

Appendix 13: Locality & Sensitivity Maps_Updated Routes

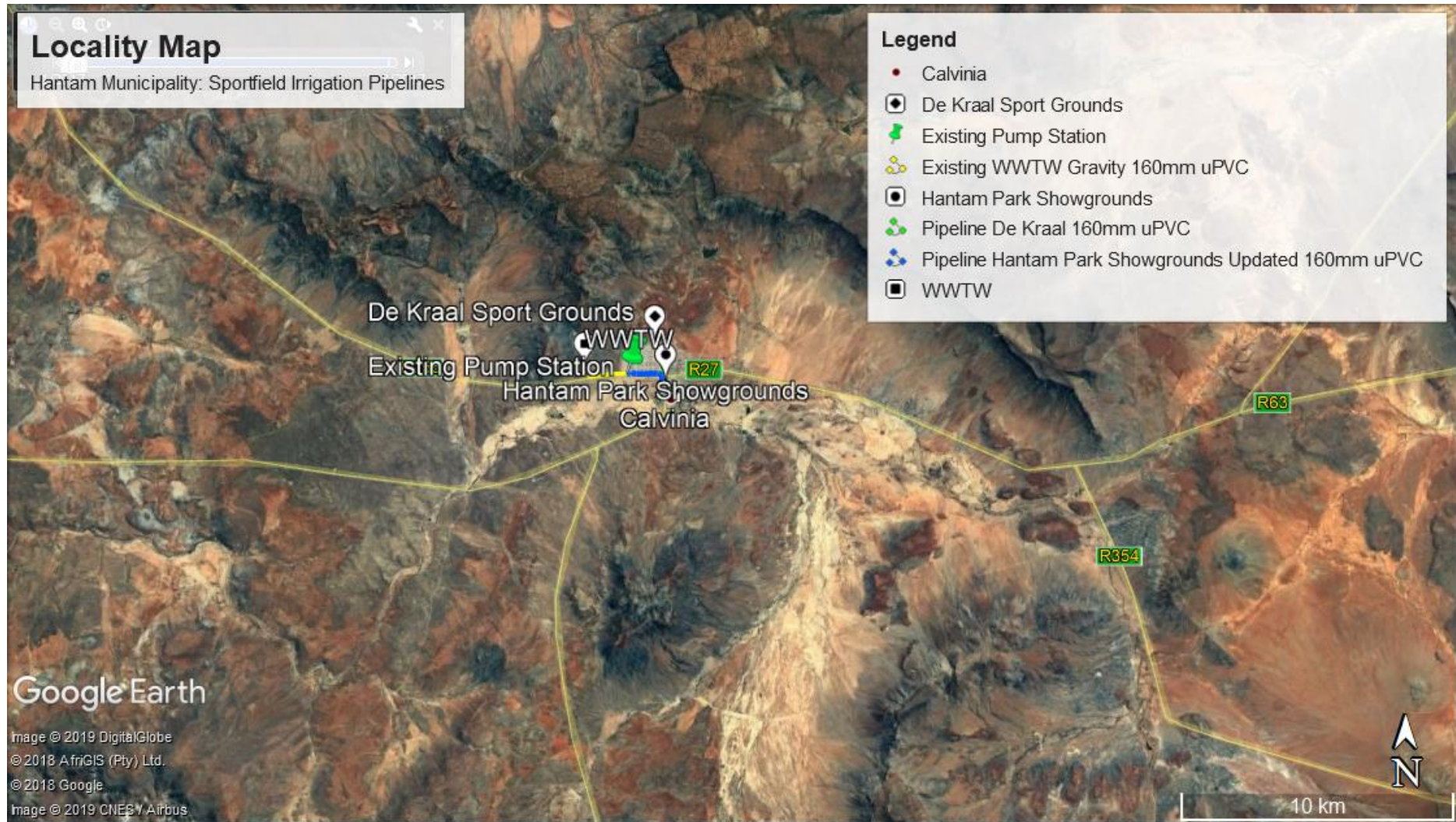


Figure 1: Google map indicating the locality of the proposed project, Newton, Calvinia, Northern Cape

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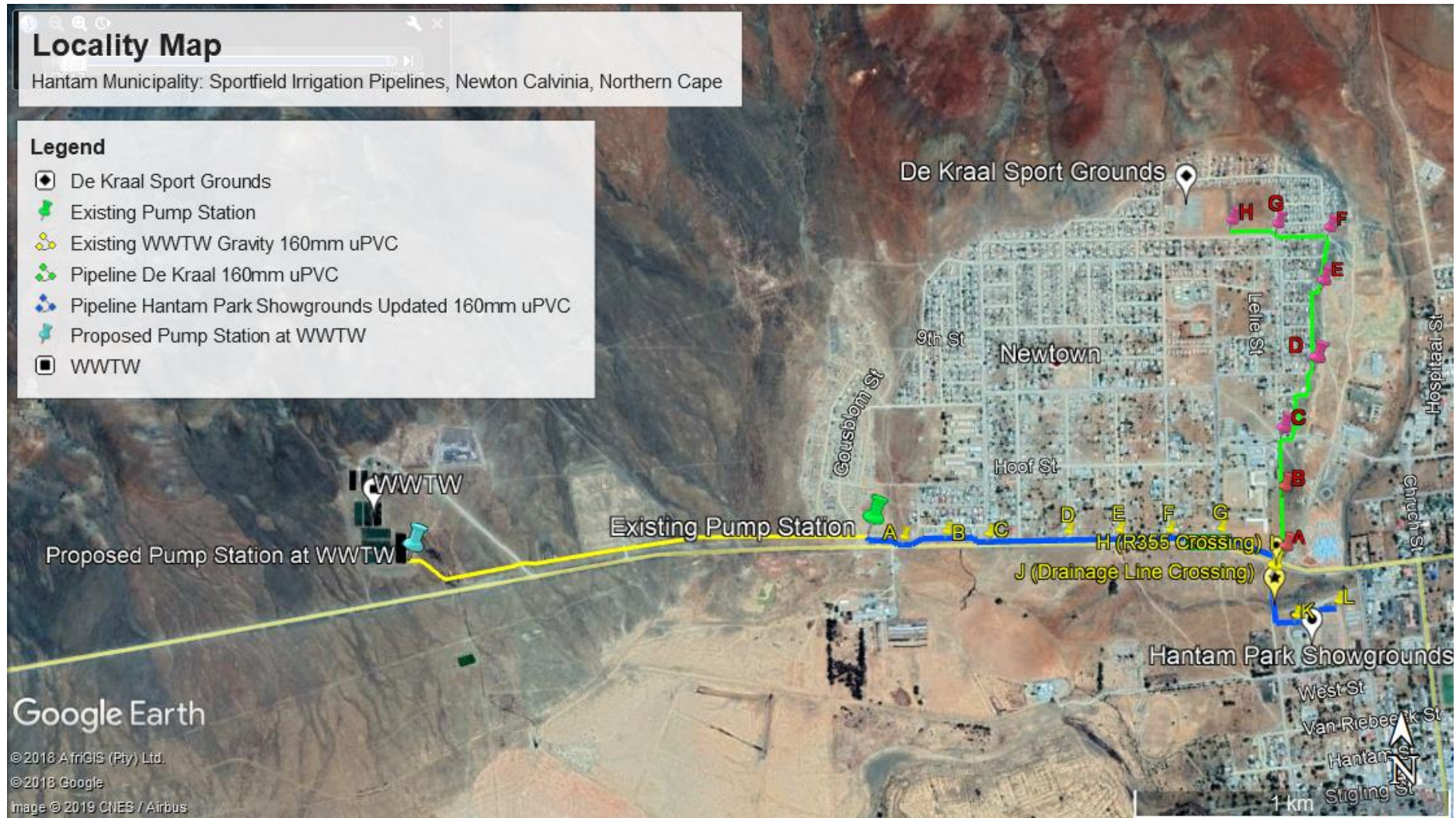


Figure 2: Google map indicating the existing pipeline from the WWTW to the pump station (yellow); Pipeline route to the Hantam Park showgrounds (blue); Pipeline to De Kraal sport grounds (green).

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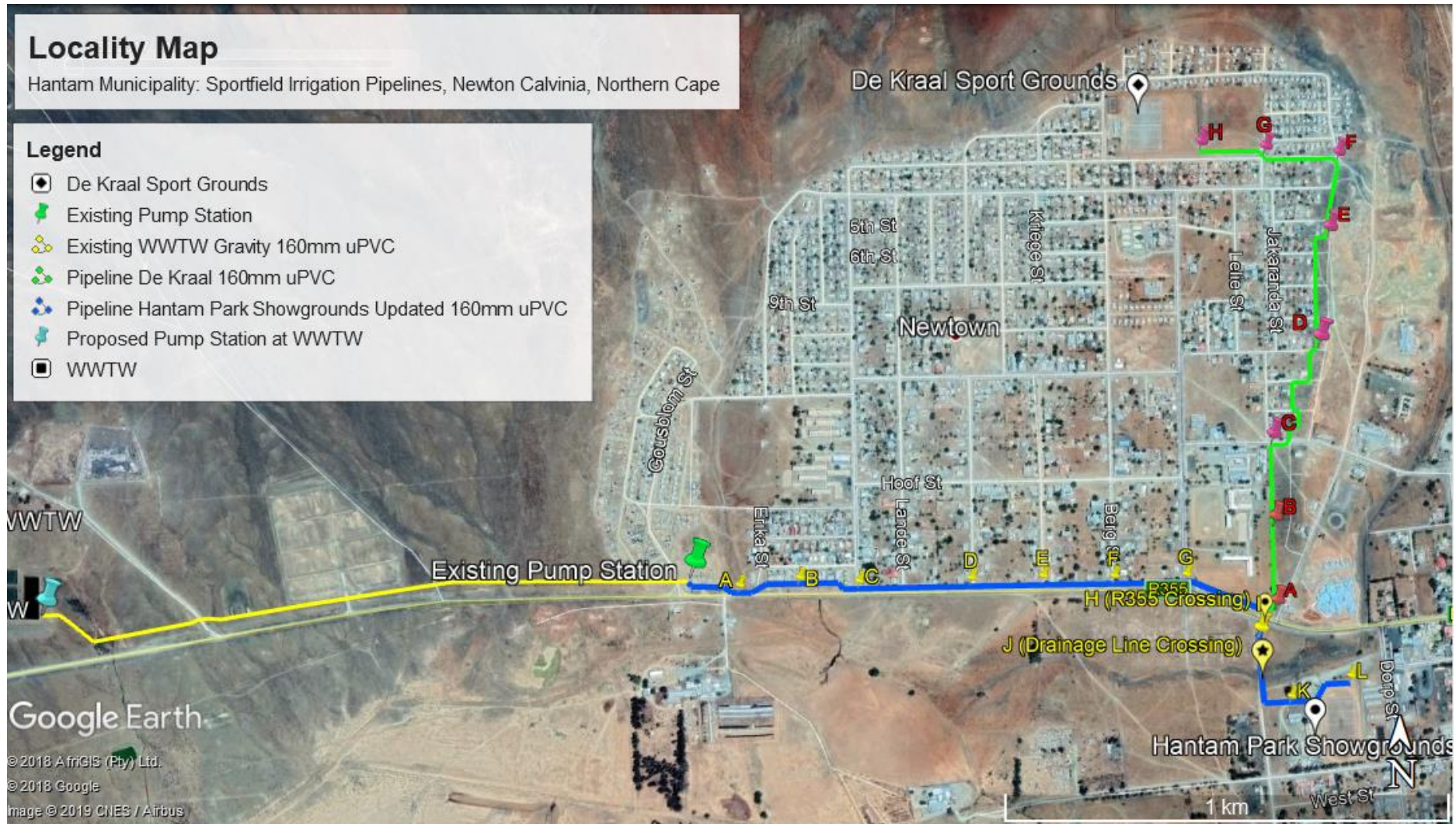


Figure 3: Google map indicating the existing pipeline from the WWTW to the pump station (yellow); Pipeline route to the Hantam Park showgrounds (blue); Pipeline to De Kraal sport grounds (green).

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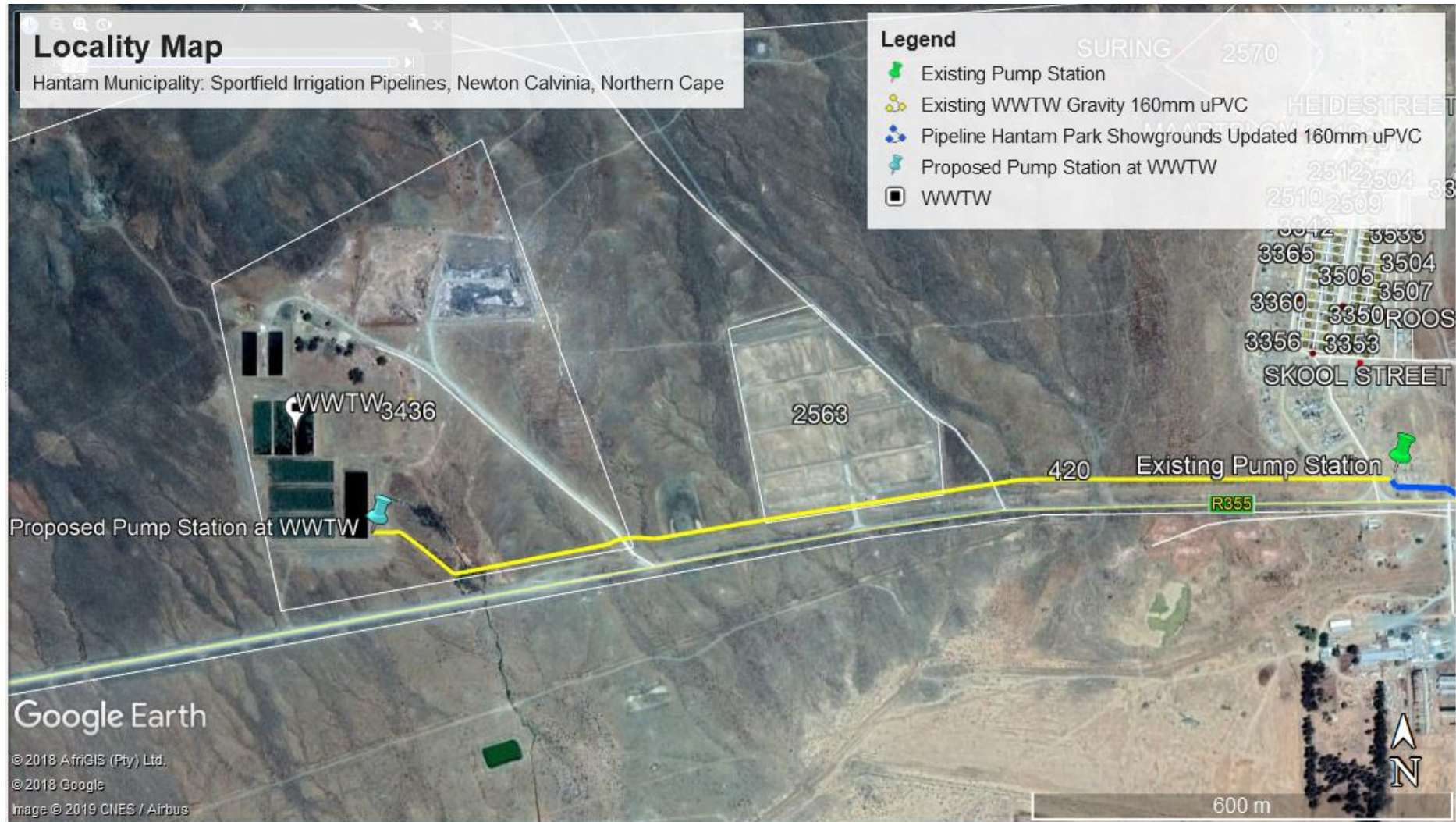


Figure 4: Google map indicating the existing Waste Water Treatment Works as well as the location of the proposed pump station at the WWTW. The map indicates the existing pipeline (yellow) to the existing pump station.

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Figure 5: Google map focussing on the pipeline to Hantam Park Showgrounds (blue) from the existing pump station until point E. Pipeline to cross a culvert at point A over an existing structure. Pipeline to remain on gravel roads and municipal land.

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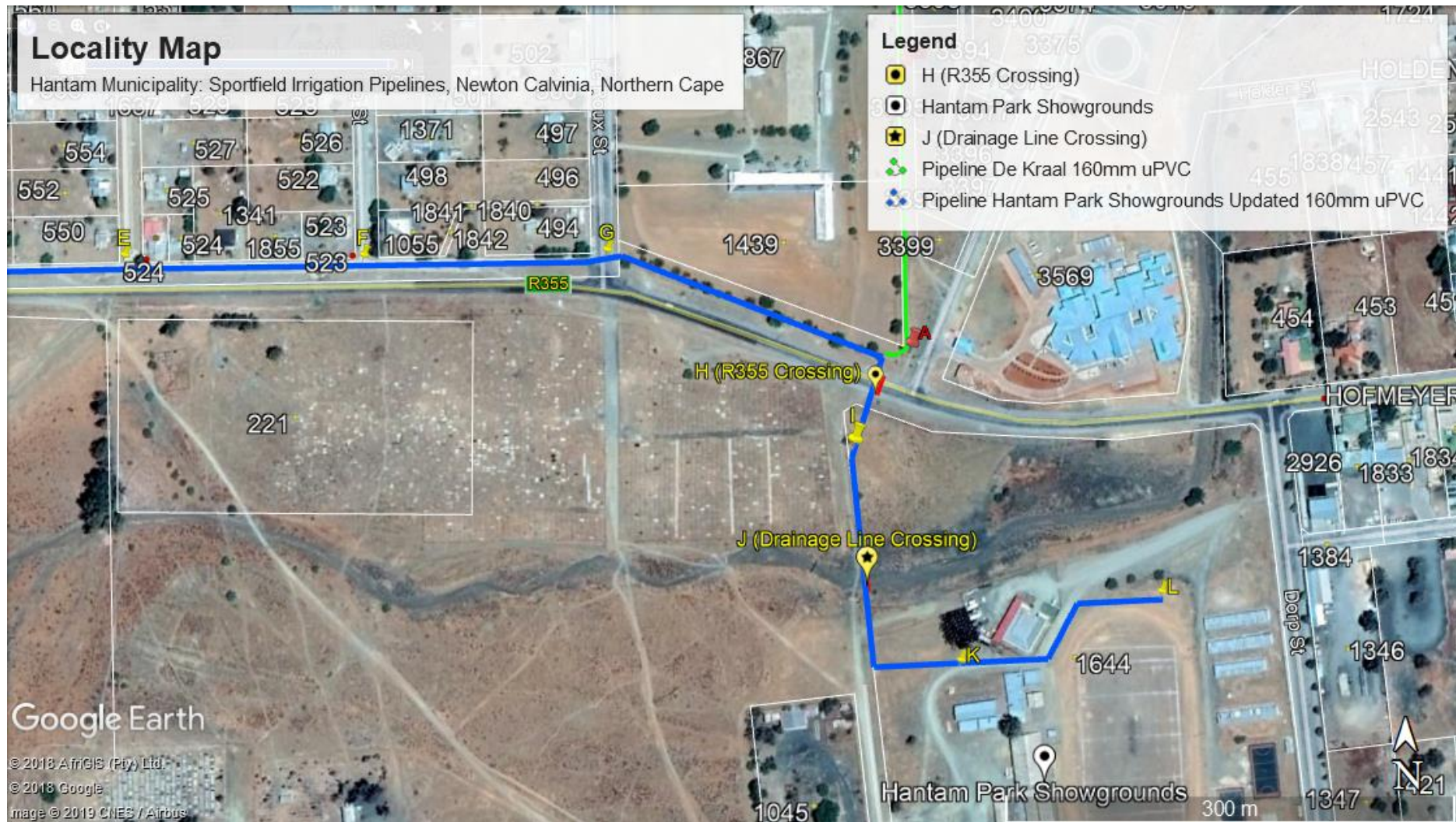


Figure 6: Google map focusing on the pipeline to Hantam Park Showgrounds (blue) from point E to where it will terminate into a 120KL reservoir at Hantam Park Showgrounds, point L. The pipeline to remain on gravel roads and municipal land. The pipeline to cross Le Roux Street at point G and to cross the R355 at point H. The pipeline to cross a modified drainage line at point J.

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Figure 7: Google map focussing on the pipeline route to De Kraal Sport Grounds from point A to C (green line). The pipeline to remain on municipal land. The map also indicated the pipeline route to Hantam Park Showgrounds (blue line).

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Figure 9: Google map focussing on the pipeline route to De Kraal Sport Grounds from point D to F (green line). The pipeline to remain on municipal land.

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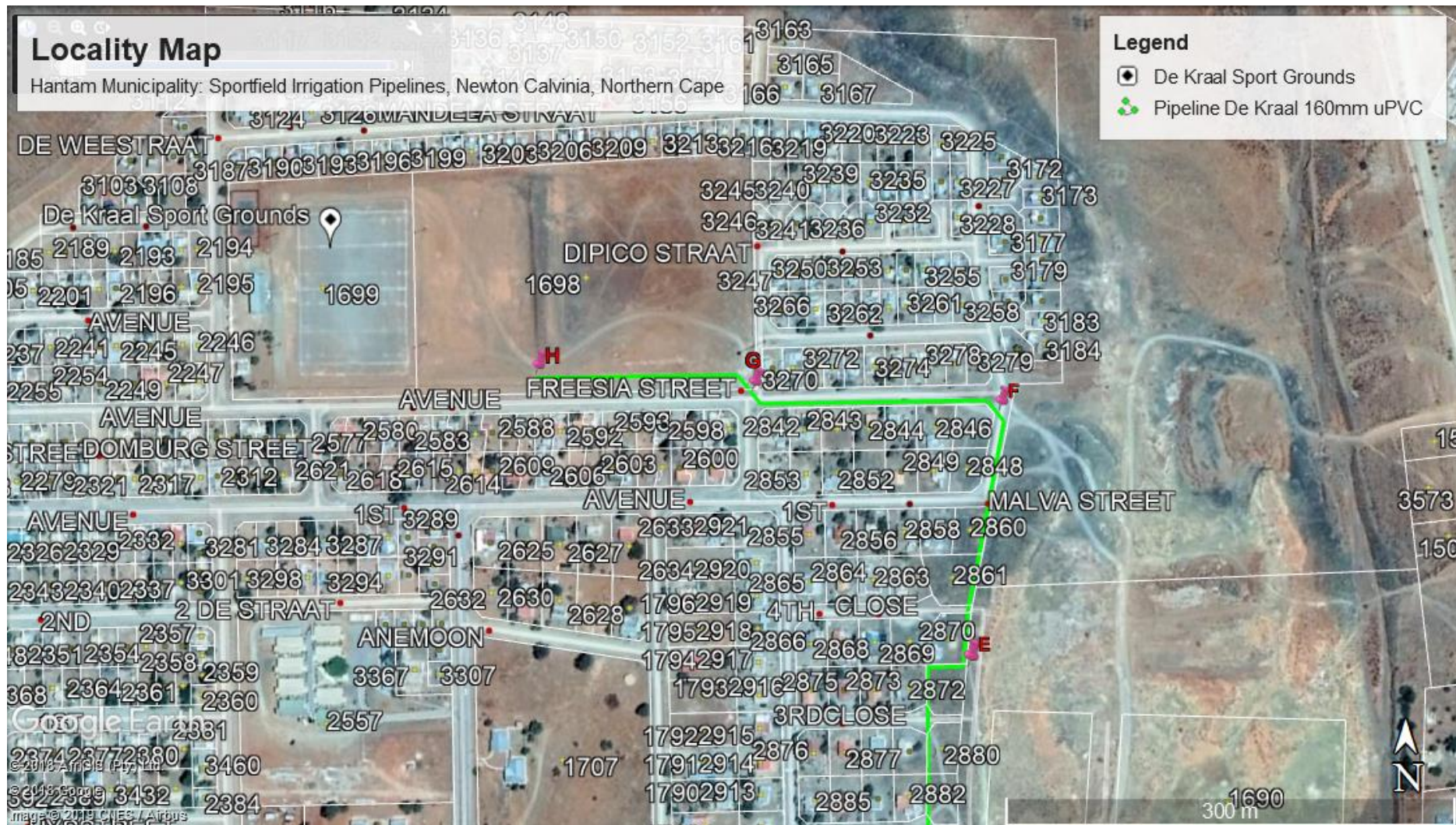


Figure 10: : Google map focussing on the pipeline route to De Kraal Sport Grounds from point E to H (green line). The pipeline to remain on municipal land. The pipeline to terminate in a 120KL reservoir at point H on De Kraal Sport Grounds.

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Pipeline Routes				
Point on Map	Coordinates	Erf number	Property Owner	Comments
Existing WWTW Pipeline/ Existing Infrastructure				
Proposed Pump Station at WWTW & Existing gravity pipeline	31°28'3.19"S 19°44'25.86"E	Erf 3436 Erf 2563 Erf 420	Municipal Land	Construction of the WWTW Irrigation Pump Station Existing gravity pipeline
Existing Pump station	31°28'0.35"S 19°45'21.12"E	Erf 420	Municipal Land	Existing pump station
New Pipeline to Hantam Park Showgrounds (160mmØ; ±1766m)				
Point on Map	Coordinates	Erf number	Property Owner	Comments
Existing Pump Station	31°28'0.35"S 19°45'25.93"E	Erf 420 Municipal Land	Municipality	
A	31°28'1.37"S 19°45'25.09"E	Municipal Land	Municipality	Pipeline to the north of the R355 in the road reserve. The proposed pipeline to cross the storm water culvert at point A on the existing structure. Culvert to be upgraded.
B	31°28'0.88"S 19°45'30.29"E	Municipal Land	Municipality	Pipeline to run parallel to the wall on disturbed land to Hantam Park Showgrounds.
C	31°28'1.14"S 19°45'35.36"E	Municipal Road	Municipality	Pipeline to fall on gravel road that runs parallel to the R355. Pipeline to run parallel to the fence to Hantam Park Showgrounds.
D	31°28'0.90"S 19°45'44.91"E	Municipal Road	Municipality	Pipeline route to fall on gravel road parallel to the R355. Pipeline route to run parallel to the fence towards the Hantam Park Showgrounds

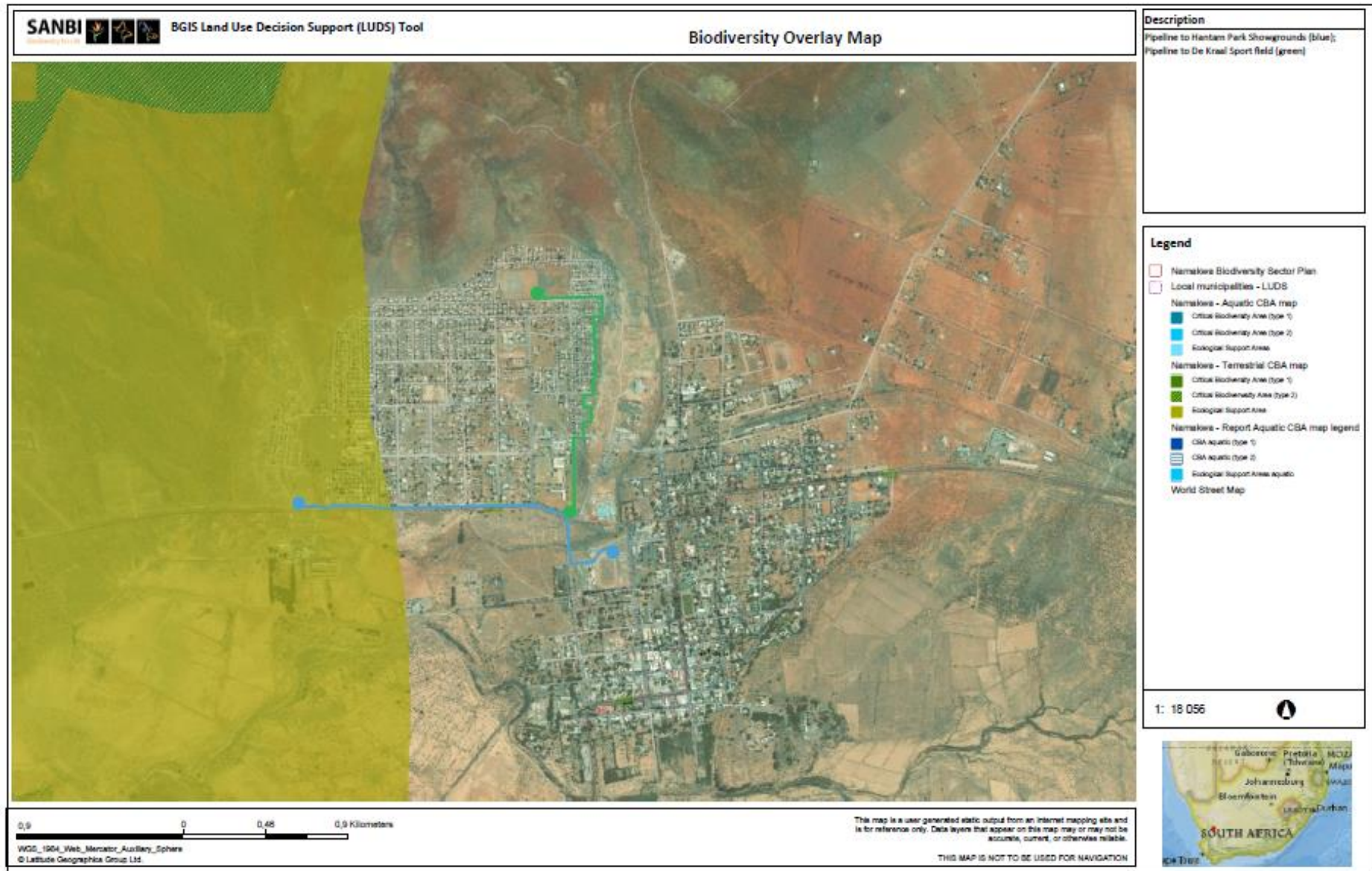
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E	31°28'0.75"S 19°45'51.03"E	Municipal Road	Municipality	Pipeline route to fall on gravel road parallel to the R355. Pipeline route to run parallel to the fence towards the Hantam Park Showgrounds
F	31°28'0.75"S 19°45'57.09"E	Municipal Road	Municipality	Pipeline route to fall on gravel road parallel to the R355. Pipeline route to run parallel to the fence towards the Hantam Park Showgrounds
G	31°28'0.63"S 19°46'3.24"E	Municipal Land	Municipality	Pipeline to cross Le Roux street, and run parallel to the fence next to the school towards Hantam Park Showgrounds.
H	31°28'3.62"S 19°46'10.06"E	Municipal Land & Provincial Road R355	Provincial Roads Department/ Municipality	Pipeline route to run parallel with the fence next to the school from where it is proposed to cross the R355, towards Hantam Park Showgrounds
I	31°28'4.81"S 19°46'9.47"E	Municipal Land Erf 1644	Municipality	Pipeline route to fall on the gravel road next to the cemetery towards the Hantam Park Showgrounds.
J	31°28'7.74"S 19°46'9.85"E	Municipal Land Erf 1644	Municipality	Pipeline to Hantam Park Showground to transverse the modified drainage line. The drainage line was transformed into a stormwater trench. Pipeline footprint to remain less than 10m ³ and less than 100m ² within the drainage line.
K	31°28'9.49"S 19°46'12.19"E	Municipal Land Erf 1644	Municipality	Pipeline to Hantam Showgrounds on transformed land.
L	31°28'8.01"S 19°46'17.27"E	Hantam Park Showgrounds Municipal Land Erf 1644	Municipality	Pipeline to end in a 120KLreservoir on Hantam Park Showgrounds.

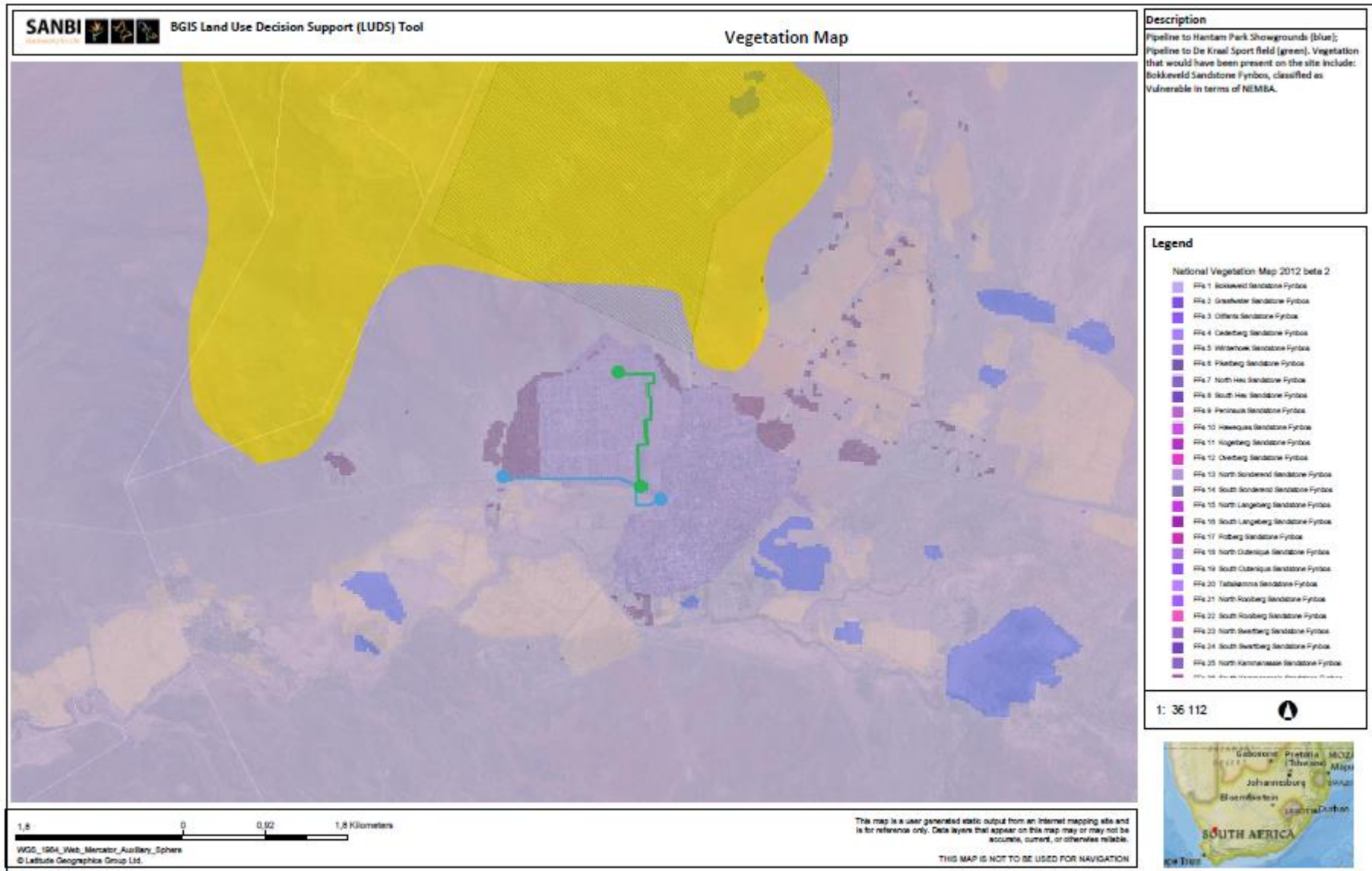
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New Pipeline to De Kraal Sport Grounds (160mmØ; ±1474m length)				
Point on Map	Coordinates	Erf number	Property Owner	Comments
A	31°28'2.71"S 19°46'10.92"E	Municipal Land	Municipality	Pipeline to De Kraal Sport Field on municipal servitude, not on private land/ erven.
B	31°27'56.61"S 19°46'10.76"E	Municipal land	Municipality	Pipeline to De Kraal Sport Field on municipal servitude, not on private land/ erven.
C	31°27'50.75"S 19°46'10.53"E	Municipal land	Municipality	Pipeline to De Kraal Sport Field on municipal servitude, not on private land/ erven.
D	31°27'43.73"S 19°46'14.50"E	Municipal land	Municipality	Pipeline to De Kraal Sport Field on municipal servitude, not on private land/ erven.
E	31°27'35.69"S 19°46'15.34"E	Municipal land	Municipality	Pipeline to De Kraal Sport Field on municipal servitude, not on private land/ erven.
F	31°27'30.16"S 19°46'16.13"E	Municipal land	Municipality	Pipeline to De Kraal Sport Field on municipal servitude, not on private land/ erven.
G	31°27'29.74"S 19°46'9.90"E	Municipal land	Municipality	Pipeline to De Kraal Sport Field on municipal servitude, not on private land/ erven.
H	31°27'29.38"S 19°46'4.43"E	De Kraal Sport Grounds Erf 1698	Municipal Land	Pipeline to end in a 120KL Reservoir at De Kraal Sport Grounds

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