

Reference: 1060-ACS-XX-XX-T-S-DN02	Project: 35 King's Street				
	Title: Method Statement			Project: 1060	
	Prepared by: BF	Date: 20.11.2024	Checked By: CO	Page: 1	Revision: P02

INTRODUCTION

Acies have been instructed to provide structural strengthening to the existing Reinforced concrete slab approximately 7m x 4m at ground floor, first floor and roof levels at No. 35 King Street. The slab has visible cracking, and there are several large cracks at the corners of the openings suggesting the slab has yielded around the openings cut in the slab due to the concentration of load transfer. Providing infill concrete along with additional steelwork will redistribute the loads as per its original design intention with added support for the slab where it has reduced strength due to the yielding impact. Acies has designed 203x203x46UC and 152x152x30UC beams, shortening the existing span and providing additional support. The steel beams will be fixed between townhouse wall and existing RC edge beam.

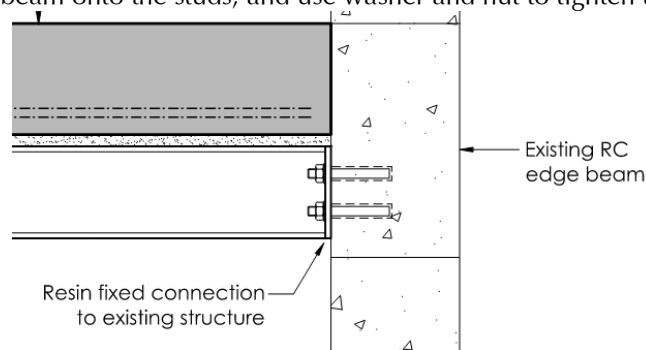
The Town House is a Grade II listed building, which recently has been approved for redevelopment converting the number of retail units within its previous demise. Acies has been requested to provide a methodology statement, supporting the steelwork design decisions, to be read in conjunction with the design drawings provided – 1060-ACIES-XX-01-D-S-1101_C02, 1060-ACIES-XX-01-D-S-1102_C02, and 1060-ACIES-XX-01-D-S-2400_C02.

METHOD STATEMENT

To avoid construction of additional supports, such as columns and associated foundations, Acies designed new steelwork to be tied to existing structure. The new 203x203x46UKC beams are to span between the existing RC edge beam and Townhouse masonry wall, with additional 152x152x30UKC beams provided as secondary/tie structure.

Fixing to existing beam

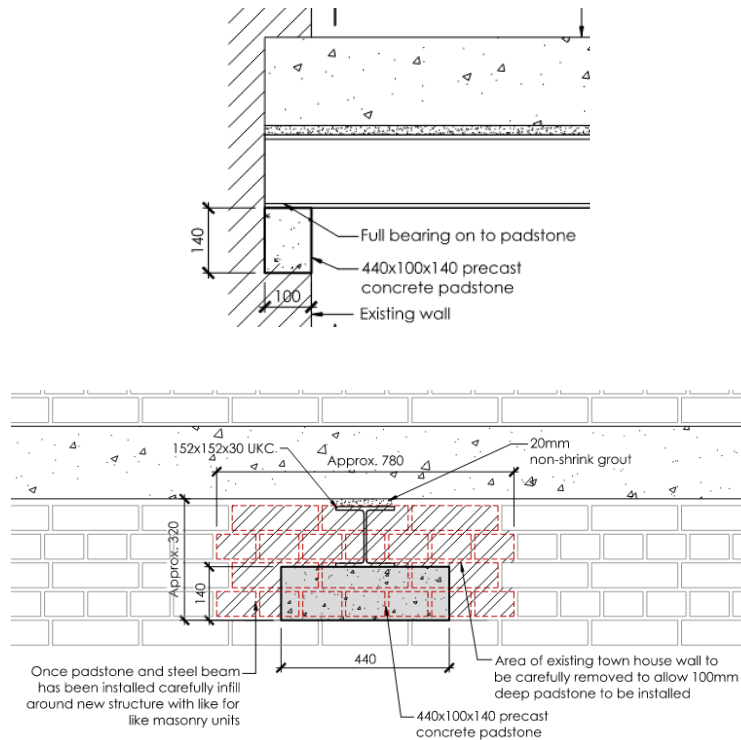
The steel beams are to be resin fixed to the existing RC edge beam, as show below. Set out the holes locations for connections, pre-drill the holes to required depth, use duster to blow dust out of the pre-drilled holes, fill the hole with resin, insert the stainless steel studs and wait for the resin to set. Following this, slot the pre-drilled beam onto the studs, and use washer and nut to tighten the beam onto the studs.



Fixing to townhouse wall.

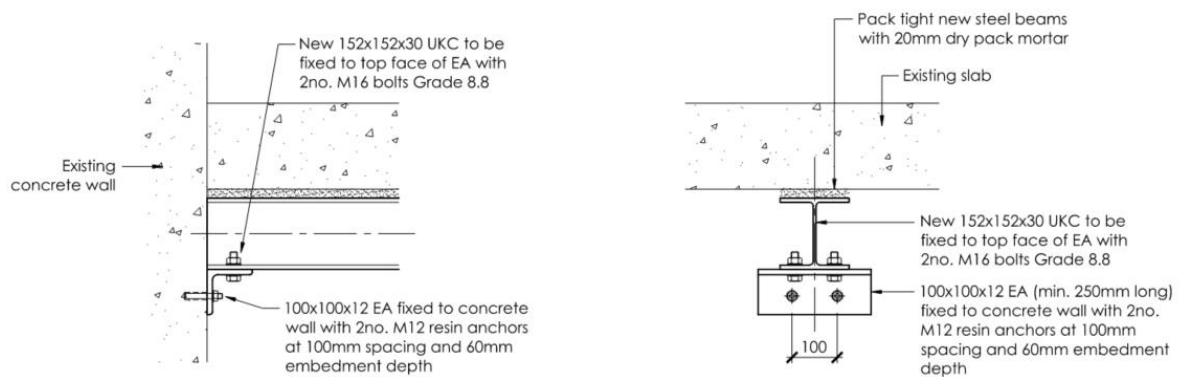
For the connection to the wall, the area of existing town house wall, below existing concrete beam (approx. 780mm x 320mm) to be carefully removed to allow a steel beam and 440mmx140mmx 100mm deep padstone for the beam support to be installed. The gap between the new steel beam and existing concrete beam to be filled with 20mm non-shrink grout. Once the padstone and steel beam have been installed carefully infill the gap around new structure with like for like masonry units.

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Steel-to-existing concrete wall connection

New 100x100x12 EA to be bolted to existing townhouse basement concrete wall with 2no. M12 resin anchors at 100mm spacing. Drill the holes and fit the resin anchors into the wall, slot and fit new 10x100x12 EA onto resin anchor positions. New 152x152x30UKC beams to be bolted to new 100x100x12 EA with 2no. M16 bolts Grade 8.8. Drill the holes and fit the bolts into the holes. Slot the beam onto the bolts and use washer and nut to tighten. Once installed, the gap between the new steel beam and existing concrete slab to be filled with 20mm non-shrink grout.



Section View

Elevation View

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