LMAC POP-UP SPRINKLER SYSTEM INSTALLATION ESTIMATES

K-Rain 20mm RPS75 Pop Up Gear Drive Sprinkler With 3 Nozzle - 6 Pack	Pack 6	3	$99.95	$299.85
Tapping Saddles	50mm x 3/4"	18	$12.00	$216.00
3/4"Nipples	3/4"	18	$2.19	$39.42
K-Rain Key And Nozzle Kit (if req.)	Pack 11	18	$2.99	$53.82
Valve Box		1	$44.98	$44.98
PVC Valves (Manual)	50mm	2	$19.29	$38.58
Contingency (Fittings etc)		1	20%	$138.53
				$831.18

Pressure/Flow Test	Flow L/Min	Friction Loss	Rev Flow	PSI	BAR
Test 16/6/25 40mm pipe *	210	20%	168	50	3.45
Theoretical 50mm pipe	241	20%	193	50	3.45

*** Test was a 40mm pipe. ChatGPT calculated flow for a 50mm pipe**

Nozzle	#3 (pre-Install)	#4	#6
Pressure (Bar)	3.45	3.45	3.45
Radius (m)	12.2	12.8	13.1
Coverage Width (Strip 25m)	24.4	25.6	26.2
Flow (L/Min)	10.2	12.9	18.5
No. Sprinklers	14	14	10
Coverage Lineal/M (Strip 150m)	171	179	131
Total Flow (L/Min)	143	181	185
System Capacity (L/Min)	193	193	193
% System Capacity	74%	94%	96%

Comment

Initial test was with the existing 40mm pipe. A new test when the full length (300m) of the 50mm pipe is in place will have to be done to determine the actual flow rate. This will show an accurate friction loss and the new flow rate, from which we can finalise the materials required and cost. IF the flow rate remains as listed in the preliminaary costing, we may get away with just one line and one valve. Obviously this would be better as this would reduce the manual intervention, from potentially 2 visits per day, down to one visit.