

**Buckhurst Hill Baptist Church - Notes relating to TPO 2: Silver Birch Tree**

TPO2 Silver Birch was shown retained on the planning drawings and the technical drawings in the hopes of being able to keep it. The tree, together with others in a narrow soft planting strip, softens the new and existing building frontage along Palmerston Road and adds to the street scene. The idea of removing the tree was discussed at length with the tree officer prior to planning consent being granted but the officer's view was expressed that we should try to retain it if at all possible.

Although it is not an ideal tree for its setting, it has moderate water take-up, minimising the effect on the foundations of the building and other structures in the vicinity, produces a relatively small amount of leaf litter and has a high, light canopy allowing natural light to fall on the ground below. The disadvantage is the high pollen drop which is a problem for children suffering from hay fever and Asthma and the ease at which it self seeds.

The tree is leaning toward the road by approximately 4 deg. and has been slowly increasing over the past 3 years. This tree, along with the others is in the narrow planted strip about 1.1m wide along Palmerston Road. It is approximately 300mm above the footpath level and increases as the road falls to the east. This strip has no retaining structure apart from a timber fence.

The roots were exposed by hand digging and shown to be very close to the tarmac surface and along the line of both ground beams from the corner of the proposed building to the east and south. There may be other roots much deeper down but we were reluctant to explore these further in case the stability of the tree was compromised.

*Please see attached foundation drawing with root positions marked in red*

The proposed foundation design was a system of piles and ground beams which ensure that tree roots are free to continue to grow without being restricted or causing structural damage. Because the roots are so close to the surface the ground beams which are 600mm wide and 450mm deep would be below. The problem occurs because they are on the same line as the ground beams.

When the tree roots conflict became apparent the structural engineer explored several alternative foundation designs the only possible solution of which is attached, although it has significant other construction problems associated with it. This idea lifts the ground beam up as high as possible (above the buildings internal finished floor level) allowing the roots to remain intact below. Because this type of foundation does not bear on the ground the roots are free to develop naturally. This does give rise to a number of knock on problems; the exposed section of foundation encroaches on the ramp reducing its width to below Building Regulations minimum and below an acceptable standard. This ramp is also designed for mothers with buggies who will use it every day to get into the building. Another significant problem is the inability to weather seal the joint between the foundations and the wall of the building and preventing a cold bridge through the concrete to the inside.

One 100mm root also runs along the line of the proposed wheelchair ramp leading up from the footpath of Palmerston Road to the proposed entrance. The level of the ramp rises from west to east and would require this root to be cut because the starting point is at street level below the root. Alternative positions for the ramp were considered but a ramp rising in the opposite direction, from east to west would have to be considerably longer to comply with the Building Regulations (about 3 times longer) because of the gradient of Palmerston Road.

For the reasons outlined above we are asking you to allow it to be removed. We realise that this is disappointing and goes against the earlier pre planning consultations with your officer but we trust by providing semi-mature trees to replace the lost silver birch it will be acceptable.

The consequences of deferring the decision to remove the tree would be a *delay to the contract* which would cost in the order of £3500 per four weeks, which the church could not sustain as they would not have funds to complete the project in spite of the contingency sum allocated to unknown site issues. This figure was provided by the church's Quantity Surveyor. This figure would be owed to contractor to compensate for "Loss & Expense" due to delays and disruption caused by not allowing them to proceed with the works. The decision to refuse removal of the tree would probably result in the project being abandoned. In addition to the above costs the church would have to pay the contractor for other losses due to the materials and items purchased and stored off site i.e. the steel frame and the laminated timber frames.

**Christopher Mathews**

For & On Behalf of

**Mathews Serjeant Architects**