Appendix A – Climate Change Statement

Climate Change Statement for Planning Applications

Part 1: Applicant details

Name of applicant/agent	Heckmondwike Grammar School Academy Trust
Site Address	Heckmondwike Grammar School, High St in Heckmondwike, West Yorkshire, WF16 0AH.
Description of Development	Erection of a new second-floor extension and the demolition of a temporary structure that has deteriorated beyond repair.

Part 2: Climate Change Mitigation measures

Please respond to the following questions considering the measures set out in the Climate Change Guidance note:
Q1: What measures have been/will be taken to reduce the energy demand associated with your proposed development beyond the minimum required in Building Regulations? (See section 2)
Low Energy lighting systems have been specified throughout that are controlled via daylight harvesting, and presence and absence detection lighting control systems. All Electrical distribution cables are specified to be correctly sized with no oversizing to ensure no transient losses. All comfort heating and cooling systems are proposed to be inverter-driven to reduce startup currents and harmonic disturbances. Heating and cooling are proposed to be achieved by systems that do not require the burning of fossil fuels. Solar PV systems are proposed to be specified to maximise the available roof space and building orientation. The scheme proposes an enhanced specification for the building's thermal performance over and above building regulations to reduce energy use and carbon emissions.
Q2: What measures have been/will be taken to limit the carbon consumed through the implementation and construction processes, e.g. by reusing existing on-site materials or sourcing materials locally? (See section 3)
It is proposed to source construction materials locally whenever feasible to reduce transportation-related carbon emissions. The works and the materials specified have been carefully chosen to ensure they are responsibly sourced to reduce the environmental impact associated with the project. Building Information Modeling (BIM) is utilised to mitigate carbon dioxide (CO2) emissions during construction. BIM enables the development of intricate 3D models, enhancing design optimisation and minimising resource utilisation.

Q3: What measures have been/will be taken to utilise renewable or low-carbon energy sources? (See section 4)
A solar PV system is specified to make the best use of the available space and building orientation to achieve the maximum KWP from the system. Additionally, the required Solar inverter proposed to be correctly sized with limited diversity to ensure the KWP of the Solar array is fully captured and utilised.
Q4: What measures have been/will be taken to ensure the building design and layout has been optimised to energy efficiency beyond the minimum requirements in Part L of the Building Regulations? (See section 5)
Passive design principles will be predominantly utilised, prioritising the performance of the building's external envelope through a fabric-first approach. This involves maximising thermal performance, ensuring air tightness, and mitigating thermal bridging to minimize heat losses and gains. The building uses passive design measures to reduce the total heating, cooling, mechanical ventilation, and lighting loads and energy consumption. The proposed scheme includes the implementation LED lighting, solar PV system, Air Source Heat Pump, and hybrid ventilation. A hybrid ventilation system is proposed to serve the second-floor level classroom areas. The systems will operate at different times of the year to provide improved thermal comfort and reduce energy use. This will comprise: winter months: mechanical fresh air ventilation with heat recovery. summer months: natural ventilation.
Q5: What measures have been/will be taken to reduce the potential impacts of flooding associated with your proposed development? (See section 6)
Considering that the proposed is an extension to the existing building, it is anticipated to connect to the existing drainage system. The extension will introduce minimal additional load to the existing drainage system and the proposed fixtures will only marginally increase its workload.It is proposed to ensure thorough waterproofing of the building envelope, including walls, windows, and doors, to minimise the risk of water infiltration from heavy rainfall or flooding. Precise considerations are given to the details of the connection to the existing structure. Cavity trays will be incorporated at the parapet level. The valley gutter will incorporate a spitter pipe through the cladding to allow excess water to drain off and will serve as a warning if outlets are blocked. Gutters will be sized to suit the roof area in accordance with all relevant standards. The existing rainwater pipes to the sports hall will be retained as part of the interface detailing.
Q6: What measures have been/will be taken to reduce water stress associated with your proposed development? (e.g. Water retention and minimisation measures) (See sections 7 and 8)
The development proposes a water-efficient design, implementing features such as low-flow fixtures, dual-flush toilets, and water-saving appliances to minimise water consumption within the development. All cold-water outlets will be fitted with flow regulation/isolation valves. The scheme also includes installation of a new water meter to monitor consumption in the Powell Building.

Q7: What measures have been/will be taken to provide biodiversity net gains? (See section 8)
The development will not impact any onsite priority habitat due to the extension being on the top of the existing first floor.
Q8: What measures have been/will be taken to reduce air pollution associated with your proposed development? (See section 9)
Utilising Renewable Energy Sources: It is proposed to incorporate renewable energy sources into the project to minimise reliance on fossil fuels. The roof space of the new extension will be utilised to provide a photovoltaic system to offset some of the building's energy consumption and carbon emissions. Encouraging Energy Efficiency: It is proposed to implement energy-efficient practices, such as LED lighting and efficient HVAC systems, which will help to reduce energy consumption and associated emissions.