Stage 1 Acoustic Risk Assessment

Unit A1, Cleator Mills, Cleator, Cumbria

Proposed gym (Class E(d)) · Planning ref 4/26/2297/0F1 · ProPG: Gym Acoustics Guidance

Prepared for: Helen Barwise, Peak Health and Performance (applicant and proposed operator)

Prepared by: KBT Consulting, Hilltop Farm, Ivegill, Carlisle CA4 0NR · T 07775 993212

Planning ref: 4/26/2297/0F1 **Date:** 27 October 2026 (Rev B – for Environmental Health comment) **Guidance:** ProPG: Gym Acoustics Guidance (2023)

At a glance: acoustic risk

How each concern raised by Environmental Health on 20 October 2026 has been addressed. Full reasoning is in Sections 5–7 and the operator's commitments are in Section 8.

Source of concern	Main pathway to neighbours	Key controls	Risk with controls
Amplified music (bass)	Airborne via wall head and roof	Background system only; no subwoofer; level locked	Low
Amplified voices	Airborne via roof	No amplified microphones	Low
Impact from weights	Floor → ground → Unit A2	Separate slabs; ≥ 6 m from wall; no overhead drops	Low
Lightweight roof	Flanking over the party wall	Wall head sealed by the landlord before first use	Low
Roller shutter	Breakout to front and car park	Kept closed during sessions	Low
Plant	—	None proposed	Negligible

Topic	Position	What needs to happen
Nearest receptor	Unit A2 (Induchem): storage with 2–3 hot desks used 2–3 days a week. Same landlord.	Occupier letter to follow (Appendix B)
Other receptors	Car park on the north elevation. Next nearest occupied building approx. 90 m away; nearest housing approx. 650 m.	None
Impact noise	Separate concrete slabs either side of the party wall; nearest rack 6 m from the wall; office, WC and kitchen between the training floor and the wall.	Operator to sign up to the drop rules (Section 8)
Airborne noise	Double brick party wall to roof sheets. 4 × 4-inch background speakers, no subwoofer.	Landlord to seal wall head (agreed, at landlord's cost); lock music level at commissioning

Topic	Position	What needs to happen
Hours and use	06:00–20:00 daily; maximum 20 active members; no new plant.	Secure by condition
How it will be secured	Noise Management Plan and planning conditions, with a complaint-triggered acoustic assessment.	LPA to consider the conditions in Section 9
Overall	**Low risk, provided the controls are secured by condition.**	**Conditions in place of the pre-commencement assessment**

Non-technical summary

Peak Health and Performance proposes to use Unit A1 at Cleator Mills as a coach-led strength and conditioning gym. Environmental Health supports the use in principle but is concerned that music, voices and dropped weights could disturb the neighbouring occupier of Unit A2 and others nearby, because the building has a lightweight roof and roller shutter doors.

This report follows the first stage of the national gym acoustics guidance (ProPG). It finds that the risk is low. The floor slabs of Units A1 and A2 are separate, which breaks the main route by which gym impacts usually travel. All weights will be used at least 6 m from the party wall, and the operator will not allow barbells to be dropped from overhead. The music system is a small background system with no bass speaker, and no microphones will be used. Unit A2 is mainly storage with a few desks used part of the week. To the north is a car park, the next nearest occupied building is about 90 m away and the nearest homes are about 650 m away.

The report proposes that these controls are secured by planning conditions, with a full acoustic assessment required only if a genuine complaint arises, instead of a full assessment before the use can start.

1 Introduction

1.1 Background and purpose

KBT Consulting was asked by Helen Barwise of Peak Health and Performance, the applicant and proposed operator, to respond to the Environmental Health consultation response of 20 October 2026 on planning application 4/26/2297/0F1, for the change of use of Unit A1, Cleator Mills from a dog training studio (sui generis) to a gym (Class E(d)).

Environmental Health requested a formal noise assessment and suggested a pre-commencement condition requiring assessment by a suitably qualified acoustic engineer with reference to BS 8233:2014. The aims of this report are to:

- identify the noise and vibration sources associated with the proposed gym;
- identify the neighbouring receptors and the routes by which noise could reach them;
- assess the risk of adverse effects using the ProPG Stage 1 risk categories; and
- set out the controls the operator will adopt and how they can be secured.

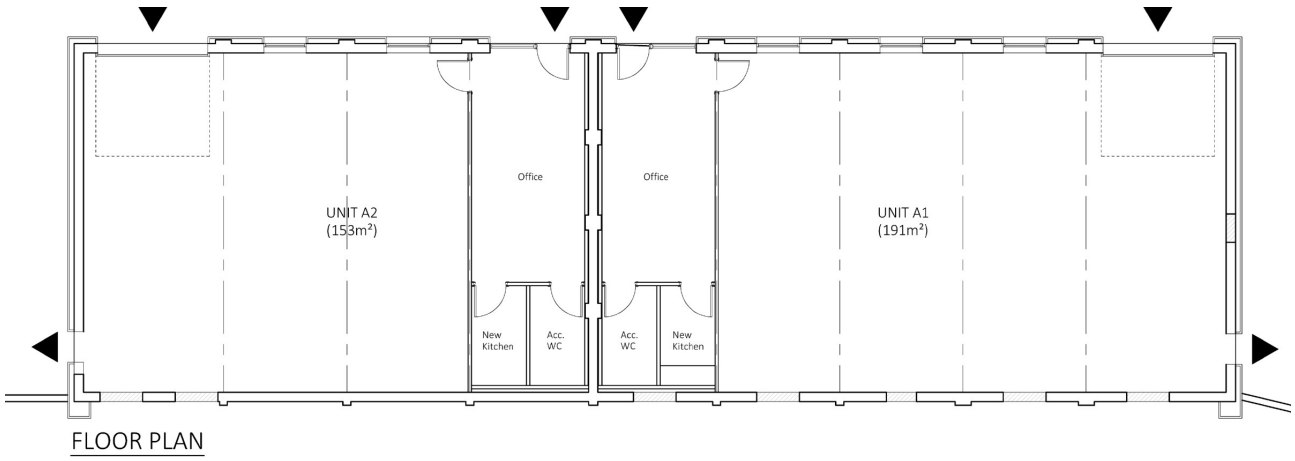


Figure 1: Existing floor plan of Unit A, showing Unit A1 (191 m^2), Unit A2 (153 m^2) and the offices, accessible WCs and kitchens on either side of the party wall. Front elevation at top. Extract from Manning Elliott Partnership drawing 1701C-EX-320 (September 2026), not to scale.

1.2 Scope

The assessment covers airborne noise (music and voices), impact noise and vibration from weights and equipment, external breakout through the roof and roller shutter, and mechanical plant. It considers Unit A2 and other premises in the vicinity.

1.3 Guidance followed

The report follows the Stage 1 initial site risk assessment approach in ProPG: Gym Acoustics Guidance (ANC, IOA and CIEH, March 2023), with reference to BS 8233:2014 Guidance on sound insulation and noise reduction for buildings, as requested by Environmental Health.

1.4 Status of this assessment

KBT Consulting is not an acoustic consultancy and no measurements have been taken. This is stated openly so that Environmental Health can judge the weight to give the report. The applicant will host a short pre-opening demonstration on site if that would assist (Section 10).

2 Site context

2.1 Site description

Unit A1 is a single-storey industrial unit at Cleator Mills, Cleator. Unit A is a single building containing only Units A1 and A2; Unit A2 (Induchem) is the only adjoining occupier. A car park lies along the north elevation. The next nearest occupied building is approximately 90 m from the unit and the nearest residential property is approximately 650 m away. The previous use was a dog training centre, and no noise complaints are known to have been received during that use.

2.2 Construction

Table 1: Construction of Unit A1 relevant to noise.

Element	Description
Size	Approx. 191 m^2 gross; internal approx. 18.57 × 10.26 m; main training area approx. 152 m^2. Eaves approx. 3.52 m, ridge approx. 5.77 m (scaled from drawing 1701C-EX-320).

Element	Description
Party wall (A1/A2)	Double brick wall (approx. 215–225 mm) rising to the underside of the roof sheets. Built before the floor slabs were cast.
Floor	Separate concrete ground-bearing slabs either side of the party wall; the slabs do not join across the boundary.
Mezzanine	Above the office at the A2 side of A1. 200 × 50 mm timber joists on joist hangers fixed to the party wall. Ancillary use only.
Internal buffer	An office, accessible WC and kitchen lie between the training floor and the party wall, with the mezzanine above. Unit A2 has a matching office, WC and kitchen on its side (Figure 1).
Roof and walls	Steel trusses, profiled roof sheets with rooflights, insulated box-profile wall cladding.
Openings	Roller shutter, pedestrian door and windows on the front elevation; fire escape door in the end gable. None on the A2 boundary.

Site photographs are in Appendix D.

2.3 Receptors

Table 2: Receptors considered.

Receptor	Distance	Use and sensitivity
Unit A2 (Induchem)	Adjoining	Mainly inventory storage; 2–3 hot desks used on 2–3 days a week. Same landlord. Low–medium sensitivity.
Car park	North elevation	Parking only; not a noise-sensitive use.
Next nearest occupied building	Approx. 90 m	Separated by open ground and the car park; no structural connection.
Nearest housing	Approx. 650 m	Not affected at this distance by an enclosed daytime gym.

Internal access to Unit A2 has not been available. The floor plan (Figure 1) shows A2's office directly behind the party wall, back-to-back with A1's office; the A2 desks are assumed to be in this office, which is the closest occupied space to the gym. The two offices, the A1 WC and kitchen, and the 6 m exclusion zone together put the training activity well away from it. The occupier has been approached and a letter confirming its use and its position on the proposal will be provided (Appendix B).

3 Proposed operation

Table 3: Proposed operation.

Item	Detail
Gym style	Hybrid strength and conditioning gym; coach-led sessions.
Hours	06:00–20:00. No night-time use.
Occupancy	Maximum 20 active members at any one time.
Flooring	Commercial-grade 20 mm rubber tiles throughout the training area; 25 m^2 of 18 mm sled turf.
Sound system	Power Dynamics 2-zone background system: 1 × PPA502 mixer-amplifier (50 W) and 4 × BV40V 4-inch wall speakers on 100 V line (10 W tap each).

Item	Detail
Strength equipment	4 squat racks (2 with cable columns, stack up to 60 kg); barbells; bumper plates 5–25 kg; dumbbells 2–35 kg; kettlebells 2–32 kg; D-balls 10–30 kg; sandbags 15–30 kg; wall balls 3–9 kg; 2 sleds; 3 foam plyo boxes. Full list in Appendix A.
Conditioning equipment	4 SkiErgs, 4 rowers, 4 BikeErgs, 3 air bikes, 1 AirRunner (non-motorised treadmill).
Plant	No air conditioning or new extraction proposed.

There are no motorised treadmills, no spin studio and no pin-loaded machines other than the two cable columns.

4 Assessment context

Environmental Health accepts that office and commercial occupiers are less sensitive than residential occupiers, while still being owed a reasonable level of comfort. ProPG reflects this in its guide internal criteria, summarised below.

Table 4: ProPG guide internal criteria (from ProPG Tables 2 and 3).

Receptor	Music (airborne)	Heavy impacts	Vibration (rms)
Commercial offices	G25–G35	G35–G45	20 mm/s²
Residential (day)	G15–G25	G20–G25	7 mm/s²

The office criteria are around 10–20 dB less stringent than for homes. ProPG also notes that early-morning gym peaks will often fall outside typical office hours. Here the receptor is largely storage with intermittent desk use.

5 Source–pathway–receptor risk screening

Each source is screened using the ProPG risk categories (negligible, low, medium, high). The first rating assumes no controls; the second assumes the commitments in Section 8.

Table 5: Risk screening.

Source	Pathway	Uncontrolled	Key controls	With controls
Barbells with bumper plates	Floor → ground → A2 slab	Medium	No overhead drops; controlled lowering; ≥ 6 m from wall	Low
D-balls and sandbags	As above	Medium	≥ 6 m from wall; separate slabs; office, WC and kitchen buffer	Low
Dumbbells and kettlebells	As above	Low–Medium	Placed, not dropped; ≥ 6 m from wall	Low
Sled loading and pushing	Plates dropped onto sled → floor	Low–Medium	Plates placed; sled lane ≥ 6 m from wall	Low
Cable column stacks	Stack → frame → floor	Low	Stack not released to drop	Low
AirRunner, ergs, bikes	Footfall and flywheel → floor	Low	≥ 6 m from wall; 20 mm floor	Low
Wall balls	Ball strike on targets	Low–Medium	Targets on free-standing racks only	Low

Source	Pathway	Uncontrolled	Key controls	With controls
Amplified music	Airborne via wall head and roof	Low	Background system; no subwoofer; locked level; wall head sealed	Low
Coaching voices	Airborne via roof	Low	No amplified microphones	Low
Mezzanine	Footfall → joist hangers → wall	Low	Ancillary use only	Negligible
External breakout	Roof, cladding, front shutter → car park and beyond	Low	Shutter, doors and windows closed during sessions; 90 m to next building	Low
Plant	—	Negligible	None proposed	Negligible

6 Discussion

6.1 Impact noise

Impact noise travels mainly through the floor. Here the floor slabs on either side of the party wall are separate, and the wall was built before the slabs were cast, so there is no continuous slab carrying impacts into Unit A2. Some energy may still pass through the ground and foundations, but this route is much weaker and is further reduced by keeping all weights activity at least 6 m from the wall.

The equipment includes bumper plates, D-balls and sandbags, which are designed to be dropped. ProPG identifies repeated overhead barbell drops in group classes as the highest-impact gym activity. The operator has therefore agreed not to permit overhead barbell drops and to require controlled lowering. D-balls and sandbags (10–30 kg) are lighter and softer than a loaded barbell, and are kept at least 6 m from the party wall like all other weights. With the separate floor slabs and the rooms between the training floor and the wall, they are not expected to be noticeable in Unit A2.

The 20 mm rubber tiles improve durability and soften impacts, but they are not an isolating floor. ProPG puts the isolation of multi-layer matting systems at 10–20 dB only at 100–150 mm thick. The low rating relies on the separate slabs, the distance and the drop controls, not on the tiles.

6.2 Airborne noise and the roof

The double brick party wall gives good airborne sound insulation. The weak points are the junction with the profiled roof sheets, where gaps can remain in the troughs of the sheeting, and the lightweight roof. The landlord has agreed to inspect and seal the wall head, at its own cost, before the gym opens.

The music system is designed for background music in shops and cafés. Its 4-inch speakers are rated from 100 Hz upwards and there is no subwoofer, so it cannot produce the strong bass that Environmental Health is concerned about. The level will be set and locked at commissioning and checked from inside Unit A2.

6.3 External breakout and surroundings

Sound escaping through the roof or the front shutter would pass first over the car park on the north side, which is not a sensitive use. The next nearest occupied building is approximately 90 m away and the nearest housing approximately 650 m away. At these distances, with the shutter closed during sessions and a background-only music system, breakout is not expected to be noticeable at other premises.

6.4 Hours and occupation

Use is limited to 06:00–20:00 with no night-time operation. Because Unit A2 is mainly storage with intermittent desk use, the time when gym activity and occupied desks overlap is limited.

7 Conclusion

The risk of the gym causing an adverse effect on the occupiers of Unit A2 or other premises is assessed as **low**, provided the controls in Section 8 are secured. The main reasons are:

- the separate floor slabs, which break the main impact noise path;
- all weights activity at least 6 m from the party wall, with the office, WC and kitchen between;
- no overhead barbell drops, and plates placed onto sleds rather than dropped;
- a background-only music system with very limited bass and no microphones;
- a commercial receptor used mainly for storage, a car park to the north, and the next occupied building about 90 m away;
- daytime-only hours, no new plant and no complaints from the previous use.

Under ProPG, a low-risk site would ordinarily proceed with planning conditions rather than a full Stage 2 assessment before development. Proportionate conditions are proposed in Section 9.

8 Noise Management Plan

The operator commits to the following measures. They are set out in full, with procedures, records and the operator's sign-off, in the Noise Management Plan at Appendix C.

Table 6: Noise Management Plan commitments.

Area	Commitment
Layout	All racks, barbell, dumbbell, kettlebell, D-ball, sandbag and sled activity at least 6 m from the A1/A2 party wall. Racks free-standing; nothing fixed to the party wall. Wall-ball targets on racks only. Mezzanine for ancillary use only; no exercise, equipment or weights at mezzanine level.
Weights and impact	No overhead dropping of barbells; loaded bars returned to the floor under control. Dumbbells and kettlebells placed down, not dropped. Plates placed onto sleds, not dropped; sled work only on the sled turf. Cable column stacks not released to drop; buffers maintained. 20 mm commercial rubber flooring throughout the training area.
Music and voices	Only the fixed background system to be used; no subwoofers, portable speakers or extra amplifiers. No speaker on the party wall. Bass no higher than flat; maximum volume set at commissioning so music is not audible in A2, then locked or marked and recorded. No amplified microphones.
Building	Before first use, the landlord will seal any gaps at the junction of the party wall and the roof sheets with profile fillers, mineral wool and flexible sealant; send photographs to the LPA. Roller shutter, external doors and windows closed during sessions except for access.
Management	Hours 06:00–20:00; maximum 20 active members at any one time. Drop rules covered at every member induction, shown on signage and enforced by coaches.

Area	Commitment
	Named responsible manager with a direct number given to the occupier of A2. Complaints log kept and available to the Council; complaints investigated within two working days.

9 Proposed planning conditions

The applicant asks that the suggested pre-commencement assessment condition is replaced by the following. Exact wording is a matter for the LPA.

Table 7: Proposed conditions.

Condition	Suggested wording
Noise Management Plan	The use shall be operated at all times in accordance with the Noise Management Plan at Appendix C of the Stage 1 Acoustic Risk Assessment (KBT Consulting, Rev B, 27 October 2026), or any revision approved in writing by the LPA.
Wall head sealing	Prior to first use, the junction of the A1/A2 party wall and the roof shall be sealed and photographic evidence submitted to the LPA.
Hours	The gym shall not be open to members outside 06:00–20:00 on any day.
Sound system	No amplified sound shall be played other than through the background music system described in the assessment; no subwoofer or amplified microphone shall be used.
Complaint review	Within 28 days of a written request from the LPA following a substantiated noise complaint, an assessment by a suitably qualified acoustician, with reference to ProPG: Gym Acoustics Guidance and BS 8233:2014, shall be submitted with any necessary mitigation and a timetable, and the approved mitigation shall then be implemented.

10 Optional pre-opening demonstration

If it would help Environmental Health, the applicant will arrange a short demonstration before opening, with the A2 occupier's agreement: music played through the installed system at its locked level, and representative controlled lifts and weight placements in the training area, with an officer present in Unit A2.

11 Limitations

- **No measurements.** No sound insulation or vibration tests have been carried out; the assessment relies on construction, layout and operational controls.
- **Construction details.** The party wall, slab separation and mezzanine details are as reported by the applicant and seen in photographs.
- **Access.** Internal access to Unit A2 has not been available; desk locations are assumed.
- **Dimensions.** Dimensions are scaled from drawings and are approximate.
- **Controls.** The conclusion depends on the Section 8 controls being implemented and maintained.

Appendix A Operator equipment list

Reproduced from the Peak Health and Performance equipment list supplied by the operator. The right-hand column shows the Section 8 control that applies to each item.

Table A1: Gym style and flooring.

Item	Operator specification
Gym style	Hybrid style gym that combines resistance training with different types of conditioning. Coach-led sessions.
Flooring	Commercial-grade 20 mm rubber floor tiles (designed for impact up to 140 kg). 25 m^2 of 18 mm sled turf.

Table A2: Equipment schedule.

Category	Qty	Item	Noise control (Section 8)
Fixed weight	2	Squat racks	Free-standing; ≥ 6 m from party wall
Fixed weight	2	Squat racks with integrated cable columns for light accessory work (up to 60 kg)	As above; stacks not released to drop
Free weights	—	Rubber bumper plates, 5–25 kg	No overhead drops; bars lowered under control
Free weights	—	Barbells, 15–20 kg	As above
Free weights	—	Hex rubber dumbbells, 2–35 kg	Placed, not dropped; ≥ 6 m from wall
Free weights	—	Kettlebells, 2–32 kg	Placed, not dropped; ≥ 6 m from wall
Cardio	4	Concept2 SkiErgs	≥ 6 m from wall
Cardio	4	Concept2 rowers	≥ 6 m from wall
Cardio	4	Concept2 BikeErgs	≥ 6 m from wall
Cardio	3	Assault air bikes	≥ 6 m from wall
Cardio	1	Assault AirRunner	≥ 6 m from wall; 20 mm floor
Other	—	Rubber D-balls, 10–30 kg	≥ 6 m from wall
Other	—	Sandbags, 15–30 kg	As above
Other	—	Wall balls, 3–9 kg, with fixed targets on the squat racks	Targets on racks only, never on walls
Other	2	Sleds	Plates placed, not dropped; sled turf only
Other	3	Foam plyo boxes	Foam construction; low impact

Quantities shown as — are not given in the operator's list.

Table A3: Sound equipment.

Item	Operator specification
System	Power Dynamics 2-zone wall-mount background music system, 4 × 4-inch speakers.
Amplifier	1 × PPA502 mixer-amplifier.
Speakers	4 × BV40V wall speakers (4-inch).

Appendix B Letter from occupier of Unit A2

[To follow: letter from Induchem confirming the use of Unit A2, typical desk occupation and its position on the proposal.]

Appendix C Noise Management Plan

Premises: Unit A1, Cleator Mills, Cleator **Operator:** Peak Health and Performance **Planning ref:** 4/26/2297/0F1

C1 Purpose

This plan sets out how the gym will be run so that noise and vibration do not disturb the occupiers of Unit A2 or other nearby premises. It forms part of the planning permission and must be followed at all times. It applies to all staff, coaches and members.

C2 Responsibilities

Table C1: Roles.

Role	Name and contact	Responsibility
Responsible manager	Helen Barwise 07514 415969	Owns this plan; first point of contact for neighbours and the Council; investigates complaints; reviews the plan.
Deputy	Lewis Craig Barwise [mobile number] 07702525610	Acts for the responsible manager when absent.
Coaches	All coaching staff	Brief and enforce the drop rules in every session; stop any activity breaching this plan.
Members	All members	Follow the gym rules agreed at induction.

The responsible manager's number will be given in writing to the occupier of Unit A2 before the gym opens, and updated if it changes.

C3 Operating limits

- Open to members 06:00–20:00 only, on any day.
- No more than 20 active members training at any one time.
- Roller shutter, external doors and windows kept closed during all sessions, except for access and emergencies.
- The mezzanine is used only for ancillary storage and office use; no exercise, equipment or weights.

C4 Layout

- All racks, barbell, dumbbell, kettlebell, D-ball, sandbag and sled activity at least 6 m from the A1/A2 party wall. The 6 m line will be marked on the floor.
- Racks free-standing; nothing fixed to the party wall. Wall-ball targets on the racks only.
- Sled work only on the 25 m^2 sled turf lane, at least 6 m from the party wall.
- Layout not changed without first checking it against this plan.

C5 Gym rules on weights and impact

These rules apply in every session and are enforced by coaches:

- No dropping barbells from overhead. Loaded bars are lowered to the floor under control.
- Dumbbells and kettlebells are placed down, not dropped.
- Plates are placed onto sleds, not dropped.

- Cable column weight stacks are lowered under control, not released.
- Wall balls are thrown only at the targets on the racks.

Signage stating these rules will be displayed in the training area. Members who repeatedly break them will be warned and, if necessary, have their membership suspended.

C6 Music and voices

- Music is played only through the installed Power Dynamics background system (PPA502 amplifier, 4 × BV40V speakers). No subwoofers, portable speakers, Bluetooth speakers or extra amplifiers.
- No speaker is mounted on the party wall.
- Bass control set no higher than flat.
- Maximum volume set at commissioning (Table C2), then locked or marked on the amplifier. Staff may turn the volume down but not above the mark.
- No amplified microphones. Coaches use their normal voice.

Table C2: Sound system commissioning record (complete before opening).

Item	Record
Date of commissioning	[DD Month YYYY]
Carried out by	[Name]
Witnessed by (Unit A2)	[Name, Induchem]
Maximum volume setting (zone 1 / zone 2)	[setting / setting]
Bass setting	[setting]
Speaker tap setting	[W]
Music audible in Unit A2 at maximum setting?	[No — or setting reduced to:]
How the setting is locked or marked	[e.g. tamper-proof cover / marked dial]

C7 Building checks

Table C3: Building works and checks.

Item	When	Evidence
Seal gaps at the party wall / roof sheet junction (fire-rated profile fillers, mineral wool and flexible sealant). Carried out by the landlord at its own cost.	Before first use	Photographs sent to the LPA
Check wall-head seal and floor tiles for damage	Every 6 months	Entry in maintenance log
Check cable column stack buffers	Every 6 months	Entry in maintenance log

C8 Staff training and member induction

- Every coach is briefed on this plan before working at the gym and signs to confirm they have read it.
- Every new member is told the gym rules (C5) at induction and signs to accept them.
- The plan is reviewed with all staff at least once a year.

C9 Complaints procedure

- Complaints can be made to the responsible manager by phone, email or in person.
- Each complaint is recorded in the complaints log (Table C4) on the day it is received.
- The responsible manager acknowledges the complaint within one working day and investigates within two working days, including checking what was happening in the gym at the time.
- Any breach of this plan is corrected straight away and the outcome reported back to the complainant.
- The log is kept for at least two years and made available to the Council on request.
- If the Council confirms a substantiated complaint, the operator will commission an assessment by a suitably qualified acoustician as required by the planning conditions.

Table C4: Complaints log (template).

Date and time	Complainant	Nature of complaint	Investigation and action taken	Reported back (date)

C10 Review

The responsible manager will review this plan every 12 months, after any substantiated complaint, and before any change to the layout, equipment, sound system or hours. Changes that weaken any measure will not be made without the written agreement of the Local Planning Authority.

C11 Operator sign-off

	Peak Health and Performance
Name	Helen Barwise
Position	Owner
Signature	[ ] H. Barwise
Date	[ ] 27/10/2026

Appendix D Site photographs



Photo 1: Interior of Unit A1: steel roof trusses, lined roof with rooflights, painted masonry walls and concrete floor. The white wall on the right is the partition to the office and mezzanine area; the brick party wall is behind it and rises to the roof.



Photo 2: Roller shutter on the front elevation, with painted brick walls.



Photo 3: Front elevation of the Cleator Mills units, with roller shutters and the car park.