



INNOVATIVE
TRANSPORT
SOLUTIONS

**Addendum to
the Transport Impact Assessment
for the Greenfields and
Koppie Development,
Postmasburg**

June 2017

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Addendum to Transport Impact Assessment for the Proposed Greenfields and Koppie Developments, Postmasburg

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1. INTRODUCTION

After completion of the Transport Impact Assessment for the Greenfields and Koppie developments in Postmasburg, amendments were made to the township layout plan for the developments.

The purpose of this addendum is to address the impact of the changes in the layout plans.

The two updated township layout plans (Urban Dynamics Drawings: PosMas_Greenfields D7/2017.05.24 and MountainView-Lay D4/2017.05.25) are attached at the end of this addendum (**Figure 1 & Figure 2**).

2. LAND USE

The proposed amended land use for the Greenfields development is summarised in **Table 1** below. Refer to **Figure 1** for the development plan.

Table 1: Amended Land use for the Proposed Greenfields Development

No	Zoning	Land Use	Extent	Units
1	Multilevel Townhouses	Subsidised Housing	2158	Dwelling units
2	Business	Business Premises	10870	m ² GLA
3	Place of Instruction	Primary School	1100	Pupils
		Secondary School	1200	Pupils
		Creche	7018	Pupils
4	Institution	Church	800	Seats
		Clinic	250	m ² GLA

The proposed amended land use for the Koppie development is summarised in **Table 2** below. Refer to **Figure 2** for the development plan. (The proposed development is referred to as “Mountain View” on this development plan)

Table 2: Amended Land use for the Proposed Koppie Development

No	Zoning	Land Use	Extent	Units
1	Multilevel Townhouses	Subsidised Housing	2600	Dwelling units
2	Business	Business Premises	16418	m ² GLA
3	Place of Instruction	Primary School	1100	Pupils
		Secondary School	1200	Pupils
		Creche	5248	Pupils
4	Institution	Church	600	Seats
		Clinic	300	m ² GLA

3. TRIP GENERATION

The expected trip generation for the proposed developments is summarised in **Tables 3, 4, 5** and **6** below.

Table 3: Amended Trip Generation for the Proposed Greenfields Development for the weekday AM Peak Hour

Land Use	Extent	Units	Trip Rate (vph/unit)	Trip Adjustment factor	Directional Split		In (vph)	Out (vph)	Total trips (vph)
					In	Out			
Residential	2158	units	0.75	0.70	25%	75%	283	850	1133
Business Premises	10870	m ²	1.50	0.80	85%	15%	111	20	130
Primary School	1100	pupils	0.85	0.35	50%	50%	164	164	327
Secondary School	1200	pupils	0.75	0.35	50%	50%	158	158	315
Clinic	7018	m ²	6.00	0.50	60%	40%	126	84	211
Church	800	seat	0.05	0.45	55%	45%	10	8	18
Creche	250	pupils	1.00	0.48	50%	50%	59	59	119
Total							911	1342	2253

Table 4: Amended Trip Generation for the Proposed Greenfields Development for the weekday PM Peak Hour

Land Use	Extent	Units	Trip Rate (vph/unit)	Trip Adjustment factor	Directional Split		In (vph)	Out (vph)	Total trips (vph)
					In	Out			
Residential	2158	units	0.75	0.70	70%	30%	793	340	1133
Business Premises	10870	m ²	1.50	0.80	20%	80%	26	104	130
Primary School	1100	pupils	0.30	0.35	50%	50%	58	58	116
Secondary School	1200	pupils	0.25	0.35	50%	50%	53	53	105
Clinic	7018	m ²	6.00	0.50	40%	60%	84	126	211
Church	800	seat	0.05	0.45	50%	50%	9	9	18
Creche	250	pupils	0.80	0.48	50%	50%	48	48	95
Total							1070	737	1807

Table 5: Amended Trip Generation for the Proposed Koppie Development for the weekday AM Peak Hour

Land Use	Extent	Units	Trip Rate (vph/unit)	Trip Adjustment factor	Directional Split		In (vph)	Out (vph)	Total trips (vph)
					In	Out			
Residential	2600	units	0.75	0.70	25%	75%	341	1024	1365
Business Premises	16418	m ² GLA	1.50	0.80	85%	15%	167	30	197
Primary School	1100	pupils	0.85	0.35	50%	50%	164	164	327
Secondary School	1200	pupils	0.75	0.35	50%	50%	158	158	315
Clinic	5248	m ² GLA	6.00	0.50	60%	40%	94	63	157
Church	600	seat	0.05	0.45	55%	45%	7	6	14
Creche	300	pupils	1.00	0.48	50%	50%	71	71	143
Total							1003	1515	2518

Table 6: Amended Trip Generation for the Proposed Koppie Development for the weekday PM Peak Hour

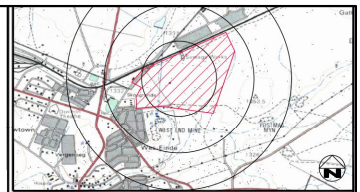
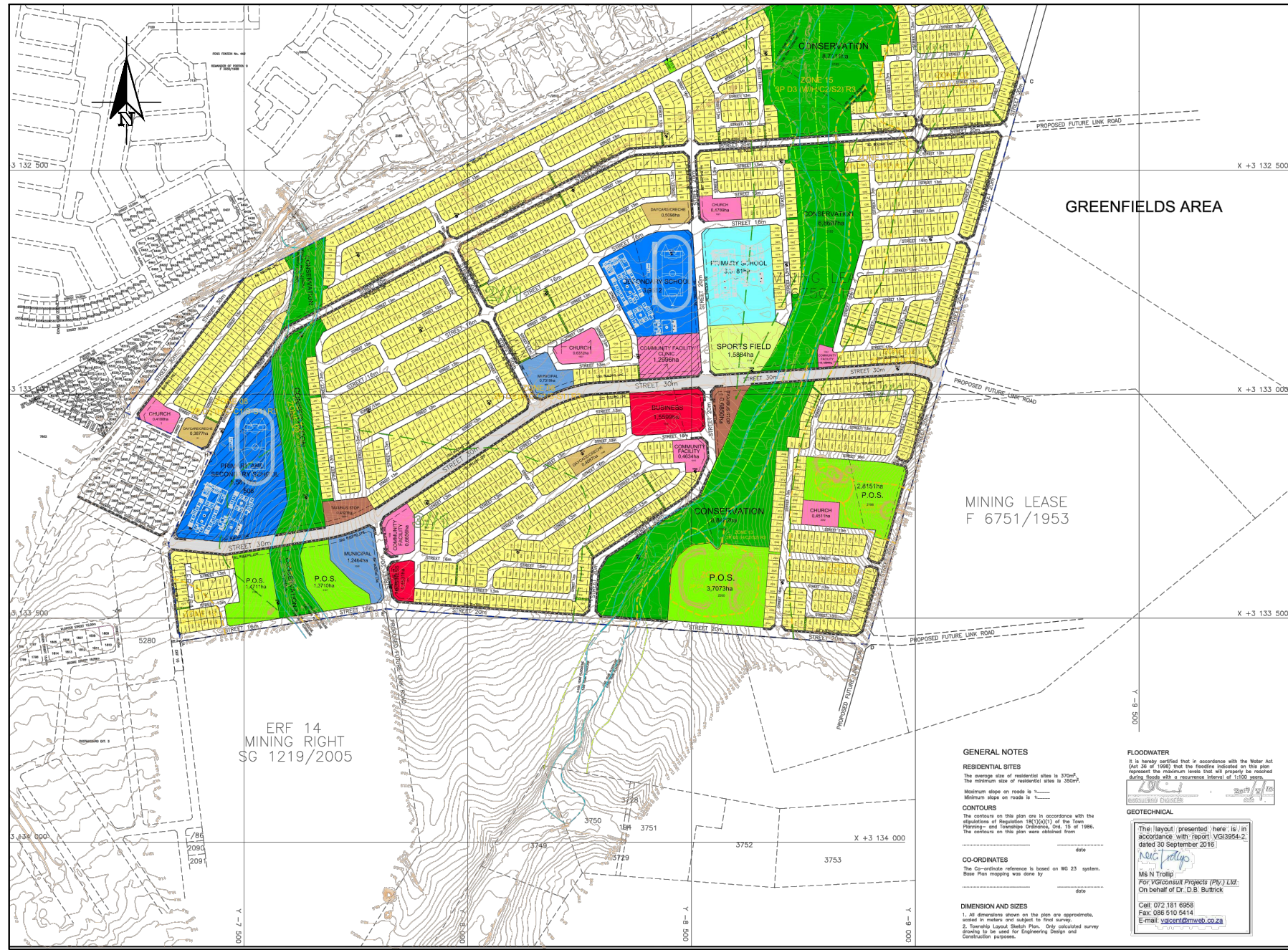
Land Use	Extent	Units	Trip Rate (vph/unit)	Trip Adjustment factor	Directional Split		In (vph)	Out (vph)	Total trips (vph)
					In	Out			
Residential	2600	units	0.75	0.70	70%	30%	956	410	1365
Business Premises	16418	m ² GLA	1.50	0.80	20%	80%	39	158	197
Primary School	1100	pupils	0.30	0.35	50%	50%	58	58	116
Secondary School	1200	pupils	0.25	0.35	50%	50%	53	53	105
Clinic	5248	m ² GLA	6.00	0.50	40%	60%	63	94	157
Church	600	seat	0.05	0.45	50%	50%	7	7	14
Creche	300	pupils	0.80	0.48	50%	50%	57	57	114
Total							1232	836	2067

The amended trip generation for the proposed developments was calculated using the same methodology as described in paragraph 7 of the Transport Impact Assessment dated May 2017.

From the above tables it can be seen that the amended township lay out plans result in 4.4% - 8.4% fewer trips expected to be generated by the developments than the expected trip generation in the Transport Impact Assessment dated May 2017. The change in the expected trips generated is therefore not significant.

4. CAPACITY ANALYSIS

As the change in the expected trips generated by the proposed developments is not significant, no new capacity analysis was performed. All results and recommendations made in the Transport Impact Assessment dated May 2017 are still valid.



LAND USE TABLE					
ZONING	LAND USE	ERF NUMBERS	No. OF STANDS	AREA OF STANDS	% OF AREA
SUBSIDISED HOUSING	RESIDENTIAL (300m ² EVEN)	184,199	2158	86,5072	43,15
BUSINESS PREMISES	BUSINESS	184,199	2	2,0120	1,00
SPECIAL ZONE	BUS STOP/PAV. RAMP	184,199	2	1,1682	0,58
PLACE OF INSTRUCTION	SECONDARY SCHOOL	479	1	3,9512	1,97
	PRIMARY SCHOOL	1209	1	5,5817	2,78
	DAYCARE / CRECHE	184,198	3	1,3184	0,65
INSTITUTION	COMMUNITY FACILITY	1343,188,1918	3	1,3184	0,65
	CHURCH	479	1	1,2999	0,65
PLACE OF WORSHIP	CHURCH	1,100,101,2042	4	1,9620	0,99
	MUNICIPAL USES	184,198	2	1,9753	0,99
PUBLIC PARKS	OPEN SPACES	2148-2153	28	9,6743	4,83
	RIVERS OR RIVERBEDS	2148-2149	6	29,7495	14,84
SPORT FIELDS AND RELATED INFRASTRUCTURE	SPORT FIELDS	3179	1	1,5884	0,79
	MINOR ROADS	5,4867	2	2,73	1,37
PUBLIC STREETS	PUBLIC STREETS	43,5810	4	43,5810	21,72
TOTAL			2213	200,4848	100,00

GENERAL NOTES
 THE FIGURE ABCDEFGH REPRESENTS OUTSIDE BOUNDARY OF THE PROPOSED TOWNSHIP POSTMASBURG_GREENFIELDS BEING APPROXIMATELY 200,4848HA IN EXTENT.

- OUTSIDE BOUNDARY OF TOWNSHIP
- GEOTECHNICAL ZONES
- SOLS ZONES
- ENVIRONMENTAL ZONE
- 1:50 YEARS FLOODLINE
- 1:100 YEARS FLOODLINE
- LINE OF NO ACCESS
- FARM PORTIONS
- 32m FLOODLINE BUFFER
- TEST PITS

REVISIONS	D: DRAFT	C: CIRCULATED	A: APPROVED
01. 1:50 AND 1:100 YEAR FLOODLINE ADDED.			C. MASON 2017.01.24
02. RE-LAYOUT.			C. MASON 2017.02.24
03. AMEND INTERSECTIONS.			C. MASON 2017.03.01
04. AMEND LAND USE TABLE.			C. MASON 2017.03.08
05. AMEND LAYOUT TO ADD STORMWATER AND AMEND LAND USE TABLE.			C. MASON 2017.04.10
06. ERF NUMBERS ADDED.			C. MASON 2017.05.02
07. P.O.S. STRIPS ADDED FOR STORMWATER.			C. MASON 2017.06.16

ERF 14
 MINING RIGHT
 SG 1219/2005

MINING LEASE
 F 6751/1953

GENERAL NOTES

- RESIDENTIAL SITES**
 The average size of residential sites is 370m².
 The minimum size of residential sites is 300m².
 Maximum slope on roads is 1:100.
 Minimum slope on roads is 1:100.
- CONTOURS**
 The contours on this plan are in accordance with the elevations of Regulation (R2100/12) of the Town Planning and Zoning Ordinance, Chg 10 of 1986. The contours on this plan were obtained from _____ date _____
- CO-ORDINATES**
 The Co-ordinate reference is based on WGS 23 system. Base Plan mapping was done by _____ date _____
- DIMENSION AND SIZES**
 1. All dimensions shown on the plan are approximate, scaled in meters and subject to final survey.
 2. Township Layout Status Plan. Only indicated survey drawing to be used for Engineering Design and Construction purposes.

FLOODWATER

It is hereby certified that in accordance with the Water Act (Act 36 of 1957) that the floodline indicated on this plan represent the maximum levels that will properly be reached during floods with a recurrence interval of 1:100 years.

GEOTECHNICAL

The layout presented here is in accordance with report VGS1954-2, dated 30 September 2016.

Ms N Trollop
 PGV VGS Consult Projects (Pty) Ltd.
 On behalf of Dr. D.B. Butrick

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CLIENT:

TOWN PLANNER: Renier Meintjes

SCALE: 1:3 000

DRAWING REF: PosMas_Greenfields

D7/2017.05.24

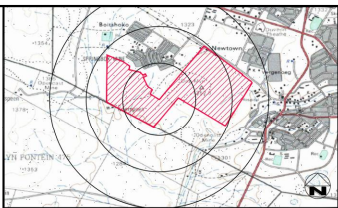
DRAWING STATUS: DRAFT

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LAND USE TABLE

ZONING	LAND USE	ERF NUMBERS	No. OF STANDS	AREA OF STANDS	% OF AREA
SUBSIDISED HOUSING (350m ² EVEN)	RESIDENTIAL	1-1440, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	2600	102,5798	61,86
BUSINESS PREMISES	RESIDENTIAL	1-1440, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	6	3,0004	1,54
SPECIAL ZONE	BUS. STRIP/TAXI STAND	1-1440, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100	3	1,3900	0,70
PLACE OF INSTRUCTION	PRIMARY SCHOOL	1440	1	3,6637	1,85
	CHURCH	1440	2	0,9773	0,49
PLACE OF WORSHIP	CHURCH	1440	3	0,7767	0,39
	COMMUNITY FACILITY	1440	4	2,2648	1,54
	CLINIC	1440	2	0,9718	0,49
MUNICIPAL USES	MUNICIPAL	1440, 1441, 1442	4	1,6483	0,83
PUBLIC PARKS	OPEN SPACES	1440-1449	22	24,3678	12,42
SHORT FIELDS AND RELATED INFRASTRUCTURE	SHORT FIELDS AND RELATED INFRASTRUCTURE	1440, 1441	2	3,8114	1,93
PUBLIC STREETS	STREETS			40,0716	20,28
MINOR ROADS	30m ROAD			1,6111	0,81
TOTAL			2651	187,7417	100%

- GENERAL NOTES**
- THE FIGURE ABCDEFGHIJKLMNOPQRSTUVWXYZA REPRESENTS OUTSIDE BOUNDARY OF THE PROPOSED TOWNSHIP MOUNTAIN VIEW, BEING APPROXIMATELY 197,7417% IN EXTENT.
- OUTSIDE BOUNDARY OF TOWNSHIP
 - GEOTECHNICAL ZONES
 - SOILS ZONES
 - 1:50 YEARS FLOODLINE
 - 1:100 YEARS FLOODLINE
 - LINE OF NO ACCESS
 - FARM PORTIONS
 - TEST PITS
 - PERMANENT STRUCTURES

REVISIONS

NO.	DESCRIPTION	D: DRAFT	C: CIRCULATED	A: APPROVED
01.	LAYOUT AMEND TO ACCOMMODATE PRATIC ENGINEER'S COMMENTS.			C. Moon 2017.02.08
02.	AMEND LAYOUT TO ACCOMMODATE STORMWATER AND UPDATE LAND USE TABLE.			C. Moon 2017.04.10
03.	ERF NUMBERS ADDED.			C. Moon 2017.05.04
04.	P.A.S. STRIPS ADDED FOR STORMWATER.			C. Moon 2017.06.15

GENERAL NOTES

RESIDENTIAL SITES
The average size of residential sites is 370m². The minimum size of residential sites is 350m².
Maximum slope on roads is 1:10.
Minimum slope on roads is 1:20.

CONTOURS
The contours on this plan are in accordance with the stipulations of Regulation 183(1)(a)(i) of the Town Planning and Township Ordinance, Ch. 15 of 1986. The contours on this plan were obtained from

CO-ORDINATES
The coordinate reference is based on WGS 23 system. Base Plan mapping was done by


DIMENSION AND SIZES
1. All dimensions shown on the plan are approximate, worked in meters and subject to final survey.
2. Township General Purpose Plan. Only estimate survey drawing to be used for Engineering Design and Construction purposes.

FLOODWATER
It is hereby certified that in accordance with section 144 of the national water act (Act 36 of 1956) the severity is not affected by a 1:100 year floodline.

GEOTECHNICAL
The layout presented here is in accordance with report VGI3954-2 dated 30 September 2016.

Ms N Trollip
For VGIconsult Projects (Pty.) Ltd.
On behalf of Dr D B Buttrick

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CLIENT:  TOWN PLANNER: Reeler McIntosh COPY/RIGHT RESERVED

SCALE: 1:3 000
DRAWING REF: MountainView-Lay D4/2017.05.25
DRAWING STATUS: DRAFT

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