

# STEVE HOLD CONSULTING CIVIL ENGINEERING



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## Removal of a Partition Wall at St. Andrews Llandaff.

Dear Matthew,

This is a brief "letter style" report to cover my site assessment on the 15th December 2023 of the structural implications of removing the partition wall between the kitchen and the dining room at St. Andrews, Llandaff as indicated in my sketch SK/1.

### 1.0 Load Paths.

It can be seen that the span of the ceiling joists are parallel to the top of the masonry partition wall in Fig 3. This means that the load from the lath and plaster ceiling is not bearing on this wall and no replacement support beam will be required as the load paths are not changing.

### 2.0 Structural Configuration.

The single pitch roof structure above the kitchen and dining room is approximately at a 30 degree pitch and as you informed me , recently in (around 2010) been re-roofed. This can be seen by the new felt above the rafters and several new rafters either replaced or cut and spliced into the existing timbers. As I said during my inspection that the two large purlins that span the length of the roof provide the main load bearing capability of the roof and despite their length (more than would be designed for today) are in good condition. Figs 1 - 3.

The lath and plaster ceiling arrangement however does require structural consideration to check that the bearing support is sufficient at the external wall where the ceiling has been given an increased pitch from the horizontal beneath the 30 degree pitch of the roof above to more like 45 degrees and is currently obscured and therefore needs to be investigated. Figs 4 and 6. This is because some of the ceiling joists have also been replaced or cut and spliced and the joists spanning onto the external wall have been "notched out" around the lower purlin close to the wall and this may have weakened them. The replacement timbers indicate that either rot or wood worm were found during the roof replacement and could be replaced in the visible accessed areas but these defects may still be present behind the obscured 45 degree pitch ceiling. The evidence of the new timbers that were needed is shown in Fig 2.

I also noted that the rafter trimming the loft hatch had not been replaced but had both rot and wood worm locally so this timber should also be replaced. This provides an opportunity to enlarge the loft hatch access to provide better access to the space above.

### 3.0 Removal of the Partition Wall.

The fragility of the lath and plaster ceiling requires care when removing the masonry between the two ceiling joists at ceiling level and thought needs to be given to the making good of this strip of ceiling. Fig 3.

### 4.0 Conclusion.

My conclusions are that this partition wall can be removed but that some masonry is left in place at either end of the wall to provide additional ceiling support as shown in SK/1.

Should you require more advice please do not hesitate to contact me.

Yours sincerely,  
Steve Hold .

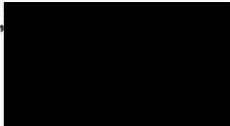




FIG 1. 30° PITCH ROOF, 2 PURLINS, REPLACED RAFTERS





FIG 2. PRIMARY SUPPORT PURLINS 'BUILT IN' REPLACED RAFTERS

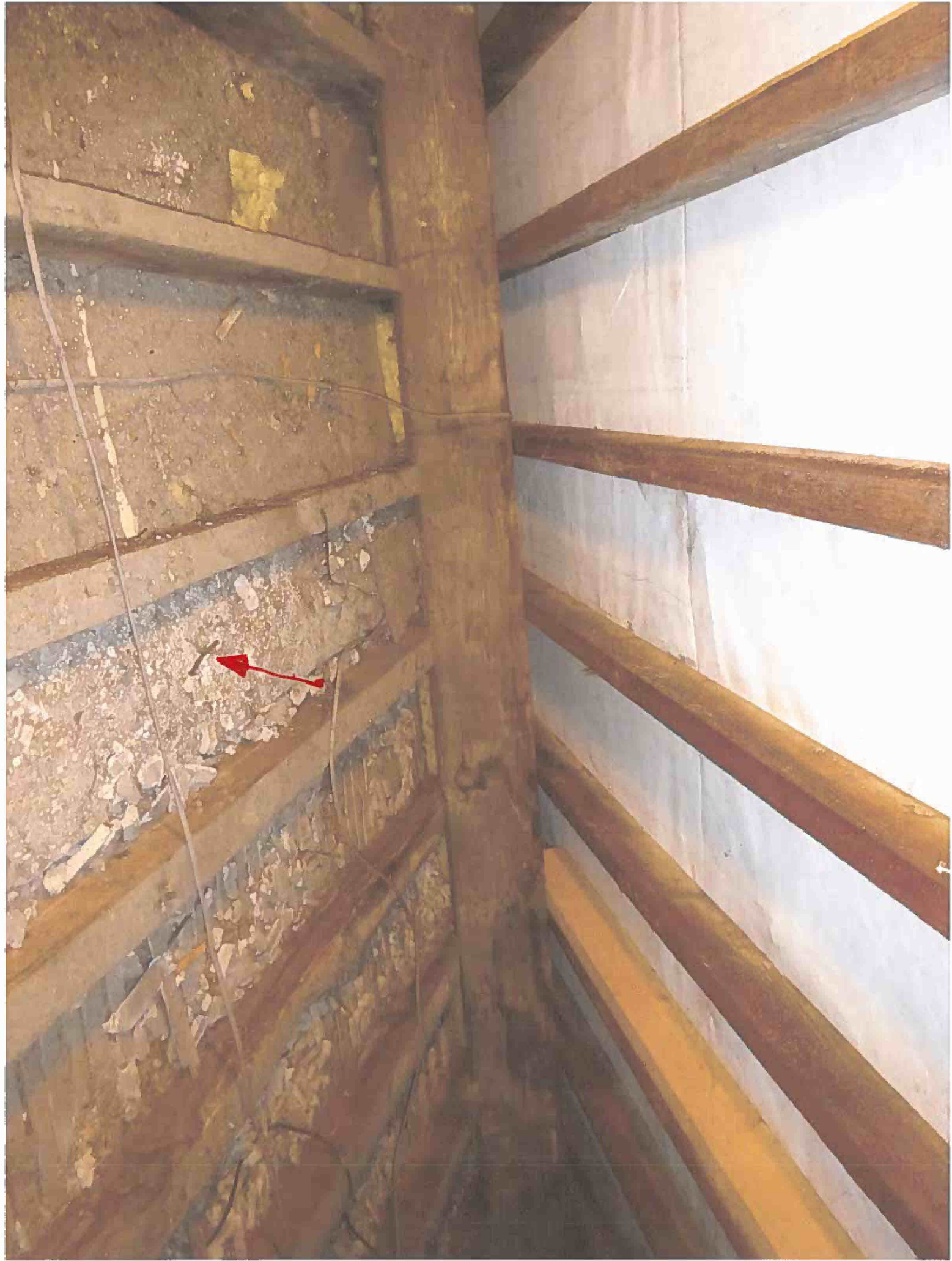


FIG 3. LOCATION OF WALL TO BE REMOVED, NEW ROOF FELT



FIG. 4. DOOR OPENING AND HATCH TO WALL, CHANGE OF CEILING





FIG 5. DOOR OPENING AND HATCH IN WALL TO BE REMOVED



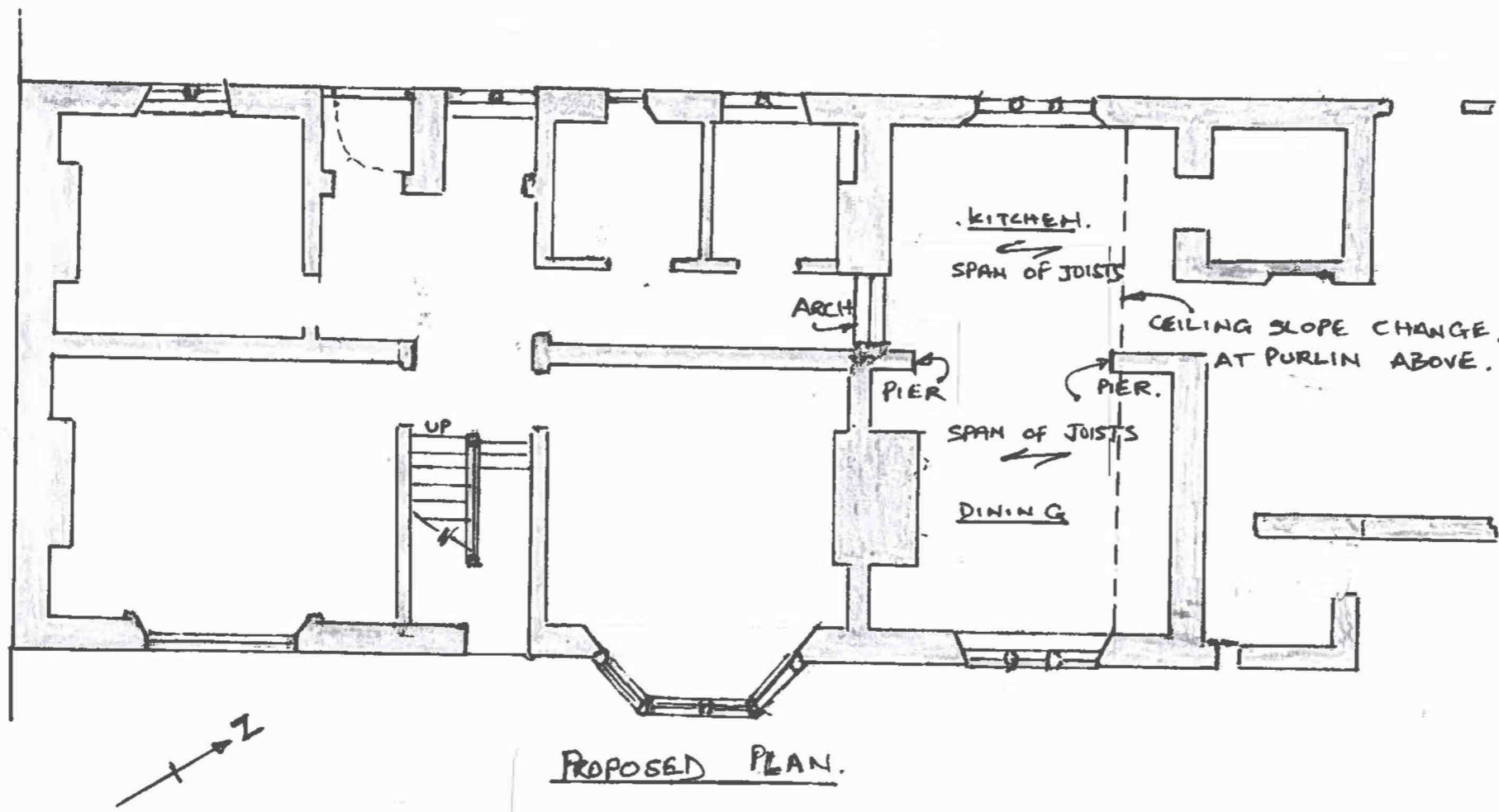
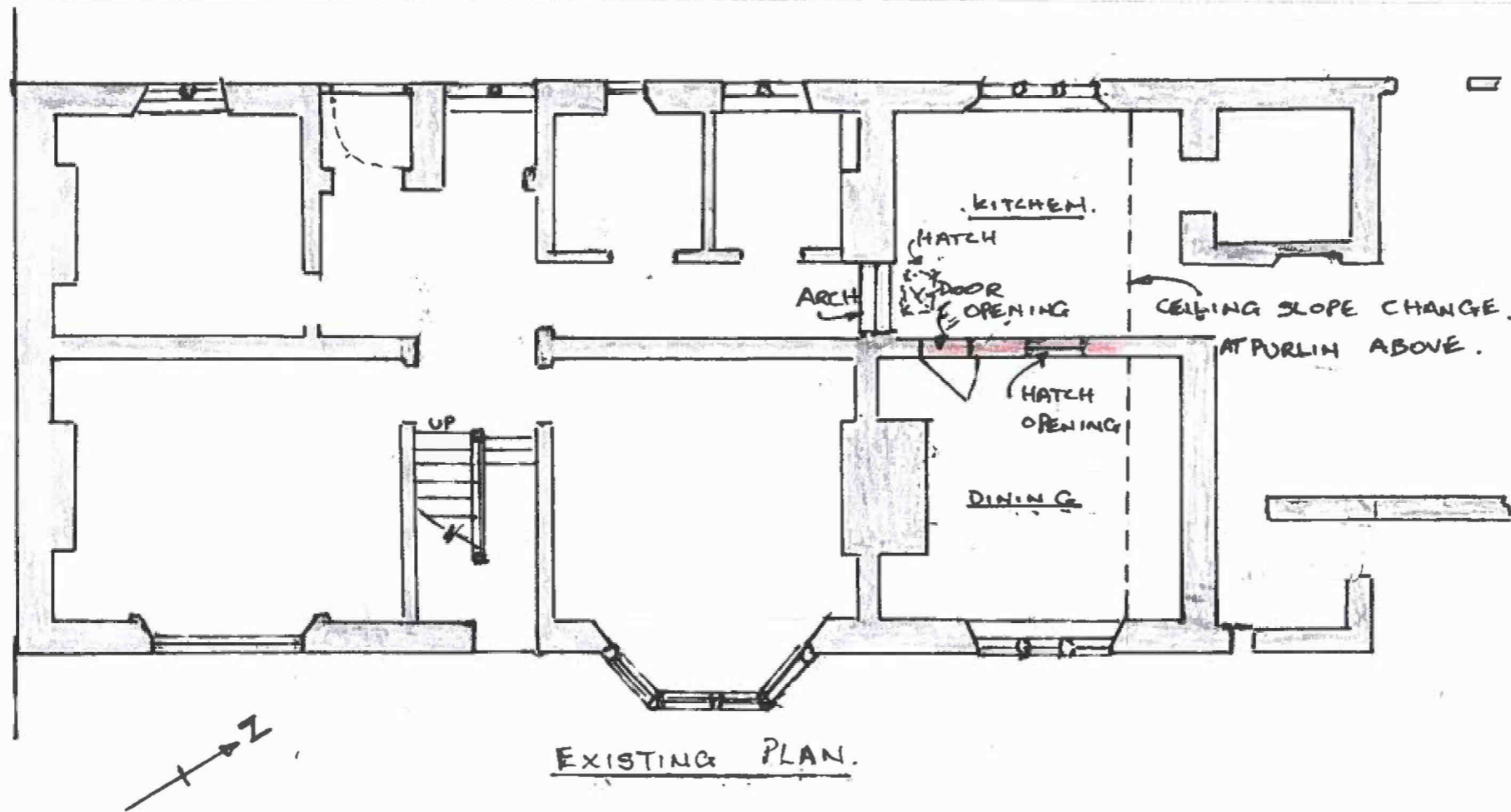
FIG. 6. DINING ROOM WINDOW ON SOUTH WALL





FIG. 7. DINING ROOM WINDOW ON SOUTH ELEVATION.





Revision	Date	Description
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<p>CLIENT  <b>MATTHEW SKUSE</b>                      2 THE AVENUE                      LLANDAFF,                      CARDIFF CF5 2LQ</p>		
<p>PROJECT TITLE  <b>REMOVAL OF PARTITION WALL IN ST. ANDREWS, LLANDAFF</b></p>		
<p>DRAWING TITLE  <b>LOCATION AND ILLUSTRATION OF PARTITION WALL,</b></p>		
SCALE	1:100	DATE 20.12.23
DESIGNED BY	SK	CHECKED
<p>15/12/23 SK/1</p>		