

- APPENDIX A -

Addressing the Need: The School's Strategic Redevelopment Plan

Highgate School, renowned for its tradition of academic excellence, is at a pivotal juncture. Our comprehensive redevelopment plan is a strategic refinement of our spaces, thoughtfully tailored to address the evolving educational demands of our pupils. This plan, deeply rooted in a detailed understanding of our curriculum and the complexities of fostering a 21st-century learning environment, is meticulously crafted based on factual data and an acute awareness of our operational challenges. These proposed enhancements, born out of necessity, resonate with our enduring commitment to educational distinction, presenting a unified strategy to elevate our facilities. Central to our initiative is the dedication to fortifying educational quality and accessibility. The redevelopment is driven by the imperative need for specialist teaching spaces that our current infrastructure struggles to support adequately. It is not an expansion for expansion's sake but a carefully considered response to the explicit educational needs articulated by our departments, particularly Music, Drama, Science, SpEx (Sport & Exercise) as well as the Sixth Form curriculum.

1.1) Current Occupancy and Utilisation Challenges at Senior School:

- Analysis, as shown in the calculation below, indicates a critical utilisation rate of 99.8% for general teaching spaces, signifying an acute shortage and a pressing need for additional classrooms. This high utilisation rate imposes significant restrictions on scheduling flexibility, limiting the ability to operate class sizes of less than the maximum and causing teachers to 'float' between spaces.

$$\text{Utilisation Factor} = \left(\frac{3055 \text{ (Actual Periods Used)}}{3060 \text{ (Max Possible Periods)}} \right) \times 100 = 99.8 \%$$

- The identified deficit of 6 general teaching classrooms results in a substantial number of periods (297 for general teaching) being taught in non-designated spaces. Peak utilisation times, such as 131% during Period 4 on Wednesday, Week 2, necessitate the use of 67 classrooms, far exceeding the available 51, thereby highlighting the critical need for additional space.
- The principle of adjusting classroom capacity to optimise facility utilisation is illustrated in the formula below. In this example, adding 6 extra classrooms reduces the utilisation factor from 99.8% to approximately 90.2%. This approach effectively addresses the demand for general teaching spaces, particularly during peak periods, ensuring a more balanced and effective use of facilities.

$$\text{New Utilisation Factor} = \left(\frac{3085 \text{ (Actual Periods Used)}}{3420 \text{ (Max Possible Periods)}} \right) \times 100 = 90.2 \%$$

- The table below, which is a tally of the total number of general teaching periods over a 2-week timetable, measured against the total number of general teaching classrooms available, illustrates an uneven distribution in the use of general teaching classrooms at the Senior School, particularly during specific periods. This imbalance is most pronounced in the mornings, where teaching space utilisation often exceeds capacity, reaching up to 111% at peak times. The figures in brackets indicate the average number of classrooms required during each period for general teaching, underscoring the need for strategic resource allocation to address these critical demand surges.
- It's worth noting that, as evident from the lower average occupancy rates during afternoon periods (P5 and P6), on three afternoons per week (Tuesdays, Wednesdays, and Thursdays), approximately one-third of Senior School pupils are either at the Bishopswood Road sports facilities or off-site for sports games and fixtures. This significantly reduces classroom occupancy during those specific afternoons.

General Teaching Periods Tally over Week A & B						
Subject Group	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
General Teaching	546 (55) 107%	527 (53) 103%	554 (56) 109%	565 (57) 111%	400 (40) 78%	433 (44) 85%

Period 1 reference example:

546 = total number of general teaching lessons over a two-week cycle in Period 1;

107% = utilisation rate obtained by dividing the total number of periods by the total number of available general teaching periods over the two-week cycle, which is 510 (51 existing general teaching classrooms x 10 days), anything over 100% indicates an excess of demand over supply;

(55) = total number of general teaching classrooms that should be available to accommodate 546 general teaching lessons over the two-week cycle.

- Notably, the highest utilisation of general teaching classrooms occurs during Period 4 on Wednesday, Week 2, shown in the sample with a demand for 67 classrooms to accommodate 131% utilisation. This specific peak period results in 16 periods being taught in less optimal room types due to resource limitations.

Week A - Friday (sample day)						
Subject Group	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
General Teaching	(60) 118%	(55) 108%	(51) 100%	(49) 96%	(52) 102%	(53) 104%
Week B - Wednesday (sample day)						
Subject Group	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
General Teaching	(50) 98%	(47) 92%	(65) 127%	(67) 131%	(34) 47%	(20) 39%

- While ideally, an additional 16 classrooms would fully address the resource constraints during peak periods, the school recognises that such a substantial increase is not justifiable. Instead, the addition of 6 to 9 classrooms would significantly alleviate the issues during these periods. Consequently, some periods will still require the use of alternative spaces to effectively resolve the challenges associated with fewer available classrooms.
- While our Lower and Middle School class sizes are of 24 pupils, in the Sixth Form class sizes range from two to 16, with an average of 9 to 12 pupils. This disparity highlights the opportunity to optimise room sizes to better align with class sizes, consequently alleviating pressure on the timetable and enhancing the overall learning environment.
- To further compounding the complexities, an extensive number of periods take place in oversized classrooms, particularly within the Sixth Form, where 91% of general teaching periods occur in rooms larger than necessary. This data emphasises the need to create and allocate smaller classrooms specifically for Sixth Form periods, allowing for more efficient space utilisation and a more conducive learning atmosphere.
- In addition to the utilisation challenges highlighted, the geographical layout of our school further exacerbates these issues. Spanning multiple sites located up to half a kilometre apart, it presents logistical challenges in terms of timetabling. Pupils and staff must navigate between the Island Site, Dyne House Site, and Bishopswood Road campus, resulting in scheduling inefficiencies and reduced learning time. The proposed redevelopment initiatives are designed to address these challenges comprehensively. By improving the flow of movement and optimising campus layout, our plan aims to alleviate timetable pressures, ensuring a seamless and cohesive educational experience for all pupils.

1.2) Existing vs Proposed Pupil Spaces (here described as 'desk spaces')

- The strategic reconfiguration in the redevelopment plan priorities space optimisation over expansion: the current 17 general teaching classrooms on the existing DH site, with a total of 334 desk spaces, will be transformed into 26 smaller, more versatile seminar rooms on the proposed Dyne House site, with 12 desk spaces each and totalling 312 desk spaces. This results in a net reduction of 22 desk spaces on the Dyne House site, and together with the proposed changes in the Science Block, culminates in an overall net loss of 46 desk spaces. This intentional reduction underscores that the redevelopment is not aimed at increasing pupil numbers but rather at enhancing the quality of educational spaces. The creation of smaller seminar rooms liberates larger classrooms for Lower and Middle School teaching on the Island Site, optimising space use, improving campus movement, and significantly alleviating current timetable pressures.
- Counterintuitively, the apparent net loss of 46 desk spaces, resulting from the reorganisation and optimisation of previously inefficient spaces, does not translate into a decrease in overall pupil places at the Senior School Hill Top sites. Rather, it signifies a strategic improvement in the number of rooms available for timetabling,

thoughtfully aligned with specific educational requirements. This reconfiguration liberates larger classrooms for Lower and Middle School on the Island Site, while enhancing the availability of smaller, seminar-style rooms on the Dyne House site for sixth-form teaching. This purposeful reallocation of spaces ensures that, despite a reduction in desk spaces, there is an effective augmentation in rooms available for timetabling, optimising the educational framework and adeptly managing scheduling intricacies with a more logical and efficient distribution of classroom sizes and locations.

- The addition of specialised spaces, including small music practice rooms, Drama and performance spaces, and new sports facilities like the hall and SpEx teaching and training rooms, would not contribute to an increase in overall pupil numbers. These enhancements, while enriching the educational and extracurricular environment, are distinct from the general classroom or seminar room base, which primarily dictates pupil capacity.

2.1) The need for separate Music and Drama performance spaces

- The requirements for performance spaces in Music and Drama are very different: the latter should be a “blacked out” space (floors, walls, ceiling) with a lighting rig, lighting desk, technical space, changing facilities, backstage area and wings; none of these things are required for a musical rehearsal/performance space and, in fact, they would detract from it.
- Further to, “sharing a facility” self-evidently means that only Drama or Music can happen in the space at any one time; as a busy Day School, when rehearsals are always outside lessons, Drama and Music rehearsals regularly take place at the same time, therefore requiring separate spaces.
- Further to, requiring Music to regularly operate on two sites of the school (were it to “share the new RMC space”) separated by roads and 10/15 minutes of walking would require the transportation of instruments, many of which are bulky and expensive, music stands, etc. (or the doubling up of all of the above) not to mention staff, on a daily basis; in short, it is utterly impractical.
- The specific performance requirements of Music, focusing on acoustic design for sound quality, contrast with the multi-dimensional, technical needs of Drama spaces. Our current inflexible spaces hinder the school's ability to offer a wider range of performance and rehearsal times, limiting pupils' participation in extracurricular Music and Drama activities.
- Additionally, the lack of specialised performance spaces presents logistical challenges and compromises the quality of both Music and Drama productions. The current infrastructure cannot adequately support the technical demands of high-caliber performances. Furthermore, the structure of individual music lessons, lasting 35 minutes and requiring pupils to be absent from regular lessons, necessitates thoughtful placement of music facilities in proximity to the main Senior School buildings.

2.2) Drama - the need and rationale for new enhanced facilities

- When our existing facilities were built, Drama was only taught up to KS3 (Y7-Y9). However, since then, Drama and Theatre Studies have been introduced at GCSE and A Level, becoming popular choices among pupils.
- This recent introduction of Drama as a full curriculum subject from Year 7 to Year 13, including GCSE and A-Level, represents a significant development in our school's academic offerings. Unfortunately, our current facilities do not align with the school's needs for both teaching and theatrical productions.
- Though the curriculum footprint varies slightly each year, there are up to two classes in each of Years 10, 11, 12, and 13; for clarity, all of these have all come online since the existing facilities for Drama were built; for additional clarity, this equates to a near 300% curricular timetable increase (if two classes in each year group operate).
- With the current facilities, 65 periods (i.e. more than half the timetable) of curricular drama are taught each fortnight outside the Drama Studio, either in a music auditorium (which is manageable, if not ideal) or in classrooms that are also used to teach, for example, Maths; having a bespoke studio space for all curricular drama lessons would be an unusual luxury in most school settings, but it isn't unreasonable to expect a significant majority of Drama lessons should take place in a bespoke Drama space; this is no different from teaching Chemistry outside a laboratory.
- In co-curricular terms, the number of annual productions has easily quadrupled since the existing facilities were built, and the size of casts for several productions every year is significantly larger in response to the popularity of co-curricular Drama.
- With the current number of pupils on role, we have simply outgrown (and did so many years ago) existing Drama facilities; the current facilities don't even have changing rooms, backstage areas and wing access attached to them.
- The proposed studio theatre, additional Theatre Studies classrooms, and a larger performance theatre align with the School's educational goals, offering pupils the necessary facilities to excel in the performing arts. These plans reflect a distinct vision for the Drama department's transformation, focusing on enhancing the quality of teaching and performances while embodying the School's commitment to a holistic education. These proposed facilities aim to foster an inclusive and vibrant Drama community, ensuring every pupil has the opportunity to explore and excel in this expressive art form, fostering confidence and its transformative effects on personal growth and self-expression.

2.3) Music - the need and rationale for redeveloped and enhanced facilities

- Over a number of years, there has been a surge in interest in academic music study, instrumental learning, and ensemble collaboration, with approximately 33% growth, underscoring an escalating demand that outpaces current facilities.
- For curricular music alone (i.e., excluding anything co-curricular or individual music lessons) a significant proportion of lessons happen in classrooms that are "multi-

purpose” rather than specifically designed for Music; pupils regularly have to “break out” into corridors in order to informally practice because the designated practice facilities are in such demand. This leads to disruptions and undermines the learning environment, underlining the need for specialised music classrooms.

- The poor quality of sound insulation between rooms and, indeed, buildings, means that music regularly bleeds into neighbouring non-musical lessons and out of Dyne House altogether. This emphasises the necessity for acoustically engineered spaces, a key aspect meticulously addressed in our proposals.
- The actual availability of the current 13 practice rooms, constrained to about 60% of the school week due to pupils’ involvement in remote sessions for Art, DTE, Sports, and off-site commitments, along with day-long school events, creates a significant discrepancy between the nominal capacity and the actual accessible time for music practice. A constraint on timetabling is caused by the fact that individual music lessons teachers (peripatetic teachers) are not full time employees of the School, but visit for a day or part of a day as they teach in other schools or privately. The high demand for rooms, exacerbated by the dual use of spaces like the Dyne House Auditorium (DHA), the Rothenberg Recital Room (RRR), specialist Music rooms (Mu15 and Mu16), and even a few general teaching rooms in Dyne House, leads to a significant scheduling challenge, resulting in these spaces having a consistently high utilisation rate during critical periods. Addressing this, the establishment of at least 24 specialised practice rooms, 5 ensemble practice areas, and expansive spaces for orchestra and choir rehearsals becomes crucial, ensuring every pupil has sufficient access to individual and group practice facilities, in line with the school's commitment to nurturing the growing demand for excellence in the musical arts.
- A significant waiting list for individual instrumental and vocal lessons highlights the high demand for music education within the school community, a demand that the current facilities are unable to meet:
 - A half-day's worth of guitar teaching is unmet, leaving 6 pupils on the waiting list.
 - An entire day's worth of singing lessons is in demand, with 12 pupils unable to be accommodated.
 - An entire day's worth of piano teaching is in demand, resulting in another 12 pupils on the waiting list.

These waiting lists not only reflect the popularity and importance of the music program but also highlight the critical shortage of space and scheduling flexibility, further advocating for the proposed enhancement of the Music Department to meet this enthusiastic demand.

3) Science Facilities:

- Recognising the pressing need for improved STEM facilities, our Science Block is ready for a vital refurbishment. These upgrades are designed to optimise the use of the block for the timetable, enhance the functionality of existing spaces, and ensure universal accessibility and inclusivity. The transformation will convert the current 5 classrooms and 14 labs into a cutting-edge facility with 17 labs and 4

classrooms, in line with the requirements of contemporary STEM education and mainstream school design guidelines such as the BB103. Our focus is on creating an environment that supports learning, innovation, and excellence in STEM, catering to the needs and aspirations of our pupils.

- Critically also, as evidenced by a timetable analysis, the Science Department faces a shortage of rooms in certain periods, with 14 instances in a 2-week timetable where not enough science labs are available for scheduled lessons. For Science periods, Periods 2 and 3 have the highest number of Science lessons on average, highlighting the imperative need for our planned enhancements.

4) Sixth Form Facilities:

- The proposal to introduce smaller, more focused seminar rooms for sixth-form teaching directly addresses the current imbalance in room occupancy, embodying our ethos of providing conducive learning environments and optimising space utilisation.
- Addressing the fragmentation of the current Sixth Form common room facilities across two buildings, the proposal aims to centralise these spaces into a single, comprehensive common room. This strategic move is designed to dissolve the divide between Year 12 and Year 13, nurturing a unified, inclusive, and collaborative learning environment. The new common room, encompassing integrated pastoral care and administrative offices, is envisioned as a multifunctional, welcoming space that signifies our commitment to enhancing the Sixth Form experience.
- The current lack of sufficient dedicated Sixth Form study spaces, falls short of mainstream school design guidelines, which advocate for up to 70% more study space. It's to be noted that Sixth Form pupils also have access to the library. This, however, is not a dedicated Sixth Form study space. Our proposal aims at addressing this current shortfall, significantly enhancing individual study areas and introducing dedicated computer study spaces. These improvements, crucial for supporting computer-based subjects and online research, are essential for preparing pupils for their future. Additionally, the creation of dedicated collaborative study spaces, distinct from quiet study zones, will cultivate a conducive environment for interactive learning, promoting essential skills for university life and beyond.

5) Sports Facilities:

- Highgate's commitment to fostering a supportive and inclusive community is vividly reflected in our sports facilities, catering to the dynamic needs of our co-educational system. The necessity for an additional sports hall, underscored by operational demands and our pledge to a modern, multifunctional environment, addresses the diverse requirements of all pupils.
- The sports hall, while meeting the size standards outlined in BB103 for Senior pupils, does not account properly for the space requirements of our Pre-Prep and Junior pupils. It's important to note that the singular sports hall cannot adequately

serve the needs of all three Schools, leaving a significant segment of our pupil community underserved.

- Furthermore, the sports hall serves a dual purpose, including hosting exams over extended periods. This multi-functional usage adds considerable pressure to the sports hall, and there are no other large spaces within the school suitable for conducting exams. Consequently, during exam periods, there are no appropriate indoor sports facilities available to accommodate the needs of Pre-Prep, Junior, and Senior pupils, impacting a significant part of the school year.
- The sports hall's 65% occupancy rate represents a significant portion of the available school week. This limited availability of indoor sports facilities poses scheduling challenges and restricts our ability to provide comprehensive physical education experiences for all pupils.
- The size of the current sports hall does not meet Sport England standards for netball, and the facility lacks an indoor netball court. Furthermore, visitor seating is not available, which limits the capacity to accommodate spectators during events. The proposed new sports hall would address these deficiencies and offer the capability, currently lacking, to host full Senior School assemblies, thereby enhancing its versatility and value to the School community.
- Additionally, the limited use of sports fields during adverse weather conditions, compaction, and the necessary grass recovery times further intensify the demand on the existing sports hall. These factors underscore the necessity for an additional sports hall to alleviate the pressure on our current facilities.
- The proposal for two hockey pitches at Far Field is a strategic step towards enhancing gender equality in sports. It's a calculated move to accommodate the rapid increase in participation of both boys and girls in traditionally single-sex sports, ensuring appropriate and ample training facilities and the ability to host concurrent fixtures.
- The logistical challenges of managing sports activities on one artificial surface, notably during Senior Sports afternoons, are profound. The inability to host simultaneous Netball and Hockey fixtures, or to provide full-size pitch training due to space constraints, highlights the necessity for additional facilities.
- Furthermore, the remote location and condition of Far Field, integral to our sports program, present unique challenges. Its susceptibility to adverse weather conditions often renders the field unusable, compelling the transportation of pupils to alternate off-site facilities. This not only disrupts our sports schedule but also imposes additional logistical burdens. The proposed redevelopment of Far Field, featuring two hockey pitches, exemplifies our commitment to providing a high-quality, multi-sport facility. This new addition will significantly alleviate the strain on our current sports hall and ensure consistent, year-round access to sports facilities.
- The planned enhancements aim to address maintenance and modernisation needs, particularly for the Mallinson Sports Centre and outdoor facilities. Improvements are crucial to optimise their use, ensure they are fit-for-purpose, and provide a welcoming environment for users and spectators alike.

- Highgate's ongoing evolution as a co-educational institution is mirrored in these proposals, aiming to foster healthy lifestyles and inclusive sporting opportunities. By broadening access, particularly for female participation in sports, we address national trends and challenges, underscoring our commitment to physical and emotional wellbeing.
- The envisaged sports infrastructure transcends physical expansion. It's a commitment to adapting to the evolving sporting landscape, fostering local and wider community engagement, and ensuring our facilities aptly reflect the calibre and aspirations of Highgate's vibrant sporting community.

6) Infrastructure and Accessibility Improvements:

- The reorganisation of the Senior School sites aims to improve circulation, reduce bottlenecks, and ensure that all existing buildings at the Senior School are fully accessible, meeting not just current needs but setting a standard for inclusive education.
- The redevelopment of the whole Dyne House site is crucial for creating fully accessible and inclusive Sixth Form, Music and assembly facilities addressing the significant changes of level within the site, with it's 15m elevation difference from street level to the Parade Ground, thereby ensuring that our facilities are accessible to every member of our community and visitors.

7) 21st Century Teaching and Design Ethos:

- The School, committed to leading the way in 21st-century educational innovation, acknowledges the critical necessity of evolving our learning environments to align with the dynamic demands of contemporary education. The transformation of traditional, linear educational setups, exemplified by the elongated corridors flanked by classrooms in Dyne House and other Senior School buildings, into progressive, collaborative spaces is not merely a trend but a fundamental shift in preparing future generations for the complexities of contemporary society.
- Embracing the concept of architectural transparency, we aim to modernise our facilities to resonate with inspiring educational designs, also evident in our multi award-winning Junior School. The incorporation of expansive break-out study areas, movable partitions, and floor-to-ceiling glass walls in select spaces signifies our dedication to nurturing open, transparent, and collaborative learning environments. This architectural philosophy is instrumental in promoting communal learning and ensuring shared visibility, mirroring the innovative work and study environments of today's world.
- Such architectural advancements are more than aesthetic enhancements; they serve as catalysts for creating vibrant public forums where pupils' work is celebrated and engagement is heightened. This departure from the rigid, unidirectional teaching models of the past signifies our dedication to nurturing autonomy, responsibility, and critical thinking among our pupils.
- The proposed architectural redesign and enhancements at the Senior School are carefully considered to address current inefficiencies and meet modern standards for accessibility, sustainability, and educational excellence. In essence, the

proposed redevelopment is a strategic response to the evolving needs of Highgate School, aiming to create a sustainable, inclusive, and future-ready educational environment. The expansion in various areas is a deliberate and necessary step to address current limitations, comply with regulatory requirements, and align with our vision for excellence in education. Each aspect of the redevelopment inherently contributes to the requirement for a larger area than the existing layout:

- **Common Areas and Circulation:** The enhancement of common areas and circulation spaces aims to accommodate the diverse needs of the School community and visitors, evolving teaching methods, full accessibility and inclusivity. Wider corridors, multi-purpose atriums, and flexible learning zones not only require more space but are strategically designed to facilitate fluid movement, encourage social interaction, and adapt to various educational activities. The expansion in these areas is justified by the need to reduce congestion, promote inclusivity, and ensure that the school environment supports a collaborative and dynamic learning experience.
- All our campuses have complex topography with multiple levels demanding more vertical circulation through lifts and stairs. This leads to a substantial increase of the required floor area.
- **Plant and Ancillary Areas:** Adopting the "fabric first" approach and integrating renewable energy systems such as ground source and air source heat pumps necessitate larger plant and ancillary areas. These systems, while contributing to the school's sustainability goals and compliance with the London Plan and other statutory requirements, require additional space for installation and operation. The incorporation of such advanced systems ensures long-term energy efficiency and carbon reduction but demands a thoughtful allocation of space to house the necessary equipment and ensure ease of maintenance and operation.
- **Passive and Active Measures for Energy Efficiency:** The integration of passive and active measures for energy efficiency, as mandated by the London Plan, involves the incorporation of advanced insulation materials, high-performance glazing, and efficient HVAC systems. These elements, while significantly enhancing the building's energy performance, occupy additional space for installation and integration into the building's fabric. Moreover, renewable energy installations like ground source heat pumps and air source heat pumps require dedicated plant space, contributing to the overall increase in the building's footprint.
- **Addressing Inefficiencies in Existing Layouts:** The reconfiguration of existing spaces to create smaller, more focused classrooms, particularly for sixth-form teaching, addresses current inefficiencies in space utilisation. However, this reconfiguration may lead to the expansion of the building's footprint as new classrooms are designed to meet specific educational needs, incorporate modern technology, and provide a conducive learning environment. Although this approach creates more classrooms, it does not equate to an increase in pupil numbers. Instead, it demonstrates a commitment to enhancing the quality of education by providing spaces that are tailored to contemporary teaching methods and pupil needs.