Building Performance Upgrades (Acoustic, Thermal, Fire & Ventilation)

The proposed residential conversion has been designed to sensitively integrate modern performance standards while preserving the building's historic character. Where soundproofing between floors is required, a suspended ceiling system will be installed. This will include acoustic mineral wool insulation, resilient bars, and acoustic plasterboard. Importantly, this system will be fully reversible and designed to avoid damage to original plaster ceilings and decorative cornicing. Where coving is present, it will be carefully boxed in and preserved in situ, allowing for potential future exposure. Without these multiple acoustic products single layer solutions would not be sufficient. Coving is also not present in every element of the building as can be seen in photos provided. Some lowering of ceilings has also already taken place.

Thermal upgrades will use internal insulation with breathable materials, and secondary glazing where appropriate. Ventilation and service routes will be planned to follow existing voids, flues, and non-sensitive areas to minimise intervention. Fire protection measures (e.g. FD30-rated doors, alarm systems) will be incorporated discreetly. These proposals strike a balance between conservation and compliance, ensuring the building remains functional, safe, and historically legible.

1. Soundproofing Between Floors

Proposal:
Soundproofing will be provided between floors using a reversible 'floating ceiling' system that avoids direct interference with historic features such as cornices or ceiling beams leaving them in place and protected.

Specification:

- Suspended ceiling system installed below the existing ceiling using acoustic insulation and plasterboard.
- Insulation to include acoustic mineral wool (typically 100mm RW3 or similar) between joists, where accessible.
- Acoustic plasterboard (15mm SoundBloc or equivalent) with staggered joints, fixed to the framework.
- All perimeter gaps sealed with acoustic sealant.
- Ceiling void to accommodate electrical ventilation, water and sewage services, enabling compliance with modern standards without disturbing original plasterwork above.

Heritage Consideration:

- Original decorative cornicing will not be removed or damaged. Instead, the new ceiling will be dropped just below the cornice line.
- This approach ensures the coving is preserved intact and concealed, rather than destroyed. It could be exposed again in the future, ensuring reversibility. Without

the space created from doing so services could not be installed for each unit. This also ensure preservation of features such as fireplaces which would be partially covered if floors were raised creating a larger impact.

2. Thermal Upgrades

Proposal:
Thermal upgrades will be introduced using internal and minimally invasive methods:

- Internal wall insulation applied only to external facing walls- removing the need to impact party walls which make up the majority.
- Secondary glazing to windows where appropriate (e.g. oak-framed, internal units), ensuring full reversibility and no harm to original sashes and leaded glass.
- Loft insulation using non-invasive methods (e.g. laid over existing joists, not packed between historic timbers).

3. Service Provision & Ventilation

Proposal:

- Ventilation and extraction to be routed through lowered ceiling voids minimising disruption to existing features.
- Kitchens and bathrooms located in non-sensitive areas, allowing for extract ducts to exit via rear-facing elevations or roof slopes- no impact to mock Tudor frontage.
- Electrical conduits and plumbing to run through floor voids or new partition walls, avoiding chasing into historic masonry.

4. Fire Protection & Acoustic Separation

Proposal:
Fire and acoustic separation will follow **Building Regs Part B and E**, with a focus on non-invasive, reversible methods, such as:

- FD30-rated fire doors to each flat, in traditional style with concealed intumescent strips.
- Acoustic insulation between party walls and floors (see soundproofing above).
- Smoke detection and alarm systems to be installed in accordance with current standards, with wiring concealed in service zones.