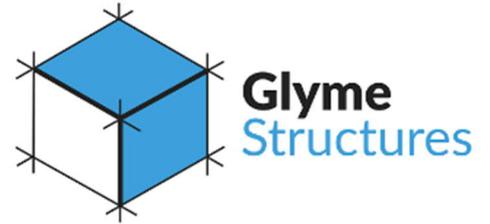


# Technical note



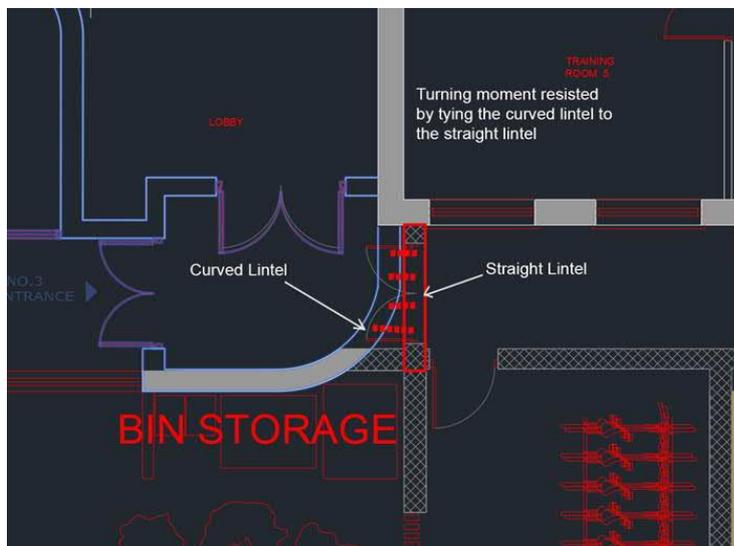
Project	1-3 Cambridge Terrace, Oxford
Date	12 February 2021
Subject	Framing of new openings at ground floor

## 1. Introduction

This note has been prepared, in advance of a detailed survey, to advise on the feasibility of forming a new opening between adjacent buildings that are to be linked as part of the proposed works.

Glyme Structures has previously carried out a survey on 1 Cambridge Terrace (the smaller of the two units on the site). 2&3 Cambridge Terrace are different floors of the same building, which forms the other building unit.

## 2. Layout



The image shows the junction of 2&3 Cambridge Terrace (3CT) (left) with 1CT (right). The hatched linework indicates a proposed new, single storey masonry wall that will form a linking corridor.

Figure 1 Ground floor plan at junction of 1 and 3 CT

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### 3. Structure

The survey noted in the introduction established that 1CT is a concrete frame structure, with a central core and perimeter columns.

From a brief walk around survey of the ground floor of 3CT, and perusal of the plans, it is clear that 3CT is also a concrete frame building.

It is not known at present what forms the structure of the curved wall in Figure 1. It has a brickwork facing. It must provide support to landings at first and second floors.

It is likely that the underlying structure is one of the following:

- a) Brick facing on a reinforced concrete backing wall.
- b) Cavity wall construction. If this is the case, the inner leaf would likely be in brick also, to achieve the necessary curvature.

Before any opening is formed, some opening-up will be required to establish which of these two options (or some other system) is the actual structure.

### 4. Structural solution for opening

If there is a concrete backing wall, it should be straightforward to form an opening.

Given the layout, it is clear that the load in the backing wall would be small relative to the capacity of the RC wall, and an opening could be cored through the wall. The facing masonry can be supported on a curved shelf-angle (there are numerous proprietary solutions for this type of solution, eg by Ancon).

If the wall is cavity wall construction, a curved lintel will be required to support both leaves above the opening, and the torsional resistance of this configuration can't be depended on. In this case, torsion can be accommodated by restraining the curved lintel against the wall of the blockwork forming the new corridor at ground floor, along the lines indicated by the architect in Figure 1.

### 5. Conclusion

It is clear that there is a practical solution for forming an opening in the curved wall at ground floor.

The precise solution depends on the actual structure of the wall. This can be determined by opening-up, which can be carried out after the start of the works, when this won't cause disruption to businesses on site.

ENDS