

Table 8 – Biomass storage calculations

	Peak Output (kW)	Annual heat energy delivered (kWh)	Energy Density by Volume - Lower Limit - Wood chip at 30% moisture content (kWh/m3)	Energy Density by Volume - Upper Limit - Wood chip at 30% moisture content (kWh/m3)	Wood chip volume combusted per annum - Lower Limit (m3)	Wood chip volume combusted per annum - Upper Limit (m3)
Biomass boiler	579.0	764,348	694	868	1,101	881
Biomass CHP	0.0	0			0	0

DELIVERY VEHICLE SIZE

TYPE	VOLUME (m3)
Flexible hose from a blower tanker	20
Topper Trailer	30
Walking floor trailer	60

TOTAL DELIVERIES PER ANNUM

LOWER LIMIT	Fuel	m3	Flexible hose from a blower tanker	Topper Trailer	Walking floor trailer
Biomass boiler	Wood chip combusted volume per annum	1,101			
Biomass CHP	Wood chip combusted volume per annum	0			

PEAK DELIVERIES PER DAY

LOWER LIMIT	Fuel	kWh combusted per day peak	m3 combusted per day peak	Flexible hose from a blower tanker	Topper Trailer	Walking floor trailer
Biomass boiler	Wood chip combusted volume per annum	13897	20.0	1.0	1.5	3.0
Biomass CHP	Wood chip combusted volume per annum	0	0.0			

AVERAGE DELIVERIES PER DAY

LOWER LIMIT	Fuel	m3 combusted per day average	Flexible hose from a blower tanker	Topper Trailer	Walking floor trailer
Biomass boiler	Wood chip combusted volume per annum	3.02	0.15	0.10	0.05
Biomass CHP	Wood chip combusted volume per annum	0.00			

PEAK STORAGE VOLUMES

LOWER LIMIT	Fuel	Peak daily combusted volume (m3) storage	Peak 2 day storage	Peak 3 day storage	Peak 5 day storage	Peak 7 day storage	Peak 2 week day storage
Biomass boiler	Wood chip combusted volume per annum	20.0	40.0	60.1	100.1	140.2	280.3
Biomass CHP	Wood chip combusted volume per annum	0.0					

STORE DIMENTIONS

LOWER LIMIT							
Height (m)			3.0	3.0	3.0	3.0	3.0
Footprint (m2)			13.3	20.0	33.4	46.7	93.4
Length (m)			3.7	4.5	5.8	6.8	9.7
Width (m)			3.7	4.5	5.8	6.8	9.7

UPPER LIMIT	Fuel	m3	Flexible hose from a blower tanker	Topper Trailer	Walking floor trailer
Biomass boiler	Wood chip combusted volume per annum	881	44	29	15
Biomass CHP	Wood chip combusted volume per annum	0			

UPPER LIMIT	Fuel	kWh combusted per day peak	m3 combusted per day peak	Flexible hose from a blower tanker	Topper Trailer	Walking floor trailer
Biomass boiler	Wood chip combusted volume per annum	13897	16.0	1.2	1.9	3.7
Biomass CHP	Wood chip combusted volume per annum	0	0.0			

UPPER LIMIT	Fuel	m3 combusted per day average	Flexible hose from a blower tanker	Topper Trailer	Walking floor trailer
Biomass boiler	Wood chip combusted volume per annum	2.41	0.12	0.08	0.04
Biomass CHP	Wood chip combusted volume per annum	0.00			

LOWER LIMIT	Fuel	Peak daily combusted volume (m3) storage	Peak 2 day storage	Peak 3 day storage	Peak 5 day storage	Peak 7 day storage	Peak 2 week day storage
Biomass boiler	Wood chip combusted volume per annum	16.0	32.0	48.0	80.1	112.1	224.1
Biomass CHP	Wood chip combusted volume per annum	0.0					

UPPER LIMIT							
Height (m)			3.0	3.0	3.0	3.0	3.0
Footprint (m2)			10.7	16.0	26.7	37.4	74.7
Length (m)			3.3	4.0	5.2	6.1	8.6
Width (m)			3.3	4.0	5.2	6.1	8.6