

05th September 2021

200120-C2C -XX-XX-LTR-S-02A

SJ & JA Beech
8 Woodland Ave,
Nantwich,
Cheshire
CW5 6JE

Re: Structural assessment of safe construction of dwelling at land off Meadow View, Well Lane, Gillow Heath, Biddulph

Dear Sirs,

C2C Consulting Engineers Ltd were appointed by SJ & JA Beech to carry out a structural appraisal of the proposed construction of the new dwelling at land adjacent to Meadow View, Well Lane, Gillow Heath, Biddulph. Specifically, we were requested to review the proposed construction of the basement along the site boundary to ensure the structural integrity of the neighbour's property is protected.

Our engineer visited the site on Tuesday the 13th July 2021 to carry out this inspection.

The inspection comprised a brief general visual inspection of the exposed accessible surfaces and areas along the boundary adjacent to 19 Well Lane. Two trial hole excavations were made along the boundary elevation, one to the front and one to the rear of the property to provide an understanding of both the existing support arrangement and the ground conditions at this depth. We have not examined internal areas, foundations, various surfaces and other parts of the building structure and fabric concealed or covered at the time of our inspection. The survey was limited to external boundary wall between 19 Well Lane and the proposed new dwelling adjacent Meadow View, We have not consulted with the Local Authority or other statutory bodies and we would report as follows.

Following the recent site inspections and trial pit investigations of the foundations to the boundary elevation at 19 Well Lane, Gillow Heath, Biddulph, we have now had chance to review the potential issues as a consequence of the construction of the proposed dwelling at Land off Meadow view, which is directly adjacent.

The proposed new dwelling is a three storey building with part basement, located approximately 2.5m from the perimeter wall of no. 19 Well Lane.

The trial pits indicated the side elevation supported off a 300mm thick concrete foundation founded at a depth of approximately 600mm below the external ground levels of no.19. It would appear that the adjacent 215mm blockwork retaining wall situated 100mm beyond the side elevation is integrated and located off the same foundation. The ground conditions at this level are of a firm sandy clay nature and was heavily waterlogged.

The proposed underside of basement slab is calculated to be approximately 1500mm below the soffit of the foundations to the combined retaining wall/side elevation.

It has been demonstrated with a dimensioned drawing that the proposed basement structure is unlikely to undermine the adjacent property as the basement construction does not intersect the theoretical 45 degree line of influence. However, the excavations required to provide a safe working space during the build process could potentially undermine the neighbouring property. It is therefore considered that a specialist form of temporary works such as sheet piling will be required along the side elevation to ensure the adjacent property is not undermined during the construction works.

A temporary sheet piled retention system will limit the size of the excavation required along the boundary and guarantee that the adjacent property is not compromised as a result of the potential disturbance and instability of the supporting ground.

In conclusion, we would state that for the safe construction of the proposed basement in both its temporary state, during the build sequence and its permanent condition following completion, a suitably designed temporary sheet piled wall is installed by an experienced piling operative.

The temporary support structure will be designed to ensure the structural stability of the property at 19 Well Lane is not compromised and the new dwelling can be constructed without resulting in any adverse structural affects.

We trust the above helps clarify your concerns regarding the proposed new dwelling, however, should you have any queries in conjunction with the above please do not hesitate to contact us further.

Yours Sincerely



Tim Wright
Associate Director
BEng.(Hons) IEng AMIStructE
For and on behalf of C2C Consulting Engineers Ltd