

**Re: Planning Application Ref: APP/X1925/V/23/3323321**

**Re: Land at Priory Farm to the East of Great Wymondley, North Hertfordshire**

### **Technical Glossary**

MVA (Mega Volt-Ampere) and MW (Mega Watt) are both units of electrical power, but they are used to measure slightly different aspects of electrical systems:

#### **MVA (Mega Volt-Ampere)**

MVA is a unit of apparent power in an electrical system.

Apparent power is the combination of real power (measured in watts, or MW) and reactive power (measured in volt-amperes reactive or VARs).

MVA takes into account both the actual power being consumed or generated (MW) and the reactive power, which is the power oscillating back and forth in the system due to inductive or capacitive loads. Reactive power doesn't perform useful work but is necessary for voltage regulation and to support the operation of inductive loads like motors and transformers.

MVA is often used in power system analysis and design to assess the capacity and load on the system, especially when dealing with complex AC circuits.

#### **MW (Mega Watt)**

MW is a unit of real power in an electrical system.

Real power is the actual power that performs useful work in an electrical circuit or system. It is typically measured in watts (W) or kilowatts (kW) for smaller applications and in megawatts (MW) for larger power generation and distribution systems.

MW represents the power that is converted into mechanical work, heat, or other useful forms of energy. It is the power that powers devices and performs tasks, such as turning a motor or lighting a bulb.

In summary, MVA includes both the real power (MW) and reactive power (VARs) in an electrical system and is used for system analysis and design, especially in larger power systems. MW represents only the real power that performs useful work and is commonly used for specifying the output of power generation sources and the power consumption of devices and equipment