

CLIENT: Baxter & King
PROJECT: Blyth Road, Hayes
WALDECK REF: 13-2079
DATE: Vibration Report



Report on Vibration Levels to Blyth Road Residents

The Proposed Development

The proposed development at Blyth road consists of three blocks of differing height, varying from a 4 storey tower through to an 11 storey tower. The ground floor is predominately parking, bin stores and plant rooms; however along the Blyth road elevation it is being proposed to construct a commercial unit and a row of domestic apartments.

There is an active rail line behind the proposed development. This report will review the impact of vibration from the rail line onto the proposed structure.

The domestic and commercial areas of the ground floor are approximately 50m away from the existing rail line

Structural Form

With the exception of the top floor levels to Block A & B (see attached layout), the frame is to be constructed with in-situ concrete. The mass of the concrete frame will provide resistance to any vibration forces that may come through the ground.

The structural frame is to be supported with CFA piles of 450-600 diameter. The piles will be installed to a depth of at least 20m.

Suspended slabs are to be adopted throughout the ground floor level to all internal spaces.

Impact on Structure due to Vibration

It is considered that any vibration on the structure due to the adjacent rail line would be minimal. The deep concrete pile solution along with suspended slabs would prevent any direct transfer through the ground.

Vibration at upper floor levels is unlikely to be an issue due to the large mass of the proposed concrete frame.

Should vibration levels require monitoring a specialist consultant would need to be appointed to carry out the works.