORIGINAL COPY

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