

Our Ref: B22621-JNP-XX-XX-CO-Z-0001/JAW/cl

Chkd: jawood

Date: 22 August 2019

Graham Tunnicliffe
Cleckheaton Construction
Crossland House
Bank Street
Wakefield Road
Liversedge
WF15 6BJ

Dear Mr Tunnicliffe

Re: Unit 24, Flush Mills, Heckmondwike

Further to your instructions I made a joint inspection on the boundary wall with yourselves on the 08 August 2019. The purpose of my inspection was to assist in the discharging of condition 12, which states: -

1. A method statement indicating how the wall will be demolished, to the height indicated on the information plan.
2. How the structural integrity of the wall will be ensured both during and following demolition works.
3. The proposed finished treatment of the wall.

To assist in our assessment of the wall and identify the location of the wall three drawings have been provided by Martin Walsh Architectural. Drawing 003P1 is a site survey undertaken by Holden Surveys Ltd, reproduced on Martin Walsh Architectural drawing header. The wall is the east boundary to the existing units 23 and 26. The wall continues forward of unit 23 to the south side for approximately 12m.

Drawing 001E shows the proposed units 24 and 25 with the boundary wall offset approximately 1.5m from the east wall of the proposed units. Drawing 0004E shows the elevations of the proposed units with the existing brick boundary wall shown on the eastern elevation. This gives the heights of the wall above the existing structural slab level of 67.14m. The proposed slab level for the new units is 66.54m indicating that approximately 600mm of ground is to be removed. It is assumed that the ground to the west of the boundary wall and between the boundary wall and proposed unit 25 is to remain at the same level. The proposed plans show leading up to the fire escape due to the existing ground remaining at the same level.

An inspection was made along the entire length of the wall. A spirit level check showed the wall to be vertical throughout its length. The wall is constructed of bricks and mortar of reasonable strength.

The pointing is in generally good condition and areas of re pointing were noted in bands approximately 6 bricks apart, above the level of the wall that is to remain. As there are bands of repointing it is possible that masonry reinforcement has been installed in the wall to provide some additional strength. However, this is above the height of wall which is to remain.

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South section of the boundary Wall

The south boundary wall has two piers which are approximately 5.7m. These piers will have to be reduced in size to allow for a fire exit route between the boundary wall and existing building. The wall is to the rear of numbers 8 and 9 Barbers Square and photographs of the wall are shown on plates 1 to 3 appended. The wall is approximately 3.55m high, where it meets the front corner of the building, see plate 4. The ground in front of the building slopes gently away towards the south and the wall is approximately 4.45m at its highest point. Having discussed the wall with the owner of No.8 Barbers Square, he would be pleased to see the wall reduced by approximately 6 brick courses to allow additional day light to the properties. He has also requested, to improve appearance, that the concrete leading edge to be removed. This is the remains of a previous building. To reducing the height of the wall the coping stones should be re fitted. The pier depths are to be reduced to approximately 500mm to allow for a fire escape route around the building.

Boundary wall to the two buildings

Unit 23 is split into two sections separated by a blockwork internal fire wall shown on plate 6. The southern section of this building is shown on plates 5 to 9 and the northern section is shown on plates 10 and 11. The floor slab internally is at the same along the wall.

Construction of the wall appears to be consistent within unit 23, 380mm thick, with spacing between brick piers of approximately 8.2m maximum.

Unit 23 has a series of pitched trusses running perpendicular to the wall, presumably supported upon steel columns within the larger masonry piers. There is a steel beam with the top flange at approximately 4.1m above the slab level running along the entire length of the wall and it is assumed that these beams are fixed into the steel columns within the piers. These steel beams are not seen externally as there is a brick skin covering the side of the beam. The wall below the beam is approximately 380mm thick and above the beam approximately 230mm thick.

The proposals call for the taking down of the masonry to the top level of the steel beam providing coping stones at this level, so that the wall appears as brickwork when viewed externally. Steel beams will act to provide wind stability to the wall and transfer loads to the steel columns within the piers. However, for the purpose of calculations produced by JNP group, any strength from these beams and columns has been ignored as we do not have information on the connection details of both the beams to the columns and the columns to the foundations.

The ground on the east side of the wall rises towards the north and the ground level externally is a maximum of 2m above the internal existing slab level. The wall acts as a retaining structure. No trial pit information is available; therefore, we are not aware if the wall increases in thickness below ground level. The structural calculations have assumed the wall remains at 380mm thick below ground level.

Calculations

Calculations have been produced presuming a maximum height of wall, 4.1m (top of steel beam). The calculations show that additional piers will be required, to provide the stability. The existing and proposed wall details are shown on JNP groups drawings 2001 and 2002 appended. Calculations for the stability of the wall are also appended.

Method statement

Under the CDM Regulations the demolition contractor should provide a method statement as part of his Health and Safety Pre-Construction File for the taking down of the existing building. Demolition process should be undertaken, unless agreed otherwise, by hand in the reverse to the construction process. This will mean: -

1. Removing the roof coverings.

2. Taking down the masonry walls completely or to the agreed final height along the east boundary.
3. Removal of the steelwork, one bay at a time leaving the columns along the east boundary wall. Existing or temporary bracing to be in place during this process.
4. Once the roof trusses have been removed the east columns above 4.1m will have to be cut or unbolted from the steel ring beam.
5. Trial pits will be required along the boundary wall to determine the depth of existing foundations and depth to good ground to allow final detailing of the foundations for the brick piers.
6. Excavation for the new slab level should not be undertaken until such time as all the foundations and piers for the boundary wall have been put in place.
7. A concrete slab should be in place to provide further buttressing of the wall at the existing current slab level.

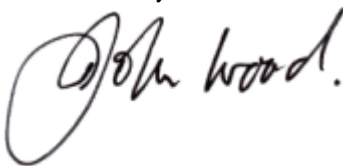
Finishes

Most of the wall has a relatively clean brick finish and no treatment will be required to this part of the wall. The steel beam should be given further corrosion protection before coping stones are fitted. To the rear two bays (behind the blockwork fire wall) the yellow paint on the wall should be removed. Any areas of repointing should be identified once the brickwork is clean.

Conclusion

The brickwork to the existing boundary wall is in good condition showing no signs of significant deterioration. The wall is vertical and there are no cracks. There is damp staining noted to the rear section of the wall at lower level due to the wall acting as a retaining structure. We recommend that drainage holes are drilled through the wall at 1.5m centres to prevent water build up behind the wall. The wall should be taken down to approximately 4.1m, which lines up with the existing steel ring beam, the ring beam left in place to provide additional stability. Piers are required as shown on JNP groups drawings to provide additional stiffness to ensure the long-term stability of the wall. The ground level in front of the wall should remain the same and this should be incorporated in the final details. Trial pits will be required to allow the concrete pads to the new piers to be detailed.

Yours Sincerely

A handwritten signature in black ink, appearing to read 'John Wood'.

J A Wood



Plate 1-External wall



Plate 2-External wall

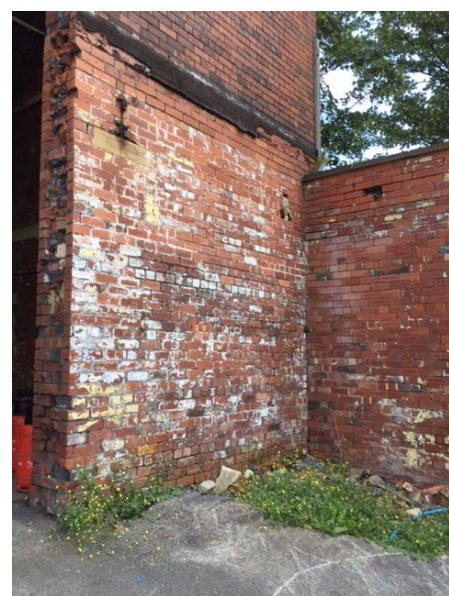


Plate 3-Front corner of the building



Plate 4-Front corner

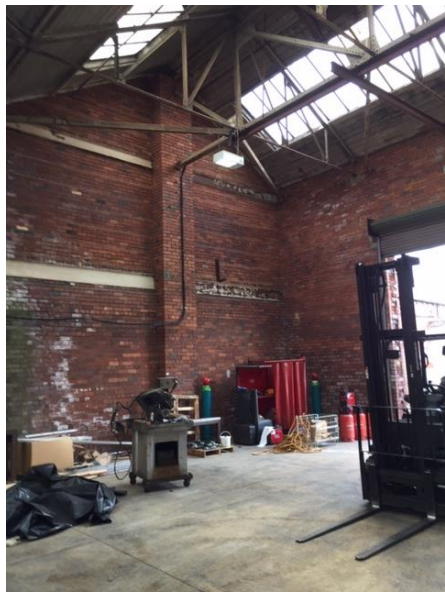


Plate 5-Internal wall towards the front



Plate 6-Internal wall looking to the back.



Plate 7-Internal wall looking to the front.



Plate 8-Wall close to blockwork partition



Plate 9



Plate 10-Rear corner



Plate 11- Wall continues to rear of blockwork separating wall