

2a Thunderbolt Cottages Alder Lane Knowsley Knowsley L34 9EQ

Volume Calculations:

Existing House Volumes:

$$28.6 \times 8.1 = 231.66 \text{ m}^3$$

$$7 \times 8.1 = 56.7 \text{ m}^3$$

$$5.3 \times 8.1 = 42.93 \text{ m}^3$$

Existing Out Building Volumes:

$$\text{OB1} - 73.3 \times 2.3 = 168.59 \text{ m}^3$$

$$\text{OB2} - 82.5 \times 2.75 = 226.87 \text{ m}^3$$

$$\text{OB3} - 7.5 \times 2.1 = 15.75 \text{ m}^3$$

$$\text{OB4/5} - 84.2 \times 2.4 = 202.08 \text{ m}^3$$

$$\textbf{\textit{Total Existing Volumes = 944.58 m}^3}$$

Proposed House Volumes:

$$69.0 \times 8.1 = 558.90 \text{ m}^3$$

$$13 \times 8.1 = 105.90 \text{ m}^3$$

$$75.6 \times 2.3 = 151.2 \text{ m}^3$$

Proposed Garage/Store/Workshop Volumes:

$$185.3 \times 3.5 = 648.55 \text{ m}^3$$

$$\textbf{\textit{Total Existing Volumes = 1464.55 m}^3}$$

$$\textbf{TOTAL INCREASE IN VOLUMES = 55\%}$$