

# *APPENDIX A*

Maps



TYPE OF PLAN:

LOCALITY PLAN

— APPLICATION SITE

**SPATIAL SOLUTIONS Inc**

PROJECT:

PROPOSED HOSPITAL DEVELOPMENT

DATE: 07/02/2017

P.O. Box 78046  
 DANNICE  
 9310

Tel: 082 253 7868

PROJECT BY:

SCALE: N.T.S.

DRG : ERF 1-2011 BFN - LOCALITY.dwg

# *APPENDIX B*

Photographs



Photo 1: View of the site to the west. The Bible House, which is located on the adjacent property, is visible in the background. Photos taken on 21 October 2016.



Photo 2: View of the site towards the south west.



Photo 3: View of the site towards the north west.



Photo 4: View of the site towards the north east. The adjacent property, the Remainder of Erf 22011, is visible in the background.



Photo 5: View of the site towards the east.



Photo 6: View of the drainage line to the east of the site, which crosses the north east corner of the site.



Photo 7: Remains of a dilapidated building still present on site.

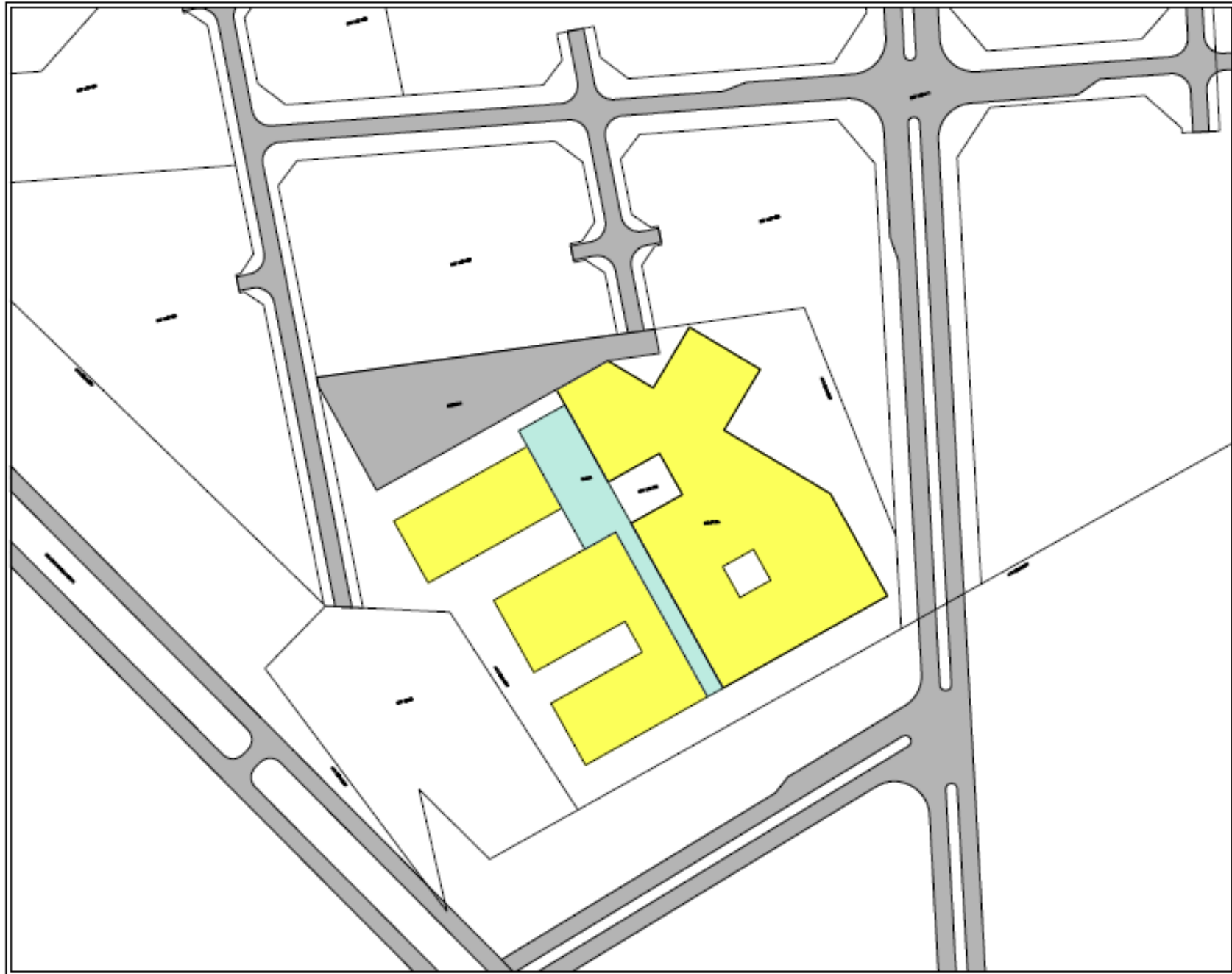


Photo 8: Building rubble on site.

# *APPENDIX C*

Facility illustration(s)





1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 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.

|  |                       |
|--|-----------------------|
| <b>GENERAL INFORMATION</b><br>PROJECT NAME: _____<br>SHEET NO.: _____<br>TOTAL SHEETS: _____                 |                       |
| <b>APPROVALS</b><br>DESIGNER: _____<br>CHECKED: _____<br>DATE: _____   |                       |
| <b>PROJECT DATA</b><br>SITE NO.: _____<br>BLOCK NO.: _____<br>LOT NO.: _____<br>ZONING: _____<br>AREA: _____ |                       |
| <b>LEGEND</b><br>[Symbol] _____<br>[Symbol] _____<br>[Symbol] _____  |                       |
| <b>SCALE</b><br>1" = _____'  |                       |
| <b>DATE</b><br>_____   |                       |
| <b>PROJECT LOCATION</b><br>  |                       |
| <b>DATE</b><br>_____   | <b>SCALE</b><br>_____ |

# *APPENDIX D*

Specialist Reports

Refer to links for:

- [Report on the Biodiversity and Ecological Assessment](#)
- [Heritage Scoping Report](#)
- [Palaeontological Desktop Study](#)

# *APPENDIX E*

Public Participation

1 Des. of 1 Jan.  
**9 870 0103.**

**4 sil, 2 badk,  
 aby KFC.  
 076 307 8523.**

**SE TE KOOP**

uur in Inneslaan:  
 dubbelgeriewe,  
 n/h. R12 000 p.m.  
**051 444 4886.**

**3-silk-huis** te  
 Waselspoort, slegs  
 naf Bloemfontein,  
 Bestand. 2  
 badk, oopplan-  
 amer, TV-kamer,  
 amer, onderdak-  
 it oproleise, per-  
 e onthaler! Enkel-  
 net afdak. Prag-  
 tryke tuin.  
 and na  
 ort-geriewe. 'n  
 te sien!  
**00. Skakel Chris  
 9515. NRE.**

**SE TE HUUR**

ilk-huis, 2,5 badk,  
 /h met afdak,  
 j, buitekamer,  
 respoeiing.  
 p.m. vanaf 1/12.  
**082 569 3616.**

**REEOORDE**

**ekuriteits  
 Jord**

nuwe eenheid,  
 vol badk, 1 ver-  
 motorhuis,  
 it braai en tuin.  
 reskikbaar.  
 .m  
**0823 6391**

**IRS TE HUUR**

**rley: Pragtige  
 te huur in huis.  
 tot R3 000 p.m.  
 meubileerd.  
 3 308 4808.**

**UDENTE-  
 MMODASIE**

**nmodasie: Stu-  
 017. Netjies, stap  
 iemeubileer, huis-  
 Stv, Wi-Fi. Afdak.  
 p.m. 082 381  
 082 327 2393.**

**gmail.com of faks na  
 051 583 1487. Skakel  
 Yvette by 074 635 9550  
 vir meer inligting.**

experience in administra-  
 tion clerk will be an added  
 advantage. **Closing date  
 is 16/11/2016 at 16:00.  
 Fax to: 086 533 6661**

**Dringend benodig:**  
 Tegnikus met kennis van  
 installering/herstel van  
 lugreëling, yskaste en  
 koelkamers. Moet rybewys  
 hê en so spoedig moontlik  
 diens kan aanvaar. **Skakel  
 Frieda 051 448 5664 of  
 Barries 082 450 7620  
 vir onderhoud.**

**Well-known  
 fast food outlet  
 looking for managers.**  
 Age: 25 - 35.  
 Male or female.  
 Salary ± R7 000 p.m.  
 Fax CV: **086 599 2034**  
 E-mail: **stadium,  
 headoffice@gmail.com**

**BETREKKINGS**

  
**HOËRSKOO  
 SAND DU PLESSIS**  
**Afrikaansmedium**

**1. RTT en/of Verbruikerstudie  
 en/of Wisk G  
 2. IGO en/of Elektriese Teg**

**Beide poste: BL of Dept**

Meld ook ander vakke

**Sluitingsdatum: 21/11/2016  
 Navrae: 051 522 4071**

Stuur u aansoek na **willem@sannies.co.za**  
 of lewer af by skool.

  
**Hoërskool  
 Hennenman**

**Departementele poste**

- Fisiese Wetenskappe Graad 10 – 12, Natuurwetenskappe Graad 8 - 9 en/of Lewenswetenskappe Graad 12
- Engels Eerste Addisionele Taal Graad 10 - 12

**Beheerliggaampos**

- Wiskunde Graad 8 - 9 en/of Lewenswetenskappe Graad 12

**ONDERRIGMEDIUM: Afrikaans**

Volledige CV's moet gefaks word na 057 573 1897 of per e-pos gestuur word na **hsh@hsh.co.za**

**Navrae: Mnr. N. Pretorius - 082 309 1350**

**Sluitingsdatum: 19 November 2016 om 12:00**

**Diensaanvaarding: 1 Januarie 2017.**

Bloemfontein.  
**Contact 076 700 5777.**

**PRIVAAT**

**061 831 1794. Adel,**  
 sexy borste, baie ondervin-  
 ding, vrek lekker BJ, proe  
 my heuning, stoute vry,  
 speelgoed, volhuis, R250.

**062 293 6701. Megan,**  
 nuwe, 22 jarige, sexy, wit  
 girl, plesier en satisfaksie,  
 sensuele masserings met  
 lekker stoute ekstras, tvl.

**079 253 4067: Busty, 36**  
 DD. 19-year-old, curva-  
 cious babe, let's meet at  
 my door with nothing on,  
 tvl, pvt, 24/7, no rush.

**072 324 0722. Cindy.**  
 Hoë klas, sexy, busty,  
 blond. Beste BJ, stoute  
 masserings met 'kinky'  
 ekstras. Baie pvt. perseel.

**A new, slim, coloured,**  
 long-legged BJ queen for  
 all your wildest fantasies.  
**Call 079 276 7948.**

**Back in TOWN!  
 Sexy, busty  
 African Sotho.  
 Everything goes!  
 Call 078 138 6576.**

- Prioritiseer dryf van nuwe besigheid
- Bewese "cold selling" vaardighede
- Goeie kommunikasievermoë
- Goeie rekenaar- en tikvaardigheid
- Tweetalig, vlot kan kommunikeer in Engels en Afrikaans
- Kode B-rybewys
- Eie motor en selfoon

**In ruil vir die suksesvolle kandidaat se dienste bied die maatskappy 'n mededingende vergoedingspakket, asook lidmaatskap van die aftree- en mediese fonds vir persone wat daarvoor kwalifiseer.**

**Belangstellendes kan aansoek stuur na:  
 aansoek@volksblad.com**

**Aansoekers moet duidelik aandui om watter pos aansoek gedoen word.**

**SLUITINGSDATUM: 26 November 2016**

Indien geen terugvoer teen 31 Januarie 2017 ontvang is nie, moet aanvaar word dat u aansoek onsuksesvol was. Die maatskappy behou die reg voor om nie die pos te vul nie.

**Ingevolge Media24 se diensbillikheidsbeleid sal aan geskikte kandidate uit die aangewese groepe voorkeur gegee word.**

**Volksblad** NIJS MET MENING

**KENNISGEWINGS**

**ENVIRONMENTAL IMPACT ASSESSMENT: PUBLIC PARTICIPATION PROCESS**

**OMGEWINGSIMPAKEVALUERINGSPROSES: OPENBARE DEELNAMEPROSES**

Notice is given in terms of Section 41(2)(c) of Regulations No. R. 982 published in Government Notice No. 38282 of 4 December 2014 of the National Environmental Management Act (Act No. 107 of 1998) (NEMA), of the intent to carry out the following activity in respect of which an Environmental Authorisation in terms of NEMA is required:

|                             |   |
|-----------------------------|---|
| <b>Project:</b>             | <b>Proposed hospital development on Subdivision 1 of Erf 22011, Bloemfontein.</b>   |
| <b>Locality:</b>            | <b>The site located adjacent to and to the north of the Bible House on Nelson Mandela Drive near the N1 western bypass.</b> |
| <b>Projek:</b>              | <b>Voorgestelde hospitaalontwikkeling op Onderverdeling 1 van Erf 22011, Bloemfontein.</b>                                  |
| <b>Ligging:</b>             | <b>Die terrein is geleë aangrensend aan en noord van die Bybelhuis in Nelson Mandelarylaan naby die N1-verbypad.</b>        |
| <b>Applicant/Applikant:</b> | <b>MPC Developers</b>   |

Should you require additional information, have comments on the project or would like to register as an interested party, please contact us by **Monday, 16 January 2017.**

Indien u enige navrae het, kommentaar wil lewer of as 'n belangstellende party wil registreer, kontak ons asb. teen **Maandag 16 Januarie 2017.**

**SPATIAL SOLUTIONS INC**  
**Property Valuers and Environmental Consultants**

PO Box 28046  
 DANHOF 9310  
 Contact person: Marguerite Cronje  
 Tel. 082 702 0547  
 E-mail: **margueritecronje@gmail.com**

# BLOEMFONTEIN Courant

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- Firebrigade: 051 406 6665
- Electricity: 051 408 2345
- Water: 051 405 8181
- Child line: 0800 055 555

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**We offer:**  
on-site reliable supervision  
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Ek betaal kontant vir jou bromfisie (scooter)  
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ACCOMMODATION  
TO LET / SHARE**

**FHP:**  
Enkelkamer vir eersligte  
soler persoon  
Skakel 072 286 2245  
GL002713

**WESTDENE**  
Eerrens woonstel in erf.  
Beskikbaar Nov. R2200  
p.m. water ingesl.  
Skakel 084 4711 741  
GL002718

belon omheining, sink dak  
geleë te Haarlemstraat 21,  
Noordhoek, Bloemfontein  
**TERME:**  
Tien (10%) persent van  
die koopprys en die  
Afsaerskoste synde ses  
persent op die eerste R30  
000 of deel daarvan 3,5%  
op die balans onderworpe  
aan 'n maksimum van R10  
777.00 plus BTW in

**TBOGO EDWIN  
SEKUTE**  
(Id no:670328 5271 089)  
Eerste Verwaaier  
**TSHEPISO PAULINAH  
SEKUTE**  
(Id no:750515 0314 087)  
Tweede Verwaaier  
**KENNISGEWING VAN  
GEREGTELIKE  
VERKOPING**  
Ingevolge 'n vonnis van

aan bepaalde  
voorwaardes o.a.  
3.1 voorskrifte van die  
Verbruikersbe-  
skermingswet 68 van  
2008.  
(URL: <http://www.info.gov.za/view/DownloadFileAction?id=99961>)  
3.2 Fica-wetgewing m.b.t.  
identiteit &

identiteitsnommer:  
450820 5031 089  
In Lewe: Algotredene  
**Oorlode:** 23 Januarie  
2016 te Bloemfontein  
Van: Mejoziestraat 3,  
Zastron  
**Boedelinommer:**  
1525/2016  
Ingevolge Artikel 35(5) van  
Wet 68 van 1965 word  
hierby kennis gegee dat  
duplikate van die Eerste

Ingevolge geleë  
rekenings.  
Geteken te Zastron op  
hierdie 7de dag van  
November 2016  
**MALHERBE SAAVMAN &  
SMITH ING**  
Postbus 44  
Zastron  
9950  
Tel: 051 673 1217  
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### ENVIRONMENTAL IMPACT ASSESSMENT: PUBLIC PARTICIPATION PROCESS OMGEWINGSIMPAAKEVALUERINGSPROSES: OPENBARE DEELNAMEPROSES

Notice is given in terms of Section 41(2)(c) of Regulations No. R. 982 published in Government Notice No. 38282 of 4 December 2014 of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) with the intent to carry out the following activity in respect of which an Environmental Authorisation in terms of NEMA is required:

**Project:** Proposed hospital development on Subdivision 1 of Erf 22011, Bloemfontein.

**Projek:** Voorgestelde hospitaal ontwikkeling op Onderverdeling 1 van Erf 22011, Bloemfontein.

**Locality:** The site located adjacent to and to the north of the Bible House on Nelson Mandela Drive near the N1 road.

**Ligging:** Die terrein is geleë aangrensend aan en noord van die Bybelhuis op Nelson Mandelarylaan naby die N1 pad.

Should you require additional information, have comments on the project or would like to register as an interested party, please contact us by **Monday 16 January 2017**.

Indien u enige navrae, kommentaar will ewer of as 'n belangstellende party wil registreer, kontak ons asb teen **Maandag 16 Januarie 2017**.

**Applicant / Applikant:** MPC Developers

**SPATIAL SOLUTIONS INC**  
Property Valuers and Environmental Consultants

P O Box 28046 DANHOF 9310  
**Contact person:** Marguerite Cronje  
Tel: 082 7020547 Email: [margueritecronje@gmail.com](mailto:margueritecronje@gmail.com)

## On-site Notice Photos



Photo A: View of notice placed along Nelson Mandela Drive on 17 November 2016.



Photo B: Closer view of notice along Nelson Mandela Drive, at the entrance to the Bible House.



Photo C: View of notice placed at the Bible House.

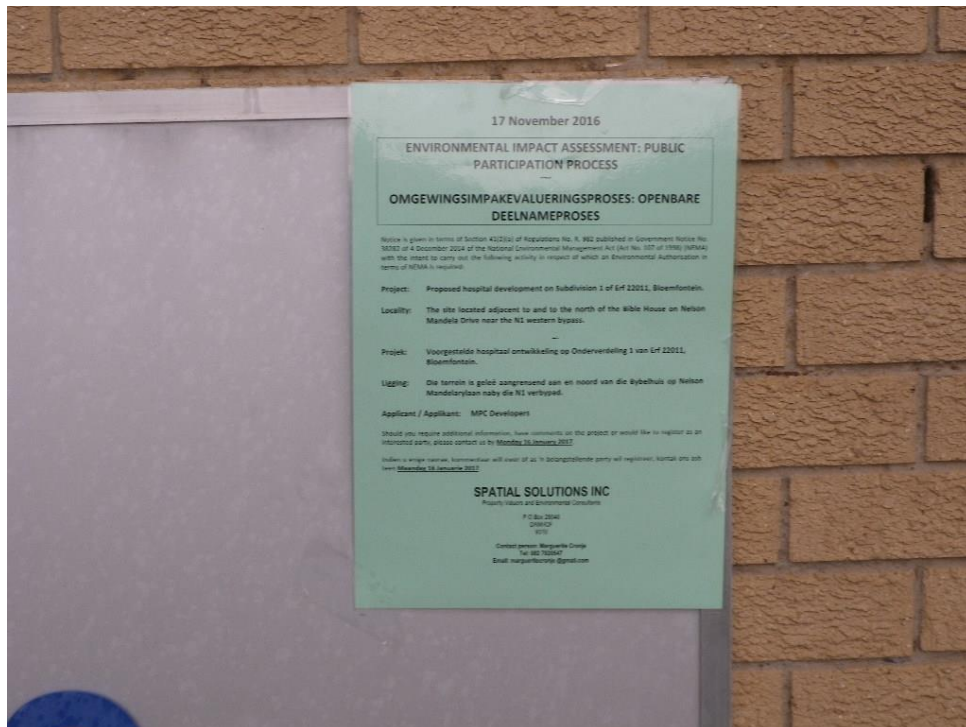


Photo D: Close-up of on-site notice.



# *APPENDIX F*

Impact Assessment

# IMPACT ASSESSMENT

## 1. METHODOLOGY

Impact assessment must take into account the nature, scale and duration of effects on the environment and whether such effects are positive (beneficial) or negative (detrimental). Each issue / impact is also assessed according to the project stages from planning, through construction and operation to the decommissioning phase (if applicable). Where necessary, the proposal for mitigation or optimisation of an impact is noted. A brief discussion of the impact and the rationale behind the assessment of its significance has also been included.

A rating system is applied to the potential impact on the receiving environment and includes an objective evaluation of the mitigation of the impact. In assessing the significance of each issue the following criteria is used:

|                       |   |            |   |             |  |           |  |           |  |
|-----------------------|---|------------|---|-------------|--|-----------|--|-----------|--|
| <b>Nature</b>         | A brief description of the environmental aspect being impacted upon by a particular action or activity is presented.  |            |   |             |  |           |  |           |  |
| <b>Extent (Scale)</b> | <p>Considering the area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales and as such bracketing ranges are often required. This is often useful during the detailed assessment phase of a project in terms of further defining the determined significance or intensity of an impact.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-right: 20px;">Site</td> <td>Within the construction site</td> </tr> <tr> <td>Local</td> <td>Within a radius of 2 km of the construction site</td> </tr> <tr> <td>Regional</td> <td>Between 2 and 30 km from the site</td> </tr> <tr> <td>National</td> <td>The whole of South Africa</td> </tr> </table>  | Site       | Within the construction site  | Local       | Within a radius of 2 km of the construction site   | Regional  | Between 2 and 30 km from the site  | National  | The whole of South Africa  |
| Site                  | Within the construction site  |            |   |             |  |           |  |           |  |
| Local                 | Within a radius of 2 km of the construction site  |            |   |             |  |           |  |           |  |
| Regional              | Between 2 and 30 km from the site   |            |   |             |  |           |  |           |  |
| National              | The whole of South Africa   |            |   |             |  |           |  |           |  |
| <b>Duration</b>       | <p>Indicates what the lifetime of the impact will be.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-right: 20px;">Short-term</td> <td>The impact will either disappear with mitigation or will be mitigated through natural processes in a span shorter than the construction phase</td> </tr> <tr> <td>Medium-term</td> <td>The impact will last for the period of the construction phase, where after it will be entirely negated</td> </tr> <tr> <td>Long-term</td> <td>The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter</td> </tr> <tr> <td>Permanent</td> <td>The only class of impact which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient</td> </tr> </table> | Short-term | The impact will either disappear with mitigation or will be mitigated through natural processes in a span shorter than the construction phase | Medium-term | The impact will last for the period of the construction phase, where after it will be entirely negated | Long-term | The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter | Permanent | The only class of impact which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient |
| Short-term            | The impact will either disappear with mitigation or will be mitigated through natural processes in a span shorter than the construction phase   |            |   |             |  |           |  |           |  |
| Medium-term           | The impact will last for the period of the construction phase, where after it will be entirely negated  |            |   |             |  |           |  |           |  |
| Long-term             | The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter  |            |   |             |  |           |  |           |  |
| Permanent             | The only class of impact which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient  |            |   |             |  |           |  |           |  |
| <b>Intensity</b>      | <p>Describes whether an impact is destructive or benign.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-right: 20px;">Low</td> <td>Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected.</td> </tr> <tr> <td>Medium</td> <td>Effected environment is altered, but natural, cultural and social</td> </tr> </table>  | Low        | Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected.                      | Medium      | Effected environment is altered, but natural, cultural and social                                      |           |  |           |  |
| Low                   | Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected.  |            |   |             |  |           |  |           |  |
| Medium                | Effected environment is altered, but natural, cultural and social   |            |   |             |  |           |  |           |  |

|                     |  |
|---------------------|--|
|                     | <p>High functions and processes continue albeit in a modified way.<br/>Natural, cultural and social functions and processes are altered to extent that they temporarily cease.</p> <p>Very high Natural, cultural and social functions and processes are altered to extent that they permanently cease.</p>  |
| <b>Probability</b>  | <p>Describes the likelihood of an impact actually occurring.</p> <p>Improbable Likelihood of the impact materializing is very low.<br/>Possible The impact may occur.<br/>Highly probable Most likely that the impact will occur.<br/>Definite Impact will certainly occur.</p>  |
| <b>Significance</b> | <p>Significance is determined through a synthesis of impact characteristics. It is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required.</p> <p>Low impact No permanent impact of significance. Mitigatory measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.<br/>Medium impact Mitigation is possible with additional design and construction inputs.<br/>High impact The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.<br/>Very high impact The design of the site may be affected. Intensive remediation as needed during construction and/or operational phases. Any activity which results in a “very high impact” (negative) is likely to be a fatal flaw.</p> |
| <b>Status</b>       | <p>Denotes the perceived effect of the impact on the affected area.</p> <p>Positive (+) Beneficial impact<br/>Negative (-) Deleterious or adverse impact<br/>Neutral Impact is neither beneficial nor adverse.</p> <p>It is important to note that the status of an impact is assigned based on the <i>status quo</i> – i.e. should the project not proceed. Therefore not all negative impacts are equally significant.</p>   |

## 2. VEGETATION DESTRUCTION

The site contains natural vegetation, but is however heavily degraded. The site has been rated “preferred” for the development by the Biodiversity and Ecological Assessment undertaken (refer to Appendix D).

| Assessment: Vegetation Destruction |   |                 |                  |                    |                     |               |
|------------------------------------|---|-----------------|------------------|--------------------|---------------------|---------------|
| <b>Nature</b>                      | Vegetation on the site will be transformed by the development of erven and subsidiary infrastructure. |                 |                  |                    |                     |               |
|                                    | <b>Extent</b>   | <b>Duration</b> | <b>Intensity</b> | <b>Probability</b> | <b>Significance</b> | <b>Status</b> |
| <b>Without Mitigation</b>          | Local   | Permanent       | Very high        | Highly probable    | High                | Negative      |

|                        |      |           |        |                 |        |          |
|------------------------|------|-----------|--------|-----------------|--------|----------|
| <b>With Mitigation</b> | Site | Long term | Medium | Highly probable | Medium | Negative |
|------------------------|------|-----------|--------|-----------------|--------|----------|

## **Mitigation Recommendations**

### **Planning phase**

- The protected Wild Olive (*Oleo euopaea* subsp. *africana*) occurring on site is not of significant size or age and are therefore not considered of conservation importance. Permits however need to be obtained to remove them from site.

### **Construction phase**

- The hunting, capturing and trapping of fauna should be prevented.
- All human movement and activities must be contained within designated construction areas in order to prevent peripheral impacts on surrounding natural habitat;
- No fire-wood may be collected in the veld.

### **Post Construction phase**

- After construction has ceased, all construction materials should be removed from the area.
- Alien invaders occurring on site should be removed and monitored for re-establishment.
- Erosion should be prevented as far as possible.

## **3. IMPACT ON WETLANDS**

The small drainage line is situated on site. It however does not contain any riparian vegetation and not considered to play a vital ecological function. It is recommended that it be formalized.

There are two wetlands located on the adjacent property, namely the Remainder of Erf 22011. The "Dam van Trane", an artificial wetland and a wetland in the north-eastern corner of the property. These may be within 500m from the site.

| Assessment: Wetlands |  |             |           |             |              |         |
|----------------------|--|-------------|-----------|-------------|--------------|---------|
| Nature               | Possible damage to wetland areas due to development / construction activities. |             |           |             |              |         |
|                      | Extent   | Duration    | Intensity | Probability | Significance | Status  |
| Without Mitigation   | Local  | Long term   | Low       | Possible    | Low          | Neutral |
| With Mitigation      | Site   | Medium term | Low       | Possible    | Low          | Neutral |

### Mitigation Recommendations

#### Planning phase

- A Water Use Licence may need to be obtained from the Department of Water and Sanitation for and development / construction within 500m from a water course / wetland area.

#### Construction phase

- All human movement and activities must be contained within the designated construction areas to prevent peripheral impacts on surrounding natural habitat.
- Measures to control erosion must always be applied.
- No dumping of building waste or spoil material should take place.
- Weed control measures must be applied to eradicate the noxious weeds in wetlands and drainage lines.

#### Post Construction phase

- Not applicable

#### 4. IMPACT ON HERITAGE RESOURCES

The site has a low field rating and although it is located near to an Anglo0Boer War (1899-1902) concentration camp, the site was severely disturbed and no heritage structures identified.

The “Dam van Trane” and “Bron van Herinnering” Monument are historical features located on the adjacent property.

| Assessment: Heritage Resources |   |                 |                  |                    |                     |               |
|--------------------------------|---|-----------------|------------------|--------------------|---------------------|---------------|
| <b>Nature</b>                  | Possible negative impacts like the destruction of heritage resources due to construction. |                 |                  |                    |                     |               |
|                                | <b>Extent</b>   | <b>Duration</b> | <b>Intensity</b> | <b>Probability</b> | <b>Significance</b> | <b>Status</b> |
| <b>Without Mitigation</b>      | National  | Permanent       | Medium           | Possible           | High                | Negative      |
| <b>With Mitigation</b>         | Site  | Medium term     | Low              | Improbable         | Low                 | Neutral       |

### Mitigation Recommendations

#### Planning phase

- A Palaeontologist should be on site during geotechnical sampling to examine excavated material for any palaeontological remains.

#### Construction phase

- Should any historical or archaeological artefacts be unearthed, the ECO and Archaeologist must be notified.

#### Post Construction phase

- Not applicable

## 5. VISUAL IMPACT

The visual impact of the proposed development in the landscape is the function of several factors of which the viewing distance, visual absorption capacity and landform are measurable. Other factors are difficult to categorize because they are subjective viewpoints.

The visual impact for the proposed development is largely due to:

- The extent of the proposed development.
- Distance from roads.
- The visual absorption capacity of the surrounding landscape.

The critical viewpoints for this development would be Nelson Mandela Drive and sections of the Tempe Military Base.

A visual impact assessment was not deemed necessary as the proposed development is within the urban edge of Bloemfontein and the aesthetically pleasing design measures.

| <b>Assessment: Visual Impact</b> |   |                 |                  |                    |                     |               |
|----------------------------------|---|-----------------|------------------|--------------------|---------------------|---------------|
| <b>Nature</b>                    | The landscape will be altered by the development. |                 |                  |                    |                     |               |
|                                  | <b>Extent</b>                                     | <b>Duration</b> | <b>Intensity</b> | <b>Probability</b> | <b>Significance</b> | <b>Status</b> |
| <b>Without Mitigation</b>        | Local   | Long term       | Medium           | Definite           | High                | Negative      |
| <b>With Mitigation</b>           | Local   | Long term       | Medium           | Highly probable    | Low                 | Neutral       |

### **Mitigation Recommendations**

#### **Planning phase**

- Aesthetically pleasing designs and visual integrity principles have been incorporated into the site development plan.

#### **Construction phase**

- Construction sites must be kept neat and tidy at all times.
- All human movement and activities must be contained within designated construction areas.
- No dumping of construction debris is allowed, especially within the open space areas.

#### **Post Construction phase**

- A landscaping plan needs to be implemented.

**6. SOCIO-ECONOMIC IMPACT**

The proposed development will have an effect on different levels of economic activity in the area and benefit the economy by creating jobs, improving quality of life and increasing disposable income.

| <b>Assessment: Socio-economic impact</b> |   |                 |                  |                    |                     |               |
|--|---|-----------------|------------------|--------------------|---------------------|---------------|
| <b>Nature</b>                            | Effects on the level of economic activity in the area due to a new development. |                 |                  |                    |                     |               |
|  | <b>Extent</b>   | <b>Duration</b> | <b>Intensity</b> | <b>Probability</b> | <b>Significance</b> | <b>Status</b> |
|  | National  | Long term       | Medium           | Highly probable    | High                | Positive      |



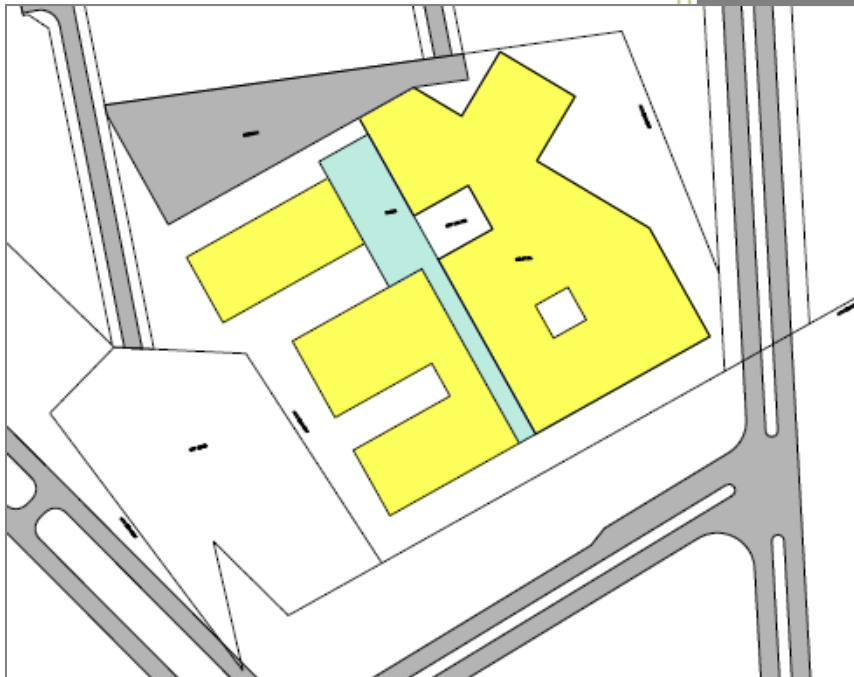
# *APPENDIX G*

Environmental Management Programme (EMPr)



# Draft Environmental Management Programme (EMPr)

Proposed Hospital Development on Portion 1 of Erf 22011,  
Bloemfontein



Compiled by:  
**SPATIAL SOLUTIONS  
INC**

Property Valuers and Environmental  
Consultants

P O Box 28046  
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9310

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**June 2017**

# 1. INTRODUCTION

## 1.1 Project description

MPC Developers proposed to develop a hospital and ancillary facilities on Portion 1 of Erf 22011, Bloemfontein. The site measure 3.5539 ha and is located adjacent to and to the north of the Bible House on Nelson Mandela Drive near the N1 western bypass. (refer to Figure 1 below).



Figure 1: Locality of the development site.

Also refer to the proposed site development plan in Annexure A.

## 1.2 Applicant details

### **MPC Developers**

P.O. Box 27196  
Erhlich Park  
BLOEMFONTEIN  
9312

Contact person: Christo Nienkemper  
Tel: 082 5522444  
E-mail: christo@nienkempergroup.co.za

## 1.3 Objectives of the EMPr

The EMPr aims to fulfill the requirements as specified in Appendix 4 of Regulations No. R. 982 (4 December 2014) in terms of the National Environmental Management Act (Act 107 of 1998), with the following objectives:

- To identify, predict and evaluate actual and potential impacts on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts, maximizing benefits and promoting compliance with the principles of environmental management;
- To identify and employ the modes of environmental management best suited to ensuring that the activity is pursued in accordance with best environmental management practices;
- To be able to respond to unforeseen events;
- To provide feedback on compliance.

## **1.4 Implementation of the EMPr**

- i) The Applicant will act as the Project Manager and will be responsible for the implementing and supervision of the EMPr and will have overall responsibility for ensuring that the provisions of the EMP are implemented. The Applicant will be assisted in this task by the Environmental Control Officer (ECO).
- ii) The Conditions of the Environmental Authorisation and recommendations of the EMPr should be included in tenders and construction / operational contracts, where necessary.
- iii) All contractors should be supplied with a copy of the EMPr and it should be ensured that construction and operational staff adhere to the mitigation measures.

## **1.5 Role of the ECO**

An ECO should be appointed prior to the commencement of construction activities. The ECO will have the following responsibilities:

- Attendance of site meetings if deemed necessary by the ECO or Project Manager;
- Advising the Project Manager and contractors on environmental issues within the defined work areas;
- Assisting in finding environmentally acceptable solutions to development and construction problems;
- Inspecting the site at a frequency determined by the stage of the project to establish compliance with environmental provisions;
- Reviewing the site logbook with regard to records of site activities that may pertain to the environment;

- Recommending corrective action to the Project Manager where construction activities are not in compliance with the EMPr;
- Keeping diligent records of communication with the Project Manager;
- Liaise with the Heritage Consultant, if and when necessary;
- Run induction courses on environmental awareness for contractors' staff and supervisors;
- Provide assistance on environmental issues;
- The ECO shall keep record of construction activities, problems identified and transgressions noted;
- Liaise with registered interested and affect parties during especially the construction phase of the project. After the construction phase their negotiations should revert to the developer and concessionaire if applicable.

## **1.6 Environmental Awareness Plan**

During site establishment and before construction activities commence, the ECO will inform all contractors of the following:

- Point out the areas that are not to be impacted on and that require protection, if any;
- Explain the possible impacts as identified in the EIA;
- Inform construction staff of the conditions of the Environmental Authorisation and recommendations of the EMPr;
- Explain risks and emergency procedures;
- Impose an understanding of pollution and degradation of the environment that may result from the construction work;
- Advise on the importance of containing the footprint of the construction site; and
- Advise on the aims of rehabilitation, post construction.

The above should also be communicated to any new employees that join the team during the construction period.

## **2. PREPARATION OF THE EMPR**

### **2.1 Person(s) who prepared the EMPr**

Marguerite Cronje (for Spatial Solutions Inc)

P.O. Box 29729

Danhof

BLOEMFONTEIN

9310

Tel: 082 7020547

E-mail: margueritecronje@gmail.com

### **2.2 Expertise of the person(s) who prepared the EMPr**

Education:

- B.Sc. (Zoology), University of the Free State, South Africa, 2002
- B.Sc. Honnours (Zoology), University of the Free State, South Africa, 2003
- M.Sc. Diploma (Equine Science), University of Edinburgh, Scotland, UK, 2005
- Masters in Environmental Management, University of the Free State, South Africa, 2008

Experience:

- 10 years of environmental management experience through conducting Environmental Impact Assessments, compiling Environmental Management Plans and monitoring construction phases of various types of projects.

### 3. IMPACT MANAGEMENT ACTIONS & MITIGATION MEASURES

#### 3.1 Planning / pre-construction phase

##### 3.1.1 Licenses & Permits

Necessary Water Use Licenses (WULA) need to be obtained for construction work within 500m of watercourses / wetland areas.

Permits for the removal of the protected Wild Olive trees (*Olea europaea* subsp. *africana*) need to be obtained.

##### 3.1.2 Site documentation

A copy of the EMPr and Environmental Authorisation should be available on site.

##### 3.1.3 Establishment of Access Roads

Some additional roads may be constructed as access roads to the area where no roads presently exist. These roads must be constructed where roads are intended as per the layout plan.

##### 3.1.4 Location of Contractor's Camp

The Project Manager and ECO must recommend and approve the location of any contractor's camp, which is the demarcated area where the contractor will establish offices, workshops and storage facilities, prior to its establishment.

In choosing a site for the camp:

- Choose as level an area as possible;
- If possible, the camp must be located within the construction site area.

Extension or movement of the construction camp must be agreed by the ECO.



If possible, the construction camp and site must only have one access route, which should be maintained in an adequate condition so as to minimise dust and erosion. Where possible, existing roads and tracks must be used, and upgraded to cope with the heavy construction plant.

#### 3.1.5 Construction Employees

Construction workers should not be housed on site.

Designated eating areas are recommended and clean water should be made available daily to workers on site.

#### 3.1.6 Sanitary Facilities

An adequate number of self-contained chemical toilets must be established on site, which must be easily accessible to construction workers. The Contractors must supply toilet paper at all toilets, and will be responsible for the maintenance and servicing.

Contractors must ensure that no spillage occurs when chemical toilets are cleaned, and that the contents are properly stored and removed off-site. A contingency plan for spills from toilets must be supplied by the Contractors and approved by the Project Manager / Implementing Agent and ECO.

Toilets must be placed outside areas susceptible to standing or flowing water, and siting must be done in consultation with the Project Manager and ECO.

Performing ablutions outside toilet is strictly prohibited.

#### 3.1.7 Safety and Security

The contractors must comply with the Occupational Health and Safety Act, National Building Regulations and any other national, regional or local regulations with regard to safety on site. Construction contracts must include safety and security measures for staff.

Fire extinguishers must be available, where required.

Entrance control during construction may be required. Unauthorised entry to construction areas should not be allowed.

### 3.2 Construction phase

Table 2 below indicates the impact management aspects and recommended actions to be taken during the construction phase.

Table 2: Construction Phase Mitigation

| Item | Aspect   | Mitigation Measure  |
|------|----------|---|
| 1.   | Trenches | <ul style="list-style-type: none"><li>• Trenching will be kept to a minimum through the use of a single trench for different services.</li><li>• The planning and selection of trench routes will be undertaken in liaison with the ECO and cognisance must be given to minimise the potential for soil erosion, disturbance of indigenous vegetation, the pit-trapping of mammals, reptiles, amphibians, insects, etc.</li><li>• Trench routes with permitted working areas will be clearly defined and marked beforehand with clear indicators.</li><li>• Trench lengths must be kept as short as practically possible.</li><li>• Trenches must be refilled to flush with (or slightly higher to allow for settlement) the surrounding land surface to minimise erosion. Excess soil will be stockpiled in an appropriate manner.</li><li>• After refilling, trenches and disturbed working areas must be planted with a suitable plant species and</li></ul> |

|    |                                 |  |
|----|---------------------------------|--|
|    |                                 | watered where practical.   |
| 2. | Topsoil stockpiles              | <ul style="list-style-type: none"> <li>• Topsoil (top 300mm of natural soil including vegetation and organic mater) must be removed during site clearance for re-use in the final landscaping of the site.</li> <li>• The Project Manager and ECO must identify a suitable site for stockpiling that is: <ul style="list-style-type: none"> <li>○ Removed from the working area;</li> <li>○ In a sheltered position so that the soil will not be exposed to the effects of erosion;</li> <li>○ Removed from drainage lines to minimise the risk of being washed away;</li> <li>○ Removed from areas of indigenous vegetation; and</li> <li>○ Removed from the base of a bank so that run-off from the top of the bank does not cause ponding of water along the stockpile.</li> </ul> </li> <li>• Stockpiles must be neat, must not exceed 3m in height, and must be convex at the top to promote run-off.</li> <li>• Weeds appearing on stockpiled topsoil must be removed by hand before seeding.</li> <li>• For stockpiling of less than one month, temporary erosion measures must be implemented by means of a secured cover of hessian or other suitable alternative.</li> </ul> |
| 3. | Handling & storage of materials | <ul style="list-style-type: none"> <li>• All chemicals used during the development, including fuel for the construction vehicles, should be stored in proper storerooms or protected areas to prevent pollution.</li> <li>• Vehicles should be serviced at designated areas. No oil, diesel or other chemicals may be spilled or</li> </ul>  |

|    |  |   |
|----|--|---|
|    |  | <p>discharged anywhere.</p> <ul style="list-style-type: none"> <li>• No construction material shall be stockpiled on the surrounding vegetation.</li> <li>• Where applicable, the contractors must ensure that all relevant national, regional and local legislation regarding storage, transport, use and disposal of petroleum, chemical, harmful or hazardous substances and materials are adhered to, where necessary.</li> <li>• All environmental problems occurring on the site such as chemical spillage, wasteful water disposal, etc. should be reported to the Project Manager and ECO.</li> </ul> |
| 4. | Concrete mixing  | <ul style="list-style-type: none"> <li>• Mixing should be confined to an impervious and contained area.</li> <li>• Excess waste concrete should be disposed of at a licensed landfill site.</li> </ul>  |
| 5. | Waste management (all construction debris and domestic waste produced during the construction phase) | <ul style="list-style-type: none"> <li>• The contractor will be responsible for the removal of construction waste.</li> <li>• Suitable containers should be placed on site to collect all solid waste. These should be emptied regularly.</li> <li>• No littering is permitted. During the construction period the site shall be maintained in a neat and tidy condition.</li> <li>• All solid waste produced during the construction phase should be disposed of at the nearest licensed landfill site.</li> <li>• No dumping, burning or burying of waste may take place on site.</li> </ul>                |
| 6. | Soil, erosion & vegetation   | <ul style="list-style-type: none"> <li>• Care must be taken not to negatively affect the sensitive rocky outcrops and wetland ecosystems.</li> </ul>  |

|     |                                      |  |
|-----|--------------------------------------|--|
|     |                                      | <ul style="list-style-type: none"> <li>• Construction activities may not be allowed to impact areas identified for protection.</li> <li>• Measures to control erosion must always be applied.</li> <li>• Weed control measures must be applied to eradicate noxious weeds.</li> <li>• No fire wood may be collected in the veld.</li> </ul>  |
| 7.  | Drilling & blasting<br>(if required) | <ul style="list-style-type: none"> <li>• If blasting is required, it is the sole responsibility of the Contractors to obtain a blasting permit and abide by the conditions of the Explosives Act and the Inspector of Explosives.</li> <li>• Blasting will only be permitted at such times as agreed by the Project Manager and ECO, in consultation with the Contractor, and must preferably occur at the same time each day.</li> <li>• Charge sizes must be set so as to ensure that no damage is caused to surrounding areas. The Contractors must allow for good vibration monitoring equipment on site at all times during blasting operation and record keeping during blasting operations is of vital importance.</li> <li>• Before doing any blasting, the relevant occupants / owners of surrounding land must be notified, and any concerns addressed.</li> </ul> |
| 8.  | Dust control                         | <ul style="list-style-type: none"> <li>• Appropriate dust suppression measures must be used when dust generation is unavoidable, e.g. dampening with water, particularly during prolonged periods of dry weather.</li> </ul>   |
| 9.  | Noise control                        | <ul style="list-style-type: none"> <li>• Construction activities should be limited to normal working hours.</li> </ul>   |
| 10. | Discovery of artefacts               | <ul style="list-style-type: none"> <li>• If <i>in situ</i> fossil material is exposed, archaeological material is uncovered, or graves are found as a result of excavations, the ECO and the specialist should be</li> </ul>   |

|  |  |                |
|--|--|----------------|
|  |  | notified asap. |
|--|--|----------------|

### **3.3 Post construction rehabilitation**

#### **3.3.1 Site Clean-up**

The Contractor(s) must ensure that all structures, equipment, materials and facilities used for construction activities are removed upon completion of the project. The Contractor must clear and clean the construction site to the satisfaction of the Project Manager and ECO.

All waste, equipment, materials, etc. used during construction must be cleared from the site.

#### **3.3.2 Landscaping**

Grass, tree and shrub species occurring in the region can be used to rehabilitate disturbed areas, if necessary.

All exotic, and especially invasive plant species must be eradicated.

#### **3.3.3 Erosion management**

Rehabilitation of disturbed areas is important to help the recovery of the vegetation. Any barren soil patches should be paved or landscaped to avoid erosion during heavy thunder storms.

### **3.4 Operational phase**

The following recommendations should be implemented during the operational phase of the development to ensure sustainability and best environmental practice:

- Energy efficient technologies and water use efficiency should be applied as far as possible.

- Where possible, recyclable materials (glass and paper) should be separated from the general solid waste and taken to a recycling depot.

## **4. COMPLIANCE AND MONITORING**

### **4.1 On-site Environmental Representative**

Apart from the ECO, it is recommended that an Environmental Representative forms part of the Project Manager or contractor's team and is available on site on a daily basis to perform visual checks of the site activities and acts as a liaison between contractors and the ECO.

### **4.2 Environmental Monitoring Reports / Audits**

The ECO will compile monthly environmental monitoring reports which must be kept on site and made available for inspection to any relevant competent authority.

### **4.3 Non-conformance and Corrective Action**

Issues of non-conformance noted by the ECO will be communicated to the Project Manager, who will be responsible for ensuring that the relevant parties are informed of the non-conformance and that appropriate corrective actions are taken where necessary.

Environmental issues will be addressed at regular site meetings between the ECO, Project Manager and Contractor. The ECO will present verbal reports of any environmental concerns or issues that have arisen, and corrective actions that have been taken. Outstanding corrective actions will be discussed and agreed at these

meetings. Issues relating to complaints or comments received from the public will also be discussed at these meetings.

Minutes of these meetings will be prepared / approved by the Project Manager and copied to all attendees before the next meeting. The frequency of the site meetings will be agreed by the ECO, Project Manager, the Contractors and other relevant parties prior to the commencement of the project.

#### **4.4 Internal Review**

Internal review of the EMPr will take place on an on-going basis by the ECO. Based on observations during site inspections and issues raised at the site meetings, the ECO shall determine whether any procedures require modification in order to improve the efficiency of the EMPr. Any changes or adjustments to the EMPr shall be registered in the records of the ECO. Therefore, adjustment and update of the original EMP document is not required when these ad hoc changes are made. The ECO's records shall be available to the relevant authority, the Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs, throughout the process and copies will be provided on request.

At the conclusion of the project, a final Environmental Monitoring Report for the construction phase will be compiled and submitted to the Project Manger. It will outline the implementation of the EMPr, especially the site clearing and rehabilitation undertaken by the contractors before site handover.



# *APPENDIX H*

Details of EAP and expertise

# CURRICULUM VITAE

## Marguerite Cronje

*Environmental Assessment Practitioner*

### PERSONAL INFORMATION:

ID : 8103090071089

ADDRESS : P.O. Box 29729  
Danhof  
Bloemfontein  
9310

MOBILE : 082 7020547

E-MAIL: margueritecronje@gmail.com

### MEMBERSHIP IN PROFESSIONAL SOCIETIES:

- Member, International Association for Impact Assessment South Africa (IAIASa)

### KEY QUALIFICATIONS:

- Key competencies and experience include:
  - research in zoology & environmental management
  - environmental impact assessment and
  - environmental management plans
  - environmental monitoring

### EDUCATION:

- B. Sc. (Zoology), University of the Free State, South Africa, 2002
- B. Sc. Honours (Zoology), University of the Free State, South Africa, 2003
- M.Sc. Diploma (Equine Science), University of Edinburgh, Scotland, UK, 2005
- Masters in Environmental Management, University of the Free state, South Africa, 2008

### COURSES:

- Environmental Impact Assessment Short Course - University of the Free State, South Africa, (2006)

## **CONFERENCES:**

- 10 years of Environmental Impact Assessments in South Africa – Somerset West (2008)
- Free State Provincial Waste Summit – Bloemfontein (2010)
- IAIAsa Conference – Thaba Nchu (2013)
- IAIAsa Conference – Port Elizabeth (2016)

## **EMPLOYMENT RECORD:**

- November 2005 – March 2013: MDA, Environmental Assessment Practitioner
- April 2013 – to date: Self-employed Environmental Assessment Practitioner

## **LANGUAGES:**

|           | <b>Speaking</b> | <b>Reading</b> | <b>Writing</b> |
|-----------|-----------------|----------------|----------------|
| English   | Excellent       | Excellent      | Excellent      |
| Afrikaans | Excellent       | Good           | Good           |

## **EXPERIENCE RECORD:**

- Environmental Assessment Practitioner: conducted numerous impact assessments and have compiled a number of Environmental Management Plans for quarries, roads and various developments since November 2005.
- Environmental Control Officer: monitored mainly road rehabilitation, pipeline construction and residential development projects.

## **PREVIOUS PROJECTS:**

### **Basic Assessments**

- Meqheleng cemetery, Ficksburg
- Townhouse development on Plot 8 Spitskop, Bloemfontein
- Various poultry facilities near Bloemfontein
- Roodewal hospitality development, Bloemfontein
- Townhouse development on Plots 4, 5 and 9 Shannon Valley, Bloemfontein
- Naval Hill reservoirs and pipeline
- Upgrading of the Vaal-Gamagara water pipeline
- Melkstroom residential development, Upington
- Soetdoring Nature Reserve chalet development
- New site for Mediclinic, Kimberley
- Installation of an incinerator at the Northern Cape Provincial Veterinary Laboratory in Kimberley

### **Full EIA's**

- Paballelo residential development, Upington
- Residential development on the Farm Pielanshoek 944, Bethlehem
- Verkykerskop town development
- Commercial and retail development on Erf 26360 and Farm Bergendal 1706, Bloemfontein
- Postmasburg "Greenfields" development (in process)
- Brandkop residential, retail and commercial development, Bloemfontein (in process)

### **Waste Licence Applications**

- Upgrading of the Sterkwater WWTW, Bloemfontein
- New North Eastern WWTW, Bloemfontein
- Augrabies waste transfer station
- Upgrading of the Hoopstad WWTW

### **Borrow Pit Mining Permits and Closure Reports**

- N1 road Springfontein – Trompsburg borrow pit closures
- N8 road Alexanderfontein – Petrusburg borrow pit permits

### **Environmental Monitoring**

- R30 road Vet River – Beatrix Mine
- Orange River – Colesberg water pipeline
- N1 road Springfontein – Trompsburg
- N8 road Tweespruit – Ladybrand
- Bloemhof Water Abstraction Works (in process)
- Lerato Park, Kimberley (in process)

# *APPENDIX I*

Specialists' declaration of interest

Refer to Specialist Reports.

# *APPENDIX J*

Additional Information