

5 March 2012

**CRONULLA SHARKS DEVELOPMENT, 461 CAPTAIN COOK DRIVE, WOOLLOOWARE, NSW
(MP 10_0229)
EFFECTS OF ELECTROMAGNETIC RADIATION (EMR) FROM 132KV TRANSMISSION LINES
ON THE HEALTH OF FUTURE OCCUPANTS OF PROPOSED RESIDENTIAL, COMMERCIAL
AND RETAIL DEVELOPMENT.**

Response to Sutherland Shire Council's Comments.

Comment "... it is considered that the electric field calculations contained in the consultant report do not accurately reflect likely exposure. It is recommended that the proponent undertake electric field exposure modelling at the closest, unshielded exposure point and at a point that includes a person standing on an unshielded balcony at the same elevation as the power line."

Response In the report the electric field profile was presented in graphical form at 1m above the ground. This is the standard form of presentation for the electric field across the power line easement. The power frequency electric field as distinct to the power frequency magnetic field is greatly influenced, i.e. distorted and shielded, by all materials including non-electrically conductive materials such as wood, glass, plaster board, brick, stone, trees, shrubs, etc. Therefore, calculating the electric field in free space and extending the results to the case where a person is standing on a balcony of a building adjacent to the power line would be grossly inaccurate. The actual electric field at the position of that person would be much smaller than the calculated electric field in free space. Never the less, we've calculated the electric field profiles in free space at different heights above the ground. The results are presented in graphical form in Fig.1 below.

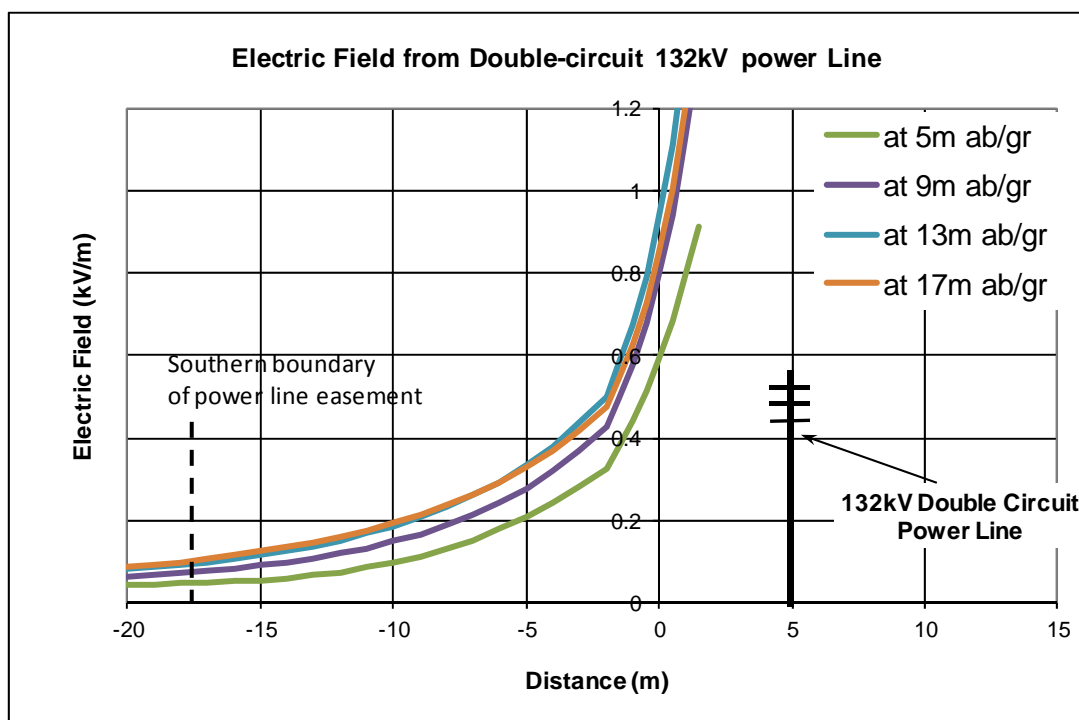


Fig.1 Electric field profiles at various distances above ground

As can be seen from the graphs in Fig.1 the undisturbed in free air electric field in the area outside the power line easement at heights from 5m to 16m above ground is less than 100V/m. This is considerably less (50 times less) than the allowable exposure limit of 5,000 V/m for the general public (see the table in Section 3.2 of our original report). Taking into consideration also the shielding effectiveness of the building structure and the balcony balustrade, the electric field on the balcony facing the power line easement would be much smaller than the calculated undisturbed electric field in free air.



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