OLDFIELD HOUSE, JOHN LYON SCHOOL APPEAL STATEMENT

EDUCATIONAL RATIONALE

Background to the proposed scheme

1. The proposed redevelopment and renewal of Oldfield House to provide a new high-quality STEAM centre of excellence is a vital constituent of the School's future. It is the core of the School's future planning looking towards the next 20 years. The School has identified areas across its site where improvements can be made through the better use of existing facilities and resources including the renewal of facilities where circumstances allow. Oldfield House has been identified as a building that no longer meets the needs of modern learning and teaching. Its replacement would deliver a high-quality STEAM centre of excellence, with much improved learning accommodation for the future, as well as enabling the reconfiguration of teaching space and enhancements throughout the whole School.

2. The School seeks to attain excellence in each subject that is offered and taught at the School. Their stated values are ambition, excellence, innovation, resolve, heritage, community, enquiry and creativity. It has achieved high academic results and it has a reputation for providing an excellent all-round education that combines high academic standards with excellence in sport and the arts as well as combining this with outstanding pastoral care. It also seeks to ensure that every one of its pupils will aim high and exceed expectations. This includes instilling within them, no matter what their academic ability or age may be, an opportunity to maximise their potential to learn and discover their passion.

3. Academic achievement of the School has for many years been high. The facts speak for themselves. It obtained a rating in 2019 from the Independent Schools Inspectorate inspection of "excellent", in the two main areas of Educational Quality, the highest standard attainable (see **Appendix 1**). These were the facts in 2019, the last full academic year's results before the Covid pandemic:

    - 100% A-Level pass rate
    - Half of all A-Level pupils achieved an A*/A
    - 60% A*/A in A-Level Mathematics
    - Successful entry to leading universities and courses including Chemistry at Oxford, Classics at Oxford, Medicine at Imperial, Economics at Warwick, Philosophy at St Andrews, Music at Durham and Architecture at Nottingham

- 62% overall 9/8/7/A*/A grades at GCSE
- More than half of all GCSE pupils awarded at least three 9/8/A* grades
- Half of all GCSE Science papers graded 9/8

4. In the type of modern 21st Century high quality educational establishment that the School wishes to be, pupils of all age groups will engage in self-learning as a matter of their own choice as opposed to being taught subjects in classrooms exclusively by teachers. They will help each other to learn, engage in discussion groups during and between lessons which can evolve into projects and innovative learning opportunities. Classrooms will be designed to be multifunctional so the space will be able to be used flexibly for co-curricular programs, including an emphasis on STEAM subjects with increasing reliance on digitisation. Behavioural improvements should come about through design of buildings as well as being self-taught by the pupils themselves. Pupils will be taught the basics of all subjects and sometimes a collection of subjects and specialisms, in order to pass national board exams. It is the ambition of the School to ensure that every one of its pupils will seek self-improvement naturally.

5. The School's governors have recognised for some time that there is a requirement to create more teaching and learning floorspace, enhance teaching spaces, provide better learning opportunities and significantly improve certain academic areas including in particular in science, technology engineering, the arts and mathematics, given the acronym STEAM, and for it to be a curriculum subject in its own right. This was the driving force for deciding to redevelop Oldfield House to provide a new modern STEAM centre of exceptional high quality, and a design fit for the present with flexibility for the foreseeable future in the 21st century.

6. There are substantial challenges which face the School at the current time. As a school in the independent school sector, it must be run so that it is economically viable, offer high quality education to all its pupils and it must be attractive to parents of pupils with a focus on learning. Its pupils are able to gain places to attend the best universities in the UK and also are exceptionally well prepared to enter into adult society when they leave the School. The School is proud of the fact that a relatively high proportion of its pupils go on to achieve high success not only University but also subsequently within the UK and abroad. The School also sees it as being important that it maintains ties with the local community of Harrow within which the large majority of its pupils and their families live. The School is seen by the wider community within Harrow as one of its principal assets. The breakdown of demographics within the School is found at **Appendix 2**, a summary list of its achievements at **Appendix 3**.

7. The School becomes a co-educational establishment in September 2021 which has its own significant educational benefits, as well as demands and challenges. In addition to those facing the School when solely a boys school, there is now a need to ensure a successful integration of female

pupils into the School in all year groups, and to accommodate different and additional curricular, space and gender requirements. This necessitates these to be carried out during a short transition period, effected within a relatively confined school campus area. For the change to be successful, high standards are required for the future in terms of new as well as existing buildings and their design or redesign. This includes ensuring as best able that the new Oldfield House can be constructed and ready for occupation as soon as possible in the near future.

8. The giving of opportunity to all its students, whatever their backgrounds, culture, ethnicity and gender, not only brings challenges but also significant benefits. Pupils of the School will develop into adulthood in a natural environment aware of their surroundings and those of others. The caring nature which will be instilled in pupils during their time in secondary education at the School will be a part of their lives as they develop into adults. The School wishes to set itself the highest of standards, always seeking to improve and to be a beacon whose example others will follow.

9. Participation in the extracurricular and co-curricular programmes, for example community projects and outreach programmes within the local community including primary schools, is very much a part of the life of the School. However, these projects and programmes require space to be available during the school day for teaching, seminars and group sessions to be held, often with a smaller teacher:pupil ratio than in a normal timetabled classroom session for a mainstream subject. There are insufficient areas at present within which such activities are able to take place. For example, in any given hour during the teaching day, typically no more than 44 lessons are able to be offered (this is the number of teaching spaces available within the school campus). The co-curricular programme often requires the need to provide a fewer number of pupils under the supervision of one member of staff, such as a filming activity. Due to the lack of teaching spaces available on site, either the activity cannot take place or alternatively it is only open to a fewer number of pupils than demand exists. Some pupils' ambitions remain unfulfilled as a result of lack of space.

10. Another example is the work with several community projects and local primary schools. These are highly valued by the primary schools concerned and by members of the community as a whole. It goes without saying that for every primary school group that comes into the school at the same time, an extra teaching space is needed, alternatively some primary school groups could be combined in a larger seminar room. These options are not available currently. The School's community outreach program can only obtain its potential if there is space on site to accommodate all of them.

11. Another example is the predicted need for computer science to grow as a subject with increased numbers but cannot do so due to lack of space. A government supported initiative 'EdTech 50'

listed John Lyon as an EdTech 50 School[1] in 2019 evidencing the School as being at the forefront of digital innovation in education. In September 2021 the School will progress its highly successful Bring Your Own Device (BYOD) programme to a School managed 'One-to-One' programme whereby each pupil carries a digital device managed by the School to enhance their leaning experience. By its very nature, the School is therefore seeking to enhance its provision outside classrooms to support pupils in their use (with, for example, charging stations and digital working areas). There are two computer suites in the school at present and another one more is needed to enable all computer science teaching to take place in the computer suite that offers higher specification computers for the teaching of Computer Science at GCSE and A-Level and to enable pupils to take part in co-curricular clubs relating to programming, robotics, virtual reality and future digital technologies. A computer science suite with flexible floorspace and walls can be fitted out as such but also be flexible enough to accommodate other subjects and requirements as and when the need arises. The same is true of a new ICT suite which would be able to use technologies for Virtual Reality and which can be used across a number of different subjects. This is an example of the cutting-edge future within a STEAM centre which the School seeks to engage in.

12. An increase in the teaching or learning floorspace of the School is essential and urgently required if the School is to maintain and seek to improve on its current standards. It has been concluded, based on the current and future projections of the School activities in terms of the core subjects taught, and co-curricular and other activities including the spaces able to be provided and their occupancy, that the School requires more floorspace merely to carry out current activities without increasing the School roll.

13. A typical teaching space for a standard classroom at John Lyon is approximately 35m2, though modern design guides would specify a larger area. To accommodate a DT (Design and Technology) space or spaces that involve apparatus and making things, such as in STEAM lessons, a much larger footprint would be needed. To enable DT, peripheral spaces for equipment, technicians work room would also be needed.

14. As already explained, there is a need not only for existing subjects to be provided with more space but also for new academic and educational areas to be provided with learning space. Due to the confined nature of the School campus, the amount of extra floorspace able to be provided is limited, whether by internal rearrangement or by construction of additional floorspace. To provide

[1] An EdTech list of 50 schools at the forefront of digital innovation in education has included John Lyon, praised for its successful use of technology in the classroom (Appendix 4 – Page 13). Created by the Education Foundation and backed by Intel, Jisc, NetSupport, The Chartered College of Teaching, Independent Schools Council and TES, with the support of Government, the list of 50 schools demonstrates and celebrates the pioneering use of technology to support learning and make a difference to the success of each child in the classroom.

a high quality STEAM centre of excellence, at least the existing floor area plus two additional floors of the existing Oldfield House is required. This does not provide space for the other subjects or learning space for which there is an existing identified need, such as a new computer suite.

15. In addition to creating a new building of high quality which would raise the standard of the School as a whole as well as significantly enhancing its reputation externally, by creating a greater number of teaching spaces the rest of the school campus and buildings can be reconfigured so that departments can function significantly more efficiently, including as hubs. Currently, many subjects are taught in teaching spaces that are shared between departments, for example geography and English. The core subjects need six teaching spaces to enable them to function properly. The sciences have become increasingly popular and currently many science subjects take place in non-specialist classrooms and teaching spaces without laboratory equipment or other equipment required to teach the sciences. In addition, some non-science subjects have to be taught within laboratories due to timetabling requirements. Both are unsatisfactory. For example, in physics, 18 out of 181 Lessons cannot take place in any type of laboratory and of those taking place in a laboratory, 33 lessons take place in a specialist biology or chemistry laboratory or other non-subject specific classrooms. The emphasis of the School on academic quality, enhancement and achievement clearly suffers, especially in the science subjects but also in other subjects too.

16. Current morning teaching occupancy rates of classrooms across the School campus ranges from 88% to 94%, averaging 92%. This is excessive and, as a result of timetabling constraints, forces teachers to move frequently between classrooms, therefore leading to inefficiencies of preparation between lessons, especially in the sciences where much is required to be done setting up a classroom or laboratory including scientific demonstrations. 80% occupancy is considered to be the percentage occupancy to be aimed for to enable most lessons to take place in their own subject hub. Increased floorspace would not only permit increased efficiency but also allow flexibility in the timetable, and permit other areas and buildings in the School to be upgraded and reconfigured in term time, for example when a building or renovation contract requires this and when an urgent need arises such as the renewal of a boiler or electrical circuitry, without the need to wait until the summer long vacation, which could be many months ahead. The challenges of coeducation being introduced add to the pressure for space as areas of the School require adjustment and reconfiguration to meet equality legislation. The Music School also needs to be temporarily closed for development and enhancement, but this cannot take place currently due lack of alternative space.

17. The creation in a secondary school of space of good quality is needed for pupils of both genders such that they can converse with each other in a relaxed atmosphere and immerse themselves in a project or subject during and beyond the school day and their normal timetable. Pupils will be able to learn from each other individually and in groups and enjoy learning for themselves both within

and outside class as well as with teachers acting in a formal and informal role as such; these are all becoming increasingly important facets of secondary education, preparing pupils for university and adult life generally, including in employment and vocations outside education. These are important elements for the new STEAM centre to provide.

The Need for STEAM

18. STEAM provides pupils with skills that cannot be easily achieved when studying standalone academic subjects. A lot of Schools around the country are building state-of-the-art new STEM and STEAM facilities as they recognise the need for it. Industries and in turn the government are investing to improve STEM teaching in the UK.

19. A key feature of concern for STEAM in schools is the prospect of a vastly changing world of work that current students will enter into. According to the UK Commission for Employment & Skills (2016), 43pc of science, technology, engineering and maths (STEM) vacancies are hard to fill. This is mainly down to a shortage of applicants with the required skills and experience. The core root of this growing skills gap is education, from school through to university and workplace training. Workforce skills are a key contributor to competitive advantage and business performance. Many innovative organisations rely on the regular intake of good quality STEM graduates to refresh their innovation capabilities. Innovation-active enterprises employ higher proportions of graduates in general and, in particular, a higher proportion of STEM graduates than their non-innovative counterparts.

20. In 2014 the Confederation of British Industry (CBI) reported that a STEM skills base is vital to our future as a knowledge-intensive economy. In 2010 around 40% of the UK workforce were classified as 'knowledge workers'; by 2020 it is expected to be over 50%. Jobs in the future will increasingly require skills that STEM study helps to develop; not only technical knowledge but also skills such as critical thinking, logic, mathematical reasoning and numerical analysis, design and a broader grasp of scientific method. The value of these competencies is such that demand for people with STEM skills is widespread and growing among businesses in non-STEM as well as STEM sectors.

21. Government support for STEM in Schools is found in a number of places: 'The future workforce relies on many more children and young people being encouraged to take STEM subjects and enter STEM careers.' (See extract of House of Commons Committee of Public Accounts: Delivering STEM Skills for the Economy 2018 at **Appendix 5**).

22. It is to be noted that there is a shortage of girls taking up STEAM subjects post School and we would therefore be encouraging this focus as we move into coeducation. In particular, and of concern, is that only 8% of the UK's engineering workforce are women – the lowest number across the whole

of Europe (see Government Press Release, and extract from "Girls Into STEM" website at **Appendix 6**).

23. Examples of other similar Schools in the independent sector championing STEAM initiatives suggest there is a need for John Lyon to be delivering in this area to remain competitive (see website extracts at **Appendix 7**). These include:

    i) Leighton Park School;

    ii) Wimbledon High School;

    iii) Brentwood School;

    iv) North London Collegiate School;

    v) Haberdashers' Aske's School for Girls.

24. It is worth pointing out that John Lyon has recently joined Quainton Hall Prep School. They currently offer a comprehensive DT programme and are extending this to STEAM provision in September 2021. As our future natural feeder school, expectations from parents will be that their child's curriculum can continue to develop in the senior school. Anecdotally, a popular question on open days is whether we offer DT. We see studying STEAM in Year 9 as a pre-cursor to a DT qualification.

25. John Lyon currently has Year 7 and 8 STEAM as a timetabled curriculum subject but is not always taught in specialist areas designed for 'making'. From September 2021, STEAM becomes an optional subject for pupils in Year 9. Of the current Year 8 cohort making their subject choices for the next academic year, all but 2 pupils have selected STEAM, such is the demand and appeal of the curriculum we offer. From September 2022 we will begin offering a GCSE qualification in DT with a view that in the longer term a qualification of this type will be enabled at A-Level. To enable this the School will need to provide both STEAM and DT spaces. In 2020 the School converted an English teaching classroom into a new STEAM Laboratory within the Science wing of the main building which will face the proposed New Oldfield proposal, ideally placing the laboratory in close proximity of the overarching STEAM facility. This will enable some STEAM activities but not all DT activities. We also created a small STEAM Makerspace that can accommodate 5 people at a time for pupils to work on individual projects. These new facilities will enable a greater proportion of STEAM lessons to be delivered in a suitable teaching space but not enable all lessons to be timetabled in this lab. To enable DT at GCSE and A-Level at least one further laboratory will be needed.

26. This will require the School site to be reconfigured and to find some footprint on which to build these facilities for two reasons:

a. The class sizes for STEAM and DT need to be significantly smaller. Whilst most curriculum subjects can be taught in classes of up to 26 pupils, STEAM and DT classes are better suited to classes of fewer than 16 on grounds of health and safety to enable the teaching that involves the use of tools, such as welding equipment. In an average year of 100 Year 9 pupils, to deliver a regular curriculum subject, would require approximately 4 teaching spaces for the same amount of learning time. To enable STEAM taught with a class size of 16 would require 7 spaces. By introducing DT in Year 10 and 11 as a GCSE subject, again with class sizes becoming smaller, 16hrs of additional lab time would be required. Similarly, by introducing A-Level in the longer term, a need of 12hrs of teaching time is required on top of the current demand. Both at GCSE and A-Level, the total number of currently timetabled lessons would remain the same, with the respective class sizes decreasing by a small amount, so the introduction of DT requires more bookable teaching space on top of the current demand. It also requires a specialist space in which to teach. The combined effect of the above is that we will need to add 4hrs (Year 9), 16hrs (Years 10-11) and 11hrs (Sixth Form), a total of 31hrs, to the required teaching allocation. This equates to a little more than the equivalent of one extra teaching space on top of our current provision.

b. The footprint of the spaces needed to teach STEAM and DT are a minimum of twice the size of standard classroom, excluding the extra ancillary support spaces (for technicians to work, specialist equipment, secure storage of materials and projects. As previously confirmed, most large general teaching spaces in John Lyon are approximately 35m^2. To enable a new DT teaching space and associated peripheral spaces a footprint of a minimum of 120m^2 will be needed.

Life without STEAM

27. The required additional footprint cannot be enabled by refurbishing the current Oldfield House, as confirmed below. It is important to note that the intended STEAM and DT provision will benefit all pupils in the School both through the taught curriculum and the range of extra-curricular and co-curricular activities that would utilise these facilities. In terms of employability, specific skills which employers are seeking that the STEAM curriculum can deliver include:

    i) Using initiative and being self-motivated

    ii) Organisational skills

    iii) Working under pressure and to deadlines

    iv) Ability to learn and adapt

    v) Communication and interpersonal skills

    vi) Teamwork

vii) Negotiation skills

viii) Valuing diversity and difference

ix) Problem solving skills

x) Numeracy and IT skills

28. Therefore, the disadvantage to not enabling the growth of DT and STEAM is that the School is less able to prepare pupils for their future employment and less able to promote and prepare all its pupils for careers in STEAM subjects.

Co-Educational need for space

29. Within John Lyon's main site, specific non-teaching communal areas for use before school, at break time, during lunch and after school are limited:

    a. Sixth Form Centre (used by approximately a quarter of pupils)
    b. The Mall, an open space accessible to all pupils
    c. The library – with specific requirements to be used as a quiet space
    d. Outdoor spaces (non with shelter or specific landscaping)

30. When comparing the facilities at John Lyon with some of its competitor Schools and particularly, with a move to Coeducation, local girls' schools, the main site currently lacks congregating spaces that pupils can use beyond classrooms used as form rooms.

31. A new building would enable a much larger footprint for communal spaces and afforded the opportunity to landscape deliberately around the whole building to enable congregating spaces.

32. For example, for its GCSE year groups, North London Collegiate School has soft seating in a communal space that abuts the form rooms of those pupils which enables pupils to congregate with access to the relevant pastoral team. By congregating informally and specifically in non-teaching spaces, pastoral conversations are better enabled between pupils and staff who use them for throughflow. Pupils are more visible enabling staff to enhance their pastoral care and have a better understanding of pupil behaviour by making it more visible and by giving pupils space.

33. These spaces make pupils feel valued as people, not just pupils who come to school for an education. By enabling these spaces, we demonstrate to pupils that we value them using time in between lessons to foster relationships, building rounded, interested and opinionated pupils.

34. Furthermore, these communal spaces can be used for breakout spaces during lessons, thereby increasing the effective size of the teaching area and giving pupils the space to work in smaller groups. Small group and personal academic study is also enabled outside lesson time.

35. Currently, pupils at John Lyon typically muster in form groups within their form rooms. They will be displaced from these if clubs or activities are taking place in their form rooms or if their form room needs to be locked (e.g. if their form room is a science lab).

36. By introducing girls to the School, it is likely that in time we will offer a greater number of subjects at A-Level due to their statistical popularity. For example, we currently do not offer sociology as a subject yet statistically this is studied by 3 times as many girls than boys. Again, by doing so, the total current timetabled lessons would likely continue, with the respective class sizes decreasing by a small amount. Subjects that are statistically more popular with girls than boys include: Photography, sociology, modern languages (e.g. Italian). If for example, 2 further A-level options were added, approximately 24 hrs of teaching time would be required which in turn would require an additional teaching space across the week.

Alternative sites within the School Campus

37. Before embarking on a course of redevelopment of the existing Oldfield Building starting with the planning process, the School and its governors carefully considered whether other existing School buildings, sites and space on its campus could be developed to accommodate the proposals. The School occupies buildings and immediately adjacent land on a relatively compact area to the north and south of Middle Road on the middle and lower slopes of Harrow Hill, with its administrative offices on West Street. The School's sports grounds are located at the foot of Sudbury Hill, about 1.5 km away to the south-east. Other than two hard multiuse games areas located immediately adjacent to the main school buildings, all sports are played at Sudbury Fields. In addition to the main school buildings, the sports hall, swimming pool and library are located in the relatively modern complex constructed in the 1990s. The Harrow School Sixth Form cricket ground lies immediately to the north-west and west of the John Lyon School buildings on Metropolitan Open Land. The site location plan of a 2010 planning permission is attached at **Appendix 8**, which illustrates the extent of John Lyon School's ownership within the blue and red line, with annotation for each building within the campus. This plan clearly confirms that the Oldfield House site is the only plot within the campus which is not already substantially built-up.

38. The options available to accommodate new floorspace for a new STEAM centre were limited. Any such floorspace would require to be located immediately adjacent to the existing school buildings and classrooms in order to ensure teaching efficiency and minimisation of time wasted of staff and pupils moving between different buildings between lessons. This ruled out not only the land at

Sudbury Fields but also land which was in the ownership of Harrow School, had that been available, which it was not in any event. There was no other land suitable and available other than the Oldfield House site. In any event, the planning constraints of the locality are substantial and any new development site on Harrow Hill meets with significant planning challenges. It was clear at an early stage that the options for the development of new floorspace whether by way of extension of an existing building or within a new building on land within the School's control or ownership which were suitable and available were limited. Given the heritage and planning constraints of the School's location, the advice given to the School by its planning consultants was that the only reasonable location to develop to provide additional floorspace for a new STEAM centre was on the Oldfield House site.

39. Also to be taken into account is the significant disruption, difficulties and cost of providing temporary classrooms if any redevelopment of Oldfield House were to be on the current site. It would not be possible to build on the current Oldfield footprint during term time. As much of this document outlines, classroom occupancy rates are extremely high. It would be impossible to timetable the School's lessons without the 9 teaching spaces (a fifth of the School's teaching spaces) located in Oldfield, staff offices, staff toilets and pupil toilets. A build time of 18 months would span several school terms, including two winters. In terms of the quality of education provided, the design and nature of teaching space can have a significant impact on pupil outcomes. Temporary accommodation would decrease the quality of learning taking place over 5 terms of a pupils schooling. Furthermore, the cost of providing, running and maintaining temporary accommodation would be substantial (as stated in the Architectural Statement, it could be over £750,000) and has not been budgeted.

The Existing Oldfield House building

40. The Oldfield House site is located in an area sunk below the wall of Crown Street with its roof visible above the wall when viewed from Byron Hill Road and Crown Street. It is hidden for most of the year behind trees, as well as solid walls and fencing. Approached from the south-west along Middle Road, the first view of the building is unimpressive, with a minibus parking area in the foreground behind a vehicle barrier and a view of the building's south-west facing blank gable end wall. To its north-west and towards its foot is a multiuse games area. A quality of the site from an educational and safeguarding point of view is that it is below street level, not overlooked and away from the public gaze, largely surrounded by trees, walls and fencing which causes it to be relatively private and the use by the School to be unobtrusive.

41. The existing Oldfield House building was constructed in the late 1970s/early 1980s with the design of an educational establishment of its time including an arts studio on the first floor. Internally, the building is on two floors, subdivided on the ground floor into 4 classrooms and a staff office and

two small meeting rooms. around a central corridor or circulation area with its single main entrance and stairs to the north-west. The boiler room, store, male and female staff WC's are located in the central corridor space on the ground floor. The first floor includes the pupils' WCs and 5 further teaching spaces, pupil toilets and a small office space, including what were designed as two art studios and a pottery room. The 1979 plans of the existing building submitted with the planning application are found at **Appendix 9**.

42. Consideration was given and professional advice taken as to whether or not the existing Oldfield House building could be altered satisfactorily and viably so as to accommodate modern teaching and learning methods, opening it up to obtain flexible learning space as well as creating additional learning space within the building. The existing building has extensive physical defects and deficiencies as well as inherent design flaws. It requires substantial refurbishment and repairs, interventions and alterations to take place to meet modern standards and statutory compliance. The existing building suffers from poor circulation space, ventilation, heating, lighting, energy retention, sound insulation both internally and externally and lacks other essential requirements of any modern education building. Most of the component parts of the building are of DfE Condition Grade D, the lowest of 4 grades ranked Good/Satisfactory/Poor/Bad (D = Bad: life expired and/or serious risk of imminent failure) with many areas requiring urgent renewal. A Physical Condition Survey submitted with the planning application is found at **Appendix 10**.

43. Even if the necessary repairs were to be carried out including the removal of asbestos, with total internal and external renovation including the roof to bring it to Grade A, it would not result in a building which would be of a quality or design required to meet the demands of a high quality 21st Century secondary school with the ambitions of the School's future set by the School Governors, namely to provide a high quality STEAM centre and other enhancements within an educational environment of excellence. The building not only has inadequate learning space, but the circulation areas and single entrance are congested, being wholly inadequate for the number of pupils that must enter, exit and circulate at any one time between lessons. As referred to elsewhere, the requirements of introducing co-education throughout the school cause the previously unsatisfactory circulation space available in a boys' school to be wholly inadequate in a coeducational secondary school environment and can be a behavioural issue.

44. An option considered was to alter the internal arrangements of the rooms and spaces so as to improve its layout and provide seminar rooms. This too is not a practicable option. The School has been advised by consultant structural engineers that the load bearing walls subdividing rooms, corridors and other spaces within the building are not possible to remove to create open spaces without significant compromise of heights of ceilings or introduction of spans in rooms by the insertion of additional structural elements both vertically and horizontally including the need for multiple pillars and beams. To prevent movement, as the building is constructed on London clay

with relatively shallow foundations, it requires the strengthening of foundations in the form of piled foundations to be inserted all around the building. In addition to its inherent design faults, it also has existing structural and other faults requiring significant investment merely to alter and repair the existing building to halt further deterioration. The building is of a design and quality of construction that requires substantial continuing and costly maintenance.

45. Another option which has been considered is to add another floor to the building, which would be required to meet the identified minimum need. The appointed architects , confirmed by consultant structural engineers, have advised the School that this is impracticable. This would require substantial loss of circulation space internally if the stairs were to be replaced by a new staircase to modern standards and a third floor added (second floor above ground). A lift would be required for mobility purposes, with fire exits and stairs to be added to comply with building regulations. The problems concerning the removal of load bearing walls and the need for additional foundations also arises. It is therefore able to be concluded that the existing building cannot be practicably converted to meet the brief, to provide a high quality STEAM centre of excellence with additional open but flexible learning space internally and adequate circulation areas, whether by internal rearrangement, or by the addition of another floor at second floor level, or by digging out a basement. It is to be noted that at no time have these options been suggested as a practicable option by objectors or the Council.

46. In conclusion, it is clear that the construction and layout of the existing building is unable practicably to be adapted to meet the brief for a high quality STEAM centre of excellence, including modern teaching and learning requirements sought by the School. Its poor circulation space and entrance areas, poor ventilation, energy and temperature control, poor lighting and the subdivision of areas including classrooms does not allow for group learning of subjects and the introduction of a flexible learning programme. Co-education within a secondary school requires wider spacing of circulatory space especially on staircases and entrances for behavioural reasons. It fails to meet modern educational building standards in many ways currently, and even if totally restored to meet the highest DfE regulatory standards, would not meet modern design requirements without excessive and impracticable intervention. The only practicable option in practice is its demolition and replacement by a new high quality building which would meet the School's brief for a new high quality STEAM centre of excellence.

The New Oldfield House Proposals

47. The School appointed Curl La Tourelle Head Architecture, award-winning architects with experience in designing buildings in heritage settings including conservation areas, to design a new high-quality sustainable building to meet the brief, namely to provide a high quality STEAM centre of excellence for the School. The School recognised that education was changing at secondary school level within

the UK and indeed the world as a whole. It saw that the provision of a high quality STEAM centre in a new high quality building would not only provide educational impetus and raise the quality of the School's educational offer as a whole, but would be fully in accordance with what the government and universities are seeking from schools and their pupils at secondary school level over the next decade and beyond.

48. In order to accommodate new and additional learning space in a modern high-quality format to provide the learning space required, it was necessary to create usable and flexible learning floorspace. The new STEAM centre would include the ability for subjects to be grouped together as a single curriculum subject available to all age group pupils. Currently this is not possible, and the STEAM subjects are an option only for years 7 and 8 pupils and are taught in generic classrooms around the School. The requirement is for all STEAM subjects to be taught in a single location, to give STEAM subjects extra emphasis, importance and status within the School as a result.

49. The location of the Oldfield House site for the replacement building was agreed after discussion with the architects and planning consultants. There was in fact no other which was considered to be suitable or available to accommodate the need. It is an excellent site from the School's point of view. The site is owned by the School, it is immediately adjacent to the existing School buildings and can co-ordinate with them functionally, educational efficiencies would be maximised, the new building would complement the existing buildings in terms of design and it would be a stand-alone building with its own identity and with the ability to meet the brief set by the governors to provide a STEAM centre of exceptional quality.

50. In terms of the new building providing a significant improvement in the School's educational efficiency, it is relevant to note that all the staff currently work between buildings, with teaching staff taking lessons in several different teaching spaces leading to loss of learning time by pupils and significant educational inefficiencies. This loss amounts to many wasted hours and teaching periods in each subject affected, probably amounting to hundreds of hours overall in each academic year. The new building would cause the number of hours taught to be increased overall per year, however the new building would have no impact on School roll numbers.

51. Having considered a number of options for its form and layout, the siting of the building lower down the slope within the Oldfield House site was agreed by the School to be the optimum location from a practical as well as, the School were advised, a planning point of view. The architects' alternative site study was submitted with the planning application. Some relatively minor tree removal was to be mitigated by net additional new planting in a high-quality landscape scheme. The architects and consultants further advised that the principal view of the building across the Sixth Form cricket pitch from Lower Road would be the principal view of the building from public

viewpoints, although also visible from Crown Street. This was agreed with planning officers and the Council's conservation officer.

52. The scheme was originally proposed to be accommodated in a new building of three storeys above ground. As a consequence of the consultation process undertaken including discussions with the Council and local residents, and in the light of responses received including from the Conservation Area Advisory Committee, the original scheme for a three-storey building above ground level was amended to introduce a lower ground floor and reduce the proposed building by one storey above ground, and to site the building more centrally within the site. This would create a high-quality STEAM centre within the new Oldfield House, albeit at higher cost than previously envisaged with the original planning application proposals. Its reduction in height was made after discussions with planning officers, and after they had taken into account the objections from local residents and groups including the Harrow Hill Trust. Given in particular the significant educational need for the new building, the planning officers supported the amended scheme which resulted in a recommendation for approval of planning permission.

53. Local residents and the Harrow Hill Trust were respondents to the public consultation and planning process and their objections were carefully considered by the School with advice from its professional advisers at the time. Their suggestion and wish for the proposed redevelopment to take place on the site of the existing building was examined in detail by the scheme architects and is the subject of the submitted information in the Architects' Alternative Site Analysis. The School was advised by them of a number of negative factors if the proposed building was positioned on the site of the existing building. They include the following:

    a. Option 2 (with lower ground floor to reduce its height, albeit higher than the proposed building above Crown Street) was impractical due to the fact that the almost level ground in front of it would have to be removed to accommodate a usable lower ground floor. This would require substantial excavation and removal of materials by lorry (calculated in the architects' Alternative Site Analysis to be approximately 2,700 cubic metres of spoil or 180 x 15 tonne lorry loads). They would all be required to be trucked through the narrow and steep streets of the West side of Harrow Hill, through the Conservation Area, through area of the School where young pupils and residents frequently walk, as well as raising inevitable strong objections from the residential community. The cost of construction would be considerably greater which would increase the costs to the School and potentially affect viability of the scheme as a whole.
    b. a building on the existing site (whether Option 2 – with lower ground floor – or Option 5 – all above ground but reduces its height by increasing the footprint) would be higher and more visible from Crown Street, contrary to the objective sought by objectors to reduce impact on Crown Street; a building further away from and below Crown Street as is proposed would,

given the greater angle of slope lower down, be able to accommodate additional height and floorspace with a lower ground floor as a result and be no higher than the adjacent buildings.

c. A building on the existing site would be close to the Crown Street wall and bank, suffering reduced daylight, and would have potential overlooking problems with neighbours unless there were no windows or obscured glass on the east and south side, leading to less natural light or poor environment internally. Natural lighting and ventilation of the building, important for educational buildings, would be reduced.

d. A further enhancement of the current proposals would be that minibus parking would be integrated better into the site with a view from Middle Road of a games area, not the current bland blank wall of the existing building with minibuses parked in front. The Options 2 and 5 would reduce the parking available from 12 spaces to 2 spaces, causing minibuses to be parked elsewhere (probably at Sudbury Fields), requiring journeys to and from there to collect and return them after dropping off pupils, and for drivers to wait on-street before being required if the two parking spaces are occupied.

e. If ramps were required and detachment from the other school buildings would result, this would be contrary to an objective of the School for the proposals to create greater integration.

f. The footprint of Option 5 would be 37% in excess of the existing Oldfield House, contrary to the s106 limitation.

g. Also, against the on-site Option 5 and a significant loss in educational terms, would be the inability to provide the planned break-out learning areas which the School sees as an important part of the proposed design objective.

54. The School has been conscious of the views of the local residents and has conducted public consultation fully in accordance with the advice of not only our own planning and other specialist consultants at the time but also the planning officers at Harrow Council. The amendments to the scheme resulted in a positive recommendation by the officers for planning permission to be granted. It was a substantial blow and significant disappointment when the decision of the members was to disagree with their professional officers and refuse planning permission.

55. After the refusal of planning permission and before deciding to appeal, the School in correspondence sought specific details of the alternative scheme or schemes which both sets of objectors were proposing, to see if there was merit in the objections and any facts or matters not considered by the architects when considering the alternative options. However, although the neighbours' representative and the Trust were prepared to meet with the School and discuss options, no details of an alternative scheme were forthcoming from either objector group. The position of both groups remained that any new redevelopment of Oldfield House should take place on the site of the existing building. As this had been tested previously by the architects in detail and had been the subject of a report submitted by them to the Council and officers before the officer

recommendation had been made, it took the matter no further forward. A copy of correspondence with both groups is found at **Appendix 11**.

56. On both planning and legal advice, the School concluded that in order to resolve the situation it would be necessary for the matter to be considered on appeal by an Inspector appointed by the Secretary of State. An appeal has therefore been made.

John Lyon School
17 May 2021

Appendices

Appendix 1 – Independent Schools Inspectorate Results 2019
Appendix 2 – School Demographics
Appendix 3 – School Achievements
Appendix 4 – EdTech Report
Appendix 5 – Delivering STEM Skills for the Economy 2018
Appendix 6 – Government Press Release/Girls Into STEM
Appendix 7 – Examples of STEAM initiatives by other schools
Appendix 8 –Plan of School Estate
Appendix 9 – Existing Building plans 1979
Appendix 10 – Physical Condition Survey
Appendix 11 – Correspondence with Local Community