

Policy and Procedure: Survey Accuracy Standards – Angular and Linear Closures

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Owner Ministry of Justice - Controller of Surveys	Manual Surveys	Last Revision
Policy Name Accuracy Standards Angular and Linear Closures	Effective Date May 31, 2006	Revised Date
Policy Statement: <p>For new surveys consisting of the surveyor's own work, the minimum accuracy standard expressed, as a misclosure must be 1:5000. When very short sites or small closures are involved, the minimum accuracy standard expressed as a misclosure must be the greater of 1:5000 or a distance of 0.02 metres.</p> <p>The maximum angular misclosure, within a surveyor's own work, shall be 10 seconds times the square root of the number of angles measured (n) in the traverse ($10\sqrt{n}$). In situations involving a parcel with a large number of angles, a smaller angular misclosure may be required to meet the 1:5000 ratio requirement.</p> <p>Examples: a parcel/traverse with 4 angles: $10 \times \sqrt{4} = 10 \times 2 = 20$ second allowable non-closure a parcel/traverse with 8 angles: $10 \times \sqrt{8} = 10 \times 2.828 = 28$ second allowable non-closure</p> <p>The standard of accuracy, when closing on other surveys, as set out in The Land Surveys Regulations is dependent on the year of the survey of the plan that is being compared to and is as follows:</p> <ul style="list-style-type: none">• For a survey performed in 1950 or earlier, the accuracy factor is 1:1500• For a survey performed between 1951 and 1975, the accuracy factor is 1:2500• For a survey performed in 1976 or later, the accuracy factor is 1:5000.		
Purpose: <p>Although nothing has changed as far as the standard of accuracy as set out in The Land Surveys Regulations goes, we have never had anything specific to angular closures. In the past it has been an internal policy that all parcels must close out angularly. This does not seem practical in situations involving a large number of angles or where subdivisions with multiple lots are concerned since adjusting one angle usually affects the angular closure in the adjacent lot. This policy was created to allow some minor angular non-closures where it is difficult to make adjustments without affecting the closures of adjacent parcels.</p>		
Linked Policies: Sections 29 & 31 of <i>The Land Surveys Regulations</i>		
Approved By: Controller of Surveys		Date: May 31, 2006