INTRODUCTION

This report addresses Condition 31 of the S106 Agreement for planning of the Tribeca development in Camden, London.

Condition 31 states the following;

> *"Prior to the commencement of works on Plot C, an assessment into the implementation of further renewable technology on site shall be submitted to and approved in writing by the Local Planning Authority. Details shall be implemented prior to the occupation of any buildings within Plot C and permanently retained and maintained thereafter"*

CURRENT PROPOSAL

Within the early stages of the design, a feasibility study was conducted by KJ Tait into the potential sources of low zero carbon technology to be implemented as a source of heating and cooling for Plot C. This study was developed on from the initial Max Fordham UBB Sustainability Planning Statement (Issued March 2018) which proposed the use of Combined Heat & Power (CHP) for the site. The KJ Tait feasibility study and design moved away from the original concept due to it being reliant on gas. The revised KJ Tait strategy shifting away from any primary energy natural gas use to an all-electric primary energy design proposal. .

It was concluded within the KJ Tait Feasibility study (*Doc reference: C2718-KJT-ZZ-XX-RP-ME-0036-Plot C LZCT Feasibility Study-S2-P01)* that Air Source Heat Pumps (ASHPs) and Photovoltaic (PV) panels would best be suited for the site. With the two technologies, the reliance on natural gas has been removed and shifted to an all-electric build, taking full advantage of the increasing improvement of the carbon intensity of the National Grid.

Buildings C2 and C3 will contain a number of Air Source Heat Pumps on their roofs that will serve all four buildings on Plot C. Roof space is limited on some buildings and therefore PV has only been allocated to Plots C2 and C3.

FEASIBLITY OF FURTHER RENEWABLE TECHNOLOGY

The KJ Tait LZCT feasibility report and Plot C Energy statement discusses other viable technologies for Plot C and their implications. This is summarised below:

Technology	Implications
Ground source heat pump	- Complex borehole construction logistics beneath basement - Expensive - Limited carbon benefit over ASHP
River Source Heat Pump	- Canal has low flow rate, discharging heat to canal will cause canal water temperature to rise - Canal is periodically drained for maintenance - Potential of environmental harm to aquatic life
Wind turbines	- Not feasible in this location
Biomass boiler	- Air quality implications - Delivery and storage implications

Such listed technologies were not deemed suitable for the design on Plot C and therefore were discontinued at an early stage of the design. ASHPs were selected as the best solution to provide heating and cooling to all builds.

A 60m^2 and 110 m^2 PV array have been implemented on the roof of Plots C2 and C3 respectively to help off-set energy consumption. The roof space of Plot C1 was looked into for any viable PV arrays, but due to the shadowing effect from the plantroom walls and the adjacent Plot C3, it was not a viable location.

Due to the amount of plant on the roofs on all the four buildings, there is no scope to further increase the PV area as the PV arrays have already been maximised as much as possible.

Access and maintenance to the large ASHPs and have also been taken into account, which means there is no feasibility for installing more units. The plant has been selected to provide appropriate resilience for the development.

The Section 106 Agreement (S106) associated with the original Planning decision included requirements for the provision of an off-site energy network study and connection plans *(document reference C2718-KJT-ZZ-XX-RP-ME-0050-Off Site Energy Network Appraisal-S2-P01).*

Clause 2.59 (a) of the S106 stipulated a requirement to safeguard Plot C for a future connection to an off-site decentralised energy network (DEN). Clause 3 of the S106 sets out the requirements for the DEN off-site feasibility study and connection plan.

From investigations to date, there are no existing heat networks in the vicinity that are viable to connect to. It may become viable to connect to a heat network in future, as set out in the off-site DEN study report.

In accordance with the Planning conditions, provision for a future connection to an off-site DEN has been made within Plot C with a dedicated pipework sleeves provide for any future incoming pipework into the basement level B1, a pipework route to the plantroom level at B2 and a dedicated DEN plant space at level B2 for future DEN interface equipment.