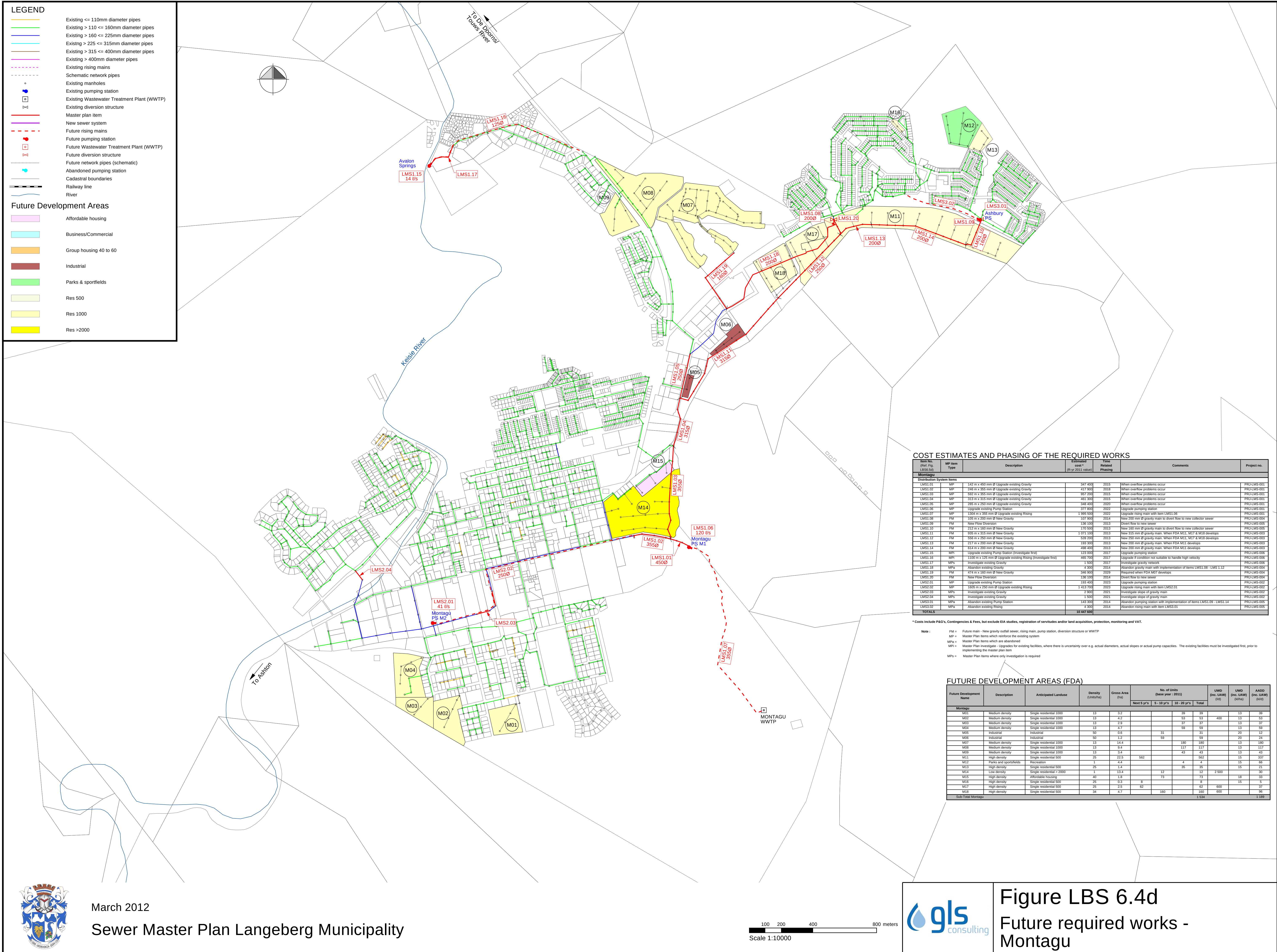




COST ESTIMATES AND PHASING OF THE REQUIRED WORKS

Item No. (Ref. Fig. LBS6.4d)	MP Item Type	Description	Estimate cost* (R-yr 2011 value)	Time Related Phasing	Comments	Project no.
Montagu						
Distribution System Items						
LMS1.01	MP	110 m x 400 mm Ø Upgrade existing Gravity	347 400	2018	When overflow problems occur	PRJ-LMS-001
LMS1.02	MP	246 m x 365 mm Ø Upgrade existing Gravity	417 900	2018	When overflow problems occur	PRJ-LMS-001
LMS1.03	MP	592 m x 365 mm Ø Upgrade existing Gravity	997 200	2018	When overflow problems occur	PRJ-LMS-001
LMS1.04	MP	213 m x 315 mm Ø Upgrade existing Gravity	482 300	2018	When overflow problems occur	PRJ-LMS-001
LMS1.05	MP	285 m x 250 mm Ø Upgrade existing Gravity	348 400	2020	When overflow problems occur	PRJ-LMS-001
LMS1.06	MP	Upgrade existing Pump Station	377 800	2022	Upgrade pumping station	PRJ-LMS-001
LMS1.07	MP	1350 m x 300 mm Ø Upgrade existing Rising	1 995 500	2022	Upgrade rising main with item LMS1.04	PRJ-LMS-001
LMS1.08	FM	105 m x 200 mm Ø New Gravity	107 900	2014	New 200 mm Ø gravity main to divert flow to new collector sewer	PRJ-LMS-004
LMS1.09	FM	New Flow Diversion	136 100	2013	Divert flow to new sewer	PRJ-LMS-005
LMS1.10	FM	231 m x 160 mm Ø New Gravity	119 500	2013	New 160 mm Ø gravity main to divert flow to new collector sewer	PRJ-LMS-005
LMS1.11	FM	935 m x 315 mm Ø New Gravity	1 071 100	2013	New 315 mm Ø gravity main. When FOX M11, M17 & M18 develops	PRJ-LMS-003
LMS1.12	FM	866 m x 250 mm Ø New Gravity	526 200	2013	New 250 mm Ø gravity main. When FOX M11, M17 & M18 develops	PRJ-LMS-003
LMS1.13	FM	241 m x 200 mm Ø New Gravity	189 300	2013	New 200 mm Ø gravity main. When FOX M11 develops	PRJ-LMS-003
LMS1.14	FM	614 m x 200 mm Ø New Gravity	496 400	2013	New 200 mm Ø gravity main. When FOX M11 develops	PRJ-LMS-003
LMS1.15	MP	Upgrade existing Pump Station (investigate first)	122 000	2017	Upgrade pumping station	PRJ-LMS-006
LMS1.16	MP	1100 m x 125 mm Ø Upgrade existing Rising (investigate first)	469 700	2017	Upgrade 125 mm Ø gravity main to handle high velocity	PRJ-LMS-006
LMS1.17	NPS	Investigate existing Gravity	1 500	2017	Investigate gravity network	PRJ-LMS-006
LMS1.18	NPA	Abandon existing Gravity	4 300	2014	Abandon gravity main with implementation of items LMS1.08 - LMS1.12	PRJ-LMS-004
LMS1.19	NPA	474 m x 160 mm Ø New Gravity	346 900	2019	Required when FOX M07 develops	PRJ-LMS-004
LMS1.20	FM	New Flow Diversion	136 100	2014	Divert flow to new sewer	PRJ-LMS-004
LMS1.02	MP	Upgrade existing Pump Station	193 400	2023	Upgrade pumping station	PRJ-LMS-002
LMS1.02	MP	1606 m x 250 mm Ø Upgrade existing Rising	1 413 700	2023	Upgrade rising main with item LMS2.01	PRJ-LMS-002
LMS2.03	NPS	Investigate existing Gravity	7 900	2021	Investigate slope of gravity main	PRJ-LMS-002
LMS1.04	NPS	Investigate existing Gravity	1 500	2011	Investigate slope of gravity main	PRJ-LMS-002
LMS1.01	NPA	Abandon existing Pump Station	143 300	2014	Abandon pumping station with implementation of items LMS1.09 - LMS1.14	PRJ-LMS-005
LMS1.02	NPA	Abandon existing Rising	4 300	2014	Abandon rising main with item LMS3.01	PRJ-LMS-005
TOTALS			10 447 950			

* Costs include P&G's, Contingencies & Fees, but exclude EIA studies, registration of servitudes and/or land acquisition, protection, monitoring and VAT.

Note:

FM = Future main - New gravity outfall sewer, rising main, pump station, diversion structure or WWTP

MP = Master Plan Items which reinforce the existing system

NPA = Master Plan Items which are abandoned

NPS = Master Plan Investigate - Upgrades for existing facilities, where there is uncertainty over e.g. actual diameters, actual slopes or actual pump capacities. The existing facilities must be investigated first, prior to implementing the master plan item

MPs = Master Plan Items where only investigation is required

FUTURE DEVELOPMENT AREAS (FDA)

Future Development Name	Description	Anticipated Landuse	Density (units/ha)	Gross Area (ha)	No. of Units (base year: 2011)				LWD (inc. LWD) (lit/s)	LWD (inc. LWD) (lit/s)	AADD (inc. LWD) (lit/s)
					Next 5 yrs	5 - 10 yrs	10 - 20 yrs	Total			
Montagu											
M01	Medium density	Single residential 1000	13	3.2				39	39		39
M02	Medium density	Single residential 1000	13	4.2				53	53	400	53
M03	Medium density	Single residential 1000	13	2.9				37	37		37
M04	Medium density	Single residential 1000	13	4.7				59	59		59
M05	Industrial	Industrial	50	0.6			31	31			31
M06	Industrial	Industrial	50	1.2			59	59			59
M07	Medium density	Single residential 1000	13	14.4				180	180		180
M08	Medium density	Single residential 1000	13	9.4				117	117		117
M09	Medium density	Single residential 1000	13	3.4				43	43		43
M11	High density	Single residential 500	15	21.5	562			562	15		577
M12	Parks and sportfields	Recreation	1	4.4				4	4		66
M13	High density	Single residential 500	15	1.4				35	35		21
M14	Low density	Single residential > 2500	1	13.4		12		12		2 500	30
M15	High density	Affordable housing	40	1.8				73			33
M16	High density	Single residential 500	15	0.3				8			5
M17	High density	Single residential 500	15	2.5	82			82	60		142
M18	High density	Single residential 500	15	4.7	160			160	600		760
Sub-Total Montagu									1 534	600	1 134