Annexure A: Technical Requirements

Digital Doorway refurbishments, installations and connectivity

RFP No. 3487/05/11/2021

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Glossary

Abbreviation	Term	Description
CSIR	Council for Scientific and Industrial Research	A statutory body established in terms of Scientific Research Council Act 46 of 1988, as amended.
DD	Digital Doorway	The DD initiative provides a mechanism for unassisted learning to allow a user to become functionally computer literate. A variety of configurations of DD computer systems in the form of containers, ICT labs and school media servers are deployed across South Africa.

Technical Requirements

Bidders must comply with the technical requirements in this document. These requirements will be evaluated in the Technical Compliance Matrix – Annexure B. Bidders that wish to respond with solutions for this project **must complete the sheet in the Annexure B.** Failure to complete the technical compliance matrix will exclude the bidder from being considered.

1 Requirement Level Keywords

To eliminate ambiguity, bidders are to interpret the meaning of functional (technical) requirements using the keywords; "must", "must not", "required", "shall", "shall not", "should", "should not", "recommended", "may", and "optional", as defined by the IETF RFC (Request For Comments) document designated as RFC2119.

MUST This word, or the terms "REQUIRED" or "SHALL", mean that the definition is an absolute requirement of the specification.

MUST NOT This phrase, or the phrase "SHALL NOT", mean that the definition is an absolute prohibition of the specification.

SHOULD This word, or the adjective "RECOMMENDED", mean that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.

SHOULD NOT This phrase, or the phrase "NOT RECOMMENDED" mean that there may exist valid reasons in particular circumstances when the particular behaviour is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behaviour described with this label.

MAY This word, or the adjective "OPTIONAL", mean that an item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because the vendor feels that it enhances the product while another vendor may omit the same item. An implementation which does not include a particular option MUST be prepared to interoperate with another implementation which does include the option, though perhaps with reduced functionality. In the same vein an implementation which does include a particular option MUST be prepared to interoperate with another implementation which does not include the option (except, of course, for the feature the option provides.)

2 Technical Compliance

Bidders shall note the evaluation criteria applicable, and the weights attached to each criterion and complete the Technical Compliance Matrix accordingly.

3 Technical Evaluation Criteria

- The evaluation of the bidder's proposal will be based on their response to the Technical Compliance Matrix (in spreadsheet format) – Annexure B.
- The bidder must complete the Technical Compliance Matrix in accordance with the instructions tabled in the Technical Compliance Matrix spreadsheet. The Technical Compliance Matrix is a mandatory submission designed to facilitate evaluation.
- Each Work Package will be evaluated individually and must be completed in a **separate tab** in Annexure B.
- Bidders will be eliminated from further evaluation **for the specific route proposed** if their technical evaluation yields a score of less than 70 overall percentage points or a score of 0 on any individual criterion.

4 Work breakdown

This section describes the work to be executed in terms of work packages as detailed in Annexure A.

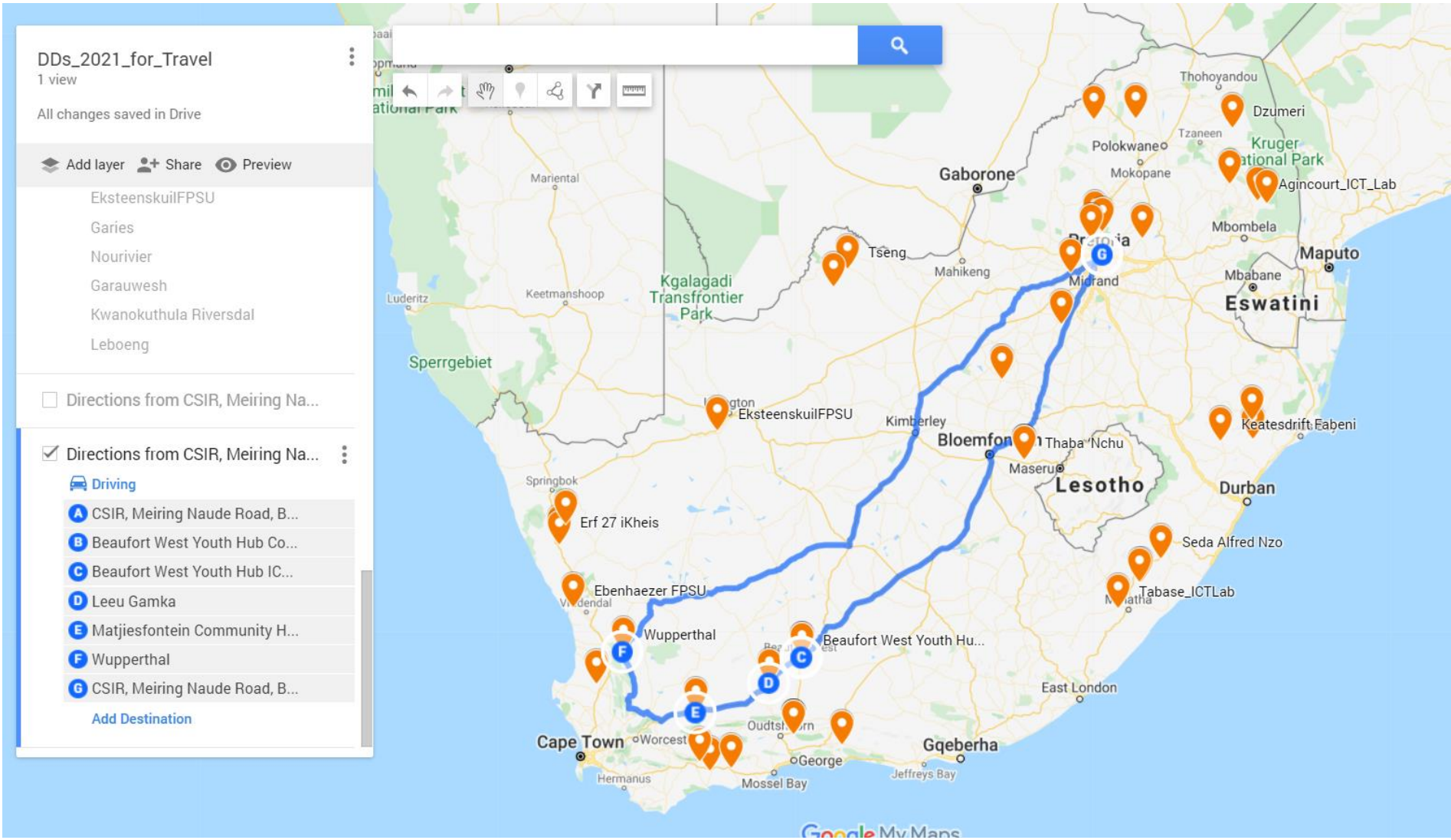
- Work packages 1 to 14 represent work to be done for each trip.
- Work packages 15 to 17 describe work to be done on a regular basis.

a. Work Package 1

Sites along route: Beaufort West Youth Hub Container - Beaufort West Youth Hub ICT Centre - Leeu-Gamka - Matjiesfontein Community Hall – Wupperthal.

WP1	**Beaufort West Youth Hub Container - Beaufort West Youth Hub ICT Centre - Leeu-Gamka - Matjiesfontein Community Hall – Wupperthal**				
Site name	**Latitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Beaufort West Youth Hub Container	-32.369369	22.580874	WC	Upgrade from Container DD V5.2 to V5.4	Appendix A – 2c
Beaufort West Youth Hub ICT Centre	-32.369117	22.580566	WC	Test 24 clients and upgrade media server	Appendix A – 2e
Leeu-Gamka	-32.768067	21.969114	WC	Use crane truck to relocate container in community Upgrade from Container DD V5.3 to V5.4	Appendix A – 1 Appendix A – 2d
Matjiesfontein Community Hall	-33.234484	20.584477	WC	Upgrade from Container DD V5.1 to V5.4	Appendix A – 2b
Wupperthal	-32.277032	19.21404	WC	Level container Upgrade from Container DD V5 to V5.4	Appendix A – 1 Appendix A – 2b

Note: A crane truck is required for this trip. The service provider is responsible to arrange the crane truck.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B Beaufort West Youth Hub Co...
C Beaufort West Youth Hub IC...
D Leeu Gamka
E Matjiesfontein Community H...
F Wupperthal
G CSIR, Meiring Naude Road, B...
Add Destination
Thohoyandou
Dzumeri
Polokwane
Tzaneen
Kruger National Park
Mokopane
Agincourt_ICT_Lab
Gaborone
Mariental
Mbombela
Tseng
Mahikeng
Maputo
Midrand
Mbabane
Eswatini
Kgalagadi Transfrontier Park
Luderitz
Keetmanshoop
Sperrgebiet
EksteenskuilFPSU
Kimberley
Bloemfon
Thaba 'Nchu
Keatesdrift
Eabeni
Springbok
Maseru
Lesotho
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Seda Alfred Nzo
Ebenhaezer FPSU
Tabase_ICTLab
Wupperthal
Beaufort West Youth Hu...
East London
Cape Town
George
Gqeberha
Mossel Bay
Hermanus
Jeffreys Bay
Google My Maps

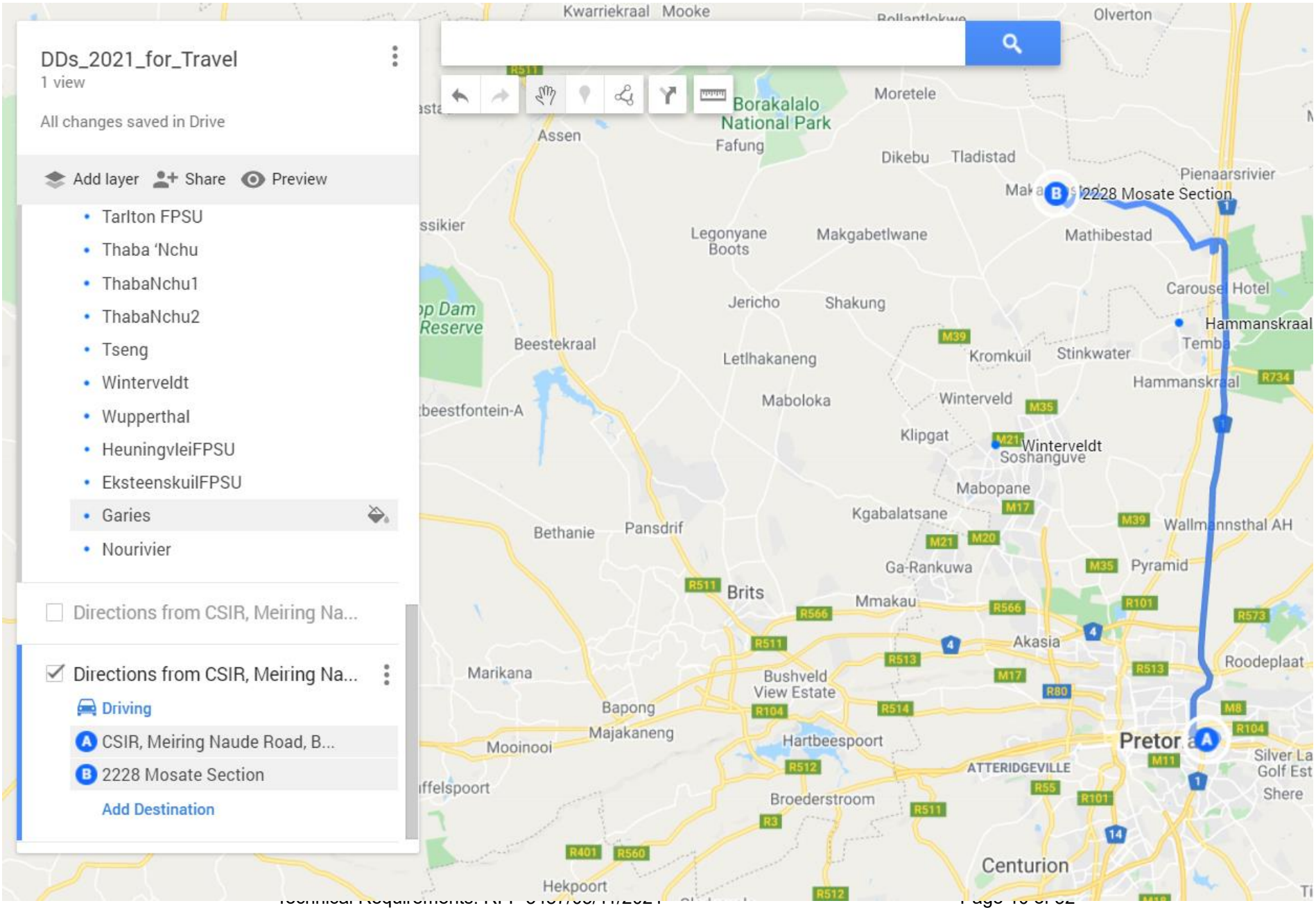
Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			4	2
2	• Depart from CSIR for Beaufort West • Upgrade the Beaufort West Youth Hub Container from V5.2 to V5.4 • Complete the upgrade & repairs • Configure software • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Beaufort West	10	1000	4	3
3	• Drive on to the Beaufort West ICT Lab. The ICT Lab is on the same premises as the Container • Test 24 Clients & upgrade the Media Server as per detailed instructions • Provide basic training • Complete sign-off documentation	NA	NA	NA	NA	4	3
4	• Depart from Beaufort West for Leeu Gamka • Meet the pre-arranged crane truck on site. Service provider is responsible for organising and hiring the crane truck. Move the container to a site within the area (site will be confirmed prior to departure) • Once the container has been relocated, upgrade the container from V5.3 to V5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Beaufort West	Leeu Gamka	2	160	8	4
5	• Depart from Leeu Gamka for Matjiesfontein Community Hall • Relocate the container within site to another position	Leeu Gamka	Matjies-fontein	2	160	8	4

Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
	• Once the container has been relocated, upgrade the container from V5.1 to V5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation						
6	• Depart from Matjiesfontein Community Hall for Wupperthal. • This site will include levelling the container. See detailed description • Upgrade container from V5 to V5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation • Crane Truck departs	Matjies-fontein	Wupperthal	5	300	8	2
7	• Depart from Wupperthal for CSIR / Pretoria	Wupperthal	CSIR, Pretoria	15	1400	N/A	N/A

b. Work Package 2

Work to be completed at 2228 Mosate Section.

WP2	2228 Mosate Section				
Site name	**Latitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
2228 Mosate Section	-25.236894	28.121115	NW	Relocate container on-site Upgrade Container DD from V5.2 to V5.4	CSIR will assist and supervise Appendix A – 1 Appendix A – 2c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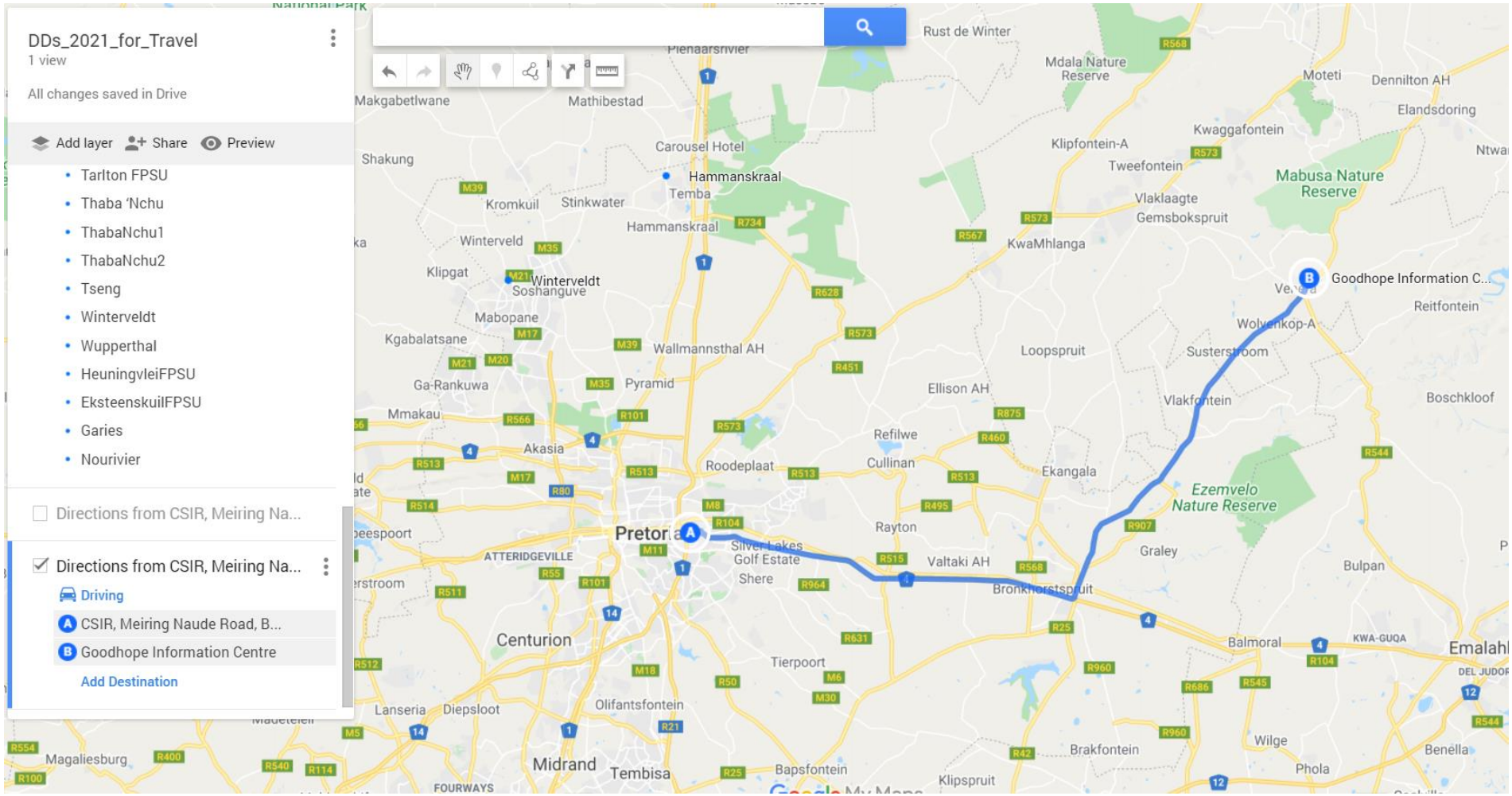
Kwarriekraal
Mooke
Olverton
Borakalalo National Park
Moretele
Assen
Fafung
Dikebu
Tladistad
Pienaarsrivier
2228 Mosate Section
Legonyane
Boots
Makgabetlwane
Mathibestad
Jericho
Shakung
Carousel Hotel
Hammanskraal
Beestekraal
Letlhakaneng
Kromkuil
Stinkwater
Maboloka
Winterveld
Klipgat
Wintervelt
Soshanguve
Mabopane
Kgabalatsane
Bethanie
Pansdrif
Wallmannsthal AH
Ga-Rankuwa
Pyramid
Brits
Mmakau
Akasia
Roodeplaat
Marikana
Bushveld
View Estate
Bapong
Majakaneng
Mooinooi
Hartbeespoort
Pretoria
ATTERIDGEVILLE
Broederstroom
Centurion
Hekpoort

Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up • A trailer/van is required that can transport 6m long steel beams		CSIR			2	2
2	• Depart from CSIR for 2228 Mosate Section • Remove both Solar roofs & batteries • Insert 3 50x50x3 square tube beams underneath container. Strap the beam to the feet under the container.* • Carefully lift container and move it to the new location behind the building. This will require manpower, not a crane truck • Upgrade container from V5.2 to V5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	2228 Mosate Section	1	100	8	4 + 12 (Local people)
3	• Depart from 2228 Mosate Section for CSIR / Pretoria	2228 Mosate Section	CSIR	1	100		

c. Work Package 3

Work to be completed at Good Hope Information Centre.

WP3	**Good Hope Information Centre**				
Site name	**Latitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Goodhope Information Centre	-25.469637	29.032737	MP	Upgrade Container DD from V5.2 to V5.4 Install new roof panels that will be provided	Appendix A – 2c CSIR will assist and super-vise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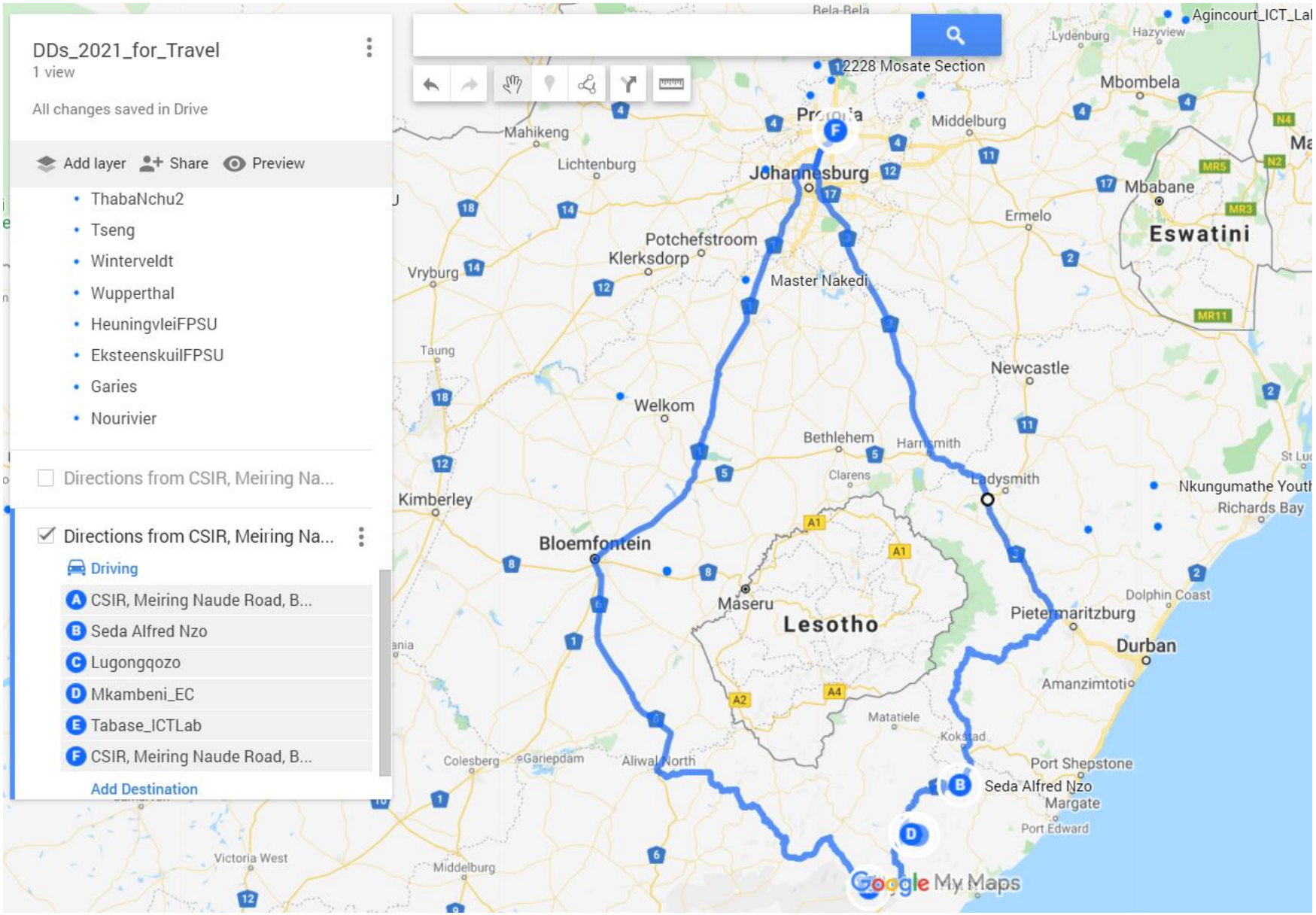
Soshanguve
Mabopane
Ga-Rankuwa
Mmakau
Akasia
Roodeplaat
Pyramid
Wallmannsthal AH
Carousel Hotel
Temba
Mathibestad
Makgabetlwane
Shakung
Kromkuil
Stinkwater
Winterveld
Klipgat
Kgabalatsane
Lanseria
Diepsloot
Olifantsfontein
Tierpoort
Bapsfontein
Klipspruit
Brakfontein
Refilwe
Cullinan
Ellison AH
Loopspruit
Rayton
Valtaki AH
Ekangala
Graley
Bronkhorstspruit
Balmoral
Wolvenkop-A
Susterstroom
Vlakfontein
Reitfontein
Boschkloof
Bulpan
Wilge
Phola
Benella
Emalahl
KWA-GUQA
Ezemvelo Nature Reserve
Mabusa Nature Reserve
Mdala Nature Reserve
Rust de Winter
Moteti
Dennilton AH
Elandsdoring
Kwaggafontein
Klipfontein-A
Tweefontein
Vlaklaagte
Gemsbokspruit
KwaMhlanga
Golf Estate
Shere
Silver Lakes
ATTERIDGEVILLE
FOURWAYS

Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up • A flat-bed trailer is required to move the two roof panels		CSIR			2	2
2	• Depart from CSIR for Goodhope Information Centre • Remove the damaged roof panels for return to CSIR • Install the new roof panels • Upgrade container from V5.2 to V5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Goodhope Information Centre	1.5	100	6	4
3	• Depart from Goodhope Information Centre for CSIR / Pretoria	Goodhope In-formation Centre	CSIR	1.5	100	N/A	N/A

d. Work Package 4

Sites along route: Seda Alfred Nzo - Lugongqozo - Mkambeni - Tabase ICT Lab

WP4	Seda Alfred Nzo - Lugongqozo - Mkambeni - Tabase ICT Lab				
Site name	**Lattitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Seda Alfred Nzo	-30.7984021	29.3758397	EC	Upgrade Container DD from V5.2 To V5.4	Appendix A – 2c
Lugongqozo	-31.1728085	29.00454	EC	Upgrade School	Appendix A – 2e
Mkambeni_EC	-31.1686	28.9518	EC	Upgrade School	Appendix A – 2e
Tabase_ICTLab	-31.5695	28.5732	EC	Upgrade School	Appendix A – 2e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B Seda Alfred Nzo
C Lugongqozo
D Mkambeni_EC
E Tabase_ICTLab
F CSIR, Meiring Naude Road, B...
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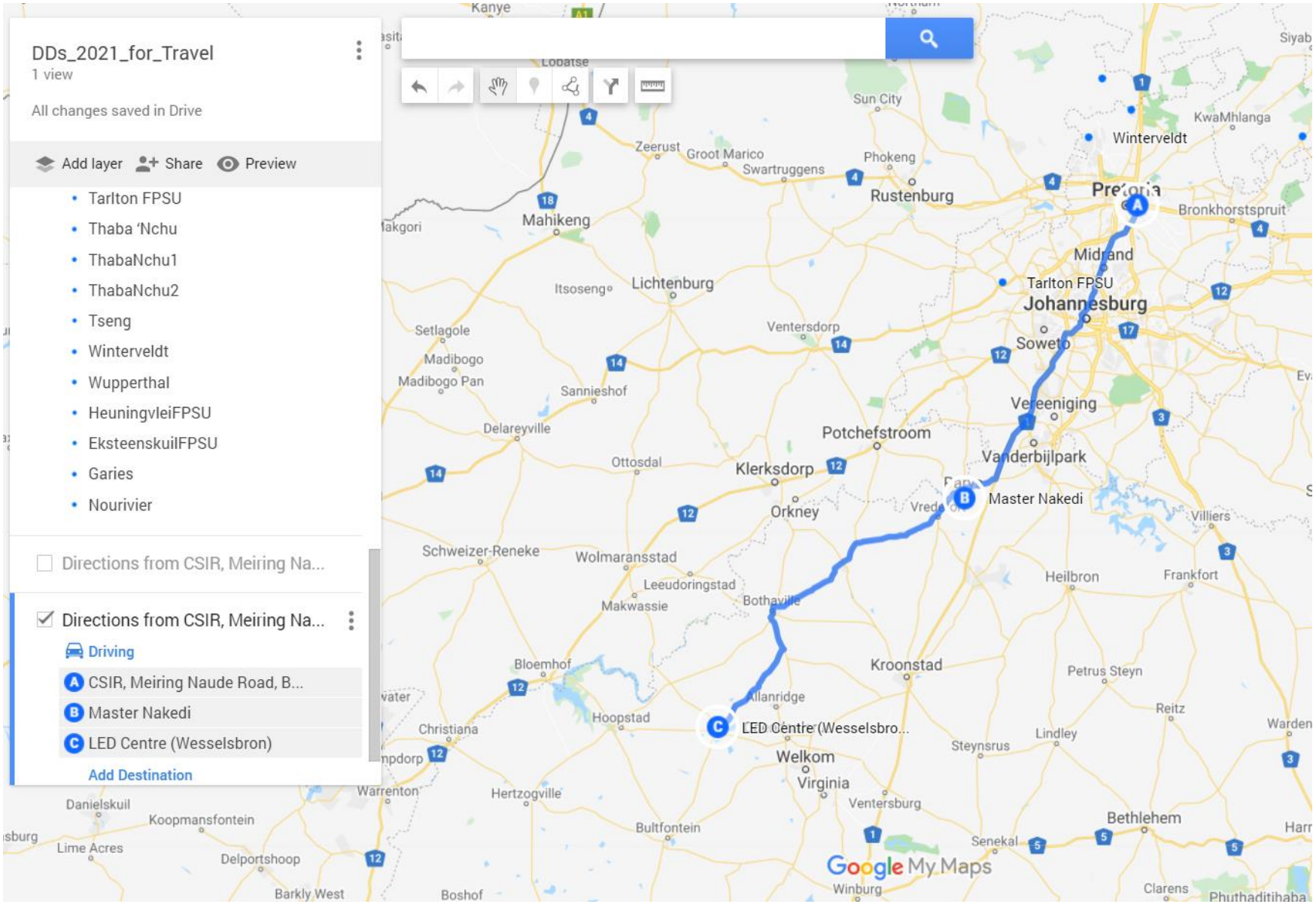
12228 Mosate Section
Johannesburg
Middelburg
Mbombela
Mbabane
Eswatini
Ermelo
Potchefstroom
Klerksdorp
Master Nakedi
Vryburg
Welkom
Kimberley
Bloemfontein
Newcastle
Ladysmith
Bethlehem
Clarens
Maseru
Lesotho
Pietermaritzburg
Durban
Dolphin Coast
Amanzimtoti
Port Shepstone
Seda Alfred Nzo
Margate
Port Edward
Richards Bay
Nkungumathe Youth
Matatiele
Aliwal North
Colesberg
Gariepdam
Victoria West
Middelburg
Google My Maps

Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			2	2
2	• Depart from CSIR and drive to Seda Alfred Nzo • Upgrade Container DD from V5.2 to 5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Seda Alfred Nzo	9	800	4	4
3	• Depart from Seda Alfred Nzo for Lugongqozo • Upgrade School • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Seda Alfred Nzo	Lugongqozo	2	100	3	2
4	• Depart from Lugongqozo for Mkambeni • Upgrade School • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Lugongqozo	Mkambeni	0.5	10	3	2
5	• Depart from Mkambeni for Tabase ICT Lab • Upgrade School • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Mkambeni	Tabase ICT Centre	2	90	3	2
6	• Depart from Tabase ICT Lab for CSIR	Tabase ICT Centre	CSIR	11	1000		

e. Work Package 5

Sites along route: Master Nakedi - LED Centre (Wesselsbron)

WP5	Master Nakedi - LED Centre (Wesselsbron)				
Site name	**Latitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Master Nakedi	-26.921308	27.49094	FS	Upgrade DD Container from V5.2 to V5.4	Appendix A – 2c
LED Centre (Wesselsbron)	-27.8325371	26.3728789	FS	Upgrade DD Container from V5.1 to V5.4	Appendix A – 2b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A CSIR, Meiring Naude Road, B...
B Master Nakedi
C LED Centre (Wesselsbron)
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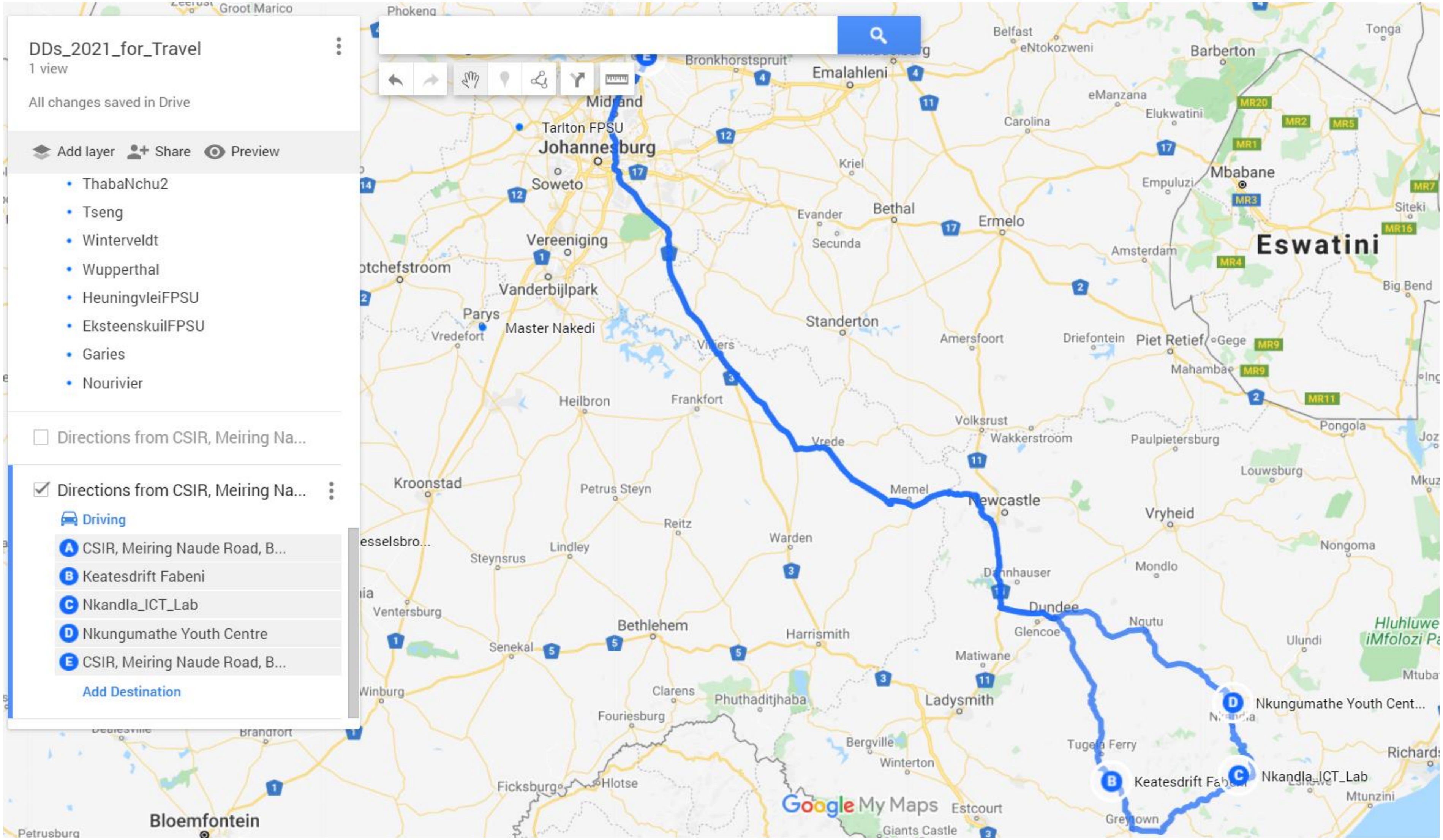
Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			2	2
2	• Depart from CSIR for Master Nakedi • Upgrade container from V5.2 to v5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Master Nakedi	2	180	4	4
3	• Depart from Master Nakedi for LED Centre Wesselsbron • Upgrade container from V5.1 to v5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Master Nakedi	LED Centre Wesselsbron	2,5	200	4	4
4	• Depart LED Centre Wesselsbron for CSIR / Pretoria	LED Centre Wesselsbron	CSIR	4	350	N/A	N/A

f. Work Package 6

Work to be completed along route: Keatesdrift Fabeni - Nkungumathe Youth Centre - Nkandla ICT Lab

WP6	**Keatesdrift Fabeni - Nkungumathe Youth Centre - Nkandla ICT Lab**				
Site name	**Latitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Keatesdrift Fabeni	-28.8545843	30.5073459	KZN	Upgrade DD Container from V5.1 to V5.4	Appendix A – 2b
Nkungumathe Youth Centre	-28.5198743	31.0908601	KZN	Upgrade DD Container from V5.2 to V5.4	Appendix A – 2c
Nkandla_ICT_Lab	-28.8307483	31.1205808	KZN	Upgrade ICT Centre	Appendix A – 2c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Standerton
Secunda
Barberton
Mbabane
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Nkandla_ICT_Lab
Keatesdrift Fabeni
Greytown
Tugela Ferry
Bloemfontein
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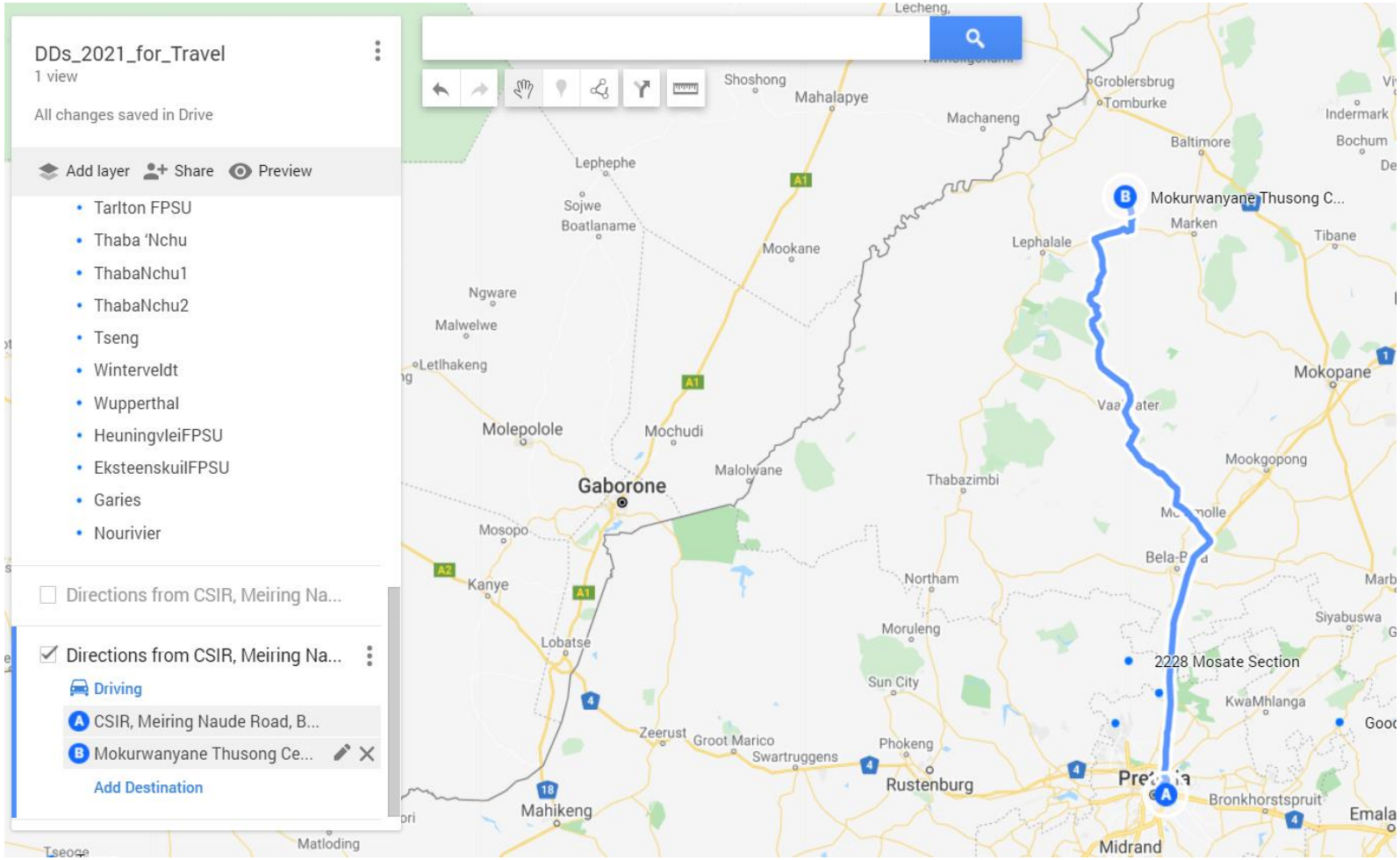
Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			2	2
2	• Depart from CSIR for Keatesdrift Fabeni • Upgrade container from V5.1 to v5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Keatesdrift Fabeni	6	520	4	2
3	• Depart from Keatesdrift Fabeni for Nkungumathe Youth Centre • Upgrade container from V5.2 to v5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Keatesdrift Fabeni	Nkungu-mathe Youth Centre	3	160	4	4
4	• Depart from Nkungumathe for Nkandla ICT Centre • ICT upgrade • Install LTE Router • Provide basic training • Complete sign-off documentation	Nkungumathe Youth Centre	Nkandla ICT Lab	1	60	2	2
5	• Depart from Nkandla ICT Lab for CSIR	Nkandla ICT Lab	CSIR	7	600		

g. Work Package 7

Work to be completed at Mokurwanyane

WP7	Mokhurwanyae				
Site name	**Latitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Mokurwanyane Thusong Centre	-28.8545843	-23.4496467	LIM	Upgrade DD Container from V5.2 to V5.4	Appendix A – 2c

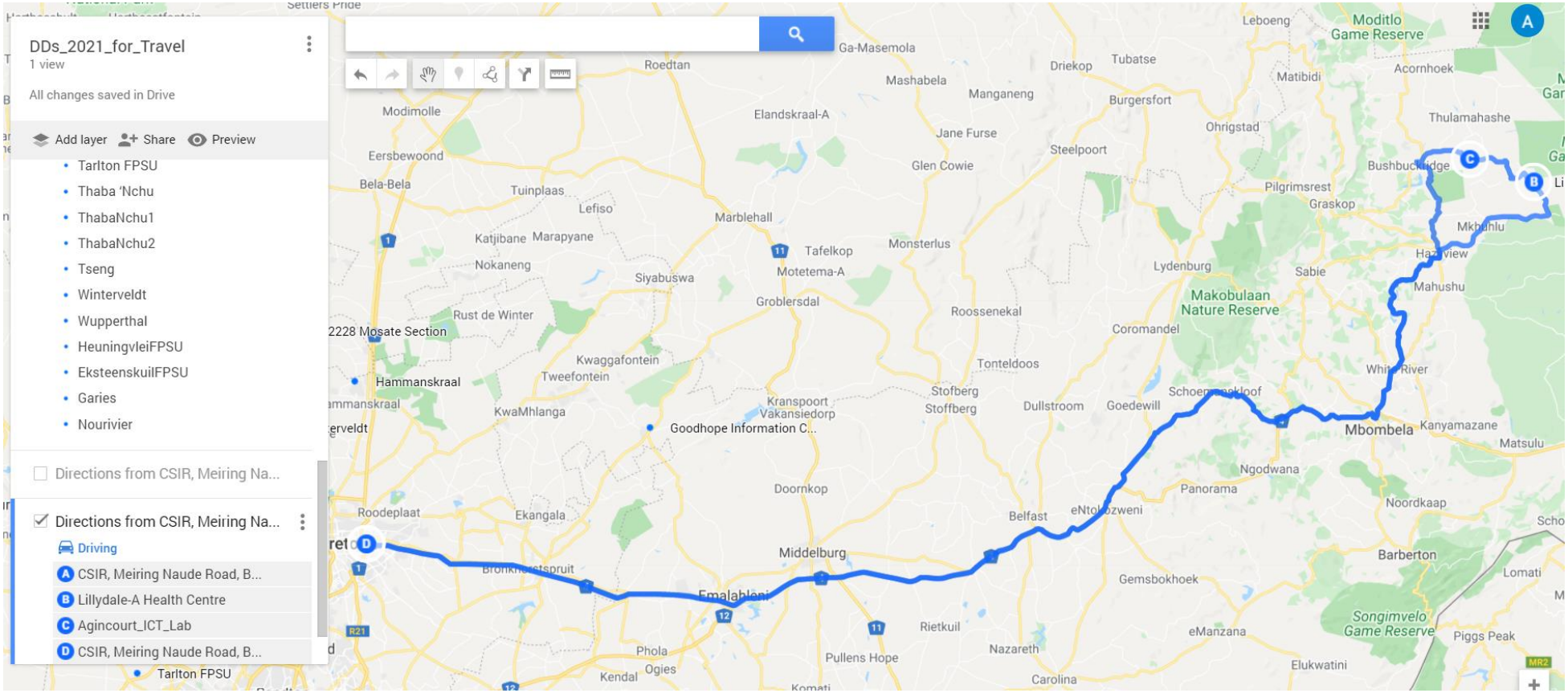


Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			2	2
2	• Depart from CSIR and drive to Mokhurwane • Upgrade the Mokhurwane Container from V5.2 to V5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Mokhur-wane	4	330	4	4
3	• Depart from Mokhurwane for CSIR / Pretoria	Mokhurwane	CSIR	4	330		

h. Work Package 8

Work to be completed along route: Lillydale - Agincourt

WP8	Lillydale - Agincourt				
Site name	**Lattitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Lillydale Health Centre	-24.878414	31.37911	MP	Upgrade DD Container from V5.1 to V5.4	Appendix A – 2b
Agincourt_ICT_Lab	-24.824199	31.208555	MP	Upgrade ICT Centre	Appendix A – 2f

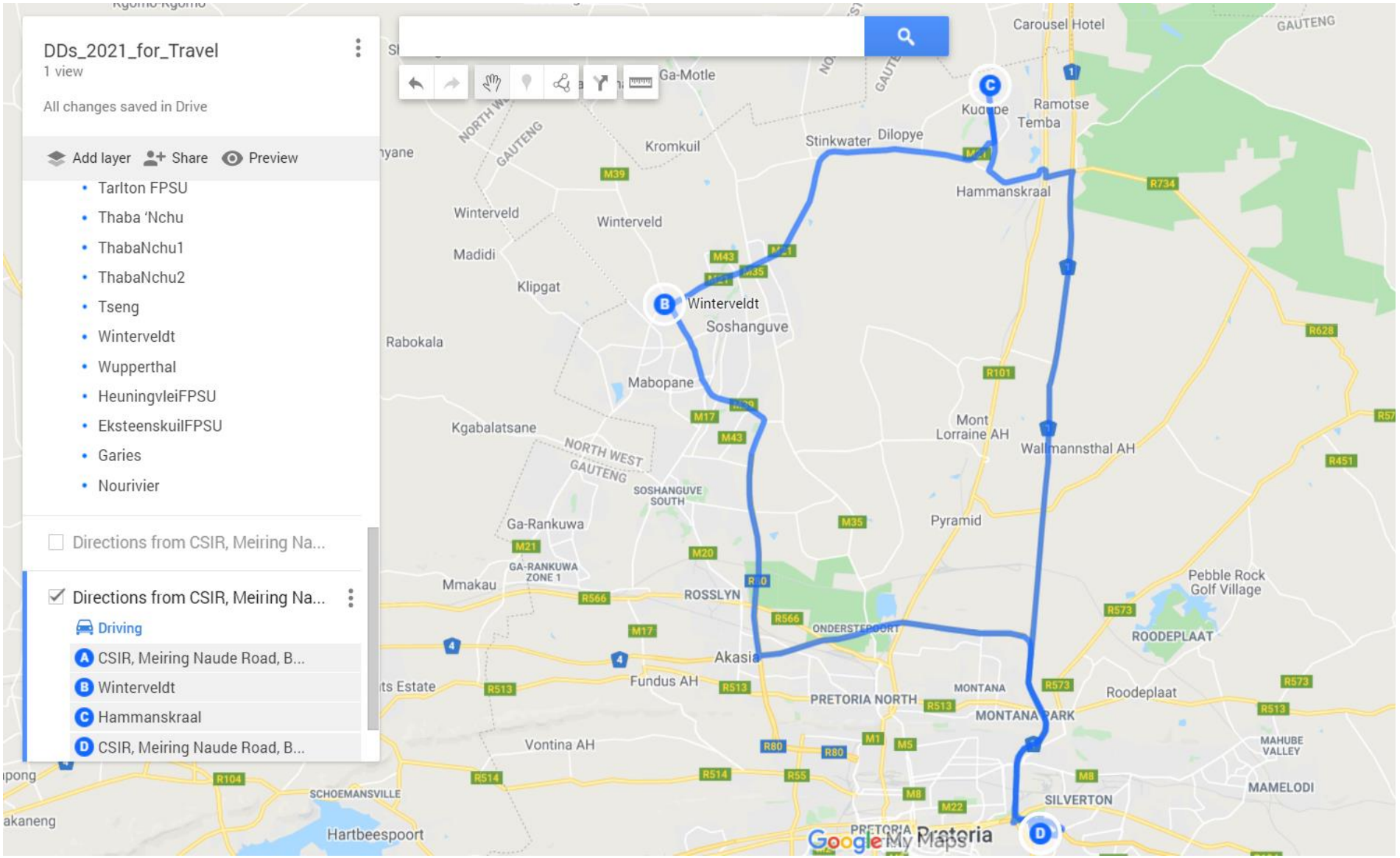


Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			4	2
2	• Depart from CSIR for Lilydale Health Centre • Upgrade the Lilydale Container from V5.1 to V5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Lilydale	5	450	6	4
3	• Depart from Lilydale for Agincourt • Upgrade ICT Lab • Provide basic training • Complete sign-off documentation	Lilydale	Agincourt	1	28	4	4
4	• Depart from Agincourt for CSIR / Pretoria.	Agincourt	CSIR, Pretoria	5	450		

i. Work Package 9

Work to be completed along route: Winterveld - Hammanskraal

WP9	Winterveld - Hammanskraal				
Site name	**Latitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Winterveldt	-25.47137	28.05793	GP	Upgrade DD Container from V5.2 to V5.4	Appendix A – 2c
Hammanskraal ICT centre	-25.358044	28.249472	GP	Upgrade ICT Centre	Appendix A – 2f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Thaba 'Nchu
ThabaNchu1
ThabaNchu2
Tseng
Winterveldt
Wupperthal
HeuningvleiFPSU
EksteenskuilFPSU
Garies
Nourivier
Directions from CSIR, Meiring Na...
Directions from CSIR, Meiring Na...
Driving
A CSIR, Meiring Naude Road, B...
B Winterveldt
C Hammanskraal
D CSIR, Meiring Naude Road, B...
Carousel Hotel
GAUTENG
Ga-Motle
Kromkuil
Stinkwater
Dilopye
Ramotse
Temba
Hammanskraal
Winterveld
Madidi
Klipgat
Winterveldt
Soshanguve
Rabokala
Mabopane
Kgabalatsane
NORTH WEST
GAUTENG
SOSHANGUVE SOUTH
Ga-Rankuwa
GA-RANKUWA ZONE 1
Mmakau
ROSSLYN
Akasia
Fundus AH
Vontina AH
PRETORIA NORTH
MONTANA
MONTANA PARK
Mont Lorraine AH
Wallmannsthal AH
Pyramid
ONDERSTEPOORT
Pebble Rock Golf Village
ROODEPLAAT
Roodeplaat
MAHUBE VALLEY
MAMELODI
SILVERTON
SCHOEMANSVILLE
Hartbeespoort
Google My Maps

Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			2	2
2	• Depart from CSIR for Winterveld • Upgrade Winterveld Container from V5.2 to V5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Winterveld	1	60	4	4
3	• Depart from Winterveld for Hammanskraal • Upgrade ICT Centre • Provide basic training • Complete sign-off documentation	Winterveld	Hamman-skraal	1	30	3	4
4	• Depart from Hammanskraal for CSIR / Pretoria.	Hamman-skraal	CSIR, Pretoria	1	60		

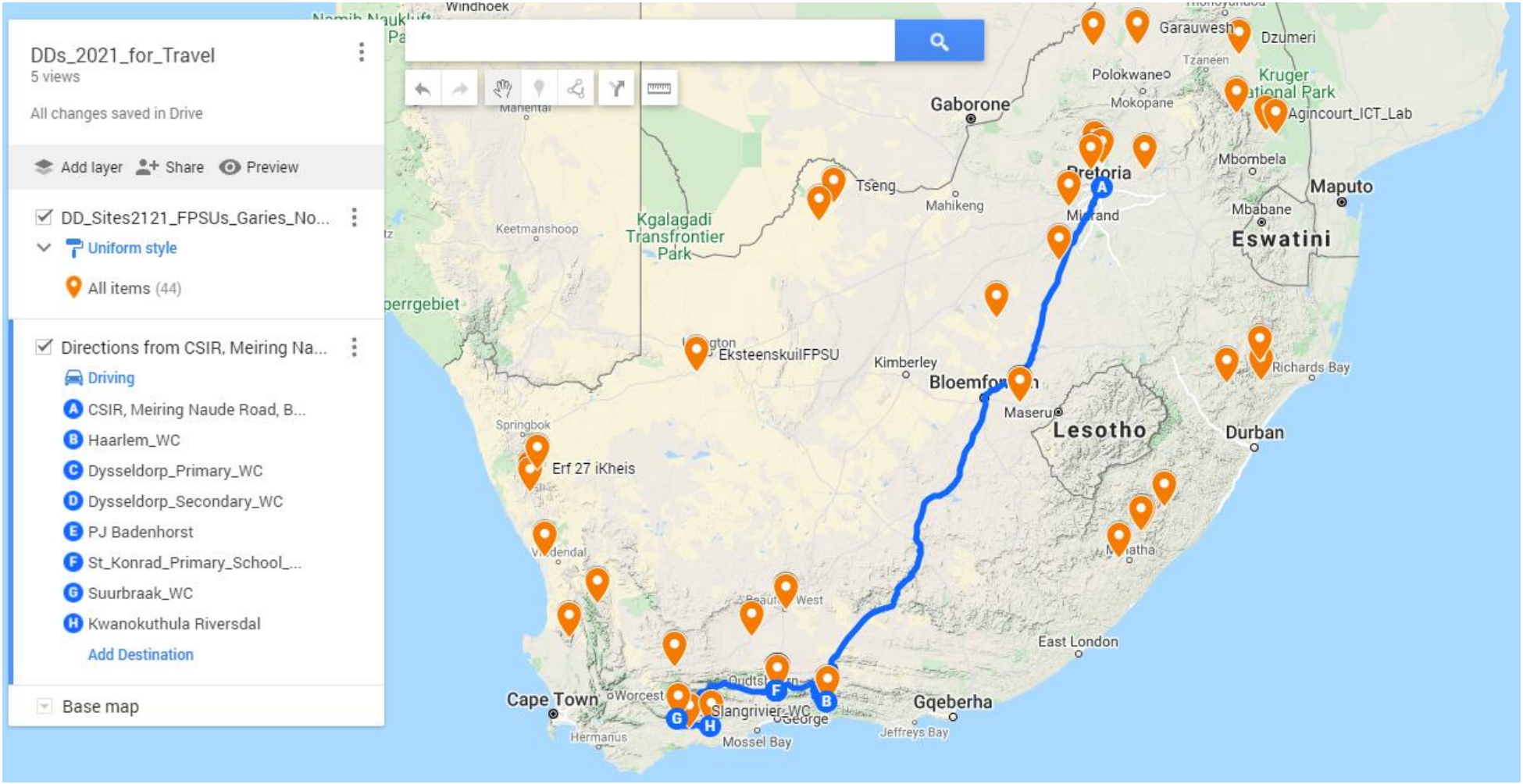
j. Work Package 10

Work to be completed along route: Haarlem - Dysseldorp Primary - Dysseldorp Secondary - PJ_Badenhorst – St Konrad Primary – Suurbraak - Kwanokuthula Riversdal

WP10	Haarlem - Dysseldorp Primary - Dysseldorp Secondary - PJ_Badenhorst - Kwanokuthula Riversdal - Suurbraak				
Site name	Lattitude	Longitude	Prov-ince	Overview of work required	For detail refer to sec-tion:
Haarlem_WC	-33.7348	23.3334885	WC	Upgrade DD Container V5.3 to V5.4	Appendix A – 2d
Dysseldorp_Primary_WC	-33.5756	22.4315	WC	Upgrade school	Appendix A – 2e
Dysseldorp_Secondary_WC	-33.5767	22.4259	WC	Upgrade school	Appendix A – 2e
PJ Badenhorst	-33.5744	22.431	WC	Upgrade school	Appendix A – 2e

St Konrad Primary	-33.5798960	22.4266770	WC	Upgrade school	Appendix A – 2e
Suurbraak_WC	-34.004632	20.653622	WC	Pick up Container DD	Appendix A - 1
Kwanokuthula (near) Riversdal	34.1007	21.2452	WC	Relocate Suurbraak Container DD in Kwanokuthula (Riversdal) - liaise with local municipality Upgrade Container DD from V3 to V5.4	Appendix A - 1 Appendix A – 2d

Note: A crane truck is required for this trip. The service provider is responsible to arrange the crane truck.



Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			4	2
2	• Depart CSIR for Haarlem • Upgrade the Haarlem Container from V5.3 to v5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Haarlem	13	1150	2	4
3	• Depart Haarlem for Dysseldorp Primary • Upgrade school • Provide basic training • Complete sign-off documentation	Haarlem	Dysseldorp Primary	2	125	3	2
4	• Depart Dysseldorp Primary for Dysseldorp Secondary • Upgrade school • Provide basic training • Complete sign-off documentation	Dysseldorp Primary	Dysseldorp Secondary	10min	1	3	2
5	• Depart Dysseldorp Secondary for PJ Badenhorst • Upgrade school • Provide basic training • Complete sign-off documentation	Dysseldorp Secondary	PJ Badenhorst	10min	1	3	2
6	• Depart PJ Badenhorst for St Konrad Primary • Upgrade school • Provide basic training • Complete sign-off documentation	PJ Badenhorst	St Konrad Primary	10min	1	3	2
7	• Depart St Konrad Primary for Suurbraak • A crane truck is required – liaise with Riversal municipality	St Konrad Primary	Suurbraak	3	230	4	4

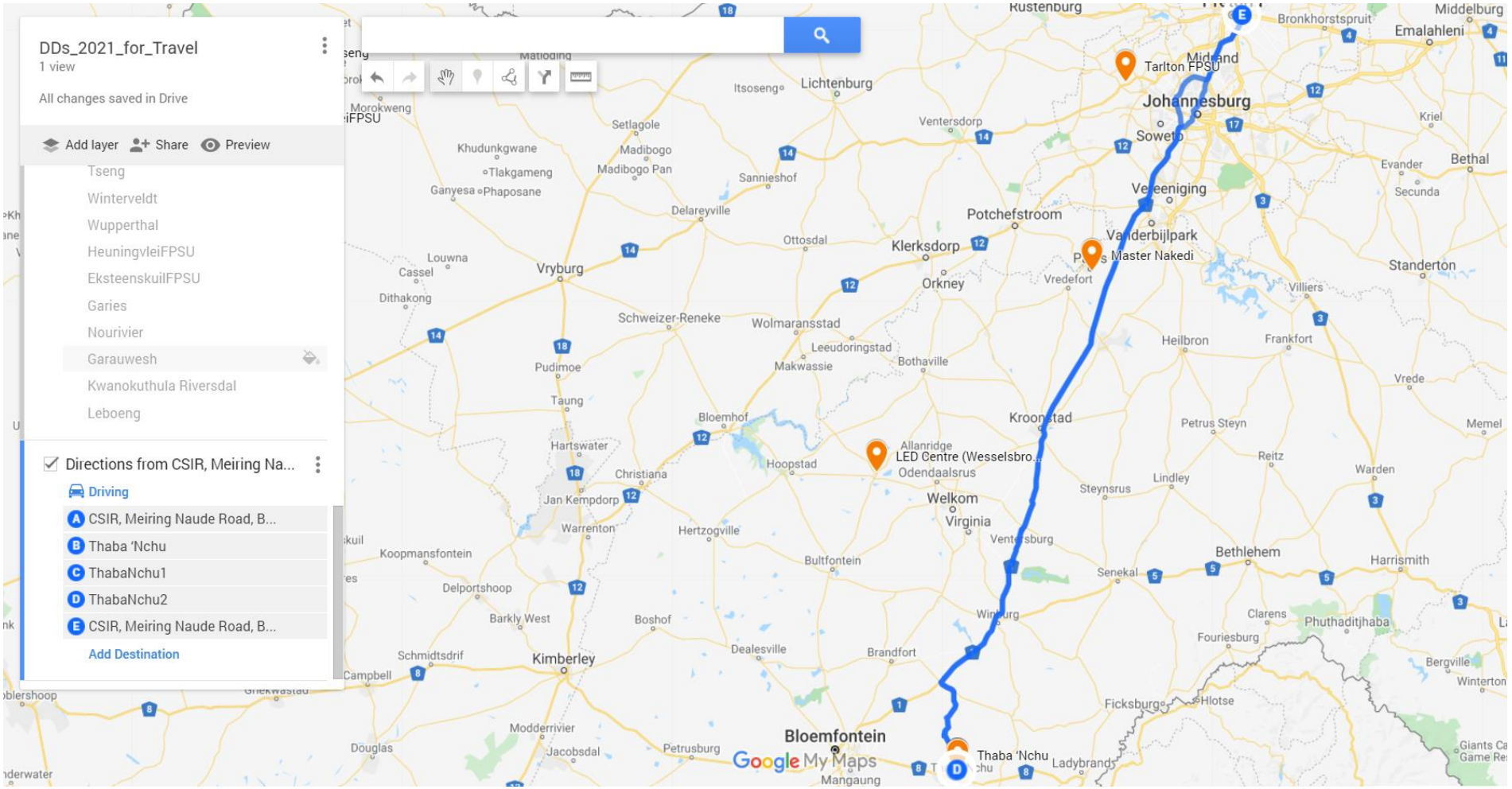
Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
	• Pick up Container DD						
8	• Depart Suurbraak for Kwanokuthula Riversdal • Offload Container DD • Upgrade container from V5.3 to V5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Suurbraak	Kwanoku-thula Riv-ersdal	1	70	 4 2	 4 4
9	• Depart Kwanokuthula Riversdal for CSIR / Pretoria.	Kwanoku-thula Rivers-dal	CSIR, Pretoria	14	1400		4

k. Work Package 11

Work to be completed along route: Thabanchu College 1 - Thabanchu College 2 - Thabanchu ICT centre

WP11	Thabanchu College 1 - Thabanchu College 2 - Thabanchu ICT centre				
Site name	**Lattitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Thabanchu College1	-29.176188	26.791922	FS	Install Container DD V5.4 on site	Appendix A – 1
Thabanchu College2	-29.173788	26.793338	FS	Install Container DD V5.4 on site	Appendix A – 1
Thabanchu ICT centre	-29.174943	26.794338	FS	Upgrade ICT Centre	Appendix A – 2f

Note: A crane truck is required for this trip. The service provider is responsible to arrange the crane truck.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Tseng
Winterveldt
Wupperthal
HeuningvleiFPSU
EksteenskuilFPSU
Garies
Nourivier
Garauwesh
Kwanokuthula Riversdal
Leboeng
Directions from CSIR, Meiring Na...
Driving
A CSIR, Meiring Naude Road, B...
B Thaba 'Nchu
C ThabaNchu1
D ThabaNchu2
E CSIR, Meiring Naude Road, B...
Add Destination
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Johannesburg
Soweto
Vereeniging
Vanderbijlpark
Master Nakedi
Potchefstroom
Klerksdorp
Orkney
Vredefort
Vryburg
Kimberley
Bloemfontein
Thaba 'Nchu
Welkom
Virginia
Odendaalsrus
LED Centre (Wesselsbro...
Allanridge
Kroonstad
Lichtenburg
Google My Maps

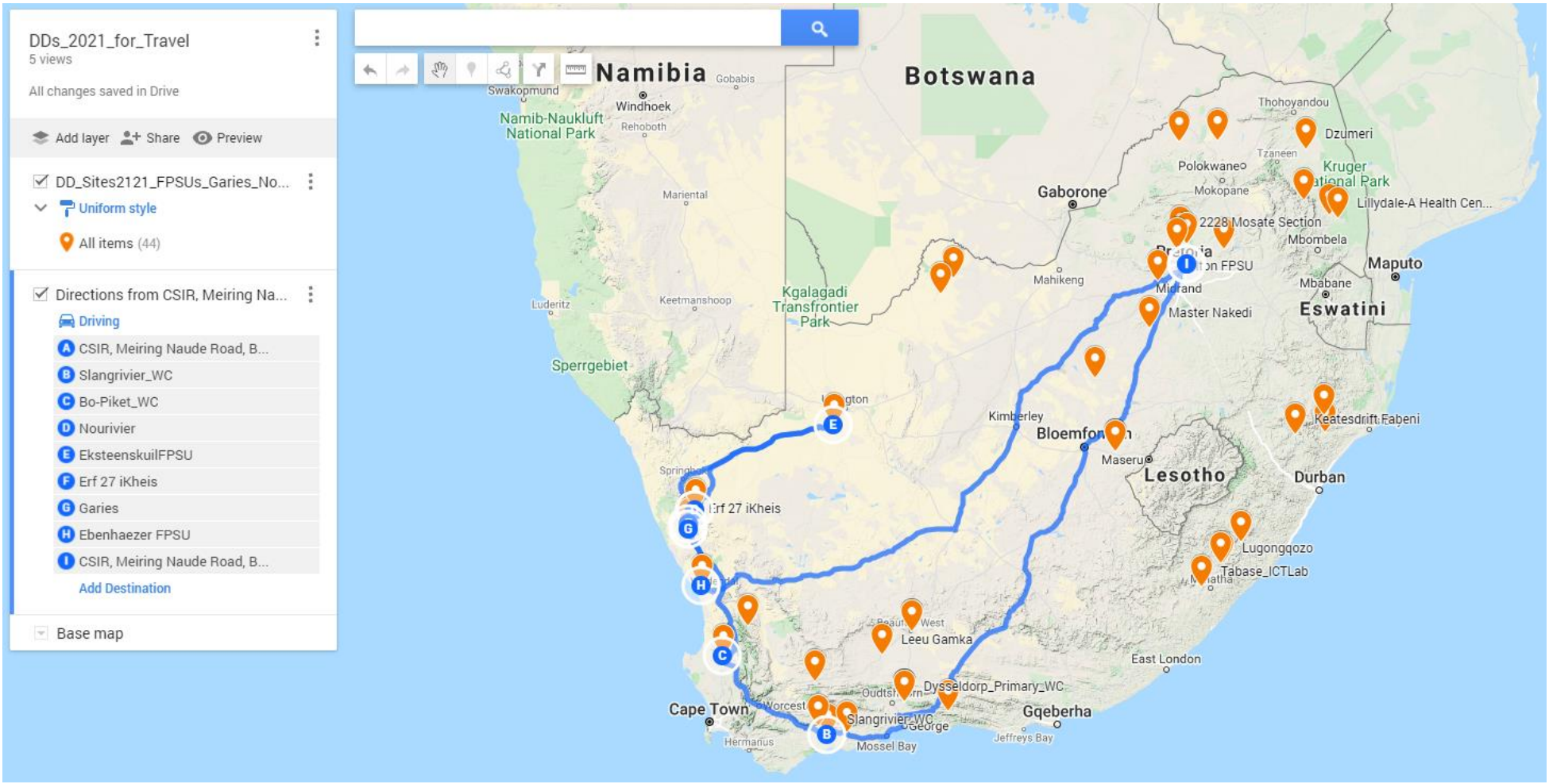
Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect 2 DD Containers and spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up. • A crane truck is required		CSIR			5	4
2	• Depart from CSIR for Thabanchu College 1 • Offload DD container • Install DD container • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Thabanchu College 1	7	450	4	4
3	• Depart from Thabanchu College 1 for Thabanchu College 2 • Offload DD container • Install DD container • Fix any other issues with the system • Provide basic training • Complete sign-off documentation • Load old DD container (to return to CSIR)	Thabanchu College 1	Thabanchu College 2	0	0	4	4
4	• Depart from Thabanchu College 2 for Thabanchu ICT Centre • Upgrade ICT Centre • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Thabanchu College 2	Thabanchu ICT Centre	0	0	6	4
5	• Depart from Thabanchu ICT Centre to CSIR	Thabanchu ICT Centre	CSIR	7	450		

I. Work Package 12

Work to be completed along route: Slangrivier - BoPiket - Klein Nourivier - Eksteenskuil - iKheis - Garies - Ebenhaezer

WP12	BoPiket - Klein Nourivier - Eksteenskuil - iKheis - Garries - Ebenhaezer				
Site name	**Latitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Slangrivier	-34.1373200	20.857883	WC	Relocate Container DD in community Upgrade Container DD V5.3 to V5.4 Install new terminal	Appendix A – 1 Appendix A – 2d
Bo-Piket	-32.784397	18.701869	WC	Relocate Container DD in community Upgrade Container DD V5.3 to V5.4	Appendix A – 1 Appendix A – 2d
Erf 157 Nourivier (Klein-Nourivier)	-30.214238	18.13731	WC	Collect Container DD	Appendix A – 1
Eksteenskuil FPSU	-28.698333	20.976388	WC	Install Klein-Nouriver Container DD at Eksteenskuil Upgrade Container DD from V5.1 to V5.4	Appendix A – 1 Appendix A – 2b
Erf 27 iKheis (NC)	-30.461835	17.992881	WC	Collect Container DD	Appendix A – 1
Garies	-30.559306	17.989947	WC	Strip equipment to bring back to CSIR	
Ebenhaezer FPSU	-31.562772	18.265466	WC	Install iKeis Container DD at Ebenhaezer FPSU Upgrade Container DD from V5.s to V5.4	Appendix A – 1 Appendix A – 2c

Note: A crane truck is required for this trip. The service provider is responsible to arrange the crane truck.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B Slangrivier_WC
C Bo-Piket_WC
D Nourivier
E EksteenskuilFPSU
F Erf 27 iKheis
G Garies
H Ebenhaezer FPSU
I CSIR, Meiring Naude Road, B...
Add Destination
Base map
Namibia
Botswana
Swakopmund
Windhoek
Gobabis
Namib-Naukluft National Park
Rehoboth
Mariental
Gaborone
Thohoyandou
Dzumeri
Polokwaneo
Tzaneen
Mokopane
Kruger National Park
Lillydale-A Health Cen...
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Mbombela
Maputo
Mbabane
Eswatini
Master Nakedi
Midrand
Mahikeng
Kgalagadi Transfrontier Park
Luderitz
Keetmanshoop
Sperrgebiet
Kimberley
Bloemfontein
Maseru
Lesotho
Durban
Keatesdrift Fabeni
Lugongqozo
Tabase_ICTLab
Erf 27 iKheis
Leeu Gamka
East London
Dysseldorp_Primary_WC
Cape Town
Slangrivier_WC
Gqeberha
George
Mossel Bay
Jeffreys Bay
Hermanus

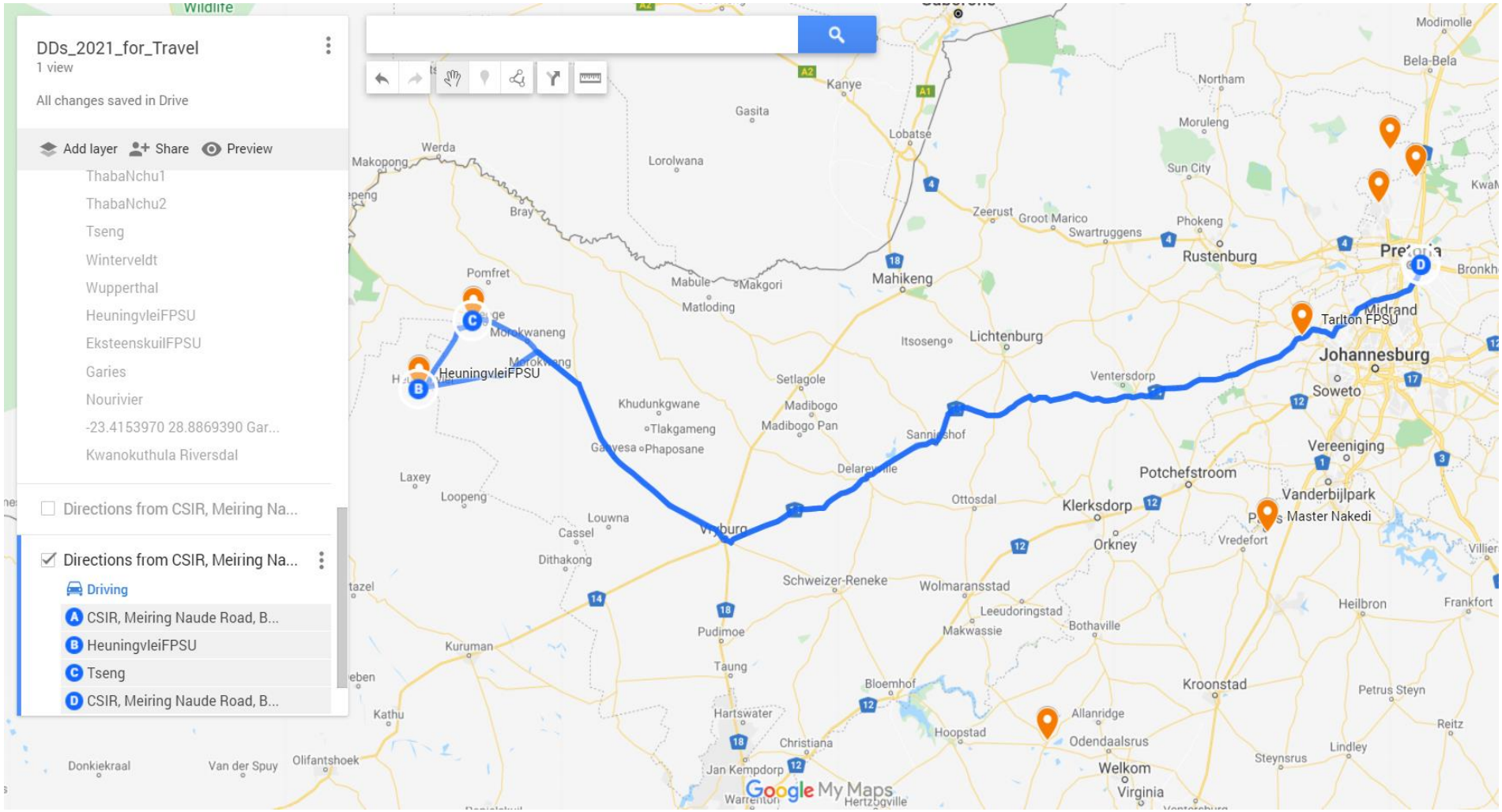
Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			4	
2	• Depart from CSIR for Slangrivier • Upload Container DD • Relocate Container DD in community • Upgrade Container DD from V5.3 to V5.4 • Install new Terminal 2 • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Slangrivier	14	1440	 4 4 2	 4 4 4
3	• Depart from Slangrivier for Bo-Piket • Upload Container DD • Relocate Container DD in community • Upgrade Container DD from V5.3 to V5.4 • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Slangrivier	Bo-Piket	5	310	 4 4 2	 4 4 4
4	• Depart from Bo-Piket for Erf 157 Nourivier (Klein-Nourivier) • Upload up DD Container	Bo-Piket	Erf 157 Nourivier (Klein-Nourivier)	6	400	4	4
5	• Depart from Erf 157 Nourivier (Klein-Nourivier) for Eksteenskuil FPSU • Offload Container DD • Install DD container an upgrade the container from v5.1 to v5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Erf 157 Nourivier (Klein-Nourivier)	Ek-steenskuil FPSU	6	390	 4 6	 4 4

Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
6	• Depart from Eksteenskuil FPSU for Erf 27 iKheis • Upload DD Container	Eksteenskuil FPSU	Erf 27 iKheis	6	450	4	4
7	• Depart from Erf 27iKeis for Garies ICT Centre • Strip and pick up all equipment from Garries ICT Centre to return to CSIR	Erf 27 iKheis	Garies ICT Centre	30	15	4	4
8	• Depart from Garies ICT Centre for Ebenhaezer FPSU • Offload Container DD • Install DD container an upgrade the container from v5.2 to v5.4 • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Garies ICT Centre	Ebenhaezer FPSU	3	160	 4 4	 4 4
9	• Depart Ebenhaezer FPSU for CSIR / Pretoria	Ebenhaezer FPSU	CSIR, Pretoria	14	**1400**		

m. Work Package 13

Work to be completed along route: Heuningvlei - Tseng

WP13	Heuningvlei - Tseng				
Site name	**Latitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Heuningvlei FPSU	-26.1427755	23.1756078	NC	Install Garies equipment, collected from CSIR	Appendix A – 2f, CSIR will assist and supervise
Tseng ICT centre	-25.992057	23.451450	NC	Upgrade ICT Centre	Appendix A – 2f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HeuningvleiFPSU
EksteenskuilFPSU
Garies
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Kwanokuthula Riversdal
Directions from CSIR, Meiring Na...
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Driving
A CSIR, Meiring Naude Road, B...
B HeuningvleiFPSU
C Tseng
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Mahikeng
Zeerust
Groot Marico
Swartruggens
Rustenburg
Phokeng
Sun City
Moruleng
Northam
Bela-Bela
Modimolle
Tarlton FPSU
Midrand
Johannesburg
Soweto
Vereeniging
Vanderbijlpark
Potchefstroom
Klerksdorp
Orkney
Vredefort
Ventersdorp
Lichtenburg
Itsoseng
Setlagole
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Tlakgameng
Phaposane
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Loopeng
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Cassel
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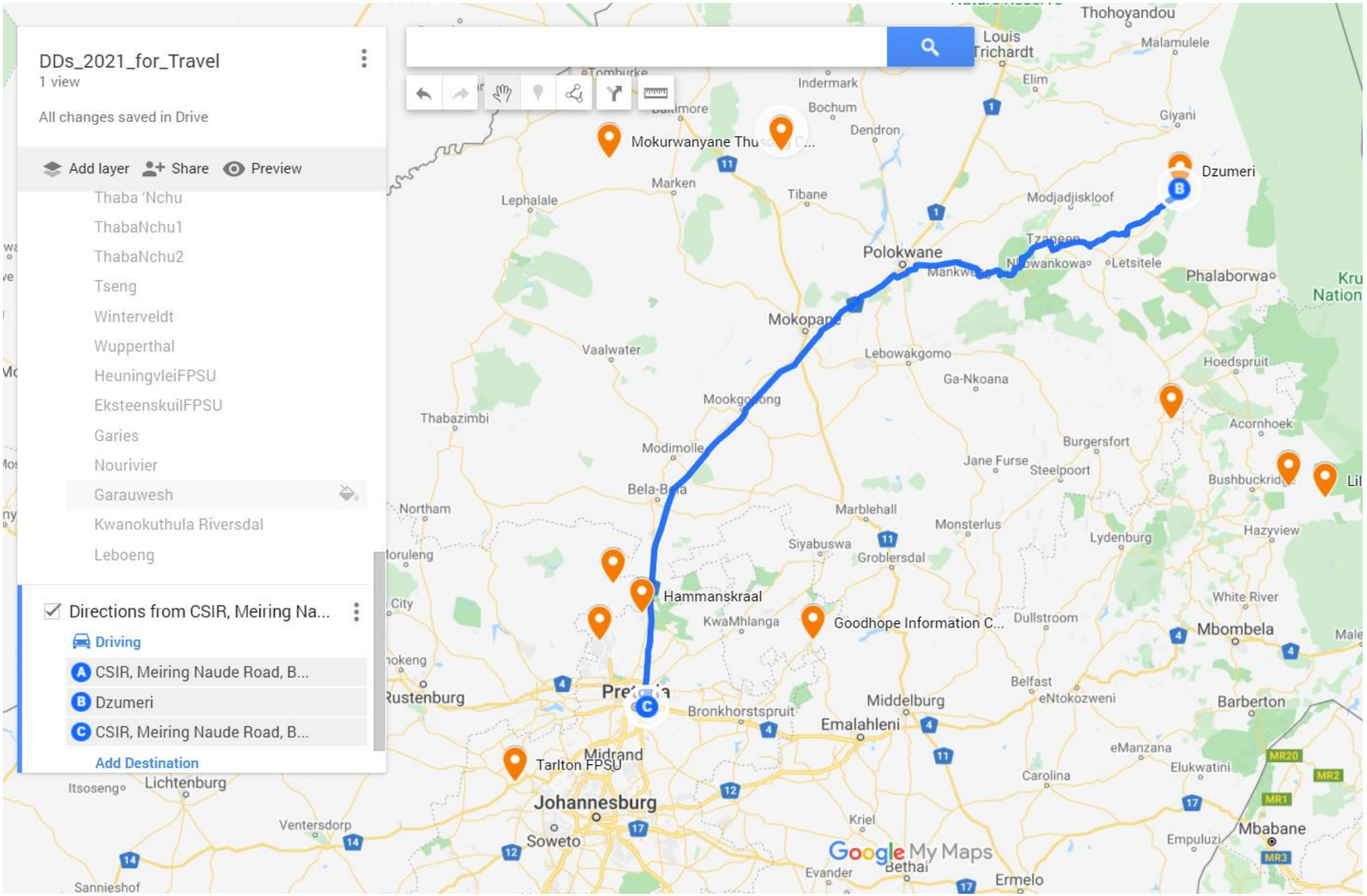
Ottosdal
Schweizer-Reneke
Wolmaransstad
Leeudoringstad
Makwassie
Bothaville
Pudimoe
Taung
Kuruman
Bloemhof
Hartswater
Christiana
Jan Kempdorp
Hoopstad
Allanridge
Odendaalsrus
Welkom
Virginia
Kroonstad
Heilbron
Frankfort
Petrus Steyn
Reitz
Lindley
Steynsrus
Donkiekraal
Van der Spuy
Olifantshoek
Kathu
Google My Maps

Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			4	4
2	• Depart from CSIR for Heuningvlei • Install Garries equipment at Heuningvlei ICT Centre • Complete the upgrade & repairs • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Heuningvlei	8	620	8	4
3	• Depart from Heuningvlei for Tseng ICT Centre • Upgrade ICT Centre • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	Heuningvlei	Tseng ICT Centre	2	65	3	4
4	• Depart Tseng ICT Centre for CSIR / Pretoria.	Tseng ICT Centre	CSIR	9	630		

n. Work Package 14

Work to be completed at Dzumeri.

WP14	Dzumeri				
Site name	**Latitude**	**Longitude**	**Province**	**Overview of work required**	**For detail refer to section:**
Dzumeri	-23.576166	30.710698	LIM	Upgrade ICT Centre	Appendix A – 2f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Garies
Nourivier
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Kwanokuthula Riversdal
Leboeng
Directions from CSIR, Meiring Na...
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B Dzumeri
C CSIR, Meiring Naude Road, B...
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Dzumeri
Polokwane
Mokopane
Hammanskraal
Goodhope Information C...
Tarlton FPSU
Johannesburg
Soweto
Pretoria
Middelburg
Emalahleni
Mbombela
Barberton
Mbabane
Ermelo
Google My Maps

Step	Description	Starting point	Destination	Est. Travel Time (h)	Est. Travel (km)	Est. Time on site (h)	Est. Man-power
1	• Collect spares from CSIR (Pretoria) for the planned upgrades on the route as well as a standard spares kit for back-up		CSIR			1	2
2	• Depart from CSIR for Dzumeri • Upgrade ICT centre • Fix any other issues with the system • Provide basic training • Complete sign-off documentation	CSIR	Dzumeri	6	450		
3	• Depart Dzumeri for CSIR / Pretoria	Dzumeri	CSIR	6	450	N/A	N/A

o. Work Package 15 – LTE connectivity recharge

This work package involves the remote recharging of LTE SIM cards at all 36 sites, based on a set allocated amount of data per site per month.

- The cost of the data must not be included in the pricing entry for this work package.
- All 36 SIM cards are to be recharged once per month for a period of 24 months. Certain SIMS may require additional recharging during the month (please allow for an additional 10 recharges per month).
- An element of flexibility should be factored in, such that if some sites have been decommissioned or are closed, other sites may receive a larger data bundle per month.
- Exact details of this process and the amounts of data involved per site will be confirmed with the CSIR during the course of contract negotiations.

p. Work Package 16 – Preventative support and maintenance

Please provide details of the costs involved to visit each site every three months for one full year after implementation to perform site inspections and proved a site report. The format of the report will be confirmed with the CSIR during contract negotiations.

- This must include travel, accommodation and manpower costs.
- Inspection teams will be required to take photographs of the site, confirm GPS coordinates, talk to the site champion and inspect equipment on site.
- Site visits and inspections may be grouped together according to location in order to reduce costs.
- Price should be stated as total cost for visiting each of the 36 sites 4 times a year
- (one number) breakdown can be provided separately
- Quarterly report including the following details:
    - All work carried out and sites visited during the quarter.
    - Confirmation of LTE data recharge procedures carried out each month and any problems encountered
    - Photographs of sites visited during site inspections
    - Summary of any issues resolved or outstanding at any of the sites visited

q. Work Package 17 – Intermittent maintenance

A maintenance budget will be set aside to perform necessary repairs to equipment or other infrastructure at a site.

Please provide costing details of travel, accommodation and manpower hours to perform maintenance at a site.

Given that sites may be located anywhere in South Africa, please provide costs as follows:

- Travel costs: Price per kilometre
- Accommodation: Price per night estimated
- Manhours: Price per person per hour estimated including number of people involved
- The above three figures must be entered into the pricing matrix (Annexure C) breakdown can be provided separately.
- Quarterly report including the following details:
    - All work carried out and sites visited during the quarter.
    - Confirmation of LTE data recharge procedures carried out each month and any problems encountered
    - Photographs of sites visited during site inspections
    - Summary of any issues resolved or outstanding at any of the sites visited

5 References

All bidders must provide details and references of similar projects completed by the bidder. The references must cumulatively be able to testify to the bidder's capability in:

1. Assembling and disassembling panel housings;
2. Installing and commissioning ICT equipment in rural areas;
3. Working in a Linux software environment and familiarity with the Linux command line;
4. Installing and connecting solar equipment;
5. Transporting panel housings / containers / similar equipment; and
6. Providing support and maintenance of ICT equipment.

The following details need to be available per reference:

a. Description of work carried out
b. Name of Client or Company
c. Contact detail for company/a client (email or telephone number)
d. Photographs of installations (optional)

6 Acceptance Procedures and documents

The following procedures and documentation will be required and should be factored into bidders cost estimates separately.

Before accepting each of the work packages 1 to 15, the CSIR will require a number of documents and confirmations from the installer:

1. Site LTE connectivity is up and running and the site has made contact with the monitoring server at CSIR

2. Installation checklist and sign-off form has been completed and signed by site administrator on-site and installer, and a copy handed to the CSIR. This document is available in Appendix A.
3. Site names as reported by the DD server on site through the monitoring dashboard correspond with the name on the ATP document
4. Photographs of the installation have been handed over to the CSIR in electronic format (folders named per site).
5. Spare keys to the site and server cabinet (where applicable) have been labelled with the appropriate site name and safely stored by the installer.
6. Any applicable Customer Acceptance Certificates (CACs) have been signed by the relevant persons and handed over to the CSIR

Appendix A: DD guidelines

1. Container DD relocation guideline

This is a guideline on how to relocate a Digital Doorway Container. Please note that the contractor must supply all personnel with suitable & appropriate Personal Protection Equipment (PPE) such as safety boots, gloves & hard hats. Anyone without suitable PPE must remain far away from the action at all times.

Note: The physical dimensions, weight and transportation requirements for the Digital Doorway container

- Dimension
    - Floor - 3500 x 2500mm
    - Roof panel - 3000 x 2100mm
    - Rear wall height - 2100mm
    - Front wall height - 2800mm
- Weight
    - Complete DD (including batteries & roof) - 1480kg (worst case scenario with 8 batteries)
    - DD Housing (excluding roof) - 800kg
    - Batteries - 61kg each. Containers have either 8 batteries, 4 batteries or 2 batteries
    - Roof (Consisting of left & right side, including solar panels) - 100kg per side
- Transportation: No special transportation permits such as Extra Wide or Extra High are required when using a standard Crane Truck. The roof panels & batteries have to be removed during transportation.

Relocation steps

1. Preferably visit the new site & evaluate things like overhanging trees, low bridge, access roads etc. Decide in conjunction with the new Site Manager / Owner where the Digital Doorway Container will be located.
2. Arrive on site from where the Digital Doorway Container will be removed & introduce yourself to the Site Manager / Site Owner.
3. Remove the batteries & the roof.
4. Use a spreader bar & suitable strops to lift the Digital Doorway Container onto the crane truck. Load up the roof & the batteries.
5. Arrive at new site. Place the Digital Doorway in its new location. Make sure that the Door faces SOUTH.
6. Refit the batteries & the roof.

7. Perform the upgrades as per detailed description.

Relocation is applicable to the following sites.

Current DD Locations		
Name	**Latitude**	**Longitude**
Bo-Piket_WC (move within community)	-32.784397	18.701869
Leeu-Gamka_WC (move within community)	-32.768067	21.969114
Matjiesfontein Community Hall (move within premises)	-33.234484	20.584477
Slangrivier_WC (move within community)	-34.13732	20.857883
Suurbraak_WC to Kwanokuthula	-34.004632	20.653622
Erf 157 Nourivier (Klein-Nourivier) to Eksteenskuil FPSU	-30.214238	18.13731
Erf 27 iKheis to Ebenhaezer FPSU	-30.461835	17.992881

2. On-site upgrade guidelines for DD implementations

a. Upgrade V5.0 DD Container to V5.4 DD Container

This document provides a basic guideline for the Upgrading procedure for the DD Containers v5.0. The estimated durations shown are based on a single person (who knows what they are doing) doing the work alone. As with all guidelines, this procedure requires a substantial quantity of common sense when implementing the upgrades.

The following activities will be required to be performed in the upgrade process:

1. Open the DD Container, remove equipment that is no longer needed, clean the entire DD Container and check the condition of the equipment that will be reinstalled.
2. Install new polycarbonate screen protectors.
3. Install new Jetway Computers.
4. Install External Reset Button & Status LED
5. Move specific components from the old Panel 8R, install them onto the new Panel 8R and install Panel 8R.
6. Connect Panel 8R and wire it into the rest of the DD Container system.
7. Install Magnetic Sensors the monitor front & rear doors.
8. Test Solar Panels & Batteries.
9. Install new Inverter Charger & Batteries (as required).
10. Connect Solar Panels.
11. Install new Rear Door Locking Mechanism.
12. Install new WiFi AP.
13. Install LTE Router & align for best throughput.
14. Switch the Upgraded System On for the first time & complete Acceptance Test Procedure (ATP).
15. Level the DD Container in case of subsidence.

Estimated duration of work: 12 Man Hours

b. Upgrade V5.1 DD Container to V5.4 DD Container

This document provides a basic guideline for the Upgrading procedure for the DD Containers v5.0. The estimated durations shown are based on a single person (who knows what they are doing) doing the work alone. As with all guidelines, this procedure requires a substantial quantity of common sense when implementing the upgrades.

The following activities will be required to be performed in the upgrade process:

1. Open the DD Container, remove equipment that is no longer needed, clean the entire DD Container and check the condition of the equipment that will be reinstalled.
2. Install new polycarbonate screen protectors.

3. Move specific components from the old Panel 8R, install them onto the new Panel 8R and install Panel 8R.
4. Connect Panel 8R and wire it into the rest of the DD Container system.
5. Install Magnetic Sensors the monitor front & rear doors.
6. Test Solar Panels & Batteries.
7. Install new Inverter Charger & Batteries (as required).
8. Connect Solar Panels.
9. Install new Rear Door Locking Mechanism.
10. Install LTE Router & align for best throughput.
11. Switch the Upgraded System On for the first time & complete Acceptance Test Procedure (ATP).
12. Level the DD Container in case of subsidence.

Estimated duration of work: 7 Man Hours

c. Upgrade V5.2 DD Container to V5.4 DD Container

This document provides a basic guideline for the Upgrading procedure for the DD Containers v5.0. The estimated durations shown are based on a single person (who knows what they are doing) doing the work alone. As with all guidelines, this procedure requires a substantial quantity of common sense when implementing the upgrades.

The following activities will be required to be performed in the upgrade process:

1. Open the DD Container, remove equipment that is no longer needed, clean the entire DD Container and check the condition of the equipment that will be reinstalled.
2. Install new polycarbonate screen protectors.
3. Install new components onto Panel 8R.
4. Test Solar Panels & Batteries.
5. Connect Inverter Charger & Batteries (as required).
6. Connect Solar Panels.
7. Install new Rear Door Locking Mechanism.
8. Install LTE Router & align for best throughput.
9. Switch the Upgraded System On for the first time & complete Acceptance Test Procedure (ATP).
10. Level the DD Container in case of subsidence.

Estimated duration of work: 4 Man Hours

d. Upgrade V5.3 DD Container to V5.4 DD Container

This document provides a basic guideline for the Upgrading procedure for the DD Containers v5.0. The estimated durations shown are based on a single person (who knows what they are doing) doing the work alone. As with all guidelines, this procedure requires a substantial quantity of common sense when implementing the upgrades.

The following activities will be required to be performed in the upgrade process:

1. Open the DD Container, remove equipment that is no longer needed, clean the entire DD Container and check the condition of the equipment that will be reinstalled.
2. Install new polycarbonate screen protectors.
3. Install new components onto Panel 8R.
4. Test Solar Panels & Batteries.
5. Connect Inverter Charger & Batteries (as required).
6. Connect Solar Panels.
7. Install LTE Router & align for best throughput.
8. Switch the Upgraded System On for the first time & complete Acceptance Test Procedure (ATP).
9. Level the DD Container in case of subsidence.

Estimated duration of work: 2.5 Man Hours

e. Upgrade of DD installation at schools

This is a guideline on how to upgrade DD installations at school.

1. Arrive on site & introduce yourself to the Site Manager / Owner
2. Locate Digital Doorway Media Server cabinet
3. Remove & replace the batteries in the APC UPS – remember to update the UPS Battery date with Powershute Software
4. Remove the hard drive(s) from the server & install upgraded SSD
5. Boot server & confirm that it starts up correctly
6. Install LTE Router & connect it to the server
7. Complete detailed ATP

f. ICT Centre upgrade

The link must comply with the following requirements:

1. The link must be provisioned on fixed-line fibre infrastructure.
2. The link must terminate on active equipment at the sites specified.
3. All equipment deployed at the specified sites must be AC powered (220V 50Hz).

4. All equipment used must have their dimension requirements specified.
5. The link must support Link Loss Forwarding.
6. The link must support Jumbo Frames.
7. The link handoff must be an Ethernet handoff on a 10GBASE-LR PHY interface.
8. The client hand-off must terminate on a patch panel.

Appendix B: Installation sign-off sheets

1. Digital Doorway Installation Sign-off Form ICT Labs

ICT Lab name:		Install/Upgrade Date: (dd/mm/yyyy)
Location (street address):		
Province (please circle):	EC, FS, GP, KZN, LIM, MP, NC, NW, WC	
GPS co-ordinates: (NB! decimal degrees e.g. -25.123456 28.123456)	Lat: - __ __ . __ __ __ __ __ __	Long: __ __ . __ __ __ __ __ __
Installation / Upgrades:	**Complete** □	**Incomplete** □ Reason: *(add notes on page 2)*
Photos taken:	Exterior of ICT Lab □ General interior of Lab □ Details of server cabinet (front & back) □ Details of User terminals □ Mounted LTE router □ Wi-Fi access point(s) mounted in place □ Photos of any problems, damage, issues □	
Site name on media server is correct?	Yes □ No □	Site name on server (e.g. iKheis_NC) :
Server cabinet testing done:	UPS is plugged in □ Server shuts down on mains power loss □ Server boots up on power restore □ Server can access the Internet □	
Lab terminals testing done:	All terminals fully functional □ Terminals connect to DD content via browser □ Terminals can access Internet: Yes □ No □	
LTE router data SIM was recharged?	Yes □ No □	
Site visible on service desk dashboard (confirmation received from CSIR / service desk)	Yes □ No □ IP Address on dashboard: __ . __ . __ . __	
Name of CSIR service desk agent / staff member contacted:		
Security before leaving site	Server Cabinet locked □ Terminal Housings Locked □	
Cabinet keys handed over?	Yes □ No □	
Recipient of keys (name):		
Recipient of keys (telephone):		
Customer acceptance sheet signed	Yes □ No □	
Lab admin name:		
Lab admin telephone:		

Installation company:		
Installers names or initials:		
Signed (key recipient):		Date:
Signed (installer):		Date:

2. Digital Doorway Installation Sign-off Form Container

Site name:		Install Date: (dd/mm/yyyy)
DD Type:	Container:□	Relocation? Yes □ No □ If yes, relocated from:
Old → New ver no. (e.g. 5.0 → 5.4)	__ . __ → __ . __	
Location (street address):		
Province (please circle):	EC, FS, GP, KZN, LIM, MP, NC, NW, WC	
GPS co-ordinates: (NB! decimal degrees e.g. -25.123456 28.123456)	Lat: - __ __ . __ __ __ __ __ __	Long: __ __ . __ __ __ __ __ __
Installation:	**Complete** □	**Incomplete** □ Reason : *(add notes on page 2)*
	Container	
Photos taken:	Site photo (wide angle) □ Whole container (from front and back) □ Inside container (all 3 terminals on) □ DD management system screen (on) □ Other details inside container □ Wi-Fi access point mounted in place □ Back of container overview (doors open) □ Back of container details □ (batteries, panels, inverter, LTE router, wiring, etc) Photos of any problems, damage, issues □	
Site name was input into DDMS via touch screen?	Yes □ No □	DDMS Name (e.g. Thabanchu_FS) :
DDMS testing done:	Start up / shutdown server □ Reboot server □ Start up / shutdown terms 1,2,3 □ Reboot terms 1,2,3 □ Start up / shutdown Wi-Fi AP □ Reboot Wi-Fi AP □ “INTERNET” indicator is green □	
LTE router data SIM was recharged?	Yes □ No □	
Site visible on service desk dashboard (confirmation received from CSIR / service desk)	Yes □ No □ IP Address on dashboard: __ . __ . __ . __	
Name of CSIR service desk agent / staff member contacted:		
Container / cabinet locked before leaving site?	Front doors locked □ Back doors locked □	

Keys handed over?	Yes □ No □	
Recipient of keys (name):		
Recipient of keys (telephone):		
Customer acceptance sheet signed	Yes □ No □	
Container DD has a champion ?	Yes □ No □	
Basic training was given?	Yes □ No □	
Champion name		
Champion telephone		
Installation company:		
Installers names or initials:		
Signed (key recipient):		Date:
Signed (installer):		Date: