

 T J Booth Associates. tjba Consulting Engineers 20A Eastgate St, Rochdale OL16 1DH	Project garside / radcliffe rd. golcar				Job Ref.	
	Section				Sheet no./rev. 1 / p0	
	Calc. by dz	Date 09/03/2020	Chk'd by	Date	App'd by	Date

History.

Revision	Date	Reason
0	Mar 20	Original

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Design Statement

BACKGROUND

The proposal is a New residential development. Principle design of lower ground, middle and ground floor accessed from Radcliffe Rd.

New residential development. Principle design of lower ground, middle and ground floor accessed from Radcliffe Rd.

The site surface slopes from North to South and East to West. To the West of the site manhole gave access to the pc culverted waterway approximately 4.2m bgl.

Trial holes were excavated in several areas see tjba SI report 160919.

Top soils and MADE GROUND were found over med dense Silty SANDS to varying depths of 1m to 2m with occasional stone and boulder over medium Dense gravelly shaley firm SILT/vf SAND this stratification slopes respectively N to S and E to W within the footprint of the two plots. It would be reasonable to assume this follows the bank of the historic stream waterway which was eventually culverted.

The lower ground floor is proposed to be situated within the shale strata to the East of the site and due to the falls of the shale the Westerly plot will be in MD silt/sand at lower ground floor level.

Therefore foundations solution to be nominal 600mm wide mass concrete trench fill strip foundations to the easterly plot stepped to suit and rc ground beams on percussion driven steel cased piles at ngt 2000mm crs to the Westerly plot. The roadside elavation and gable returns to be retaining structure with cavity filled masonry stem and the base to be part of the slab arrangement at lower ground floor level.

EXISTING RETAINING WALL

Assessment of existing retaining wall in respect of removal of parapet section to form opening to property entrance and the bearing of proposed pcc units and finishes from car park area at ground floor level adjacent radcliffe road.

Existing masonry retaining wall constuted of random stone walling and infill tapering from assumed base width of approximately 1750mm to 500mm at the top. The parapet section is approximately 900mm above ootpath level at the roadside.where the wall thickness is approximately 750mm.

The car park area is to comprise 215mm pcc units with nominal 75mm finishes spanning ngt 2550mm.

By calculation it is seen that the stonework outweighs the proposed dead and live loads associated with the car park slab.

Therefore the existing wall will not be compromised by the proposed design it will be enhanced.

The proposed car park loading will not increase loading on the base.

The abutting walls will butress the existing wall and any loads will dissapate through the wall linearly with insignifant difference.

FOUNDATIONS

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The foundations to the front walls of the proposed properties are to be reinforced concrete walls with a base which will form part of the lower ground floor slab. This has been incorporated so as to raise the base level such that the excavation will not adversely effect the idealised 45 degree surcharge line from the base of the existing retaining wall.

Also as an additional precaution the contractor will pile the Western section of the plot through reduced level formation at approximately slab level. The foundations will then be excavated around these to depth in 3m long sections and cast rc works in stages with lapping rebars to adjacent sections.

This will thereby ensure that the existing bank slope will be maintained until next section is required to be excavated.

EXISTING DRAINAGE

Immediately adjacent the base of the Existing retaining wall to radcliffe rd is an existing combined 150 dia VC drainage pipe running East to West. This is to remain and be buit over. Discussions with YW may be required.

However the proposal is to pile and beam over the pile and bear the end wall foundation between the building and the retaining wall on the new property thereby not surcharging onto the drain pipe.

Also these end walls close off the area between the road and the proposed building therefore access is to be provided to this area via doorsets in each wall or the purpose of remedial works to the drain if necessary.

