

In reply please send to: Newcastle District Office
Our reference: FN01-12004L0
Your reference: Building Application

Mr Wade Morris
SNL Building Constructions P/L
PO BOX 4222
EDGEWORTH NSW 2285

Dear Mr Morris

**FN01-12004L0—TBA14-28604L1—LOT 1 DP 436503 NO 142, 144 146 DUDLEY 2 & 4
KOPA STREET, WHITEBRIDGE—MULTI-DWELLING HOUSING DEVELOPMENT**

At their meeting on 27 May 2015 the Members of the Mine Subsidence Board discussed your request for an amendment to Condition 6 as outlined in the Board's letter to you dated 9 December 2014. The Board Members agreed to an amendment as shown in Condition 6 listed below. The conditions applicable to the approval of the development are as follows:

1. Submit a final "*Mine Subsidence Impact Statement*" prior to commencement of detailed design for acceptance by the Board, which incorporates the draft version (reference Forum Engineer's letter dated 26 June 2014) and subsequent amendments.
2. Submit a final design incorporating the design methodology contained in the final "*Mine Subsidence Impact Statement*", for acceptance by the Board prior to commencement of construction. This shall include certification by a qualified structural engineer to the effect that the improvements will remain "*safe, serviceable and any damage from mine subsidence will be slight, localised and readily repairable*" taking into consideration the mine subsidence parameters;
 - a) Maximum vertical subsidence: 650 mm.
 - b) Maximum ground strain: $\pm 4\text{mm/m}$.
 - c) Maximum radius of curvature: 7km.
 - d) Maximum tilt: 6mm/m.
3. The Structural, Civil, and Hydraulic, Engineers provide certification that the design is in accordance with Australia Codes including the Building Code and relevant Standards, with an allowance for mine subsidence parameters, over and above the minimum code requirements.
4. The final design shall;
 - a) Be developed from the concept design accompanying the Building Application dated 19th June 2014
 - b) Where permitted under the relevant Building Codes and Standards, reduce the likelihood of cracking in the basement structures by designing the reinforced concrete for a allowable reinforcing bar stress less than 60% of the yield strength, in lieu of the AS 3600 code provision of 80%.



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- c) Where practicable include design mitigation measures to reduce the transfer of horizontal strain, such as;
 - Void filler or equivalent on the vertical surfaces of buried structures.
 - HD polyethylene sheeting, sand bedding or equivalent on the horizontal surfaces of buried structures.
 - Slip joints between any piers and foundation footings.
 - d) Include design measures to adjust building levels for mine subsidence tilt, such as floor screw jacks or equivalent.
 - e) Where practicable include an additional grade for tilt due to mine subsidence, in excess of the minimum Code requirements for drainage structures including pipes, gutters and wet areas.
 - f) Where practicable include mine subsidence design measures for underground pipes or conduits. This may necessitate flexible joints, flexible bedding surround and flexible building connections and penetrations.
 - g) Where practicable reduce the effective length of building structures by designing independent modules less than 30m long that eliminate the transfer of horizontal strain and curvature between modules.
 - h) Locate all underground pipes or conduits to facilitate ease of repair and replacement. For example services under the building are to be minimised or otherwise routed to the nearest building perimeter line.
 - i) Ensure internal finishes are installed in accordance with relevant codes and standards and industry best practice guidelines with additional provision for mine subsidence.
 - j) Ensure there is suitable provision for articulation jointing in building elements. All control joints including articulation for mine subsidence are to be shown on the design plans and elevations,
 - k) Ensure there is provision for isolation joints between adjoining structures. For example between a building and adjacent paving.
 - l) Ensure roads, driveways and pavement areas are designed as flexible structures with an asphalt surface course and unbound base and sub base. If a concrete surface course is required, it shall be designed so any damage is slight classification and include expansion and crack control joints or sacrificial sections.
5. On completion, certification by a qualified structural engineer is to be forwarded to the Board, that all improvements have been constructed in compliance with plans approved by the Board under this development application with supporting documentation.
6. The Commercial/Residential Structure on Dudley Road shall be as depicted in the plans (Smith & Tzannes 14_026 DA-A-102); ie. Predominantly 3 storeys + basement with the exception of a 4th storey + basement on the western edge. The continuous length of the basement shall be no greater than 65m long and is to be constructed in accordance with the engineering design principles submitted.
7. All Residential Structures shall;
- Make provision for screw jacks to enable future adjustment for tilt due to mine subsidence.
 - Use light weight frame and cladding in lieu of brick veneer.
8. All Residential Structures shall be constructed on a raft slab or equivalent in lieu of reinforced concrete strip footings.

Approval is current for two (2) years from 9 December 2014.

If you have any queries concerning this matter please contact the acting District Manager Ian Bullen or myself on (02) 4908 4300.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Greg Cole-Clark', with a stylized flourish at the end.

Greg Cole-Clark
Chief Executive Officer

19 June 2015