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The Municipal Manager  
Knysna Municipality  
P O Box 21  
KNYSNA  
6570

For attention: Mr Hennie Smit

3 September 2018

Dear Sir

**ERF 5395 KNYSNA : 'THE PROPERTY'**  
**REPORT : SURVEY OF THE HEIGHT OF THE BUILDING AND THE DETERMINATION**  
**OF NATURAL GROUND LEVEL**

**1 METHODOLOGY**

Heights were surveyed on the northern, eastern, southern and western side of the building located on the property. The height of the roof of the building was surveyed at 9 places on the roof.

The above heights are shown in red on plan 699KN1A.DRG.

The datum used for the survey was an arbitrary datum based on the point marked BM with an adopted height of 50m.

On the south western side of the building is an exposed rockface. This rockface was also surveyed.

In order to determine the natural ground levels the following assumptions were made -

- A) With the original construction of Finkelstein Crescent, that the shoulder of the excavation on the southern side of the road has been accepted as the natural ground level of the land . This level coincides with the existing change in the slope of the land from the road level to the lower parts of the property.
- B) That the land falls in a southerly direction at a reasonably constant slope from the shoulder towards the rock face and from the shoulder southwards along the eastern side of the building.

The southern side of the property has scattered loose rock underfoot and is difficult to access for survey purposes.

The roof of the building comprises 4 sections that have been investigated for compliance with the zoning scheme regulation.



- a) The western roof has on the northern side a height of 53,77 metres and on the southern side a height of 54,29.
- b) The eastern main roof of the building has a height of 53,57 metres on its southern side and on the northern side heights of 54,09, 55,60 and 56,27 metres.

To determine the height of the building relative to the ground levels cross sections were prepared at A-A, B-B and C-C which show the roof heights in relation to the natural ground heights.(see plans 699KN1A.DRG and 699KN1B.DRG)

From the sections the natural ground level has been determined and used for the determination of the height of the building above this level.

Attached to the brief was Annexure B which is a contour plan prepared by Professional Land Surveyor M de Bruyn. Mr de Bruyn's survey was also based on bench mark BM with a height of 50m. (See plan 699KN1B.DRG).

The contours from this plan were also used on the cross sections to ascertain the agreement if any with the survey at hand.

Survey by Professional Land Survey M de Bruyn :

Mr de Bruyn conducted his survey when the property had been cleared after the fire had destroyed the original building.

Under the circumstances of the extremely difficult task to determine the natural ground levels of the property because of the inaccessibility of the terrain, the steepness of the property and the non-existence of suitable contour plans of the land prior to it being developed, the contours as surveyed by Mr de Bruyn in August 2017, before the construction of the new building, must also be taken into account. The survey at hand could not determine ground heights within the structure as access is impossible. However Mr de Bruyn did survey ground heights where the building is now standing.

A plan is attached which was obtained from the Surveyor-General. This plan is the original development application plan that was prepared by the planner that submitted the application for the approval of the township layout. The contours shown on this plan are of no assistance to draw any suitable conclusion.

The cross sections A-A, B-B and C-C have incorporated the levels as surveyed by Mr de Bruyn and are represented by the green lines on each cross section.

## 2 CONCLUSIONS

The following schedule is an analysis of cross sections A-A, B-B and C-C: -

### CROSS SECTION A-A

ROOF HEIGHT	NATURAL GROUND LEVEL	ROOF HEIGHT ABOVE NATURAL LEVEL	LESS TOLERANCE FACTOR OF 1 METER
53,57	40,8	12,8	11,8
55,60	45,8	9,8	8,8
54,09	45,3	8,8	7,8
53,8	47,3	6,5	5,5

### CROSS SECTION B-B

ROOF HEIGHT	NATURAL GROUND LEVEL	ROOF HEIGHT ABOVE NATURAL LEVEL	LESS TOLERANCE FACTOR OF 1 METER
53,57	42,1	11,4	10,4
56,27	47,2	9,0	8,0
55,2	45,2	10,0	9,0

### CROSS SECTION C-C

ROOF HEIGHT	NATURAL GROUND LEVEL	ROOF HEIGHT ABOVE NATURAL LEVEL	LESS TOLERANCE FACTOR OF 1 METER
54,29	45,0	9,3	8,3
53,77	47,0	6,8	5,8

The Knysna zoning scheme regulations allow the height of the roof to be a maximum of 8 metres vertically above the natural ground level.

The circumstances of the difficulty and complexity of the task to determine the elevations of the natural ground before any earthworks and landscaping makes it essential to introduce a tolerance of at least 1m on the encroachments as calculated above.

The conclusion is thus:-

That the building at cross section A-A complies at the roof height of 53,8 and 54,09 and not at heights 55,6 and 53,57 metres.

That the building at cross section B-B complies at the roof height of 56,27 and does not comply at the roof height of 53,57 and 55,2 metres.

That the building at cross section C-C complies at the roof height of 53,77 and does not comply at roof height of 54,29 metres.

Emphasis must be placed on the extreme nature of the conditions under which this assessment has been made.

The property is abnormally steep to be used for development for residential purposes. Furthermore the property is scattered with loose rock and in places overgrown with creeper weed that has grown over fallen trees.

The part of the property that has the natural ground levels that would not have been disturbed is at the shoulder of the road and where the exposed rock face occurs on the south western side and to a lesser extent to the east of the building.

Except for the survey of the road shoulder, it was extremely hazardous to negotiate over these features with survey equipment in order to undertake and complete this task of the determination of the height of the building relative to the natural ground level of the property.

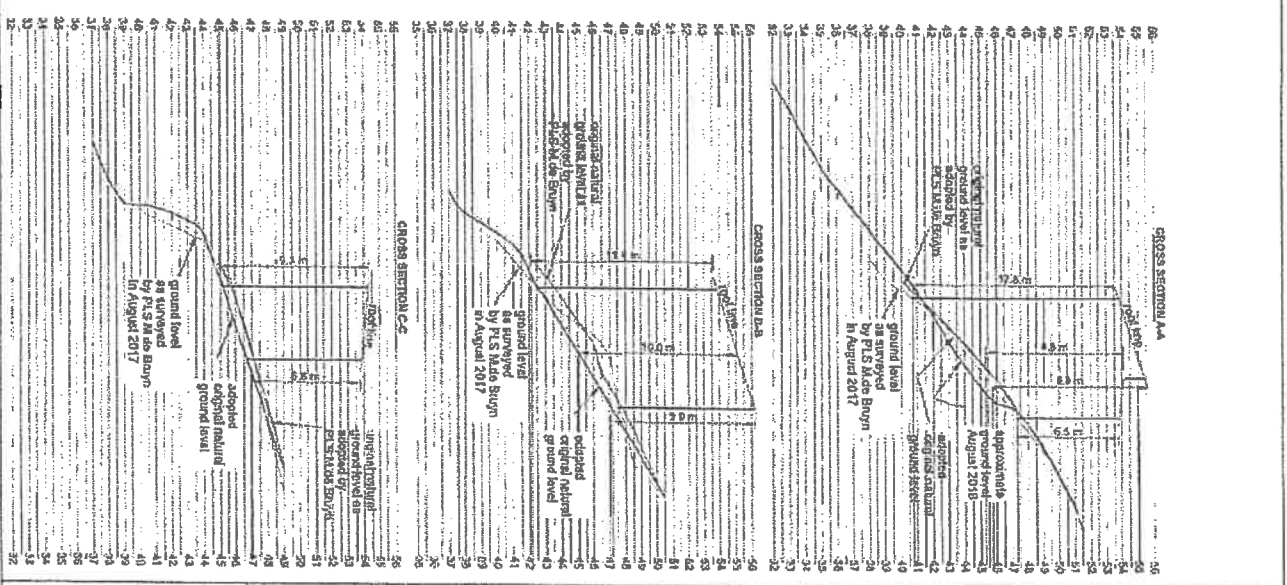
Yours faithfully

Bailey & le Roux  
Professional Land Surveyors



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per J.H.Bailey  
PLS 0019



<p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>1. Refer to drawing sheet 2.</li> <li>2. Ground level as surveyed by PLS Mada Baug in August 2017.</li> <li>3. Proposed ground level as indicated.</li> </ol>	<p><b>DATE:</b> 1/2022</p>	<p><b>PROJECT:</b></p> <p>RESIDENTIAL DEVELOPMENT</p>	<p><b>CLIENT:</b></p> <p>PT. SUDIRMAN BANGSA</p>
<p><b>DESIGNER:</b></p> <p>PT. SUDIRMAN BANGSA</p>	<p><b>CHECKER:</b></p> <p>PT. SUDIRMAN BANGSA</p>	<p><b>APPROVED:</b></p> <p>PT. SUDIRMAN BANGSA</p>	<p><b>SCALE:</b></p> <p>AS SHOWN</p>

*Handwritten signature and initials*