As per Camden Council's Local Plan adopted in 2017, under the policy CC2 (Adapting to Climate Change), any developments must demonstrate what measures have been taken to promote sustainable cooling methods.

In Camden's Planning Guidance on Energy efficiency and adaptation published in 2021, it states that "all developments should follow the cooling hierarchy" which is outlined in the following points:

1. Minimise internal heat generation through energy efficient design

2. Reduce the amount of heat entering the building in summer

3. Manage the heat within the building through exposed internal thermal mass and high ceilings

4. Passive ventilation

5. Mechanical ventilation

6. Active cooling

Although these have been observed within the design of the changes proposed, due to the strict limitations of working within a listed building and having to work with the schools existing cooling system, it is unavoidable that many of these cannot be realised through our proposed interventions.

Below are some points that validate the considerations taken and result of the process.

When planning the new layout of the rooms we placed the teaching spaces along the north facade to reduce solar gain. These rooms also have access to the existing opening windows to allow for passive ventilation.

However, one of the teaching rooms, a media suite for filming which needed to be a dark room (no natural light), had to be placed in the centre of the plan which meant it had no access to natural ventilation and hence would require a mechanical unit.

We raised several of the ceilings to allow for better passive ventilation but many issues which regard overheating require changes to the exterior of the building which were not possible due to the listed nature of the structure. This also inhibited more invasive solutions such as the introduction of water based cooling systems.

The existing classrooms in the scheme are currently services by air conditioning units which act as both the heating and cooling for the school. This is why we therefore proposed that the new rooms which were being created in between would latch on to the existing system. To introduce a whole new mechanical system into the school for two new rooms would have required much more intervention, time and likely cost to the school.

To support the air cooling systems for the new rooms, new condenser units were necessary to and hence our application for the addition to the existing set in the external moat around the building.

The units are as following and their specifications are appended to this document:

— Fujitsu AOYG12KBTB
— Fujitsu AOYG18KATA