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1. **FOREWORD**

To: Rt Hon George Osborne MP, Chancellor of the Exchequer  
Boris Johnson MP, Mayor of London

In February 2015 you announced jointly your long-term economic plan for the future of London as a world-class city, aiming to make London a centre of the world’s creative and commercial life, with new investment in science, finance, technology and culture.

As part of that plan you asked us to undertake a feasibility study into creating a world-class new concert hall at the heart of the capital. You asked the Barbican Centre, with its resident orchestra the London Symphony Orchestra, to consider the case for a new state-of-the-art Centre for Music that would ensure London’s leading role in the future and inspire a new generation.

We have been encouraged by the widespread support and enthusiasm for this concept. We feel we have a unique opportunity to make this vision reality: the coming together of London’s need, a compelling idea, audience demand, new transport links, the arrival in autumn 2017 of Sir Simon Rattle as Music Director of the LSO and Artist-in-Association at the Barbican Centre and Guildhall School, and the potential availability of an ideal site in the City of London’s Cultural Hub – all these combine to make the moment unmissable.

We believe we have articulated a clear vision of what a new Centre for Music could be and how it could be transformative for a new generation of audiences and participants, offering performance excellence and developing engagement and discovery for all in a superb new setting.

Our teams and advisers have worked intensively through the period of this study to analyse a wide range of options both artistically and financially, and we believe we have identified a proposal which is feasible. We believe this is a proposal that can unlock new sources of private and public support, and draw in a wide range of stakeholders to share the vision. We undertake to consult widely with the sector as we move forward to deliver an outcome that will be of benefit to all.

This is a bold plan for the future of great music for all. We hope it meets your aspirations for London and that you will fully support its realisation.

Sir Nicholas Kenyon, Managing Director, Barbican Centre  
Kathryn McDowell CBE, Managing Director, London Symphony Orchestra  
Professor Barry Ife CBE, Principal, Guildhall School of Music & Drama
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2. EXECUTIVE SUMMARY

2.1 BACKGROUND

2.1.1 This is a decisive moment for music in this country. There is a once-in-a-lifetime chance to shape a new creative offer to audiences, visitors and performers. All the elements are present to create and deliver a vision for the future: we need to seize the opportunity now.

2.1.2 The UK is thriving as a centre of economic growth and soft power, a nation whose artistic and heritage offering is admired around the world. Recent investment in our presenting the UK’s cultural assets in China, for example, has used our international reputation to strengthen national links.

2.1.3 London is flourishing as a world-class city with an unrivalled range of heritage, museums and galleries, contemporary arts and formal and informal spaces, which in an increasingly diverse city are all broadening the offer to audiences.

2.1.4 London’s cultural offer is world famous, accounting for a significant proportion of the tourism to the capital. Over 17 million international tourists visited the capital in 2014, an increase from 15 million in 2011, with 70% of them citing culture and heritage as a driver for their visit. £4.43bn of inbound tourist expenditure in 2014 is directly attributable to London’s cultural offering.

2.1.5 The world’s leading artists recognise the potential of engaging with the thriving creative life here. The arrival of Sir Simon Rattle in September 2017 as Music Director of the London Symphony Orchestra, and as Artist-in-Association with the Barbican Centre and the Guildhall School of Music & Drama, will bring to London for the first time his charismatic leadership skills, and his commitment to education and music-making for young people. This opens up a game-changing potential for the future.

2.1.6 But Britain cannot be complacent about its international success. London is in danger of falling behind other world cities in its provision of leading musical venues – recent developments especially in Asia, and the acclaimed new Philharmonie hall in Paris have highlighted London’s lack in this area. We need to meet the expectations of international visitors, our increasingly diverse audiences, and our leading musicians and performers.

Even in its unfinished state the new Philharmonie looks and (more importantly) sounds like something London’s musicians and classical music punters can only dream about: a world-class concert hall…The lack of a hall in London remotely as good as those in Birmingham or Gateshead, let alone Berlin, Vienna and now Paris, is threatening London’s status as the world’s classical music capital.


2.1.7 This is therefore a critical moment to consider what facilities are needed to reflect and build on the UK’s international leadership role in the creative industries and the arts, and to ensure it retains this leading role in the 21st century. What Tate Modern has done for the visual arts, what the Science Museum does for science, a new Centre for Music can do for music.

2.1.8 This study, requested by the Chancellor of the Exchequer and the Mayor of London in February 2015, is part of their ambitious plan to ensure that the London of the future is ‘a centre of the world’s creative and commercial life, with new investment in science, finance, technology and culture’. The agreed brief for the study is ‘for the Barbican Centre, with its resident orchestra the London Symphony Orchestra, to consider the case for a new state-of-the-art Centre for Music; including how it could be delivered in the City of London, how it will operate sustainably in the long term and what the impacts and benefits are for the national music sector’. This is the challenge to which we have responded in this study.

2.1.9 This Feasibility Study, with its Outline Business Case, will:

• Set out the vision of a new Centre for Music
• Demonstrate that this can be delivered in a way that meets the objectives for the project
• Show that the project will deliver important benefits to a wide range of stakeholders
• Plan for the future realisation of the project

2.1.10 In making the case, we realise that this is a bold and demanding project. High-quality standards are necessary to achieve its vision. We believe that this Feasibility Study shows that the project is needed, that it is timely, and that it is possible to deliver it.
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2.2 WHY LONDON?

2.2.1 London is the centre of the UK’s creative industries, the home of international arts organisations that serve the whole of the UK and the world. London is growing, especially eastwards; arts audiences are changing, reflecting the rich diversity of our capital city. Transport links are being improved, and with the opening of Crossrail in 2018-19, access to the live arts is ever more possible for more people. Cultural activity of many different kinds is playing a greater part in people’s lives, with a strong desire for participation and involvement. The importance of providing cultural facilities in new developments, urban planning and regeneration projects is now accepted. We need to invest in resilient high-quality infrastructure for future generations.

2.2.2 The case for investment in cultural facilities outside London is clear, and recent decades have seen major developments at, for example, Sage Gateshead, Symphony Hall Birmingham and Manchester, and planned infrastructure projects in Bristol and notably the Factory in Manchester. Alongside these developments it is in the interests of the whole of the UK that we continue to invest in London, to keep the capital city at the heart of the world’s music-making and drive investment in the national economy.

2.3 WHY THE CITY?

2.3.1 The City of London Corporation has a consistent and long-lasting commitment to the arts, supporting the London Symphony Orchestra and the Guildhall School, building the Barbican with its arts facilities after the war, as well as maintaining a unique range of heritage and tourist facilities. It ranks alongside other major national bodies as a consistent investor in the arts, offering Londoners a range of cultural and heritage activities from Tower Bridge to the Museum of London.

2.3.2 The City Corporation is actively developing the vision for a Cultural Hub in the north-west of the Square Mile, responding to the imminent arrival of Crossrail in 2018/19, which will make this area an international centre for the performing arts and education, drawing organisations together in close collaboration, and making the Barbican area and a planned new Museum of London a centre for culture, heritage, the arts and education. Major developments in the public realm will enhance the character of the area.
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2.4 WHAT IS THE NEED FOR A NEW CENTRE FOR MUSIC?

2.4.1 Music is central to our lives. Amongst all the arts, engagement in music, both live and digital, is a vital part of the daily experience of audiences of all ages and backgrounds. The exponential growth in digital technology has led to a renewed thirst for the live experience, and those who have grown up as digital natives expect to receive their arts in new ways for the 21st century.

2.4.2 We now have the opportunity to reflect this activity in a bold plan for the long-term, one which expresses London’s increasingly rich diversity and our commitment to the power of music as a unifying force in our lives. It is a moment to show how the community of musicians that forms a symphony orchestra can be at the heart of this process.

London deserves a great concert hall ... in addition to acoustics, a flexible space is needed to enable more imaginative repertoire and performance possibilities, to serve our audiences as well as we possibly can. This is a once-in-a-lifetime chance to set up an orchestra where every element of the work and philosophy is joined up...which can reinvent the shape of the institution for our time.

– Sir Simon Rattle, 2015

2.4.3 This is not just about the present: it is a commitment to – and an investment for – future generations.

2.4.4 London has several good historic concert halls, and some outstanding smaller venues, but it has arguably not had since the Queen’s Hall was destroyed in 1941 a world-class venue for symphonic music of the highest standards. It is falling behind the rapidly growing number of world concert halls in this vital respect.

2.4.5 From Los Angeles to Luxembourg, from Tokyo and Sapporo to Helsinki, Lucerne and now Paris, new halls have been built with outstanding acoustics and facilities. It is essential that audiences hear great orchestras and leading performers at their very best. A world-class acoustic, within a physical space that gives every seat a sense of intimacy with the performers, enables each audience member to experience the sound of a great orchestra with a brilliance, immediacy, depth, richness and warmth that is lacking in London’s halls today.

2.4.6 We need to move with the times, and keep up with cities in Europe, America and Asia to protect our world-leading status. The Centre for Music must be a landmark building which draws people in and is visible as a key part of London’s cultural infrastructure; this is also essential in order to attract private funding.

2.4.7 The origin of this project is a unique collaboration between three different but linked organisations: a world-class orchestra, the London Symphony Orchestra; a world-class conservatoire, the Guildhall School; and a world-class arts centre, the Barbican Centre. All are funded and two are owned by the City of London Corporation as part of its major investment in the arts and heritage.

2.4.8 Over the last 25 years the pioneering LSO Discovery, Guildhall Connect and Barbican/Guildhall Creative Learning programmes have offered learning opportunities to east London, and have played a significant role alongside other London institutions in supporting the National Music Plan, the London Curriculum and the evolving Cultural Education Partnerships. This is already a pioneering cultural alliance, working together in a way that has been described as ‘one of the country’s most developed models of a community of practice’ [Cultural Education in England by Darren Henley].
2.5 WHY NOW?

2.5.1 The idea of a new Centre for Music has been under consideration for a number of years, and the project has been given urgency and focus by the appointment of Sir Simon Rattle as the Music Director of the London Symphony Orchestra. Sir Simon’s continued advocacy of the best conditions for performers and audiences has brought wide attention to this proposal, and his dedication to the project is invaluable. Among leading musicians today, he is the one who can galvanise public support and private funding.

2.5.2 The development of diverse audiences, the expansion of London, and new transport links over the next ten years will be hugely significant and must be responded to. The population of London is set to grow by 12% between 2015 and 2025. The arrival of Crossrail in 2018-19 will bring an additional 300,000 people within a 30-minute rail journey of the Barbican area. These new audiences should be served with the highest quality activity and opportunities for engagement.

2.5.3 Audiences for music are currently growing faster than population growth. Between 2003 and 2013 the London Orchestras Marketing Consortium estimates that while the population of London grew by 13%, sales of tickets for orchestral performances increased by some 30%. This is mirrored by the 26% increase in theatre tickets sold in the same period. An estimate of possible audience growth for this activity between now and 2025 is between 15% and 25%.

2.5.4 It is estimated that the education and outreach elements of the new programme will reach 245,000 people directly each year, while the overall reach through digital technology could be some 2 million people globally annually. A new Centre for Music can fulfil this new need.

2.5.5 A further imperative to act now is the availability of a site that has arisen with the plan for a new Museum of London in West Smithfield, and the Museum’s intention to vacate their current site in the Barbican. This site is owned by the City of London Corporation, who have indicated their willingness to contribute it as a key part of their support for the project.

2.5.6 The future audience need, the imperative to keep London a leading world city, the imminent arrival of Sir Simon Rattle at the helm of one of the world’s leading orchestras, and the availability of a site all combine to make this the moment to act. And there is a vision which drives this forward.
2.6 WHAT IS THE VISION?

2.6.1 The vision for a new Centre for Music is clear and simple: it should offer the highest quality experience for all, inspiring future generations of music-lovers and potential new audiences by offering them involvement in the very best and most exciting music-making.

2.6.2 This is not business as usual: it is a new idea of what a concert hall can be.

I would completely rebuild the spaces in which classical music takes place. I would make them much more porous, adaptable, beautiful to be in, accessible, able to accommodate any collection of musicians under any circumstances, and above all I would insist that the design of these spaces be not only incredibly alluring so that everyone wants to go there, but that they would bring everyone in the hall really close to the musicians. Because I think we have to get away from the bourgeois culture palace of the 19th century. Everything to me is about bringing people close.

– Gerard McBurney, composer and writer, Chicago Symphony Orchestra

2.6.3 The Centre for Music will be the first institution of its kind in this country to be conceived and created in the digital age. It will be a welcoming, porous building, connecting with audiences both physically and digitally.

2.6.4 Following concentrated workshop discussions, a session with Sir Simon Rattle, discussions with LSO players and widespread conversations in the sector, we have then clarified the aims of the new Centre for Music. It will:

• Be an inspirational, forward-looking facility connecting performance, discovery and learning, which enhances the status of London as a world-class city
• Act as an energising, inclusive advocate for the future of music-making for all, reflecting the diversity of London, its national and international visitors
• Be the world-class home for the LSO, the resident orchestra of the Barbican Centre
• Be a beacon of the City of London’s vibrant and welcoming Cultural Hub in the north-west of the Square Mile, a destination for visitors and audiences
• Contribute to a co-ordinated offer of cross-arts activity and cultural education, in collaboration with other key venues including the Museum of London
• Extend the existing facilities of the Barbican Centre, Guildhall School and LSO St Luke’s, to provide a further integrated offer to audiences and communities
• Complement sensitively the capital’s provision of classical symphonic concerts, welcome leading international orchestras and offer a visiting base for the UK’s out-of-London orchestras and national youth music organisations
• Enable access for young people to world-class performance, music-making and learning opportunities in partnership with music education hubs and other agencies
• Be an innovator in exploring new methods of digital engagement and interaction with audiences, enabling this work to be available to all
• Be sustainable and operate efficiently and effectively, providing a consistently excellent experience to audiences, musicians, students, and all others who encounter it whether in person or remotely

2.6.5 Among many examples of how this will be translated into practice:

• The audience will surround the stage area, creating a feeling of immersion and involvement in the sound
• Flexible, built-in projector screens in the hall will enable pioneering interactions with the performance experience
• Each seat in the hall will have a data connection and touch-screen capable of offering programme information and social media content before and after the performance, enhancing the concert and creating communities of interest among the audience
• The spaces in the concert hall will be flexible, allowing large-scale participatory and side-by-side performances to take place on an extended stage
• The hall design will respond to the new ways in which composers and creators are working with multimedia and cross-arts developments
• There will be visibility from parts of the surrounding areas into the hall, providing opportunities to see and observe the orchestra at work
• An exhibition space will become the home of major shows exploring sound and music, with the larger ‘blockbuster’ exhibitions spilling out into the building’s wider front of house areas
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2.6.6 As a whole, the Centre for Music must be a landmark and inspirational building which draws people inside and which reflects the venue’s significance as part of London’s cultural infrastructure. A building of this nature is also required to attract private sector funding in both the short and long-term.

2.6.7 This is not just about one new facility. It is about creating a set of integrated new, existing and repurposed facilities across four venues, planned together to make a wholly exceptional offer to audiences. This adds a collaborative dimension to the plan, in which the whole is far greater than the sum of the parts.
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2.7 WHAT IS THE OUTLINE BUSINESS CASE?

2.7.1 The Outline Business Case, developed in accordance with HM Treasury Green Book principles, analyses in detail the different aspects of the case for the project. After extensive independent analysis, it reaches the conclusion that building a new Centre for Music in the City of London offers the best location, the best value for money, and the best economic impact of all the available possibilities.

2.7.2 The Centre for Music can enable a step-change in the offer to audiences, visitors and performers. Given the context of the collaboration between the LSO, Guildhall School and Barbican Centre, the strategic case for a new Centre for Music is that it can provide an inspiring model of performance excellence and audience engagement. It will act as a base for digital development, participation, discovery and learning, which will be of benefit to all.

2.7.3 In terms of what London can offer the UK and the world, this is potentially a game-changer.

ECONOMIC CASE

2.7.4 A full list of potential options for a new facility has been considered, starting from a base case of no action, and exploring options including the refurbishment or rebuild of the Barbican Hall, building a new concert hall in London or near the Barbican, outside or inside the City, using existing facilities to enhance the educational and digital offer, placing these in a separate building, and finally developing a Centre for Music which starts from scratch on a new site.

2.7.5 These have then been refined down to four shortlisted options which are analysed in full:

Option 1: Do nothing
Continue to use existing facilities with no improvements, risking declining status and loss of audience.

Option 2: Rebuild the Barbican Hall
Completely rebuild and enlarge the present Barbican concert hall to create better acoustics, but with major impact on the rest of the Centre.

Option 3: Build a new concert hall
Create a new venue in a location that allows for a landmark building, but with limited space for educational, digital and commercial needs.

Option 4: Build a new Centre for Music
Create a landmark, inspirational building that is part of the collaboration between the LSO, Guildhall School and Barbican Centre and located in the area of the City where it is developing its Cultural Hub, delivering high-quality spaces for education, digital and commercial activity.

2.7.6 The results of the quantitative appraisal of the shortlisted options indicate clearly that Option 4 performs best in terms of overall value for money in relation to the base case of doing nothing.

2.7.7 It delivers the highest overall economic benefit at £891m in present value, which is £510m greater than the do nothing option and £576m greater than Option 3.

2.7.8 It has a gross benefit-cost ratio of 1.39. In net terms, when compared to the base case of Option 1, the benefit-to-cost ratio for Option 4 is 1.73 (for those benefits that can be quantified, and before considering more qualitative benefits).

2.7.9 It has the highest capital cost, but the investment serves to unlock quantifiable benefits that would not be realised in the absence of the investment. These include additional tourism spillovers for the UK, wellbeing benefits for audiences arising from engaging with music and consuming music digitally, and longer-term benefits for individuals and society at large from the extensive education and learning activities that would take place.

2.7.10 The qualitative assessment of the options strengthens the case for Option 4, which has the highest ranking of all options. This stresses the contribution to London’s world-class status, extending the reach and diversity of engagement with great music and supporting the UK’s position as a world-leading centre for the cultural and creative industries. While not wholly quantifiable in financial terms, these are central to the strategic case and the rationale for the investment.

2.7.11 Option 4, to build a new Centre for Music, is therefore the preferred option for delivering the strategic objectives of the project.
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COMMERCIAL CASE
2.7.12 This analyses the functionalities required to deliver the project, and highlights the required services, the procurement strategy, and the potential for risk transfer. The detail of this work will be undertaken in the next phase of the project. In the meantime it is assumed that the City of London Corporation’s processes and policies for capital projects will be adopted in order to ensure a robust framework for the delivery of the project.

FINANCIAL CASE
2.7.13 This analyses the financial structure of the project and considers how it would be integrated into the business models of the Barbican Centre and London Symphony Orchestra going forward. The schedule of accommodation and the design of the Centre for Music has been built in detail through the combined expertise of the Barbican, LSO and Guildhall School together with highly experienced project managers, GVA Acuity, and design consultants Arup. The size, scale and capital cost of the building has been benchmarked against similar projects both in the UK and overseas.

MANAGEMENT CASE
2.7.14 This analyses the necessary steps to deliver the proposition effectively. The project will be managed in accordance with PRINCE 2 methodology in seven phases, with this study as Phase One, and a second phase running from late 2015 to March 2017, delivering a full business case, concept design and fundraising plan.
2.8 WHERE SHOULD IT BE?

2.8.1 The question of the most suitable venue for a new concert hall is clearly complex and sensitive, and requires careful analysis. A new hall in a currently unserved or underserved area of the capital or beyond could bring real benefits to that area, but would require major investment in infrastructure, audience development and management structures, and would not necessarily benefit from the City Corporation’s financial support. The brief for this study already suggests that such a hall could be built in or near the City of London. The Outline Business Case presents and analyses the options.

2.8.2 There are advantages to a site in the City of London, as part of the evolving Cultural Hub in the north-west area of the City around the Barbican Centre and the Museum of London. As referenced above, the centre of gravity in London is moving east, and this area of the City provides a pivot point between the established West End, the regenerated area of King’s Cross with its emerging Knowledge Quarter, and the developing east with the planned new facilities of the Olympic Park. It is located directly on the new Crossrail service, with Farrington to the west and Moorgate/Liverpool Street to the east, both with excellent north-south as well as east-west connections. It is adjacent to the thriving Tech City around Shoreditch and the vibrant area of Clerkenwell, both areas of growing creative industries and small-scale businesses. It is in a position to reach and develop diverse new audiences.

2.8.3 The recent development of the City of London’s Cultural Hub in the north-west of the City has been a major element in rethinking this thriving area of the City which is home to an unrivalled collection of arts, cultural, heritage and learning organisations. It has already led to fresh collaborations across the area, especially with the Museum of London, cultural bodies and heritage bodies, all linked to the cultural strategy of the City of London and making links with major institutions such as St Paul’s Cathedral.

2.8.4 The City Corporation recently completed and consulted on an Area Strategy for the Barbican and Golden Lane, which will plan to bring significant new public realm improvements to the area in the near future, improving pedestrian and cycle access, creating open spaces, and highlighting the unique residential amenity of the Barbican Estate.

2.8.5 The dynamic partnership of three organisations, the LSO, Guildhall School and Barbican Centre, would result in an offer that is based not just on the new Centre for Music but also includes the extensive facilities of the Barbican Centre including its existing hall which would be renewed and repurposed as part of this project, the Guildhall School with its outstanding Milton Court concert hall for smaller-scale music, and the much-valued local activity of LSO St Luke’s. The umbilical links between these different venues, each with its own character and purpose, would be visible to all.

2.8.6 This partnership would build organically on existing structures and support in delivering new services. Partners would therefore achieve far more than the sum of their parts, through sharing space, sharing expertise, sharing education and learning activity, and sharing varied programming plans in a linked offer to audiences. The partnership would significantly reduce overall running costs through the use of existing management structures.

2.8.7 In this plan, the new Centre for Music will not be a stand-alone venue. As a key part of the development, the present Barbican Hall would be renewed and repurposed as a home for innovative and popular contemporary music, and the community use of LSO St Luke’s would be enhanced. Each of the music venues within the Cultural Hub would have its own strong characteristics and features – as a working summary:

- **Centre for Music**
  
  World-class acoustics, orchestral excellence, immersive learning, participatory events, digital engagement

- **Barbican Hall**
  
  Innovative music-making, contemporary experience, exploring music and technology

- **LSO St Luke’s**
  
  Engaging local communities, diverse programming, commercial recording

- **Guildhall School Milton Court**
  
  Intimate music-making, chamber orchestras, artist residencies, integrated arts and learning.

2.8.8 Further cross-arts elements will complement this picture of close musical partnership. The curriculum-based student experience of the Guildhall School serves drama as well as music, training actors, musicians and theatre technicians for the future. The cross-arts, wide-ranging offer of the Barbican Centre presents theatre, dance, film and galleries all under one artistic leadership, with strong commercial underpinning.

2.8.9 Building outwards from this context, the location of a world-class Centre for Music in the City of London would demonstrate what it can offer London and the nation. As the City Corporation has done for many years, including the creation of the iconic Barbican Estate, it would support the provision of high-quality facilities that offer access and engagement for all, making its own decisive contribution to the status of London as a world-class city.
2.9 WHAT SHOULD THE CENTRE FOR MUSIC CONTAIN?

2.9.1 The concert hall of the Centre for Music will be the world-class performance space that London needs. The Centre for Music will take a radical approach to the interlinking of this concert hall with front of house and backstage facilities, and will offer varied spaces for informal performance, learning and engagement.

2.9.2 The main spaces of the Centre for Music will be:

- Concert Hall: 1,900 capacity main hall with world-class acoustics, an extraordinary venue for making and experiencing acoustic (i.e. non-amplified) music
- Club Space: a more informal second performance venue for 200 people with integrated dining and bar facilities for late-night and free flowing activity
- The Core: the main front-of-house facilities: an inclusive, transparent and engaging space where the audience, performers and staff meet and interact throughout the day and into the evening
- Learning and participation spaces: welcoming spaces for informal performance, discovery and development, exhibition spaces
- Digital spaces and facilities: state-of-the-art spaces for content creation, broadcast spaces and technical areas
- Rehearsal and back of house: rehearsal spaces, dressing rooms, break-out rooms, servicing
- Entertaining and restaurant spaces: rooms for receptions, dining facilities
- External spaces: accessible interactions with the Centre for Music

2.10 WHAT COULD THE PROGRAMME BE?

2.10.1 This is the heart of the new proposition which we offer. The creation of a new Centre for Music will enable a far broader and richer cross-section of music to be programmed across the campus than currently, in venues that are ideally suited to each individual genre, ensuring a better experience for artists and performers, existing and new audiences. A diverse programme model will be developed, planned, coordinated and delivered across the four venues. Collaboration with the other organisations of the City’s Cultural Hub will add to the richness.

2.10.2 A programme has been developed to show how much could be achieved in the spaces available, and a two-week sample is shown in the study to demonstrate what the LSO, the Barbican’s associate orchestras and ensembles, the international associates and visiting orchestras could potentially offer audiences.

2.10.3 The LSO’s work with Sir Simon Rattle and its other conductors would have its home in the Centre for Music. Major works which are impossible to perform in the current Barbican Hall either because of size or because of the lack of key facilities, e.g. an organ, could now be offered.

2.10.4 The venues will be filled with musical and cultural experiences all the year round. In the new Centre for Music, for example, evening performances and open rehearsals will be complemented by weekend matinees, short early evening performances, late-night events in the informal Club Space, coffee concerts and lunchtime performances, with daytime exhibitions and learning activities.

2.10.5 It will be possible to move from a digital learning session in the Centre for Music to a world music concert in the Barbican Hall, or from a community session at LSO St Luke’s to an evening recital in Milton Court, all within short walking distances with ample restaurant facilities.

2.10.6 The range of activity across the four venues has been articulated in four thematic strands:

- **Platforms: rehearse/create/perform**
  - London Symphony Orchestra, Barbican Associates, London Symphony Chorus, Barbican Contemporary, youth orchestras, Music Hub ensembles, schools and communities, artist development and digital interaction

- **Public experience: visit/view/listen/interact**
  - Music welcome, exhibition space, insight, talks, new concert formats, digital resource, library

- **Participation: join in/contribute**
  - Learning spaces, participatory workshops, studios for schools, youth ensembles and adult amateur groups

- **Professional Development: progression/training**
  - Creating a new workforce for music education and leadership, music therapy, Creative Labs, orchestral artistry, international knowledge exchange.
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2.11 WHAT IS THE LEARNING AND DISCOVERY OFFER?

Every child ever born wants to paint a picture, dance, sing, hear a story, build a kingdom out of pots and pans.

– Jeanette Winterson, The Guardian

There is compelling evidence for the benefits of music education on a wide range of skills including: listening skills which support the development of language skills, awareness of phonics and enhanced literacy; spatial reasoning which supports the development of some mathematical skills; and where musical activities involve working in groups a wide range of personal and social skills which also serve to enhance overall academic attainment even when measures of intelligence are taken into account....

– Professor Susan Hallam

2.11.1 The Centre for Music will generate progressive opportunities for people of all ages to learn, create and perform in new and dynamic ways. With an outstanding concert hall at its core, together with supporting spaces for informal performance, learning and development, the Centre for Music will enable a transformative offer of musical discovery.

2.11.2 There has always been a challenge for London’s cultural organisations in the diversity of the audiences that they attract. In developing work established over thirty years in pioneering relationships with east London and taking this further, the alliance of the Guildhall School, Barbican Centre and LSO with an inspiring new leader is ideally placed to radically increase that diversity.

2.11.3 The Centre for Music will build on the existing LSO Discovery and Barbican/Guildhall Creative Learning offer. This has developed strong links with schools, communities and boroughs in east London, and has created an organic set of relationships for the future. The programme will link to the Guildhall School’s International Professional Development Programme, training musicians for the future to perform, create, lead and communicate, and extend this to artists from other disciplines.

2.11.4 It will place equal emphasis on informal, non-formal and traditional instrumental progression routes, and be attuned to career opportunities in teaching, performance, management, creative production, and enterprise. It will help to create a flexible and creative workforce. Higher Education training, placement, apprenticeship and paid internship schemes will be developed, encouraging a diverse demographic reflecting the London of today.

2.11.5 A long-term ambition for the inspirational effect of the Centre for Music is that by 2040, through collaboration and in association with partners:

- By the age of 18 every young person in the country will have had the opportunity to experience the Centre for Music physically or virtually
- Every household within the M25 should have had at least one interaction with the Centre for Music

The LSO’s education work is world famous and rightly admired and copied. We should go much further, starting with a much closer Guildhall relationship. We should attract the world’s best students, and educate them as the next generation of LSO players. All should be associated with a primary school, all should learn conducting, composing and improvisation. All should have a total command of the stylistic demands of all kinds of music – again a holistic approach. All should be evangelists for music, not just players.

– Sir Simon Rattle, 2015

2.11.6 An illustration of the kind of learning and discovery opportunities for people of all ages made possible by the Centre for Music is illustrated opposite.
DAYS OF DISCOVERY...new experiences for all

The Centre for Music will offer a huge range of opportunities for people of all ages to experience, participate in and learn about all aspects of music in the most inspiring setting imaginable. It will offer something for everyone, from those experiencing the arts for the first time to people looking to develop their skills and knowledge and to gain outstanding new experiences of music.

The Centre for Music will be a transformational facility that embraces a wealth of musical styles and genres, engaging a wider, more diverse community of audiences and participants in music at all levels.

Experiencing live music

At the heart of the experience will be live music with a spectacular new concert hall offering a truly inspirational setting to engage with music of all kinds. The design of the building, with more integrated front-of-house and back-of-house areas, will feel inclusive and alive, encouraging interaction between musicians and members of the public.

Open rehearsals from the LSO and other major orchestras will give young people the chance to meet musicians and witness the sound of a full symphony orchestra performing or rehearsing either from the hall itself or in specially equipped pods in the foyer that provide digital notes on the music being played.

Innovative learning and engagement

The Centre for Music learning experience will not only include the concert hall itself, but a range of interactive and participatory spaces and learning zones that provide visitors of all ages and experiences with irresistible opportunities to explore music-making through sound installations, touch screens, talks, singing and hands-on instrumental playing.

School music groups will be able to visit the Centre for Music to take part in a side-by-side session with LSO musicians as well as performing in the Centre’s informal foyer spaces. There will be workshops, open to all, ranging from learning choral singing to developing DJ-ing skills, all led by professional musicians and educators.

The Centre for Music will run digital discovery projects that ensure the Centre’s education programme will resonate far beyond its walls, providing digital learning resources for schools that introduce young people to the joys of music and encourage them to start their own musical journey, as well as providing online courses that bring together people from across the country to explore and encounter music together.

Digital technology will also give the public constant and free access to the activities in the Centre for Music – whether live streaming concerts from world-class performers such as Sir Simon Rattle and the LSO to being able to watch rehearsals, workshops and discussions and debates on great musical works. This will provide access to excellence on an unprecedented level, allowing audience members the chance to taste the atmosphere of the Centre for Music remotely before potentially visiting the venue for the first time.

Interactive exhibition spaces

At the Centre for Music’s heart will be a ‘launch pad’ into the world of music and music-making. This permanent exhibition will reveal the essence of sound - its tone, colour, shape, momentum - through the fundamentals of rhythm, melody and harmony. It will be accessible, available and visible to anyone who walks into the building, inviting them to discover the art, craft and science of music through playful interaction that is both fun and educational.

Families and school groups will have the chance to visit the Centre for Music’s interactive play zone, an exhibition space that will provide fascinating, hands-on digital resources that bring music to life; from a digital journey showing how music has evolved through the ages to interactive exhibits that give visitors the chance to conduct a digital orchestra.

Students and young people will also be able to book special packages that give them the opportunity to experience all areas of the Centre for Music including regular drop-in sessions in the Creation Studio where experienced workshop leaders will encourage them to explore music-making, handle and play instruments and create their own music in state-of-the-art spaces. Early years sessions will enable families who are getting involved with composing and playing music to meet and learn together.

The Centre for Music will also provide professional development opportunities for young people interested in developing their career in the music and creative industries, through apprenticeships and paid internship schemes that encourage a diverse range of people to consider possible careers across programming, production, stage and technical management. This will complement a programme that aims to build a new national workforce of 21st century portfolio musicians who can perform, compose, improvise, lead and teach at the highest level.

Partnership

The Centre for Music’s work is designed to complement and enhance the outstanding music education work already going on across London and the UK. It will also build on the partnerships forged over many years by the LSO Discovery programme and the Barbican and Guildhall School’s pioneering joint creative learning department with music hubs and a wide range of cultural and education organisations.

It will work closely with the UK’s regional and national music organisations to build a collaborative structure of music delivery for the country that encourages lifelong engagement with performance and ensures every child in this country has the chance to experience a high-quality music education.
2.12 WHAT IS THE DIGITAL OFFER?

2.12.1 The Centre for Music will be the first British institution of its kind to be conceived and created in the digital age. It will be optimally placed to harness digital technology in order to engage, educate and inspire audiences from all backgrounds and of all ages.

2.12.2 For the Centre for Music, it provides an opportunity to break down barriers to access and offer new ways to communicate. Digital in this context means immediacy, ‘shareability’, and malleability: a culture in which information can be created and shared in an instant. The rapid evolution and development of technology means that it is crucial not to be limited by what is possible now, but to imagine how improved technology could enable new audience experiences.

2.12.3 A number of recommendations are set out in the study for the kind of experiences the Centre for Music will offer across the Concert Hall, the public spaces and beyond the building’s walls. These proposals have been informed by a number of specially commissioned research papers.

2.12.4 Building a new facility enables the creation of engaging public spaces which change the way audiences relate to music. An immersive, informal front of house space will allow the audience to see and hear the stage and performers, with a range of camera angles, high quality audio and opportunities to take control of the viewpoint or have it curated by a commentator or member of the orchestra.

2.12.5 A separate interactive zone could be a ‘launch pad’ into the world of music and music-making. This permanent exhibition will reveal the essence of sound - its tone, colour, shape, momentum - through the fundamentals of rhythm, melody and harmony. It will be accessible, available and visible to anyone who walks into the building, inviting them to discover the art, craft and science of music through playful interaction that is both fun and educational.

The Centre for Music is poised to be one of the most significant projects undertaken in the City for a generation. It has the ability to capture the imagination of London...The role that digital technology plays could be ground-breaking and inspirational, but more importantly it has a fundamental potential to elevate the entire experience of the venue.

– Rawden Pettitt [Stanton Williams], Architecture and Digital Technology
2.13 WHAT WOULD BE THE CHANGES TO THE BARBICAN HALL AND LSO ST LUKE’S?

2.13.1 The current Barbican Hall is highly valued for the repertory it presents, and it is currently in overwhelming demand for concerts, rentals, commercial hires (e.g. annual general meetings, university graduations), preventing the hall’s resident and associate orchestras from rehearsing there as regularly as they would wish and need. The balance of its activity has moved increasingly to include the presentation of amplified non-classical, jazz, world and other genres which draw a very diverse audience.

2.13.2 The renewal and repurposing of the Barbican Hall would be a major exercise with the aim of greatly increasing flexibility in both repertory and audience accommodation. The stalls seating would be able to switch between raked seating and a flat floor which would enable a standing audience for the non-classical contemporary concerts. The repurposing would allow greater flexibility and further potential for income generation.

2.13.3 The refurbished Barbican Hall will make a distinctive offer: a technologically advanced facility, allowing the Barbican to programme a rich and diverse range of contemporary and world music that reflects London’s changing community. Through its wide-ranging cross-arts programme the Barbican already attracts a diverse audience; this development would complement the vision of the Centre for Music to be inclusive, participative, and welcome the widest range of audiences as a cultural home for all Londoners.

2.13.4 LSO St Luke’s already provides significant community programming, and with the move of LSO rehearsals to the new Centre for Music, this can be increased and developed. This will help further deepen roots in the local community beyond the Square Mile of the City and provide more first access opportunities through a wider range of LSO Discovery participation and performance activity, as well as new community-led activity. The visually superb setting of LSO St Luke’s will be further enhanced as a base for digital recording, especially for learning programmes and online courses.
2.14 WHAT IS THE POTENTIAL IMPACT ON THE WIDER SECTOR?

2.14.1 Beyond the Centre for Music, there is immense opportunity for its activities to be transmitted and relayed nationally and internationally. With a body of exemplary digital content, the Centre for Music can push the boundaries of learning and engagement, developing new models of digital engagement.

2.14.2 We have undertaken, as part of the preliminary work on this study, a pilot project based around Stravinsky’s The Rite of Spring filmed in a recent performance by the LSO under Sir Simon Rattle. Creating a major digital learning course led by Simon Rattle, in collaboration with FutureLearn and curator Gerard McBurney, we have shown how digital engagement can provide added value to the performance experience, exploring cultural background and musical methods in depth, enlightening both the piece, its composition and its cultural context. This provides a template for possible future provision enabled by the Centre for Music.

2.14.3 However, as with all innovations in this area, there may be concerns from the sector that this work is not fully reflecting their own contributions and activity. It is therefore important that a dialogue is established to ensure collaboration and partnership in this area, so that the digital innovations can be planned on a collaborative basis around the UK and best practice is shared widely.

2.14.4 The BBC is a natural partner in this process, and its recent policy statements emphasise the priority of collaboration going forward. The BBC plays a central role in the cultural and musical life of the country, and already has strong links with the Barbican Centre through its thriving relationship with the BBC Symphony Orchestra as Associate Orchestra and its relays of the LSO on radio and television. The BBC Young Musician and its ‘Ten Pieces’ concert will be relayed from the Barbican in 2016. This will be built on in the future so that the BBC becomes a key partner in the collaborative process.

2.14.5 In the initial consultations that have been commissioned for the study from Bonnar Keenlyside and the independent adviser Peter Phillips, there are a range of views with many positive and supportive comments about the ambitions of the project. There is also a clear concern that the impact on the music sector in London and UK might be damaging, potentially drawing resources and audiences away from current existing activity. This consultation concentrated on the classical music sector, and we now need to engage the widest musical community.

2.14.6 We wish in the next stage of this project to consult widely, and to work with partners in the sector to respond to these concerns. We believe that a large-scale, widely recognised project will decisively raise the profile of music nationally, and will be of benefit to the sector as a whole, expanding the market for the art-form in the same way as Tate Modern achieved for the visual arts sector at the start of the millennium, or Sadler’s Wells has achieved for contemporary dance: the experience is that increased supply to an already expanding market creates more demand.
2.15 HOW COULD THE VISION BECOME REALITY?

2.15.1 We began to develop this proposal as an ambitious concept, at a time when it was not obvious that any opportunity existed to implement it because there was no immediately suitable site. While we have been working intensively on the project, an opportunity has become available which we believe potentially provides the ideal solution and ensures the feasibility of the project.

2.15.2 Independently, as part of a common ambition to improve London’s cultural and heritage offer to the public, the Museum of London had been considering its development for the future and has analysed different options, including further development on its present site and moving elsewhere. The future of the West Smithfield General Market had been the subject of considerable debate over a commercial development planned for the site, and that plan was withdrawn. Discussions are now taking place with a view to ensuring the Museum’s ambition to move to West Smithfield, enabling it to enlarge and have an exciting new presence near Farringdon Crossrail station.

2.15.3 The advantages of the present site of the Museum of London as a location for the Centre for Music are considerable.

- The site analysis by Arup as part of the Feasibility Study shows how the necessary size and scope of the Centre for Music can be integrated onto the site alongside a commercial development which helps to reduce its cost.
- The position of the site in relation to the current facilities of the Barbican Centre, Guildhall School and LSO St Luke’s is ideal, and allows for shared services to reduce running costs.
- The City Corporation is the owner of the site, and has indicated its willingness to provide the site for the project, significantly reducing the overall capital cost.
- The potential for increased connectivity between the Centre for Music and the Barbican is considerable, and would potentially help to address the access and visibility issues that were highlighted in the Barbican and Golden Lane Area Strategy.
- The rotunda at the Museum of London is currently under-developed: if it were to become a landmark for the new Centre and the Barbican, visible from the north of St Paul’s Cathedral, a connectivity would be established that has so far been absent from the Centre, to St Paul’s, to the Millennium Bridge, linking to Tate Modern and the South Bank on one of London’s prime cultural routes.
2.16 WHAT ARE THE COSTS AND HOW SHOULD IT BE FUNDED?

2.16.1 Leading consultants GVA and Arup, and quantity surveyors Gardner & Theobald, have been retained to analyse the costs of the Centre for Music with a detailed accommodation schedule as specified in the study, which is included in Part III. This indicates that the overall space requirement of the Centre for Music building is likely to be just under 30,000m². This will be refined during the next phase of the project.

2.16.2 The basis for this is the design concept of the site identified at the present Museum of London. In the course of this intense period of the Feasibility Study we have aimed to create a vision for the project and an outline design, without for example going to architectural competition. The aim has been to establish whether in terms of the brief for the study, the proposal is feasible. It is.

2.16.3 The total capital costs in present day terms, excluding the value of the land, are estimated as follows:

- Centre for Music: £278.2m
- Works to Barbican Hall: £34.4m
- Works to LSO St Luke’s: £0.8m

2.16.4 The site is owned by the City Corporation and could be provided for this purpose. In building the economic case of the Outline Business Case, the site has been valued at £160m. Additional costs which are specific to this site total some £39m.

2.16.5 The annual revenue costs for the Centre for Music have been provisionally assessed at £5.6m per annum. This is low in comparison to the operating costs of comparable organisations. This is due firstly to the substantial synergies achieved in working with the Barbican Centre as it would be planned as an extension of current activities. Moreover income generation is at the heart of delivering the vision, with venues and spaces designed to ensure the building is busy and vibrant through the day.

2.16.6 As part of the next phase of the project, additional options will be explored to generate income. The report assumes that these income streams and costs will be factored into the present business models of the Barbican Centre and LSO, making use of existing infrastructure and ensuring that the incremental costs of the new venue are minimised.

2.16.7 A major private fundraising campaign will be planned and initiated, and we have commissioned a study to assess the potential level that such a campaign could reach. The present estimate of a realistic but ambitious figure is £123m.

2.16.8 The total investment involved in this project will allow the realisation of the significant cultural, social and economic benefits that are described in this report.

2.16.9 The report is the first step in a process of design and implementation and further detailed work will be required. It is recommended that the project should immediately proceed to Phase 2, which it is estimated will take 18 months from the start. This will complete the Full Business Case for the project, agree the terms for the acquisition and development of the preferred site, develop the design concept and plan the private sector fundraising with the aim of securing a lead private funder.
2.17 WHAT ARE THE CONCLUSIONS AND NEXT STEPS?

2.17.1 The summary conclusions of this study are:

- London must innovate and develop new facilities if it is to maintain its position as a world cultural leader.
- London needs a great concert hall with world-class acoustics for symphonic music.
- This new facility can be the first concert hall created specifically for the digital age in the UK.
- It can offer ambitious education and learning programmes, digitally available to all, increasing the diversity of audiences.
- The UK’s music sector will benefit if London is seen internationally as a leader in this field.
- The Centre for Music should be located in the City of London, where it can benefit from the strong support of the City of London Corporation.
- The alliance of the LSO, Guildhall School and Barbican Centre provides a firm collaborative basis for the project.
- The emerging Cultural Hub of the City around the Barbican and the Museum of London provides the ideal location for the development.
- After careful analysis of the options, a site can be identified which it is feasible to deliver.
- Together their venues can make an inclusive and diverse offer to a wide public.
- The project supports the delivery of key objectives for key stakeholders including Government, Arts Council England, the Greater London Authority and the City of London Corporation.
- It demonstrates what the City can achieve for London and the nation.
- It can unite a range of potential funders, both private and public, in delivering a major addition to London’s outstanding range of landmark buildings, one that excites audiences, visitors and performers alike.

2.17.2 This report has demonstrated that the Centre for Music can provide an inspiring model of performance excellence and audience engagement, demonstrating best practice and value for money. This Feasibility Study provides strong evidence for the ambitions of the commissioners, the Chancellor of the Exchequer and the Mayor of London, in ensuring the long-term prominence of London as a world-leading city.
PART I
INTRODUCTION AND EXECUTIVE SUMMARY
PART I
INTRODUCTION AND EXECUTIVE SUMMARY

3. SCOPE AND PURPOSE

3.1 This Outline Business Case and Feasibility Study has been prepared in response to a request to consider the case for a new state-of-the-art Centre for Music, including how it could be delivered in the City of London, how it will operate sustainably in the long-term and what the impacts and benefits are for the wider music sector.

3.2 This report is the output of an intense six month study, building where appropriate on existing work. The aim of the report is to:

• Set out the case for a new Centre for Music;
• Present a formal Outline Business Case for a project to build a new Centre for Music; and
• Assess the feasibility of delivering such a project.

3.3 This report is set out in two main parts as follows:

PART II
Outline Business Case – setting out the formal outline business case in line with the requirements of the HM Treasury Green Book.

PART III
Feasibility Study – setting out in greater detail the case for a new Centre for Music and the benefits that it will bring, as well as considering in detail how such a project might be delivered.

There is some duplication between the two parts of this report where that is considered appropriate in order that each part can, if necessary, act as a stand-alone document.

3.4 This report is the first substantive step in a long process of design and implementation. It considers four strategic options of which one is identified as a preferred option which is developed in more detail in relation to a single preferred site. Further detailed work would be required to develop a Full Business Case as part of a next phase of work as outlined in Section 32.

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4. TERMS OF REFERENCE

4.1 The Terms of Reference under which the Outline Business Case and Feasibility Study have been prepared were agreed with the Department for Culture, Media and Sport (DCMS) and Greater London Authority (GLA) in April 2015 and are set out below.

4.2 This report sets out conclusions arising from the work of the past six months and outlines the steps required to progress this project to the next stage.

TERMS OF REFERENCE

OVERALL BRIEF
For the Barbican Centre with its resident orchestra the London Symphony Orchestra to consider the case for a new state-of-the-art Centre for Music; including how it could be delivered in the City of London, how it will operate sustainably in the long-term and what the impacts and benefits are for the national music sector.

SPECIFIC OBJECTIVES
In particular, this study should consider:

- The case for a Centre for Music, how it would operate artistically and financially in a sustainable way, and the implications for the operations of the Barbican Centre and the LSO.
- The location options for building a world-class Centre for Music in the City, what it would cost to build and how the business model would work.
- The role of such a Centre for Music within the wider musical sector nationally, in London and within the context of the City’s Cultural Hub and how the project will contribute to the wider community including regional economic growth and partnership working.
- How the Centre for Music will be transformative for the nation as a whole; contribute to national objectives for engagement in music and the arts, and engage, educate and inspire people from all backgrounds and of all ages, particularly through the use of digital technology.

GOVERNANCE
The Steering Group for the study will include senior representatives of the Barbican, LSO, Guildhall School of Music & Drama, City of London Corporation and Arts Council England. The Department for Culture, Media and Sport (DCMS) and the Greater London Authority (GLA) will attend as observers.

The Arts Council’s role is to advise on the extent to which any such Centre could contribute to the national ecology for music and improve engagement in the arts.

Every two months DCMS and GLA will convene a Review Meeting with the Steering Group.

A Project Group will oversee the work streams of the study, reporting to the Steering Group, and will comprise Sir Nicholas Kenyon (Managing Director, Barbican Centre), Kathryn McDowell (Managing Director, LSO), Professor Barry Ife (Principal, Guildhall School), Sandeep Dwesar (Chief Operating and Financial Officer, Barbican Centre and Guildhall School), Rakesh Shah (Finance Director, LSO) and Peter Lisley (Assistant Town Clerk, City of London Corporation).

ADVISERS
Nick Hytner will be invited in from time to time to advise on the wider cultural, digital and educational offer, acting as a critical friend for the project, stress-testing assumptions and assertions around the feasibility work and the geography and acting as an independent voice amongst all those with an interest in the overall scheme.

Other advisers will be asked to contribute as appropriate.

TIMESCALES
The study is to report in six months (September 2015), with interim reports in three to four months (June/July 2015).
PART II
OUTLINE BUSINESS CASE
5. SUMMARY OF THE OUTLINE BUSINESS CASE

5.1 INTRODUCTION

5.1.1 This Outline Business Case has been prepared in response to a request to consider the case for a new state-of-the-art Centre for Music, including how it could be delivered in the City of London, how it will operate sustainably in the long-term and what the impacts and benefits are for the wider music sector.

5.1.2 According to the Visit Britain Foresight November 2014 report, the UK’s overall ranking for culture has slipped to fifth place as other countries are improving at a faster rate. The Centre for Music would play a crucial role if London is to reverse the trend and become the world’s leading cultural city. The Strategic Case sets out the investment objectives of this project and their consequent benefits to help enable this outcome.

5.1.3 The Economic Case demonstrates that the Centre for Music offers high value for money with substantial benefits for London and the UK’s wider cultural sector. The Financial Case sets out the capital cost of the project and its annual running costs, which compare well against both national and international benchmarks.

5.1.4 A commercial, management and governance model is detailed in the report to reduce risk, setting out a robust project delivery framework.

5.2 STRATEGIC CASE

5.2.1 London is a leading world city with a world-famous cultural offering; however, present music facilities in the capital do not match those of world-class halls that have been built elsewhere in the world, nor are they particularly well suited for the digital future.

The acoustics for non-amplified music in the Barbican Hall are amongst the best in London but not of the very highest quality, particularly when compared to other concert halls overseas. Additionally, a lack of flexibility for today’s needs and space limitations mean that the LSO is unable to rehearse in the hall and, moreover, education and engagement activity is severely restricted.

5.2.2 Without facilities that at least match or exceed facilities in many other parts of the world, London’s position as a leading cultural city will inevitably be affected. This proposal sets out the case for a world-class facility that, with the unique collaboration of the Barbican Centre, the London Symphony Orchestra and the Guildhall School of Music & Drama, supported by the City of London Corporation, could:

- Enhance the status of London as a world-class destination for music
- Extend the reach and diversity of engagement with great music
- Provide innovative music discovery and learning opportunities, both live and digital
- Drive the development of the City of London’s Cultural Hub as a visitor destination
- Support the UK’s position as a world-leading centre for the cultural industries.

5.2.3 The Centre for Music will provide an inspiring model of performance excellence and audience engagement, demonstrating best practice and delivering value for money.

- It will create world-class performance and digital opportunities, marking a step change for the organisations involved, providing immense benefit to the City and advancing London’s reputation as a pre-eminent cultural centre.
- The Centre for Music will be an inspirational, forward-looking facility. It will transform the traditional model of the concert hall, creating new types of spaces and experiences of music, making it more immediate, more accessible, more intimate and more immersive.
- Its range and increased programming diversity will better reflect London’s demographic, and will help to meet the needs of London’s growing and increasingly diverse population.

5.2.4 The Strategic Case sets out the context for change, demonstrating the investment objectives that would meet business needs and consequent benefits.
5.3 THE ECONOMIC CASE

5.3.1 The economic case sets out a wide range of achievable options identified as the "long list", focussed on the range of options around scope, scale and location. These are then evaluated against the project's investment objectives and critical success factors.

5.3.2 The following four options have been shortlisted for appraisal and subject to a cost-benefit analysis:

- Option 1 – Do nothing
- Option 2 – Rebuild the Barbican Hall
- Option 3 – Build a new concert hall
- Option 4 – Build a new Centre for Music.

5.3.3 The appraisal considers the costs and benefits over the project development and construction period for each option, and then over a 60 year time period.

5.3.4 The costs considered in the economic appraisal are as follows:

- Capital costs (net of assumed private sector contribution) plus an optimism bias of 33% applied to each option
- Additional opportunity costs associated with the use of land for the New Centre for Music
- Operating costs for the Barbican and the LSO.

5.3.5 While the cost-benefit analysis is based on quantifiable economic benefits, the non-quantifiable benefits are significant, and an integral part of the overall economic case.

5.3.6 The key non-quantifiable benefits are identified as follows:

- The ability of world-class music facilities to improve London’s overall competitiveness as a location and enhance its inward investment offer to both prospective businesses and residents
- The consequential enrichment of the UK’s cultural sector and subsequent spillover effects on the sector
- The contribution to the on-going success of the Guildhall School of Music and Drama
- Welfare benefits linked to health, social inclusion and crime reduction
- Tourism spillover effects arising from touring artists’ entourages and press
- The non-use value, other than that proxied by development income.

Quantifiable benefits include revenues from direct users of the facilities plus non-financial benefits monetised using a Total Economic Value framework covering:

- Welfare benefits for concert attendees, education/learning participants and those reached by digital engagement. Subjective well-being values have been attributed to participants, using standard values from external research, to account for the non-market use value of engaging with the new facilities.

Externalities There are a number of important externality benefits associated with the project. These include international tourism spillover effects arising from increases in attendance at concerts, as well as health and long term productivity benefits associated with engagement in music and learning activities.

5.3.8 The results of the quantitative appraisal of the shortlisted options indicate that Option 4 (build a new Centre for Music) performs the best in terms of overall value for money, relative to the reference case Option 1 (do nothing).

5.3.9 Whilst Option 4 has the highest capital cost, the investment serves to unlock a number of quantifiable benefits that would not be realised in the absence of the investment. These include wellbeing benefits for UK audiences engaged with the new Centre for Music facilities, additional tourism spillover effects and the longer term benefits for individuals and society at large, as a result of the education, learning and digital activities that would take place under this option.

5.3.10 The quantified benefit-cost ratio (BCR) of 1.73 represents value for money. However, this excludes many of the key benefits associated with the proposed Centre for Music which cannot be robustly quantified. The switching value of these would need to amount to £190m in NPV terms (£3.2m per annum over the life of the building) to yield a BCR of 2.0. Such a switching value, in the context of the overall contribution a new Centre for Music would bring to the London and UK economy, has been considered to be both modest and achievable.

5.3.11 Option 4 also scored substantially higher than the other three options in the qualitative assessment of options against the investment objectives and the critical success factors. Option 2 scored particularly poorly and Option 3, as it is currently configured, has a BCR compared to the reference case of less than one. A switching value of £215m would be required for Option 3 to have acceptable value for money (a BCR of 1.3).
5.3.12 The preferred Option 4 has been subject to a thorough risk assessment and sensitivity testing. The effect of changing key assumptions has been examined, to determine the overall impact on the net present value (NPV), BCR and the switching value needed to enable a BCR of 2.

5.3.13 Overall, the economic analysis has demonstrated that Option 4, the Centre for Music, offers high value for money, so long as the scale of unquantifiable benefits are of the order of £200m. For an asset with a long life and given the potential impact the Centre for Music will have on the London and UK economy, as well as society at large, this appears entirely plausible. There are, however, a number of important risks associated with the project that will need to be carefully managed and mitigated to ensure the project delivers good value for money.

5.4 THE COMMERCIAL CASE

5.4.1 As the Centre for Music project is at a very early stage, the level of detail regarding the commercial arrangements is more limited than will ultimately be necessary. The exact arrangements will be developed in more detail in the next phase of work as part of the Full Business Case. In the meantime, it is assumed by default that the City of London Corporation’s long-established polices and processes for capital projects will be adopted in order to ensure a robust framework for the delivery of the project.

5.4.2 The services for key consultants, contractors, specialist advisers and the project team will be required for the duration of the project. Appointments will be made at the appropriate stage in the project with the intention of bringing the core team together at the beginning of the project.

5.4.3 The procurement strategy will reflect Public Contract Regulations 2015 with Construction Management approach considered most likely to offer the best solution in developing the project programme.

5.4.4 An outline non site specific project programme has been developed and set out in this report.
5.5 **THE FINANCIAL CASE**

5.5.1 The Barbican Centre and the LSO operate separately with very different business models. The business plans and strategic objectives of the two organisations naturally reflect their specific vision, artistic, operational and business needs.

5.5.2 The Financial Case is based on the assumption that the Centre for Music will be integrated into the operating models of both the Barbican Centre and the LSO. It sets out the current combined financial base of the two organisations and in detail examines the impact on them of the Centre for Music. This provides the changes to income and expenditure across Barbican and LSO activities and the consequent net financial impact of the Centre for Music.

5.5.3 The allocation of financial risk and the responsibility for the Centre for Music’s activities will depend on its operating and governance model, yet to be determined. This will be examined and agreed during the next phase of the project.

5.5.4 The proposed working model is constructed to deliver the synergistic benefits of the three organisations and to maximize income generation.

5.5.5 In particular:

- The model is reliant on the strength and depth of the Barbican’s management and operational infrastructure giving it the ability to broaden its base and deliver a successful Centre for Music. Any other organisation, without the Barbican’s capabilities and capacity, would have to build its infrastructure from the base up and consequently would incur significantly higher annual costs.

- Purpose built spaces at the Centre for Music will materially increase the scope to generate income and reduce annual running costs.

- The Barbican’s programme will have broader appeal and greater capacity within a reconfigured hall. As a consequence, the net cost of the Barbican Centre will be reduced considerably.

5.5.6 The Centre for Music and the changes to the Barbican Hall will deliver:

- The overall music programme will deliver 100 additional concerts, 300 programmes in the Club and two major commercial exhibitions a year.

- An additional 184,000 people will directly participate in over 3,000 new education and engagement events.

- An increase of over 650,000 event attendees per annum and an additional general footfall of 350,000.

- Digital reach of the arts programme and education activity will reach at least two million people.

5.5.7 The cost of running the new building and delivering this programme of activity is estimated at £18.1m. Total additional income of £12.5m will result in net annual running costs of £5.6m (including a contingency of £0.5m). The advantage of building the Centre for Music as part of the current Cultural Hub ensures that this financial model, when compared to the net cost of running similar organisations is extremely favourable.

5.5.8 The total cost of building the Centre for Music including a compete fit out, professional fees, client costs and appropriate contingencies is set at £278.4m.

5.5.9 The total cost of re-configuring the Barbican Hall is £34.4m. This delivers a complementary venue to the Centre for Music which will be technologically advanced where every form of music has a home.

5.5.10 The total cost of this build programme will, in effect, deliver two world-class and complementary facilities.

5.5.11 The Outline Business Case requires financial analysis to determine the financial capacity of the organisation to successfully deliver the project and absorb financial risk. The Barbican Centre is a department of the City of London Corporation and its assets and liabilities are reflected in the City Corporation’s Balance Sheet. Similarly, the Barbican’s bank accounts are part of the City Corporation’s overall cash management structures and therefore reflect the working capital needs of the Centre.

5.5.12 The governance and management model of the Centre for Music will determine the allocation of business risk. This will be the subject of discussion between the primary funders and project stakeholders – Central Government, Greater London Authority, the City Corporation and Arts Council England.

5.5.13 For the purposes of the Outline Business Case, the Barbican Centre has used the City Corporation as its parent and reference point. The financial asset base and cash reserves of the City Corporation would meet any risk assessment in relation to this project.
5.6 THE MANAGEMENT CASE

5.6.1 The project will be managed in accordance with PRINCE 2 methodology and can be categorised into seven distinct phases, which are set out below:

- **PHASE 1** Outline Business Case and Feasibility Study
- **PHASE 2** Full business case; RIBA Stage 2
- **PHASE 3** Developed design / planning
- **PHASE 4** Pre-construction
- **PHASE 5** Construction, fitting out and commissioning
- **PHASE 6** Handover to Operations
- **PHASE 7** In Use

**PHASE 2 OUTLINE**

5.6.2 The next phase of the project, Phase 2, is anticipated to take approximately 18 months from the start, assumed to be immediately after the completion of the Feasibility Study. This phase will complete the Full Business Case (FBC) for the project, agree the terms for the acquisition and development of the preferred site, develop the concept design and begin the private sector fundraising task with a view to securing a lead funder.

5.6.3 In addition to delivering the Full Business Case, Phase 2 will develop in more detail the full potential of the three organisations’ creative offer and its likely impact, within a digital context. This will be the key strategic theme defining the Cultural Hub and will sit at the heart of the Centre for Music plans.

GOVERNANCE

5.6.4 There are three organisations delivering the project (Barbican Centre, LSO, Guildhall School) and five key stakeholders [HM Treasury, DCMS, Greater London Authority, City of London Corporation, Arts Council England]. As a consequence the governance and management arrangements should have the resilience to reflect these complexities. Moreover, private fundraising will be a key aspect of delivering the Centre for Music, and consequently a key part of any delivery structure.

5.6.5 The following governance and project management structure is proposed:

- **Project Board** – to lead and oversee the project at a non-executive level
- **Fundraising Appeal Board** – the fundraising arm of the project
- **Executive Group** – representing the three organisations delivering the project and overseeing its delivery at an executive level
- **Project Team** – responsible for the day-to-day management and delivery of the project.

5.7 CONCLUSIONS AND NEXT STEPS

5.7.1 This Outline Business Case concludes that of the four short-listed options, Option 4 - build a new Centre for Music – best delivers the benefits associated with the project’s investment objectives and critical success factors. Option 4 also delivers the highest net present value (NPV), at £890m and the highest benefit-cost ratio (BCR) at 1.73 compared to the reference case of Option 1.

5.7.2 The Outline Business Case demonstrates how Option 4 will be delivered in terms of procurement and project management, and sets out the financial implications for the partner organisations.

5.7.3 The third part of this report – the Feasibility Study – sets out in greater detail the case for a new Centre for Music and the benefits it will bring, as well as considering in detail how such a project might be delivered.
6. THE STRATEGIC CASE

6.1 INTRODUCTION

6.1.1 London is a leading world city with a world-famous cultural offering. Over many years it has built an outstanding reputation as an international cultural centre, and it is this offering which drives a significant proportion of its visitor activity with an unrivalled range of museums and galleries, formal and informal performance spaces and other cultural facilities. In the years since the 2012 Olympics and Paralympics, the reputation of London has grown still further as cultural organisations have collaborated to build on the successful cultural festival that complemented the Games, and new infrastructure projects are being developed across the capital.

6.1.2 The ‘Olympicopolis’ venues being created in the Queen Elizabeth Olympic Park (including new spaces for Sadler’s Wells, the Victoria and Albert Museum and the Smithsonian Institution) are among several major developments which are putting culture at the heart of regeneration. The Southbank Centre has been renewed and is continuing to invest in new facilities. ‘Albertopolis’, comprising a range of institutions in South Kensington continues to develop. A Mayfair cultural area around the Royal Academy of Arts is planned. Other initiatives include Nine Elms, the new Design Museum, and potential development at Woolwich Arsenal. All these highlight that the arts and culture remain at the heart of London’s future.

6.1.3 Yet London’s world-leading position is not reflected in the musical facilities which the capital has to offer. The capital is rich in halls of historic significance, from the Royal Albert Hall to the post-war Royal Festival Hall of 1951 and Barbican Hall of 1982, but not since the Queen’s Hall was destroyed in 1941 has there been a hall in London with world-class acoustics. Present facilities do not match those of world-class halls that have been built elsewhere in the world, nor are they particularly well suited for the digital future.

6.1.4 The quality of London’s facilities, and demands on space which limit the amount of rehearsal time available in the principal performance spaces, are important factors for top international conductors and leading musicians who have the choice of working with a number of excellent orchestras in a range of world-class venues. While London is currently able to attract and retain the most talented musicians despite the conditions in which they are able to work, it will struggle to continue to do so in an ever more competitive environment unless it can offer world-class facilities in which to rehearse and perform.

6.1.5 Demands on space also severely limit the scale and potential of learning and participation activity. Reach could be expanded if more time were available in key rehearsal and performance spaces, supporting formal and informal learning for individuals of all ages and backgrounds.

6.1.6 Furthermore, the audience for classical music is set to grow by between 15% and 25% between 2015 and 2025, in the light of projections in population growth, coupled with improved transport links including the arrival of Crossrail and an ambitious outreach programme to bring in new audiences. Research demonstrates a tendency for the audience to increase as the number of performances increases. There is thus a strong possibility that by raising the profile of classical music, the Centre for Music will also help to develop new audiences for all venues. There will be a need to supply sufficient activity to meet the demand.

6.1.7 Alongside overall growth in audience numbers, the Centre for Music will actively seek to broaden the audience so that it is genuinely a venue which welcomes everyone, irrespective of age, background, physical ability or economic circumstances. This will be achieved through artistic programming decisions, expansion of learning and discovery activities, and the innovative use of technology.

6.1.8 This project has been born of a belief that a world-class Centre for Music could give London the facility it needs, to inspire a new generation of music-lovers by offering them the very best and most exciting music making, available to all.

6.1.9 This project, which has been under consideration for a number of years, has been given urgency and focus by the appointment of Sir Simon Rattle as Music Director of the London Symphony Orchestra from September 2017. It will turn into reality a unique and visionary ambition for music and the performing arts by creating world-class performance and digital opportunities marking a step change for the organisations involved, providing immense benefit to the City, advancing London’s reputation as a pre-eminent cultural centre, and offering the fruits of those achievements – through live performance, learning, participation and digital innovation - to the widest possible public.

6.1.10 The Centre for Music will transform the traditional model of the concert hall, creating new types of spaces and experiences of music, making it more immediate, more accessible, more intimate and more immersive. Alongside a 1,900 seat auditorium and rehearsal areas, the Centre for Music will include dynamic front of house spaces including informal performance areas, exhibition space, viewing portals into performance and rehearsal spaces and entertainment, catering and retail facilities. The Centre will also incorporate the Club Space, a second performance venue for informal and late-night sets and sessions, with integral bar and dining facilities.

6.1.11 Alongside this, renovations will be undertaken to the Barbican Hall to repurpose it as a unique, innovative performance venue for the presentation of the widest range of performances and events. This will include creating opportunities for a standing audience, enabling variable acoustics and future-proofing the hall’s technological capabilities. In addition, the LSO’s existing centre for education and community based music-making at LSO St Luke’s will be provided with new recording facilities. There will therefore be three closely related and complementary capital projects that make up the Centre for Music project.
PART II
OUTLINE BUSINESS CASE

CENTRE FOR MUSIC
OUTLINE BUSINESS CASE AND FEASIBILITY STUDY

PART A: THE STRATEGIC CONTEXT

6.2 ORGANISATIONAL OVERVIEW AND BUSINESS STRATEGIES

6.2.1 The context for the project is a unique collaboration between a world-class arts centre, orchestra and conservatoire: the Barbican Centre, the London Symphony Orchestra and the Guildhall School of Music & Drama, supported by the City Corporation.

6.2.2 The Barbican exists to inspire people to discover and love the arts. It innovates with outstanding artists and performers to create an international programme that crosses art forms, investing in the artists of today and tomorrow.

6.2.3 A Grade II listed building, the Barbican is Europe’s largest multi-arts and conference venue and one of London’s best examples of Brutalist architecture. The Barbican was opened by The Queen in 1982, who declared it ‘one of the modern wonders of the world’ with the building seen as a landmark in terms of its scale, cohesion and ambition. Its stunning spaces and unique location at the heart of the Barbican Estate have made it an internationally recognised venue, set within an urban landscape acknowledged as one of the most significant architectural achievements of the 20th century.

6.2.4 The Barbican’s ambition is to be at the forefront of both innovation and quality, creating the arts of the future. Its international programme consists of over 3,000 arts events a year and regularly features world famous artists from across the globe. This programme is delivered through collaboration with the Barbican’s many partner organisations which include resident orchestra the LSO, as well as artistic associates including the BBC Symphony Orchestra, Royal Concertgebouw Orchestra of Amsterdam, Gewandhaus Orchestra Leipzig, Jazz at Lincoln Center, Serious, Britten Sinfonia, Cheek by Jowl, Michael Clark Company, Deborah Warner, Boy Blue Entertainment and the Academy of Ancient Music.

6.2.5 The Barbican attracts an increasingly large and diverse audience with 2014/15 seeing a record 1.2 million attend the Barbican’s arts and learning events as well as in excess of 2 million visitors to the Centre. Its offsite work in the east London boroughs that surround the Centre has seen it attract new audiences to the arts in areas with historically low levels of cultural participation.

6.2.6 The Barbican’s offer of world-class arts is underpinned by a unique partnership with the Guildhall School of Music & Drama to run an innovative creative learning programme across east London. This pioneering cultural alliance between a world-class art centre and conservatoire – in collaboration with partnership organisations spanning local authorities, schools, arts and learning organisations and funders – creates transformative opportunities for the widest possible number of young people with a depth and quality of programme that finds and equips the talent of the next generation. Around 50,000 people participate in this programme every year with a recent manifesto committing the two organisations to develop partnerships that, by 2020, offer inspirational, hands-on arts experiences for every 8-16 year old in east London and provide arts and training opportunities for over 10,000 young people.

6.2.7 The free-to-join Young Barbican scheme offers young people aged 14-25 the chance to buy 50,000 discounted tickets for events at the Barbican every year across arts, film, music, theatre and dance with prices ranging from just £3 to £15. The recent improvements made to the scheme have led to a 69% increase in the number of members since coming into effect in September 2014.

6.2.8 Recent research showed the Barbican to be worth £47m a year to London’s economy, as well as supporting 1,308 jobs in the capital. The Barbican’s contribution to the City, and London’s, international standing, and the social impact of the arts and learning work undertaken in east London schools and communities, continues to make the most of the City of London Corporation’s generous investment.

6.2.9 The Barbican Centre is a department of the City Corporation, led by a Managing Director with oversight from the Barbican Board which comprises both elected members of the City Corporation and appointed external individuals.
THE LONDON SYMPHONY ORCHESTRA

6.2.10 The London Symphony Orchestra, with its long and illustrious history of over a century’s great music-making, has been resident orchestra of the Barbican since its opening in 1982. The LSO enjoys long-standing relationships with many of the world’s greatest conductors and artists and is on the cusp of a new era with the appointment of Sir Simon Rattle. Regarded as one of the world’s top five orchestras, the LSO has developed international residencies in New York, Paris, Aix and Tokyo, alongside regular overseas tours across Europe, Asia, Australasia and America.

6.2.11 The LSO is a world leader in recording music for film, from Star Wars to Superman and more recently video and computer games. In response to changes in the commercial recording market it established the award-winning label, LSO Live, which now produces audio-visual recordings in addition to growing its catalogue of over 100 audio recordings, available world-wide through international distribution, downloads and streaming.

6.2.12 At the heart of the LSO’s activities lies its pioneering education and community programme, LSO Discovery, established over 25 years ago and now reaching some 60,000 people annually through 950 workshops and 150 concerts, as well as a substantial programme within its international residencies. LSO Discovery has developed strategic partnerships with ten East London music hubs and also collaborates with the Guildhall School on a masters’ programme to develop orchestral artistry. In 2003, in response to the need for a base within the local community for its Discovery work, the LSO led the refurbishment of a derelict church on Old Street to create LSO St Luke’s, now a thriving centre of education and community based music-making.

6.2.13 The LSO is an independent charity, governed by a Board of Directors comprising elected members of the Orchestra, appointed external members with business and professional expertise, and led by a Managing Director. The company’s shareholders are the musician members of the Orchestra, although in keeping with its charitable status, they have no financial rights to any of the company’s assets.

THE GUILDHALL SCHOOL OF MUSIC & DRAMA

6.2.14 The Guildhall School is one of the world’s leading conservatories and drama schools, offering musicians, actors, stage managers and theatre technicians an inspiring environment in which to develop as artists and professionals.

6.2.15 The School is a global leader of creative and professional practice and promotes innovation, experiment and research. Rated No.1 specialist institution in the UK by the Guardian University Guide 2013 and 2014, it has nearly 1,000 students in higher education, drawn from nearly 60 countries around the world. The School is also the UK’s leading provider of specialist music training at the under-18 level with nearly 2,500 students in Junior Guildhall and the Centre for Young Musicians.

6.2.16 The School has been a pioneer across three decades in learning and outreach programmes, especially through its Guildhall Connect programme, which won the Queen’s Anniversary Prize in 2005. This work is continuing to develop through the joint Barbican Guildhall Creative Learning programme, inspiring and engaging a new generation of audiences and participants in music, drama and technical theatre.

6.2.17 The Guildhall School is a department of the City Corporation, led by a Principal with oversight from a Board of Governors which comprises both elected members of the City Corporation, appointed external individuals, staff and a student representative.
6.3 WIDER CONTEXT

6.3.1 This project brings together a number of key organisational agendas and strategic aims particularly in relation to the United Kingdom’s position as a world-leader in arts and culture; national initiatives in relation to the arts and education; and specific local policies to promote and enhance the role of culture within the City Corporation.

6.3.2 The United Kingdom’s leading role in arts and culture in all their forms is widely acknowledged across the world. Facilities and talent across the country are developed and nurtured, delivering benefits in terms of profile, recognition and ‘soft power’ as well as the significant economic benefits generated through the creative industries. The UK leads the world in soft power according to the Soft Power 30 index published in July 2015, with an unmatched combination of strong assets across all categories of soft power, and particular strengths in culture, digital and global engagement.

6.3.3 The UK’s cultural offering has been developed and sustained through continuous innovation and investment over the centuries. However, since the latter part of the 20th Century, developed and emerging countries across the world have built new musical facilities, taking advantage of developments in acoustics and more recently embracing the potential of new technologies – some examples are in the table that follows. There is a need to maintain the UK’s pole position with music facilities which are truly befitting the country’s status.

6.3.4 This project supports Arts Council England’s strategy to offer great art for everyone, supporting young people’s engagement in the arts, developing links with museums, galleries and the library sector, building the digital agenda, and encouraging collaboration with Music Education hubs, bodies such as Youth Music, and national organisations including the national youth music ensembles.

6.3.5 In a broader context, the ambitions shared by many are to widen access to the arts through education; ensuring equality of opportunity for all; to raise aspirations for young people, improving educational standards; providing workforce development in the arts, education and the creative industries; and building partnerships. This project seeks to contribute in all these areas.

THE LOCAL CONTEXT

6.3.6 The City Corporation is a leading investor in the arts and culture sector, supporting a range of organisations from the Barbican Centre and the Museum of London to the Guildhall School, the London Symphony Orchestra and the City of London Festival. The City Corporation actively seeks to sustain and enhance its commitment to the sector.

6.3.7 The City Corporation’s Cultural Strategy 2012-17 cites the potential to explore the concept of a Cultural Hub in the north-west of the City. New buildings such as the Guildhall School’s Milton Court (opened in 2013) and the Barbican’s cinemas (opened in 2012), complemented by new restaurants and facilities have already demonstrated how the area can be enlivened and regenerated.

<table>
<thead>
<tr>
<th>Concert Hall</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sapporo Concert Hall, Japan</td>
<td>1997</td>
</tr>
<tr>
<td>KKL Luzern</td>
<td>2000</td>
</tr>
<tr>
<td>Walt Disney Concert Hall, Los Angeles</td>
<td>2003</td>
</tr>
<tr>
<td>The Sage, Gateshead</td>
<td>2004</td>
</tr>
<tr>
<td>Bartók National Concert Hall, Budapest, Hungary</td>
<td>2005</td>
</tr>
<tr>
<td>Philharmonie Luxembourg</td>
<td>2005</td>
</tr>
<tr>
<td>DR Koncerthuset, Copenhagen</td>
<td>2009</td>
</tr>
<tr>
<td>Helsinki Music Centre, Finland</td>
<td>2011</td>
</tr>
<tr>
<td>La Maison Symphonique, Montreal</td>
<td>2011</td>
</tr>
<tr>
<td>Harpa Concert Hall, Iceland</td>
<td>2011</td>
</tr>
<tr>
<td>Stavanger Concert Hall, Norway</td>
<td>2012</td>
</tr>
<tr>
<td>NOSSPR Concert Hall, Katowice, Poland</td>
<td>2014</td>
</tr>
<tr>
<td>National Forum of Music (NFM), Wrocław, Poland</td>
<td>2014</td>
</tr>
<tr>
<td>Philharmonie de Paris, France</td>
<td>2015</td>
</tr>
</tbody>
</table>

Selected new concert halls since 1997
6.3.8 The concept of the Cultural Hub is for it to be the creative heart of the Square Mile, an internationally renowned, distinctive, vibrant and welcoming centre for the arts, heritage, learning and entertainment. The Cultural Hub will recognise and respect the unique character and heritage of the area in which it is located, around the iconic Barbican estate. It builds on the existing strengths of the area and its organisations to offer an increasingly coordinated, collaborative offer to audiences and visitors. It aims to be a cultural leader and pioneer, delivering the highest quality performing and visual arts, education, outreach and learning, and a world-class public realm to match the world-class arts and learning offer.

6.3.9 A major stimulus which will benefit the Cultural Hub is the arrival of Crossrail from 2018, coupled with upgrades to Thameslink services, both lines have stations within the Cultural Hub. Together with further growth in London’s population, the potential reach of the Cultural Hub is projected to increase significantly in the years ahead. The potential audience for cultural activity will therefore grow and there will be a need to supply sufficient activity to meet the demand.

6.3.10 The Cultural Hub also offers an opportunity to draw in all Londoners, and those from further afield, into the City of London, by demonstrating that the Square Mile represents more than finance and commerce. As London becomes ever more diverse, the Centre for Music will attract and be accessible to audiences of all musical interests, welcoming everyone, irrespective of age, background, physical ability or economic circumstances.

PART B: THE CASE FOR CHANGE

6.4 INVESTMENT OBJECTIVES

6.4.1 Reflecting the context outlined above, the investment objectives for this project have been defined as follows:

- Enhancing the status of London as a world-class destination for music
- Extending the reach and diversity of engagement with great music
- Providing innovative music discovery and learning opportunities, both live and digital
- Driving the development of the City of London’s Cultural Hub as a visitor destination
- Supporting the UK’s position as a world-leading centre for the cultural industries.

6.5 EXISTING ARRANGEMENTS

6.5.1 The three organisations currently operate a full and successful programme of activity within their existing facilities. However, the amount of space available and a lack of sufficient flexibility for today’s needs act as a significant constraint. Key challenges which prevent the organisations from achieving their full potential include the following:

- The Barbican concert hall is heavily in demand for artistic, educational and commercial activity. The organisations’ needs cannot be fully accommodated in the time available. In particular, the LSO is unable to hold all of its rehearsals in the concert hall (unlike its peers overseas which all have priority for rehearsals in their home concert hall) meaning that the Orchestra is unable to prepare for concerts in the manner expected of a leading symphony orchestra.

- Limitations on space (not just in the Barbican Hall) also severely constrain the amount of education and engagement activity that can take place. The organisations’ expertise and ability to deliver such activity, for which there is considerable demand and which generates significant benefits to participants, is not therefore fully exploited.

- The acoustics for non-amplified music in the Barbican Hall are amongst the best in London but not of the very highest quality, particularly when compared to other concert halls overseas. This is not simply a factor for those with a highly trained musical ear. As with all art, work of the highest quality is recognised as such by all that experience it even if the reasons cannot be easily identified or articulated. London’s audiences enjoy and recognise excellent performances by its orchestras but – unless they experience their concerts overseas – they do not yet hear the orchestras at their absolute best.

- The combination of limited rehearsal time, space constraints and acoustical challenges means that the LSO is unable to achieve its full artistic potential and the experience of London audiences is not of the same quality as that of audiences elsewhere.

- The current facilities were not designed to be as flexible as is required in the 21st Century. Performances involving staging or multimedia cannot easily be presented in the Barbican Hall and increasing needs of technology (e.g. for broadcast filming) require additional equipment to be brought in which disrupts sightlines in the auditorium and requires seats to be taken off sale.
6.6 BUSINESS NEEDS

6.6.1 The problems, difficulties and service gaps associated with the existing arrangements in relation to future needs are set out in the following table.

<table>
<thead>
<tr>
<th>Investment objective</th>
<th>Existing arrangement</th>
<th>Business need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancing the status of London as a world-class destination for music</td>
<td>London has a number of good concert halls, but none today of world-class standard. Current facilities are also not equipped for the digital future.</td>
<td>London and the UK risk falling behind other countries making it more difficult to attract leading musicians, with consequent impacts on the country's status and reputation and its ability to train and develop the talented musicians of the future.</td>
</tr>
<tr>
<td>Extending the reach and diversity of engagement with great music</td>
<td>Existing facilities are workable but not generally very well-suited to creating inspiring experiences for audiences and participants of diverse interests, abilities and backgrounds, nor does the technical infrastructure support dissemination of activity more widely.</td>
<td>Limitations of existing facilities mean that they do not encourage the widest number of people to experience the activities that take place. As the role of technology continues to expand, the existing facilities will become even more of a constraint.</td>
</tr>
<tr>
<td>Providing innovative music discovery and learning opportunities, both live and digital</td>
<td>Existing discovery and learning programmes are of high quality but are limited in scale and impact by a lack of available facilities.</td>
<td>The reach of existing activities is severely constrained meaning that the benefits of activities are not felt by as many people as is desirable.</td>
</tr>
<tr>
<td>Driving the development of the City of London’s Cultural Hub as a visitor destination</td>
<td>Existing buildings are falling below international standards and are not achieving their potential to attract visitors.</td>
<td>Failure to maximise the potential for income from visitors (from the UK and overseas).</td>
</tr>
<tr>
<td>Supporting the UK’s position as a world-leading centre for the cultural industries.</td>
<td>The organisations contribute to the development of talented musicians and the success of the UK’s music industry but the current infrastructure is starting to fall behind the required standards.</td>
<td>Failure to invest and maintain the standard of infrastructure will weaken the music industry through difficulties in attracting and developing talent and associated reputational issues.</td>
</tr>
</tbody>
</table>

6.7 POTENTIAL BUSINESS SCOPE AND KEY REQUIREMENTS

6.7.1 The scope of this project is to consider the case for a new state-of-the-art Centre for Music. The following table sets out the potential business scope and key requirements assessed against a continuum of need ranging from:

A minimum scope – essential or core requirements/outcomes.

An intermediate scope – essential and desirable requirements/outcomes.

A maximum scope – essential, desirable and optional requirements/outcomes.
6.8 **MAIN BENEFITS CRITERIA**

6.8.1 The Centre for Music will provide an inspiring model of performance excellence and audience engagement, demonstrating best practice and delivering value for money. It will provide important benefits to a range of stakeholder groups.

6.8.2 The table below sets out the high-level strategic and operational benefits, by investment objective:

<table>
<thead>
<tr>
<th>Investment objective</th>
<th>Main benefits criteria by stakeholder group</th>
</tr>
</thead>
</table>
| Enhancing the status of London as a world-class destination for music | Central Government, City Corporation, Greater London Authority, Arts Council England  
- Maintain the international reputation and profile of London and the UK.  
- Indirect benefits (economic, diplomatic, etc.) of the UK remaining a world-leader in this field.  

The Barbican Centre, LSO and Guildhall School  
- Sustain and enhance the reputation of the organisations to increase income and support their business models by attracting more audiences and students.  
- Ability to attract and retain the most talented musicians, given competition from other organisations overseas.  

Existing and new audiences  
- Ability to experience and be inspired by world-leading performances.  

Education and learning participants  
- Ability to experience and be inspired by world-leading performances.  

Professional and trainee musicians  
- Opportunities to work with, learn from and develop professionally by working with the most talented musicians. |
| Providing innovative music discovery and learning opportunities, both live and digital | Central Government, City Corporation, Greater London Authority, Arts Council England  
- Complements and allows efficient delivery of music education provision.  

The Barbican Centre, LSO and Guildhall School  
- Opportunities to engage with more people to develop current and future musicians and audiences to support the organisations’ business models.  

New and existing audiences  
- Opportunities for more and improved high quality musical experiences, improving well-being and skills.  

Education and learning participants  
- Opportunities for more and improved high quality musical experiences, improving well-being and skills.  

Professional and trainee musicians  
- Increased opportunities to train and earn a living from educational work alongside performance activity, making the musical workforce more resilient and independent. |
| Extending the reach and diversity of engagement with great music | Central Government, City Corporation, Greater London Authority, Arts Council England  
- Educate and inspire the whole population through high quality musical experiences, also improving well-being and skills such as team working.  

The Barbican Centre, LSO and Guildhall School  
- Opportunities to engage with a wider range of people to develop current and future audiences to support the organisations’ business models.  

New and existing audiences  
- Opportunities for more and improved high quality musical experiences, improving well-being and skills.  

Education and learning participants  
- Opportunities for more and improved high quality musical experiences, improving well-being and skills. |
| Supporting the UK’s position as a world-leading centre for the cultural industries | Central Government, City Corporation, Greater London Authority, Arts Council England  
- Economic benefits of sustaining this sector of the economy.  

Professional and trainee musicians  
- Sustained opportunities for training, professional development and employment. |
6.9 MAIN RISKS

6.9.1 The main risks associated with the potential scope for this project are shown below, together with their counter measures.

6.9.2 A full risk register is set out at Appendix 6A.

<table>
<thead>
<tr>
<th>Main Risk</th>
<th>Counter Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business risk</td>
<td></td>
</tr>
<tr>
<td>Loss of momentum: long-term project requiring on-going support and commitment of a range of stakeholders</td>
<td>Ensure all stakeholders are fully engaged in the project with senior level commitment.</td>
</tr>
<tr>
<td>Delays in timetable</td>
<td>Robust project planning and careful management to identify and mitigate potential delays at an early stage.</td>
</tr>
<tr>
<td>Dependence on private sector fundraising to deliver the project</td>
<td>Close attention to keeping capital costs affordable and devoting sufficient resources to fundraising from the earliest stage whilst ensuring that fundraising targets are realistic.</td>
</tr>
<tr>
<td>Cost overruns</td>
<td>Professional expertise used at all stages to ensure costs are realistic and closely monitored, with appropriate contingencies included.</td>
</tr>
<tr>
<td>Identifying and securing a suitable site given the shortage of space and pace of the property market in central London</td>
<td>Close monitoring of potential sites and on-going dialogue with relevant public- and private-sector developers regarding the availability of sites.</td>
</tr>
<tr>
<td>Funding model for net additional operating costs unclear or not viable</td>
<td>Business model being developed and refined to minimise net operating cost, and sources of funding being investigated.</td>
</tr>
<tr>
<td>Service risk</td>
<td></td>
</tr>
<tr>
<td>Facilities do not adequately meet the needs of users or address current weaknesses</td>
<td>Ensure close involvement of all user groups (musicians, audiences, learning participants, etc.) throughout the development process and obtain appropriate professional and technical advice (e.g. acousticians, architects, technology experts, etc.) from the earliest stage.</td>
</tr>
</tbody>
</table>

6.10 CONSTRAINTS

6.10.1 The project is subject to the following constraints:

<table>
<thead>
<tr>
<th>Site availability</th>
<th>Including the ability to secure a suitable site within an appropriate timeframe.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtaining necessary permissions</td>
<td>Including planning permission and any listed building consents that might be required depending on the site/buildings involved.</td>
</tr>
<tr>
<td>Stakeholder support</td>
<td>There is a need to obtain support from a range of stakeholders without which development of the project may prove challenging.</td>
</tr>
<tr>
<td>Funding</td>
<td>The project is dependent on sufficient funding being secured to deliver all essential elements.</td>
</tr>
</tbody>
</table>

6.11 DEPENDENCIES

The project is subject to the following dependencies that will be carefully monitored and managed throughout the lifespan of the scheme:

<table>
<thead>
<tr>
<th>Site availability</th>
<th>The availability of certain sites may be dependent on planning permission being obtained, or vacation of the site by existing occupiers.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder support</td>
<td>Continued support from all key stakeholders will be necessary to maintain the momentum required to deliver the project.</td>
</tr>
</tbody>
</table>
7. THE ECONOMIC CASE

7.1 INTRODUCTION

7.1.1 In accordance with the Capital Investment Manual and requirements of the HM Treasury Green Book, this section of the Outline Business Case documents the range of options that have been considered in response to the potential scope identified within the Strategic Case, the options shortlisted for further appraisal, the cost-benefit framework used and the results of the economic appraisal.

7.2 CRITICAL SUCCESS FACTORS (CSFs)

7.2.1 Alongside the investment objectives set out in the Strategic Case, the CSFs were determined at a workshop attended by senior representatives from the Barbican, LSO and the Guildhall School of Music and Drama. The CSFs are the attributes considered essential to the successful delivery of the project. The CSFs reflect strategic fit and business needs, potential value for money, potential achievability and potential affordability. It was agreed at the workshop that the provision of a world-class facility with the widest possible audience reach was the primary mission driver for the project. Following a wider discussion which considered London’s competitive position in the music industry, the growing and diverse audience base, the importance of London’s Cultural Hub and the provision of inspirational music education, the following CSFs for the project were agreed:

- **CSF1**: Deliver a venue recognised for its world-class acoustics (capable of improving London’s status internationally)
- **CSF2**: Ensure continuity and development of the activities of LSO/Barbican Centre/Guildhall School
- **CSF3**: Create a landmark venue of a standard that maximises the ability to attract private sector investment
- **CSF4**: Deliver high-quality, innovative spaces for education and learning
- **CSF5**: Enable full use of digital technologies for audience engagement and discovery
- **CSF6**: Ensure the development is deliverable and viable in the long-term
- **CSF7**: Ensure that any need for ongoing revenue support is funded
- **CSF8**: Produce a convincing programme for raising capital funding.
7.3 THE LONG LISTED OPTIONS

7.3.1 The development of the long list of options considered potential solutions for delivering on the investment objectives and critical success factors for the project. Each option has then been assessed against the investment objectives and critical success factors to allow a preferred short list of options to be established.

7.3.2 The long list of options is outlined below, with commentary on the advantages and disadvantages associated with each of them, and the results of the shortlisting process (see table that follows).

LONG LIST OPTION 1

Do nothing

- This would involve no changes to the existing Barbican Centre apart from general maintenance and repair work, which is already planned for.
- This option will be carried forward to the short list of options as the reference case. (short list Option 1)

LONG LIST OPTION 2

Carry out modest refurbishments to the Barbican Centre

- This would involve no major building work to the existing concert hall and would consist only of minor improvements.

Advantages

- Lower capital costs compared to building a new concert hall.

Disadvantages

- There have been two significant refurbishments of the Barbican Centre in 33 years. These have improved the facilities modestly but not enough to deliver a world-class concert hall or enhance ongoing financial sustainability.
- The scope to make further improvements through modest refurbishment is minimal.
- Owing to these disadvantages, this option has therefore been discounted and will not be carried forward to the short list.
LONG LIST OPTION 3
Rebuild the existing Barbican Hall

• This would involve rebuilding the existing Barbican Hall to deliver a concert hall with world-class acoustics. Given space constraints, it would not be possible to incorporate any additional space for educational or digital activities under this option.

Advantages
- Delivers a venue with world-class acoustics.
- Ensures continuity of the activities of LSO/Barbican Centre/Guildhall School.
- Lower capital costs involved compared to building a new concert hall.

Disadvantages
- Significant disruption to the current activities of the LSO/Barbican Centre, with associated costs. An alternative short-term location would have to be found to accommodate the organisations. This could harm continuity in activities and in attendance.
- Would not deliver sufficient space for world-leading educational and digital learning activities.

Although this option does not score as well as some of the other options in relation to the provision of education and learning facilities, it would meet the key CSF of delivering a venue with world-class acoustics. Therefore this option will be carried forward to the short list of options (short list Option 2).

LONG LIST OPTION 4
Build a new concert hall within close proximity to the existing Barbican Centre

• This would involve building a new concert hall with world-class acoustics within an approximate 10 minute walking radius of the existing Barbican Hall in order to maintain the synergies with the Barbican Centre and Guildhall School. Additional space for educational, digital and commercial activities would be minimal.

Advantages
- Delivers a venue with world-class acoustics capable of improving London’s international competitiveness.
- Ensures continuity of the activities of LSO/Barbican Centre/Guildhall School.
- Possibility to create a landmark venue to attract greater private investment.

Disadvantages
- Would only deliver moderate additional space for world-leading educational and digital learning activities.
- This option will be carried forward to the short list of options (short list Option 3).

LONG LIST OPTION 5
Build a new concert hall outside of a 10 minute walking radius from the existing Barbican Hall but within the City of London

• This option focusses on the location of a new concert hall and is used as a comparison to long list options 4 and 6.

Advantages
- No significant advantages over building a similar concert hall within closer proximity to the Barbican Centre, apart from a greater choice of possible sites.

Disadvantages
- No suitably sized locations were found for the venue (see Section 20 for details of the review of potential sites).
- Synergies between the artists at the Barbican, LSO and Guildhall School would be lost due to the lack of proximity.
- Operating costs would increase if the new concert hall was built in a location not within walking distance of the Barbican Centre, due to the reduced scope to share overheads.
- This option has been discounted and will not be carried forward to the short list.
LONG LIST OPTION 6
Build a new concert hall outside of the City of London

- This option focuses on the location of a new concert hall and is used as a comparison to long list options 4 and 5. The Olympic Park and Battersea Power station were examples of the locations considered.

Advantages
- The City of London is already home to a wide variety of cultural facilities. Other areas of London may experience greater economic benefits as a result of a world-class concert hall choosing to locate there as opposed to in the City of London.
- Lower opportunity costs of land, given lower land values.

Disadvantages
- There may be a loss of regular audience members given that 49% of Barbican audience members currently live within 30 minutes of the Centre. Locating in a central London location provides better transport links to all areas of London and beyond.
- There was a significantly negative impact on the LSO when it moved to the Barbican centre 33 years ago due to a loss of core audience members.
- Synergies between the artists at the Barbican, LSO and Guildhall would be lost.
- Operating costs would increase if the new concert hall was built in a location not within walking distance of the Barbican Centre (e.g. increased overhead costs).

LONG LIST OPTION 7
Build a Centre for Music

- This would involve building a world-class concert hall capable of improving London’s status internationally. It would also deliver high-quality innovative spaces for education and engagement, enable full use of innovative digital technologies and maximise commercial potential. All of these activities would be delivered in one iconic, landmark building.

Advantages
- This option delivers against all critical success factors and investment objectives.
- Potential for a more diverse and robust operating model.

Disadvantages
- Larger capital costs and ongoing running costs involved.
- More complex project requiring greater skill to deliver successfully.
- This option will be carried forward to the short list of options (short list Option 4).
LONG LIST OPTION 8

Locate the educational and digital facilities in a separate location to the concert hall. The possibility of renting some nearby office space was evaluated.

- This option focuses on the location of different facilities provided by the new music centre. A new world-class concert hall would be built under this option but the majority of educational and digital facilities would be provided in an alternative location and not under the same roof.

Advantages
- Cheaper capital costs compared to building a Centre for Music all under one roof.

Disadvantages
- The connectivity between the orchestra and the educational participants would be lost.
- The sense of permeability, connectivity and integration offered by co-location of the educational and digital facilities would be lost in this configuration. Attending a music workshop in an office block would not provide the inspiring experience that attending a workshop in a working concert hall next to musicians rehearsing and performing would provide. Moreover, given the limited window of time that touring artists have available to engage with this activity, there would be a real risk of artists being unable to do so in this option.

This would compromise the ability to inspire children and adults to become more engaged with music, a key objective of the Barbican, LSO and Guildhall School.
- Increased running costs and overheads would be incurred as a result of running two very separate facilities.

This option has been discounted and will not be carried forward to the short list.

LONG LIST OPTION 9

Locate all educational and digital facilities in LSO St Luke’s.

- This option is similar to long list option 8 in that it focuses on the location of different facilities provided by the new music centre. A new world-class concert hall would be built under this option but the majority of educational and digital facilities would be provided in LSO St Luke’s.

Advantages
- Cheaper capital costs compared to building a Centre for Music all under one roof.

Disadvantages
- No breakout areas are available at LSO St Luke’s and the design layout of the educational facilities would be limited.
- Connectivity between the educational participants and the full scale orchestra performances would not be possible.
- The volume of educational activity envisaged in a Centre for Music could not be achieved in the limited space of LSO St Luke’s.

This option has been discounted and will not be carried forward to the short list.
LONG LIST OPTION 10

Develop a Centre for Music where space and cost are no object

• This option would encompass world-class acoustics, world-class educational facilities and world-class digital infrastructure and the maximum space devoted to these facilities. In order to test this, a 38,000m² Centre for Music with costs well in excess of £400 million was evaluated.

Advantages

− This option delivers against the critical success factors and investment objectives.

Disadvantages

− A very large sum of public money would be needed to fund this option.

− This option encompasses the wants of all parties directly involved in the project (Barbican, LSO and Guildhall School) but does not necessarily make efficient use of the space or provide the best value for money.

− A world-class facility could still be provided but with a smaller quantum of floorspace and at a lower cost, if the space is used more efficiently and the commercial element is maximised (e.g. as provided in long list option 7).

• This option has therefore been discounted and will not be carried forward to the short list.

LONG LIST OPTION 11

Develop a new Centre for Music with a basic specification (i.e. not a landmark building)

• This option is focussed on the aesthetic image of the building and is therefore linked to the ability the development has to attract private sector funding. Kings Place near King’s Cross was mentioned during initial discussions as an example of a building with limited prominence and presence.

Advantages

− Lower capital costs involved.

− Would still have the potential to provide world-class acoustics and world leading educational and digital facilities.

Disadvantages

− While there would be lower capital costs involved with this project, the ability to raise funding through the private sector would be compromised. In order to receive a substantial amount of investment from high net worth individuals and corporates with potential naming rights, the building needs to be of sufficient landmark quality.

− A basic building would not provide the inspiring experience that visiting a landmark building would provide. The Barbican/LSO/Guildhall School want to inspire children and adults to become more engaged with music, an experience this option would compromise.

• This option has been discounted and will not be carried forward to the short list.
## Description of option

Do nothing | Minimal refurb to Barbican Hall | Rebuild Barbican Hall | Construct a world-class concert hall | Locate close to Barbican but outside a 10 minute walking radius | Locate outside the City of London | Construct a world-class centre for music close to the Barbican | Locate education / digital facilities in an office block | Locate education / digital facilities in St Luke’s | Develop a Centre for Music where cost and space are no object | Develop a basic spec concert hall (non-landmark building)

### Investment objectives

<table>
<thead>
<tr>
<th>Description of option</th>
<th>Do nothing</th>
<th>Minimal refurb to Barbican Hall</th>
<th>Rebuild Barbican Hall</th>
<th>Construct a world-class concert hall</th>
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<th>Locate education / digital facilities in St Luke’s</th>
<th>Develop a Centre for Music where cost and space are no object</th>
<th>Develop a basic spec concert hall (non-landmark building)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancing the status of London as a world-class destination for music</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Extending the reach and diversity of engagement with music</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Providing innovative music discovery and learning opportunities, both live and digital</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td></td>
</tr>
<tr>
<td>Driving the development of the City of London’s Cultural Hub as a visitor destination</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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<td></td>
</tr>
<tr>
<td>Supporting the UK’s position as a world-leading centre for the cultural industries</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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<td>●</td>
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<td></td>
</tr>
</tbody>
</table>

### Critical Success Factors

<table>
<thead>
<tr>
<th>Description of option</th>
<th>Do nothing</th>
<th>Minimal refurb to Barbican Hall</th>
<th>Rebuild Barbican Hall</th>
<th>Construct a world-class concert hall</th>
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<th>Locate education / digital facilities in St Luke’s</th>
<th>Develop a Centre for Music where cost and space are no object</th>
<th>Develop a basic spec concert hall (non-landmark building)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliver a venue recognised for its world-class acoustics (capable of improving London’s status internationally)</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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<td>●</td>
<td></td>
</tr>
<tr>
<td>Ensure continuity and development of the activities of LSO/Barbican/Guildhall School</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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<td>●</td>
<td></td>
</tr>
<tr>
<td>Create a landmark venue of a standard that maximises the ability to attract private sector investment</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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<td>●</td>
<td>●</td>
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<td></td>
</tr>
<tr>
<td>Deliver high-quality innovative spaces for education and learning</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Enable full use of digital technologies for audience engagement and discovery</td>
<td>●</td>
<td>●</td>
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<td>●</td>
<td>●</td>
<td>●</td>
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<td></td>
</tr>
<tr>
<td>Ensure that the site selected is deliverable and viable in the long-term</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Ensure that any need for ongoing revenue support is funded</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Produce a convincing programme for raising capital costs</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<td>●</td>
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<td></td>
</tr>
</tbody>
</table>

### Summary

<table>
<thead>
<tr>
<th>Description of option</th>
<th>Do nothing</th>
<th>Minimal refurb to Barbican Hall</th>
<th>Rebuild Barbican Hall</th>
<th>Construct a world-class concert hall</th>
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<th>Develop a Centre for Music where cost and space are no object</th>
<th>Develop a basic spec concert hall (non-landmark building)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary</td>
<td>Short-list Option 1</td>
<td>Reject</td>
<td>Short-list Option 2</td>
<td>Reject</td>
<td>Short-list Option 3</td>
<td>Reject</td>
<td>Short-list Option 4</td>
<td>Reject</td>
<td>Reject</td>
<td>Reject</td>
<td>Reject</td>
</tr>
</tbody>
</table>

● cannot be delivered under option
● can potentially be delivered under option but uncertain at this stage
● can be delivered under option
7.4 SHORT LISTED OPTIONS

7.4.1 As set out above, the long list consisting of 11 options was developed. These options were then sifted and reduced to a short list of four options to be subjected to further monetary and non-monetary assessment.

7.4.2 The following conclusions can be drawn from the long-list appraisal:

- The provision of educational and digital facilities forms an integral part of the short-listed appraisal options. A facility consisting of minimal, moderate and substantial facilities should be appraised.

- The only suitable location option taken forward to the short-list is to be within the City of London in order to continue to benefit from the existing grant, maximise organisational synergies and minimise operational costs.

7.4.3 The short list of options is as follows:

**OPTION 1**

**Do nothing**

This option involves the Barbican, LSO and Guildhall School continuing to use the same facilities with no improvements or refurbishments. This option would involve no upfront capital costs and would only involve ongoing maintenance and repair costs. It does not meet the objectives but has been shortlisted under HM Treasury guidance and provides a benchmark for VFM.

**OPTION 2**

**Rebuild Barbican Hall**

This option would involve completely rebuilding the existing Barbican Hall to improve the acoustics in the concert hall and allow for modest provision of education and engagement spaces. This option would incur lower capital costs than if a new concert hall was built with modestly lower operating costs. Repurposing the existing hall could enhance the status of London as a world-class destination for music but would fail to meet other investment objectives including the provision of world leading educational and digital facilities.

**OPTION 3**

**Build a new concert hall**

This option would involve building a new concert hall with world-class acoustics within close proximity to the existing Barbican Hall. The new concert hall could be developed in a landmark building, maximising the potential for private investment. However, it would offer limited additional space for educational, digital and commercial needs.

**OPTION 4**

**Build a new Centre for Music**

This option would involve building a world-class concert hall capable of improving London’s status internationally. It would deliver high-quality innovative spaces for education, enable full use of innovative digital technologies and maximise commercial potential. All of these activities would be delivered under one roof in a landmark and inspirational building fit for one of the great cities in the world.
7.5 ANALYSIS OF SHORT LISTED OPTIONS

7.5.1 A multi-criteria decision scoring exercise has been undertaken based on the investment objectives and qualitative benefits.

7.5.2 The qualitative benefits for each investment objective are outlined below. Representatives from the Barbican, LSO, Guildhall School and Regeneris Consulting worked together to assign weights to each investment objective based on the relative importance of the qualitative, non-financial benefits it represented.

<table>
<thead>
<tr>
<th>Investment Objectives</th>
<th>Qualitative Benefits</th>
<th>Weight</th>
</tr>
</thead>
</table>
| 1 - Enhancing the status of London as a world-class destination for music | Non Quantifiable  
  • Improvements in London's international competitiveness and inward investment prospects (enhancing its ability to attract high value business activities and highly skilled workers)  
  • Ensuring London retains its status as a world-class music destination through providing world-class acoustics and facilities to rival other major cities  
  • Ensuring London can continue to attract and produce world-class musicians | 30% |
| 2 - Extending the reach and diversity of engagement with great music | Quantifiable  
  • Increases in the number of individual benefiting from improved wellbeing, skills, productivity and health as a result of music engagement and participation | 30% |
|  | Non Quantifiable  
  • Increases in the diversity of individuals engaged with classical and contemporary music (through offering a music programme more reflective of the diverse London population)  
  • Increases in the number of individuals benefiting from the transferable skills music engagement helps to enhance (team work, self-discipline, commitment etc.) | |
| 3 - Providing innovative music discovery and learning opportunities, both live and digital | Quantifiable  
  • Immediate and long term benefits as a result of music engagement and participation | 20% |
|  | Non Quantifiable  
  • The provision of music education and engagement opportunities for those who may not otherwise have access to such facilities  
  • The ability to inspire musicians of the future to make the leap from observation to participation in music | |
| 4 - Driving the development of the City of London's cultural hub as a visitor destination | Quantifiable  
  • Tourism spillover effects resulting from an increase in the number of domestic and international tourists visiting London and the Cultural Hub. | 10% |
| 5 - Supporting the UK's position as a world-leading centre for the cultural industries | Non Quantifiable  
  • Ability to continue to attract a highly skilled creative class to London  
  • Reinforce and enhance London's cultural identity. | 10% |
7.5.3 Representatives from the project team then assigned a score of 1 to 10 to each option for how well it delivers the benefits associated with each investment objective. The weights and scores were then multiplied together to provide a total weighted score for each option. These results can be seen in the following table.

### Options – Raw (R) and Weighted (W) results

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>R</td>
<td>W</td>
<td>R</td>
<td>W</td>
</tr>
<tr>
<td>Investment objective 1</td>
<td>30%</td>
<td>1</td>
<td>30</td>
<td>7</td>
<td>210</td>
</tr>
<tr>
<td>Investment objective 2</td>
<td>30%</td>
<td>1</td>
<td>30</td>
<td>3</td>
<td>90</td>
</tr>
<tr>
<td>Investment objective 3</td>
<td>20%</td>
<td>1</td>
<td>20</td>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td>Investment objective 4</td>
<td>10%</td>
<td>1</td>
<td>10</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Investment objective 5</td>
<td>10%</td>
<td>1</td>
<td>10</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>5</td>
<td>100</td>
<td>24</td>
<td>480</td>
</tr>
<tr>
<td>Rating</td>
<td></td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

7.6 SUMMARY OF ANALYSIS OF SHORT LISTED OPTIONS

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Rank</th>
<th>Key considerations influencing score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do nothing</td>
<td>No improvements or refurbishments to existing facilities.</td>
<td>4th</td>
<td>Does not meet any of the investment objectives or critical success factors.</td>
</tr>
<tr>
<td>2. Rebuild Barbican Hall</td>
<td>Rebuild parts of the existing Barbican Hall to improve the acoustics and allow for some additional learning spaces.</td>
<td>3rd</td>
<td>Would enhance London's status as a destination for music although may not be able to deliver world-class acoustics to rival other international cities. It would also only offer minimal space for educational activities and more limited digital facilities than if a new concert hall was built.</td>
</tr>
<tr>
<td>3. Build a new concert hall</td>
<td>Build a new concert hall with world-class acoustics within close proximity to the existing Barbican Hall.</td>
<td>2nd</td>
<td>Would enhance London's status as world-class destination for music and would help drive development of the City of London’s Cultural Hub. However, the educational and digital facilities would be compromised.</td>
</tr>
<tr>
<td>4. Build a new Centre for Music</td>
<td>Build a world-class concert hall with high-quality innovative spaces for education and digital discovery all within one landmark and inspirational building.</td>
<td>1st</td>
<td>Would deliver against all the investment objectives providing sufficient private and public funding could be raised</td>
</tr>
</tbody>
</table>
INTRODUCTION

This section provides a detailed overview of the main costs and benefits associated with each of the selected options.

The section starts with an explanation of the appraisal parameters and then outlines the costs and benefits considered. The explanation of the cost-benefit framework indicates how costs and benefits have been estimated and the key sources of information used.

The figures used in this section are based on those used elsewhere in this report (e.g., for financial modelling) but have been adjusted for the purposes of the economic analysis. For example, the economic analysis focuses on impact on UK residents, and makes adjustments to the base figures to ensure consistency with other assumptions used in the Economic Case. Accordingly, there are differences between some figures used in this section and elsewhere in the report.

DESCRIPTION OF COSTS AND BENEFITS

The key parameters for the economic appraisal are as follows:

- Project boundary. The project involves a number of organisations, principally the LSO and Barbican Centre but also the Guildhall School of Music and Drama. For the purposes of the appraisal, the analysis only considers the costs and benefits to the LSO and the Barbican Centre and assumes that the Guildhall School of Music and Drama is generally unaffected by the difference between options. This is clearly not the case and in practice either Option 3 or 4 would bring it benefits. The quantification of these benefits has not been possible but these are considered later in the switching value analysis.

- Appraisal period. The appraisal considers the costs and benefits over the project development and construction period for each option, and then over a 60 year operational time period. This time period has been used for the appraisal, although a new concert hall would be expected to be in use for much longer than this. Hence the appraisal covers the period 2015/16 (when project development would commence) to 2083/84.

- Price basis. All values have been stated in constant 2015/16 prices unless otherwise stated. As outlined later in the document, this represents a prudent and conservative approach given many of the benefits may rise in real terms in line with incomes.

- Discount rate. Future costs and benefits have been discounted using HM Treasury’s social discount rate (3.5% per annum for years 0-30 and 3.0% thereafter).

- Impact area. The analysis has been undertaken on the basis of the costs and benefits for the UK as a whole. However, in the discussion of results an indication of the split of benefits for City of London, Greater London and the UK is provided.

- Additionality. All values of benefits stated are net additional to the UK. This is discussed in more detail under Additionality of Benefits later in this section.

COSTS AND FUNDING

The economic appraisal considers the following costs:

- Capital costs associated with each option (covering existing facilities and the construction of new facilities).

- Operating costs for the Barbican and the LSO.

- Additional opportunity costs associated with the use of land for the new Centre for Music.

- The following cost has not been covered by the appraisal:

- Additional costs of the Guildhall School of Music and Drama (since these are not impacted materially by the project across the options).

An explanation of the approach and key assumptions is provided below.

CAPITAL COSTS

The appraisal considers the capital costs for each of the shortlisted options. These have been estimated by the project’s cost consultants, Gardiner & Theobald and have been calculated up to RIBA Design Stage 7. This has involved an extensive benchmarking exercise looking at the final out-turn costs of major new concert halls around the world (see Appendix 7A for details on this benchmarking).

The key elements are as follows:

- Project development costs
- Construction costs (including costs of demolition for the Barbican Hall in Option 2)
- Statutory consents (planning permission and building regulations, etc.)
- Fixtures, fittings and equipment (IT and digital, musical instruments, furniture etc.)
- Professional fees
- Costs of project management.

Contingency allowances of 7.5% and 5% have been added to the construction costs and project management costs respectively. Professional fees also include contingencies. Profiles for these capital costs over time have been provided by the external Project Manager (GVA Acuity).

An Optimism Bias assessment has been carried out on the costs excluding contingencies – this is described under the results of the cost-benefit analysis.
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OPERATING COSTS

7.9.7 The appraisal considers the revenue costs associated with running the Centre for Music as well as the existing Barbican Hall. These have been estimated using a detailed financial model developed by the Barbican Centre and the LSO for all of the shortlisted options. The operating costs and revenues have been estimated for a steady state operating year as well as the the years pre- and post-opening. Full details on the financial model are contained in Section 9. It comprises the following elements:

- Direct expenditure, including direct programming expenditure for music and learning events, costs associated with commercial exhibitions and marketing expenditure
- Building related expenditure which includes rates, insurance, cleaning, security, utilities, repairs and maintenance, and minor works
- Salaries expenditure
- Technology and IT equipment
- Administration and overheads.

7.9.8 These costs are assumed to remain the same in real terms across the appraisal period. In other words, no change in relative costs compared to the rest of the economy is assumed.

7.9.9 The financial model has been subjected to external validation by an expert group. This concluded that the model was sound and that, in some cases, the assumptions on income were too conservative. The model was updated in light of this review.

ADDITIONAL OPPORTUNITY COSTS

7.9.10 Finally, the economic appraisal also estimates any additional economic opportunity costs of the options which are not reflected in financial costs. The main relevant opportunity cost here relates to the alternative use of the land on which any new build facility would sit. Where the site is owned by the City of London Corporation, the City Corporation may in principle make a capital contribution. In so doing, the City of London Corporation (and so the public sector and economy at large) will be effectively incurring a financial opportunity cost equal to the value of the land.

7.9.11 The value of the land has been estimated in consultation with the City of London Corporation, using the advice in the Green Book. It is based on the difference between the site value that the City of London Corporation would be able to achieve with the more limited commercial development possible under either Option 3 or Option 4, compared to the most valuable alternative use. For the purposes of this exercise, the valuation has been undertaken on a potential site in the City of London (the most likely site for the Centre for Music) and on the basis of the anticipated gross external area of the Centre for Music.

7.9.12 Note that the site also has a residual value at the end of the appraisal period (this is set out in the discussion of Benefits below).

SUMMARY OF COSTS FRAMEWORK

7.9.13 A summary of the costs and the approach to estimating them is provided below:

<table>
<thead>
<tr>
<th>Summary</th>
<th>Approach and data sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital costs</td>
<td>Construction/demolition/refurbishment costs associated with any works to existing Barbican Hall and for new Centre for Music.</td>
</tr>
<tr>
<td>Estimated by cost consultants.</td>
<td></td>
</tr>
<tr>
<td>Operating costs</td>
<td>Ongoing revenue cost implications for the existing Barbican Centre and any new facility, including staff costs, utilities, etc.</td>
</tr>
<tr>
<td>Estimated by Feasibility Study financial modelling team, drawing on existing cost base information and industry benchmarks.</td>
<td></td>
</tr>
<tr>
<td>Opportunity costs</td>
<td>The potential value of the capital receipt and wider economic benefits foregone by City of London as a result of using a site for a concert hall/Centre for Music as opposed to its alternative use dictated by City of London planning restrictions.</td>
</tr>
<tr>
<td>Value of land in most valuable alternative use (Source: City of London Corporation).</td>
<td></td>
</tr>
</tbody>
</table>
7.9.14 The economic appraisal considers the net costs of the project and options to society as well as the net costs to the public purse. There are different ways that non-public funding for the project can be considered:

- Any funding received by non-UK residents or businesses based overseas would reduce the resource costs to the UK economy and so should be netted off the costs (insofar as there is no displacement effect from funding that would otherwise have been available for other activities or projects in the UK).

- Private donations by UK residents and companies are resources costs for the UK economy; however, arguably, they can be seen as at least one measure of the "non-use" value placed on the facilities. They can therefore be treated as a benefit.

7.9.15 It follows that the non-public sector income from sponsorship, naming rights, philanthropic donations etc. can either be seen as helping reduce costs or as a financial manifestation of non-use benefits. Either way, they contribute to the benefit-cost ratio (BCR).

7.9.16 The private contributions to the capital costs have been netted off in the BCR in order to focus on the costs to the public sector. In estimating the potential scale of these private sector contributions, the conclusions from a review of the fundraising potential of the project have been drawn upon, as set out in Section 26. The key points are as follows:

- Firstly, the level of private contribution achievable is heavily influenced by the nature of the building and the activities taking place within it – in particular, a landmark building with the involvement of a world-class architect is more likely to be able to attract significant private contributions than a lower specification, less ambitious building project. Therefore, there is a trade-off between cost and fundability.

- Secondly, the recommended approach is to target the bulk of funding from a single individual who would have significant naming rights, with the remainder coming from a range of individuals, trusts and companies.

7.9.17 Consequently, the assumption is that Option 4 would be able to attract the most private funding given the iconic design and landmark nature of the building, whilst it would be more difficult to achieve these levels of contribution under Options 2 and 3. Based on the fundraising advice received, it has been assumed that the achievable private sector contribution to the project would be (in 2015/16 prices):

- Option 4: £125m – the most significant contribution given the iconic nature of the building.
- Option 3: £75m – a significant contribution but lower than in Option 4 given the scaled down nature of the concept.
- Option 2: £25m – the lowest contribution of all options, since the option is concerned with upgrading an existing asset rather than creating a new one.

7.9.18 In terms of the funding for the revenue costs, whilst the Barbican and LSO receive an ongoing subsidy from the City of London Corporation and Arts Council England, this has been excluded from the project revenues, given that this is a transfer payment. Development income from private sector contributors is included in the revenues (as set out above, it can be seen as a proxy measure of non-use value).
7.10 **BENEFITS**

7.10.1 The economic appraisal uses the latest approaches to assessing the economic value of arts and cultural assets. There are essentially two ways of looking at the economic value of an artistic institution:

- **Economic footprint analysis**, whereby the institution’s contribution to the economy is estimated based on direct employment and Gross Value Added (GVA) within the institution and the employment and GVA generated within its supply chain (indirect effects). The induced effect from employees’ expenditure may also be considered here. Whilst a useful measure of the scale of economic activity generated by the institution, this approach is limited as it does not inform of the value of the activities themselves, in terms of the impact on economic welfare. As the economist John Kay put it recently, “you can’t measure the value of a play by how much it costs to clean the theatre.”

- **Total economic value analysis**. The limitations of this form of economic impact analysis have been acknowledged in the literature and in recent work by the Warwick Commission. Consequently, efforts have been made to develop more appropriate measures of economic value for the sector. These approaches use a Total Economic Value framework first developed in the fields of transport and environmental economics.

7.10.2 Therefore, whilst the project will make a macro-economic contribution, this is not included in the benefit-cost ratio.

7.10.3 The analysis of the benefits of the options therefore draws on the Total Economic Value framework. The components of this framework are summarised in the following diagram. The quantifiable elements are discussed in detail below.
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7.10.4 These are the impacts for those individuals and thus the aggregate welfare of those who use the Centre for Music. There are a number of distinct types of output produced by the Centre for Music, which generate user benefits.

Concerts and exhibitions

7.10.5 Those who attend concerts (classical, contemporary and so on) and arts exhibitions held at the Centre for Music and within the existing Barbican Hall derive a welfare benefit from doing so. The subjective value to these individuals from this attendance is given by their willingness to pay for each concert visit. For concerts that are not free, this willingness to pay is at least as large as the price they pay for each concert visit. The price paid is the market use value. The price paid may not capture a concertgoer’s full willingness to pay, insofar as some concertgoers may have been willing to pay more for any given visit. In such a case there is a consumer surplus, given by the difference between the willingness to pay and the price paid per visit. This is particularly the case for events that are free to attend. This consumer surplus for UK residents is the non-market use value associated with concert attendance.

7.10.6 The total market use value has been estimated using the revenue projections from the project financial model. The steps are as follows:

- Programming diary. Detailed projections for the programming diary across all proposed new facilities and the existing Barbican Hall space have been produced by a dedicated Feasibility Study workstream.

- Audience projections. Projections for attendance at each type of event have been produced. These have been based on existing attendance numbers for 2014/15.

- Revenue projections. These have been built up using the projected audience numbers and assumptions on ticket yield, drawn from the experience of the 2014/15 programme.

7.10.7 It is assumed that these revenues reach a steady state three years after opening and remain constant in real terms over the appraisal period.

7.10.8 Estimating the total non-market use value, or consumer surplus, is challenging since it requires non-market measures of welfare to be generated. There is no specific research for the LSO or Barbican on the consumer surplus associated with attending concerts or other events, using either stated or revealed preference measures of welfare.

7.10.9 However, recent research has used subjective well-being valuation techniques to estimate such welfare effects from engaging in the arts in general. These techniques are accepted as robust and highlighted in recent HM Treasury Green Book guidance. This found that being an audience to the arts in general had a subjective wellbeing value of £75 per annum, and for music specifically there was a value of £472 per annum. These values are over and above any price paid for attendance. Whilst associated data on frequency of attendance is imperfect, the research recommends that indicative per activity values of £47 - £62 can be used. The same approach has been used to estimate a per activity value for music event attendance resulting in values between £37 and £49.

7.10.10 The midpoint of these values (£43 per visit) has been applied to the UK audiences for concerts held in the Centre for Music and in the existing Barbican Hall, across all options. The midpoint value of being an audience member to the arts (£54 per visit) has been applied to 25% of the visitors to exhibitions held at the art gallery and Curve gallery. Although Green Book guidance suggests that the value of such a benefit may increase in real terms over time, it has been assumed for the base case that the values remain constant in real terms over the appraisal period. The UK audience share has been estimated using the data supplied by the Barbican Centre. This indicates that for 2014/15, 87% of visitors were UK residents. It has been assumed that this remains constant over the appraisal period and is identical between the shortlisted options. Arguably it may rise a little under Options 3 and 4, but for prudence, no variation across the options is assumed.

7.10.11 Whilst these are the best available estimates of the non-market use value from concert attendance, they are subject to the following caveats:

- As the research highlights, the underlying data on frequency of attendance are imperfect, so the per activity values are indicative.

- There is no further breakdown of the benefit of being an audience to music performances by type of music. The analysis therefore implicitly assumes that the wellbeing effect does not vary significantly between different types of music (classical, jazz, popular etc.) or indeed the quality of the performers/performance. It is not possible to adjust these, since they are, by their nature, subjective values.

Commercial events

7.10.12 In addition to concerts held by the LSO and others, across the options the Barbican Centre and new concert hall would be hired out to third parties on a commercial basis for a range of events, including conferences, university graduations and other events. Commercial income from hiring out these spaces has been estimated based on the average daily income for hire of the Barbican Hall in 2014/15. Attendance figures for these events are based on the actual attendance figures for the Barbican Hall, in 2014/15.
7.10.13 In each of the options there is retail and catering income from audiences and casual visitors, including cafes, restaurants, bars and retail outlets. Income to these outlets is a further source of use value.

- Catering (café, restaurants, bars): It is assumed that music concerts generate secondary catering income (commercial events are not assumed to generate catering income and education events are only assumed to generate income for coffee points and cafes). Income has been estimated using budgeted 2015/16 concession income per person for the Barbican Centre.

- Retail shop: All music and education events are assumed to generate retail income. Commercial events are not assumed to generate any retail income.

### Digital content

7.10.14 Under each of the shortlisted options there would be varying levels of digital content produced by the LSO and the Barbican Centre. The approach to valuing this content is as follows:

1. Estimates of the level of activity and associated volume and average duration of content that would be possible under each of the options have been made by the digital team. This is based on an assessment of the capabilities of the infrastructure and human resources available under each Option. Option 4 delivers the most content given the investment in facilities and space that would be possible. Other options also deliver some content but it is more limited, given space and infrastructure constraints. Details are provided under the cost-benefit analysis results later.

2. These have then been split between those based in the UK and overseas, based on evidence from current activities.

3. It is assumed that all content accessed by UK-based users will be available for free, whilst some content for those based overseas will be charged for. The use value for UK users accessing content for free is estimated by multiplying the total duration of content accessed by the value of non-work time (£6.99 per hour in 2015/16 prices). Although DfT applies real increases in this value over time, as elsewhere, it has been conservatively assumed that there is no real terms increase in this value of non-work time over the appraisal period.

### Education and engagement activities

7.10.15 Each of the shortlisted options would see opportunities for education and engagement delivered within the building facilities and through digital outreach activities. Some of these are entirely free to attend, but most are a mix of free and paid for events. The market value is estimated via the revenues from paying attendees. This is based on a detailed schedule of events for each option drawn up by the education teams at the Barbican/LSO, along with estimates of the number of paying visitors and price paid for attendance.

7.10.16 There is a range of research highlighting the non-market benefits to the individual from engagement with music both for children and adults. These include impacts on subjective wellbeing cited earlier, and a range of externality effects (discussed later under Externalities). This evidence has been used along with the planned programme of education and learning activities across the options, to value the benefits of the activity over the appraisal period. The approach is complex, and as follows.

1. The Barbican and LSO have generated a detailed baseline and projections for the volume and nature of education and learning activities that would take place under each shortlisted option and the associated attendance at these events. These activities are funded and included in the revenue costs going forward. These projections have been based on an assessment of the capacity to deliver under each option (given the space, time and staff resources available) and the latent demand for the activities (given the number of schools, school children and adults that make up the target market). The latent demand for the proposed activities has been observed through current delivery and consultations with partner organisations. The activities have been classified in a number of ways:
   - By broad type of activity (Public/Participation/Platforms/Professional development)
   - By intensity (High/Medium/Low/Non-participatory)
   - By type of impact (Long/Medium/Immediate)

2. Attendance at these events has been split into:
   - participants and audiences, with an estimate of the number of unique visitors for each activity in any year and between years (a conservative approach has been adopted to assume that 25% of visits in any one year are from individuals who have taken part in activities in a previous year or the same year from another stream of education activity)
   - those who are under 18 years old and those who are 18 years old and over.

3. Involvement in the education and engagement activities is assumed to have an immediate wellbeing effect for adults, which accrues per visit, and for some attendees under 18 years old, a longer term, permanent impact. In order to be conservative, any long term impact on adult attendees has not been assumed in the analysis.
4. To value the immediate benefit, the per activity subjective wellbeing values of engagement with music cited earlier (£43 per visit) have been applied to the number of audience members and participants that are over 18 years old, to all types of activity.

5. For the valuation of the longer term benefits for those under 18 years old, there are three elements.

7.10.17 Firstly, a judgement on the likelihood of engagement in these activities as a child leading to the participant/audience member going on permanently to engage in music and arts as an adult, when they would not otherwise have done so. In order to arrive at the assumptions outlined in the table below ‘Increase in Likelihood of becoming regularly engaged in music as an adult as a result of participating in the following types of activity’ the types of activity have been differentiated between evidence from a range of literature has been consulted.

7.10.18 The methodology and proxies used to determine these values in the table are outlined below:

- Evidence from the ‘Taking Part Survey’ commissioned by DCMS to better understand adults’ engagement in culture, leisure and sport suggests that on average, adults who were taken to arts events occasionally (less than once per year) when growing up are still 8% more likely to regularly attend arts events as an adult than individuals who were never taken to arts events as children. This occasional attendance of arts events as a child has been used as a proxy for a medium impact/non-participatory activity (11%).

- A study by the National Endowment for the Arts in the US suggests that children who participated in music appreciation classes under the age of 12 years before giving up are 18% more likely to attend one arts event or more per year as adults than individuals who took did not partake in any art appreciation classes as children. This participation in arts appreciation classes as a child under the age of 12 has been used as a proxy for a medium impact/medium intensity activity (18%).

- The same study suggests that children who participated in music appreciation classes all the way through their childhood up to age 18 are 29% more likely to attend one arts event or more per year as adults than individuals who took did not partake in any art appreciation classes as children. This participation in arts appreciation classes throughout childhood has been used as a proxy for a long term impact/medium intensity activity (29%).

- It has been assumed that a non-participatory or low intensity event is unlikely to have a long-term impact (e.g. develop a new skill set) therefore a long term impact/non-participatory or low intensity activity is assumed not to be applicable to this analysis (N/A).

- Likewise, there are no activities sitting in the immediate impact/high intensity category (N/A).

- No suitable proxies were found for immediate impact/low intensity, medium impact/flow intensity and immediate impact/medium intensity activities given the limited literature on this topic. These figures have therefore been estimated and interpolated based on the trends observed in the proxy figures.

7.10.19 The table below sets out the increase in likelihood of becoming regularly engaged in music as an adult as a result of participating in the following types of activity.

### Increase in Likelihood of becoming regularly engaged in music as an adult as a result of participating in the following types of activity

<table>
<thead>
<tr>
<th>Impact</th>
<th>Non-participatory</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Intensity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate</td>
<td>8%</td>
<td>12%</td>
<td>14%</td>
<td>N/A</td>
</tr>
<tr>
<td>Medium</td>
<td>11%</td>
<td>14%</td>
<td>18%</td>
<td>28%</td>
</tr>
<tr>
<td>Long</td>
<td>N/A</td>
<td>N/A</td>
<td>29%</td>
<td>37%</td>
</tr>
</tbody>
</table>

**Notes:**
- *Encourage Children today to build audiences for tomorrow, Arts Council England, March 2009*
- *Estimation based on other proxies*
- *Not applicable event type*
7.10.20 Secondly, the extent to which this impact is additional has been estimated – i.e. that it would not have happened otherwise in the absence of engagement with this Barbican/LSO activity. As an example of this, an attendee who already participates in regular music lessons may get a lot of out of engagement with Barbican/LSO education activities and any subsequent engagement with music as an adult could not be attributed to this participation in Barbican/LSO activity. However, for an attendee who had had little previous engagement with music, engagement in the activity is more likely to have an additional impact that can be attributed to the visits to these education events. A judgement has been made based on the additionality of different types of activity, based on an assessment of the likely participants and the other educational opportunities to which they may have been exposed. In doing so, a cautious approach has been taken, since a specific evaluation or other evidence has not been identified to inform this. The table below sets out assumed additionality factors by type of education and engagement activity.

### Assumed impact additionality factors by type of education and learning activity

<table>
<thead>
<tr>
<th>Impact</th>
<th>Intensity</th>
<th>Non-participatory</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td></td>
<td>0%</td>
<td>1.0%</td>
<td>2.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Medium</td>
<td></td>
<td>2.5%</td>
<td>3.0%</td>
<td>5.0%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Long</td>
<td></td>
<td>2.5%</td>
<td>5.0%</td>
<td>10.0%</td>
<td>15.0%</td>
</tr>
</tbody>
</table>

Source: Regeneris Consulting assumptions. Note: these percentages represent the proportion of participants/attendees for whom there is an additional impact on the longer term propensity to engage with music.

7.10.21 These first two steps generate a cohort of unique individuals every year (and hence cumulatively) who go on, as adults, to become regular engagers with music, when they would not otherwise have done. As illustrations of this approach in practice:

- Out of 1,000 unique schoolchildren attending activities which are immediate impact and low intensity, just one (1,000 X 12% likelihood X 1% additionality; 0.1%) of these would, as a result, go on to become regularly engaged in music in the long term as an adult.
- In contrast, for every 1,000 unique schoolchildren attending long impact/high intensity activities, 55 (1,000 X 37% likelihood X 15% additionality; 5.6%) would become long term engagers.

7.10.22 The mix of activities and consequent overall additionality factors for each option is set out later in the report.

7.10.23 In order to estimate the wellbeing effects from this long term engagement, annual wellbeing values have been applied to this cohort of people, using the evidence cited earlier – i.e. a value of £742 per annum per person. (again it is assumed that this remains the same in real terms over the appraisal period). It is assumed that there will be an 8 year lag between the attendance at Barbican/LSO activity and subsequent regular engagement as an adult, based on the average age of attendees who are under 18 years old. There are also a number of externality effects arising from this cohort’s long term engagement with the arts, which are discussed below under Externalities.

7.10.24 Note that although conservative assumptions have been applied, given the relative lack of underpinning evidence, the valuations of the education activity are subject to higher levels of uncertainty than those for the other benefits. Consequently, the results have been subject to a more stringent downside sensitivity test in order to examine the impact on the overall BCR.

### Volunteering opportunities

7.10.25 Note that although conservative assumptions have been applied, given the relative lack of underpinning evidence, the valuations of the education activity are subject to higher levels of uncertainty than those for the other benefits. Consequently, the results have been subject to a more stringent downside sensitivity test in order to examine the impact on the overall BCR.

7.10.26 A number of techniques have been developed for placing a value on volunteering, including valuing:

- the output of volunteers (using the replacement cost approach, valued at the market wage)
- the subjective wellbeing benefits to volunteers.

Recent research found that regular volunteering was associated with a subjective wellbeing value of £13,500 per annum at 2011 prices.

7.10.27 Whilst there will be volunteering opportunities, they will not vary markedly across the shortlisted options, so these have not been valued in the cost-benefit analysis.

### Non-user benefits (non-use value)

7.10.28 In addition to benefits to the various users of the facilities, the facilities may have a benefit for those who do not use them. This non-use value is the value to individuals of knowing that a particular cultural good exists for others’ current use (altruistic value) or for future generations (bequest value), even though these individuals may never intend to use it themselves. Hence individuals may value the existence of a classical music orchestra and its facilities in this way even if they do not intend to visit themselves.
Evidence on the non-use value for the UK cultural sector specifically, is generally scarce.\textsuperscript{17} There is some international evidence from studies of the Vara Concert Hall in Switzerland and The Royal Theatre in Copenhagen.\textsuperscript{18}

Whilst there is no survey evidence of non-users available for the LSO or the Barbican, the value of donations is considered a useful proxy for non-use value. Most of the value of such donations is not linked to direct use but to the preservation of the continued existence of the asset. Therefore, development income towards the operating costs is included under revenues. It is important to note that this approach may underestimate the true size of the non-use value.

**ECONOMIC EXTERNALITIES**

**[INSTRUMENTAL VALUE]**

There are a number of important externality or spillover benefits associated with the project, not captured in the assessment of user and non-user benefits, as follows.

**Tourism spillovers**

The activities of the Barbican Centre and LSO generate tourism spillovers, through a number of sources, including:

- **Audiences who come from outside London and the UK, for whom the visit to the facilities is the primary, or an important, reason for their visit to London/ the UK (this would include, for instance, specialist music press coming for particular concerts).** The expenditure by such visitors outside the facilities themselves (e.g. on accommodation, food and drink, shopping etc.) is additional expenditure for London and the UK. The consequent direct and supply chain GVA generated by this expenditure represents the economic value of this spillover effect.

- **Orchestral players from regional and international orchestras and their supporting teams who visit London.** For audiences above, the spending of these visitors outside the facilities represents an economic benefit for London and the UK. The GVA from spending by orchestral players cannot be counted as an additional GVA benefit from the UK as it is paid for in part by the Barbican/LSO. However, the GVA from spending by orchestras has been estimated using data from the Barbican on audiences in 2014/15. This approach is as follows:
  - Audience numbers for each option have been estimated using the projections from the programming team.
  - The origin of audiences has been estimated using data from the Barbican on audiences in 2014/15. This indicated that 13% of audiences come from overseas (this proportion has remained stable in recent years).
  - The average off-site expenditure of overseas audiences has been estimated using data from the International Passenger Survey (IPS). The 2011 survey provided data on the average spend per visit by international visitors to the UK, split by the activities that they undertook. These data have been split by visitors who came to the UK for the purposes of a holiday or miscellaneous reasons, who attended a theatre/musical/opera/ballet (the closest fit category) and stayed for up to three nights. Average spend per visit for these visitors in 2011 was £449. This figure was then adjusted to account for the increase in average spend between 2011 and 2014 (this proportion has remained stable in recent years).
  - The breakdown of this gross expenditure (after VAT) has been estimated using data on spending by international visitors in the ONS Tourism Satellite Accounts. Expenditure taking place in the venues themselves has been netted off, by taking away the known average audience spend on tickets in 2014/15 (£23, including audiences who had complimentary tickets) and average secondary spend per audience.
member in the café/bar/restaurant/retail facilities (£1.07 for all audience members, including those who do not spend anything).

- The resulting figure is the gross off-site expenditure of audiences at the Barbican and LSO. This then needs to be netted down to account for spend that is non-additional i.e. would have happened anyway and cannot be attributed to the visit to the Barbican/LSO. This has been estimated using data from a recent report on the economic impact of the City of London’s arts and culture cluster, which indicated a 22% average additinality factor for overseas visitors (i.e. 78% of spend on average was non-additional). 21

- The economic effects of the resulting additional expenditure injection have then been estimated using Regeneris Consulting’s input-output model to estimate the first round and indirect/supply chain impacts on GVA for the UK. Induced effects are not included.

City Competitiveness

7.10.35 There is a wealth of research on the role of cultural assets in driving the competitiveness of cities as locations for high value business activities and highly skilled workers.

7.10.36 Cultural institutions are an important direct source of jobs and economic activity but they also play a much broader role in enhancing local competitiveness. It has been suggested that a city’s culture is now viewed as an ‘economic asset’ with a fundamental market value. 22 Arts and culture can improve the attractiveness of a location for skilled labour and capital. They not only provide important local amenities but can also act as spaces for civic engagement, connectivity and the exchange of ideas, reducing business and public services costs. 23 Economist Richard Florida argues that a substantial cultural offering is instrumental in a city’s ability to attract a creative class of highly skilled employees, often working within the digital media and software development industries. 24 These workers often demand a certain type of lifestyle with sufficient local amenities but in return have substantial disposable incomes to spend and productivity skills to drive the local economy forward.

7.10.37 Case study examples of UK cities which have benefitted from the development of a cultural hub include:

- Liverpool - Within the first year of Liverpool being awarded the ‘European Capital of Culture’ in 2008, inward investment enquiries in the city rose by 30%, demonstrating a link between investment in the arts and the desirability of the area as a business location. Over 50% of the city’s cultural sector peers agreed that the Cultural Development strategy had repositioned Liverpool as a ‘world-class city’ with the creative industries expanding by 8% between 2004 and 2008. 25

- Newcastle/Gateshead - Two cultural institutions were developed in succession alongside the River Tyne, the Baltic Centre for Contemporary Art and the Sage Gateshead Music Centre. The £150 million public sector investment in these cultural facilities subsequently secured Gateshead more than £1 billion private sector investment in the area, averaging £5 million per acre. 26 In addition, companies in the creative industries sector are increasingly employing highly skilled graduates from the region as well as attracting graduates from outside the region. 27

- Salford, Greater Manchester In 2000, the Lowry theatre opened, marking the first step of cultural-led regeneration in the area. The Lowry’s role as a ‘cultural catalyst’ was then used to successfully lobby the location of the Imperial War Museum site and generate further inward investment in the area. Salford remains central to Greater Manchester’s competitiveness, with the opening of MediaCityUK demonstrating how the development of a cultural hub can act as a catalyst for attracting businesses and highly skilled workers.

7.10.38 Turning to London specifically, the city clearly already has a rich cultural offer across a wide range of cultural and art forms. Currently its cultural offer ranks highly compared to international competitor locations – for example, the LSO itself is ranked highly compared to other orchestras in the world. 28 This cultural offer plays a role in attracting and retaining highly skilled workers in the City of London and Greater London. data from a recent report showed that nearly a fifth of attendees at events held at the Barbican were City of London based. 29

7.10.39 However, London’s concert halls often do not rank highly compared to other international concert halls, 30 and in the absence of investment in facilities London’s competitive position will further erode. Whilst this may only have a relatively modest impact on the location decisions of a small number of people, over time decisions by highly talented (and wealthy) people could make a difference to the trajectory of the City of London’s economy. In the context of the £340 billion London economy, small changes can have a large overall impact.

7.10.40 Although these effects are an important aspect of the strategic case for the project, it has been decided that there is no reliable way of placing a robust economic value on them. A switching value approach has therefore been applied, to illustrate the value that they would need to take, in order to change the project’s BCR to a certain level – this is set out below in the results of the cost-benefit analysis and should be borne in mind when interpreting the results.
Spillovers from engagement with music

7.10.41 In addition to the wellbeing effects for individuals engaging with music, there are further benefits to society. A range of recent research has explored these effects. These include a mix of impacts, which in practice are a mix of benefits to individuals and to society at large:

- **Health impacts.** Participation in cultural activities has been found to have a positive effect on overall health and wellbeing. Evidence suggests that engaging with the arts increases the likelihood of a person reporting they are in good health by 5.4%. Taking the national average NHS cost of £1,979 per person per year, it has been estimated that those in good health incur £693 less in overall NHS costs per year. This results in an average cost saving to the NHS of £37 per person, per year as a result of engagement with the arts. This value has been applied to the cumulative stock of people who have been estimated – as a direct result of engaging with education and learning at the Centre for Music – to go on to become regularly engaged with music/the arts [see above for the method].

- **Evidence suggests that 16-18 year olds who participate in musical activities are 8.4% more likely to report an intention to go on to further and higher education.** The Department for Education suggests the lifetime earnings for graduates are £400,000 greater than for non-graduates. Using this figure as an approximate for the economic value of further education, the study assumes that an 8.4% increase in the aspirations of students to continue their studies after school is associated with an approximate increase in lifetime earnings of £33,600.

- **The same research paper found that engagement with the arts is associated with a greater likelihood of volunteering: participating in, and being an audience member at, any arts event was associated with a 5% increase in the likelihood of volunteering frequently.** Other research has shown the subjective wellbeing value of regular volunteering to be £13,500 per annum (2011 prices).

- **A review of international evidence found that engagement with structured arts programmes led to an increase in transferable skills of 10-17% and an increase in children’s cognitive ability by 16% - 19%, compared with those who do not engage with the arts.** Participating in musical groups can also develop a range of transferable skills, including social networking, team work, self-discipline, cooperation and commitment.

- **A 12 year study in the United States of arts education and the effects on young people by Professor James Catterall demonstrated that participating in arts education improved student’s attainment in maths and literacy with a particularly marked improvement for students from low income families.**

7.10.42 The table below sets out indicators of higher education by socio-economic status and arts involvement.

<table>
<thead>
<tr>
<th>Indicators of higher education by socio-economic status and arts involvement</th>
<th>All Students</th>
<th>High socio-economic status</th>
<th>Low socio-economic status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Art participation</td>
<td>Low Art participation</td>
<td>High Art participation</td>
</tr>
<tr>
<td>Attended college</td>
<td>79.1%</td>
<td>98.6%</td>
<td>92.0%</td>
</tr>
<tr>
<td>Attended post high school institution</td>
<td>53.8%</td>
<td>93.3%</td>
<td>76.0%</td>
</tr>
<tr>
<td>Mostly A’s and B’s as undergrad</td>
<td>31.0%</td>
<td>36.8%</td>
<td>55.0%</td>
</tr>
<tr>
<td>MA</td>
<td>3.8%</td>
<td>12.1%</td>
<td>10.9%</td>
</tr>
<tr>
<td>BA</td>
<td>29.6%</td>
<td>17.7%</td>
<td>6.3%</td>
</tr>
</tbody>
</table>

Source: Doing well and doing good by doing art, James Catterall
 PART II
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• Using research from the Centre for the Economics of Education, an increase of 1 standard deviation in cognitive ability at age 11 is associated with an approximate 10% increase in hourly wages at the age of 42.\textsuperscript{11} This suggests that social skills are important both because they influence achievement at school, but also because they impact on labour market performance directly.

• A study by Pricewaterhouse Coopers [PWC] has estimated that 6.6% of the children engaged with Creative Partnership Programmes [a government funded scheme to encourage creative professionals to work in partnership with schools across the UK] who achieved 5 ‘good’ GCSEs (L2) would not have done so in the absence of Creative Partnerships. Applying DfE wage estimates for someone with level 2 qualifications suggests that engaging with music as a child could lead to an extra £93,000 over a person’s lifetime.\textsuperscript{14}

• Adult engagement with the arts has been found to increase economic productivity, with those that are unemployed being 12% more likely to have looked for a new job in the last month if they are actively engaged with the arts.\textsuperscript{19}

• Language and Literacy Skills – there is a significant amount of evidence that links musical engagement with development of language and literacy skills. Speech and music have a number of shared processing systems and therefore musical engagement can enhance processing and thus impact linguistic skills. A study involving eight year old children showed that with just eight weeks of musical training there was an improvement in perceptual cognition compared with the children with no music education.\textsuperscript{11}

• Reduced crime costs - A study by PWC has estimated that 6.6% of the children engaged with Creative Partnership Programmes who achieved 5 ‘good’ GCSEs (L2) would not have done so in the absence of Creative Partnerships. A 1% increase in the proportion of the working age population with qualifications equivalent to L2 could also potentially reduce the social costs of crime by up to £20 million per year.\textsuperscript{12}

• Reduced truancy - A further report by NFER [2008] found a statistically significant relationship between Creative Partnerships and reduced learner absence and exclusion rates in primary schools. Using the National Audit Office statistics which found that a reduction in absence by one day per learner would represent an educational revenue saving of around £127 million a year, an estimated value could be placed on truancy cost savings as a result of musical education.

Although there is therefore a range of potential positive externalities arising from the education and learning activities across the options, only the health and productivity benefits have been valued; other values such as the increase in the likelihood of volunteering, the reduced social costs and crime and truancy etc. are not valued. There are two reasons for this. Firstly, this ensures that the approach to estimating benefits is conservative. Secondly, the health and productivity benefits have been researched recently using established techniques and are more readily quantifiable than the other benefits. The fact that only some of the potential externalities benefits from long term engagement in music have been valued should be borne in mind when interpreting the results of the cost-benefit analysis.

This has been done by applying the values of health benefits (£37 per person per annum) and skills and productivity (£33,600 over a working lifetime)\textsuperscript{41} to the cohort of all attendees who participate. The current plans for the Centre for Music in Option 4 represent a 24% increase in the number of people attending classical music concerts. Accordingly and given the distinctiveness of the classical music offer, it is unlikely that there will be a decrease in the level of the number of people attending classical music concerts. However, for prudence at 10% displacement for classical audiences has been assumed. Although the audience for the contemporary music programme and rentals is also expected to grow, there is more likely to be some displacement of these audiences from other venues. 25% displacement has been assumed for these concerts.

7.10.45 At the end of the appraisal period, the site on which the Centre for Music would sit will retain a residual value. It has been assumed that the value used in the calculation of opportunity cost (£160m) remains constant in real terms (although, of course, in discounted terms at the end of the appraisal period this is heavily discounted). This is a conservative assumption given the recent and projected growth in land values in the City of London.

Additional benefits

7.10.46 All benefits included in the analysis are net additional for the UK. That is, they are stated after deadweight, displacement, substitution and leakage effects. This has been done as follows:

• Concert attendees. It has been assumed that there is some displacement of attendance from other venues in the UK under all options. The audience market research indicates that there is significant projected growth in the size of the market for classical and other music concerts, driven in particular by the growth in the population of London. An estimate of audience growth in the next ten years from 2015 to 2025 is between 15% and 25% (see Section 16), and the current plans for the Centre for Music in Option 4 represent a 24% increase in the number of people attending classical music concerts. Accordingly and given the distinctiveness of the classical music offer, it is unlikely that there will be displacement of audiences at classical concerts. However, for prudence a10% displacement for classical audiences has been assumed. Although the audience for the contemporary music programme and rentals is also expected to grow, there is more likely to be some displacement of these audiences from other venues. 25% displacement has been assumed for these concerts.
7.10.47 Whilst these assumptions have not been subjected to sensitivity testing directly, the effect of decreases and increases in the associated benefits have been examined (which may occur due to changes in the volume of attendance, or the additionality of this attendance, or both).

7.11 RESULTS OF COST-BENEFIT ANALYSIS

SUMMARY OF SPACE AND ACTIVITIES ACROSS OPTIONS

Accommodation Schedule

The following table summarises the volume and breakdown of space across the options, compared to the baseline position. Option 4 would have a total internal floorspace of 29,845m², compared to 22,116m² in Option 3 and 21,400m² in Option 2. The particular things to note are the differences between Option 4 and Option 3, in particular the additional space created for:

- Support areas for performance spaces in Option 4
- The Club Space
- Front of House
- Digital facilities
- Learning, meeting and entertaining.

<table>
<thead>
<tr>
<th>Option 2: Redevelop Barbican Hall m²</th>
<th>Option 3: New Concert Hall m²</th>
<th>Option 4: Centre for Music m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Performance Space 1 - Concert Hall</td>
<td>2,338</td>
<td>2,406</td>
</tr>
<tr>
<td>2 Performance Space 1 - Concert Hall - Support spaces</td>
<td>4,255</td>
<td>2,890</td>
</tr>
<tr>
<td>3 Performance Space 2 - Club Space</td>
<td>-</td>
<td>401</td>
</tr>
<tr>
<td>4 Rehearsal</td>
<td>440</td>
<td>375</td>
</tr>
<tr>
<td>5 Front of House</td>
<td>3,688</td>
<td>3,867</td>
</tr>
<tr>
<td>6 Learning, Meeting and Entertaining</td>
<td>985</td>
<td>1,326</td>
</tr>
<tr>
<td>7 Archive</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>8 Digital</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>9 Performers / Backstage</td>
<td>1,268</td>
<td>1,378</td>
</tr>
<tr>
<td>10 Production Support</td>
<td>880</td>
<td>847</td>
</tr>
<tr>
<td>11 Management / Administration</td>
<td>-</td>
<td>656</td>
</tr>
<tr>
<td>12 Back-of-House Entrance</td>
<td>670</td>
<td>1,265</td>
</tr>
<tr>
<td>13 Outdoor Performance</td>
<td>-</td>
<td>95</td>
</tr>
<tr>
<td>Sub-total</td>
<td>14,558</td>
<td>15,045</td>
</tr>
<tr>
<td>Other (circulation, building services, walls, partitions etc.)</td>
<td>6,842</td>
<td>7,071</td>
</tr>
<tr>
<td>Grand Total</td>
<td>21,400</td>
<td>22,116</td>
</tr>
</tbody>
</table>
Activities: overall summary

7.11.2 The volume and type of activities taking place within the facilities are important drivers of the operating costs/revenues and the non-financial benefits across the options. The following table summarises the assumptions on the number of events by type and associated attendance across the shortlisted options. Key points to note are:

- In **Option 1** the assumption is that attendance remains the same over the full appraisal period. There is a possibility in the do nothing option of marginal erosion in audience numbers in the event of a lack of investment and a consequent reduction in competitiveness relative to other international concert halls. However, given the projected increases in the size of the market (see Section 16), for prudence and so as not to understate the reference case, it has been assumed that attendance remains static.

- **Option 2** attendances are the same as in Option 1 in steady state terms, except that the loss of the Curve gallery leads to the loss of the associated exhibition attendees. Under this option there is significant disruption whilst the Barbican is closed for refurbishment and a subsequent need to rebuild audiences, which impacts on the overall number of attendees over the period.

- **Option 3** would see a significant increase in attendance in all categories compared to Option 1, with the largest increases at commercial events held in the Barbican. There is also an increase in attendance at learning events, as well as in general footfall.

- **Option 4** has a further increase in attendance, particularly in commercial and contemporary events, learning activities and general footfall.

<table>
<thead>
<tr>
<th></th>
<th>Current Base (Option 1)</th>
<th>Option 2: Repurpose Barbican Hall</th>
<th>Option 3: New Concert Hall</th>
<th>Option 4: Centre for Music</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(thousands)</td>
<td>(thousands)</td>
<td>(thousands)</td>
<td>(thousands)</td>
</tr>
<tr>
<td>Commercial</td>
<td>106</td>
<td>106</td>
<td>194</td>
<td>208</td>
</tr>
<tr>
<td>Rentals</td>
<td>123</td>
<td>123</td>
<td>155</td>
<td>161</td>
</tr>
<tr>
<td>Contemporary</td>
<td>68</td>
<td>68</td>
<td>106</td>
<td>182</td>
</tr>
<tr>
<td>Classical</td>
<td>120</td>
<td>120</td>
<td>168</td>
<td>167</td>
</tr>
<tr>
<td>Education</td>
<td>73</td>
<td>73</td>
<td>135</td>
<td>257</td>
</tr>
<tr>
<td>Exhibition</td>
<td>355</td>
<td>0</td>
<td>355</td>
<td>521</td>
</tr>
<tr>
<td>Sub-total</td>
<td>845</td>
<td>490</td>
<td>1,113</td>
<td>1,496</td>
</tr>
<tr>
<td>Other venues</td>
<td>432</td>
<td>432</td>
<td>432</td>
<td>432</td>
</tr>
<tr>
<td>General Footfall</td>
<td>700</td>
<td>700</td>
<td>832</td>
<td>1,050</td>
</tr>
<tr>
<td>Total</td>
<td>1,977</td>
<td>1,622</td>
<td>2,377</td>
<td>2,978</td>
</tr>
</tbody>
</table>
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Education and engagement

7.11.3 The anticipated numbers of schoolchildren and adults engaged by the education and engagement activity in a steady state year are set out in the following table. This illustrates the scale of engagement which is enabled across the options, compared to the baseline position in Option 1 (attendance in Option 2 would remain the same as at present there would be no further investment in facilities or staff), and puts it in the context of the size of the relevant population.

7.11.4 Option 3 would enable an increase in the numbers of both schoolchildren and adult attendance at education and engagement activities. However, significant space and resource constraints would remain. Option 4 would deliver a step change in the number of beneficiaries reached.

7.11.5 To put the figures into context, they have been compared to the current size of the population of schoolchildren and adults in the UK, based on the assessment of unique individuals attending the activities. This clearly shows the increase in reach which is achieved in Option 4. The number of visits by schoolchildren in Option 4 is equivalent to one in every 61 schoolchildren in the UK, compared to one in every 210 at present. In interpreting these figures it is important to note that ONS projections indicate that the number of children aged 6 to 15 in London is expected to grow by 12%. Consequently, the target population for the education activities aimed at schoolchildren will grow, creating growing opportunities to engage them in the education activities of the Centre for Music.

7.11.6 These assumptions on attendance are subjected to sensitivity testing in a later section of the report.

<table>
<thead>
<tr>
<th>Options</th>
<th>000's</th>
<th>Option 3: New Concert Hall</th>
<th>Option 4: Centre for Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options 1 and 2</td>
<td></td>
<td>000's</td>
<td>000's</td>
</tr>
</tbody>
</table>

* Total Reach

- Under 18 years old: 60.0, 93.0, 208.0
- 18 years old and above: 49.9, 64.5, 166.4
- All ages: 109.9, 157.5, 374.4

Penetration rate (based on estimate of unique attendees)

- 1 in every…schoolchildren in UK: 210, 136, 61
- 1 in every…adults in UK: 1,051, 813, 315

School pupil numbers taken from ONS Schools, Pupils and their Characteristics (for England), the Scottish Government High Level Summary of Statistics data for School Education trends (for Scotland) and Department of Education Northern Ireland Number of Pupils attending Educational Establishments in Northern Ireland by School Type (for Northern Ireland). Adult population estimates taken from ONS Midyear Population Estimates (all 16 years old and above).

* Reach figures include participants in LSO and Barbican education activity, and participants in the Guildhall School’s non-formal education activity.
7.11.7 As set out earlier, the valuation of the long term benefits of this education activity for the schoolchildren is partly determined by the mix of education activities taking place. This mix has been estimated across options in the following tables.

7.11.8 This also illustrates the overall impact additionality implied by this mix of activities (after applying the methodology described earlier) – i.e. the percentage of all school age attendees who become long term engagers in music as adults as a result of this attendance. As this implies, at present (in Option 1), 14 in every 1,000 attendees who attend these events go on to become regularly engaged in music as adults. Although the number of attendees increases considerably in Option 4, given the focus of these activities the overall additionality is estimated to fall to 9 in 1,000 attendees.

7.11.9 Clearly, there is considerable uncertainty around the overall additionality figures. However, it is considered that these overall additionality rates implied in the activities are fairly conservative estimates. Given this uncertainty, the education values have been subject to a strong downside sensitivity test.

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Options 1 and 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-participatory</td>
<td>Low</td>
</tr>
<tr>
<td>Immediate</td>
<td>3%</td>
<td>17%</td>
</tr>
<tr>
<td>Medium</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Long</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Overall impact additionality</td>
<td>1.4%</td>
<td></td>
</tr>
</tbody>
</table>

Option 3: New Concert Hall

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Options 3: New Concert Hall</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-participatory</td>
<td>Low</td>
</tr>
<tr>
<td>Immediate</td>
<td>3%</td>
<td>14%</td>
</tr>
<tr>
<td>Medium</td>
<td>0%</td>
<td>11%</td>
</tr>
<tr>
<td>Long</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Overall impact additionality</td>
<td>1.5%</td>
<td></td>
</tr>
</tbody>
</table>

Option 4: Centre for Music

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Options 4: Centre for Music</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-participatory</td>
<td>Low</td>
</tr>
<tr>
<td>Immediate</td>
<td>3%</td>
<td>52%</td>
</tr>
<tr>
<td>Medium</td>
<td>0%</td>
<td>13%</td>
</tr>
<tr>
<td>Long</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Overall impact additionality</td>
<td>0.9%</td>
<td></td>
</tr>
</tbody>
</table>
Digital reach

7.11.10 The following table sets out the assumptions on digital reach across the options. As set out earlier, it is assumed that some additional activity is possible in Options 2 and 3 but that this is limited by the available infrastructure and facilities. Option 4 delivers a more significant increase in activity and reach given the additional facilities that would be developed. Note that as well as an increase in reach, Option 4 also delivers a significant increase in the depth of engagement, driven in particular by the introduction of online learning courses, which have a greater average duration. Total digital reach is anticipated to be 2 million people internationally. For the purposes of the economic analysis a value has only been attributed to UK residents accessing content for free.

<table>
<thead>
<tr>
<th>Number of UK Residents accessing content for free (000s per annum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Average Duration (minutes)</td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td>LSO Play and similar platforms</td>
</tr>
<tr>
<td>Local area broadcasts</td>
</tr>
<tr>
<td>Content for schools</td>
</tr>
<tr>
<td>Digital publishing</td>
</tr>
<tr>
<td>Video conferencing</td>
</tr>
<tr>
<td>Online learning courses</td>
</tr>
<tr>
<td>Audio visual broadcasts</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
COSTS

Capital Costs

7.11.11 The capital costs for each option are summarised below on both an undiscounted and discounted basis. The anticipated split in private/public funding for the project is then set out after the assessment of optimism bias, in the table below.

- Option 2 has a significant construction cost (£113.4m in 2015/16 prices), stemming from the need to demolish and reconstruct the existing Barbican Hall. The total capital cost would be £157m. Including contingencies, this rises to £174m.

- Construction costs in Option 3 are higher (£127.3m) and there are additional requirements for fixtures and fittings (including new digital equipment and musical instruments). Total capital costs would be £181m, rising to £200m including contingencies.

- Option 4 has the highest construction cost (£234m) given the scale and specification of the Centre for Music building. Costs of fixtures and fittings are also larger than in Option 3, including the need for additional digital and AV equipment and other loose furniture. Total capital costs for Option 4 would be £284m, rising to £313m with contingencies.

7.11.12 Note that in the ‘do nothing’ Option, although there are no major capital costs, there is an ongoing budget for repairs and maintenance – however, this is factored into the operating costs (see below).

<table>
<thead>
<tr>
<th>Option 2: Redevelop Barbican Hall</th>
<th>Option 3: New Concert Hall</th>
<th>Option 4: Centre for Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>£m</td>
<td>£m</td>
<td>£m</td>
</tr>
<tr>
<td>Cost Breakdown (2015/16 prices, undiscounted)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Development</td>
<td>1.9</td>
<td>3.5</td>
</tr>
<tr>
<td>Construction</td>
<td>113.4</td>
<td>127.3</td>
</tr>
<tr>
<td>Statutory Consents</td>
<td>0.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Fixtures, fittings and equipment</td>
<td>12.1</td>
<td>17.3</td>
</tr>
<tr>
<td>Total Build &amp; Refurbishment Cost (exc. Contingency)</td>
<td>127.8</td>
<td>148.7</td>
</tr>
<tr>
<td>Professional Fees</td>
<td>28.0</td>
<td>28.1</td>
</tr>
<tr>
<td>Client Costs</td>
<td>1.2</td>
<td>4.7</td>
</tr>
<tr>
<td>Total costs (2015/16 prices, undiscounted)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- exc. contingency</td>
<td>157.0</td>
<td>181.4</td>
</tr>
<tr>
<td>- inc. contingency</td>
<td>173.8</td>
<td>200.5</td>
</tr>
<tr>
<td>Total Costs (2015/16 prices, discounted)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- exc. contingency</td>
<td>120.6</td>
<td>138.1</td>
</tr>
<tr>
<td>- inc. contingency</td>
<td>133.4</td>
<td>152.5</td>
</tr>
</tbody>
</table>

Notes:
- Contingencies include a 7.5% contingency on construction costs and a 5% contingency on client costs. Professional fees are calculated on the basis of these costs including contingencies.
- Costs exclude VAT and finance costs.
- Discounted costs have been discounted over the project development and construction period (2015/16 to 2026/27) at HM Treasury Social Discount Rate.
An optimism bias assessment of the capital costs in the options has been conducted. This has been done by applying HM Treasury Green Book guidance on adjusting capital costs for optimism bias. Given its potential complexity and the unique nature of the building, the project is properly classed as a non-standard building, meaning that the upper bound optimism bias factor for costs is 51%.

The adjustment for residual optimism bias has been undertaken in consultation with the external Project Manager (GVA Acuity), based on judgements on the extent to which the contributory factors can be expected to be mitigated. The results are set out in the table (see following pages) and indicate a managed optimism bias of 33% should be added to the capital expenditure costings (excluding contingencies).

HM Treasury Green Book guidance breaks down the ‘contributory factors’ that historically have led to optimism bias into four broad categories: procurement, project specific, client specific and external influences. In attributing a mitigation factor to the risks within these categories, a cost benchmarking report carried out by GVA Acuity and Gardiner & Theobald has been taken into consideration. This report informed the cost estimations by taking an average of outturn costs for 11 comparable symphonic concert hall developments within the last 20 years. Additional contingencies were then added to these costings to estimate a final conservative cost estimation per square footage of space. A copy of the benchmarking report methodology and findings can be found in appendix 7A.

Although no contractor has been appointed for the project yet and unforeseen circumstances cannot be predicted, some degree of mitigation factor has been applied to the risks within this section. This is as a result of the benchmarking report already taking account of the final costs and overruns of similar projects. Discussions with the external Project Manager indicated that the benchmarked concert halls had a similar contract complexity to that envisioned for the new concert hall in London. The high profile nature of the project has also meant that discussions with various involved parties is happening at an earlier stage than would normally be expected.

A fairly significant mitigation factor has been applied to the risks within this sector as a result of the benchmarked projects having similar levels of design complexity as the envisioned new concert hall. The majority of benchmarked projects also pushed the boundaries of innovation at the time they were constructed and subsequently suffered the cost implications and risks associated with this.

The overall costs per square metre assumed for the Centre for Music equate to £5,893 per square metre (including contingencies). For context, this compares with £4,500 - £5,000 per square metre for a large hospital located in London and £3,800 per square metre for a CAT A office building.

The business case and project management risks have been partially mitigated given the costs have been based on a benchmarking report for recent international concert halls with additional contingencies added on top. Steps have also been taken to ensure that expert advisors have been brought in at every stage of the project development to date.

Site specific risks have not been able to be mitigated given the development is non site specific at this stage.

Although economic, legislative and technology changes cannot be accurately predicted, some mitigation has been applied to these factors as the majority of concert halls used in the benchmarking analysis suffered from changing economic conditions and resulting funding implications as well as other regulation and technology changes during their development.

Together, these mitigations amount to an overall 35% mitigation of the upper bound optimism bias, leaving a residual optimism bias in the base case of 33%.

7.11.13

7.11.16

7.11.17

7.11.18

7.11.19

7.11.20

7.11.21

7.11.22
### Optimism bias assessment

<table>
<thead>
<tr>
<th>Classification</th>
<th>Non-standard building</th>
<th>Mitigation factor</th>
<th>Justification for mitigation factor</th>
<th>% mitigation on CAPEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Expenditure</td>
<td>51%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Procurement

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Mitigation Factor</th>
<th>Justification for mitigation factor</th>
<th>% mitigation on CAPEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complexity of Contract Structure</td>
<td>1%</td>
<td>0.8</td>
<td>The contract structure is expected to be modeled around an industry standard structure. The benchmarking exercise involved concert halls with similar levels of contract complexity to those expected, although not all unforeseen complexities can be accounted for.</td>
</tr>
<tr>
<td>Late Contractor Involvement in Design</td>
<td>2%</td>
<td>0.6</td>
<td>Although the contractor has not yet been appointed, it is anticipated by all involved parties that the contractor will be brought in at the earliest possible stage. Due to the high-profile nature of this development, the cost consultants have already had very early access to planners in order to increase the accuracy of cost estimations.</td>
</tr>
<tr>
<td>Poor Contractor Capabilities</td>
<td>5%</td>
<td>0</td>
<td>No contractor has been identified yet, therefore no mitigation factor will apply.</td>
</tr>
<tr>
<td>Government Guidelines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispute and Claims Occurred</td>
<td>11%</td>
<td>0.5</td>
<td>A number of the concert halls in the benchmarking exercise have suffered from serious disputes throughout the development process, leading to increased costs. This factor has therefore already been partially mitigated in the benchmarked costing figures although the cost impact of unforeseen disputes cannot be accurately predicted.</td>
</tr>
<tr>
<td>Information Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other(specify)</td>
<td></td>
<td></td>
<td>No specific discussion yet</td>
</tr>
</tbody>
</table>

#### Project Specific

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Mitigation Factor</th>
<th>Justification for mitigation factor</th>
<th>% mitigation on CAPEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Complexity</td>
<td>3%</td>
<td>0.6</td>
<td>The design of the new concert hall is unlikely to be significantly more complex than those listed in the benchmarking report, therefore the increased costs associated with this risk have largely been accounted for. However, the design elements remain incomplete until a site has been confirmed and contractor appointed.</td>
</tr>
<tr>
<td>Degree of Innovation</td>
<td>9%</td>
<td>0.7</td>
<td>A degree of innovation will be involved in the new project but the factor has largely been accounted for in the benchmarking report which only includes projects completed in the last 20 years, the majority of which tried to push the boundaries of innovation.</td>
</tr>
<tr>
<td>Environmental Impact</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other(specify)</td>
<td>5%</td>
<td>0</td>
<td>No specific discussion yet</td>
</tr>
</tbody>
</table>
## PART II
### OUTLINE BUSINESS CASE

### CENTRE FOR MUSIC
OUTLINE BUSINESS CASE AND FEASIBILITY STUDY

<table>
<thead>
<tr>
<th>Classification</th>
<th>Mitigation factor (1 = fully mitigated, 0 = not mitigated at all)</th>
<th>Justification for mitigation factor</th>
<th>% mitigation on CAPEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification: Non-standard building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Expenditure</td>
<td>51%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Bound</td>
<td>0.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client Specific</td>
<td>11.5%</td>
<td>Outline Business Case is currently being finalised but appraisal demonstrates viable scheme. Costs have been based on a benchmarking report for final cost per square metre for recent international concert halls with additional contingencies added on top (11% for increased London costs, 7.5% for construction costs and 5% for overall costs). Uncertainties remain regarding the final site location assembly and more work is needed to understand and meet stakeholder interests.</td>
<td></td>
</tr>
<tr>
<td>Inadequacy of the Business Case</td>
<td>23% 0.5</td>
<td></td>
<td>11.5%</td>
</tr>
<tr>
<td>Large Number of Stakeholders</td>
<td>0.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding Availability</td>
<td>0.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Management Team</td>
<td>2% 0.2</td>
<td>Although the Barbican/LSO/Guildhall School have not delivered a project of this scale before, steps have been taken to ensure that expert advisors have been brought in at every stage. However, given the early stages of this project this factor can only be partially mitigated.</td>
<td>0.4%</td>
</tr>
<tr>
<td>Poor Project Intelligence</td>
<td>6% 0.2</td>
<td>Significant study has been undertaken to look at comparable project costs for international symphony concert halls and reasons for cost overruns. However, at this stage the development is non site specific, therefore only a partial mitigation factor has been applied.</td>
<td>1.2%</td>
</tr>
<tr>
<td>Other(specify)</td>
<td>2% 0</td>
<td>No specific discussion yet</td>
<td>0.0%</td>
</tr>
<tr>
<td>Public Relations</td>
<td>0.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Characteristics</td>
<td>1% 0</td>
<td>At this stage the development is non site specific, therefore no mitigation factor will be applied here.</td>
<td>0.0%</td>
</tr>
<tr>
<td>Permits/Consents/Approvals</td>
<td>&lt; 1% 0</td>
<td>At this stage the development is non site specific, therefore no mitigation factor will be applied here.</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other(specify)</td>
<td>3% 0</td>
<td>At this stage the development is non site specific, therefore no mitigation factor will be applied here.</td>
<td>0.0%</td>
</tr>
<tr>
<td>External Influences</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political</td>
<td>0.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>13% 0.25</td>
<td>Although economic, legislative and technology changes cannot be accurately predicted, some mitigation has been applied to these factors as the majority of concert halls used in the benchmarking analysis suffered from changing economic conditions and resulting funding implications as well as other regulation and technology changes during their development.</td>
<td>3.3%</td>
</tr>
<tr>
<td>Legislative/Regulations</td>
<td>7% 0.25</td>
<td></td>
<td>1.8%</td>
</tr>
<tr>
<td>Technology</td>
<td>5% 0.25</td>
<td></td>
<td>1.3%</td>
</tr>
<tr>
<td>Other(Specify)</td>
<td>2% 0</td>
<td>No specific discussion yet</td>
<td>0.0%</td>
</tr>
<tr>
<td>Managed Optimism Bias (MITIGATION)</td>
<td>100%</td>
<td>Managed Optimism Bias (MITIGATED)</td>
<td>33.2%</td>
</tr>
<tr>
<td>Managed Optimism Bias (MITIGATED)</td>
<td>35%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CAPITAL FUNDING

7.11.23 The following table sets out the capital costs including optimism bias (in 2015/16 prices, present value terms) and the anticipated split in private and public funding for the project. As set out earlier in the Economic Case, the project team has taken advice from a fundraising consultant on the level of private sector funding that can realistically be raised for the project. Applying the assumptions set out earlier, it has been estimated that the split in private and public funding would be as set out in the table below. These assumptions are later subject to sensitivity testing.

It is anticipated that the public sector contribution would be delivered by key stakeholders. It is assumed that any cost-overruns would need to be covered by the public sector. In summary:

- The capital cost of Option 4 including optimism bias is £377m (in undiscounted, 2015/16 prices). After the expected private sector contribution of £125m, this leaves a residual cost to be met by the public sector of £252m, or £192m once discounted.

- Option 3 has a lower capital cost at £241m including optimism bias (in undiscounted, 2015/16 prices). As set out earlier, the anticipated private sector contribution would be lower. After taking this into account, the residual cost to the public sector would be £166m, or £127m once discounted.

- Option 2 has lower capital costs (£209m including optimism bias) but also a lower expected private funding contribution. The public sector contribution would therefore be £184m, or £141m once discounted.

7.11.24 The public sector contribution set out below is used later in the calculation of Net Present Value and Benefit-Cost Ratio.

7.11.25 Clearly, should the actual level of optimism bias be lower than presented here, the public sector contribution to the project would fall. In the sensitivity analysis presented later, the impact of a higher and lower optimism bias factor on the BCR is demonstrated.
OPPORTUNITY COST OF LAND

7.11.26 Consultations with the City of London indicate that the value of the land required for the Centre for Music, in the City, would be of the order of £160m, based on valuing the land for commercial use. This value is used in the economic appraisal for Option 4. For both options it is assumed that the opportunity cost is incurred in 2017/18 – they are discounted on this basis. These values are also used in the estimation of the residual value of the site at the end of the appraisal period (there these are discounted accordingly) – see below under Benefits.

OPERATING COSTS AND REVENUES

7.11.27 The table below summarises in £ millions the operating costs across each of the options. The key points to note are as follows:

- In option 1 it is assumed that both organisations would face the same current operating costs and revenues over the appraisal period as at present, with a continuation of the current combined operating deficit of £25.6m p.a., which is funded through City of London Corporation and Arts Council England grant.

- Option 2 would see a reduction in both operating costs and revenues for the Barbican due to the loss of the Curve gallery as a result of the repurposing. This would lead, for example, to a loss of associated box office revenue and secondary income as well as an anticipated downward negotiation of the concession rate. This would be marginally offset by the reduction in running costs, leading to a slight reduction in operating deficit. It is important to note the significant temporary disruption costs that would occur in this option as the Barbican would close entirely for three years and incur redundancy costs in the period. The LSO would need to find an alternative location for concerts during this time, with associated costs and potential reduction in attendance.

- In Option 3, costs and revenues for both organisations would increase, particularly for the Barbican given the larger operation that it would become. In particular there would be increases in building related costs, direct music programming costs and education and engagement activities. The Barbican would also be able to increase its income from commercial events and a range of music types given the space and time freed up in the Barbican Hall. The LSO would see a small increase in costs associated with the delivery of education activities and development income is expected to increase.

- Option 4 would see a further increase in costs and revenues for the Barbican associated with running the Centre for Music. The LSO’s costs would remain as in Option 3, and revenues are expected to increase as a result of increases in development income, box office income and exhibition space income. Although Option 4 has higher operating costs than Option 3, it has a lower operating deficit because of the greater scope for income generation. The presence of the Club Space and the greater footfall associated with casual visitors and visitors to education and engagement events, will create additional income generation and opportunities for secondary spend.

<table>
<thead>
<tr>
<th>Option 1: Do Nothing</th>
<th>Option 2: Repurpose Barbican Hall</th>
<th>Option 3: New Concert Hall</th>
<th>Option 4: Centre for Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steady State Year</td>
<td>Present Value</td>
<td>Steady State Year</td>
<td>Present Value</td>
</tr>
<tr>
<td>Total operating costs</td>
<td>£57.3</td>
<td>£53.5</td>
<td>£68.3</td>
</tr>
<tr>
<td></td>
<td>£1,570</td>
<td>£1,413</td>
<td>£1,786</td>
</tr>
<tr>
<td>Total revenues</td>
<td>£31.7</td>
<td>£28.0</td>
<td>£36.1</td>
</tr>
<tr>
<td></td>
<td>£868</td>
<td>£748</td>
<td>£954</td>
</tr>
<tr>
<td>Combined operating position</td>
<td>-£25.6</td>
<td>-£25.5</td>
<td>-£665</td>
</tr>
</tbody>
</table>

Note: Present values are discounted at HM Treasury social discount rate; steady state year values are undiscounted. Income excludes public sector grant.
PART II
OUTLINE BUSINESS CASE

CENTRE FOR MUSIC
OUTLINE BUSINESS CASE AND FEASIBILITY STUDY

7.11.28 In addition to the financial benefits in the form of revenues for the Barbican and LSO outlined above, the economic appraisal considers a range of non-financial benefits. The approach to quantifying these is explained earlier in the Economic Case. The results are set out below.

7.11.29 In interpreting this it is important to note that there are several key benefits from the project that have not been quantified, including:

- The impact of investment in the cultural offer on City of London competitiveness.
- The contribution to the success of the Guildhall School of Music and Drama (and associated soft power effects).
- Potential spillover benefits for the wider cultural sector.
- Tourism spillovers arising from touring artists’ entourages and press.
- Welfare benefits linked to health and social inclusion, crime reduction and so on.
- Non-use value [other than that proxied by development income].

Wellbeing

7.11.30 In each of the options there are wellbeing benefits for UK residents associated with attendance at concerts, education and learning activities and the consumption of digital content. The present value of these benefits is set out in the following table, by option.

7.11.31 The benefits from concert attendance are driven by the number of events and associated attendance that is expected to be achieved. Option 2 has the lowest associated wellbeing value over the appraisal period because of the need to close the Barbican Hall while it is being refurbished, and the fact that once it re-opens there would be no increase in concert attendance and the Curve gallery would be lost. Option 3 sees an increase in the wellbeing benefit from concert attendance, but no change in the benefits associated with the Curve gallery. The greatest wellbeing benefit is delivered by Option 4, given the higher attendance at concerts enabled within the Barbican Hall and the Centre for Music, and the increase in attendance due to the new exhibition space.

7.11.32 In terms of education and engagement benefits:

- Option 2 again delivers the lowest benefit due to the temporary disruption and the fact that no increase in education and learning activities is possible due to the continuing space constraints.
- Option 3 would see an increase in both the immediate and long term benefits, given the increase in the volume of education and learning events that would take place.
- Option 4 would have the greatest benefit since it would enable both a greater volume and intensity of activity to take place. This is reflected in both the immediate and long term benefits.

7.11.33 Option 4 generates the greatest digital benefit due to the greater investment in infrastructure and facilities that would take place, and the activity that this would enable. As set out earlier it is assumed that some further activity is possible in Options 2 and 3 compared to the reference case.

<table>
<thead>
<tr>
<th>Type of benefit</th>
<th>Option 1: Do Nothing</th>
<th>Option 2: Repurpose Barbican Hall</th>
<th>Option 3: New Concert Hall</th>
<th>Option 4: Centre for Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concert attendance</td>
<td>£259</td>
<td>£240</td>
<td>£330</td>
<td>£364</td>
</tr>
<tr>
<td>Exhibition Attendances</td>
<td>£115</td>
<td>£23</td>
<td>£115</td>
<td>£151</td>
</tr>
<tr>
<td>Education and learning (immediate)</td>
<td>£59</td>
<td>£57</td>
<td>£70</td>
<td>£154</td>
</tr>
<tr>
<td>Education and learning (long term)</td>
<td>£183</td>
<td>£178</td>
<td>£267</td>
<td>£388</td>
</tr>
<tr>
<td>Digital content</td>
<td>£27</td>
<td>£52</td>
<td>£53</td>
<td>£244</td>
</tr>
<tr>
<td>Total quantified wellbeing benefits</td>
<td>£644</td>
<td>£550</td>
<td>£835</td>
<td>£1,302</td>
</tr>
</tbody>
</table>

Note: excludes revenue income.
7.11.34 The options each deliver externality benefits. These are summarised below and in the following table (£ millions).

7.11.35 The tourism spillovers are driven by the attendance at concerts and the number of visitors from overseas, set out earlier. Hence Option 2 has the lowest benefit due to the temporary disruption and the fact that there is no increase in attendance at concerts once the refurbishment has taken place. Options 3 and 4 both generate additional tourism spillovers due to the increases in attendance that are enabled, with Option 4 generating the largest benefit here.

7.11.36 The health and productivity benefits are associated with those who, as a result of engaging with the education and engagement activities, go on to become regular, long term engagers with music. Consequently:

- Option 2 has the lowest benefit owing to the effects of disruption and the fact that the level of activity remains the same as in Option 1
- Option 4 therefore delivers the greatest value for both of these categories. The differences between the health benefits across the options are relatively small due to the relatively low value per person attributed to regular engagement with the arts (£37 per person). There is much more of a distinction between the productivity benefits as these are higher per person (£33,600 over a working lifetime).

Residual Value

7.11.37 The final benefit that has been quantified is the residual value of the site at the end of the appraisal period. This is estimated to be £18 million in discounted 2015/16 prices, on the basis of the site retaining its current estimated value of £160 million. It should be noted that this assumes that there is no real terms increase in the value of the site over the period.

<table>
<thead>
<tr>
<th></th>
<th>Option 1: Do Nothing</th>
<th>Option 2: Repurpose Barbican Hall</th>
<th>Option 3: New Concert Hall</th>
<th>Option 4: Centre for Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism spillovers</td>
<td>£236</td>
<td>£140</td>
<td>£281</td>
<td>£330</td>
</tr>
<tr>
<td>Health benefit (NHS cost savings)</td>
<td>£9.3</td>
<td>£9.8</td>
<td>£14</td>
<td>£19</td>
</tr>
<tr>
<td>Increased productivity</td>
<td>£193</td>
<td>£187</td>
<td>£281</td>
<td>£384</td>
</tr>
<tr>
<td>Total quantified externality benefits</td>
<td>£438</td>
<td>£336</td>
<td>£575</td>
<td>£733</td>
</tr>
</tbody>
</table>
COST-BENEFIT ANALYSIS

7.11.38 The table at 7.11.45 brings together a summary of all costs and benefits across the options. The table immediately after then sets out the relative costs and benefits of Options 2-4 compared to Option 1, the reference case.

7.11.39 The key points to note are as follows.

Financial analysis

7.11.40 Looking at the performance of the options in purely financial terms:

- All options have a negative financial Net Present Value ("NPV") (Option 1 has a negative NPV due to the ongoing operating deficit which is currently funded by the City of London Corporation and Arts Council England).
- Options 3 and 4 have a higher operating deficit than Option 1 and Option 2. Option 3 has the highest operating deficit of all options. Although Option 4 has higher operating costs, it has significantly higher income generation potential than Option 3, so its operating deficit is lower.
- Given the higher capital costs, option 4 has the lowest financial NPV of all options, at £1.0bn. This is £307m lower than in the Do Nothing option, and £49m lower than Option 3, given the greater capital cost.

Economic analysis

7.11.41 The key points from the economic appraisal are as follows.

- In gross terms (i.e. before netting off the reference case, Option 1), Option 4 delivers the highest NPV, at £890m. This is £510m greater than the Do Nothing option, and £122m more than Option 3. It has a gross benefit-cost ratio (BCR) – based on the public sector contribution to the capital costs – of 1.39. Note that although this is not significantly greater than the BCR for Option 1 of 1.242, this is due to the absence of capital costs in Option 1. Options 1's NPV is much lower, at £380m as the economic benefits delivered in Option 1 are lower.
- In net terms, when compared to the reference case of Option 1 (see table that follows), the BCR for Option 4 (which is based only on the benefits that have been quantified) is 1.73.
- Option 4 delivers the highest NPV because it has the greatest quantifiable economic benefit, at £3.16bn, compared to £1.95bn in Option 1 and £2.38bn in Option 3. The largest components of the economic benefit in Option 4 are the long term education benefits (wellbeing and externalities), the wellbeing benefit from concert attendance, and the digital benefits.
- Given the lower levels of concert attendance, educational and digital activity than in Option 4, Option 3 as currently configured has a negative net BCR compared to the Do Nothing option. Option 4 delivers a greater economic benefit than Option 3 due to:
  - the greater number of concert events and attendees than in Option 3, generating additional £34m in wellbeing benefits for attendees as well as additional tourism spillovers (£49m).
  - the greater scale and intensity of education and engagement activity enabled by the Centre for Music, which generates both greater immediate and long term wellbeing benefits (£84m and £122m over Option 3 respectively) as well as greater long term health and productivity externalities (£5m and £104m respectively over Option 3).
- Option 2 has a lower economic benefit than Option 1 – this is due to the disruption caused over the years when the Barbican temporarily ceases operations, leading to a loss of concert attendees and education and engagement activities in this period (and hence a loss of tourism spillovers, wellbeing benefits and the benefits flowing from the education activity). Once a stable operating year is reached, there would be no increase in concert attendance as over Option 1, and the Curve gallery would be lost.
- Again it is important to note that the analysis presented here is only on the basis of those economic benefits which it has been possible to quantify in a reasonably robust fashion. Other benefits (on City competitiveness, the wider cultural sector, other tourism spillovers, aspects of social welfare and non-use value) have not been valued directly but the switching value that these benefits would collectively need to have in order for the BCR of Option 4 (net of Option 1) to equal 2 has been analysed. This analysis indicates that in this base case the present value of these benefits would need to equal £198 million, equivalent to an average of £3.2 million per annum (in discounted, 2015/16 prices) in order for Option 4 to have a BCR of 2 compared to Option 1. This is equivalent to around £10 million per annum (undiscounted, 2015/16 prices) over the operational period of the Centre for Music. The switching value is subject to sensitivity testing in the following section.
- It is also worth noting that since the origin (i.e. UK vs. overseas) of the private sector contribution to capital costs cannot be known at this stage, these have not been factored into the resource costs or economic benefits.
- The summary of economic appraisal results by option (all values in £m, 2015/16 prices, discounted over appraisal period, 2015/16 to 2083/84) is set out in the following table.
### PART II
OUTLINE BUSINESS CASE

#### CENTRE FOR MUSIC
OUTLINE BUSINESS CASE AND FEASIBILITY STUDY

#### Option 1: Do Nothing

<table>
<thead>
<tr>
<th>Costs</th>
<th>Option 1: Do Nothing</th>
<th>Option 2: Repurpose Barbican Hall</th>
<th>Option 3: New Concert Hall</th>
<th>Option 4: Centre for Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital cost</td>
<td>£0</td>
<td>£121</td>
<td>£138</td>
<td>£215</td>
</tr>
<tr>
<td>- exc. contingency</td>
<td>£0</td>
<td>£160</td>
<td>£184</td>
<td>£287</td>
</tr>
<tr>
<td>- with optimism bias</td>
<td>£0</td>
<td>£141</td>
<td>£127</td>
<td>£192</td>
</tr>
<tr>
<td>(1b) Operating cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Barbican</td>
<td>£1,155</td>
<td>£997</td>
<td>£1,348</td>
<td>£1,481</td>
</tr>
<tr>
<td>- LSO</td>
<td>£415</td>
<td>£416</td>
<td>£438</td>
<td>£442</td>
</tr>
<tr>
<td>Total operating cost</td>
<td>£1,570</td>
<td>£1,413</td>
<td>£1,786</td>
<td>£1,922</td>
</tr>
<tr>
<td>(1c) Opportunity cost (value of land)</td>
<td>£0</td>
<td>£0</td>
<td>£155</td>
<td>£155</td>
</tr>
<tr>
<td>Total Economic Costs (1a) + (1b) + (1c)</td>
<td>£1,570</td>
<td>£1,554</td>
<td>£2,067</td>
<td>£2,209</td>
</tr>
</tbody>
</table>

#### Benefits

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Option 1: Do Nothing</th>
<th>Option 2: Repurpose Barbican Hall</th>
<th>Option 3: New Concert Hall</th>
<th>Option 4: Centre for Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2a) Revenues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Costs</td>
<td>-£69</td>
<td>£498</td>
<td>£699</td>
<td></td>
</tr>
<tr>
<td>Total revenues</td>
<td>-£120</td>
<td>£86</td>
<td>£238</td>
<td></td>
</tr>
<tr>
<td>Total wellbeing benefits</td>
<td>-£93</td>
<td>£191</td>
<td>£658</td>
<td></td>
</tr>
<tr>
<td>Total externality benefits</td>
<td>-£102</td>
<td>£137</td>
<td>£295</td>
<td></td>
</tr>
<tr>
<td>Residual land value</td>
<td>£18</td>
<td>£18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Quantified Economic Benefits</td>
<td>-£195</td>
<td>£346</td>
<td>£971</td>
<td></td>
</tr>
<tr>
<td>Total Benefits</td>
<td>-£315</td>
<td>£432</td>
<td>£2,090</td>
<td></td>
</tr>
<tr>
<td>NPV (financial only)</td>
<td>-£104</td>
<td>-£257</td>
<td>-£307</td>
<td></td>
</tr>
<tr>
<td>NPV (economic)</td>
<td>-£299</td>
<td>-£66</td>
<td>£510</td>
<td></td>
</tr>
<tr>
<td>BCR</td>
<td>-</td>
<td>0.87</td>
<td>1.73</td>
<td></td>
</tr>
<tr>
<td>Switching value for BCR to equal 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- total</td>
<td></td>
<td>£564</td>
<td>£190</td>
<td></td>
</tr>
<tr>
<td>- average per annum over 60 years</td>
<td></td>
<td>£9.4</td>
<td>£3.2</td>
<td></td>
</tr>
</tbody>
</table>

#### Note:
Given uncertainty on location of origin of private sector capital contributions, these are excluded from UK resource cost and benefits (as an indicator of use/non-use value).

#### 7.11.45
The economic appraisal results net of Option 1 (do nothing): (£m, 2015/16 prices, discounted over appraisal period, 2015/16 to 2083/84) are set out in the following table:

<table>
<thead>
<tr>
<th>Option 1: Do Nothing</th>
<th>Option 2: Repurpose Barbican Hall</th>
<th>Option 3: New Concert Hall</th>
<th>Option 4: Centre for Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Costs</td>
<td>£569</td>
<td>£449</td>
<td>£628</td>
</tr>
<tr>
<td>Total revenues</td>
<td>£868</td>
<td>£748</td>
<td>£954</td>
</tr>
<tr>
<td>Operating deficit</td>
<td>-£702</td>
<td>-£665</td>
<td>-£832</td>
</tr>
<tr>
<td>(2b) Wellbeing benefits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Concert attendance</td>
<td>£259</td>
<td>£240</td>
<td>£330</td>
</tr>
<tr>
<td>- Exhibitions</td>
<td>£115</td>
<td>£23</td>
<td>£115</td>
</tr>
<tr>
<td>- Education and engagement attendance (immediate)</td>
<td>£59</td>
<td>£57</td>
<td>£70</td>
</tr>
<tr>
<td>- Education and engagement attendance (long term)</td>
<td>£183</td>
<td>£178</td>
<td>£267</td>
</tr>
<tr>
<td>- Digital content</td>
<td>£27</td>
<td>£52</td>
<td>£53</td>
</tr>
<tr>
<td>Total wellbeing</td>
<td>£844</td>
<td>£550</td>
<td>£835</td>
</tr>
<tr>
<td>Total Externalities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Tourism spillovers</td>
<td>£236</td>
<td>£140</td>
<td>£281</td>
</tr>
<tr>
<td>- Health benefits (NHS cost savings)</td>
<td>£9.3</td>
<td>£9.0</td>
<td>£14</td>
</tr>
<tr>
<td>- Increased productivity</td>
<td>£193</td>
<td>£187</td>
<td>£281</td>
</tr>
<tr>
<td>Total Externalities</td>
<td>£438</td>
<td>£336</td>
<td>£575</td>
</tr>
<tr>
<td>(2d) Residual value of land</td>
<td>n/a</td>
<td>n/a</td>
<td>£18</td>
</tr>
<tr>
<td>Total Quantified Economic Benefits (2b) + (2c) + (2d)</td>
<td>£1,082</td>
<td>£886</td>
<td>£1,428</td>
</tr>
<tr>
<td>Total Benefits</td>
<td>£1,950</td>
<td>£1,634</td>
<td>£2,381</td>
</tr>
<tr>
<td>NPV summary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total costs</td>
<td>£1,570</td>
<td>£1,554</td>
<td>£2,067</td>
</tr>
<tr>
<td>Total benefits</td>
<td>£1,950</td>
<td>£1,634</td>
<td>£2,381</td>
</tr>
<tr>
<td>NPV (financial only)</td>
<td>-£702</td>
<td>-£665</td>
<td>-£832</td>
</tr>
<tr>
<td>NPV (economic)</td>
<td>-£299</td>
<td>-£66</td>
<td>£510</td>
</tr>
<tr>
<td>BCR</td>
<td>1.24</td>
<td>1.05</td>
<td>1.15</td>
</tr>
</tbody>
</table>

Note: Given uncertainty on location of origin of private sector capital contributions, these are excluded from UK resource cost and benefits (as an indicator of use/non-use value).
OPTION APPRAISAL CONCLUSIONS

7.11.46 The results of the quantitative appraisal of the shortlisted options therefore indicate that Option 4 performs best in terms of overall value for money relative to the reference case (Option 1: Do Nothing). Whilst it has the highest capital cost, the investment serves to unlock a number of quantifiable benefits that would not be realised in the absence of the investment. These include additional tourism spillovers for the UK, wellbeing benefits for UK audiences arising from engaging with music and consuming music digitally, and longer term benefits for individuals and society at large from the education and engagement activities that would take place.

7.11.47 Unlike the other options considered, only Option 4, of building a Centre for Music, meets the objectives set out in the terms of reference. The economic analysis shows that its output, reach and impact materially outweigh every other option. Its BCR and NPV as a consequence is materially greater.

7.11.48 The purely financial difference between building a concert hall (Option 3) and a Centre for Music (Option 4) is as follows:

<table>
<thead>
<tr>
<th></th>
<th>Option 3</th>
<th>Option 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of construction</td>
<td>£200m</td>
<td>£278m</td>
</tr>
<tr>
<td>Less: fundraising target</td>
<td>£75m</td>
<td>£125m</td>
</tr>
<tr>
<td>Net</td>
<td>£125m</td>
<td>£153m</td>
</tr>
</tbody>
</table>

This estimates Option 3 to be £28m cheaper than Option 4. However, the net annual running costs of a stand-alone concert hall are around £1m per annum higher than that of a Centre for Music. As the economic analysis shows, over the lifetime of the asset, the purely financial NPV between these two options is negligible. The added non-financial value of the Centre for Music makes the case for it, in comparison with a concert hall, compelling.

7.11.49 Of equal importance and weighting for the assessment is the qualitative assessment of the options which was presented earlier. This qualitative assessment is important because there are benefits from the project that, whilst not quantifiable in a robust manner, are nonetheless central to the strategic case and rationale for the investment, and hence the investment objectives. These include the contribution to London’s status as a world-class destination for music (investment objective 1), extending the reach and diversity of engagement with great music (investment objective 2) and supporting the UK’s position as a world-leading centre for the cultural industries (investment objective 5).

7.11.50 On the qualitative contribution to each of these objectives, Option 4 has the highest ranking of all options. Moreover, in a do nothing option there is a risk of London and hence the UK experiencing a deterioration in its competitive position compared to other global locations, as a destination for music and as a centre for the cultural industries in particular.

RISKS

7.11.51 An assessment of the key risks associated with the project has been undertaken. A sensitivity analysis has then been carried out on the economic appraisal to examine the impact on the overall NPV, BCR and switching value required for the project to have a BCR of 2.

7.11.52 The table below sets out the key risks to the project, how these have been tested quantitively in the sensitivity analysis and the mitigating actions that would be put in place.
<table>
<thead>
<tr>
<th>Risk</th>
<th>Likelihood</th>
<th>Sensitivity test</th>
<th>Comment: Mitigation</th>
</tr>
</thead>
</table>
| Capital cost overruns                          | Low        | Tested by changing Optimism Bias factor (downside = applying upper bound Optimism Bias for non-standard buildings of 1.31; upside = Optimism bias factor of 10%)                                                                                                                                | Current capital cost estimates have been developed in a robust fashion through a detailed benchmarking exercise against the final outturn costs of a range of comparable concert hall developments (see Appendix 7A). It has been assumed that the central optimism bias assumption of 33% is prudent, and further cost overrun over this level is unlikely.
Careful cost management will be built into all stages of the project with oversight from the client, cost consultants, project managers and key funders and regular formal reviews. Particular risk areas such as inflation will be specifically monitored and any concerns about cost increases will be identified and addressed at the earliest opportunity. |
| Higher operating deficit than anticipated      | Low        | Tested by examining the effect of changes in the operating deficit (downside = +20%; upside = -20%)                                                                                                               | The base financial model has been developed on the basis of conservative assumptions and has been subject to robust testing by an expert group. The base model already factors in a £0.5m contingency, equivalent to 3% of expenditure or 4.5% of income. It has been assumed unlikely that revenues would be lower, or costs higher, than in the base case.
The financial case provides a detailed analysis of income and cost sensitivities. The Barbican Centre operates a diversified business model, with twelve distinct income-generating activities. This allows it to manage any volatility in any particular income stream, and each budget centre is reforecast every month to facilitate this. This portfolio approach would continue to be employed going forward and help to mitigate any revenue shortfalls that may be experienced. |
| Lower than expected audience numbers for concerts | Low        | Tested by examining the effect of changes in audience numbers (downside = -20%; upside = +20%)                                                                                                           | Audience projections have been developed based on a detailed programming diary and drawing on research on the size of the market. This research (see Section 16) shows that the size of the market for classical and other music that would be offered by the LSO and Barbican Centre is expected to increase considerably given increases in the population of London in particular. It has therefore been assumed that it is unlikely that audience numbers would be lower (or indeed that displacement of audiences from other venues would be higher) than in the base case.
Future phases of work on this project will involve detailed market research and audience analysis which will be used to refine estimates of total audience demand, whilst programming plans and the overall business model will be developed to maximise demand and to minimise the risk of audience numbers falling below estimated levels. |
| Lower than expected attendance at education and learning events | Med        | Tested by examining the effect of changes in attendance at education and learning events. Given the important role that the education and learning activities play in the delivery of quantifiable benefits and potentially heavier downside risk, a greater downside has been tested for this position compared to other risks (downside = -30%; upside = +20%) | The projections for attendance at the education and learning events have been developed based on an assessment of the capacity available to deliver events (in terms of space and time), the latent demand that has been observed through current delivery and consultations with partners, and the projected growth in the population. Given the scale of increase in the level of activity in Option 4 compared to the baseline, it has been assumed that there is a medium risk of attendance being lower than expected.
Future phases of work on this project will involve detailed analysis into the demand and needs for education and learning activities, from institutions such as schools and from the public directly. This will be used to inform specific activity plans in these areas to minimise the risk of attendances falling below estimated levels. |
| Lower than expected digital benefits           | Med        | Tested by examining the effect of the additional benefit from digital activities decaying over time (downside = additional benefit over option 1 decays over 20 years to zero; upside = 20% greater digital reach) | Given that future technological changes are uncertain, it is possible that the benefits associated with the digital activity decay over time as new technologies are developed. |
| Inability to raise private funding for capital costs to expected levels | Med        | Tested by examining the effect of changes in private sector capital contribution (downside = -20%; upside = +20%)                                                                                               | The base assumptions on private funding are based on an independent assessment of fundraising potential. Given the uncertainty it has been assumed that there is a medium risk of this contribution being lower than expectations. |
SENSITIVITIES

7.11.53 A sensitivity analysis has been undertaken to examine the impact of these risks (both downside and upside) on the performance of Option 4 relative to Option 1, using the tests outlined above. The results are shown in the table below. The key points are as follows:

- For several of the tests (capital costs, concert audiences, digital reach, private sector contribution), the BCR remains above 1.5 in the downside scenario.

- The tests with the most significant impact are the education attendees and the operating deficit, which in the downside scenario reduce the BCR to 1.32 and 1.40 respectively. Here it is worth noting that a larger downside has been applied to education (-30%) in order to account for uncertainty. Given the existing contingencies built into the financial model and the diversified nature of the business model, an operating deficit of this order is considered to be very unlikely.

- On the upside, all of the tests yield a BCR of around 1.8 or above, and two of the tests push the BCR above 2, without taking non-quantified benefits into account.

7.11.54 Depending on the combination, four or five of these downside scenarios would need to materialise together for the quantified net BCR to move below 1. For the reasons explained above, this scenario is considered to be extremely unlikely. Once switching values are considered, even in such a scenario the project would have acceptable value for money.

<table>
<thead>
<tr>
<th></th>
<th>BCR (Option 4 less Option 1)</th>
<th>Switching value required to reach BCR of 2 (Present Value, 2015/16 prices)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Base</td>
<td>Downside</td>
</tr>
<tr>
<td>Capital Cost</td>
<td>1.64</td>
<td>1.86</td>
</tr>
<tr>
<td>Operating deficit</td>
<td>1.41</td>
<td>2.23</td>
</tr>
<tr>
<td>Concert audiences</td>
<td>1.53</td>
<td>1.93</td>
</tr>
<tr>
<td>Education and learning attendees/benefits</td>
<td>1.32</td>
<td>2.00</td>
</tr>
<tr>
<td>Digital reach/benefits</td>
<td>1.52</td>
<td>1.80</td>
</tr>
<tr>
<td>Private sector contribution</td>
<td>1.68</td>
<td>1.78</td>
</tr>
</tbody>
</table>
PART II
OUTLINE BUSINESS CASE

7.12 CONCLUSION

7.12.1 The appraisal summary table is set out below.

7.12.2 Overall, the economic analysis has demonstrated that Option 4, the Centre for Music, offers good value for money, so long as the scale of unquantifiable benefits are of the order of £200m. For an asset with a life of well over 60 years and given the potential impact the Centre for Music will have on the London and UK economy, as well as society at large, this appears entirely plausible.

7.12.3 Option 4 also makes a much stronger contribution to the investment objectives and critical success factors of the project than do the other shortlisted options. It makes a particularly strong contribution to enhancing the status of London as a world-class destination for music, extending reach and diversity of engagement with great music, and providing innovative music delivery and education opportunities.

7.12.4 There are a number of important risks associated with the project that will need to be carefully managed and mitigated to ensure the project delivers good value for money. Nonetheless, Option 4 remains robust in the face of a range of sensitivity tests.

<table>
<thead>
<tr>
<th></th>
<th>Option 2 relative to reference case</th>
<th>Option 3 relative to reference case</th>
<th>Option 4 relative to reference case (preferred option)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Present Value Benefits (Em, 2015 prices &amp; values, Revenue &amp; Capital)</td>
<td>-£315</td>
<td>£432</td>
</tr>
<tr>
<td>B</td>
<td>Present Value Costs (Em, 2015 prices and values, Revenue &amp; Capital)</td>
<td>-£16</td>
<td>£498</td>
</tr>
<tr>
<td>C</td>
<td>Net Present Value (Em, 2015 prices and values) (A-B)</td>
<td>-£299</td>
<td>-£66</td>
</tr>
<tr>
<td>D</td>
<td>Benefit-Cost Ratio (A / B)</td>
<td>-</td>
<td>0.87</td>
</tr>
<tr>
<td>E</td>
<td>Significant Non-monetised Impacts</td>
<td>Impact on London’s competitiveness</td>
<td>Impact on London’s competitiveness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Switching Values</td>
<td>Quantified net benefits above reference case</td>
<td>Acceptable value for money after SOCEF* (BCR = 1.3) if non-quantified benefits have switching value of £215m over appraisal period. This is considered plausible.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Value for Money (VfM) Category</td>
<td>Poor</td>
<td>Acceptable</td>
</tr>
<tr>
<td>H</td>
<td>Public Sector Financial Cost (Em, undiscounted, 2015/16 prices)</td>
<td>Public sector capital cost exc. Optimism Bias = £132m</td>
<td>Public sector capital cost exc. Optimism Bias = £106m</td>
</tr>
<tr>
<td></td>
<td>Revenue cost: annual operating deficit falls by £0.12m.</td>
<td>Revenue cost: annual operating deficit increases by £6.62m.</td>
<td>Revenue cost: annual operating deficit increases to £5.66m.</td>
</tr>
<tr>
<td>I</td>
<td>Risks / other issues</td>
<td>- Risk of loss of audiences during period of disruption; need subsequently to rebuild audiences.</td>
<td>- Risk of capital cost overrun; higher operating deficit; lower audience and education attendee numbers; lower digital reach; lower private sector contribution - Significant number of construction jobs (not quantified).</td>
</tr>
</tbody>
</table>

SOCEF = Social Opportunity Cost of Exchequer Funds. Guidance states that these distortionary effects on economic efficiency are of the order of 20-30%. Hence a BCR of at least 1.3 is needed after these have been accounted for.
8. COMMERCIAL CASE

8.1 INTRODUCTION

8.1.1 This section of the OBC outlines the proposed deal in relation to the preferred option outlined in the economic case.

8.1.2 As the project is at a very early stage, the level of detail regarding the commercial arrangements is more limited than will ultimately be necessary. The exact arrangements will be developed in more detail in the next phase of work as part of the Full Business Case, and will be kept under regular review as the project progresses to take account of any significant changes in scope, programme, costs, etc.

8.1.3 One key issue will be to establish at an early stage in the phase of work the contracting party for each of the three capital projects (Centre for Music, Barbican Hall and LSO St Luke’s), noting that there may be different contracting parties for each of these elements. This will depend on the relative roles and responsibilities of the various stakeholders in the project, and these will be clarified early on in the next phase of work including the identification of the specific entity which will act as Client for the project.

8.1.4 In the meantime, it is assumed by default that the City Corporation’s long-established policies and processes for capital projects will be adopted in order to ensure a robust framework for the delivery of the project.

8.2 REQUIRED SERVICES

8.2.1 The key design team appointments will be the Acoustician, the Architect (who will lead the design team) and the Theatre Consultant. This reflects the key objectives of achieving world-class acoustics, a landmark building and a modern, accessible venue. There will also be a need for structural and services engineering and a number of other specialist services, for example in relation to planning, catering, retail, etc.

8.2.2 The services required include external project management which will be selected and put in place at the earliest opportunity to assist with the procurement of the project team, including agreeing roles and responsibilities. The external Project Management Team will need to have appropriate experience at a strategic and operational level, and be embedded in the client project management team to which they will report on a day-to-day basis.

8.2.3 The other key consultant is the Cost Consultant (quantity surveyor), who must also have appropriate experience of similar high profile cultural projects. There is a preference for the Cost Consultant to be independent of the Project Management Team to avoid any actual or perceived conflicts of interest.

8.2.4 Appointments will be made at the appropriate stage in the project with the intention of bringing the core team together at the beginning of the project. All appointments will be reviewed at each phase of the project to ensure that the professional team provides the highest quality advice whilst maintaining value for money.

8.2.5 The process of consultant selection for the project will seek not only past experience of the relevant firms and individuals but also the need to establish effective team working across the professional team. This will be particularly critical in relation to the architect and the acoustician who will need to be able to work together on a highly collaborative basis.

8.3 POTENTIAL FOR RISK TRANSFER

8.3.1 The general principle is that risks should be passed to the party best able to manage them, subject to value for money considerations.

8.3.2 This section provides an assessment of how the associated risks might be apportioned between the Project ("Client") and third-parties ("Others"). Please see the risk transfer matrix below.

<table>
<thead>
<tr>
<th>Risk Category</th>
<th>Potential allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Client</td>
</tr>
<tr>
<td>1. Design risk</td>
<td>✔</td>
</tr>
<tr>
<td>2. Construction and development risk</td>
<td></td>
</tr>
<tr>
<td>3. Transition and implementation risk</td>
<td></td>
</tr>
<tr>
<td>4. Availability and performance risk</td>
<td></td>
</tr>
<tr>
<td>5. Operating risk</td>
<td>✔</td>
</tr>
<tr>
<td>6. Variability of revenue risks</td>
<td>✔</td>
</tr>
<tr>
<td>7. Termination risks</td>
<td>✔</td>
</tr>
<tr>
<td>8. Technology and obsolescence risks</td>
<td></td>
</tr>
<tr>
<td>9. Control risks</td>
<td>✔</td>
</tr>
<tr>
<td>10. Residual value risks</td>
<td>✔</td>
</tr>
<tr>
<td>11. Financing risks</td>
<td>✔</td>
</tr>
<tr>
<td>12. Legislative risks</td>
<td>✔</td>
</tr>
<tr>
<td>13. Planning risks</td>
<td>✔</td>
</tr>
<tr>
<td>14. Other project risks</td>
<td>✔</td>
</tr>
</tbody>
</table>
The nature of the project means that it is not considered possible or appropriate to fully transfer risks to other parties, as to do so would result in an unacceptable loss of control. However, where risks will be shared, the division of responsibilities and liabilities will be clearly established at the outset to ensure as far as is possible that the project only bears risks relating to matters under the Client’s control.

8.4 PROPOSED CHARGING MECHANISMS

8.4.1 The payment mechanism for the consultants and contractors will include suitable controls in relation to their performance and delivery against programme. This will include all contractor payments being authorised by the Cost Consultant and fee payments to the professional team being authorised by the Project Management Team. Normal internal controls will also operate to ensure authorisation by the Client prior to payment.

8.4.2 Payments will be made in arrears to reflect work carried out and/or in line with agreed payment schedules, other than in exceptional circumstances (and in that case with appropriate controls and approval mechanisms in place).

8.5 PROPOSED CONTRACT LENGTHS

8.5.1 It is anticipated that the procurement strategy will follow public sector procurement regulations which has been allowed for in the project programme. Contract lengths will be set as appropriate to the nature of the services being provided and the balance of costs and risks. Early termination clauses will be put in place where appropriate.

8.6 PROPOSED KEY CONTRACTUAL CLAUSES

8.6.1 Contractual clauses will be in line with industry standards (e.g. Joint Contracts Tribunal – JCT – standard agreements) as appropriate to the nature of individual appointments and the balance of costs and risks. Legal advice will be sought in relation to all appointments.

8.6.2 Specific clauses will depend on the final nature and structure of the project (e.g. the procurement strategy – see below) but would typically include the ability to delay or cancel the project if funding is not available and the ability to terminate contracts in the case of negligence or unsatisfactory performance.

8.7 PERSONNEL IMPLICATIONS (INCLUDING TUPE)

8.7.1 It is anticipated that the TUPE – Transfer of Undertakings (Protection of Employment) Regulations 1991 – will not apply to this project. This will be reviewed alongside the detailed development of the operating model for the new venue in relation to any transfer of activities from the Barbican Centre to the new Centre for Music. At this stage, no additional costs are expected to arise due to TUPE.

8.8 PROCUREMENT STRATEGY AND IMPLEMENTATION TIMESCALES

8.8.1 It is anticipated that the procurement strategy will be in accordance with the current regulations, which are the Public Contracts Regulations 2015 (“PCR 2015”), but will also need to adhere to any standing orders or procedures of the contracting party and the requirements of key funders.

8.9 CONSULTANT PROCUREMENT

8.9.1 A report on consultant procurement has been prepared by the Project Manager for the Feasibility Study, GVA Acuity, and this is attached at Appendix A.

8.9.2 As noted above, one of the first steps before the Centre for Music can move to the concept design stage will be the selection and appointment of a consultant team. Consideration will be needed as to whether the same design team that is selected for the new Centre for Music should also be responsible for the works to the Barbican Hall and LSO St Luke’s or whether separate design teams are selected for these works given the different scale and scope (smaller value, refurbishment, listed building etc.) and timescale.

8.9.3 In the event that it was decided to select separate design teams for the Barbican Hall and/or LSO St Luke’s, there would be a strong rationale for retaining, as a minimum, the same external Project Management Team and Cost Consultant to enable effective overall coordination and reporting on the project.

8.9.4 The project will benefit from a high degree of continuity and all key members of the consultant team will ideally be involved with the project from as early as possible in its development to allow full integration and coordination through the lifetime of the project. However, the ability to review all appointments at each phase of the project will be retained to ensure that the professional team provides the highest quality advice whilst maintaining value for money.

8.9.5 Appointment of the core professional team will begin soon after the completion of the feasibility stage so that the delivery team can be involved in the design process from the outset.

8.9.6 Prior to these appointments being made, the client body for the project will need to be established as outlined in Section 10 (Management Case). If necessary, procurement could begin sooner by one of the partner organisations or the City Corporation with contracts then novated to the eventual client body at a later point as required.

8.9.7 It is anticipated that the procurement process will take approximately 6 months. The partner organisations and key stakeholders will all need to...
be involved in the selection process, with sufficient time allowed in the process for their involvement and consultation. External support will be required to coordinate and/or support the procurement process.

8.10 CONTRACTOR PROCUREMENT

8.10.1 A report on contractor procurement has been prepared by the Cost Consultant for the Feasibility Study, Gardner & Theobald, and this is attached at Appendix 8B. A range of procurement options have been considered based on the current scope and nature of the project. Options considered include single stage, two-stage and Construction Management.

8.10.2 The time taken to develop any form of single stage tender (Design and Build or Traditional) is likely to be too long to gain maximum benefit from a change in the prevailing market conditions and in the current market it is believed that Main Contractors would not be willing to accept the level of risk transfer. Furthermore the nature of the works and the higher risk of changes in the pursuit of excellence are likely to considerably increase the risk of delays and contractual claims. A single stage approach is therefore not considered to be appropriate.

8.10.3 The alternative is a two stage approach, which may be the only option if a lump sum contract with single point responsibility is necessary (e.g. if the build is developer led). This would allow a degree of overlap of design and construction but the process is more likely to be open to abuse and it can be difficult to close the second stage without considerable cost increase and risk transfer back to the Client. This approach still carries a risk of contractual claims for discovery following commencement of construction. The Construction Management route requires a knowledgeable client and additional client resource to support it but for a project of this scale this would be in place anyway. Early involvement of the Construction Manager would also assist in programming and buildability advice.

8.10.4 Construction Management is the method that has been used to deliver (in most cases relatively successfully) the majority of the recent major cultural projects. A Construction Manager ("CM") is appointed on a professional basis and working with the design team, is responsible for planning the work in to tender packages, which are subject to separate contracts direct between the trade contractor and the Client. The Construction Manager controls each package on behalf of the Client and, provided that there is a high level of professional understanding from the Client team, it can work well.

8.10.5 Gardner & Theobald consider that a Construction Management approach is likely to offer the best solution and this approach has been assumed when developing the project programme and project budget.

8.10.6 Whilst Construction Management may initially attract a cost premium it is considered that this investment in enhanced management resource is likely to lead ultimately to a more reliable delivery. This view is supported by the precedent projects and the ability to engage with the market earlier could also help reduce the inflation burden.

8.10.7 The Construction Management route requires a knowledgeable client and additional client resource to support it but for a project of this scale this would be in place anyway. Early involvement of the Construction Manager would also assist in programming and buildability advice.

8.11 PROJECT PROGRAMME

8.11.1 An outline project programme has been developed using sensible assumptions regarding the time required for all key activities such as procurement, design, planning approvals and construction. This programme is not based on any specific site, and the actual programme will depend heavily on site availability, other site-specific factors and the timeframes required to secure funding for the project.

8.12 FRS 5 ACCOUNTANCY TREATMENT

8.12.1 It is envisaged that the assets created through this project will be on the balance sheet of the client organisations.
9. THE FINANCIAL CASE

9.1 INTRODUCTION

9.1.1 This section of the OBC describes the financial aspects of the proposed project.

9.2 SUMMARY

9.2.1 The capital costs for building the new Centre for Music, refurbishing the Barbican Hall and improvement to LSO St Luke’s are as follows:

• Centre for Music £278.2m
• Barbican Hall £34.4m
• LSO St Luke’s £0.8m

9.2.2 The site provided by the City of London is valued at £160m.

9.2.3 The additional annual revenue cost of these facilities is estimated at £0.6m and includes a contingency of £0.5m. There is confidence, based on the past record of the Barbican and LSO, that commercial income streams can be increased beyond the estimates in this model. This will be examined during the next stage of the project.

9.2.4 This investment gives us an extraordinary world-class Centre for Music that combines the UK’s first institution of its kind to be built in the digital age. It will have a world-class symphonic hall, the first in London, meeting the highest international standards, and an unparalleled education programme with the potential to engage people all over the UK and overseas.

9.2.5 The repurposed Barbican Hall will complement the Centre for Music in delivering a programme of contemporary and world music of the highest quality. This will broaden the overall artistic programme of the Cultural Hub, reflecting London’s cultural diversity. Moreover, the critical mass of activity and the scope of the Barbican, LSO and Guildhall School has the potential to create a unique Cultural Hub in the heart of the City of London.

9.2.6 The net additional operating revenue costs as a consequence of these developments are modest in relation to their impact. This is entirely due to the current existing infrastructure within the Barbican Centre, as a consequence of which, only the incremental costs of running the new building and additional activities are incurred.

9.3 CONTEXT

9.3.1 The Barbican Centre and the LSO operate separately with very different business models. For the Barbican this includes its performing and visual arts, creative learning programme, a commercial business and a building to maintain and manage. The LSO’s main focus will be the orchestra and its performance and commercial model both at the Barbican and overseas.

The business plans and strategic objectives of the two organisations will naturally reflect their specific vision, artistic, operational and business needs. The LSO’s residency at the Barbican is contractually based, setting out an annual number of its performances in the hall, its grant from the City of London Corporation, rented office spaces and other services.

9.3.2 This Financial Case has been modelled on the basis that the Centre for Music will be integrated into the operating models of both the Barbican Centre and the LSO. It sets out the current combined financial base of the two organisations and in detail examines the impact on them of the Centre for Music. This provides the changes to income and expenditure across Barbican and LSO activities and the consequent net financial impact of the Centre for Music.

9.3.3 The allocation of financial risk and the responsibility for the Centre for Music’s activities will depend on its operating and governance model, yet to be determined. This will be examined and agreed during the next phase of this project.

9.4 ORGANISATIONAL BACKGROUND

9.4.1 The Barbican Centre is a department of the City of London Corporation’s local government arm, wholly owned by the City Corporation, and is therefore subject to local government policies and procedures. The operating risk of the Barbican Centre is underwritten by the City Corporation.

9.4.2 The Guildhall School is also a department of the City Corporation, but unlike the Barbican is funded through the City Corporation’s private arm. Although the Guildhall School will have a central role in developing the Centre for Music within the cultural hub, its financial model will not be materially affected by the core activities and costs reflected below.

9.4.3 The Barbican business model has a number of significant income generating activities which each have a distinct planning cycle and business model. This is a complex portfolio of activities that has developed into a mature business model with a world-class reputation.

9.4.4 The LSO is an independent company with charitable status. Its annual turnover is approximately £16m, of which 75% is earned income, 12% subsidy from the City of London Corporation and 13% subsidy from the Arts Council England.

9.4.5 The LSO also has a separate Endowment Trust with independent Trustees, which exists to support the activities of the Orchestra. Through special appeals and the Arts Council funded Catalyst scheme the LSO has increased the Endowment fund from £4m to £17m in the last seven years.
The Barbican’s activities generated over £21m of arts and commercial income in 2014/15, with the LSO earning some £12m. With public subsidy, the combined financial model for the Barbican and LSO is in excess of £57m. With the Guildhall School, these activities will be delivered by the three organisations.

As explained in the Economic Case (Section 7), three options have been considered in delivering the terms of reference of this feasibility study in addition to the ‘do nothing’ base. These have each been tested with the financial model of the preferred option set out below.

## SYNOPSIS OF FOUR OPTIONS

### 9.5.1
A financial model for each of the four options is set out in Appendix 9A. This shows the projected income, expenditure and funding needs under each scenario.

### 9.5.2
The table below summarises the financial detail (in present day terms) for each option, setting out:

- The likely net impact on public funding from the current base in a typical year; details relating to transitional operating costs are set out in Appendix 9B.
- The capital cost of delivering the option.

### 9.5.3
Option 4, as set out in the Economic Case of the report, is the preferred option.

<table>
<thead>
<tr>
<th>Option</th>
<th>Net increase (reduction) - revenue</th>
<th>Base capital cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option 1 Do Nothing</td>
<td>£0.0m</td>
<td>£0.0m</td>
</tr>
<tr>
<td>Option 2 Rebuild Barbican Hall</td>
<td>£0.1m</td>
<td>£173.8m</td>
</tr>
<tr>
<td>Option 3 Build a New Concert Hall</td>
<td>(£6.6m)</td>
<td>£200.5m</td>
</tr>
<tr>
<td>Option 4 Build a New Centre for Music</td>
<td>(£5.6m)</td>
<td>£313.4m</td>
</tr>
</tbody>
</table>
9.6 THE PREFERRED OPTION

9.6.1 The Financial Case, as part of the Outline Business Case, is not site specific – this is further examined in Part III, the Feasibility Study. The Financial Case – both the financial model and the capital build costs – has been developed on the basis that the Centre for Music will be part of the Cultural Hub.

9.6.2 The Centre for Music will deliver its strategic objectives and meet the terms of reference of the feasibility study by adding new venues and facilities to the Cultural Hub. A detailed financial model for Option 4 has been developed and critically assessed against the current base position.

9.6.3 There are considerable advantages in basing the new Centre for Music within the Cultural Hub. The Barbican, LSO and Guildhall School are world-class organisations with the capacity and professional experience to maximise the benefits from these additional facilities.

9.6.4 The proposed working model of a world-class arts centre, orchestra and conservatoire developing a programme of artistic and educational activities in this way is almost unique in the world. The critical mass of activity and inevitable synergistic benefits have the potential to deliver ‘game changing’ possibilities in the arts and arts education.

9.6.5 The strength and depth of the Barbican’s management and operational infrastructure gives it the ability to broaden its base and deliver a successful Centre for Music. Any other organisation, without the Barbican’s capabilities and capacity, would have to build its infrastructure from the base up and consequently would incur significantly higher annual costs.

9.6.6 As part of the City of London Corporation, the Barbican benefits from its financial and institutional strength. The City’s functions such as legal, property, treasury, procurement etc. provide a level of support not available to other major arts organisations in the UK.

THE FINANCIAL MODEL

9.7.1 For the purposes of this exercise, the Barbican and LSO’s budgets and business plan have been combined to set out its current base financial model. The preferred option, in 2015/16 prices, is set out in this section of the report with the impact of these changes integrated into the combined business models of the Barbican and LSO.

9.7.2 Subject to the final timetable, the financial implications of the preferred option are unlikely to surface until the transition years, possibly from 2022/23. It will take the business model around two years to develop into a consistent rhythm of activity and consequently net running costs in the first two years are likely to be higher. See Appendix 9B.

9.7.3 A world-class symphonic hall will undoubtedly strengthen the classical programme. Quite apart from the qualitative benefits, the number of symphonic concerts is expected to increase from 82 a year to 110. It will enable the orchestra, conservatoire and arts centre to use the variety of venues available, consequently offering more choice and greater flexibility to audiences (see detailed event and attendance numbers in paragraph 9.7.8).

9.7.4 Under the current operating model the LSO, unlike other leading orchestras, is limited in its rehearsal time in the Barbican Hall. The new venue will provide this space, enabling improved performance and a richer audience experience.

9.7.5 The Barbican Hall will be repurposed, enabling it to deliver a wider range of programme and consequently a repertoire that complements the new hall, and together they will deliver 100 additional concerts a year.

9.7.6 The education and engagement programme will reach an additional 184,000 people directly each year with overall reach through the use of digital technology estimated to reach two million people globally.

9.7.7 Additional facilities programmed during the day, such as education and digital activities, will ensure the building is lively with audiences and visitors, and will also deliver the financial benefit of increased income streams such as catering and retail. This will ensure there is a critical mass of activity and reduce the cost base of the Centre for Music as well as providing value on investment. A crucial component of delivering a viable business model is to ensure that the facilities are used to their full potential and not left idle. When benchmarking with other international concert halls, it became clear that many venues were idle during the day and some evenings due to lack of general activity and orchestral rehearsals.
The table below compares the current and projected levels of activity in the Centre for Music and Barbican Hall combined with attendance estimates.

<table>
<thead>
<tr>
<th>Events and Attendances</th>
<th>Current Base</th>
<th>With Centre for Music</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Events</td>
<td>Attendance</td>
<td>Events</td>
</tr>
<tr>
<td>Concerts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rentals</td>
<td>104</td>
<td>123,305</td>
<td>126</td>
</tr>
<tr>
<td>Contemporary</td>
<td>44</td>
<td>68,251</td>
<td>69</td>
</tr>
<tr>
<td>Classical</td>
<td>82</td>
<td>119,623</td>
<td>110</td>
</tr>
<tr>
<td>Partner Activity and Recitals</td>
<td>0</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>Subtotal Concerts</td>
<td>230</td>
<td>311,179</td>
<td>330</td>
</tr>
<tr>
<td>Club Space</td>
<td>0</td>
<td>0</td>
<td>300</td>
</tr>
<tr>
<td>Learning</td>
<td>1,270</td>
<td>72,657</td>
<td>4,341</td>
</tr>
<tr>
<td>Commercial</td>
<td>108</td>
<td>106,098</td>
<td>605</td>
</tr>
<tr>
<td>Exhibitions</td>
<td>572</td>
<td>354,917</td>
<td>752</td>
</tr>
<tr>
<td>Subtotal Barbican Hall and Centre for Music</td>
<td>2,180</td>
<td>844,851</td>
<td>6,328</td>
</tr>
<tr>
<td>Other venues (theatre, cinema etc)</td>
<td>2,754</td>
<td>432,371</td>
<td>2,754</td>
</tr>
<tr>
<td>General Footfall</td>
<td>700,000</td>
<td>1,050,000</td>
<td>350,000</td>
</tr>
<tr>
<td>Total</td>
<td>4,934</td>
<td>1,977,222</td>
<td>9,082</td>
</tr>
</tbody>
</table>
9.7.9 In a typical year, these activities and the total financial impact of the Centre for Music on the Barbican and LSO would result in additional annual net cost of £5.6m, as set out in the table below.

9.7.10 The Centre for Music’s financial model is based on the experience of the partner organisations of managing their existing venues and the wide range of activities currently undertaken. Where appropriate, specialist advice has been sought to ensure and test the robustness of income and expenditure assumptions. The key components driving activity and the financial model are examined below.

9.7.11 The Barbican and LSO have mature business models with the cycle of activities set out in detail in annual budgets and long term business plans. The income and expenditure from these activities is subject to rigorous financial management, continually informing and adapting long term plans in the face of market changes.

9.7.12 The financial model and its underlying assumptions were subjected to critical evaluation by industry experts. Their assessment and contribution has guided the development of assumptions and, at the next phase of this project, the model will be subjected to further detailed examination by this group.

<table>
<thead>
<tr>
<th>Overall Financial Model</th>
<th>Current base £m</th>
<th>With the Centre for Music £m</th>
<th>Net Change £m</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total income</td>
<td>31.7</td>
<td>44.3</td>
<td>12.6</td>
<td>39.7%</td>
</tr>
<tr>
<td>Public funding</td>
<td>25.6</td>
<td>25.6</td>
<td>0.0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Contingency</td>
<td>0.0</td>
<td>(0.1)</td>
<td>(0.1)</td>
<td>0.0%</td>
</tr>
<tr>
<td>Total Resources</td>
<td>57.3</td>
<td>69.8</td>
<td>12.5</td>
<td></td>
</tr>
<tr>
<td>Direct Expenditure</td>
<td>(25.1)</td>
<td>(31.8)</td>
<td>(6.7)</td>
<td>26.7%</td>
</tr>
<tr>
<td>Salaries</td>
<td>(19.3)</td>
<td>(25.4)</td>
<td>(6.1)</td>
<td>31.6%</td>
</tr>
<tr>
<td>Building costs</td>
<td>(9.0)</td>
<td>(13.1)</td>
<td>(4.1)</td>
<td>45.5%</td>
</tr>
<tr>
<td>Other expenditure</td>
<td>(3.9)</td>
<td>(4.7)</td>
<td>(0.8)</td>
<td>20.5%</td>
</tr>
<tr>
<td>Contingency</td>
<td>(0.0)</td>
<td>(0.4)</td>
<td>(0.4)</td>
<td>0.0%</td>
</tr>
<tr>
<td>Total Expenditure</td>
<td>(57.3)</td>
<td>(75.4)</td>
<td>(18.1)</td>
<td></td>
</tr>
<tr>
<td>Shortfall</td>
<td>0.0</td>
<td>(5.6)</td>
<td>(5.6)</td>
<td></td>
</tr>
</tbody>
</table>
9.8 KEY COMPONENTS OF THE BUSINESS MODEL – INCOME

9.8.1 The income target for the Centre for Music of £12.5m represents an increase of more than a third on current income total of £31.7m. The table below provides a breakdown of its constituent elements together with the comparative current position. See Appendix 9C for a detailed income and expenditure statement.

<table>
<thead>
<tr>
<th>Income</th>
<th>Current Base</th>
<th>With Centre for Music</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£000</td>
<td>£000</td>
<td>£000</td>
</tr>
<tr>
<td>Box Office</td>
<td>9,070</td>
<td>11,705</td>
<td>2,635</td>
</tr>
<tr>
<td>Exhibitions</td>
<td>1,119</td>
<td>3,189</td>
<td>2,070</td>
</tr>
<tr>
<td>Commercial</td>
<td>5,613</td>
<td>7,775</td>
<td>2,162</td>
</tr>
<tr>
<td>Development</td>
<td>4,346</td>
<td>6,146</td>
<td>1,800</td>
</tr>
<tr>
<td>Learning</td>
<td>1,462</td>
<td>2,802</td>
<td>1,340</td>
</tr>
<tr>
<td>Retail and Catering</td>
<td>4,759</td>
<td>6,932</td>
<td>2,173</td>
</tr>
<tr>
<td>Other</td>
<td>5,299</td>
<td>5,599</td>
<td>300</td>
</tr>
<tr>
<td>City of London Corporation and Arts Council England</td>
<td>25,607</td>
<td>25,607</td>
<td>0</td>
</tr>
<tr>
<td>Total Income</td>
<td>57,275</td>
<td>69,755</td>
<td>12,480</td>
</tr>
</tbody>
</table>

Music Programme and Box Office Income

9.8.2 Additional music activity:

<table>
<thead>
<tr>
<th>Music Programme</th>
<th>Number of Concerts</th>
<th>Audience Numbers</th>
<th>Income</th>
<th>(Subsidy)/ Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical</td>
<td>28</td>
<td>28,547</td>
<td>£790k</td>
<td>(£177k)</td>
</tr>
<tr>
<td>Contemporary</td>
<td>25</td>
<td>65,293</td>
<td>£1,204k</td>
<td>£466k</td>
</tr>
<tr>
<td>Club Space</td>
<td>300</td>
<td>48,000</td>
<td>£641k</td>
<td>£416k</td>
</tr>
<tr>
<td>Other Concerts</td>
<td>25</td>
<td>18,350</td>
<td>£0k</td>
<td>£0</td>
</tr>
<tr>
<td>Total</td>
<td>378</td>
<td>160,190</td>
<td>£2,635k</td>
<td>£705k</td>
</tr>
</tbody>
</table>
9.8.3 The programme will be strengthened both qualitatively with a world-class acoustic and also through the increased diversity of the programme. See Appendix 9D for a detailed breakdown of box office income.

9.8.4 Contemporary concerts and programming within the Club Space will reduce overall programming subsidy and significantly increase audience numbers across the two venues. The programming diversity reflects and resonates with London’s changing demographic and is expected to increase in line with demand.

9.8.5 It is anticipated that contemporary ticket yields will range between £18 and £24. Classical ticket yields have a wider range due to the quality, size and scale of the performances. These vary from £10–£48, with the lower price ensuring wider accessibility to the classical music programme. The world-class quality of the Centre for Music, as a landmark building with world-class acoustics and digital technology, with a compelling programme, will increase demand. The business model conservatively assumes yield and ticket price increases of 5% on current achieved levels.

9.8.6 The financial modelling for the Centre for Music Feasibility Study is based on sound assumptions that the audience for classical music will grow by between 15% and 25% in the next ten years. Research papers regarding classical music demand from 11 independent sources have been drawn on during this study; they include Arts Council England, the Department for Culture, Media and Sport, the Greater London Authority, the Office for National Statistics and London and Partners. See Section 16 for further details.

9.8.7 The key factors underlying these assumptions are:

- Projections in population growth – the resident population of Greater London is forecast to grow by 12% during 2015–25 and by a further 8% during 2025–35.
- Improved transport links such as Crossrail, which will bring an additional 300,000 people within a 30 minute rail journey. In addition Crossrail will have a high impact, in terms of reduced journey times, on new areas which have not traditionally been used for the marketing of classical music.
- Increase in international visitors by between 3% and 4% annually. It should be noted that 13% of the LSO’s audience currently is drawn from overseas visitors.
- An ambitious outreach programme to bring in new audiences.

9.8.8 This increased demand will be achieved without adverse impact on the business models of London’s other performance venues. This has been demonstrated by research carried out by Silversea for the London Orchestras Consortium, for the period 2003–04 to 2012–13; this timespan includes the opening of one new venue, Kings Place, and the temporary closure of the Royal Festival Hall, which re-opened for the 2006–07 season. The research demonstrated that while audiences are loyal to a particular venue or orchestra, they also prefer to book a particular type of venue or style of performance. Patrons of the LSO, for example, might also book for the BBC Symphony Orchestra, while the audience for Orchestra of the Age of Enlightenment (OAE) is more likely to book as well for London Philharmonic and Philharmonia rather than for the LSO.

9.8.9 The factors of population growth and increased visitor numbers, noted above, will apply equally to all venues in London and so the total number of tickets on sale is expected to increase across the marketplace.
EDUCATION AND ENGAGEMENT PROGRAMME

9.8.10 The increased capacity provided by the Centre for Music will help to significantly strengthen the current/future workforce of musicians working in educational and community settings. It will also enable the education departments to broaden and deepen their engagement with participants across the board. There will be much greater reach in all strands of the work and an increasing level of expectation across the sector, the benefits of which will be felt by the participants as well as the artists. The 33% increase in numbers of musicians training professionally to teach and lead music education activity will have a positive ‘ripple effect’, amplifying the impact on children, young people, teachers and parents through influence in classrooms and wider community settings.

9.8.11 The development of new income generating strands for this work, and the efficiencies produced by modern, fit for purpose facilities would result in a reduction of the net cost per participant.

9.8.12 Demand for this increased offer already exists as is evidenced by the success of the existing offers of the organisation’s education and engagement programmes. The combined education and engagement programmes have grown over the past five years, with a corresponding increase in participants. Many current activities are now oversubscribed, including Barbican Box, LSO schools’ concerts, LSO Discovery choirs and singing days.

9.8.13 The analysis of audience demand for concerts in the Centre for Music also provides a convincing backdrop for planned increases in education and engagement activity. This programme of activity will address the growth in London’s population, and changes in population age profile which include a significant increase in numbers of primary-school aged children; the GLA has identified the need for 4,000 more primary school classes by 2020 [The Greatest City on Earth, Ambitions for London, GLA June 2013].

9.8.14 The organisations’ capacity to grow this work further to meet and extend demand is limited by lack of bespoke learning spaces around the main concert hall, while the ability to communicate digitally is hampered by limited technical facilities. Working together in a new Centre for Music the digital and learning teams will reach out nationally and internationally with live streaming, live link-ups, and other digital interactions between world-class musicians, school classrooms, and learning initiatives across London, nationally and internationally, enabling their work to reach a far wider audience.

9.8.15 The increase in activity would enable the education departments to reach a critical mass of activity which truly raises the profile of music and music education – enabling advocacy and evidencing the benefits of engagement at the highest level.

<table>
<thead>
<tr>
<th>Education Programme</th>
<th>Current Base</th>
<th>With Centre for Music</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>£1,462</td>
<td>£2,802</td>
<td>£1,340</td>
</tr>
<tr>
<td>Salaries</td>
<td>(1,013)</td>
<td>(1,778)</td>
<td>(765)</td>
</tr>
<tr>
<td>Expenditure</td>
<td>(1,867)</td>
<td>(3,651)</td>
<td>(1,784)</td>
</tr>
<tr>
<td>Net cost</td>
<td>(1,418)</td>
<td>(2,627)</td>
<td>(1,209)</td>
</tr>
</tbody>
</table>
Developments

9.8.16 The Development model income stream components will include:

- Corporate membership and sponsorship
- Individuals and family foundations
- Charitable trusts and foundations
- Fundraising events

9.8.17 Both the Barbican and LSO have substantial expertise in each of these areas of activity and currently generate some £4m annually from these sources. The LSO has also recently completed an endowment fundraising campaign raising £6m. Experienced fundraising teams and strong support from Board and committee members are key factors in achieving this level of income.

9.8.18 A combination of brand new facilities, a world-class acoustic concert hall, spaces devoted to hospitality and fundraising, a broader range of programming, a quantum increase in education and engagement through digital technology will significantly increase potential fundraising opportunities. This will place the collective cultural hub on a par with the major fundraising arts organisations in London. Consequently there is confidence that a net increase in contribution of a little over 50% is achievable. This is supported by the findings from a review of comparators (National Theatre and Royal Opera House) which indicates that the quality of venues, the mix of spaces and the richness of the programme should increase the ability of the organisations in fundraising to support activities. See Appendix 9E for details.

Commercial Income Streams

9.8.19 In 2011 the Barbican began a programme to revitalise its commercial businesses to build a more plural funding model and thereby reducing reliance on funding from the City of London Corporation. The programme of change set a series of challenging growth targets across all commercial activity. Income growth over the four year period to 2014/15 has exceeded targets with income increasing from £4.5m to £8.0m.

9.8.20 A sales driven and commercially focussed function has replaced an approach that relied more on contract management than entrepreneurialism. The commercial business model is gaining critical mass and building a substantial skills base across a range of activities. As a consequence of this professional experience and record of delivery there is confidence that the Centre for Music’s commercial targets can be met. See Appendix 9F for detailed analysis of income growth by activity.

<table>
<thead>
<tr>
<th>Development</th>
<th>Current Base</th>
<th>With Centre for Music</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate sponsorship</td>
<td>2,244</td>
<td>3,244</td>
<td>1,000</td>
</tr>
<tr>
<td>Individual giving</td>
<td>875</td>
<td>1,375</td>
<td>500</td>
</tr>
<tr>
<td>Trusts and Foundations</td>
<td>670</td>
<td>870</td>
<td>200</td>
</tr>
<tr>
<td>Other</td>
<td>557</td>
<td>657</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td><strong>4,346</strong></td>
<td><strong>6,146</strong></td>
<td><strong>1,800</strong></td>
</tr>
<tr>
<td>Salaries</td>
<td>(736)</td>
<td>(1,089)</td>
<td>(353)</td>
</tr>
<tr>
<td>Overheads</td>
<td>(400)</td>
<td>(450)</td>
<td>(50)</td>
</tr>
<tr>
<td><strong>Contribution</strong></td>
<td><strong>3,210</strong></td>
<td><strong>4,607</strong></td>
<td><strong>1,397</strong></td>
</tr>
</tbody>
</table>
COMMERCIAL EXHIBITIONS

9.8.21 The Barbican creates large scale commercial exhibitions and has experience of touring these exhibitions to large audiences both at the Barbican and abroad. It is intended that these exhibitions at the Centre of Music will drive audience numbers during the day and generate income to support operations.

9.8.22 The current model provides only limited scope for the Barbican to create these exhibitions as there is no dedicated space for this activity with space shared with Barbican Visual Arts when available. Over the last three years, two major exhibitions – Designing 007: 50 Years of Bond Style and Digital Revolution have been hugely successful at the Barbican and globally both in terms of audience reach and commercial contribution. Appendix 9G profiles the current portfolio of exhibitions with their touring programme, audience reach and income.

9.8.23 The financial assumptions have been based on extending current activities to the Centre for Music. At this stage, the work to increase income streams further through venue and accommodation design and develop new ways of working around the critical mass of activity within the Cultural Hub has not been done. There is an untapped potential which will be developed during the next phase of this project.

9.8.24 There is confidence based on demonstrable success to date in the Barbican’s ability to increase output in this field of activity. For more detail see Appendix 9G.

<table>
<thead>
<tr>
<th>Expenditure</th>
<th>Current Base</th>
<th>With Centre for Music</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Expenditure</td>
<td>(1,070)</td>
<td>(1,323)</td>
<td>(5,203)</td>
</tr>
<tr>
<td>Salaries</td>
<td>(235)</td>
<td>(113)</td>
<td>(348)</td>
</tr>
<tr>
<td>Other Expenditure</td>
<td>(0)</td>
<td>(330)</td>
<td>(330)</td>
</tr>
<tr>
<td>Total Expenditure</td>
<td>(1,305)</td>
<td>(1,766)</td>
<td>(2,071)</td>
</tr>
<tr>
<td>Net</td>
<td>573</td>
<td>304</td>
<td>877</td>
</tr>
</tbody>
</table>

CATERING AND RETAIL

9.8.25 In 2014 the Barbican readjusted the way the catering contracts were tendered. The aim was to secure a better financial offer and to extract the foyer bars from the catering contract and to run the operation in-house. Concessionary income from catering has now increased from 20% to 25% of gross income, materially increasing the Barbican’s net income, with the in-house bars operation forecasting substantial growth. This business model and the expertise would be replicated at the Centre for Music.

9.8.26 The Barbican’s retail department is relatively new, having been taken in-house a little over three years ago after being contracted on a concession basis. Since then turnover has increased, much to do with a conscious focus on relevant product range. The online shop has been redesigned and relaunched, and plans are in place to create a new retail space by the main entrance. This will give the Barbican more than three times its current retail floor space, in a more visible, navigable and high profile location. This in-house retail model would be the recommended operation for the Centre for Music.

9.8.27 See Appendix 9H for further detail.
PART II
OUTLINE BUSINESS CASE

BUSINESS EVENTS

9.8.28 The Barbican has a successful conference and banqueting business. A key selling point is the fact that the Barbican is not just a standard business venue, but an internationally renowned arts centre. The skills and creativity within the Barbican help it to stand out from the competition as it is possible to harness the tools within the commercial operation e.g. the technical and production team working with world-class orchestras also support clients’ business events.

9.8.29 Over the last five years income has grown from £1.7m in 2010/11 to £2.5m in 2014/15, the result of a commercial development plan that has aligned internal processes and created a more sales focussed team.

9.8.30 The Barbican has worked to penetrate new markets and sectors, particularly the lucrative international association market. London welcomes a huge number of global business events and in 2014 was 6th (up from 7th in 2013) in the world rankings of the most popular destinations for international conventions and conferences. London also continues to reap the rewards of hosting the 2012 Olympics, which enhanced the city’s infrastructure and also attracted new landmark hotels and event spaces.

There is increasing optimism in the meetings market with venues indicating that overall business performance was up in 2014 compared with 2013, and 65% anticipating that 2015 results would show further growth.  See Appendix 91 for further industry statistics.

9.8.31 The fact that the demand for large meeting spaces outstrips supply is demonstrated by the circa £3.8m of business the Barbican had to turn away during 2014/15. This was due to either the Hall being used for other activities, or the associated breakout spaces not being available.

HALL UTILISATION

9.8.32 The Barbican Hall is normally very heavily utilised and remains dark (i.e. unused) for only 3% of the year. This is due to a high demand from all types of users and reflects a delicate balance to both meet artistic needs and deliver commercial revenue.

9.8.33 As a consequence under the current operating model the LSO has limited rehearsal time in the Barbican Hall, often only on the day of performance.

9.8.34 The new venue will provide the opportunity for all of the LSO’s rehearsals to take place in the concert hall, offering the LSO rehearsal conditions that are on a par with its peer group abroad, and thus enabling higher and more consistent standards of performance and a richer audience experience.

9.8.35 The programming, education, commercial and other activities for the Centre for Music and the newly developed hall are reflected in the utilisation charts below.

<table>
<thead>
<tr>
<th>Business Events</th>
<th>Current Base</th>
<th>With Centre for Music</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>£000’s</td>
<td>£000’s</td>
<td>£000’s</td>
</tr>
<tr>
<td>Salaries</td>
<td>(626)</td>
<td>(796)</td>
<td>(170)</td>
</tr>
<tr>
<td>Overheads</td>
<td>(323)</td>
<td>(490)</td>
<td>(167)</td>
</tr>
<tr>
<td>Contribution</td>
<td>2,398</td>
<td>4,025</td>
<td>1,627</td>
</tr>
</tbody>
</table>
To meet the terms of reference this proposal would create Britain’s first major cultural institution in the digital age. It has the potential to transform the way that audiences and the public, both within and outside of the building, could interact with the Cultural Hub.

The transformative potential of the digital aspects of this project focusses on the concert hall, front of house and beyond the Centre for Music. It will have the ability to attract audiences and materially amplify education reach.

Current models in other institutions, for example the National Theatre’s NT Live, work as significant profit centres. NT Live has 19 members of staff and delivers a programme internationally through a range of partnerships earning a contribution to the National Theatre of £1m. There is clearly income earning potential in streaming; however, for the Centre for Music this will remain a longer term ambition.

Given the current stage of development and the purpose of the digital agenda (prioritising reach over financial return) it is not expected that Digital would be a profit centre. The model as it stands would be a combination of some activities that generate net income and others which are subsidised.

<table>
<thead>
<tr>
<th>Digital Activities</th>
<th>UK Reach %</th>
<th>Overseas Reach %</th>
<th>Total Reach # of people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive Platforms</td>
<td>60</td>
<td>40</td>
<td>500,000</td>
</tr>
<tr>
<td>Wallcast</td>
<td>100</td>
<td>0</td>
<td>24,000</td>
</tr>
<tr>
<td>Streaming to Schools</td>
<td>100</td>
<td>0</td>
<td>150,000</td>
</tr>
<tr>
<td>Digital Publishing</td>
<td>100</td>
<td>0</td>
<td>150,000</td>
</tr>
<tr>
<td>Video Conferencing</td>
<td>80</td>
<td>20</td>
<td>10,000</td>
</tr>
<tr>
<td>Online Learning Courses</td>
<td>50</td>
<td>50</td>
<td>160,000</td>
</tr>
<tr>
<td>Audio Visual Broadcasts</td>
<td>5</td>
<td>95</td>
<td>1,000,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>1,994,000</strong></td>
</tr>
</tbody>
</table>

To deliver its agenda, the Digital function would employ 11 members of staff and would be subsidised. There is, however, likely to be significant potential to widen the scope of activities to generate a net contribution of income but that is unclear at this stage and therefore the model has been calculated without these assumptions in place.
9.8.42 The Club Space, restaurant and bars (including a rooftop terrace depending on the exact site) all have the potential to be significant attractions and income generators. The current proposal would be to curate high quality and appealing concerts in a club atmosphere while connecting the venue with the restaurant and rooftop terrace. If designed in the right way this venue has the potential of driving significant trade. The concept has been assessed by both the Barbican’s in-house catering team and Searcy’s, the Barbican’s incumbent contract catering company. Despite significant income potential, at this stage, cautious assumptions have been made regarding income from these venues.

9.9 KEY COMPONENTS OF THE BUSINESS MODEL – EXPENDITURE

STAFFING

9.9.1 Staffing costs form a substantial proportion of the budget of an arts venue. The operating model integrating the Centre for Music has been reviewed to assess the additional staffing requirements of the Barbican and LSO – a full breakdown by department is presented in Appendix 9J.

9.9.2 The table below sets out the overall changes in staff numbers and cost. The Barbican’s current structure will absorb much of the overhead and so will deliver a significant increase in events (see table 9.7.8) and an increase in attendance levels, which are shown below.

<table>
<thead>
<tr>
<th></th>
<th>Current base</th>
<th>With Centre for Music</th>
<th>Net change</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of staff</td>
<td>417</td>
<td>558</td>
<td>141</td>
<td>34%</td>
</tr>
<tr>
<td>Salary costs (£m)</td>
<td>£19.3m</td>
<td>£25.4m</td>
<td>£6.1m</td>
<td>32%</td>
</tr>
<tr>
<td>Attendance</td>
<td>1,977,222</td>
<td>2,976,428</td>
<td>1,001,206</td>
<td>51%</td>
</tr>
</tbody>
</table>
## BUILDING COSTS

9.9.3 Appendix 9K shows the assumptions for the building related costs below.

<table>
<thead>
<tr>
<th></th>
<th>Current £000's</th>
<th>Proposed £000's</th>
<th>Variance £000's</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rates</td>
<td>2,004</td>
<td>3,258</td>
<td>1,254</td>
</tr>
<tr>
<td>Insurance</td>
<td>421</td>
<td>709</td>
<td>288</td>
</tr>
<tr>
<td>Cleaning</td>
<td>1,129</td>
<td>1,717</td>
<td>588</td>
</tr>
<tr>
<td>Security</td>
<td>949</td>
<td>1,246</td>
<td>297</td>
</tr>
<tr>
<td>Utilities</td>
<td>1,733</td>
<td>2,286</td>
<td>553</td>
</tr>
<tr>
<td>Repairs and</td>
<td>979</td>
<td>1,264</td>
<td>285</td>
</tr>
<tr>
<td>maintenance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other expenditure</td>
<td>250</td>
<td>327</td>
<td>77</td>
</tr>
<tr>
<td>Total</td>
<td>7,465</td>
<td>10,807</td>
<td>3,342</td>
</tr>
<tr>
<td>Contingency</td>
<td>0</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Capital</td>
<td>1,500</td>
<td>2,300</td>
<td>800</td>
</tr>
<tr>
<td>Total</td>
<td>8,965</td>
<td>13,307</td>
<td>4,342</td>
</tr>
</tbody>
</table>
9.10 BUSINESS MODEL ASSUMPTIONS, RISK AND SENSITIVITY ANALYSIS

9.10.1 Although the business model is based on cautious assumptions, it factors in contingencies totalling £500k, representing approximately 3% of the incremental costs arising as a result of this project. This is considered to be a reasonable contingency at this stage of the model’s development, taking into account the level of detail through which the model has been built up and the generally cautious nature of the estimates for income and expenditure.

9.10.2 For longer term projections, it has been assumed that any inflationary increase of expenditure will be matched by increases in income and funding and therefore a neutral impact on the overall financial model. There are nonetheless specific areas of the business model which could result in greater volatility.

9.10.3 The cost of utilities in recent years has far outstripped general inflation and longer term projections appear uncertain given global geopolitics. Until recently it was anticipated that these costs would continue to outstrip general inflation by a significant margin, however, the recent drop in oil prices indicates otherwise. The utility budget for the Centre for Music (total including Barbican Centre) is £2.29m.

9.10.4 With improvements in the economy, and particularly in London, there is likely to be increased pressure on salary costs. The Barbican has already factored in the London Living Wage for all its employees and those of its contractors and is consequently a little ahead of other organisations in the industry.

9.10.5 The Barbican and the LSO conduct extensive overseas business and as a consequence have to manage quite significant currency exposures, especially in US Dollars and Euros. These can be hedged in the short and medium term but can affect the model over the longer term.

9.10.6 The Barbican and LSO have considerable experience in managing business volatility and delivering successful world-class programmes of activity within budget. This has been managed through a combination of prudent strategic planning and ensuring that the business model of the organisations remains resilient.

9.10.7 The Barbican and LSO produce a rolling business plan annually covering a period of four years (Barbican) or three years (LSO) to factor in material business changes and financial plans to deliver strategic objectives. Annual budget cycles based on the long term business plan bring specificity and clarity to individual budget holders. The organisations’ finance departments, working closely with responsible budget managers, re-forecast each budget centre every month. This creates a regular up to date forecast of financial activity, allowing management to take steps in time to address potential material financial shortfalls. This requires not only an understanding of likely risks and opportunities but also the variable nature of costs within the model.

9.11 INCOME AND COST SENSITIVITY

9.11.1 The Barbican and LSO together have a substantial and mature business model with a combined current turnover of £57.3m. The Centre for Music, in total, would add 22% taking the total turnover to £69.8m. This should be seen as an extension of current activities and, given the robustness of the current model, provide assurance of the two organisations’ capacity to manage the Centre for Music. The sensitivity analysis below reflects potential business risk.

<table>
<thead>
<tr>
<th></th>
<th>Centre for Music</th>
<th>10% Change £m</th>
<th>% Change of Current Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>12.5</td>
<td>1.2</td>
<td>2.7% of total £44.3m income</td>
</tr>
<tr>
<td>Variable cost</td>
<td>7.4</td>
<td>0.7</td>
<td>1% of total £75.4m expenditure</td>
</tr>
<tr>
<td>Semi Fixed cost</td>
<td>9.2</td>
<td>0.9</td>
<td>1% of total expenditure</td>
</tr>
<tr>
<td>Fixed cost</td>
<td>1.5</td>
<td>0.1</td>
<td>0.4% of total expenditure</td>
</tr>
</tbody>
</table>
An important part of the Barbican’s model, mitigating income risk, is its reliance on twelve distinct income generating activities. This creates a portfolio of streams reducing the risk beta of overall income.

The LSO’s earned income comes from a range of sources: international touring engagements; relationships with the creative industries on film and commercial sessions; the LSO’s own recording label, LSO Live; box office on own concert promotions; and private sector fundraising.

The transition costs of implementing the proposed option, particularly in relation to Barbican refurbishment is set out in detail in Appendix 9B.

The Barbican, as part of local government, pays business rates whereas arts organisations as charities get relief of between 80% and 100%. The cost of business rates for the Centre for Music will therefore depend on its governance and operating entity structure. The potential benefits of rates relief are illustrated below.

<table>
<thead>
<tr>
<th>Potential change in business rates</th>
<th>Cost £m</th>
<th>Benefit range £m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre for Music</td>
<td>1.3</td>
<td>1.0 to 1.3</td>
</tr>
<tr>
<td>Barbican Centre and Guildhall School</td>
<td>2.7</td>
<td>2.2 to 2.7</td>
</tr>
<tr>
<td>Total</td>
<td>4.0</td>
<td>3.2 to 4.0</td>
</tr>
</tbody>
</table>

It has been assumed that all VAT will be recoverable on the basis that this is currently the case for the Barbican as part of the City of London Corporation. This will also depend on the governance and operating entity structure.
9.12 CAPITAL COSTS

9.12.1 The schedule of accommodation and the design of the Centre for Music has been built in detail by the combined expertise of the Barbican, LSO and Guildhall School together with highly experienced design and acoustic teams.

9.12.2 The venues, supporting function rooms and infrastructure of the Centre for Music have been critically examined to ensure that it is both fit for purpose but also to test the added value of each aspect of the facility over and above a symphonic concert hall.

9.12.3 The building has been designed as part of the Cultural Hub and therefore it is expected that many of the facilities would be shared with the Barbican Centre e.g. box office, office spaces etc. Consequently, were this building to be placed outside the Cultural Hub, capital costs would escalate.

9.12.4 The size, scale and capital cost of the building has been benchmarked against similar projects both in the UK and overseas [see Section 25].

9.12.5 In addition to a symphonic concert hall and associated spaces, the preferred option includes education, commercial and spaces for digital exploration to deliver a Centre for Music. As a consequence, in the main, classical concerts currently performed at the Barbican Centre will move to the new hall.

9.12.6 It is proposed that as a consequence, the Barbican Hall will be adapted enabling it to deliver a wider range of contemporary programming that will have broader appeal across London’s increasingly diverse population. In addition, LSO St Luke’s will be adapted for commercial recording purposes to support the LSO’s needs for commercial income to make it more sustainable.

9.12.7 The need for refurbishing the Barbican Hall: if the Centre for Music were to be created as a symphonic concert hall but without any renovations to the Barbican Hall, the Barbican would be open to great risks – both artistic and reputational.

9.12.8 The Barbican has always programmed its classical and contemporary seasons alongside each other in the Barbican Hall, one without any concession to the other; as such, the Barbican is rightly able to promote itself as a home for all music with neither classical nor contemporary music having a pre-eminence in the Centre. With the creation of a symphonic jewel in the Centre for Music, but in the event of no renovations to the Barbican Hall, this parity would be irreparably damaged.

9.12.9 By undertaking strategic renovations to the Barbican Hall alongside the building of the Centre for Music, there is a chance to create the world’s most complementary, strategic and technologically advanced music facility where every music has a home, where every musician can give of their best and that welcomes the broadest possible audience without concession.

9.12.10 Collectively, these three capital projects will deliver the strategic objectives and terms of reference of this feasibility study.

9.12.11 The nature, size and scale of the Centre for Music has been a complex exercise with the proposed building developed after extensive workshops, expert consultations and detailed review of international comparators.

9.12.12 To deliver an efficient workable solution, a series of iterative steps have reduced the initial size of the building from 38,000m² to just under 30,000m². This has been benchmarked, both in terms of size and cost against similar international venues – see Appendix 7A.

9.12.13 The total cost of delivering these changes is as follows:

<table>
<thead>
<tr>
<th>Capital Costs</th>
<th>Centre for Music</th>
<th>Barbican Hall</th>
<th>LSO St Luke’s</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and fittings including 7.5% contingency</td>
<td>221.1</td>
<td>26.9</td>
<td>0.7</td>
<td>248.7</td>
</tr>
<tr>
<td>Professional fees</td>
<td>38.5</td>
<td>5.0</td>
<td>0.1</td>
<td>43.6</td>
</tr>
<tr>
<td>Client costs</td>
<td>5.5</td>
<td>0.5</td>
<td>0.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Client contingency</td>
<td>13.1</td>
<td>2.0</td>
<td>0.0</td>
<td>15.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>278.2</strong></td>
<td><strong>34.4</strong></td>
<td><strong>0.8</strong></td>
<td><strong>313.4</strong></td>
</tr>
</tbody>
</table>

9.12.14 Inflation assumptions are largely dependent on timescales needed to acquire a potential site, planning permissions and the expected period of construction.
9.13 BALANCE SHEET AND CASH FLOW IMPACT

9.13.1 The Barbican Centre is a department of the City Corporation of London and its assets and liabilities are reflected in the City Corporation’s Balance Sheet. Similarly, the Barbican’s bank accounts are part of the City Corporation’s overall cash management structures and therefore reflect the working capital needs of the Centre.

9.13.2 As stated in this report, the governance and management model of the Centre for Music will determine the allocation of business risk. This will be the subject of discussion between the primary funders and project stakeholders – Central government, GLA, the City Corporation of London and the Arts Council England.

9.13.3 For the purposes of the Outline Business Case, the Barbican Centre will use the City Corporation as its parent and reference point. The financial asset base and cash reserves of the Corporation would meet any risk assessment in relation to this project. The City Corporation’s financial statements are available on its website.52

9.14 THE NEXT STAGE

The Full Business Case will determine whether the governance and management structures for the Centre for Music organisations will change. This in turn may have an impact on the financial projections and their risk profile.
10. MANAGEMENT CASE

10.1 INTRODUCTION

10.1.1 This section of the OBC addresses the ‘achievability’ of the project. Its purpose is to set out the structure and processes that will be required to ensure the successful delivery of the Centre for Music project in accordance with best practice.

10.2 CURRENT PROJECT MANAGEMENT ARRANGEMENTS

10.2.1 Project management arrangements were established at the beginning of the Feasibility Study stage to steer the stakeholder input and the business case process as follows:

- Project Group – representatives of the Barbican, LSO, Guildhall School and the City Corporation; oversees the work of the Feasibility Study; meets fortnightly, reports to the Steering Group.
- Steering Group – chief officers of the above four organisations, representatives from the Arts Council, independent adviser; meets monthly.
- Review Group – the DCMS and GLA meet with the Steering Group; meets two monthly.

10.2.2 An organogram setting out the organisation structure for the Feasibility Study is below.
10.3 THE PROJECT MANAGEMENT AND GOVERNANCE STRUCTURE MOVING FORWARD

10.3.1 The project will be managed in accordance with PRINCE 2 (Projects IN Controlled Environments) methodology and can be categorised into seven distinct phases, which are set out in the table.

10.3.2 The phasing of the overall project will depend on the direction set following decisions by key stakeholders. Exact timing will depend on certain critical factors such as the availability of a site, funding decisions, etc.

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>Outline Business Case and Feasibility Study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Vision and Strategic Brief</td>
</tr>
<tr>
<td></td>
<td>• Set out activity, operating and financial model</td>
</tr>
<tr>
<td></td>
<td>• Initial project brief</td>
</tr>
<tr>
<td></td>
<td>• OBC/Feasibility Study due end September</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHASE 2</th>
<th>Full business case; RIBA Stage 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Implement governance structure</td>
</tr>
<tr>
<td></td>
<td>• Select and appoint consultant team</td>
</tr>
<tr>
<td></td>
<td>• Concept design (RIBA Stage 2)</td>
</tr>
<tr>
<td></td>
<td>• Fundraising begins</td>
</tr>
<tr>
<td></td>
<td>• Develop programme plans and operating model</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHASE 3</th>
<th>Developed design / planning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Finalise operating and governance model</td>
</tr>
<tr>
<td></td>
<td>• Developed design (RIBA Stage 3)</td>
</tr>
<tr>
<td></td>
<td>• Planning application / approval</td>
</tr>
<tr>
<td></td>
<td>• Further fundraising activity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHASE 4</th>
<th>Pre-construction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Implement operating and governance model</td>
</tr>
<tr>
<td></td>
<td>• Technical design (RIBA Stage 4)</td>
</tr>
<tr>
<td></td>
<td>• Procure/package contractors</td>
</tr>
<tr>
<td></td>
<td>• Contractor design</td>
</tr>
<tr>
<td></td>
<td>• Secure majority of funding to allow construction to begin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHASE 5</th>
<th>Construction, fitting out and commissioning</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>PHASE 6</th>
<th>Handover to Operations</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>PHASE 7</th>
<th>In Use</th>
</tr>
</thead>
</table>
10.3.3 The next phase of the project, Phase 2, is anticipated to take approximately 18 months from the start, assumed to be immediately after the completion of the Feasibility Study i.e. running from October 2015 to March 2017. The budget needed to deliver the outputs for this phase of work has been calculated at £5.8m with the majority of costs relating to the internal project team and external professional team.

10.3.4 This phase will complete the Full Business Case ("FBC") for the project as required by HM Treasury, agree the terms for the acquisition and development of the preferred site, develop the concept design and begin the private sector fundraising task with a view to securing a lead funder.

10.3.5 The detailed outputs of Phase 2 include the following:
- Finalise and implement project governance structure, including formation of Project Board and Appeal Board.
- Building and Site:
  - Select/procure consultant team
  - Develop final project brief for the Centre for Music
  - Site and selected option confirmed
  - Site acquisition and site development plan agreed
  - Concept Design RIBA Stage 2
  - Final project budget prepared
  - Wider development strategy including highways and public realm.
- Activity and operating model developed to include:
  - Detailed activity programme developed for artistic, learning and digital plans, including role of partner organisations
  - Income and funding model developed to maximise commercial opportunities and self-generated income
  - Develop an integrated Commercial model across the Cultural Hub to maximise the critical mass and brand values of the three organisations.
  - Finalise schedule of accommodation, functional requirements and design needs to meet the needs of the activity programme and business model
  - Further consultation with the wider sector to maximise opportunities for partnerships and to ensure that the project complements the rest of arts and music sector
  - Detailed market research and audience demand analysis.
- Fundraising campaign:
  - Appoint Fundraising Campaign Director
  - Develop fundraising case
  - Donor research and initial cultivation
  - Aim to secure the lead gift(s).
- Gateway 2 risk potential assessment and procurement strategy review.
- Develop long-term Governance and Management structure, including corporate status, partnerships, contractual relationships between all stakeholders.

10.3.6 In addition to delivering the Full Business Case, Phase 2 will develop in more detail the full potential of the three organisations’ creative offer and its likely impact, within a digital context. This will be the key strategic theme defining the Cultural Hub and will sit at the heart of the Centre for Music plans.
GOVERNANCE

10.3.7 There are three organisations delivering the project (Barbican Centre, LSO, Guildhall School) and five key stakeholders (HM Treasury, DCMS, Greater London Authority, City Corporation, Arts Council England). As a consequence the governance and management arrangements should have the resilience to reflect these complexities. Moreover, private fundraising will be a key aspect of delivering the Centre for Music, and consequently a key part of any delivery structure.

10.3.8 The following governance and project management structure is proposed:

- **Project Board** – to lead and oversee the project at a non-executive level
- **Fundraising Appeal Board** – the fundraising arm of the project
- **Executive Group** – representing the three organisations delivering the project and overseeing its delivery at an executive level
- **Project Team** – responsible for the day-to-day management and delivery of the project.
10.3.9 The Project Board will be the governing body of this project with ultimate control and responsibility for the project. It will communicate with the key stakeholders referred to above and the Boards of the three partner organisations. Board Members will include:

- Chairman
- Chairman of the Fundraising Appeal Board
- Three expert appointments of senior figures with experience of property, construction, legal, etc.
- Chairman or nominated member of the Barbican Board
- Chairman or nominated member of the LSO (a musician)
- One additional LSO Board Member
- Chairman or nominated member of the Guildhall School Board
- Town Clerk of the City of London Corporation

10.3.10 In addition, the members of the Executive Group (see below) will attend. In total, this equates to 10 permanent members of the Project Board who, with the 6 members of the Executive Group, represent the key stakeholder organisations.

10.3.11 The governance structure may require augmentation at different stages of the project with project subcommittees set up when deemed appropriate, for example to cover procurement, the construction phase and/or the technological aspects of the project.

10.3.12 The legal framework within which this independent Board will operate will need to be considered early on, for example through the creation of a new entity established specifically to deliver this project.

10.3.13 The Fundraising Appeal Board will be the fundraising arm of the project, and will be set up to reflect the likely scale and nature of the project. Its Members should all contribute financially and will include:

- Chairman
- Chairman of the Project Board
- Up to 8 independent appointees – including international philanthropists
- Chairman of Policy and Resources Committee, City Corporation
- Chief Executives of Barbican Centre, LSO and Guildhall School.

10.3.14 In total, this equates to 14 permanent members of the Fundraising Appeal Committee.
10.3.15 The Executive Group will represent the Barbican, LSO and Guildhall School. It will oversee the management of the project, reporting to the Project Board. Group members will include:

- Managing Director of the Barbican Centre (Sir Nicholas Kenyon) - Project Senior Responsible Owner
- Managing Director of the LSO (Kathryn McDowell)
- Principal of the Guildhall School (Professor Barry Ife)
- Assistant Town Clerk of the City Corporation (Peter Lisley)
- Project Director and Chief Operating Officer of the Barbican Centre and Guildhall School (Sandeep Dwesar)
- Project Director and Finance & Resources Director of the LSO (Rikesh Shah)

This group represents the three organisations and the City Corporation as primary stakeholder.

10.3.16 The Senior Responsible Owner (“SRO”), Nicholas Kenyon, will be the individual responsible for ensuring that the project meets its objectives and delivers the projected benefits. He will be the owner of the overall business change that is being supported by the project.

10.3.17 The Project Team, which will be an internal team based within the project’s lead organisations, will include the following roles and responsibilities. The structure outlined below relates primarily to Phase 2 of the project and will be adapted as necessary for future phases. The Project Team will be headed by two Project Directors (Sandeep Dwesar and Rikesh Shah), reporting to the Executive Group.

10.3.18 Whilst typically a project would have a single Project Director, this project extends to three organisations with a diverse range of complex activities and financial drivers and a number of key stakeholders. No single person can effectively represent all three organisations and oversee a project of this scale, and there is a clear benefit of this role being covered by individuals with close knowledge of the partner organisations’ activities and governance models.

10.3.19 The Project Directors will be jointly responsible for the management and delivery of the project and maintain core responsibility within their respective organisations with either of them able to make a decision without the other when needed.

10.3.20 Their combined organisational knowledge and network of relationships, including key stakeholders, provides strong support across the various facets of the project including any absence cover.

10.3.21 The Project Directors will jointly lead the Project Team and will take the role of Client with the authority to make day-to-day decisions in order to ensure the prompt and efficient management of the project. The extent of this authority will be agreed at the commencement of Phase 2.

10.3.22 The Project Directors’ responsibilities will include:

- Lead the (internal) Project Team and external advisers to successfully deliver all aspects of the project.
- Ensure that the project fulfils the Vision and Brief.
- Ensure adherence to the project programme, cashflow and budget.
- Advise the Executive Group and Project Board of any potential issues or concern and propose solutions as appropriate.

10.3.23 Two internal Project Managers will report to the Project Directors, and they will be responsible for the day-to-day delivery of the project, close liaison with all internal and external teams and ensuring effective coordination, monitoring and reporting of the project.

10.3.24 The Buildings Project Manager will lead on the coordination and delivery of all aspects of the project relating to the physical buildings. The Activity Project Manager will lead on the coordination and delivery of all other aspects of the project, primarily developing the programmes of artistic, educational and digital activity and the development of the business model, as well as coordination of Phase 2 of the project itself.
10.3.25 The responsibilities of the Buildings Project Manager will include:

- Act as the first point of contact for the external professional team including the Acoustician, Architect (who as design team leader will be responsible for coordinating the input of the acoustician, theatre consultant, structural and services engineers etc.), cost consultant and any specialist consultants (e.g. planners, environmentalists, rights of light surveyors etc.).
- Coordinate internal input and communication of all buildings related elements of the project (e.g. agreeing deliverables, project programme, the schedule of accommodation, etc.).
- Ensure effective and prompt liaison between everyone involved in the site and buildings workstream, sitting in on all relevant meetings e.g. design team, design workshops, planners, etc. as the client’s eyes and ears.
- Together with the Activity Project Manager, maintain the overall project budget and overall project programme.
- Working closely with the Activity Project Manager, ensure effective coordination between all aspects of the project.
- Authorise invoices from external consultants for payment.
- Coordinate regular reports from the external project manager, design team leader, cost consultant etc.
- Assist with the process of site assembly and site acquisition, to include liaison with legal advisers, surveyors, etc.
- Ensuring that the project is proceeding as planned (on track, on budget, on time, etc.) and raise issues with the Project Directors as necessary.
- Report to and support Project Directors in all aspects of their work.

10.3.26 The responsibilities of the Activity Project Manager will include:

- Act as the first point of contact for internal teams and external consultants who are involved with the development of the partner organisations’ activity model and business plan following the opening of the Centre for Music.
- Coordinate internal input and communication of all activity focused elements of the project (e.g. agreeing deliverables, activity programmes, financial modelling, etc.).
- Ensure effective and prompt liaison between everyone involved in the activity development, sitting in on all relevant meetings.
- Together with the Buildings Project Manager, maintain the overall project budget and overall project programme.
- Working closely with the Buildings Project Manager, ensure effective coordination between all aspects of the project.
- Authorise invoices from external consultants for payment.
- Coordinate regular reports from the internal teams and external advisers.
- Primary responsibility for the overall coordination of Phase 2 of the project, in accordance with PRINCE 2.
- Prepare regular reports for the Executive Board and Project Board.
- Liaise with funders preparing reports, ensuring compliance with funding conditions and coordinating applications for drawdown of funds.
- Act as the first point of contact for external stakeholders such as ACE, DCMS, GLA, etc. on a day-to-day basis.
- Ensuring that the project is proceeding as planned (on track, on budget, on time, etc.) and raise issues with the Project Directors as necessary.
- Report to and support Project Directors in all aspects of their work.

10.3.27 The Project Team will be supported by a Project Coordinator who will be responsible for running the Project Management Office including providing administrative support.

10.3.28 Specific responsibilities will include:

- Running the Project Management Office including providing administrative support to the team.
- Scheduling meetings, maintaining a project directory, minuting meetings, etc.
- Responding promptly to queries from all those involved with the project, facilitation communication and assisting in addressing such queries.
- Project record-keeping and filing.
10.3.29 Other members of the internal team, who will be appointed at the appropriate time will include:

- **Fundraising Appeal Director** – an experienced fundraiser responsible for leading all aspects of the private sector fundraising campaign at an executive level, working closely with the Fundraising Appeal Board and Executive Group to ensure that the fundraising target is achieved. This person is likely to be appointed during Phase 2 of the project, once the Fundraising Appeal Board Chairman is in place.

- **Finance Support** – to support the Project Team in all finance matters related to the project particularly financial modelling, effective financial management of the current phase of the project, financial reporting on the project, etc. This person is likely to be required early in Phase 2 of the project.

- **Technical Director** – to manage the detailed delivery of the building projects including reviewing and approving technical specifications, room specifications and drawings. This person will be required to work very closely with the external professional team and the Project Directors, and would be appointed at the beginning of Phase 3 of the project.

10.3.30 Supporting the Project Team will be a highly experienced range of external professional advisers, including the following specialisms:

- **External Project Management** – providing external specialist support on technical aspects of project management, such as scope of services for the consultant team, the need for specialist input, site related issues, neighbourly issues, project structure and governance, risk and value management, advising on procurement options/approaches, etc. This support will be the key link between the internal team and the professional advisers, and will have significant experience of delivering cultural building projects.

- **Professional Team** – Acoustician, Architect/Design Team Leader, Principal Designers, Theatre Consultant, Structural and Services Engineering, Cost Consultant, Fire Engineering, Transport and Traffic, etc.

- **Other External Advisers** – including specialist expertise in areas such as legal, taxation, catering, retail, communications, digital technology, etc.

10.3.32 It is anticipated that the Executive Group will meet weekly or fortnightly (depending on the specific stage of work), and the Project Board will meet every 6-8 weeks (again depending on the status of the project). Regular communication will be maintained with the Project Board Chairman as appropriate.

10.3.33 The Fundraising Appeal Board will meet formally every 6-8 weeks, depending on the status of the fundraising campaign, with informal communication taking place more frequently as required. It is expected that the Fundraising Appeal Board Chairman would be closely in touch with the Executive Group and Fundraising Appeal Director.
PART II
OUTLINE BUSINESS CASE

PROJECT MANAGEMENT METHODOLOGY

10.4 PROJECT PLAN, TIMETABLE AND OUTLINE ARRANGEMENTS

10.4.1 An outline project programme has been developed using sensible assumptions regarding the time required for all key activities such as procurement, design, planning approvals and construction. As previously stated, this programme is not based on any specific site, and the actual programme will depend heavily on site availability, other site-specific factors and the timeframes required to secure funding for the project.

Outline Programme - Key Milestones (site dependent - see 10.4.1)
PART II
OUTLINE BUSINESS CASE

PROJECT BUDGET

10.4.2 The budget for the project, which has been developed by Project Managers (GVA Acuity) and Cost Consultants (Gardiner & Theobald), is summarised below.

<table>
<thead>
<tr>
<th>Specialist Area</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Management</td>
<td>Professional project management appropriate for a major capital cultural building project</td>
</tr>
<tr>
<td>Acoustician</td>
<td>Specialist in world-class acoustics for a major symphonic hall</td>
</tr>
<tr>
<td>Architect/Design Team Leader</td>
<td>Landmark cultural building</td>
</tr>
<tr>
<td>Design</td>
<td>Expert advice on site and building design, configuration etc.</td>
</tr>
<tr>
<td>Theatre Consultant</td>
<td>Specialist in major symphonic halls</td>
</tr>
<tr>
<td>Financial</td>
<td>Specialist tax advice</td>
</tr>
<tr>
<td>Other</td>
<td>To be confirmed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Centre for Music</th>
<th>Barbican Hall</th>
<th>LSO St Luke’s</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>£m</td>
<td>£m</td>
<td>£m</td>
<td>£m</td>
</tr>
<tr>
<td>Construction and fittings (including 7.5% contingency)</td>
<td>221.1</td>
<td>27.3</td>
<td>0.6</td>
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<tr>
<td>Professional fees</td>
<td>38.8</td>
<td>4.6</td>
<td>0.1</td>
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<td>Client costs</td>
<td>5.3</td>
<td>0.8</td>
<td>0</td>
</tr>
<tr>
<td>Client contingency</td>
<td>13.2</td>
<td>1.6</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>278.4</strong></td>
<td><strong>34.3</strong></td>
<td><strong>0.7</strong></td>
</tr>
</tbody>
</table>
OUTLINE ARRANGEMENTS FOR CHANGE AND CONTRACT MANAGEMENT

10.4.4 Change management associated with the project will be managed by the external Project Manager reporting to the Project Directors. Day-to-day change management will be discussed and approved by the Project Directors, within agreed limits, at the Executive Group’s weekly meeting. Any change outside the approved budget will need to be approved by the Executive Group or Project Board.

10.4.5 During the design stages, the Cost Consultant will undertake cost checks and prepare regular cost plans to reflect the current design. The Cost Consultant will undertake cost checks on all anticipated or proposed changes, drawings and documents, when issued, against the estimates included within the cost plan so that the change can be approved or sent back for further review. This will be controlled with the change management process and the external project manager will be responsible for instructing the design team in relation to any agreed change or further work required.

10.5 KEY PROJECT RISKS, VARIABLES AND ISSUES

10.5.1 A copy of the project benefits register is attached at Appendix 10A. This sets out who is responsible for the delivery of specific benefits, how and when they will be delivered and the counter measures, as required.

10.5.2 The strategy, framework and plan for dealing with the management of risk has been developed in partnership with the professional team working on the Centre for Music project. Risk owners have been identified and mitigation strategies have been agreed. Risks will be managed through the project delivery structure. One of the core competencies of the supplier appointed as external Project Manager will be the ability to set up and monitor a robust risk management process.

10.5.3 A copy of the project risk register is attached at Appendix 6A. This details who is responsible for the management of risks and the required counter measures, as appropriate.

10.6 PROJECT EVALUATION

10.6.1 The outline arrangements for Post-Implementation Review (PIR) and Project Evaluation Review (PER) have been established in accordance with best practice and are set out below.

10.6.2 Post-Implementation Review – PIR (also known as Post-Occupancy Evaluation – POE) will be carried out when the facility has been in use for long enough to determine whether the business benefits have been achieved. This is likely to be twelve months after completion of a full year’s operation but this will be agreed by the Project Management Group at project closure. The review will be carried out by an independent team and will establish whether the expected business benefits have been achieved from the investment in the facility, as justified in the business case, and whether lessons learned from the business-focused aspects of the project will lead to recommendations for improvements in performance on future projects.

10.6.3 A Project Evaluation Review [PER] will be undertaken to review the effectiveness of the project management up to the point of project closure. Led by the external Project Management Team, it will provide an End Project Report and a Lessons Learned Report as described in the PRINCE 2 guidance.

10.6.4 Post Project Review (PPR) (often referred to as a Post Project Evaluation (PPE)) will also be planned before project closure. It will compare outturns against estimates for all relevant costs and benefits, and generally review success in achieving objectives. It will be conducted 6 to 12 months after project closure, led by an individual independent of the Management Groups and Project Team.

10.6.5 As the project is unlikely to be completed for at least 7 years, it is premature to outline in detail the post-implementation review and the project evaluation review arrangements for post project evaluation.

10.6.6 Although a risk review has been undertaken a Gateway 2 risk potential assessment (RPA) has not been undertaken and likewise although a project delivery strategy has been prepared a Gateway 2 (procurement strategy) has not been prepared. It is proposed that these will be undertaken at an early stage as part of Phase 2.
10.7 CONTINGENCY PLANNING

10.7.1 A contingency plan will be devised for an outcome other than in the usual (expected) plan.

10.7.2 This will be based on the risk review where an exceptional risk that, though unlikely, would have catastrophic consequences.

10.8 POST PROJECT GOVERNANCE AND MANAGEMENT ARRANGEMENTS

10.8.1 The LSO’s residency at the Barbican is contractually based, setting out an annual number of its performances in the Hall, its grant from the City of London Corporation, rented office spaces and other services. The residency has provided the LSO with financial stability and infrastructure and is an important enabler in its success. In turn, the Barbican’s artistic programme is augmented by a world-class orchestra. The relationship therefore is a symbiotic one, benefitting both organisations.

10.8.2 The Centre for Music, as this study sets out, could be the catalyst to deliver an extraordinary and transformative artistic and educational offer in the digital age. With world-class organisations, working in world-class facilities, the critical mass of activity can build a Cultural Hub with significant international impact.

10.8.3 As part of the Feasibility Study, Adrian Ellis Associates (AEA) undertook a governance benchmarking study, reviewing the operational relationship between venues and orchestras. Of the twelve international models from a long list, their report focuses on six case studies. See Appendix 10B for further details.

10.8.4 The next stage of the feasibility study will examine the possible governance models, identifying the framework best suited given the organisations and stakeholders involved.

10.9 NEXT STEPS

The Governance and management framework including key appointments will need to be made as soon as practically possible. This process will start immediately on the commencement of the second phase of the project.
11. OUTLINE BUSINESS CASE CONCLUSIONS

11.1.1 This Outline Business Case concludes that of the four short listed options, Option 4 – build a new Centre for Music – best delivers the benefits associated with the project’s investment objectives and critical success factors. Option 4 also delivers the highest net present value, at £890m, and the highest benefit-cost ratio (BCR) at 1.73 compared to the reference case of Option 1.

11.1.2 The Outline Business Case demonstrates how Option 4 will be delivered in terms of procurement and project management, and sets out the financial implications for the partner organisations.

11.1.3 The third part of this report – the Feasibility Study – sets out in greater detail the case for a new Centre for Music and the benefits it will bring, as well as considering in detail how such a project might be delivered.
12. **INTRODUCTION**

12.1 Having thoroughly analysed the case for a Centre for Music in Part II, this Feasibility Study part of the report develops the Preferred Option (Option 4 – build a new Centre for Music) identified in the Outline Business Case and examines in detail how it might be delivered on the preferred site.

12.2 Part III starts with the background to and context for the Feasibility Study. It then sets out the vision for the Centre for Music, before examining the potential audience and the impact on the wider arts ecology. It outlines the proposals for artistic and educational programming, including a sample two week programming diary, as well as the ambitions for maximising the potential of new technology.

12.3 Part III then considers the physical needs which are required to deliver the artistic, educational and digital ambitions, sets out an assessment of site options and provides an illustrative scheme for how the Centre for Music might be developed on the preferred site.

12.4 In order to demonstrate the extraordinary potential of the Centre for Music to become a new landmark within London, that celebrates the unique vision and mission of the venue, an illustrative design has been developed, as one interpretation of how the building and its spaces could be imagined.

12.5 Part III also sets out how the project might be delivered, including the capital costs, the operational financial model and potential governance models. Finally, it sets out conclusions and proposed next steps.
13. BACKGROUND AND CONTEXT

13.1 BACKGROUND

13.2 In February 2015 the Chancellor of the Exchequer and the Mayor of London jointly announced funding for a Feasibility Study into the creation of a new world-class concert hall in London. The terms of reference of the study (see section 4) invite the Barbican Centre, with its resident orchestra the London Symphony Orchestra (LSO), to consider the case for a new state-of-the-art Centre for Music; including how it could be delivered in the City of London, how it will operate sustainably in the long term and what the impacts and benefits are for the national music sector.

13.3 As set out in Section 6 (the Strategic Case), London is a leading world city with a world-famous cultural offering. Yet London’s world-leading position is not reflected in the musical facilities which the capital has to offer. Present facilities do not match those of world-class halls that have been built elsewhere in the world, nor are they particularly well suited for the digital future.

13.4 This project has been born of a belief that a world-class Centre for Music could support and serve the whole of the UK and give London the facility it needs, to inspire a new generation of music-lovers by offering them the very best and most exciting music making, available to all.

13.5 This project will turn into reality a unique and visionary ambition for music by creating world-class performance and digital opportunities marking a step change for the organisations involved, providing immense benefit to the city, advancing London’s reputation as a pre-eminent cultural centre, and offering the fruits of those achievements – through live performance, learning, participation and digital innovation - to the widest possible public.

13.6 CONTEXT

13.6.1 This project brings together a number of key national and local agendas and policies including:

- A desire to maintain the UK’s leading international role in arts and culture in all their forms, in part to deliver benefits in terms of profile, recognition and ‘soft power’ as well as the significant economic benefits generated through the creative industries.

- National policies to offer great art for everyone, supporting young people’s engagement in the arts, developing links with museums, galleries and the library sector, building the digital agenda, and encouraging collaboration with Music Education hubs, bodies such as Youth Music, and national organisations including the national youth music ensembles.

- A desire to widen access to the arts through education, equality of opportunity; aspirations for young people; raising educational standards; providing workforce development in the arts, education and the creative industries; and building partnerships.

- Development of the City of London Cultural Hub as an internationally renowned, distinctive, vibrant and welcoming centre for the arts, heritage and learning, capitalising on the growth in London’s population and maximising the potential of major infrastructure improvements such as Crossrail.

13.6.2 The best possible environment is required to support the above ambitions, but current facilities and conditions in London are, for a number of reasons explained below, not suitable or adequate. If these ambitions are to be achieved, and if the status of the UK and London as a world-leader in music is to be maintained, a major investment in new facilities is required.

13.7 CURRENT CHALLENGES

13.7.1 London, despite having several good concert halls, does not have a world-class venue for large scale classical music in which performances of the very highest quality can be created and enjoyed. This situation is widely acknowledged, and has been regularly commented upon by music critics and others in the music industry who have the benefit of experiencing concert halls across the world.

13.7.2 For example, the recent opening of the new hall in Paris prompted the following comment from Richard Morrison, the Chief Music Critic of The Times:

“Even in its unfinished state the new Philharmonie looks and (more importantly) sounds like something London’s musicians and classical music punters can only dream about: a world-class concert hall. For all the cosmetic [but expensive] ‘improvements’ to the Royal Festival Hall, the Royal Albert Hall and the Barbican, they remain acoustically mediocre... The lack of a hall in London remotely as good as those in Birmingham or Gateshead, let alone Berlin, Vienna and now Paris, is threatening London’s status as the world’s classical music capital.”

(16 January 2015)

13.7.3 A key weakness in London’s large symphonic halls is the quality of the acoustics, which has a critical impact on the way that a performance is delivered by the musicians and heard by the audience. This is not simply a factor for those with a highly trained musical ear. As with all art, work of the highest quality is recognised as such by all that experience it even if the reasons cannot be easily identified or articulated. London’s audiences enjoy and recognise excellent performances by its orchestras but - unless they experience their concerts overseas – they do not yet hear the orchestras at their absolute best.
13.7.4 Sir Simon Rattle has described the concert hall as 'the instrument of the orchestra' which challenges every musician's imagination to develop the range and colour of the sound in completely new ways. A world-class acoustic, within a physical space that gives every seat a sense of intimacy with the performers, enables each audience member to experience the sound of a great orchestra with a brilliance, immediacy, depth, richness and warmth that is lacking in London's halls today.

13.7.5 The Barbican also lacks an organ – a key instrument for certain works and present in most major concert halls across the world.

13.7.6 Demands on time in the main auditorium compromise the quality and value of rehearsals. For example, the LSO – unlike any of its international peers – is unable to hold all of its rehearsals in the concert hall itself. This means that rehearsals are inefficient as it is only possible to 'fine tune' the performance when in the concert hall itself which is often not until the day of a performance.

13.7.7 The quality of London's facilities, and the conditions such as the amount of rehearsal time available in the principal performance spaces are important factors for leading musicians who have the choice of working with a number of excellent orchestras in a range of world-class venues.

13.7.8 London is hampered in its ability to attract and retain the most talented musicians because of the conditions in which they are able to work. Whilst such individuals do perform in London because of its profile, and the quality of its performing organisations such as the LSO, they do so despite – rather than because of – the quality of London's facilities. Over time, London will struggle even more to compete with other major cities in attracting talent. This is particularly true with the top international conductors who have the choice of the world's best concert halls.

13.7.9 The various factors that contribute to the quality of a concert hall have a direct effect on the quality of the artistic performance and the way that it is perceived by audiences (whether in person or remotely). Artists perform their best work when given an environment that properly suits their needs, just as athletes excel when given the best practice facilities and stadia. This also means that audiences appreciate the artists' work most when it is presented in the best possible conditions.

13.7.10 The nature of existing facilities in the UK means that - other than sitting in a concert hall - audiences have no way of understanding or engaging with the creative process behind orchestral performance. Institutions such as the National Theatre and the Metropolitan Opera have begun to address this through their live cinema broadcasts, whilst the new Max Rayne Centre at the National Theatre achieves this in the physical space. More recently the Cleveland Museum of Art has opened Art Lens, the most technologically advanced interactive art experience in the world. Britain lacks a classical music facility that is able to harness the benefits of a recent trend towards opening up the artistic process to audiences.

13.7.11 The demands on space [not just in the Hall] mentioned above, together with lack of dedicated and suitable ancillary spaces, also limit the scale and potential of learning and participation activity. The Barbican Centre, LSO and Guildhall School could each expand their reach in these areas if more time were available in key rehearsal and performance spaces. Alongside its role as a performance venue, the Centre for Music would be devoted to supporting learning whether formal or informal, and for individuals of all ages and backgrounds.

13.7.12 As recording and broadcast of performances for both recreational and educational purposes becomes increasingly important, the quality of the technical infrastructure within a venue is also a distinguishing factor. Older venues generally lack the modern infrastructure required by broadcasters [e.g. high definition cameras] and bringing in stand-alone equipment often causes issues e.g. with sightlines for the audience within the auditorium.

13.7.13 Recent projects undertaken by the partner organisations demonstrate that any digital activity currently undertaken is a significant compromise, both for the in-hall audiences whose concert experience is diminished by intrusive technology, and the ensuing digital output which is not delivered to the highest possible quality expected by clients and consumers. There are a number of difficulties in retro-fitting technological infrastructure and current solutions almost always have some detrimental impact on audience sightlines and sound levels inside the auditorium.

13.7.14 Aside from recording facilities in the main auditorium, the Barbican Centre has minimal facilities which allow related work to be edited and distributed to the widest possible audience with the material adapted or enhanced to suit the needs and interests of specific groups. The effective and meaningful sharing of performances and other activities with a wider audience is therefore difficult to achieve.
13.8 ADDRESSING CURRENT CHALLENGES

13.8.1 The creation of a Centre for Music will address all of the issues outlined above, and will provide a facility in which the LSO, and other orchestras and ensembles, can achieve the very highest standards and thereby create excellent performances for their audiences. The world’s finest musicians will continue to want to work regularly in London maintaining the city’s musical reputation and profile in the decades ahead.

13.8.2 The partner organisations’ education, community and outreach projects currently reach some 73,000 people each year, many of them young people. The initiatives envisaged through the Centre for Music have the potential to engage far greater numbers through significant growth in the scale, quality and reach of these projects.

13.8.3 A new, modern venue will allow all performances to be captured and shared digitally both live and at a later date as expected and demanded by 21st century audiences. The same will apply to educational concerts, workshops, masterclasses, open rehearsals and similar activities. It will also become possible to produce new digital programmes such as online learning courses. An inability to be physically present in a venue will never again be a barrier to experiencing and participating in these activities.

13.8.4 Further details as to how these challenges will be addressed are set out in the vision and proposed programmes of activity which are presented in the following sections.
14.**THE VISION**

14.1 The overall vision for the Centre for Music is as follows:

- The vision is to create a landmark building in or around the City of London, to be a state-of-the-art Centre for Music of acoustic and visual excellence that will be a base for inspiring music-making, digital development, participation, discovery and learning, raising the level of performance and engagement in music for all.

14.2 In particular, the Centre for Music will:

- Be an inspirational, forward-looking facility connecting performance, discovery and learning, which enhances the status of London as a world-class cultural city.
- Act as an energising, inclusive advocate for the future of music-making for all.
- Be the world-class home for the LSO, the resident orchestra of the Barbican Centre.
- Be a beacon of the City Corporation’s vibrant and welcoming Cultural Hub in the north-west of the Square Mile, a destination for visitors and audiences.
- Contribute to a coordinated offer of cross-arts activity and cultural education, in collaboration with other key venues including the Museum of London.
- Extend the existing facilities of the Barbican Centre, Guildhall School and LSO St Luke’s, to provide an integrated offer to audiences and communities.
- Be a magnet for the world’s top conductors, artists, composers and orchestras.
- Complement sensitively the capital’s provision of classical symphonic concerts, welcome leading international orchestras and provide a visiting base for the UK’s orchestras based outside of London and national youth music organisations.
- Fulfil a national role in providing young people with access to world-class performance, music-making and learning opportunities in partnership with music education hubs and other agencies.
- Be an innovator in exploring new methods of digital engagement and interaction with audiences, enabling this work to be available to all.
- Be a living place, able to adapt to evolving needs and new opportunities.
- Be sustainable and operate efficiently and effectively, providing a consistently excellent experience to audiences, musicians, students, and all others who encounter it whether in person or remotely.

14.3 **DETAILED AIMS**

14.3.1 The detailed aims for the Centre for Music are set out below and reflect the ideas and ambitions developed through the Feasibility Study including the views of many different stakeholders who have contributed to the process. These objectives will continue to be refined as the project progresses to ensure that the Centre for Music has maximum impact and benefit for the widest cross section of society.

**Performance & Experience**

- The Centre for Music will be an arresting and impactful place which makes a unique architectural and musical contribution to London. It will enable audiences to experience the full power and thrill of live music in new ways.
- The Centre for Music will include a concert hall with world-class acoustics for natural (i.e. not amplified) sound, most importantly full symphonic orchestra (with and without choir and/or organ), and larger-scale participatory performances.
- The Barbican Hall will complement this provision with excellent acoustics for amplified or unamplified performance in a wide range of music genres, with special emphasis on contemporary, innovative performance, while being equally suitable for commercial and business events.
- There will be an integrated programme of activities across the Centre for Music, the other venues of the Barbican Centre, the Guildhall School, and LSO St Luke’s.
- The Centre for Music will be welcoming to people of all ages and backgrounds and fully accessible for those with physical or other impairments.

**Impact & Engagement**

- The Centre for Music will be a landmark building that inspires and engages people and which creates a strong sense of belonging.
- The Centre for Music will be a building that brings the audience as close as possible to the music-making, creating a feeling of immersive involvement.
- The configuration of the building will be as flexible as possible, so that different layouts, foyer uses, etc. can be explored whilst always maintaining the quality of acoustics and experience.
14.3.4 Learning and Discovery

- The Centre for Music will generate new opportunities for people of all ages to learn, create and perform in new, dynamic ways, coordinating the offers of the LSO, Barbican Centre and Guildhall School. It will play a major role in helping to guarantee every child and young person music-making experiences of the highest order.

- There will be an integrated programme of performing, composing and listening activities for schools, families and young people, building on the work of LSO Discovery and Barbican/Guildhall Creative Learning. This will be driven by local, regional and national need, all in the context of the National Music Plan and the evolving Cultural Education Partnerships.

- The project will be a catalyst for developing the musical progression of Under 18s that helps to deliver the ambition of the National Music Plan, as well as other key initiatives such as the London Curriculum, connecting the resources and expertise of the Centre for Young Musicians, Junior Guildhall, LSO On Track and Barbican/Guildhall ‘Connect’ ensembles.

14.3.5 Transparency

- The Centre for Music will be inviting, welcoming, well connected with its surroundings, providing easy access and clear wayfinding from all local transport links including the Tube, Crossrail and National Rail services. It will be visible and inviting expressing through the exterior of the building the activities that take place inside, maximising use of open space, for example through external screenings of events.

14.3.6 Catalysing the Cultural Hub

- The Centre for Music will be a landmark building that symbolises the growth and development of the City of London’s Cultural Hub in the north-west area of the Square Mile.

- It will be a visible draw to audiences coming from (for example) Bankside/Tate Modern and the Millennium Bridge to St Paul’s Cathedral, and from transport nodes.

- It will catalyse the working relationship between the Barbican, LSO and Guildhall School, allowing them better to share their experience for the benefit of audiences.

- Through connecting with the other cultural institutions of the Hub, and different art-forms, it will explore a co-ordinated programme and learning offer that helps to build collaboration and increase the impact of the Cultural Hub.

- It will provide opportunities to attract new audiences to the Hub.

- The Centre for Music and the existing Barbican Hall will extend and enhance the engagement and connection with audiences, students and performers virtually, through live experiences and on-line learning.

- The Centre for Music and the Barbican Hall will be equipped with pioneering and versatile technology that supports innovation and trends in music communication, media and education.

- The Centre for Music will naturally strengthen the synergies between the arts on offer throughout the partnership. The digital offer will extend this through a range of content-driven resources including widely available concerts, events, educational performance and teaching and digital publishing and will extend beyond this to create new relationships and opportunities for interaction with audiences and all those interested in music.

- It will become a catalyst to create communities of music-making and music learning locally and globally.

14.3.7 Adaptability and Flexibility

- The Centre for Music will be adaptable, to enable potential changes to be accommodated over time within acceptable cost, disruption and time parameters.

- It will be designed with a view to the rapidly changing digital environment, most likely preferring flexible technology to fixed systems.

14.3.8 Digital

- The live performance will always remain the pre-eminent expression of music. The Centre for Music will harness digital technologies both to enhance this live core and to create a series of experiences beyond the Concert Hall which inspire, engage and educate a new generation of music audiences.
14.4 WHY LONDON?

14.4.1 Having set out the vision for the Centre for Music, the next section considers where it might best be built. London, in part through its status as the capital city, is a focal point for the UK’s musical life. It is home to five symphony orchestras and countless other ensembles across all musical genres. Clearly many other cities in the UK have a large and vibrant musical life, although none on the scale of London in terms of the number of ensembles, number of events, or audience attendances.

14.4.2 London also has international presence and recognition as a leading hub for music beyond what is enjoyed by any other city or region in the UK. More generally, London is one of the world’s leading cities from a wide range of perspectives – for example in terms of commerce, culture, sport and history - and it is in the UK’s interests that it should remain so.

14.4.3 As noted earlier, other cities across the world have developed new musical facilities in recent years and London has fallen behind. If London is to remain pre-eminent in this field, there is a need for its musical infrastructure to match or exceed that found overseas.

14.4.4 In the event that a new facility is built in London, it will have the potential to be used by organisations from across the country, for the benefit of the whole UK population. Equally, a new venue for classical music in London would arguably complement the excellent halls found in cities such as Birmingham and Manchester.

14.4.5 One further relevant factor is that the Centre for Music would be a home for the LSO which, for obvious reasons, would expect its base to be in London giving a further rationale for the Centre for Music being in the capital.
14.5 WHERE IN LONDON?

14.5.1 London benefits from a number of concert halls and musical venues across the city, and transport links mean that these venues have reach far beyond their immediate locality across the city and, in most cases, regionally across the South East.

14.5.2 Given that the preferred strategic option for the Centre for Music project is to build a new venue for classical music and to repurpose the Barbican Hall for other types of music, there is a natural case for building the Centre for Music near to the Barbican Centre. However, this has not been taken as an automatic assumption for the purposes of this Feasibility Study.

14.5.3 Factors that have been considered in assessing potential areas of London in which to locate a new venue include the following:

14.5.3.1 Locating in a very central location such as the City provides better transport links to all areas of London and the South East. Locations in many other parts of London would result in longer travel times for some potential audience members creating an imbalance in terms of the reach of the new venue. Conversely, a central location will remain accessible to the whole population of London and the South East, irrespective of future trends in population growth.

14.5.3.2 The Barbican and LSO have over several years built strong relationships with many east London boroughs particularly through their education provision. Time and resources would be needed to build up that kind of relationship with other London boroughs if the Centre for Music were located in other parts of London.

14.5.3.3 The LSO benefits from annual revenue funding from the City Corporation, in return for the Orchestra committing to present its season of concerts within the City. A location for the Centre for Music outside the City would only be viable financially for the LSO if the revenue funding could be retained or replaced. In the current environment for public finances, it is unlikely that any other local authority would be both willing and able to replace City Corporation’s funding. This means that a location outside of the City would need to be extremely compelling for other reasons for it to be considered as viable.

14.5.3.4 Relocation of the LSO’s base away from the City would most likely lead to a loss of regular audience members. This was the experience when the LSO moved to the Barbican Centre when it opened in 1982 and the need to rebuild the audience base had a negative financial impact. Avoiding a repeat of this situation would be preferable to ensure that the LSO’s business model is sustained.

14.5.3.5 Many of the activities of the Barbican Centre, LSO and Guildhall School are closely integrated and this is widely acknowledged to be a key strength arising from the unique collaboration of an arts venue, orchestra and conservatoire. For example, Guildhall School students benefit from working on a regular basis with the LSO and its musicians whilst the Barbican’s theatre, cinemas and galleries make jointly developed cross-artform projects possible. This is possible only because the three organisations are physically based very close to each other and each organisation would be weakened if the connection with its partners were weakened.

14.5.3.6 The business model for the Centre for Music requires staffing and operational infrastructure which already exists at the Barbican Centre and Guildhall School, but which would need to be recreated (at least in part) if the new venue were distant from the current venues. Operating costs would therefore increase if the Centre for Music was built in a location not within walking distance of the Barbican Centre.

14.5.4 In addition to the points set out above, a further factor in favour of locating the Centre for Music in the City is the willingness of the City Corporation to consider in principle making a capital contribution. This is particularly in the context of City Corporation’s cultural strategy and the development of the Cultural Hub. Given immense pressures on space within London, particularly in central areas, the value of such an offer – albeit without any firm commitment at this stage – is a major factor.

14.5.5 Taking all of the above factors into account, there is a strong case for locating the new Centre for Music in the City of London. If a potential site were identified in another part of London a number of these factors would need to be addressed for that site to be viable – e.g. the venue would need to be accessible to audiences without being too close to other similar venues, and revenue funding for the LSO would need to be maintained. Therefore, for the purposes of the Feasibility Study, the main focus on site options has been in and around the City of London. Specific site options are considered in more detail in Section 20.
15. PROGRAMMING AND DIGITAL

15.1 A Centre for Music within the City of London’s Cultural Hub would create a campus of four music performance venues – the Centre for Music Concert Hall, the repurposed Barbican Hall, LSO St Luke’s and the Guildhall School’s Milton Court, each with its own very distinct identity and characteristics, but complementing each other in a coherent and exciting public offer.

15.2 Each of the venues in the campus will have its own characteristics and features:

**Centre for Music** – world-class acoustics, orchestral excellence and innovation, immersive learning, participatory events, digital engagement.

**Barbican Hall** – innovative music-making, contemporary experience, exploring music and technology.

**LSO St Luke’s** – engaging local communities, diverse programming, commercial recording.

**Milton Court** – intimate music-making, chamber orchestras, artist residencies, integrated arts and learning.

15.3 The Club Space will provide a unique additional venue alongside exhibition space and digital development spaces, all of which will draw people into a welcoming and porous building.

15.4 The Centre for Music will be filled with inspiring and memorable musical experiences all year round. The venue will always feel inclusive and alive, and all activity will be of the highest quality. Evening performances will be complemented by weekend matinees, short early evening programmes, late night events, coffee concerts and lunchtime performances.

15.5 The Centre for Music will provide a home for the LSO and offer a London base for visiting orchestras, creating an opportunity to each to present elements from their core artistic programmes and to build a London network of audiences and supporters. Through strategic partnerships with leading youth music organisations, it will engage with youth orchestras, youth choirs, youth brass bands, youth jazz ensembles and school choirs and ensembles across the country. Celebrations of youth music will populate the programme, with facilities across the campus brought into play for music courses during holidays.

15.6 Bringing together live performance and digital learning in a landmark building of acoustical and visual excellence, the Centre for Music will be a base for inspiring music-making, digital development, participation, discovery and learning, raising the level of performance and engagement in music for all. It will allow a dynamic new approach to performance and learning in music.

15.7 CENTRE FOR MUSIC ACTIVITY

15.7.1 Proposed activity across the four venues can be grouped into four strands:

**Platforms** – create/rehearse and perform: allowing musicians of all ages, backgrounds and abilities to create, rehearse and perform at the Centre for Music.

**Public experience** – visit, listen, view and interact: offering opportunities for individuals, families, groups and schools to experience and interact with the Centre for Music, in person or virtually.

**Participation** – join in and contribute: enabling people of all ages, backgrounds and abilities to participate in music-making activities.

**Professional development** – progression and training: providing high quality experiences and resources for aspiring and professional musicians and teachers.

15.7.2 Within these areas, the scale of activity programmed across the four venues will increase significantly. A new world-class concert hall will strengthen the music programme and, together with the repurposed Barbican Hall, an additional 190 events will be delivered a year. An additional 184,000 people will directly participate in over 3,000 new education and engagement events each year. Digital reach of the arts programme and education activity will reach at least 2 million people.

15.7.3 A range of exciting activities will be offered under each of these areas, giving everyone the opportunity to access and engage with music. Some examples are set out below.
PLATFORMS – CREATE/REHEARSE AND PERFORM

Allowing musicians of all ages, backgrounds and abilities to create, rehearse and perform at the Centre for Music.

- **London Symphony Orchestra** – the performing, rehearsal and administrative home for the world-class LSO and Music Director Sir Simon Rattle.
- **Barbican Presents** – an agenda-setting classical programme from across the globe, including orchestral, chamber, vocal and recital performances.
- **Barbican Associates** – regular London concerts from the BBC Symphony, Britten Sinfonia and Academy of Ancient Music, plus the Guildhall Symphony Orchestra and Guildhall Artists programme.
- **Barbican International Associates** – a London base for some of the world’s greatest orchestras (Royal Concertgebouw Orchestra, Jazz at Lincoln Center Orchestra, Leipzig Gewandhaus Orchestra, Los Angeles Philharmonic and New York Philharmonic), showcasing their innovative artistic and learning programmes.
- **London Symphony Chorus** – a rehearsal home for the 200-strong chorus and a base for its concerts, festivals and sing-along extravaganzas.
- **Barbican Contemporary** – a kaleidoscopic mix of cutting-edge jazz, folk, eclectic and world music, with regular collaborations with Barbican Associate Producer Serious.
- **Collaborations** – a laboratory for projects that defy categorisation and a place for artists of different art-forms and genres to experiment, such as those being developed by media artist Refik Anadol, which test the boundaries between space, sound, visuals and light.
- **Schools** – concerts that provide a welcoming home for primary and secondary schools, linking with the National Curriculum, resourcing teachers and inspiring a new generation of music lovers.
- **Families** – events that engage family members of all ages, through concerts and tailored activities during school holidays and at weekends.
- **Artist Development** – opportunities to showcase the best in young talent through performances and festivals, in partnership with the Guildhall School, London Schools Symphony Orchestra, East London Music Hubs and National Youth Music Organisations.
- **Digital** – a tactile, responsive and immersive institution connecting with audiences, orchestras and arts centres locally, nationally and internationally through a range of creative technological innovations.

PUBLIC EXPERIENCE – VISIT, LISTEN, VIEW AND INTERACT

Offering opportunities for individuals, families, groups and schools to experience and interact with the Centre for Music, in person or virtually.

- **A musical welcome** – a new benchmark for visitor experience in the cultural sector. Large-scale permanent interactive installations and hands-on activities in the foyers will stimulate and entertain all visitors, allowing them to explore and experience musical performances in entirely new ways.
- **A building constructed from music** – and made for tourism. Audiences will be enticed to discover their ability to create music through a range of specially commissioned digital instruments and hundreds of pieces of music embedded throughout the building, and only audible when near to digital devices.
- **Exhibition Space** – music and cross-arts touring commercial exhibitions with wide and popular appeal.
- **Insight** – open rehearsals, demonstrations and ‘skylight’ pods into the concert hall to provide unique access to visitors and a different perspective to music-making.
- **Talks** – presentations, debates and masterclasses by artists and specialists, encouraging interaction and exploration.
- **Concert formats** – a programme of ever-evolving experiences with concert spaces, timings, content and technologies to appeal to a wide variety of audiences and circumstances.
- **Digital Resource** – a wide range of digital resources will be available to the public, and fellow institutions. The digital publishing resource will bring consistency and best practice to music pedagogy, and push the boundaries of learning and engagement to extend beyond the live event. It will be both accessible and relevant to a broad audience and ideal for formal or informal learning.
- **Archive** – physical and virtual access to the rich archives of the LSO, Barbican and Guildhall School for researchers and the general public.
PART III
FEASIBILITY STUDY

PARTICIPATION – JOIN IN AND CONTRIBUTE

Enabling people of all ages, backgrounds and abilities to participate in music-making activities.

- **Spaces** – technology-driven areas specifically designed to support and enhance participation in music-making for children, schools, families and adults.
- **Resources** – instruments and equipment encouraging participation and ensuring excellent musical experiences at first access.
- **Studios** – providing high quality opportunities for choral and instrumental music-making, including for schools and amateur groups.
- **Learning Programmes** – models to inspire learning in schools, including the involvement of artists such as Simon McBurney and Sir Simon Rattle, alongside complementary digital publishing resources.
- **Workshops** – led by nationally and internationally renowned music leaders, covering a range of musical styles and instruments from across the globe – for all ages.
- **Technology** – regular group sessions for young musicians to explore the use of creative technology with emerging and established composers working in this field.
- **Immersive Days** – extraordinary, wide ranging participatory opportunities as part of artistic focuses across the Centre for Music.
- **Events** – high-impact, mixed-ability events designed for community involvement on the concert hall stage, working side by side with professional musicians.

PROFESSIONAL DEVELOPMENT – PROGRESSION AND TRAINING

Providing high quality experiences and resources for aspiring and professional musicians and teachers.

- **An International Centre** – inspiring and training a new generation of musicians, with collaboration, enterprise, imagination, leadership and social engagement at the core plus apprenticeship programmes for stage and technical careers.
- **A new workforce for Music Education** – building on current Guildhall School and LSO programmes to create a network of highly skilled educator-performers.
- **Orchestral artistry** – a new home for the ground-breaking LSO/Guildhall School initiative, enabling aspirng professionals to work alongside LSO members and conductors.
- **Knowledge Exchange** – creating a national and international centre for research, dialogue and reciprocal learning across cultures and art-forms, both physically and virtually through synchronous distance learning.
- **Music Therapy** – regular research and therapy sessions, including work with people with special needs and post-traumatic stress.
- **Creative Labs** – creating a hotbed for collaboration between emerging and established musicians, across the performing, visual and digital arts.
- **e-assessment** - a central feature of all learning opportunities inside the Centre for Music will be the opportunity to record individuals’ achievements via digital transcript.
TWO WEEKS OF WORLD-CLASS EVENTS

15.8.2 A sample two week diary, showing how artistic programming and education activity could be programmed across the entire campus (Centre for Music, Barbican Centre, LSO St Luke’s and Milton Court) is shown on the following pages.

15.8.3 In the Centre for Music, Sir Simon Rattle and the LSO will give two performances of William Walton’s great choral work, Belshazzar’s Feast – with 350 singers, a vast orchestra and the new organ. Elgar’s Cello Concerto and a work by leading British composer Mark-Anthony Turnage completes the programme.

15.8.4 The previous evening, singers from all over the south east will join in a massed sing-along of the Walton led by Chorus Director Simon Halsey in an organ arrangement.

15.8.5 This begins a celebration of British music that will be echoed across the other venues, from leading folk musician Eliza Carthy in the Club space to a family concert with jazz musician, Soweto Kinch in Barbican Hall.

15.8.6 Barbican International Associates, the Los Angeles Philharmonic will appear in the Centre for Music with their charismatic Principal Conductor Gustavo Dudamel. Talks and workshops involving these musicians will take place across the Centre for Music involving young musicians from East London Music hubs.

15.8.7 French artists join the LSO across the two weeks: the great French organist Olivier Latry makes his recital debut on the magnificent new Centre for Music organ, pianists Hélène Grimaud and Jean-Efflam Bavouzet play, and conductor François-Xavier Roth leads LSO programmes with young musicians and young composers, including a massed performance of Debussy’s La Mer for 800 musicians on the extended Centre for Music Stage.

15.8.8 There are opportunities daily for schools and young people to interact with the programme – both in full scale schools concerts related to the London curriculum or through guided sessions during LSO rehearsals in the pods that open onto the hall.

15.8.9 Alongside the live programme, the digital team will be capturing the rehearsals, talks and performances and disseminating these internationally as well as giving people visiting the Centre an insight into what is happening at different points in the day.

15.8.10 Associate orchestra the BBC Symphony Orchestra appears with its principal conductor, Sakari Oramo; leading tenor Ian Bostridge and composer/pianist Thomas Adès give a recital, and there are main stage appearances by Chilly Gonzales, Cecilia Bartoli, Rolando Villazón, Herbie Hancock and Chick Corea.

15.8.11 Everything is planned to offer the widest possible audience an engaging journey around the venues, linking experiences, interaction and discovery.

15.8.12 More detail about the programme is set out in the sections that follow.
2 weeks 4 sites
### Centre for Music
#### Outline Business Case and Feasibility Study

**Part III: Feasibility Study**

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<th>Day</th>
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<td>Barbican Guildhall Folk and Jazz Workshop</td>
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<td>Barbican Guildhall 1-3</td>
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<td>Digital Revolution</td>
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**200+ events**

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**Event**

**Centre for Music**

**200+ events**

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**Event**

**Centre for Music**

**200+ events**

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15.9 **ARTISTIC PROGRAMMING**

15.9.1 The new Centre for Music hall, with its focus on providing the right environment for excellent acoustic music-making, will have its stage more centrally placed in the auditorium. With a significant number of choir and audience seats behind the stage, there will be scope for a different kind of intimacy and a more immersive audience experience than in the Barbican Hall. Combined with the added presence of a pipe organ, this will allow the performance of major, large scale works which currently cannot be played in the Barbican Hall. The option of lowering the stage to the same level as the stalls will allow a different kind of informal engagement between stage and audience, in an intimate and transparent relationship.

15.9.2 Significantly enhanced conditions and facilities – including acoustic properties, technical capabilities and ambient factors – will allow artists to give of their best and encourage richer audience engagement. A refined balance of classical and contemporary music programming between the venues will allow for the full spectrum of musical activity to be presented in optimum conditions. Furthermore, state-of-the-art broadcasting opportunities across all four venues, with greatly enhanced digital capabilities, will enable the creation of digital resources available to all.

15.9.3 The new Centre for Music hall will provide an opportunity for the full canon of classical repertoire to be presented in the best possible acoustic conditions, including large scale choral works and those requiring an organ. It will provide optimum conditions for the world’s top conductors and artists to perform, for young artists to emerge on the main stage, and for composers of today and tomorrow to realise their ambitions in this new facility.

15.9.4 It will also be a home for singing, led by world renowned LSO Choral Director Simon Halsey, with the London Symphony Chorus at the heart of the programme, a wide range of programmes for singers of all ages and abilities, and a new partnership between the LSO and the Guildhall School to develop young professional singers.

15.9.5 The LSO will hold all its rehearsals in the Centre for Music, allowing the time and conditions enjoyed by its peers internationally and enabling it to reach its true potential as a leading world-class orchestra. This will also release more time at the Barbican Hall and LSO St Luke’s for diverse programming from LSO and visiting artists, community based work and creative industry partnerships.

15.9.6 The Centre for Music will allow a far broader and richer cross-section of music to be programmed across the campus than currently, in venues that are ideally suited for each individual genre, ensuring a better experience for artists and existing and new audiences alike. A rich and diverse programme model will be developed, planned and delivered across all four venues which will make a distinctive and exciting complement to existing provision.

15.9.7 The modifications and renovations to the Barbican Hall will repurpose it as a unique, innovative performance venue for the presentation of the widest range of performances and events. The proposed modifications would allow the Hall to be set-up in four different formats, depending on the event that was being presented: a 3,000 capacity with flat-floor in the stalls which would allow standing and dancing, as well as numerous conference benefits; the current 1,743 capacity with a fully seated and tiered stalls level; an 800-capacity with the stalls only utilised and circle and balcony levels curtained off; and a 1,400 capacity with the stalls and circle utilised, but with the balcony curtained off. Such flexibility would be mirrored in the acoustic capabilities of the Hall, which – through physical and electronic manipulation – would be optimisable to a wide range of events while the hall’s technological specifications would be updated and future-proofed to make it the most advanced venue in the country. Through the fundamental repurposing and creative use of the Barbican Hall, there is the possibility of creating a venue which will show the widest range of music to its best effect, to spark artistic imaginations and provide audiences with the very best of experiences.

15.9.8 As a venue with the capability of working from the intimacy of an 800-seater small hall to a 3,000 capacity large auditorium with standing/dancing areas, the Barbican Hall will present an outstanding, rich and diverse programme that complements the output of the Centre for Music. The Barbican Hall will be home to the majority of events programmed as part of the Barbican contemporary music offer, including jazz, world, folk, electronic and eclectic strands; the infrastructure changes to the Hall will allow the contemporary programmers to be even more ambitious and wide-ranging in extending the boundaries of their seasons. The Hall will remain a venue for classical music, including being a significant performing venue of the BBC Symphony Orchestra and the Barbican family of Associate ensembles, and will include baroque music, recitals and semi-staged operas in its offer. The Hall will increase its opportunity for cross-arts collaborations and for projects that hover on the edge of classification. The changes will also allow the opportunity and diary time to expand into the worlds of comedy and contemporary circus, as well as increasing the level of artistic rentals and Barbican business events, including banqueting.
15.9.9 Moving the LSO’s rehearsals to the Centre for Music will unlock the potential to offer more diverse programming at LSO St Luke’s, thereby increasing community focus. This will help to deepen further roots in the local community and to provide more first access opportunities as well as new community-led initiatives.

15.9.10 The LSO will move its chamber ensembles from the Barbican Hall into the more intimate setting of LSO St Luke’s, alongside Barbican classical chamber programming and the ongoing BBC Radio 3 and Discovery lunchtime concert series. Greater use will be made of the inspiring setting and acoustic of LSO St Luke’s for recordings, using a new dedicated digital control space, thereby capturing even more activity, enhancing digital reach and generating commercial income from recordings.

15.9.11 The programming policy at Milton Court will bring together the outstanding work of the students at the Guildhall School with the Barbican Associates, working with world-renowned artists in both workshop and public settings. Milton Court will also continue to be used for Barbican contemporary and classical programming, artistic rentals and Barbican business events.

15.10 EDUCATION AND ENGAGEMENT

15.10.1 The Centre for Music will generate new opportunities for people of all ages to learn, create and perform in novel and dynamic ways. With an outstanding concert hall at its core, accessible to everyone, together with supporting spaces for informal performance, discovery, learning and development, the Centre for Music will allow a transformative offer for musical discovery, appreciation, participation and learning.

15.10.2 The interactive and participatory learning zones will present irresistible opportunities for people of all ages and experiences to explore music-making, as well as its heritage and history, through sound installations, touch screens, drop-in talks, singing and hands-on instrument playing. There will be sessions offering introductions to music-making, as well as ‘Come and Play/Sing’ days and professionally-led workshops for intermediate and more advanced musicians.

15.10.3 The Centre for Music will build on the existing Guildhall School International Centre for Music Professional Development Programme, inspiring and training musicians for the future to perform, create, lead, teach and communicate, and extend this opportunity to artists from other disciplines. To complement this, Higher Education training, placement, apprenticeship and paid internship schemes will be developed, encouraging a diverse demographic to consider possible careers across programming, production, stage and technical management.

15.10.4 The long-term ambition is that by 2040:

- By the age of 18 every young person in the country will have the opportunity to experience (and know about) the Centre for Music, whether physically or virtually.

- Every household within the M25 should have at least one interaction with the Centre for Music.

15.10.5 The Centre for Music will work in close partnership with the UK’s regional and national music organisations to build a collaborative programme of music performance and learning supported by a pooled digital resource. Connecting the resources and expertise of the Centre for Young Musicians, Junior Guildhall, LSO Discovery and Barbican/Guildhall ‘Connect’ programmes, it will establish a programme for lifelong engagement with performance and learning in music that allows clear entry and progression at every level and ability.

15.10.6 The programme will be delivered through a network of human, material and virtual resources. It will offer a live and online world of discovery combining inspirational performance with academic excellence, from first access through group and one to one teaching, to selective ensemble pathways. Experiences will be enhanced by live professional orchestras and supported by an online broadcast facility and a digital platform offering a major interactive learning resource for music.
15.10.7 An illustration of the kind of learning and discovery opportunities for people of all ages made possible by the Centre for Music is illustrated here.

DAYS OF DISCOVERY... new experiences for all

The Centre for Music will offer a huge range of opportunities for people of all ages to experience, participate in and learn about all aspects of music in the most inspiring setting imaginable. It will offer something for everyone, from those experiencing the arts for the first time to people looking to develop their skills and knowledge and to gain outstanding new experiences of music.

The Centre for Music will be a transformational facility that embraces a wealth of musical styles and genres, engaging a wider, more diverse community of audiences and participants in music at all levels.

Experiencing live music

At the heart of the experience will be live music with a spectacular new concert hall offering a truly inspirational setting to engage with music of all kinds. The design of the building, with more integrated front-of-house and back-of-house areas, will feel inclusive and alive, encouraging interaction between musicians and members of the public.

Open rehearsals from the LSO and other major orchestras will give young people the chance to meet musicians and witness the sound of a full symphony orchestra performing or rehearsing either from the hall itself or in specially equipped ‘pods’ in the foyer that provide digital notes on the music being played.

Innovative learning and engagement

The Centre for Music learning experience will not only include the concert hall itself, but a range of interactive and participatory spaces and learning zones that provide visitors of all ages and experiences with irresistible opportunities to explore music-making through sound installations, touch screens, talks, singing and hands on instrumental playing.

School music groups will be able to visit the Centre for Music to take part in a side-by-side session with LSO musicians as well as performing in the Centre’s informal foyer spaces. There will be workshops, open to all, ranging from learning choral singing to developing DJ-ing skills, all led by professional musicians and educators.

The Centre for Music will run digital discovery projects that ensure the Centre’s education programme will resonate far beyond its walls, providing digital learning resources for schools that introduce young people to the joys of music and encourage them to start their own musical journey, as well as providing online courses that bring together people from across the country to explore and encounter music together.

Digital technology will also give the public constant and free access to the activities in the Centre for Music – whether live streaming concerts from world-class performers such as Sir Simon Rattle and the LSO to being able to watch rehearsals, workshops and discussions and debates on great musical works. This will provide access to excellence on an unprecedented level, allowing audience members the chance to taste the atmosphere of the Centre for Music remotely before potentially visiting the venue for the first time.

Interactive exhibition spaces

At the Centre for Music’s heart will be a ‘launch pad’ into the world of music and music-making. This permanent exhibition will reveal the essence of sound - its tone, colour, shape, momentum - through the fundamentals of rhythm, melody and harmony. It will be accessible, available and visible to anyone who walks into the building, inviting them to discover the art, craft and science of music through playful interaction that is both fun and educational.

Families and school groups will have the chance to visit the Centre for Music’s interactive play zone, an exhibition space that will provide fascinating, hands-on digital resources that bring music to life, from a digital journey showing how music has evolved through the ages to interactive exhibits that give visitors the chance to conduct a digital orchestra.

Students and young people will also be able to book special packages that give them the opportunity to experience all areas of the Centre for Music including regular drop-in sessions in the Creation Studio where experienced workshop leaders will encourage them to explore music-making, handle and play instruments and create their own music in state-of-the-art spaces. Early years sessions will enable families who are getting involved with composing and playing music to meet and learn together.

The Centre for Music will also provide professional development opportunities for young people interested in developing their career in the music and creative industries, through apprenticeships and paid internship schemes that encourage a diverse range of people to consider possible careers across programming, production, stage and technical management. This will complement a programme that aims to build a new national workforce of 21st century portfolio musicians who can perform, compose, improvise, lead and teach at the highest level.

Partnership

The Centre for Music’s work is designed to complement and enhance the outstanding music education work already going on across London and the UK. It will also build on the partnerships forged over many years by the LSO Discovery programme and the Barbican and Guildhall School’s pioneering joint creative learning department with music hubs and a wide range of cultural and education organisations.

It will work closely with the UK’s regional and national music organisations to build a collaborative structure of music delivery for the country that encourages lifelong engagement with performance and ensures every child in this country has the chance to experience a high-quality music education.
PART III
FEASIBILITY STUDY

15.11 DIGITAL

15.11.1 Rawden Pettitt [Stanton Williams], Architecture and Digital Technology:

“The Centre for Music is poised to be one of the most significant projects undertaken in the City for a generation. It has the ability to capture the imagination of London and deliver spaces and events that will make it a significant part of the local cultural map as well as a global destination in its own right – for music lovers, new audiences, performers and artistic ambassadors. The role that digital technology plays in this composition could be ground-breaking and inspirational, but more importantly it has a fundamental potential to elevate the entire experience of the venue.”

15.11.2 The Centre for Music will be the first British institution of its kind to be conceived and created in the digital age. It will be optimally placed to harness digital technology in order to engage, educate and inspire audiences from all backgrounds and of all ages.

15.11.3 A more digital world is an opportunity for the Centre for Music to break down barriers to access, to better communicate what it is and what it is for, and to amplify its impact. For the Centre for Music, digital means immediacy, shareability and malleability - a culture in which information can be created and shared in an instant.

15.11.4 The rapid evolution and development of technology means that it is crucial not to be limited by what is possible now, but to imagine how improved technology could enable new audience experiences. A number of recommendations are set out below for the kind of experiences the Centre for Music will offer across the Concert Hall, the public spaces and beyond the building’s walls. These proposals have been informed by a number of specially commissioned research papers, as well as interviews with sector experts and a full report is at Appendix 15A.

CONCERT HALL

15.11.5 The heart of the Centre for Music, the auditorium, will be a hub for experimentation and creativity, with the necessary infrastructure to enhance and create new audience experiences both inside and outside the Concert Hall. Through the use of state-of-the-art projection and sensory technology, it has the potential to become the most accessible and inclusive concert hall in the UK.

15.11.6 There has been a growing trend from audiences wanting a visual stimulus to accompany a classical music performance. Flexible, built-in digital projector screens in the auditorium will enable pioneering interactive performance experiences to bring people further inside the music and enrich the performance experience.

15.11.7 The Concert Hall, and the performances within the space, will be at the forefront of the mass consumer take-up of virtual and augmented realities. This content will be created in such a way as to be available to those watching from elsewhere in the UK or overseas, to enrich their experience in the home. People might be able to, for example, conduct their own virtual orchestra with an interactive baton that uses movement and acceleration sensors, or to have musical themes highlighted on the stage in front of them.

15.11.8 Artists, technologists and other creatives will be commissioned to create interesting and innovative content for use in the auditorium – pieces that integrate live performance and visuals. To fully enhance the concert experience, each seat in the Concert Hall will have a data connection and touch-screen capable of offering programme information, marketing/social driven content for sharing with a virtual community and wearable technology.

PUBLIC SPACES

15.11.9 Projects such as the National Theatre’s Max Rayne Centre and the Cleveland Museum of Art’s Art Lens projects such as the National Theatre’s Max Rayne Centre and the Cleveland Museum of Art’s Art Lens are symbolic of a recent trend towards opening up the artistic process to audiences. The Centre for Music will be the first music facility in Britain that is able to harness the benefits of this trend.

15.11.10 The Centre for Music’s immersive public spaces will offer some of the most exciting possibilities for digital innovation relating to music, and audiences will be able to explore and experience orchestral performance in entirely new ways. The porosity of the building’s design will significantly blur the traditional boundaries and barriers which lie between concert hall and surrounding environment, and enable the artistic process to be opened up to audiences.

15.11.11 The Centre for Music will offer new ways for audiences to experience rehearsals and performances. An immersive, informal front of house space will allow the audience to see and hear the stage and performers, with a range of camera angles, high quality audio and opportunities to take control of the viewpoint or have it curated by an ‘explainer’ or member of the orchestra, perhaps even providing commentary from the stage as an aside to camera. (An interesting analogy here lies in TV cricket coverage, where players sometimes wear microphones during matches.) These rehearsals and performances could also be broadcast to a wider range of audiences and begin to form a rich archive of educational content.

15.11.12 The Centre for Music will seek to do for orchestral music what the Science Museum does for science: engage audiences with lively and interactive installations that bring ideas to life. The main exhibition space will become the home of major shows exploring sound and music, with the larger blockbuster’ exhibitions spilling out into the building’s wider front of house areas.
A separate interactive zone will be a ‘launch pad’ into the world of music and music-making. This permanent exhibition will reveal the essence of sound – its tone, colour, shape, momentum – through the fundamentals of rhythm, melody and harmony. It will be accessible, available and visible to anyone who walks into the building, inviting them to discover the art, craft and science of music through playful interaction that is both fun and educational.

Audiences will be enticed to stumble upon and discover a vast array of music and related content. Some of the building’s architecture will also be transformed into playable instruments, encouraging people to focus on the nature of their interaction with the building and the resultant melodies. One additional possibility is the embedding of hundreds of pieces of music throughout the building, manifested as a series of physical labels – audiences would be able to hear these pieces by bringing their digital devices within proximity of the relevant label.

With a body of exemplary digital content, the Centre for Music will push the boundaries of learning and engagement to extend beyond the live event and give music new and unimagined perspectives. The Centre for Music will seek to act as a catalyst so that research, practice and industry can connect and innovate around a common language and imperative, especially with regards to music education. It will stream and disseminate performances and wider content – including commentary from musicians, interactive guidance notes, animation, teacher resources etc – around the UK as well as overseas.

The challenge for the music sector is to establish what lies at the core of the live experience, and how to translate that into secondary spaces. The gradual advancement of virtual reality and 3D sound technologies into the mainstream may provide the answer; the Centre for Music has the opportunity to create a groundbreaking live-streamed offer which allows audiences to remotely join the Concert Hall and experience performances as if they were attending in person. A truly immersive streaming experience can only be facilitated by the incorporation of appropriate camera positions into the design of the new auditorium.

With a digital backbone, and using a mobile and immersive environment as well as a social and collaborative network, the Centre for Music will support and build future music education assessment. Remotely connecting learners to the Centre for Music will enable schools to tap into a wealth of experience, building on existing teaching practice developed by LSO Discovery and Barbican Guildhall Creative Learning.

The Barbican, LSO and Guildhall School have already worked together on a significant Arts Council England funded pilot project to develop a digital learning product (a massive open online course) in partnership with FutureLearn. The richly interactive pilot (a four-week course about The Rite of Spring, led and presented by Sir Simon Rattle) offered tangible results, full of interactive exercises and discussions, filmed introductions, quizzes, multiple choice, extension exercises and links to further reading and ideas.
PART III
FEASIBILITY STUDY

16. AUDIENCE DEMAND AND REACH

16.1. CONTEXT

16.1.1

16.1.2

Three factors influence the assumptions that have been made about the audience demand for the Centre for Music:

a. the projected increase in the population of London and the Rest of Southeast England ("RoSE")

b. the impact of Crossrail on the number of visits to the City of London

c. the ambition described in Section 15, that by 2040, every household within the M25 should have at least one interaction with the Centre for Music.

16.1.3

There is a wide body of evidence about current audience demand for classical music venues in London. The analysis which follows draws on 11 research papers from independent sources, including Arts Council England, the Department for Culture, Media and Sport, the Greater London Authority, the Office for National Statistics, London and Partners and City Corporation tourism intelligence. It is also informed by marketing reports from The Audience Agency and Morris Hargreaves McIntyre, and by commissioned research specific to the orchestral sector by Silversea in 2015. A full list of source material is shown in Appendix 16A. This range of material gives data to enable reasonable planning assumptions to be made for a number of different timeframes.

16.1.4

Although the analysis below focuses on the demand for performances of classical music, some consideration is also given to the demand for other genres, given that there will be an expansion in the programming of contemporary music (including jazz, rock, world, folk, electronics and hip hop as well as other, cross genre, offerings) in the Barbican Hall.

16.1.5

It should be noted that the population in London and the RoSE is larger, more transient and more diverse than in other metropolitan centres, and that comparisons should be treated with caution. The marketplace for music in London is distinctive in being able to support a high number of venues and performing organisations.

16.2. POPULATION GROWTH AND AUDIENCE DEMAND

16.2.1

Research by the London Orchestras Marketing Consortium reveals that, between 2003 and 2013, sales of tickets for orchestral performances increased by some 30%, while the population of London increased by 13%. Given that this timeframe includes the financial crash of 2008 and a period of economic recession, these figures provide a sound, possibly conservative, basis for assumptions about future growth in audience demand.

16.2.2

The picture of an audience demand which grows faster than the general population is supported by research by the Association of British Orchestras. This demonstrated that in two sample years, 2009–10 and 2011–12, attendances at orchestral events in London increased by 4% while the population increased by only 3%.

16.2.3

The clear trend in recent years has therefore been for absolute growth in audience numbers for orchestral performances, and the research indicated a healthy and growing demand in London.

16.2.4

The growth in the resident population of Greater London is forecast to continue, by 12% 2015–25 and by a further 8% 2025–35. Some of the areas expected to expand most 2015–35, by more than 30%, are boroughs with which the Barbican and the LSO already have strong links: Tower Hamlets, Newham, Redbridge and Barking & Dagenham.

16.2.5

The number of visitors to the City of London is also forecast to continue to rise, by between 3% and 4% annually. It should be noted that 13% of the LSO’s audience currently is drawn from international visitors.

16.2.6

Demographic changes are also expected to have a positive impact on audience numbers both through an increasing number of older people with leisure time and a particularly high propensity for engagement with the arts, and through increased numbers of young people who will be attracted by the creative use of technology.

16.3. CROSSRAIL

16.3.1

When it opens in 2018, Crossrail will bring an additional 300,000 inhabitants of Greater London and the RoSE within a 30-minute rail journey of the Barbican Estate. Clearly, the local catchment area for the Centre for Music will be even larger than the existing one for the Barbican Hall.

16.3.2

An impact study by The Audience Agency has shown that the areas that will derive the greatest benefits from Crossrail journey times to the City include those to the south east and south west, such as Windsor, Egham, Guildford, Sidcup and Bexley. These are all zones which can be expected to produce audience members for the LSO and the Centre for Music.

16.3.3

In addition to footfall solely generated by orchestral performance, there is likely to be a section of the audience which sees the Centre for Music as a destination venue, attracted by a landmark building on an axis with St Paul’s Cathedral, the Millenium Bridge, Tate Modern and Shakespeare’s Globe.
16.4 NEW AUDIENCES

16.4.1 Interestingly, though, The Audience Agency’s research also showed that Crossrail will have a high impact, in terms of reduced journey times to the City, bringing audiences from a wider circle into the catchment area such as Hayes, Hounslow, Woolwich and Erith.

16.4.2 The greatest increase in population in London Boroughs will occur in five Crossrail boroughs: Tower Hamlets, Newham, Redbridge, City, and Barking & Dagenham; ones with which the Barbican, LSO and Guildhall School have particularly strong educational relationships and partnerships.

16.4.3 Crossrail will therefore open up exciting possibilities for developing new audiences. As mentioned elsewhere in this report, there is an intention to work with other organisations in London to target households within the M25 and to bring them into contact with music. The confluence of Crossrail and the Centre for Music is a key factor in making this intention a reality.

16.5 SUMMARY OF PROJECTIONS: ORCHESTRAL PERFORMANCES

16.5.1 Putting together the various factors outlined above, an estimate of audience growth in the next 10 years from 2015 to 2025 is between 15% and 25%. Of this increase, about half is due to population growth and an increase in overseas visitors, about 10% to demographic changes, and the remainder derives from the improved transport links provided by Crossrail, with the attraction of the Centre for Music as a landmark building.

16.5.2 The operating and financial model assumes a growth in audiences for classical concerts of 24% which, although at the upper end of this range, is considered to be achievable and realistic taking all of the above factors into account.

16.5.3 Over the medium and long-term, it is considered that further growth in audiences would result from the proposed scale of educational and digital activity created by the Centre for Music. This work will both raise the profile of classical music and will engage those who might otherwise not develop an interest in attending concerts. Increased repeat visits by those who have a positive experience of the new venue could also be expected to have a positive effect on audience numbers over time. As the impact of these factors is difficult to measure, they have not been explicitly factored into the audience demand projections.

16.5.4 It is worth noting that the impact of the Centre for Music in creating new audiences and increasing levels of interest and engagement with classical music would be expected to benefit other venues both in London and elsewhere in the country. Each positive musical experience enjoyed by an individual as a result of the Centre for Music can reasonably be expected to increase his or her propensity to attend concerts in the future whether at the Centre for Music or elsewhere, for the benefit of the whole music sector.
16.6 AUDITORIUM CAPACITY

16.6.1 As explained later in this report, an auditorium capacity of up to 1,900 seats has been assumed for the Centre for Music Hall, based in large part on acoustic considerations. However, the size of auditorium has also been considered from an audience demand point of view.

16.6.2 The level of sales for individual concerts can vary based on a range of factors including the repertoire, conductor, soloist and orchestral/ensemble performing as well as practical factors such as the day of week or time of day of the performance. Some performances will be almost certain to sell out whereas others might not be quite as popular and will therefore have some seats unsold.

16.6.3 The size of auditorium, from an audience demand point of view, should be large enough to meet the higher levels of demand (and thereby maximise ticket income), but not so large that many concerts cannot achieve a high level of sales compared to the number of seats available. In particular, it is undesirable to have performances in which the auditorium is (or feels to be) only half-full, as the atmosphere and experience of the live performance is diminished (feels to be) only half-full, as the atmosphere and experience of the live performance is diminished for both audience members and the musicians performing.

16.6.4 The assumed capacity of 1,990 (reduced to approximately 1,700 for concerts involving a large chorus) achieves a balance between being large enough to meet demand for the most popular performances, without being so large that achieving high levels of sales is challenging. This assessment is based on an analysis of actual sales data for both the LSO and Barbican’s classical concerts, and projections of the attendances once the Centre for Music opens.

16.6.5 On the same basis, it is considered that an auditorium smaller than 1,900 would not allow the Centre for Music to maximise box office income, whilst an auditorium much larger than this might make it more difficult to consistently achieve a high level of sales.

16.6.6 Another factor in ensuring that the auditorium size is appropriate is that a larger capacity inevitably leads to higher construction costs for the auditorium and other spaces such as foyers, etc. Therefore there would need to be a strong case for higher capacity to justify the increased up-front capital costs involved.

16.7 DEMAND FOR CONTEMPORARY MUSIC PERFORMANCES

16.7.1 The Barbican Centre has a well-established programme of contemporary music. Many of these events are among the Barbican Centre’s fastest sellers, partly because each genre and performer has its own fan base. This is despite performances being scheduled in the less-attractive slots (because of the constraints of working within a venue which is the home of a symphony orchestra), with minimal rehearsal time and no opportunity for repeat performances.

16.7.2 The chance to present contemporary work in both the Centre for Music and a refurbished Barbican Hall will not only allow for greater flexibility and effectiveness in scheduling, but will also allow performances to be given in the venue that is best suited to the genre. Thus, concerts that are acoustic or lightly-amplified will find a natural home in the Centre for Music, and the reconfigured Barbican Hall will house performances that are more heavily amplified and require a flat, rather than raked, auditorium.

16.7.3 Between 2003 and 2015, the number of contemporary events in the Barbican Hall and tickets sold for these events more than doubled. This demonstrates the strength of demand for these types of events.

16.7.4 Continued growth in demand for contemporary music performances is expected, reflecting growth in this genre as well as many of the factors that apply to classical music. In addition, greater availability of the Barbican Hall will enable more performances and larger audiences. The assumed increase in audiences for contemporary music, from a relatively low base, is therefore considered to be realistic and achievable.

16.8 AUDIENCE DIVERSITY

16.8.1 Alongside the anticipated overall growth in audience numbers, the Centre for Music will actively seek to broaden the audience so that it is genuinely a venue which welcomes everyone, irrespective of age, background, physical ability or economic circumstances. The combination of the Centre for Music and its auditorium, Club Space and digital spaces together with the refurbished Barbican Hall, LSO St Luke’s and Milton Court will allow a wide range of performances to be held across a variety of genres. These venues will therefore attract and be accessible to audiences with a wide range of musical tastes and interests.

16.8.2 The range of events that will take place in the expanded group of venues will allow an even wider audience base to be created. For instance, contemporary performances may include those which appeal to individuals of particular nationalities or with niche musical tastes. Over time, programming - particularly of contemporary music - will adapt to meet the demands and tastes of audiences.
16.8.3 Building on the organisations’ existing outreach work, which is well-established and respected in the sector, the programme of learning activity will be significantly expanded. Part of this will particularly be targeted at those people who are typically ‘hard to reach’ in that they have low levels of engagement with the arts in general and with music in particular. Carefully designed initiatives to draw these groups into the Centre for Music, in an accessible and welcoming way, will also broaden and deepen the audience base over time.

16.8.4 It is also proposed that the scheduling of performances will seek to draw in a wider range of audiences. For example, matinee concerts might appeal to older people who prefer to avoid evening concerts and the need to travel home late at night. Busier people may be willing to attend a shorter concert immediately after work (starting at 6pm, say, and finishing by 7pm) rather than committing to a full evening out.

16.8.5 Further development of the programming model for the Centre for Music and other venues will be developed as the project progresses, taking into account more detailed external audience analysis and market research to ensure that the proposed activities meet the demands of future audiences.

### 16.9 TOTAL REACH

16.9.1 The Barbican and LSO currently attract a total of almost 2 million people each year. The addition of the Centre for Music would increase this to almost 3 million with growth spread across all areas of activity. Digital activities, which currently reach a further 1 million people annually, would expand to engage some 2 million people.

16.9.2 The total reach (physical and digital) of the two organisations would therefore increase from some 3 million in total to some 5 million with the addition of the Centre for Music – growth of 67%. The considerable social and economic benefits of this increased engagement is analysed in Section 7 (The Economic Case).

16.9.3 Broadcasting through partnership with the BBC would also form an important part of the Centre for Music’s wider reach both nationally through BBC Radio 3 and internationally through the European Broadcasting Union (“EBU”). Currently, broadcasts of 30-40 concerts reach an audience of several million people annually.

### Physical Attendances

<table>
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<tr>
<th></th>
<th>Current</th>
<th>Projected</th>
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<tr>
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<td>119,623</td>
<td>148,170</td>
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<tr>
<td>Learning</td>
<td>72,657</td>
<td>257,330</td>
<td>184,673</td>
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<tr>
<td>Commercial</td>
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<td>123,305</td>
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<tr>
<td>Contemporary</td>
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<td>133,544</td>
<td>65,293</td>
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<tr>
<td>Partner Activity and Recitals</td>
<td>-</td>
<td>18,350</td>
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<tr>
<td>Club Space</td>
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<td><strong>Total Physical Attendances</strong></td>
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### Digital Reach

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<td>Digital Reach</td>
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### Total Overall Reach

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<td>Total Overall Reach</td>
<td>2,977,222</td>
<td>4,972,428</td>
<td>1,995,206</td>
</tr>
</tbody>
</table>
16.10 IMPACT ON AUDIENCES FOR OTHER VENUES

16.10.1 It is important to consider what will be the impact of the Centre for Music on the business model of other venues in London.

16.10.2 This question has been explicitly addressed by considering research carried out by Silversea for the London Orchestras Consortium, for the period 2003–04 to 2012–13; this timespan includes the opening of one new venue, Kings Place, and the temporary closure of the Royal Festival Hall, which re-opened for the 2006–07 season. The research demonstrated that while audiences are loyal to a venue nearest to their travel route home, they also prefer to book a particular type of venue or style of performance.

16.10.3 Silversea’s research also demonstrated that there is a tendency for the audience to increase as the number of performances increases. After the re-opening of the Royal Festival Hall, and then the opening of Kings Place, audiences grew. There is thus a strong possibility that by raising the profile of classical music, the Centre for Music will also help to develop new audiences for all venues.

16.10.4 The factors of population growth and increased visitor numbers, noted above, will expand the market generally in London and so the total number of attendances would be expected to increase across the marketplace.

16.11 AUDIENCE DEMAND AND REACH: CONCLUSIONS

16.11.1 The financial modelling for the Centre for Music Feasibility Study is based on sound assumptions that the audience for classical music will grow between 2015 and 2025 during which time a new Centre for Music would open. The key factors underlying these assumptions are projections in population growth, coupled with improved transport links and an ambitious outreach programme to bring in new audiences. This increased demand will be achieved without adverse impact on the business models of London’s other performance venues.

16.11.2 The Centre for Music will enable the diversity of London’s population to be reflected better in programming. Audience diversity is expected to increase as a result of a wider range of events being staged in a broader mix of venues, with greater scope to tailor performances to the needs of specific audiences. Overall reach – both physical and digital – is projected to increase substantially, leading to social and economic benefits which will be a direct result of the creation of the Centre for Music.

This overview was compiled with the help of researchers from the audiences strand of the CreativeWorks London knowledge exchange hub, funded by the Arts and Humanities Research Council.
17. **BUILDING SPECIFICATION**

17.1 **INTRODUCTION**

17.1.1 The Initial Brief and Requirements have been developed from the vision and objectives for the Centre for Music described in Section 14 and the programme of activities, performance, education and events that are envisaged for the venue set out in Section 15.

17.1.2 The vision and the programme set aspirations for a ground-breaking cultural space that engages the public, and creates opportunities to experience and learn from orchestral and other music in radically different ways to the conventional concert halls of previous centuries.

17.1.3 The expansive and unique ambitions for the Centre for Music have been interpreted in the form of an Initial Brief which defines its main functions, spaces, qualities and characteristics. An important aspect of the vision and objectives for the Centre for Music is that they are set within the wider context of the City’s Cultural Hub.

17.1.4 As a major new addition to the cultural life of the City, the Centre for Music will be inseparable from the existing facilities of the Barbican Centre, LSO St Luke’s and the Guildhall School and complementary to other nearby facilities such as the Museum of London.

17.1.5 The creation of the Centre for Music will enable the evolution of the existing programme and facilities of the Barbican Centre, leading to a broadening in the range, frequency, accessibility and quality of musical culture in the City. Consequently the associated brief for the refurbishment of the Barbican Hall and enhancements to LSO St Luke’s have also been developed.

17.1.6 **KEY THEMES**

17.1.6.1 The Initial Brief sets the compass for the Centre for Music as a place, exploring the spaces, facilities and character of the venue. It describes the elements and qualities of the venue that will make it a unique and world-class fulcrum of artistic experience and learning.

17.1.6.2 The standards set within the Initial Brief directly establish a range of criteria that will deliver the venue and place described in the vision, as shown here.

17.1.7 **A NEW MODEL**

17.1.7.1 The Centre for Music will transform the traditional model of the concert hall, creating new types of space and experiences of music, making it more immediate, more accessible, more intimate, and more immersive.

17.1.8 **THE CENTRE FOR MUSIC’S CONCERT HALL**

17.1.8.1 The Centre for Music Concert Hall will be the world-class performance space that London has never had. Combined with the Barbican Hall, Milton Court and LSO St Luke’s, the Centre for Music Hall will complete a constellation of four exceptional and unique venues.

17.1.9 **A UNIQUE EXPERIENCE**

17.1.9.1 The Centre for Music will be unlike any other world-class venue – it will be colourful, transformational, inspiring and representative of London’s dynamism and culture.

17.1.10 **THE EDUCATIONAL ENVIRONMENT**

17.1.10.1 The Centre for Music will be a place of education, where rehearsals and performance are explored and used as opportunities for participation, learning and play.

17.1.11 **INTEGRATION WITH THE BARBICAN AND THE CULTURAL HUB**

17.1.11.1 The Centre for Music will be a catalyst for transformation across the Cultural Hub, seeding change to the Barbican Centre, LSO St Luke’s and Milton Court.

17.2 **STRUCTURE AND CONTENT**

17.2.1 The Initial Brief is described in summary here, and is based on a more detailed description developed by Arup Associates with the extensive involvement of the project team.

The main components are:

- Performance Spaces
- The Core – the main front of house facilities
- Learning, meeting and entertaining spaces
- Digital spaces and facilities
- Rehearsal and back of house
- External spaces
- Other ancillary spaces.
17.3 CENTRE FOR MUSIC HALL

17.3.1 Quality and ambition
The Concert Hall is the single major functional volume at the heart of the Centre for Music. It is to be the excellent, world-class venue for acoustic (non-amplified) music that London is lacking.

17.3.2 The Concert Hall is to be an extraordinary venue for making and experiencing acoustic music. The acoustics are to be excellent for both audience and artists, during both performances and rehearsals. It will enable audience members to become totally absorbed in performances, with excellent connection between the audience and performers. For the audience itself, it will create a true sense of togetherness.

17.3.3 The vision and aspiration is for a hall which is the home for the London Symphony Orchestra. It will be a place where the LSO can realise its full potential, providing an experience that inspires musicians and audiences alike.

17.3.4 The hall is to support and enable both traditional performances and innovative and complex musical and cross-arts performance formats. It is to reflect London in the 21st century – an embodiment of its successful, leading, assured, diverse, and forward-thinking qualities.

17.3.5 The hall environment is to be adjustable. This for example could facilitate variety to lighting and projection to provide new opportunities and experiences for audience members. This will also meet the requirements of the performance and attending audience from a comfortable and relaxed style, promoting the continuation of tradition, to cutting edge experimental and exciting. This adaptability is to align with the priority of not compromising world-class acoustics for acoustic (non-amplified) programs.

17.3.6 The hall will be instantly recognisable as an innovative and forward-looking Centre for Music in London.

17.3.7 The hall is to support and enable both traditional performances and innovative and complex musical and cross-arts performance formats. It is to reflect London in the 21st century – an embodiment of its successful, leading, assured, diverse, and forward-thinking qualities.

17.3.8 The hall environment is to be adjustable. This for example could facilitate variety to lighting and projection to provide new opportunities and experiences for audience members. This will also meet the requirements of the performance and attending audience from a comfortable and relaxed style, promoting the continuation of tradition, to cutting edge experimental and exciting. This adaptability is to align with the priority of not compromising world-class acoustics for acoustic (non-amplified) programs.

17.4 AUDIENCE CAPACITY

17.4.1 The audience capacity of the concert hall has been set at 1,900. This is because acoustical excellence and high intimacy, both acoustic and visual, are difficult to achieve in concert halls exceeding 1,900-2,000 seats. This is for two main reasons. Firstly, people absorb sound and hence the loudness in halls with high capacities is lower, exacerbated by the increased distance from the furthest seats to the performers, this can reduce the impact and dynamic range of the music for all listeners, not just for those in the furthest seats. Second, the increased number of seats means that some members of the audience are necessarily further away, reducing the quality of their experience, particularly with respect to the intimacy between performers and audience which is a basic tenet of the philosophy for the new hall.

17.4.2 More generally, a balance must be struck between a tendency towards a smaller capacity to meet the ambitions for acoustic excellence and intimacy, and the desire to maximize potential box office income. Following discussion with the professional team, the maximum capacity for which the acoustic and architectural design would not be compromised is considered to be 1,900.
SIZE AND SHAPE

17.5.1 Several factors, both acoustical and architectural, drive the overall dimensions and shape of the Centre for Music Concert Hall.

17.5.2 Given the importance of acoustic and visual intimacy within the vision for the concert hall, a key driver is creating a space that encompasses a sense of proximity with the performers, of clarity of sound, and of immersion in the music.

17.5.3 The size of the stage, which is determined mainly by the performance programme, affects the overall spatial dimension of the concert hall. The size of each individual seat, the number of seats, and the seating layout determine the overall area and shape of the auditorium.

17.5.4 Precedent halls of various shape and proportion typologies of similar capacity have been compared in deriving a notionally shape and size for the hall. These precedents have been identified for their acoustical qualities, both on stage and in the audience. They also share a sense of togetherness, engagement and intimacy which is the heart of the vision for the new concert hall.

17.5.5 The conclusions from this analysis are that for the main hall at the Centre for Music the minimum clear internal dimensions of the hall should be 59m long, 37m wide and 23m high. These dimensions are measured from the floor below the lowest row of audience to the highest point of the interior ceiling.

17.5.6 On the basis of preliminary studies, the minimum external dimensions of the concert hall have been determined below. These take into account the necessary construction and structures required for sound isolation, the spatial necessities for circulations around the hall as well as technical equipment required. These are:

- Overall length: hall internal length + 15m
- Overall width: hall internal width + 8m
- Overall height: hall internal height + 10m.

The overall minimum volumetric box dimensions within which world-class acoustics are achievable used in the feasibility study are therefore:

- Overall length 74m
- Overall width 45m
- Overall height 33m.

17.5.7 A site that can accommodate the chosen box of these dimensions would be suitable and satisfactory, with the confidence that a concert hall with world-class acoustics could be achieved. Several excellent existing concert halls could fit within these dimensions and a range of typologies for the shape and layout of the hall could be created within the chosen box.

17.5.8 There are typically two general formats for concert halls - either with the audience wrapped around a centrally located stage (sometimes known as vineyard style - e.g. Suntory Hall, Tokyo and the Philharmonie in Berlin) or a more rectangular, ‘shoebox’ style auditorium with the stage at one end (e.g. KKL Lucerne and Birmingham Symphony Hall).

17.5.9 At this feasibility stage, no definite view has been taken on the actual shape, style or typology for the auditorium as that is something that will need to be considered carefully at the concept design stage from both an acoustic and an architectural perspective. However, given the aspirations for visual intimacy, there is a preference towards a hybrid between the ‘shoebox’ and ‘vineyard’ styles, the exact nature of which will be developed further as the project progresses.

17.5.10 Preliminary studies for the main hall indicate the following:

- Average distance from audience to stage: 20m
- Average distance from exit: 7m

ACOUSTICS – CONCERT HALL

17.6.1 The acoustic brief for the Centre for Music Hall has been developed through detailed discussion between Arup Associates and Nagata Acoustics combining their experience of a large number of concert halls of different styles from across the world.

17.6.2 Acoustic excellence for acoustic (non-reinforced or non-amplified) music, including symphonic, choral and classical music is paramount for this hall; the acoustic must be world-class.

17.6.3 The acoustics are to be such that audiences, conductors, musician and singers all look forward to returning to a rewarding musical and sound experience.

17.6.4 Provisions for other types of repertoire, such as sound reinforced, amplified and remote (virtual) music performances, and for other potential performer and audience arrangements, are to be without detriment to the primary acoustic music excellence requirement.

17.6.5 This hall is to provide a strong natural concert sound, comparable with the best halls in the world. This sound is to be provided for different ensemble configurations, from full symphony orchestra and chorus to baroque and early music ensembles, with and without singers.

17.6.6 The sound should help support and develop the acclaimed sound signature of the LSO, and the hall itself should have a clear and admired sound identity.

17.6.7 The sound should have a beautiful and pleasing timbre (tonal quality), with appropriate warmth and brilliance, without thinness or harshness.
17.6.8 The auditorium is to have ample reverberance for the enjoyment of 19th, 20th and 21st centuries’ symphonic, choral and operatic repertoire. Equally the hall is also to provide excellent listening conditions for 18th century and earlier repertoires. A rise in the low frequency reverberance is to provide warmth to the orchestral sound.

17.6.9 Symphonic rehearsal in the hall is a priority and the difference in the acoustic between rehearsal and performance states must be minimised as far as practicable by the hall design and materiality. Primarily this focuses on the audience seat design, assisted by judicious use of the variable sound absorption system.

17.6.10 Reverberance is to be matched with excellent clarity. The relative sound levels of the soloists, chorus and each section of the orchestra are to be well balanced. Blend between sections and between orchestra and chorus is to be appropriate – neither too much nor too little. There is to be good loudness, to provide an exciting and dramatic sound experience and to allow the conductor maximum dynamic range.

17.6.11 A complete absence of noise is to maximise the dynamic range, provide the greatest musical drama and to allow the entire ensemble to play softer for the same impact. Acoustical excellence in the concert hall requires a very quiet environment: the softest notes and nuances must be audible, without any disturbance from noises coming from the outside, from other rooms in the building or from mechanical and electrical equipment (such as heating, ventilation and air conditioning systems and performance technical systems).

17.6.12 The sound is to be acoustically intimate. The listener should feel close to and involved in the music.

17.6.13 The orchestral sound is to be spacious. Most of the audience is to experience a degree of envelopment during loud orchestral work.

17.6.14 There should be directional fidelity. The performers are to be accurately aurally located at their physical positions.

17.6.15 The auditorium is to be free of image shifts, echoes, sound focusing and other acoustic defects.

17.6.16 A pre-requisite of a great performance is good performing conditions. The hall is to provide a positive response and aural experience for the performers. This is to include self-hearing, mutual hearing between the soloists, chorus, orchestra and conductor and later support from the room.

17.6.17 Using variable sound absorption and sound reinforcement systems, the hall is also to provide very good sound for other important proposed programming including learning activities.

17.6.18 Variable sound absorption systems will adjust the acoustic if and when required for specific performances, learning and commercial events.

17.7 SIGHTLINES, SOUNDLINES AND AUDIENCE EXPERIENCE

17.7.1 Excellent sightlines and (direct) soundlines for the audience are a pre-requisite to achieve optimal acoustical and visual experiences.

17.7.2 Other important components of the audience experience include seating comfort and spacing, environmental conditions, straightforward circulation, good lighting of circulation areas and clear signage at all levels.

17.7.3 Current trends indicate that future music performance will be more often combined with other art forms such as dance, projection and lightly staged opera and the sightlines will therefore need to be designed with due consideration of those types of performance; this will give the Centre for Music an advantage over traditionally focused halls.

17.8 DIGITAL MEDIA

17.8.1 The hall is to provide an excellent experience for both physically present and remote audiences.

17.8.2 A full high definition (broadcast quality) installation of silent, remote control cameras and high quality microphone arrays will facilitate imaginative broadcast and streaming of rehearsals and performances in a wide range of performance set-ups.

17.8.3 There will be permanent and temporary manned camera positions, functioning without disturbing the live audience, avoiding noise, circulation difficulties and sightline issues.

17.8.4 The digital facilities will also provide for highly flexible, multi-channel video and audio reproduction, including large projectors and screens.

17.9 PIPE ORGAN

17.9.1 The hall will feature a suitably sized major pipe organ for solo and ensemble use. It will be playable both at the organ and from a remote console, normally located when needed on the concert platform.

The hall’s acoustic will consider the installed major concert pipe organ in three ways:

- Sufficient reverberance and dynamic range to support the full musical grandeur and capability of the instrument, in both solo and ensemble use
- The timbre of the instrument
- Balance and communication with the orchestra and chorus.
PART III
FEASIBILITY STUDY

17.10 SUPPORT SPACES

17.10.1 There are a range of critical service spaces and facilities that support the operation of the Centre for Music Hall:

- Control suites and dimmer room.
- Projection rooms.
- Generous side assembly platform entrance areas and rear assembly / crossover / case storage area.
- A suite of warm-up rooms.
- Instrument and technical stores.
- Movable element storage below the hall.
- Performance zone and audience area lift machinery pits and access.
- A full headroom technical attic above the full performance zone and most of the overall hall containing technical equipment and providing easy access for maintenance.
- Digital realm rooms associated directly with content feed to and from the hall.

17.11 THE CLUB SPACE AND EXHIBITION SPACE

17.11.1 The Club Space will be an exciting second performance venue. Its use will include:

- Late night “Classical Club” performances.
- Similar late night jazz and world music programming.
- Lunchtime recitals.
- Educational programming.
- Small ensemble rehearsal and recording.
- Digital music presentation.
- Sponsor’s events.
- External hire for public and private events.

17.11.2 Less formal than the main auditorium, the space will include an integral bar, dining capability and in-space performance control (sound, light and video) positions. Subject to site opportunities and constraints, it is hoped that the space may benefit from views across the City and/or access to an external area.

17.11.3 Appropriate technical facilities for jazz and similar amplified performances will be provided, including programmable atmospheric lighting and simple adjustable drapes.

17.11.4 The space will accommodate 280 people.

17.11.5 The acoustics will be optimised for small scale solo recitals and chamber works. A simple variable sound absorption system will both help match rehearsal and performance conditions and allow for sound reinforced and amplified performances.

17.11.6 The Club Space has a suite of support rooms including catering spaces, a projection room, a recording control room, local dressing rooms and quick change rooms, together with a company office that can also be used during education events.

17.12 "THE CORE" - FRONT OF HOUSE

17.12.1 The Centre for Music will be distinct from other concert venues by virtue of its radical, dynamic and compelling Front of House spaces.

17.12.2 The Front of House of the Centre for Music will depart from the traditional models of ‘foyer’ or monothematic assembly areas. Instead, the Front of House will embody the values of inclusivity, transparency and engagement for all that the Centre for Music symbolises. It will be a place of many places, providing a multiplicity of settings, scales and resonances. Above all it will be a meeting place – a place of encounters between people, music, events and the City.

17.12.3 Notionally entitled ‘The Core’, it is the place where the performers, the Centre’s staff and the public meet throughout the day and into the evening.

17.12.4 The Core is a place to meet, exchange ideas, perform, enjoy performances, teach and learn. It is much more than a performance foyer, though that is a primary role pre-performance.

17.12.5 It is a gateway space not only to the new building but to all the facilities of the Centre for Music and the Cultural Hub.

17.12.6 The Core is located as a bridge between the main public entrance, the concert hall, the Club Space, the other spaces which provide for public access and the private backstage world.

17.12.7 The Core includes all the conventional facilities of a major performing arts centre foyer – weather lobby, public reception zone including information desk and ticketing, shops, concession and signing area, ATM, coat-check, toilets, all-day café and several bars at different levels, capable of serving a total of 950 people in 15 minutes, with additional pre-order for 380 people.

17.12.8 In addition it includes – or is immediately adjacent and open to:

- The Forum - An accessible performance space with informal seating for an audience of 50-200 (total performer + audience capacity 300). The Forum will have an area of approximately 300m², full technical production systems (including an overhead suspension grid and digital replay / broadcasting facilities, including potential for immersive performances. It will also be used as a teaching space, and for pre-performance talks and similar events.

- Less formal performance “niches” – incidental spaces, balconies, platforms or corners within the main space for smaller musical performance.

- Viewing portals – small nooks with seating and views controllable with full technical blackout blinds into some of the performance and rehearsal spaces.

- An exhibition space with digital overlay, for example including “science of sound and music” interactive physical and digital exhibits.
The “Home” for school group lunches and for use as a family lounge.

Seating areas suitable for both public, staff and performer meetings and relaxation.

The “Musical Launch Pad” – a musical play zone for young children.

A digital connection to the outside or virtual world – an interactive webcam connection so even those who are not there can be connected.

Mobile device support facilities as appropriate to the current and envisaged technology.

17.12.9 The digital component of the Centre for Music will be clearly evident, with large video screens and associated directional loudspeakers replaying material from within and beyond the building, and with a high definition camera installation to record and broadcast activities within the Core. There may be visual contact to digital editing and control spaces.

17.12.10 It is intended that during daytime, performers and staff will share the café and bar facilities with the public. These will have a clear and welcoming presence from the street. Toilets, bars and interval snack facilities will be provided on each major audience access level to the concert hall.

17.12.11 The Core is to accommodate 1,900 patrons in comfort and will have adequate space for 2,500 patrons. This will allow for simultaneous performances in the concert hall and the Club.

17.13 ACoustics – The Core

17.13.1 The Core will have significant acoustic control, to limit the loudness of occupational noise and allow for simultaneous activities without disturbance, whilst still providing a dynamic environment.

17.13.2 The main and informal performance spaces will include sound reflecting, scattering and absorbing surfaces as appropriate to support unamplified performances and spatially control sound from amplified performances.

17.13.3 The associated gallery, exhibition and museum spaces must allow for multiple exhibit sound tracks with minimal crosstalk and distraction.

17.14 Learning Spaces

17.14.1 Learning

17.14.1.1 Pods

17.14.1.2 The pods are a suite of 4 unique small rooms, suitable for learning, meeting and entertaining, which support the vision for transparency. They will also provide access to the Concert Hall for people with special needs who might otherwise be unable to attend performances. They will be close to the Centre for Music Hall for corporate sponsors’ convenience and reasonably close to the Rehearsal Suite and Digital Centre for learning activities.

17.14.1.3 Each pod will have viewing windows for direct views into the Centre for Music Hall. These will be screenable for privacy and blackout when needed. In addition, as the rooms are digitally enabled, the Concert Hall and many other areas can be viewed via video screens. Subject to design – and without detriment to the hall acoustic – it is intended that the glazing is operable to allow the pod to become a concert hall box seating area when appropriate, using suitable seating arrangements such as a retractable bleacher system.

17.14.1.4 The pods, each holding up to 30 people, will be combinable into larger spaces to accommodate different size events.

17.14.2 Digital Learning

17.14.2.1 There is to be a group of studios accessible to the public and others, for educational, digital, rehearsal and performance use. The rooms include:

- Public reception
- Exploration Studio
- Creation Studio
- Teaching Studio
- Performance Studio.

17.14.3 At least one of the studios will have a comprehensive infrastructure for creating and presenting fully immersive musical experiences. For maximum functionality the studios need to feature:

- High transparency and porosity, with privacy when needed using electrochromic glass or blinds.
- Sound isolation and room acoustics appropriate to the critical uses.
- Full digital facilities including infrastructure in walls and ceilings to easily mount cameras, screens, loudspeakers.
17.15 MEETING AND ENTERTAINING

17.15.1 For meetings and entertaining at the Centre for Music there will be a combination of spaces, all served by a central production kitchen and administrative facility, capable of catering for larger events with between 1,000 and 1,900 guests.

- **Founders’ Room**
  This is a primary function room for dinners and drinks receptions. Following the concept of efficient multiple space, it will be capable of hosting informal small recitals, digital music presentations, pre-concert talks and meetings. To facilitate some of these activities there will be an area of retractable seating which can be rapidly deployed but will be stored out of sight for aesthetic reasons.

- **Function Room**
  The Function Room will be combinable with the VIP Room to create a larger venue, without compromising the experience in either room.

- **VIP Room**
  This is primarily a function room for entertaining sponsors. It can also present small informal performances and talks. It will be located so that it can serve as a space where conductors and soloists can meet invited guests or members of the public after performances.

- **Central Production Kitchen**
  This will be an efficient facility, expected to serve the Café / Bar, Lounge / café, Founders’ Room and Function Room.

17.16 DIGITAL

17.16.1 Digital Creation / Media

17.16.2 The digital centre includes content collation, creation and broadcast spaces and technical areas. This set of spaces includes a Digital Lab, a Recording Studio and four Recording Booths.

17.16.3 Many of the staffed spaces in the digital centre are clustered together, alongside some server and electronic rack rooms. Other server and rack rooms are distributed around the Centre for Music to allow for future-proofing.

17.16.4 Unlike many rooms within the Centre, those serving the digital centre do not need to be near or at the hall platform level. Some spaces such as the vision control room and edit suite require good sound isolation from other activities.

17.16.5 In keeping with the transparency of the Centre, some spaces will have large viewing windows to allow visitors, education groups and other staff and musicians to see the digital work being received, created and sent when appropriate.

17.16.6 Given the fast-changing nature of the digital world, the digital centre facilities must be particularly suitable for change, with significant future-proofing.

17.17 BACKSTAGE

17.17.1 Dressing rooms for players and artists are fully detailed in the Schedule of Accommodation. The Conductor’s Room will meet the conductor or musical director’s needs for both performance and education, in the live and digital worlds. Facilities for use by the conductor / musical director include a combined green room, rehearsal and teaching area with a grand piano, and a private relaxation and dressing area.

The Leader and soloists’ facilities will be similarly provided for.

17.17.2 Each individual dressing room will if possible benefit from daylight.

17.17.3 It is expected that all users of the Centre will take advantage of the Core catering facilities to meet with others from the musical community. In addition to this, the green room will provide a “staff café” facility between front of house and back stage, for use when appropriate. There is an adjacent lounge for relaxation.

17.17.4 A further quiet lounge is located close to the dressing rooms.
17.18 REHEARSAL SPACES
17.18.1 There will be a range of rehearsal spaces at the Centre for Music to support the programme of performances and optimise the utilisation of the Centre for Music Hall in particular.

17.19 CHORUS REHEARSAL ROOM
17.19.1 The primary function of the Chorus Rehearsal Room will be choral rehearsal by the London Symphony Chorus. It will have sufficient volume to allow for prolonged use by 200 singers without acoustic fatigue caused by excessive loudness.

17.19.2 The room is suitable for sectional rehearsals, for example by youth orchestras, and for smaller musical ensembles. It is also suitable for uses including lectures and choral workshops and will have a full digital overlay. As noted above, like all the rehearsal spaces it will benefit from both simply variable acoustics and natural light if possible, with full technical blackout.

17.20 REHEARSAL ROOMS
17.20.1 Two rehearsal rooms will be used for sectional rehearsal (chorus and orchestras) and for pre-performance warm-up. They will also be suitable for many other educational and digital uses, with variable acoustics and full digital infrastructure. Rehearsal Room 2 will accommodate 100 people, Rehearsal Room 3 will hold 50 people.

17.21 Breakout Rooms
17.21.1 A primary function of four Breakout Rooms will be for orchestral players to rehearse for LSO Discovery mixed ability projects. At other times the rooms will be available for other rehearsal, digital and educational uses.

17.22 SERVICING
17.22.1 Venues Get in / Dock
17.22.1.1 The building will require first class, efficient and safe facilities for specialist deliveries such as instruments, stage sets and digital equipment. Areas for parking specialist vehicles including recording and outside broadcast trucks is also required. The facilities are to include:

- Weather-protected and secure truck docks for a minimum of two, and ideally three, large European articulated trucks – the docks to be at standard European truck tailgate height, with dock levellers with enough travel to cope with standard sized vans.

- Secure parking, preferably weather-protected, for the LSO instrument truck. This is in addition to the loading dock positions.

- Secure parking, preferably weather-protected, adjacent to the building envelope with tie lines, for up to three recording/outside broadcast vehicles (audio, video and satellite).

- Two goods lifts – sizes 1.80m door width, 2.30m width, 2.30m height, 7.30m length.

17.22.1.2 A physically and security separated delivery zone is required for non-technical logistics including catering and building supplies delivery and for recycling and compaction of refuse. A separate goods and catering lift is required. This separation is to protect valuable equipment from theft and damage, and to keep odours away from the technical area.

17.22.1.3 As an example of an aspiration for imaginative use of the whole building, the design should consider the potential public and/or educational use of the loading dock as a “found” performance/digital screening space. The loading dock could be a temporary performance platform.
17.23 EXTERNAL SPACES

17.23.1 The Centre for Music will take advantage of its unique and historic location within the Cultural Hub and the City.

17.23.2 The Centre will have a highly accessible, active and high quality public realm, integrated into the wider regeneration of the Cultural Hub. Connectivity and movement will form a part of the experience of the Centre for Music; sequences of open spaces and places will form formal and informal settings, not only at street level, but on upper levels, terraces and roof gardens with views around and over the City, for example to St Paul’s Cathedral.

17.23.3 The external spaces will provide a range of functions including:

- **Orientation and Way-Finding** – the open spaces will enable easily navigated and visible connections into and around the Centre for Music, connecting to the surrounding public realm. The open space should integrate with the existing public areas of the Barbican to create connections between the Centre for Music and the Barbican Centre, sensitive to the context and neighbouring residences.

- **Landscape and Ecology** – the open spaces should add to the greening of the City, building on the gardens and landscape of the Barbican, and bringing green spaces into the Centre for Music – for example in roof gardens. They are to be enjoyed both by users of the Centre for Music and by people viewing them from surrounding buildings.

- **Outdoor Performance and Events** – The potential for open spaces at street level, mid and upper levels should create a range of settings for impromptu events, installations, performance and exhibitions. These could include temporary structures such as kiosks, projection screens, sculpture, surfaces for dance or theatre and seating.

- **Cultural Topography** – The unique relationship of the Centre for Music to the living history of the City, embodied in the visual and physical connections to landmarks such as St Paul’s Cathedral and routes to the Thames and other venues should be celebrated in the open spaces of the Centre for Music. This will be through creating new visual connections such as framed views, vantage points and platforms and through walking routes or sequences of movement such as streetscape, squares or courtyards, terrace and gardens.

17.23.4 The functional brief for open space could include:

17.23.4.1 An outside performance space, with both live (sound reinforced) and digital (large screen) performances, the screens replaying live content from elsewhere in the Centre for Music, live content from another location, pre-recorded content or a combination of all of these.

17.23.4.2 A terrace space with fine views, preferably with direct access to sponsors’ spaces.

17.23.4.3 A public space with café or bar, possibly temporary street food stalls.

17.23.4.4 Relaxing public garden with soft landscaping and sensory features.

Facilities may include:

- Contouring and geometry to create a natural stage and/or informal audience seating, with a view to a large screen.
- Catering.
- Large video screen and associated high power loudspeakers.
- Protected sound, light and video control position.
- Secure rack room and terrace equipment store.
- Immediate backstage area and performer’s quick change and toilet.

Regarding acoustics, the performance or screen area needs to be:

- Protected from traffic noise.
- Located and screened to avoid disturbance to neighbours.
- Free of undesirable sound focussing or echoes.
17.24 OTHER SPACES

Other spaces and facilities that form part of the Initial brief include:

- management and administration facilities
- production support
- services
- library/archive.

17.25 BARBICAN HALL AND LSO ST LUKE’S

17.25.1 BARBICAN HALL

17.25.1.1 The existing Barbican Concert Hall is to be repurposed as a unique, innovative performance hall for the presentation of the widest range of performances and events.

17.25.1.2 Complementing the new concert hall, which will be used primarily for acoustic (classical, symphonic, choral and organ) music, the programming of the repurposed Barbican Hall will have a strong emphasis on contemporary sound reinforced and amplified performances and events, including conventional end stage amplified shows and 21st century cross-arts, virtual performances, mixed live and virtual performances and imaginative staging formats.

17.25.1.3 Importantly, it will remain an important performance venue of the BBC Symphony Orchestra and have significant baroque and recital programming.

17.25.2 Audience Capacity

17.25.2.1 A capacity of between 800 (seated, stalls only) and 3,000 (including significant standing) is preferred. The upper limit will depend on fire capacity and may require amendment to escape arrangements as well as to audience facilities such as foyer, cloakrooms, toilet and catering capacity.

17.26 CONFIGURABILITY

17.26.1 It will be possible to quickly and efficiently remove the audience seating over most (preferably all) of the main floor area. The method for achieving this is to be determined, but may be one of a proprietary moving seat system, or a retractable seating system.

17.26.2 A system using moving seat wagons is not preferred because of the time and staff needed to reconfigure the Hall.

17.26.3 Options for lowering the stage (to form a full flat floor) and for having an adjustable size performance area (including a downstage extension) are to be considered.

17.26.4 It is important that the new seating systems do not degrade the acoustic nor the audience experience in order to continue classical and symphonic programming.

17.27 CLOSURE OF BALCONY AND/OR CIRCLE

17.27.1 It will be possible to both acoustically and physically close off the balcony and circle levels for certain performances. This may be achieved by a vertical or horizontal action banner or drape system. This will increase the multi-purpose functionality and increase visual and acoustical intimacy when, for example, the event is stalls only. It should be noted that this may be inappropriate for some unamplified concerts due to the reduction in reverberance and sound reflections caused by the deployed curtains if these are traditional fabric – the acoustic specification of the closing surfaces (sound absorbing, sound reflecting at mid / high frequencies or both) will require study and briefing at a later project stage.

17.28 OPENINGS TO FOYER

17.28.1 The Hall is to open to the surrounding foyer in three ways:

- By glazing which will permit glimpses of the activity within the hall, including by education groups and visitors following the Centre for Music’s Visitor Route. A technical blackout system will prevent viewing when necessary.

- By large video screens and high quality audio.

- By large physical openings such as sliding doors which provide good sound isolation when closed.

17.29 VARIABLE ACOUSTICS

17.29.1 Two variable acoustics systems will provide whatever acoustic, fixed or changing, is demanded by the work. First, a mechanical variable sound absorption system to reduce reverberance and room boundary reflections. This will be used when a ‘dry’ room acoustic is needed, for example for many amplified events and digital or virtual programming. Second, an electronic architecture system to increase reverberance.

17.29.2 This will increase the room acoustic response when desirable artistically.
17.30 TECHNICAL FACILITIES

17.30.1 As within the new Centre for Music, the reconfigured Barbican Hall will support the flexible and innovative presentation of music and other art forms in the 21st century. It will contain all appropriate current technology, upgradable infrastructure and spatial, structural and electrical capacity for future technology.

17.30.2 In addition to the movable elements, production elevators, conventional suites of enclosed control, projection, follow spot, rack rooms, and digital capability, the available technology will include:

- High load suspension capability above the performance zone and much of the audience area, using a matrix of strong points and movable point or chain hoists, preferably accessed from a technical walkway arrangement with or in addition to tension wire grids, for static and dynamic flying of performers, scenic elements and technical equipment.

- Multiple large suspended video screens and acoustically enclosed high power digital projectors in addition to the main projection rooms.

- Silent concert lighting for acoustic performances.

- Flexible and dramatic production lighting using fixed and moving luminaires.

- High power, full-range, high quality sound reinforcement and amplification system, easily reconfigurable to different music types and presentation (performer and audience) formats.

- Video and audio soundtrack preparation and presentation.

- Immersive audio and video technology such as wavefield synthesis surround sound.

- A motorised lift or lifts for live performance sound, light and video control position(s) within the Hall.

- High bandwidth, high speed, fully digital interconnectivity within and to and from the Hall.

- Provision for all of the audience to use mobile devices when appropriate, including pro-active input to the performance.

- Surtitling facilities.

17.30.3 The repurposed Barbican Hall is to provide an excellent experience for both physically present and remote audiences. High definition (broadcast quality) remote control cameras, permanent or temporary manned camera positions and high quality microphone arrays will allow for imaginative broadcast and streaming of rehearsals and live performances in a wide range of performance set-ups. This will be without disturbance to the live audience, including noise, circulation difficulties and sightline issues.

17.30.4 Incoming video and multi-channel audio will be received, processed and replayed within the Hall using both installed and hired-in video and sound systems.

17.30.5 The digital protocols, infrastructure and equipment will match this within the new building, to ensure seamless operation across the Centre for Music.

17.31 LSO ST LUKE’S

LSO St Luke’s is to be provided with a new internal performance control room and a new recording control room, together with necessary access facilities and digital infrastructure. This enhancement will ensure that LSO St Luke’s is fully equipped for recordings in its main space, the Jerwood Hall. Other minor enhancements would also take place to ensure that the venue is fit for purpose some 20 years after it first opened as the LSO’s Music Education Centre.
18. SCHEDULE OF ACCOMMODATION

18.1 CENTRE FOR MUSIC PRINCIPAL AREAS OF ACCOMMODATION

18.1.1 A brief description of the principal spaces is set out in this section. The full Schedule of Accommodation is at Appendix 18A.

Key Performance Spaces

<table>
<thead>
<tr>
<th>Name</th>
<th>Purpose</th>
<th>Net Area m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concert Hall</td>
<td>Excellent, world-class venue for acoustic (ie non amplified) music. The hall is to generously support and enable both traditional performances and innovative and complex musical and cross-arts performance formats. The hall environment is to be adjustable to provide new, exciting opportunities and experiences for users.</td>
<td>6,421</td>
</tr>
<tr>
<td>Club Space</td>
<td>Large informal room including table-seating, low stage, bar and catering facilities, and performer and backstage technical support spaces.</td>
<td>653</td>
</tr>
<tr>
<td>Exhibition Space</td>
<td>An exhibition space with digital overlay, for example including “science of sound and music” interactive physical and digital exhibits. The space can be free-flow - open to the Core - or partitioned for paying exhibitions or events.</td>
<td>830</td>
</tr>
<tr>
<td>Digital Learning</td>
<td>A suite of studios accessible to the public and others, for educational, digital, rehearsal and performance use. The space will include a welcoming public reception space within the Core.</td>
<td>300</td>
</tr>
<tr>
<td>Forum</td>
<td>Within the public area there will be informal spaces for daily performances.</td>
<td>300</td>
</tr>
</tbody>
</table>

Learning Spaces (also used for meetings and entertainment)

<table>
<thead>
<tr>
<th>Name</th>
<th>Purpose</th>
<th>Net Area m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pods</td>
<td>A suite of 4 unique small rooms, suitable for entertaining, meeting and learning, which support the vision for transparency. They are close to the Concert Hall for corporate sponsor's convenience and reasonably close to the Rehearsal Suite and Digital Centre for learning activities. Each pod will have viewing windows for direct views into the concert hall (screenable for privacy and blackout when needed). In addition, as the rooms are digitally enabled, the concert hall and many other areas can be viewed via video screens. Subject to design – and without detriment to the hall acoustic – it is intended that the glazing is openable to allow the pod to become a concert hall box seating area when appropriate, using suitable seating arrangements such as a retractable bleacher system.</td>
<td>170</td>
</tr>
<tr>
<td>Founders’ Room</td>
<td>A primary function room for dinners, drinks receptions, etc. It will be capable of hosting informal small recitals, digital music presentations, pre-concert talks, education activity, meetings, etc. There will be an area of retractable seating which can be rapidly deployed but will be stored out of sight for aesthetic reasons.</td>
<td>293</td>
</tr>
<tr>
<td>VIP &amp; Function Rooms</td>
<td>The VIP Room is primarily a function room for entertaining sponsors. It can also present small informal performances, talk and education activity. It can serve as a space where conductors and soloists can meet invited guests or members of the public after performances. The Function Room will be combinable with the VIP Room to create a larger venue, without compromising the experience in either room. Both rooms will share catering facilities.</td>
<td>455</td>
</tr>
</tbody>
</table>
### Performance Support Spaces

<table>
<thead>
<tr>
<th>Name</th>
<th>Purpose</th>
<th>Net Area m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chorus rehearsal room</td>
<td>Rehearsal room for LSO chorus with bleacher seating and grand piano. Also including ancillary support spaces.</td>
<td>365</td>
</tr>
<tr>
<td>Other rehearsal spaces and facilities</td>
<td>Including: smaller spaces for sectional rehearsal and smaller ensembles; reception and administration area; shared stores and technical facilities.</td>
<td>600</td>
</tr>
<tr>
<td>Digital Creation / Media</td>
<td>A suite of digital creative facilities including content collation, creation and broadcast spaces and technical areas. Given the fast-changing nature of the digital world, the digital centre facilities must be particularly suitable for change, with significant future-proofing. Many of the staffed spaces are clustered together, together with some server and electronic rack rooms. Other server and rack rooms are distributed around the Centre for Music to allow for future-proofing.</td>
<td>330</td>
</tr>
</tbody>
</table>

### Restaurants and Retail

<table>
<thead>
<tr>
<th>Name</th>
<th>Purpose</th>
<th>Net Area m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurant A (top tier)</td>
<td>This space is intended to be a prime fine dining offer with spectacular views across London, for example to St Paul’s cathedral. If practicable it will include an outside dining area. It will include a small musical performance area. It will be serviced from its own independent kitchen.</td>
<td>600</td>
</tr>
<tr>
<td>Restaurant B</td>
<td>This all-day restaurant will preferably have an outdoor area and have prominent and effective signage to attract casual visitors from outside the building. It will double as a lounge — a café-style relaxation space for users such as LSO partners and youth orchestras. It is hoped that this is a space in which people from different communities will meet and exchange ideas.</td>
<td>446</td>
</tr>
<tr>
<td>Retail</td>
<td>A single shop unit open onto the Core and external public realm, preferably at street level, very visible through the glass façade, to encourage passers-by to enter the Centre. It is expected that the shops will trade in goods related to the Centre for Music — for example branded souvenirs (Centre for Music / LSO / Barbican / London), music CDs and DVDs and sheet music, perhaps musical instruments or audio equipment.</td>
<td>175</td>
</tr>
</tbody>
</table>
## PART III
### FEASIBILITY STUDY

<table>
<thead>
<tr>
<th>Capacity Schedule</th>
<th>Capacity</th>
<th>Internal Area (m²)</th>
<th>External Area (m²)</th>
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</thead>
<tbody>
<tr>
<td>Concert Hall</td>
<td>1900</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhibition Space</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Club Space</td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Founders’ Room</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function Room</td>
<td>175</td>
<td></td>
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<table>
<thead>
<tr>
<th>Area Summary</th>
<th>Performance Space 1 - Concert Hall</th>
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<tr>
<td></td>
<td>Performance Space 1 - Concert Hall - Support Spaces</td>
<td>4,015</td>
<td>0</td>
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<tr>
<td></td>
<td>Performance Space 2 - Club Space</td>
<td>653</td>
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<tr>
<td></td>
<td>Rehearsal</td>
<td>965</td>
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<td></td>
<td>Front of House</td>
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<tr>
<td></td>
<td>Learning, Meeting and Entertaining</td>
<td>1,384</td>
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<td></td>
<td>Archive</td>
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<td></td>
<td>Digital</td>
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<tr>
<td></td>
<td>Performers / Backstage</td>
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<td></td>
<td>Production Support</td>
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<td>Management / Administration</td>
<td>859</td>
<td>0</td>
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<td></td>
<td>Back of House Entrance</td>
<td>1,268</td>
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<tr>
<td></td>
<td>Outdoor Performance</td>
<td>95</td>
<td>1300</td>
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<tr>
<td>Sub Total (net)</td>
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### OPTION A

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PART III
FEASIBILITY STUDY

CENTRE FOR MUSIC
OUTLINE BUSINESS CASE AND FEASIBILITY STUDY

1 PERFORMANCE SPACE 1
CONCERT HALL

2 PERFORMANCE SPACE 1
CONCERT HALL
SUPPORT SPACES

3 CLUB SPACE

4 REHEARSAL

5 FRONT OF HOUSE

6 MEMBERS,
SPONSORS, VIPs

7 ARCHIVE

8 DIGITAL

9 PERFORMERS /
BACKSTAGE

10 PRODUCTION
SUPPORT

11 MANAGEMENT /
ADMINISTRATION

12 BACK-OF-HOUSE
ENTRANCE

13 OUTDOOR
PERFORMANCE

14 CIRCULATION

15 BUILDING SERVICES

16 WALLS, PARTITIONS & STRUCTURE
19. ORGANISATIONAL ANALYSIS

19.1 CRITICAL ADJACENCIES AND RELATIONSHIP

19.1.1 It is critical that the anatomy of the building and its spaces are organised so that the complex functions and activities happening within can be performed at world-class standards.

19.1.2 The key relationships are mapped in the adjacent diagram.

19.1.3 This illustrates the critical relationship of front and back of house support spaces to the main concert hall, in particular the essential spaces related to the platform.

19.1.4 The adjacent diagram shows the key concert hall, front-of-house and back-of house adjacencies. The accommodation schedule has been formatted into categories of usage. Within these categories, there are desired spatial relationships between the various rooms and spaces listed within that category. Similarly, there are also desired spatial relationships with rooms and spaces in other categories, or with other categories as a whole. The spatial relationships are simplified here into three categories: integral, close proximity and loose connection.

19.1.5 Some spaces are integral to each other – for example, the Forum and Exhibition spaces are intended to be part of the dynamic, free flowing Core of the building; similarly the backstage areas and technical spaces associated with the concert hall are inseparable from the concert hall auditorium space itself.

19.1.6 Some spaces need to be directly accessible from each other – for example the digital facility should be directly accessible by the public from the Core; similarly, the dressing rooms and warm-up rooms should be easily accessible from the platform waiting area. The VIP Room should be related to the main auditorium so that it can be easily accessed during the interval period. Close proximity spaces could be accessed by a shared corridor, off a shared space, or arranged vertically around shared vertical circulation.

19.1.7 Some spaces only require a loose connection.

19.1.8 The diagrams are therefore centred on a particular item in the accommodation schedule, and show the varying desired levels of spatial connectivity with other spaces in these three categories.

19.2 INTEGRATED FRONT AND BACK OF HOUSE SPACES

19.2.1 Traditionally, backstage and front of house spaces are deliberately separate entities. The Centre for Music will revolutionise the way these spaces are organised, creating more visibility into the previously secretive world of professional music.

19.2.2 Areas of integration will be created between 'backstage' and 'front of house' space in new and unprecedented ways, to enable musical discovery and learning in environments where the conventional barriers between public, amateur performers, professional performers and future performers can be removed.
CONCERT HALL

19.2.3 Various technical support spaces, such as the technical control suites, technical attic, platform lifts, and the platform waiting area are integrated into the broader envelope of the concert hall. On the public side of the hall, Sponsors’ Rooms and VIP Room need access to the appropriate area of seating (usually stalls or first tier). The hall needs to be well connected to the Core to integrate, to give the hall presence in the public areas of the building, and allow efficient movement of concert goers to their seats. On the performer side of the hall, there needs to be good connections to key back of house spaces and the main performer facilities and rehearsal spaces.

CLUB SPACE

19.2.4 The Club Space is envisioned as a more informal performance venue, and therefore requires good access from both the public and performer sides of the building Core. It also needs a connected bar to serve the venue and a modest requirement of technical support spaces and performer facilities.

REHEARSAL

19.2.5 The rehearsal suite needs to operate as both a functional rehearsal facility for the performers and as part of education and engagement programmes, and therefore needs good connectivity to the Core, and a dedicated reception area. The distinct rehearsal spaces are linked to the reception area, but may be arranged to suit other adjacencies, e.g. daylight, proximity to platform etc. There are technical support spaces to support the rehearsal rooms’ operations, principally the Chorus rehearsal room.

THE CORE

19.2.6 The Core itself is comprised of spaces central to the public operation of the building – for example coat check, toilets, ticketing points, information points etc. These are distributed within this larger space to most effectively serve the needs of visitors.

19.2.7 Other spaces are integral to the Core which make it a dynamic and free flowing space – for example, the Forum allows more informal, spontaneous performances, retail draws people in, education spaces begin a learning journey, and bars and cafés provide informal refreshments.

19.2.8 Also attached to the Core is the top tier restaurant, providing prime fine dining experiences, able to operate independently of other Centre for Music activities.

LEARNING

19.2.9 These spaces should allow for effective dual uses of space. All of these spaces should be able to be accessed from the central production kitchen, with local finishing kitchens as appropriate.

19.2.10 The pods are directly adjacent to the concert hall, allowing them to function as viewing boxes into the hall, and have good links to the Core.

19.2.11 The Founders’ Room is connected to the Core, and has its own adjacent toilets, coat check and bar, and should also have an easy access route to the concert hall. The Founders’ Room should be located so it has good exterior views, and dedicated exterior space.

19.2.12 The VIP and Function Rooms should be located next to each other so that they can be combined into one space, should be near appropriate seating areas of the concert hall (the stalls or first tier), and should have access from the Core and backstages. These two rooms have shared adjacent toilets, coat check and bar.

ARCHIVE

19.2.13 The archive should be accessible from the administration spaces, and have loose connections to the Core and backstage. The archive would also be connected to the digital facility, but may not need a physical link.

DIGITAL

19.2.14 The digital learning should be linked closely to the Core, with the studios accessed off a reception desk. Digital creation/media studios and should have a similar link with the Core, arranged in close proximity off the same reception desk.

PERFORMERS / BACKSTAGE

19.2.15 The dressing rooms should be located in close proximity to the concert hall crossover. Certain dressing rooms such as the conductors’ and soloists’ must be on platform Level. Dressing rooms should have good access to the green room, performers’ lounge, and other performance spaces.

19.2.16 The green room and performers’ lounges should be in close proximity to the concert hall crossover, and have dedicated toilets, bar and servery attached. Both should have good links to the Club Space and rehearsal spaces.
PRODUCTION SUPPORT

19.2.17 The media room and ushers’ facilities should be linked directly to the Core. Technicians’ facilities and technical management offices should be linked to the performers’/backstage spaces. Workshops and stores should be located with easy access from the loading dock and get-in and from the various venues – primarily the concert hall.

MANAGEMENT/ADMINISTRATION

19.2.18 Management and administration spaces for the Centre are more flexible in their location, but should be arranged into a single block to enable the efficient use of shared office facilities. This would be accessed through a shared reception area and have a link to the performers’/backstage spaces.

BACK OF HOUSE ENTRANCE

19.2.19 The back-of-house entrance is managed from a staff entrance and dock management facility, well connected to the performers'/backstage spaces and adjacent to the loading dock. The loading dock should be located so as to allow direct access through the get-in to the concert hall and then on to the other venues of the Club Space and rehearsal. The loading dock should also allow general deliveries to the rest of functional spaces – for example catering, retail, administration spaces.

OUTDOOR PERFORMANCE

19.2.20 Outdoor performance spaces should be easily accessed from the public Core, and have a small provision of technical support spaces. They should be connected to other public facilities such as catering and retail to create fluidity within the spaces. A provision of space with views out over London would be desirable.
20. SITE OPTIONS

20.1 CONTEXT

20.1.1 The feasibility study includes as one of its specific objectives a review of the location options for building a world-class Centre for Music in the City of London. This section sets out the case for a development in London, specifically in the City of London, and assesses the potential development sites.

20.1.2 “The City” (capitalised) refers specifically to the City of London, also known as the Square Mile, whilst “city” (lower case) refers to Greater London as a whole.

20.2 SITE OPTIONS

20.2.1 Having assessed the space requirements of the Centre for Music, there has been a detailed analysis of potential site options based on the following key criteria of size, location and availability:

- Suitable for a 1,900 seat hall and associated facilities, the exact size and scope of which will depend on the final scope of the Centre for Music.
- Located within the City of London boundary and close to the Barbican and wider Cultural Hub.
- Potentially available or receptive to an approach and available within a realistic timeframe.

20.2.2 Previous site analysis based on similar criteria had been carried out in 2012 and 2013. This work was a desktop study based on information which was readily available, while maintaining confidentiality, drawing on market information available at the time. The City of London Corporation was also consulted on a number of occasions as to the availability of potential sites.

20.2.3 A total of 31 sites within the City were considered, and an evaluation matrix was compiled. Out of this long list of possible sites, there were relatively few sites which were suitable in terms of the above key criteria. Some of these sites were investigated further, and discussions held with developers where appropriate. Details of shortlisted sites, and an assessment of their suitability are set out in Appendix 20A.

20.2.4 Apart from the limited number of sites which are sufficiently large to accommodate the brief, one key issue was that virtually all the sites which were considered were being valued on the basis that they could be developed for office (or, in some cases, residential) use. Therefore, even where the key physical criteria were met, the sites were unlikely to be available due to a reluctance of commercial developers to enter into discussions and meaningful dialogue about a cultural use. Alternatively, the capital cost of development would have to reflect a significant sum for site acquisition, most likely making the project very difficult to fund.

20.2.5 As part of the current feasibility study, both GVA and the City of London Corporation have assessed whether any new sites have become potentially available since the last detailed review in late 2013.

20.2.6 The conclusion from the latest site assessment is that there remain very few sites in the City of London which are sufficiently large to house the Centre for Music and which are potentially available for development in a reasonable timeframe without constraints that restrict their viability.

20.2.7 Three sites in the City were considered to have sufficient potential to merit further investigation: the Poultry Market in Smithfield; Baynard House near Blackfriars; and the site currently occupied by the Museum of London. The analysis of these sites is summarised below.

20.2.8 One other site, the General Market in Smithfield, has also been briefly considered as a possible site for the Centre for Music. Aside from the Museum of London’s desire to move to this site (see below), planning restrictions imposed in 2014 which require the interior of the General Market to be preserved mean that the creation of the large open space required for a concert hall auditorium would be impossible. This site is therefore not considered to be feasible for the Centre for Music.
20.2.9 The Poultry Market is part of the series of market buildings in Smithfield between Farringdon and Barbican underground stations. The site meets the key criterion in terms of location and has excellent links to key transport routes. However, the site is considerably constrained and presents many potential difficulties in accommodating the Centre for Music.

20.2.10 Because of the required space for the main auditorium, the site would only be feasible by building east into East Poultry Avenue and abutting Smithfield Market but this would be extremely difficult given that both buildings are listed. In addition, significant excavation would be required to contain the concert hall volume under the existing roof of the Poultry Market. Again, this would be problematic given the Poultry Market is listed and the process of construction would probably require the demolition and reconstruction of the existing building to deliver the required volumes for the Centre for Music.

20.2.11 Alternatively, building above the existing roof would cause harm to the listed building which has been defended by the Planning Inspector from alteration / demolition in two Public Inquiries and also take it above the St Paul's Heights limits, which would present an additional challenge to planning policy.

20.2.12 Possible future use of part of the Poultry Market basement by the Museum of London is an additional factor to be considered. Working alongside the Museum’s plans, while potentially possible, is likely to result in a compromised solution for both the Museum and the Centre for Music.

20.2.13 The potential acoustic difficulties of locating the highly sensitive concert hall so close to train tunnels which run immediately to the west of the site would also present challenges. This would require an engineered solution (such as a box-in-box auditorium) to achieve the desired world-class acoustics, adding to the space required, technical complexity and cost.

20.2.14 Aside from the physical constraints, it is also uncertain whether or not the site could be made available within a reasonable timeframe. Unless the site were to be actively made available for the Centre for Music, the uncertainty over if and when the site could be redeveloped would be a major risk.

20.2.15 Therefore, whilst the Poultry Market site could potentially be viable, it would only merit further investigation if there were a clear possibility of it becoming available in the near future and if there was a realistic expectation of the planning and listed building issues being resolved. Given these various constraints and challenges, this site is not considered to be viable at present.
SECTION LOOKING NORTH WEST - 9M DEEP BASEMENT (ASSUMED EXISTING)

- PROPOSED MOL AND BASEMENT
- PROPOSED MOL POULTRY MARKET BASEMENT
- UNDERGROUND TRAIN TUNNEL
- CONCERT HALL ENVELOPE VOLUME
Baynard House is located between Blackfriars Bridge and the Millennium Bridge and its riverside location is a major strength. It is a large site but does face constraints because of its proximity to St Paul’s Cathedral and the presence of roads and underground lines on and next to the site.

The restrictions on building height from the St Paul’s Heights Policy mean the concert hall volume must be sunk to a considerable depth of 13.5m, and allowing for a further level of plant below this would result in further excavation to a depth of 19.5m. In addition, any excavation on the site from the current configuration may encounter complications due to the Scheduled Ancient Monument on the site, and the structural support of roads and underground Tube infrastructure.

Exact locations of infrastructure would need to be surveyed formally to determine a definitive conclusion, but estimated locations indicate that small distances between the roads and Tube tunnel and the concert hall would result in significant space constraints in terms of circulation and ancillary facilities which need to be located very close to the auditorium.

The potential acoustic difficulties of locating the highly sensitive concert hall so close to this infrastructure would also present challenges. As with the Poultry Market, it would require an engineered solution (such as a box-in-box auditorium) to achieve the desired world-class acoustics, adding to space constraints and cost.

Availability of this site in the near future is a major concern as the current occupier (BT Group) holds a long lease and relocation of its operational equipment is likely to be costly. Unless the site were to be actively made available for the Centre for Music, the uncertainty over if and when the site could be redeveloped would be a major risk.

A weakness of this site is that it is not in close proximity to the Cultural Hub which limits the opportunities for artistic collaborations and operating synergies between the Barbican Centre, LSO and Guildhall School.

Taking all of the above factors into account, it is considered that whilst Baynard House could possibly be workable as a site for the Centre for Music there are a number of potential issues – both physical and in terms of availability - which currently reduce its attractiveness. On this basis, it has been concluded that it is not appropriate to consider this site further at this stage.
In early 2015, following an extensive study, the Museum of London declared its aspiration to move to the General Market in Smithfield, making its present site potentially available for redevelopment in the next few years.

As well as being sufficiently large, the Museum’s current site is close to the Barbican Centre and the Cultural Hub, meaning that a new Centre for Music could enhance this area and complement existing facilities, as well as achieving operating synergies.

The site has a pivotal location within the City, at the crossroads of the major north-south route from St Paul’s Cathedral, where St. Martin’s Le Grand connects to Aldersgate Street, and the historic east-west axis of London Wall. The potential to develop stronger pedestrian links from the Millennium Bridge and St Paul’s Cathedral to this site and onwards into the rest of the Cultural Hub is also attractive, and could be an important driver of visits to all of the venues within the Cultural Hub.

Tube and Crossrail stations at Farringdon, Barbican, Moorgate and St Paul’s are all within 10 minutes’ walk allowing easy east-west travel along Crossrail (once opened) and the Central Line, and north-south travel along Thameslink and the Northern line. Despite these strong transport links, the site does not appear to have any underground lines running nearby which eliminates one potential issue in achieving the desire quality of acoustics.

Unlike other sites, which are in the hands of commercial developers, this site would be (once the Museum of London relocates) under the control of the City of London Corporation.

This site has a number of advantages over others that have been considered and offers opportunities to both benefit from and to further enhance the Cultural Hub and its component organisations.

Taking into account the detailed analysis of potential sites, including a period of several years prior to the current Feasibility Study, the conclusion is that very few suitable sites are available in or very close to the City of London and Cultural Hub.

Only the site currently occupied by the Museum of London currently appears to meet the key criteria of size, location and availability and offers a number of positive opportunities both for the Centre for Music and the surrounding area.

Consequently, and in order to focus the Feasibility Study’s work as efficiently as possible, the Museum of London site has been treated as the preferred site for the Centre for Music.

This conclusion does not indicate that the Museum of London site is the only possible location for the Centre for Music, and a further assessment of site options would be carried out should the project proceed further.
EXISTING SITE ARRANGEMENT
PART III
FEASIBILITY STUDY

VACANT SITE ARRANGEMENT

AERIAL VIEW FACING NORTH

AERIAL VIEW FACING NORTH WEST

BIRDS EYE VIEW FACING WEST
21. SITE ANALYSIS

21.1 INTRODUCTION

21.1.1 As stated in the previous section, the site currently occupied by the Museum of London has a pivotal location within the City, at the cross-roads of the major north-south route from St Paul’s Cathedral, where St. Martin’s Le Grand connects to Aldersgate Street, and the historic east-west axis of London Wall.

21.1.2 At the south-western corner of the Barbican, the site forms the edge of the unique 1960s and 1970s development of the Barbican Estate, including the Barbican Centre, the Guildhall School of Music and Drama, St Giles Cripplegate and the City of London School for Girls, as well as the Museum of London itself.

21.1.3 Originally the location of the Roman fort on the north-west corner of the City walls, the Barbican has become the focus of one of London’s most important cultural, educational and residential communities.

21.1.4 The site is the nexus of a wider urban network linking the City and its surrounding quarters of Spitalfields, Smithfield, Clerkenwell and Shoreditch into a unique and dynamically-evolving urban phenomenon. Major urban-scale evolutions are in motion around the site.

21.1.5 Crossrail is being constructed, passing beneath the Barbican, with the new station at Farringdon bringing an extra 1.5 million people to within 45 minutes of the site.

21.1.6 The City Corporation has, with organisations such as the Barbican Centre, the LSO, the Guildhall School and Museum of London, been developing a vision for the City Cultural Hub. The concept of the Cultural Hub is for it to be the creative heart of the Square Mile, an internationally renowned, distinctive, vibrant and welcoming centre for the arts, heritage, learning and entertainment. It aims to be a cultural leader and pioneer, delivering the highest quality performing and visual arts, education, outreach and learning, and a world-class public realm to match the world-class arts and learning offer.

21.2 THE SITE – CONTEXT AND ANALYSIS

21.2.1 A single site with two potential variants have been assessed in the study:

1. The site footprint currently occupied by the Museum of London, situated on the southern edge of the Barbican – ‘Site Condition A’

2. A larger site footprint comprising the area currently occupied by Museum of London, as well as the site of Ironmongers’ Hall immediately next to the Museum and the Public Open Space adjacent to Aldersgate Street – ‘Site Condition B’.

21.2.2 The major elements of the local context for the site under these scenarios are as follows:

UNDER BOTH SITE CONDITIONS A AND B

The City and its historic commercial and cultural precincts to the south. These establish a sensitive, nationally significant, and unique heritage environment to which the Centre for Music will respond, and also contribute.

- The residential neighbourhood of the Barbican Estate to the north, in particular Thomas More House and Mountjoy House, and on Aldersgate Street. The development of the Centre for Music will respect the visual and environmental amenity of the local community within which it will be sited. The Centre for Music will provide a response that improves the quality of architecture and landscaping, and mitigates significant impacts from its proximity to the community such as overlooking, noise or light pollution.

- The City of London School for Girls and its sports ground and car park to the north. The Centre for Music will avoid overlooking and other impacts on the security and privacy of the school’s grounds and maintain existing access and servicing provisions.
• The Public Open Space immediately to the east of the Museum of London within which the Scheduled Ancient Monument of London Wall lies: a section of Roman and medieval wall and bastions, west and north of Monkwell Square. The Centre for Music will seek to improve the relationship of the site to the archaeological area, making it more accessible and providing a higher quality of setting and protection.

• The landscaped area in the centre of the Barbican Estate, including the Church of St Giles Cripplegate and its Columbarium. The Centre for Music will provide an opportunity to create a new relationship, including a pedestrian link from London Wall to the Barbican Centre, integrating the public space around the church into the journey.

• The Barbican Centre. The Centre for Music will become an intrinsic part of the complex of arts venues in the area, and the counterpart to the Barbican Hall as a major venue. The programme and character of the Centre for Music will create a cultural symbiosis with the Barbican Hall and Centre, which will also adapt and evolve.

• The Guildhall School of Music and Drama. The School is a core element in the cultural anatomy of the Cultural Hub, providing the opportunity for synergies and connections with the Centre for Music.

• The Barber-Surgeons’ Hall and Monkwell Square to the east of the site is an historic institutional neighbouring site which will be affected by the Centre for Music development.

• The office and residential premises on the west side of Aldersgate Street. These will also be immediately adjacent to the Centre for Music.

• The office premises along London Wall. These establish a commercial character to London Wall, less diverse than the streetscape on Aldersgate Street.

• The ‘High Walk’ – the elevated pedestrian promenade that connects the separate residential towers and blocks of the Barbican Estate above street level. Maintaining this important local amenity and its connectivity to the surrounding City, which is particularly valued by the local community, will be an important component in the urban makeup of the Centre for Music.

• The underground car park on London Wall (within which is the Scheduled Ancient Monument of London Wall: the west gate of Cripplegate fort and a section of Roman wall in London Wall underground car park, adjacent to Noble Street). There is potential for the car park to be connected for pedestrian access to the Centre for Music.

• The Ironmongers’ Company located in Ironmongers’ Hall immediately to the north of the Museum of London site. Ironmongers’ Hall presents a range of important constraints on the development of the Centre for Music, described below, including maintaining access, light, emergency escape routes, security etc.

• The Public Open Space immediately adjacent to Ironmongers’ Hall. This space is currently secluded from the street by the western parts of the Museum of London and could be improved with the development of the Centre for Music.

• Access ramp off Aldersgate Street leading to service yard and car parking beneath the Museum of London, Ironmongers’ Hall and the City of London School for Girls, which is also used by Barbican residents.
21.3 THE SITE - ASSUMPTIONS

21.3.1 Based on the understanding of the key elements of the local context (above), the Feasibility Study is based on a set of assumptions that have been developed in collaboration with officers of the City of London Corporation. These are summarised on the plan, and overleaf, as follows:

THE MUSEUM OF LONDON

21.3.2 The Study assumes that the Museum of London relocates to Smithfield, and that the site is demolished for development.

BASTION HOUSE

21.3.3 The Study assumes that Bastion House, which is a commercial office development above the Museum of London, will be demolished as part of the redevelopment of the site.

THE ROTUNDA

21.3.4 The Study assumes that the Rotunda, which is currently separate at street level from the main Museum of London site, will be connected at street level and above, through the removal of the part of the existing roundabout that separates the two.

IRONMONGERS’ HALL

21.3.5 Under Site Condition A (where the existing Ironmongers’ Hall remains in situ), it has been assumed that the Museum of London’s existing curtilage is to be respected.

21.3.6 Under Site Condition B (where the existing Ironmongers’ Hall is relocated), it has been assumed that the existing freehold sites occupied by both the Museum of London and Ironmongers’ Hall is fully incorporated into the Centre for Music site.

21.3.7 The existing access and servicing provisions to Ironmongers’ Hall are complex and rely on access across the footprint of the Museum of London (both at street level on Shaftesbury Place, and at basement level along the service route traversing the site onto London Wall).

21.3.8 Under Site Condition A the street level access to Shaftesbury Place is assumed to be maintained, but the basement level access route is extinguished with the demolition of the Museum of London.

21.3.9 Under Site Condition B, all access to Ironmongers’ Hall will be reorganised to suit the new location of the building.

ROAD RE-ALIGNMENT

21.3.10 With the integration of the Rotunda site into the site for the Centre for Music, the road width and alignment along Aldersgate Street and London Wall are assumed to be in the positions indicated. This schematic has been provided by the City of London Corporation as a working assumption for the purposes of the Feasibility Study.

21.3.11 The precise position of crossings and traffic lights etc. are yet to be confirmed.

SITE BOUNDARY FOR FEASIBILITY STUDY

21.3.12 The site boundary for the Centre for Music is derived from several assumptions related to the existing Museum of London site.

21.3.13 The existing Rotunda road junction is assumed to be reconfigured, so that the Rotunda joins and becomes contiguous with the main part of the Museum site to the north. A quadrant of the existing roundabout carriageway is, as a consequence, lost, and the road junction becomes a crossroads.

21.3.14 The re-alignment of London Wall and Aldersgate Street and the consequent position and shape of the site boundary have been assumed based on the potential new road junction design provided by the City of London Corporation.

21.3.15 The existing Museum and High Walk, and the Rotunda enclosed landscape area have complex building lines.

21.3.16 For the purposes of the Study an assumed frontage on London Wall has been adopted. Through discussions with the City of London Corporation it has been agreed as a working assumption that the site boundary could be further south along London Wall than the existing edge of the Museum of London and the Highwalk.

21.3.17 The site boundary with Ironmongers’ Hall site has been based on the current understanding of the titles and boundary position.

ACCESS RAMP OFF ALDERSGATE STREET

21.3.18 The Study assumes that the existing vehicle access ramp will continue to provide access to basement levels of the site, and can be oversailed at an appropriate height by new buildings, increasing the development potential of the site.

21.3.19 The existing ramp off Aldersgate Street that leads to the undercroft car park below the City of London School for Girls sports ground, and also to the service yard for the Museum of London and Ironmongers’ Hall, is assumed to be fully accessible for the purposes of serving the Centre for Music.

21.3.20 In addition the space above the ramp has also been assumed to be potentially usable, at a level above that required for large service and emergency vehicle access off Aldersgate Street.
THE SITE - ASSUMPTIONS

1. Agreed concert hall box external footprint
2. Assumed site boundary for feasibility study
3. Car park ramp. Assume available for Centre for Music basement access
4. Project extents boundary
5. Public garden. Assumed to be included in feasibility study
6. Ironmongers' Hall freehold
7. Ironmongers' Hall escape route access. Easements to be verified, but assume can be relocated
8. Current key highwalk connections. Highwalk crossing site to be relocated
9. Road rerouting
10. Pedestrian access for ironmongers' from aldersgate street maintained tbc.
PART III
FEASIBILITY STUDY

THE HIGHWALK

21.3.21 The Study assumes that the existing Highwalk will be reconfigured as a result of the redevelopment, so that existing connections to London Wall, Aldersgate Street and across the Rotunda will be re-organised, while still providing alternative access to the area.

21.3.22 Connections from the Highwalk to street level (which are currently provided outside the proposed site further to the east and north) may be provided within the Centre for Music site.

PUBLIC OPEN SPACE

21.3.23 The Study assumes that the existing open space within the Rotunda and to the north of Ironmongers’ Hall will be re-provided in different types and locations of publicly-accessible open space in the redevelopment.

21.3.24 As part of Site Condition B (where the existing Ironmongers’ Hall is relocated) it has also been assumed that, with appropriate re-provision within the Centre for Music site, the public open space onto which Ironmongers’ Hall looks (off Shaftesbury Place) can be considered a usable part of the site.

OFFICE DEVELOPMENT

21.3.25 The study assumes that the redevelopment will include a new office development by the City of London to replace the current Bastion House office block.

CONCERT HALL BOX EXTERNAL FOOTPRINT

21.3.26 A generic three-dimensional envelope that contains the required volume of the main concert hall has been developed from the Initial Brief, the Accommodation Schedule and the Organisational Adjacency analysis.

21.3.27 This volume incorporates the critical internal dimensions associated with the brief for the concert hall, and the spaces critically adjacent to the hall:

- The technical attic
- The support spaces beneath the hall and platform
- Control suites and follow spot rooms
- Organ chamber
- Essential lateral circulation and cross-overs
- The potential thickness of the acoustic fabric and walls containing the space.

21.3.28 The rationale for the proportion and scale of this envelope is described in the Initial Brief, and is a fundamental parameter of the vision and objectives for the Centre for Music.
21.4 SITE CONSTRAINTS AND OPPORTUNITIES

21.4.1 As with any development site, there are a number of constraints and opportunities presented. These have been assessed for the Museum of London site in relation to the Centre for Music and cover the following areas:

Constraints
- Town Planning and Planning Policy
- Site Area
- Site Access and Transport/Roads
- Ground conditions
- Archaeology
- Site infrastructure
- Adjacent Residential Areas and Amenity
- Ironmongers’ Hall
- Heritage and Conservation
- City of London School for Girls
- Daylight / Sunlight Standards
- Rights to light
- Easements, Rights and Title issues

Opportunities
- Architectural landmark at site entrance
- Reconfiguration of local road network
- Reconnect public space across the Barbican Estate
- Rooftop views across London, and to St Paul’s Dome.
- Extension of London Wall
- Simplify & rationalise circulation routes.
22.4.1 As with any development site, there are a number of constraints and opportunities presented. These have been assessed for the Museum of London site in relation to the Centre for Music and cover the following areas:

**Opportunities:**
- Rooftop views across London, and to St Paul’s Dome
- Extension of London Wall
- Simplify & rationalise access and circulation routes

**Constraints:**
- Reconnect public space across the Barbican Estate
- Reconfguration of local road network
- Rights to light
- Daylight / Sunlight Standards
- City of London School for Girls
- Ironmongers’ Hall
- Adjacent Residential Areas and Amenity
- Site infrastructure
- Archaeology
- Ground conditions
- Site Access and Transport/Roads
- Site Area
- Town Planning and Planning Policy

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**Opportunities:**
- Architectural landmark at site entrance
- Reconnect public space across the Barbican Estate
- Simplify & rationalise access and circulation routes
- Extension of London Wall
- Rooftop views accross London, and to St Paul’s Dome
- Daylight / Sunlight Standards
- Visual Amenity and the London View Management

**Constraints:**
- Easements, Rigay and Title issues
- Heritage and Conservation
- Site infrastructure
- Ground conditions
- Site Access and Transport/Roads
- Site Area
- Town Planning and Planning Policy

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**Opportunities:**
- Architectural landmark at site entrance
- Reconnect public space across the Barbican Estate
- Simplify & rationalise access and circulation routes
- Extension of London Wall
- Rooftop views accross London, and to St Paul’s Dome
- Daylight / Sunlight Standards
- Visual Amenity and the London View Management

**Constraints:**
- Easements, Rigay and Title issues
- Heritage and Conservation
- Site infrastructure
- Ground conditions
- Site Access and Transport/Roads
- Site Area
- Town Planning and Planning Policy
PART III
FEASIBILITY STUDY

Opportunities:

22.4 SITE CONSTRAINTS AND OPPORTUNITIES

Opportunities:

Constraints:

22.4.1 As with any development site, there are a number

Simplify & rationalise access and circulation routes

Rooftop views across London, and to St Paul’s

Reconnect public space across the Barbican Estate

Reconfiguration of local road network

Easements, Rigay and Title issues

City of London School for Girls

Heritage and Conservation

Ironmongers’ Hall

Adjacent Residential Areas and Amenity

Site infrastructure

Archaeology

Ground conditions

Site Access and Transport/Roads

Site Area

Town Planning and Planning Policy

Framework (LVMF).

following areas:

have been assessed for the Museum of London site

of constraints and opportunities presented. These

Dome.

Simplify & rationalise access and circulation routes

Extension of London Wall

Rooftop views across London, and to St Paul’s

Reconfiguration of local road network

Architectural landmark at site entrance

Easements, Rigay and Title issues

Daylight / Sunlight Standards

Visual Amenity and the London View Management

City of London School for Girls

Heritage and Conservation

Ironmongers’ Hall

Adjacent Residential Areas and Amenity

Site infrastructure

Archaeology

Ground conditions

Site Area

Town Planning and Planning Policy

Framework (LVMF).
21.4.2 TOWN PLANNING AND PLANNING POLICY

Planning advice was obtained from consultants, DP9 whose advice is summarised as follows.

SUMMARY

"Should it be physically possible to site the Centre for Music at the Museum of London site then there should be considerable public support. It is also clear that the City Corporation and other decision making bodies such as Historic England and the GLA would also wish to support the proposals. However, the support is subject to whether the development proposals can successfully address Development Plan policy, do not cause overwhelming public objection from the Barbican Estate and also provides for the re-location of the Museum of London. It will not be possible to accord with every Development Plan policy and nor will it be possible to obtain support from all parties and individuals (or receive no objection), but the planning application would be determined according to consideration of all material considerations and a balance of the benefits and harm accruing. It should not be assumed that a significant public benefit will override harmful impact upon residential amenity or, for example, impact upon designated heritage assets, but nonetheless exceptions are allowed to the presumption against harm should there be significant public benefit."

In addition to the more general impact of the development proposals for the site, specific planning issues include minimising the impact on heritage assets and the neighbouring residential properties. If these issues can be addressed positively in the development proposals, then DPP consider that there is a very good prospect of planning permission being secured.

Particular areas that are critical to planning policy are:

- Existing cultural uses and growth of the Cultural Quarter
- Protecting existing floor space – replace or increase office space of Bastion House
- The High Level Walkways
- The open space on the Rotunda
- Ironmongers’ Hall
- Residential amenity
- Community uses
- The setting of listed buildings and the Historic Park and Garden
- The setting of scheduled ancient monuments and archaeology
- The setting of Postman’s Park and Smithfield Conservation Areas
- London View Management Framework ("LVMF")
- Design Quality
- Environment
- Access and Inclusive Design
- Sustainability
- Transport
- Heritage.

POTENTIAL AREAS OF MITIGATION

Potential areas of mitigation of these factors include the following:

- High Level Walkways – Integrate and improve pedestrian environment – respect listed buildings guidelines
- Rotunda open space – re-provide and re-set features
- Ironmongers’ Hall – heritage asset – seek Certificate of Immunity if proposed to relocate
- Residential amenity – respect day and sun light to the neighbouring residences, avoid overlooking, provide compensatory amenity benefits, improve the views and visual impact of the southern part of the Barbican Estate, provide improvements and re-integration of the Highwalk as part of the development, mitigate and manage noise and light pollution, create opportunities for improved access and amenity
- Respect day and sun light to City of London School for Girls
- Listed building setting to Barbican – respect and improve in consultation with Historic England
- Scheduled Ancient Monument – sensitive response to the site and its setting especially if link is considered
- Conservation Areas – respect views into the site from south and west
- Highest architectural quality
- Transport and servicing planning
- Streetscape – protect and re-set Wesley Memorial, Aldersgate Street Memorials/plaques.

SITE ACCESS

The site has accessible frontages along London Wall, at the Rotunda and along Aldersgate Street edges. The Aldersgate Street ramp currently serves the Museum of London, Ironmongers’ Hall and City of London School for Girls, and is used to access car parking by Barbican residents.

ADJACENT RESIDENTIAL AREAS AND AMENITY

Development adjacent to residential areas is constrained by planning policies to protect daylight and sunlight. A planning envelope determined by the daylight and sunlight levels into Thomas More House, Mountjoy House and London House sets a volumetric constraint on the overall scale and massing of the development. The envelope rises towards the southern edge of the site which is furthest from the residential areas.

IRONMONGERS’ HALL

Ironmongers’ Hall has occupied its site immediately to the north of the Museum of London since the 1920s. The complex of buildings sits on Freehold land with a close boundary condition to the adjacent site. Without a street frontage, Ironmongers’ Hall is accessed through an archway under the Museum of London, and via the vehicle ramp off Aldersgate Street. The buildings benefit from Rights to Light that affect the potential development volume of the Centre for Music adjacent.
HERITAGE AND CONSERVATION

21.4.7 The site occupies a location of great historic significance, and flanks a Scheduled Ancient Monument. The Barbican Estate is Grade II listed, and the Centre for Music will significantly change the setting of both the estate and the monument.

ADJACENT SCHOOL AND AMENITY

21.4.8 The site sits adjacent to the City of London School for Girls, in particular the all-weather sports area to the south of Thomas More House.

ARCHAEOLOGY

21.4.9 Land and constructed elements of archaeological significance are believed to be largely confined to the public open space to the east of the Museum of London site. These include the remnants of the original Roman Wall and its integrated bastions. This continues south over London Wall.

GROUND CONDITIONS

21.4.10 Basic groundwise and envirocheck desktop studies have been undertaken. The ground beneath the site is shown to be sand and gravel which is typical of the City of London.

SITE INFRASTRUCTURE

21.4.11 Multiple utilities cross the site as confirmed by the groundwise study. These utilities include gas, water, sewerage, electrical and communications systems which are likely to require diversion as necessary. Further exploration and development should be carried out at the next stage.
21.4.12 The site sits within the local context of St Paul’s Cathedral. Bastion House and the residential towers of the Barbican Estate as well as 1 Aldersgate Street House are visible within a number of the LVMF views towards St Paul’s from the south. The redevelopment of the Museum of London, together with Bastion House, will necessitate consideration of the impact to these views. In particular the height of the new development is likely to be constrained to a lower level than Bastion House, to keep any new building out of site of the roof line of St Paul’s.

OPTION A

21.4.13 Under site condition A: Daylight / Sunlight standards, Rights to Light and the London View Management Framework

The combination of the three parameters applied to the potential development of the site is illustrated here.

The three-dimensional envelope is defined by:

- The conventional maximum volume as constrained by no more than a 20% reduction of light to neighbouring residential properties, in particular Mountjoy House, Thomas More House and London House
- Rights to Light to the benefit of the Ironmongers’ Company
- The likely reduction in height of the existing Bastion House tower volume, if redeveloped, to respect the profile of St Paul’s Cathedral.

Above: Daylight & Sunlight Envelope for Site Option A
OPTION B

21.4.14 Under site condition B: Daylight / Sunlight standards

Under the assumption in Site Condition B that Ironmongers’ Hall is re-provided elsewhere on the site, the constraints imposed by the Rights to Light are avoided.

The potential three-dimensional envelope across the larger site is illustrated. This shows that the major volume that would be acceptable in terms of Daylight and Sunlight rises to the south of the site, and to the east, in which it replicates the existing volume of Bastion House.
LONDON VIEW MANAGEMENT FRAMEWORK

21.4.15 The LVMF Protected Vistas do not affect development on the site. However, a number of River Prospect Views will constrain development to an extent. Some of these are shown opposite. A number of listed buildings will be visible in the views including the Barbican Tower and numerous historic church spires.

Further qualitative assessment would be required by specialists in future phases of work.
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Visual Management Guidance

Foreground and Middle Ground

234 Development should seek to preserve or enhance the townscape setting of the Cathedral, while working within the general geometric constraints of the St Paul's Heights Limitations. The incorporation of unoccupied vertical features is encouraged on middle ground buildings, where these can be shown to improve the experience of the view without undermining the visibility of the Cathedral.

Visible City churches contribute to the townscape quality of views of the foreground and middle ground from this place. New development should respect the historic environment and should not harm the relationship between these landmarks and the broader composition of the view.

Background

236 Existing development in the background of the view has begun to compromise the dominance of St Paul's Cathedral because of its size and visual proximity. This condition should not be worsened by development that has a negative visual inter-relationship with the peristyle, drum or dome.

Management of the Viewing Location

237 This is a good location from which to experience views. Consideration should be given to provision of a viewing plaque at the point axial to the Cathedral.

London View Management Framework

Above: LVNF River Prospect View // View From Thames Side Viewing Location

CENTRE FOR MUSIC
OUTLINE BUSINESS CASE AND FEASIBILITY STUDY
EASEMENTS, RIGHTS OF WAY AND TITLE ISSUES

21.4.16 Advice was sought from the property department of the lawyers, Baker & McKenzie, in order to obtain an understanding of the legal position in so far as it could impact on the working assumptions being used to progress and evaluate design options for the Museum of London site.

They advised that the proposed development site (excluding the Ironmongers’ freehold titles) consists of 8 separate titles and set out the matters affecting these titles which will need to be considered.

The Ironmongers’ Company land benefits from:

1. A right of way with or without vehicles over the service road and the access way from London Wall to Ironmongers’ Hall and then on to Aldersgate Street together with a right to park service vehicles on the access way (but not on the service road).

2. A right of way for pedestrian access from Aldersgate Street to Shaftesbury Place.

3. A right of way for fire or other emergency from a new fire escape which they have constructed on the Hall.

4. The whole of the Ironmongers’ Company land is also subject to a lease dated 14 April 2003. The proprietor is Ferroners Limited. That lease is for a term of years commencing on 14 April 2003 and ending on 28 September 2030. This lease is not excluded from the Landlord and Tenant Act 1954 and is also subject to underleases.

The basis on which these rights can be varied will need to be agreed with the Ironmongers’ Company by the City of London Corporation (as freeholder) in conjunction with the Centre for Music project team.

In relation to the access down the ramp from Aldersgate Street the title entries confirm that this land is subject to rights of way for the passage of services and such other rights as may be granted by the leases specified on the title. There are 305 leases noted on the title which relate to residential properties in the Barbican Estate.

The City of London freehold site is subject to the following two leasehold interests:

(a) The Museum of London leases which it is expected will be surrendered as part of its plans to relocate to Smithfield General Market. This is subject to negotiation and agreement between the Museum and the City of London Corporation.

(b) A lease of Bastion House (140 London Wall), with the lease expiring on 31 March 2018 after which the City will regain possession and control over this part of the site.

The complexity of the legal position is not unusual for a site of this nature in the City of London and it is considered reasonable to assume that the site can be assembled without undue restrictions. Nonetheless, this will depend on the outcome of discussions with the Museum and the Ironmongers’ Company (irrespective of whether or not Ironmongers’ Hall is to be relocated as part of the overall development).

The willingness of the City of London Corporation to support the process of removing any legal restrictions relating to the site will be important given its position as freeholder.
22. DEVELOPMENT PRINCIPLES

22.1 The focus of the Feasibility Study to this stage has been on understanding the range of ambitions and requirements for the Centre for Music, the constraints of the candidate site, and the ways in which the two aspects can be balanced to evolve a concept that is both visionary and viable.

22.2 The conceptual options that follow have been informed by a set of themes and principles that the project team has developed in response to the vision, and in response to the site’s identity and characteristics. These principles are outlined as follows:

PROVIDING THE SPATIAL REQUIREMENTS

22.3 Provide sufficient volumetric development to accommodate the spaces and facilities necessary to deliver the cultural vision, with the optimum adjacencies and relationships.

CREATING ACCESS AND PERMEABILITY

22.4 Open up entrances and approaches that welcome and embrace the public and visitors to the venue, revealing the life and activities within, and connecting to the Barbican Centre, and connecting the south and north parts of the site with a sensitive unlocking of the ground level route.

SITING THE CONCERT HALL

22.5 Site the concert hall at the heart of the venue so that it is visible and accessible, with easy servicing access, and where the cycle of rehearsals and performance can be experienced in new and extraordinary ways.

CREATING THE MIDDLE GROUND

22.6 Create areas of integration between ‘back of house’ and ‘front of house’ space in new and unprecedented ways, to enable musical discovery and learning in environments where the conventional barriers between all the musical community can be removed.

OPTIMISING THE ROTUNDA

22.7 Celebrate the urban significance of the Centre for Music through a landmark on the Rotunda site. In particular, exploit the axial views along St Martin’s Le Grand towards the Rotunda, creating a beacon to draw visitors up from St Paul’s Cathedral, and creating a vertical showcase for the life and activities within.

RELATING TO THE BARBICAN ESTATE

22.8 Integrate the Centre for Music into the Barbican, healing the edges of the site, and offering a more green and visually sensitive aspect towards the local residential community.

RELATING THE SCHEDULED ANCIENT MONUMENT AND PUBLIC OPEN SPACE

22.9 Integrate and preserve views and appropriate access to the monument, respecting its antiquity and cultural significance, so that it is better understood and interpreted within the context of the City and Cultural Hub.

ACCESS AND SERVICING

22.10 Create clear and functional access for both the front and back of house programme of the Centre for Music.

RESPECTING THE LMFV AND PLANNING ENVELOPE

22.11 Configure the three-dimensional massing and form of the Centre for Music respecting the planning constraints of the site. Optimise the major volumes towards the south, and terrace down towards the north with roof gardens and raised public spaces.

SITING THE COMMERCIAL DEVELOPMENT

22.12 Allow scope for a commercial building within the former Museum of London site within the optimum part of the planning envelope - towards the east of the site.

SITING IRONMONGERS’ HALL (OPTION B ONLY)

22.13 Provide a new location for a better-sited and more visible Ironmongers’ Hall, to offset the impact of relocation with a clear improvement in the quality of the site and its buildings.
23. DEVELOPMENT OPTIONS

23.1 Two development options have been considered in detail to demonstrate the capacity of the candidate site to accommodate the Centre for Music. The options are tested to provide an appropriate configuration, aligned with the Initial Brief and operational adjacency requirements, while respecting the site constraints and responding to the site context.

- **OPTION A // IRONMONGERS’ HALL REMAINS IN SITU**

- **OPTION B // IRONMONGERS’ HALL RELOCATED ON SITE**

Legend:
- Yellow: CENTRE FOR MUSIC - MAIN HALL
- Blue: CENTRE FOR MUSIC - OTHER SPACES
- Pink: IRONMONGERS’ HALL
- Orange: COMMERCIAL
PART III
FEASIBILITY STUDY

OPTION A

OPTION B
23.2 **OPTION A**

23.2.1 This Option accommodates the Centre for Music on Site Condition A, with the Ironmongers’ Hall remaining in situ.

**CONCEPT**

23.2.2 The Centre for Music fully occupies the site available to the south of Ironmongers’ Hall, to a new frontage on London Wall.

23.2.3 Two minor wings extend northwards, flanking Ironmongers’ Hall.

23.2.4 The Centre for Music Hall is laid out on an east-west direction, with the front to the west, where the rotunda area is occupied by a tall tower containing the main Core (foyer) spaces.

23.2.5 The platform, and associated storage and back stage areas are sited to the east.

23.2.6 A commercial office building flanks the Centre for Music to the east.
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MASSING

23.2.7 The massing envelope with which this option conforms is composed of both the planning daylight/sunlight envelope related to the residences of Thomas More House, Mountjoy House and London House, and the Rights of Light envelope associated with the upper south facing windows of Ironmongers’ Hall.

23.2.8 The constraint on adjacent development imposed by this composite three dimensional envelope is addressed in this option through siting the main concert hall at a level with the platform 12 metres below street level.

23.2.9 The opportunity for increased height and mass towards the south of the site is exploited in the option by a series of stepped layers, terracing towards the north.

23.2.10 The southernmost part of the site, above the former Rotunda, is occupied by the highest part of the building, and occupied by a tower of public foyer, education, exhibition and entertainment spaces looking south towards St Paul’s Cathedral.
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FEASIBILITY STUDY

ACCESS AND MOVEMENT

23.2.11 Public visitor arrival is likely to be from the north (from Barbican Tube Station and Farringdon East Crossrail Station), from the east (Liverpool Street Crossrail Station and Moorgate Tube Station) and the south (from St Paul’s Tube Station). Drop off by bus, or taxi, will approach from the north, south, east and west, converging on the main tower.

23.2.12 Entrances around the base of a tower off Aldersgate Street and London Wall will lead into the main arrival space of the ‘Core’. The street level equates to the likely Circle level of the concert hall, and stairs and lifts leading down to a sequence of lower ground levels will connect into the stalls of the concert hall. The area at the base of the tower adjacent to the concert hall will provide space for exhibitions, cafés and bars and relaxation and interactive areas.

SERVICING

23.2.13 Service access is provided from the existing road ramp off Aldersgate Street, down to a service yard and loading dock sited at 1st basement level. A turntable caters for trucks to turn, unload, and return back to Aldersgate Street. Good lifts in the service yard bring deliveries via segregated goods lifts down to platform level.

FUNCTIONAL ZONING AND LAYOUT

23.2.14 The Centre for Music Hall is sited centrally, oriented east-west, and occupying a volume rising through six levels from 3rd Basement to 2nd Floor level.

23.2.15 Public and joint use spaces, including educational, digital and dining spaces are located to the west and south of the hall, rising to 5th Floor level. Spaces for performers, rehearsal and production support are located in the north east wing. Management and administration functions are located in the upper levels of the north west wing, addressing Aldersgate Street.

CREATING A LANDMARK

23.2.16 This Option accommodates the spaces required for the Centre for Music in a way that emphasises the vertical nature of the southern part of the site, in particular above the Rotunda site. This creates the possibility for a landmark volume, visible from the north, south and east at the confluence of the main streets, marking the main public entrance, and containing a dramatic series of visible spaces and activities on the most visible part of the site.

RELATING TO CONTEXT

23.2.17 The Option provides a highly efficient fit of the required accommodation and facilities for the Centre for Music within the available site area. The relationship of the massing to daylight into the adjacent properties mitigates the potentially harmful loss of daylight, and provides a roofscape that, with green roofs and landscaping, will significantly improve the quality of the views towards the south.

23.2.18 The two wings flanking Ironmongers’ Hall create the potential for a better quality of boundary relationship than that currently created by the Museum of London.

23.2.19 With the potential decking over of the service area north of the Ironmongers’ Hall to conceal and mitigate the potential impact of vehicle movements below, the northern edge of the site could be significantly improved and connected at a garden level to the existing landscape to the west of the Roman Walls.
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LEVEL 5

LEVEL 7 / ROOF

LEVEL 5

LEVEL 7 / ROOF
PART III
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SECTION THROUGH OPTION A
SECTION KEY PLAN

RIGHTS OF LIGHT

LONDON WALL

12m

6m

IRONMONGERS’ HALL

CONCERT HALL

PLATFORM

ABOVE HALL

BELOW HALL

01

02

03

04

05

06

07

+16.5 m

+24.5 m

+28.5 m

+32.5 m

+36.5 m

+40.5 m

+44.5 m

B1

B2

B3

B4

+12.5 m

+8.5 m

+4.5 m

-1.5 m

+36.5 m

+40.5 m

+44.5 m
COMMERICAL DEVELOPMENT
23.2.20 This Option allows for redevelopment of the area of the site currently occupied by Bastion House, to provide a separate commercial development on London Wall, and flanking the Scheduled Ancient Monument.

IRONMONGERS’ HALL
23.2.21 The existing hall, and its relationship to the public gardens will be retained in its current position with significant improvements possible to the nature and quality of the perimeter relationship to the south, east and west. The north-west wing of the Centre for Music could be configured to provide a lower building, set back further from Ironmongers’ Hall than the current Museum of London buildings, with wider and more open access onto Aldersgate Street.

23.2.22 The service access to the Ironmongers’ Hall will be affected by this Option, such that deliveries and other service access will be limited to access from the north, returning back up the ramp to Aldersgate Street.

OPEN SPACE
23.2.23 Open space will be created around the southern corner of the site, where the corner tower of the Centre for Music meets the street. The Rotunda site will be transformed to create a street level public space at the main entrance to the Centre for Music. This will create space for all visitors to the Centre for Music to congregate and circulate in and out of the front of house Core.

23.2.24 Above the main hall, and accessed through the rising through the levels of the Core, a sequence of roof gardens and terraces will be created, looking back towards St Paul’s along St Martin’s Le Grand and across towards St Giles church.

THE NORTH SOUTH LINK
23.2.25 A pedestrian connection between the Centre for Music and the Barbican could be created with the establishment of a new north – south Link. The route will be created with two new pedestrian footbridges across the water bodies in the centre of the estate, opening up a route from the Barbican Centre to the Centre for Music passing St Giles, and the archaeological site on London Wall.

INTEGRATING THE HIGHWALK
23.2.26 The Option creates potential to connect the Highwalk to the Centre for Music and also to connect the Highwalk to street level. The Highwalk can connect to the upper levels of the Centre for Music and the public spaces of the Core, which also provides the opportunity to bring the Highwalk to street level.

PARKING
23.2.27 Parking will be provided through a combination of drop off points integrated into the reconfigured highway, and parking using the existing car parks under London Wall, and the undercroft below the City of London Girl’s School playing field.
23.3 OPTION B

23.3.1 This Option accommodates the Centre for Music on Site Condition B, with Ironmongers’ Hall relocated from its existing site, to new premises within the Feasibility Study site.

CONCEPT

23.3.2 The Centre for Music fully occupies the site available to the south of the service yard adjacent to Aldersgate Street. The sites currently occupied by Ironmongers’ Hall and the public garden are incorporated into the main part of the site for the Centre for Music. A new Ironmongers’ Hall is located on Aldersgate Street, on a triangular plot to the west of the Centre for Music.

23.3.3 A commercial office building is located to the east of the Centre for Music. The Centre for Music sits between the two, with a rectilinear main block extending southwards onto the former Rotunda site.

23.3.4 The main concert hall is laid out on a north-south orientation, with the front to the south, where the rotunda area is occupied by a tall tower containing the main Core (foyer) spaces. The platform, and associated storage and backstage areas are sited to the north.
23.3.5 The massing envelope with which this option conforms is composed of the planning daylight/sunlight envelope related to the residences of Thomas More House, Mountjoy House and London House. The Rights of Light associated with Ironmongers’ Hall are extinguished with the relocation to the new site on Aldersgate Street.

23.3.6 The constraint on adjacent development imposed by this three dimensional envelope is addressed in this option through siting the concert hall platform 8 metres below street level.

23.3.7 The opportunity for increased height and mass towards the south of the site is exploited in the option by a series of stepped layers, terracing towards the north.

23.3.8 The southernmost part of the site, above the former Rotunda, is occupied by the highest part of the building, and occupied by a tower of public foyer, education, exhibition and entertainment spaces looking south towards St Paul’s Cathedral.
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AERIAL VIEW FACING NORTH

AERIAL VIEW FACING SOUTH
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ACCESS AND MOVEMENT

23.3.9 Public visitor arrival is likely to be from the north (from Barbican Tube Station and Farringdon East Crossrail Station), from the east (Moorgate Tube Station) and the south (from Liverpool Street Crossrail Station and St Paul’s Tube Station). Drop off by bus, or taxi, will approach from the north south, east and west, converging on the main tower. Entrances around the base of a tower off Aldersgate Street and London Wall will lead into the main arrival space of the ‘Core’. The street level equates to the likely mid seating level of the Centre for Music Hall, and stairs and lifts leading up and down to the circle and stalls levels will connect into the auditorium across a dynamic void space that reveals the flanks of the concert hall.

23.3.10 The area at the base of the tower adjacent to the Centre for Music Hall will provide space for exhibitions, cafés and bars and relaxation and interactive areas.

FUNCTIONAL ZONING AND LAYOUT

23.3.11 The Centre for Music Hall is sited centrally, oriented north-south, and occupying a volume rising through six levels from 2nd Basement to 3rd Floor level.

23.3.12 Shared ‘Core’ spaces, including educational, digital and dining spaces are located to the south of the concert hall, rising to 5th Floor level. Spaces for performers, rehearsal and production support are located in wings around the main concert hall volume, primarily to the east, west and north.

23.3.13 Management and administration functions are located in the 2nd and 3rd levels of the east and west wings in natural daylight.

CREATING A LANDMARK

23.3.14 Similar to Option A, this Option accommodates the spaces required for the Centre for Music in a way that emphasises the vertical nature of the southern part of the site, in particular above the Rotunda site. This creates the possibility for a landmark volume, visible from the north, south and east at the confluence of the main streets, marking the main public entrance, and containing a dramatic series of visible spaces and activities on the most visible part of the site.

RELATING TO CONTEXT

23.3.15 The Option provides a highly efficient fit of the required accommodation and facilities for the Centre for Music within the available site area, along with the potential for Ironmongers’ Hall to relocate to a site with equivalent space to its existing condition, but with modern infrastructure and improved site presence, visibility and accessibility. The reconfiguration of the site in this way has the potential to provide an optimum layout for the Centre for Music, in a rectilinear volume sited centrally, with new publicly accessible arcades running between the new Ironmongers’ Hall and the new commercial development.

23.3.16 The relationship of the massing to daylight into the adjacent properties mitigates the potentially harmful loss of daylight, and provides a roofscape that, with green roofs and landscaping, will significantly improve the quality of the views towards the south.

23.3.17 With the potential decking over of the service area north of the site (to conceal and mitigate the potential impact of vehicle movements below) the northern edge of the site could be significantly improved and connected at a garden level to the existing landscape to the west of the Roman Walls. The service route running south to London Wall would also be roofed, with the potential for the upper level to connect to the High Walk on London Wall, and descend northwards towards a new arrival point in the gardens to the south of St Giles.
COMMERCIAL DEVELOPMENT

23.3.18 This Option allows for redevelopment of the area of the site currently occupied by Bastion House, to provide a separate commercial development on London Wall, and flanking the Scheduled Ancient Monument.

IRONMONGERS’ HALL

23.3.19 The new Ironmongers’ Hall has a frontage onto Aldersgate Street, with the potential for a highly visible and formal arrival sequence. The new building would be taller than the existing Ironmongers’ Hall (approximately 16 metres above ground level) within which the main volumetric rooms of the existing hall (the Banqueting Hall in particular) could be replicated.

23.3.20 The creation of a pedestrian arcade between the rear of Ironmongers’ Hall and the flank of the Centre for Music, and the location of a potential entrance hall at the southern apex of the triangular block would provide a higher quality of setting and access for the hall. Service access would be provided from the existing service route off Aldersgate Street with basement levels connecting to the service yard shared with the Centre for Music.

OPEN SPACE

23.3.21 Open space will be created around the southern corner of the site, where the corner tower of the Centre for Music meets the street. The Rotunda site will be transformed to create a street level public space at the main entrance to the Centre for Music. This will create space for all visitors to the Centre for Music to congregate and circulate in and out of the front of house Core.
23.3.22 Two new pedestrian routes will be created running between the Centre for Music and the Commercial Office development and the new Ironmongers’ Hall. These pedestrian streets will connect northwards and into the gardens adjacent to the archaeological site.

23.3.23 Above the main hall, and rising through the levels of the Core, a sequence of roof gardens and terraces will be created, looking back towards St Paul’s along St Martin’s Le Grand and across towards St Giles church.

THE NORTH SOUTH LINK

23.3.24 A pedestrian connection between the Centre for Music and the Barbican could be created with the establishment of a new north – south Link. The route will be created with two new pedestrian footbridges across the water bodies in the centre of the estate, opening up a route from the Barbican Centre to the Centre for Music passing St Giles, and the archaeological site on London Wall.

Artists impression of the potential for a new North - South link.
INTEGRATING THE HIGHWALK

23.3.25 The Option creates potential to connect the Highwalk to the Centre for Music and also to connect the Highwalk to street level. The Highwalk can connect to the upper levels of the Centre for Music and the public spaces of the Core, which also provides the opportunity to bring the Highwalk to street level.

PARKING

23.3.26 Parking will be provided through a combination of drop off points integrated into the reconfigured highway, and parking using the existing car parks under London Wall, and the undercroft below the City of London Girls’ School playing field.

SERVICING

23.3.27 Service access is provided from the existing road ramp off Aldersgate Street, down to a service yard/loading dock sited at 1st Basement level. The service yard and loading dock are located immediately adjacent to the backstage area of the hall, with goods lifts serving the platform level. The service yard is connected back to London Wall with a service route that runs back up from 1st Basement level to street level between the east flank of the Centre for Music and the commercial office tower.
Centre for Music
North-South Route

Condition A
INDICATIVE

In this condition, the Ironmongers’ Hall remains in situ.
The North South public walk would connect the existing public spaces in the Barbican Estate with the addition of two pedestrian bridges, and landscaping of the frontage to the Roman bastion to enable an easy passage to London Wall.

KEY:
- High Walk
- North South public walk
- public route
- public space
- footbridge
- internal route
Centre for Music
North-South Route

Condition B
INDICATIVE

In this condition, the Ironmongers’ Hall is relocated to a new site on Aldersgate.

The North South public walk would connect the existing public spaces in the Barbican Estate with the addition of two pedestrian bridges, and landscaping of the frontage to the Roman bastion to enable an easy passage to London Wall.

KEY:
- High Walk
- North South public walk
- public route
- public space
- footbridge
- internal route
24. PROJECT DELIVERY

24.1 SPECIFIC PROJECT DELIVERY RISKS OF CONCERT HALL PROJECTS

24.1.1 An effective project delivery strategy promotes high performance over avoiding poor performance. However, in designing a high-performing strategy it is worth considering briefly the factors that contribute to poor project performance on projects.

24.1.2 Research has been undertaken by GVA Acuity into some of the specific project delivery risks associated with previous and current concert hall projects of similar scale and aspiration to determine what common issues arose and how they could be mitigated.

24.1.3 Some key issues are summarised opposite together with the mitigation measures.

24.1.4 Research carried out by Pricewaterhouse Coopers (Insights and Trends: Current Programme and Project Management Practices 2012) on major projects identified and rated factors ranging from the quality of the business case to implementation skills in contributing to poor project performance. The four main factors align with GVA Acuity’s research and are as opposite.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>There has been a lack of a clear understanding of the purpose/ functionality of hall at the beginning leading to frequent changes in design creating delays and increased costs.</td>
<td>An exhaustive and collaborative process has led to the Initial Project Brief (see synopsis in Section 17). The final Project Brief will be developed and tested during the concept design stage with study visits so there is absolute clarity as to what is required.</td>
</tr>
<tr>
<td>Political pressure has led to changes very late in the design stage with different hall parameters than originally planned and subpar acoustics.</td>
<td>The Project Brief, budget and funding implications will be established and agreed with all key stakeholders before concept design proceeds too far.</td>
</tr>
<tr>
<td>Political/funding/public pressure has led to local (national) architects being preferred in lieu of the best internationally which may lead to compromise in quality.</td>
<td>The selection of the key members of the design team (architect, acoustician etc.) will be key to achieving the landmark building and world-class acoustics required. Any potential impact on the budget related to the selected team will also be considered.</td>
</tr>
<tr>
<td>Some of the acknowledged outstandingly successful projects were the result of a strong collaborative relationship between the architect and the acoustician.</td>
<td>The strength of the team’s ability to identify problems and find solutions working together will be critical to working within budget.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>%</th>
<th>Business Case</th>
<th>Governance</th>
<th>Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor estimates / missed deadlines</td>
<td>30</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Lack of executive sponsorship</td>
<td>15</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Poorly defined goals / objectives</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Change(s) in scope mid project</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>
24.2 PROJECT STRUCTURE

24.2.1 Being aware of, and responsive to, the challenges facing major projects like the Centre for Music is essential to successful delivery. Major projects require outstanding leaders who have the skills and experience to deliver challenging objectives. For project leaders to succeed in their roles, they must be properly empowered, with clear accountability and responsibility for delivering their projects. Critically they need experienced clients with strong management and realistic budgets.

24.2.2 Work has taken place on the governance and operating model for the Centre for Music focusing on the structuring and allocation of rights and responsibilities between the Barbican and the LSO. This will be finalised at the beginning of the next phase of work. The contracting party (the “Client”) for the next stage of work, and subsequent stages of the capital project, will also need to be agreed. This will then provide the necessary clarity of accountability and responsibility.

24.2.3 The overall Project Delivery Organisation Structure has been put in place with the above in mind and identifies the key parties with lines of communication and reporting together with levels of responsibility as shown opposite.

24.2.4 The Project Board will be responsible for overseeing the work of the Executive Group and will have executive powers to change the strategic direction of the project and authorise changes to the agreed brief, budget and programme. The Project Team will report to the Executive Group.

24.2.5 The Senior Responsible Owner (“SRO”) will be the individual responsible for ensuring that the project meets its objectives and delivers the projected benefits. He will be the owner of the overall business change that is being supported by the project.

24.2.6 The Project Directors will lead the Project Team and be responsible for making decisions on a day-to-day basis on the project within the agreed brief, budget and programme. The Project Directors will report to the Executive Group.

24.2.7 The Project Directors will be supported by the Project Team and an external Strategic Project Manager, whose responsibilities will include programme management in accordance with PRINCE 2. It will be important to ensure flexibility so that the resource level can be increased should it be deemed necessary.

24.2.8 The project delivery structure and governance together with the meeting framework and frequency will be finalised at the beginning of the next phase, when the governance arrangements have been finalised, prior to the commencement of concept design.

Key Stakeholders:
- HM Treasury, DCMS, Greater London Authority, City of London Corporation, Arts Council England
- Specialist Client Advisers (Legal, etc.)
- Professional Team including External Project Manager
- Internal Teams (Business Planning, etc.)
- Fundraising Appeal Board
- Project Board
- Executive Group
- Senior Responsible Owner (SRO)
- Independent Advisers
- Wider Site Development and Public Realm Works
- Project Directors
- Project Team
- Key Stakeholders
24.3 PROGRAMME TO COMPLETION

24.3.1 A strategic project programme has been developed and prepared by GVA Acuity for the capital projects [Centre for Music, Barbican Hall and LSO St Luke’s] in discussion with the Feasibility Study team.

24.3.2 The summary programme below shows the key stages of work and milestones and this would be developed into a more detailed site-specific programme as part of the next phase of work.

24.3.3 The programme is highly dependent on when the preferred site is vacated both by the Museum of London and the occupiers of the Bastion House office block. It is in the City of London Corporation’s interests to commence redevelopment of Bastion House at the earliest opportunity. The City Corporation intends to work with the Museum of London on its relocation programme with a view to releasing the site as soon as possible after the current lease on Bastion House ends (2018). The programme has been prepared on this basis.

24.3.4 Later vacation of the site by the Museum of London and/or Bastion House would extend the programme, although in this event the additional time would be used to make further progress with design, procurement and fundraising.

24.3.5 It has been assumed that the works necessary to LSO St Luke’s (which should not need the building to close) can be completed in 2020 and the works to the Barbican Hall (which will need the Barbican Hall to close) are undertaken following the opening of the Centre for Music.

Outline Programme - Key Milestones (site dependent - see 24.3.3)
24.4 PROJECT SCHEDULE AND STAGES

24.4.1 An outline of the project schedules and stages with the key deliverables is detailed below

PHASE 1
Outline Business Case and Feasibility Study
- Vision and Strategic Brief
- Set out activity, operating and financial model
- Initial project brief
- OBC/Feasibility Study due end September

PHASE 2
Full business case; RIBA Stage 2
- Implement governance structure
- Select and appointment consultant team
- Concept design (RIBA Stage 2)
- Fundraising begins
- Develop programme plans and operating model

PHASE 3
Developed design / planning
- Finalise operating and governance model
- Developed design (RIBA Stage 3)
- Planning application / approval
- Further fundraising activity

PHASE 4
Pre-construction
- Implement operating and governance model
- Technical design (RIBA Stage 4)
- Procure/package contractors
- Contractor design
- Secure majority of funding to allow construction to begin

PHASE 5
Construction, fitting out and commissioning

PHASE 6
Handover to Operations

PHASE 7
In Use
24.5 NEXT STEPS

24.5.1 It is envisaged that the next phase will include an “Inception Stage” when feedback on the Feasibility Study will need to be evaluated in consultation with key Stakeholders and the consultant team to take forward the project selected. This will run through to the end of Q2 2016 when concept design will commence. An outline programme through to the end of Q1 2017 is outlined opposite.

24.5.2 There are a number of issues which will need to be resolved at an early stage during concept design including the site split and arrangements between Centre for Music, Ironmongers’ Hall and development of a commercial building by the City of London Corporation, as well as close liaison with the Museum of London regarding the timing of site possession for this project.

24.5.3 There are also a number of site-related issues including highway alignment, service access, the High Level walkways, daylight/sunlight, rights of light, the London View Management Framework, public open spaces, legal and neighbourly issues which will take some time to resolve and will need to be progressed at an early stage.

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24.6 PLANNING APPROVAL DELIVERY

24.6.1 A report on planning matters has been prepared by DP9 which outlines the position in relation to the Museum of London site. The formulation of a planning application requires a significant degree of consultation with statutory bodies such as the City of London Corporation, Historic England, GLA, etc. as well as public consultation which will largely be focused upon the Barbican Estate residents.

24.6.2 It will be advisable to begin consultations with the City of London Corporation to discuss and consider all the above material considerations in the context of the concept scheme as soon as possible. A design will evolve through a series of iterations and at the point where the City Corporation is broadly satisfied that there is the potential for a satisfactory scheme to be promoted, it would be appropriate to then engage with wider public consultation on a more defined development proposal. It is important that parameters governing the design brief are established prior to the wider consultation, but early public consultation will be required in any event.

24.6.3 Any proposal put forward, however, will require sign off by the Client and full design team to avoid unrealistic options gaining preferred status and other options being seen as inferior in comparison.

24.6.4 Engagement with Historic England and the GLA will also be appropriate at the early stage together with bodies such as Transport for London (Highways and Servicing). The strategy would be to submit a planning application that is fully developed whereby all relevant material considerations have been considered and addressed within the planning application scheme.

24.6.5 This means that a series of meetings will need to be held with all the statutory consultees as well as a series of public meetings/exhibitions, not only as a means of demonstrating proper public engagement, but also as a means of identifying and addressing matters of concern to interested parties. The aim would be that the planning application is submitted with all such interested parties, as far as reasonably possible, being satisfied with the proposed scheme. This necessitates front loading resources and extending the pre-application period but, in doing so, it should shorten the planning determination process.

24.6.6 It is worth noting at this stage that the Environmental Assessment process requires consideration of alternatives not only to the form of development and, for example, servicing arrangements and layout, but also the location of the development. This will include whether the Centre for Music should be located outside London or in alternative locations within London and thus the process of site selection will need to be set out clearly and comprehensively (as described in Section 20).

24.6.7 In relation to a strategy in respect of the risk of Ironmongers’ Hall being listed, it may be advisable to obtain a Certificate of Immunity from Listing, but the pros and cons and risks need to be properly considered.
24.7 PROJECT DELIVERY STRATEGY

24.7.1 The Centre for Music is a large and complex project of national importance. It will involve creating something totally new, major financial investment and a multitude of stakeholders representing different interests. The success of the capital project will be immediately visible in terms of achieving the world-class acoustics and landmark building but to an agreed budget and timescales.

24.7.2 However, the real success of the Centre for Music can only be gauged in the years after the Centre opens and the extent to which it is able to engage and inspire the communities that it serves. In the timeframe that it will take to bring this project to fruition, there will be changes in the artistic, social, political and business environment and further evolution of the technologies that the Centre for Music can harness.

24.7.3 In grouping the general and specific factors that have had an impact on project delivery risks in other projects of a similar scale, an interesting ranking emerges with “implementation” as the highest, strongly underpinned by strong governance and a well thought out and live business case.

24.7.4 In mitigating these factors, the three key elements of the control environment are proper transparency of controls, clear accountability of responsibilities, and a meaningful audit trail of information to make sure people are performing their required roles effectively. An effective risk management process is also critical.

24.7.5 PRINCE 2 (Projects IN Controlled Environments) is the methodology which will be used to project manage the project. It provides a structured project management method and a secure overall framework for the project work.

24.7.6 At the next phase of work a Project Execution Plan (“PEP”) will be prepared which will be an overarching document that includes (or references) a number of more detailed plans focusing on specific issues such as: the project quality plan; health and safety plan; risk management plan; change control procedures; value management plan; contingency management; stakeholder management plan etc. and sets out the overall strategy for managing the project, describing who does what and how, and defining the policies, procedures and priorities that will be adopted.

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**Implementation**
- Poor estimates
- Selecting the right team
- Poor communication
- Inadequate risk planning
- Lack of change management

**Governance**
- Lack of executive sponsorship
- Lack of stakeholder involvement
- Change in environment
- Change in strategy

**Business Care**
- Poorly defined goals / objectives
- Lack of executive sponsorship
25.-capital-costs

25.1 Specific Budget Risks of Concert Hall Projects

25.1.1 Research has been undertaken into some of the specific risks associated with previous and current concert hall projects of similar scale and aspiration to determine what common issues arose and these are summarised in the table together with mitigation measures.

25.1.2 “Poor estimates during project planning and missed deadlines” are the largest contributors to project failure, according to Insights and Trends, PwC’s 2012 global survey of project management leaders.

<table>
<thead>
<tr>
<th>Risk</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concert halls are high risk in that they are amongst the most complicated type of building to create as they are highly complex, bespoke buildings.</td>
<td>GVA Acuity in discussion with the consultant team has undertaken research and benchmarking of other projects of similar scale and ambition to ensure the budget is in line with comparable projects.</td>
</tr>
<tr>
<td>Concert halls have uncompromising acoustical requirements including the large volumes needed to fulfil these requirements.</td>
<td>The volumetric requirements have been established by appropriately experienced acousticians at an early stage.</td>
</tr>
<tr>
<td>Where costs have been underestimated at the outset this has resulted in an increased budget while the project is proceeding, the risk of insufficient funding and in some cases construction halted for years and/or legal disputes.</td>
<td>A realistic initial budget has been prepared at the outset.</td>
</tr>
<tr>
<td>There is no simple set of cost drivers that can be addressed to make significant savings without drastically affecting the character and quality of a scheme.</td>
<td>There will need to be change control in place as concept design develops and cost checks as the design proceeds so that there are early warnings if the budget is at risk of being exceeded.</td>
</tr>
<tr>
<td>Costs are mainly driven by the auditorium and foyer areas, so there is little flexibility to reduce the cost by value engineering or savings once the size of the performance space, and character and quality of the building has been determined.</td>
<td>Undertake thorough cost checks at the concept design stage while there is still the opportunity to make some changes.</td>
</tr>
<tr>
<td>Concert halls by their nature lack repetition and often have an innovative design, so they do not benefit from the use of well-tried construction techniques, or the economies of scale that are available to commercial schemes of a similar value.</td>
<td>Buildability advice, early testing in the market place and involvement of specialist subcontractors should be introduced to avoid later problems.</td>
</tr>
</tbody>
</table>
25.2 **BENCHMARKING OF CONSTRUCTION COST**

25.2.1 At the outset of the Feasibility Study it was agreed that it would be important to assemble data on other projects with similar characteristics that could be used to make comparisons in a number of key areas which included the overall gross area and construction cost. Data was compiled by GVA Acuity from a variety of different sources with input from Arup Associates, Nagata Acoustics, Gardiner & Theobald and information in the public domain. Whilst complete accuracy cannot be assured due to different calculation methods, etc., all data has been sense checked.

25.2.2 Cost data for UK projects was regionally adjusted to UK average prices using Building Cost Information Service data and updated to current prices based on house data on inflation. Costs for international projects were converted to sterling based on exchange rates at the date of completion and updated to current prices.

25.2.3 The data include a number of UK concert halls (Perth, Waterfront, Symphony Hall, Birmingham, Bridgewater and Sage) as well as some of the more significant UK theatres (Royal Shakespeare Theatre, Lowery, Wales Millennium Centre and Royal Opera House). Most of the UK projects are clustered in the £4,500/m² to £5,000/m² bracket, the exception being Sage, Gateshead at £5,584/m².

25.2.4 The limitations of international benchmarking including accuracy and consistency of published data, differences in construction methods and regulation, economic cycles and the vagaries of exchange rates mean these data should be treated with caution although all figures have been sense checked. In some cases this indicated problems with the data such as the inclusion of ancillary space such as car parking in either the cost or area.

25.2.5 The costs for the Centre for Music are based on international benchmarking. Although several concert halls have been built in the UK there is nothing that is directly comparable to the proposed Centre for Music. The brief requires a state of the art landmark building with world-class acoustics. In order to determine an appropriate cost allowance it has therefore been necessary to consider some international comparators.

25.2.6 It was established at the outset that the projects which were selected as suitable for benchmarking the Centre for Music against would all be symphonic concert halls with a seating capacity of over 1,500 seats which had been completed in the last 20 years. In the event 11 international projects were selected from North America, Europe, Japan and one project (The Sage, Gateshead) from the UK.

25.2.7 The data on outturn construction costs were analysed which involved updating them for inflation and converting the cost into £/m². Excluding the highest and lowest cost per m² the nine projects ranged between £5,207/m² and £6,750/m².

<table>
<thead>
<tr>
<th>Hall</th>
<th>Capacity (Main Hall)</th>
<th>Gross Area</th>
<th>Construction Cost (Current Prices)</th>
<th>£/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philharmonie Luxembourg</td>
<td>1,506 seats</td>
<td>20,000 m²</td>
<td>£ 122m</td>
<td>£ 6,080 /m²</td>
</tr>
<tr>
<td>The Sage, Gateshead</td>
<td>1,640 seats</td>
<td>20,000 m²</td>
<td>£ 112m</td>
<td>£ 5,584 /m²</td>
</tr>
<tr>
<td>Sapporo Concert Hall, Japan</td>
<td>2,008 seats</td>
<td>20,746 m²</td>
<td>£ 112m</td>
<td>£ 5,914 /m²</td>
</tr>
<tr>
<td>Bartok National Concert Hall, Budapest, Hungary</td>
<td>1,809 seats</td>
<td>20,750 m²</td>
<td>£ 123m</td>
<td>£ 6,750 /m²</td>
</tr>
<tr>
<td>Stavanger Concert Hall, Norway</td>
<td>1,500 seats</td>
<td>22,000 m²</td>
<td>£ 151m</td>
<td>£ 6,978 /m²</td>
</tr>
<tr>
<td>Walt Disney Concert Hall, Los Angeles</td>
<td>2,265 seats</td>
<td>27,870 m²</td>
<td>£ 149m</td>
<td>£ 6,630 /m²</td>
</tr>
<tr>
<td>Centre for Music (Proposed)</td>
<td>1,900 seats</td>
<td>29,845 m²</td>
<td>£ 176m</td>
<td>£ 5,893 /m²</td>
</tr>
<tr>
<td>Harpa Concert Hall, Iceland</td>
<td>1,800 seats</td>
<td>30,300 m²</td>
<td>£ 146m</td>
<td>£ 5,207 /m²</td>
</tr>
<tr>
<td>KKL Luzern</td>
<td>1,840 seats</td>
<td>35,000 m²</td>
<td>£ 274m</td>
<td>£ 7,817 /m²</td>
</tr>
<tr>
<td>Helsinki Music Centre, Finland</td>
<td>1,704 seats</td>
<td>38,600 m²</td>
<td>£ 193m</td>
<td>£ 5,350 /m²</td>
</tr>
<tr>
<td>Philharmonie de Paris, France</td>
<td>2,400 seats</td>
<td>62,000 m²</td>
<td>£ 305m</td>
<td>£ 4,916 /m²</td>
</tr>
</tbody>
</table>

25.2.8 Gardiner & Theobald proposed working to the average which (if the upper and lower extremes are discounted) is £5,350/m². Gardiner & Theobald have then added a London weighting to this figure (currently 11%) to give a construction cost for the Centre for Music of £5,950/m². This is higher than any UK project but considerably less than landmark projects by internationally recognised architects such as in Lucerne or Walt Disney Hall, Los Angeles. This has then been adjusted for the technical equipment costs and digital infrastructure to give an overall rate in the order of £5,893/m² (excluding contingency and site enabling works) used.

25.2.9 A summary of the benchmarking is detailed below, with more detail in Appendix 7A.
25.3 SUMMARY OF OUTLINE PROJECT BUDGET

25.3.1 The objective has been to prepare a realistic initial budget at the outset with limited exclusions. The design work which underpins this budget is at a feasibility stage but given the extensive benchmarking which has taken place the starting point is on a comparable basis with other completed projects.

25.3.2 The budget has been prepared by GVA Acuity and Gardiner & Theobald with Gardiner & Theobald advising on all construction related costs, furniture, fittings and equipment, inflation etc. Advice has been sought from a number of sources including Arup Associates on technical equipment budgets, Baker & McKenzie LLP on legal costs, Gordon Ingram Associates on Rights of Light compensation, Arup Associates, GVA Acuity and Gardiner & Theobald on fees and Nagata Acoustics on fees and acoustic models. The Barbican Centre and LSO have advised on client costs, fundraising costs, instruments etc. and overviewed the budget.

25.3.3 A summary of the project budget at current costs is as the following table.

25.3.4 A more detailed version of this budget is presented at Appendix 25A.

25.3.5 A contingency allowance of 7.5% has been included as part of the construction cost and a separate overall client contingency of 5% has also been added.

25.3.6 There is no material difference in costs between the options with Ironmongers’ Hall remaining in situ or being relocated. This is because the costs of relocating Ironmongers’ Hall are offset by reduced construction costs for the Centre for Music as a result of a more efficient use of the site.

<table>
<thead>
<tr>
<th>Capital Costs</th>
<th>Centre for Music</th>
<th>Barbican Hall</th>
<th>LSO St Luke’s</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction and fittings</td>
<td>£ 221.1</td>
<td>£ 27.3</td>
<td>£ 0.6</td>
<td>£ 249.9</td>
</tr>
<tr>
<td>(including 7.5% contingency)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional fees</td>
<td>£ 38.8</td>
<td>£ 4.6</td>
<td>£ 0.1</td>
<td>£ 43.5</td>
</tr>
<tr>
<td>Client costs</td>
<td>£ 5.3</td>
<td>£ 0.7</td>
<td>£ 0.0</td>
<td>£ 6.0</td>
</tr>
<tr>
<td>Client contingency</td>
<td>£ 13.2</td>
<td>£ 1.6</td>
<td>£ 0.1</td>
<td>£ 14.9</td>
</tr>
<tr>
<td>Site specific costs (demolition, etc.)</td>
<td>£ 39.0</td>
<td>£ 0.0</td>
<td>£ 0.0</td>
<td>£ 39.0</td>
</tr>
<tr>
<td>Total</td>
<td>£ 317.4</td>
<td>£ 34.2</td>
<td>£ 0.8</td>
<td>£ 352.4</td>
</tr>
</tbody>
</table>
25.4 SITE SPECIFIC COSTS
25.4.1 Site specific costs total £39m and include the following:
- Demolition of Museum of London and Bastion House
- Demolition and re-provision of Ironmongers’ Hall
- Enabling works
- Associated costs of statutory consents, fees, client costs, client contingency, etc.
25.4.2 The cost of demolition of the Museum of London and Bastion House has been based on the size of the buildings and current average rates for demolition costs, together with an allowance for asbestos removal given the age of the buildings.
25.4.3 Scanned record drawings of the existing Ironmongers’ Hall were used by Gardiner & Theobald to arrive at an estimated approximate area of 3,180m². However, in the absence of detailed scale drawings, it was agreed that it would be prudent for the time being to base all calculations on a rounded figure of 3,500m². The total cost of replacement has been based on the creation of a new building of this size.
25.4.4 Enabling works have been estimated to cover the costs of:
- Re-routing underground services as the building moves beyond the current building line and into what is currently pavement.
- Additional work outside the current assumed site boundary to reflect the assumed need for service access for articulated lorries via Aldersgate Street/ London Wall.
- Any necessary adaption to the ramp from London Wall.
- Any works required to service access for Ironmongers’ Hall (if it is not relocated).
- Moving and re-provisioning the Rotunda Open Space and Ironmongers’ Garden.
25.5 INFLATION ASSUMPTIONS
25.5.1 The costs presented above are in current day terms, before accounting for inflation. Estimates have been made of the impact of inflation although this will depend on the exact programme and timing of works.
25.5.2 Gardiner & Theobald have developed, over several years, their own approach to the problem of forecasting the trends in construction tender prices. The Tender Price Indicator system relies on two elements:
- a series of computerised cost models for differing types of projects; and
- the contribution of state-of-the-market information by those at the workface of the industry, the contractors and specialist sub-contractors.
25.5.3 Using this system, the assumptions which Gardiner & Theobald have used for inflation are as below:

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020 and beyond</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.5%</td>
<td>3.5%</td>
<td>3.0%</td>
<td>3.0%</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

25.5.4 Based on these figures, the total allowance for inflation is likely to be approximately 25%, depending on the exact timing of the project, particularly the timing of construction as that represents the largest element of costs.
25.5.5 Any change in the rate of tender price inflation would have a significant effect on the outturn cost as would any delay in the completion date. This will be monitored as the project proceeds and early warning given of a change in the economic climate if that is possible as occasionally external factors such as regulatory forces or the financial markets can affect a project such as this with little warning.
25.5.6 Gardiner & Theobald also tested the sensitivity on the total impact of inflation by adjusting the assumed inflation rate for 2020 onwards. Using a range of inflation rates between 1% and 3% from 2020 onwards, the total impact of inflation on the project budget would be estimated to be between 20% and 30%.
26. CAPITAL FUNDING

26.1 CONTEXT

26.1.1 Given the scale of this project, a clear plan is required to ensure that the project can be funded. Work has been carried out as part of the Feasibility Study to consider possible sources of private sector funding and to assess the level of funding that might be achieved.

26.1.2 Cultural projects of this nature are attractive to donors, sponsors and charitable trusts and practically all comparable projects in recent years have engaged in major fundraising campaigns to fund part or all of their capital costs. It is therefore reasonable to assume that contributions from the private sector will play an important part in funding this project.

26.1.3 Equally, it is important to ensure that fundraising expectations are realistic and achievable to avoid creating inappropriate assumptions regarding the level of funding and putting the project at risk at a later date. Setting a fundraising target that is challenging but achievable is preferable to creating a target that is too ambitious and which results in reductions in the scope of the project at later stages or requires unexpected increases in funding from other sources.

26.1.4 In order to assess the potential sources of funding, a fundraising consultant, Ruth Jarratt, was engaged to advise on the opportunities for funding from the private sector, and discussions have also been held with key stakeholders to ascertain the scope for funding from public sources.

26.1.5 The largest proportion of the capital cost relates to the creation of the Centre for Music whilst other elements relate to specific aspects of the project (e.g. refurbishment of the Barbican Hall). At this stage the fundraising potential is being considered for the project as a whole although it may be appropriate at later stages to consider separate fundraising campaigns for specific elements of the project.

26.2 PRIVATE SECTOR FUNDING POTENTIAL

26.2.1 Ruth Jarratt’s report, which is attached at Appendix 26A, considers a number of factors associated with the private sector fundraising campaign for this project. Her key observations and findings are as follows.

26.2.2 The fundraising campaign associated with the creation of the Centre for Music is likely to be one of the biggest so far in the arts sector here in the UK. However, when set against other arts projects worldwide, or indeed against other projects in the wider UK cultural sector, it is not so huge.

26.2.3 The project partners might look at a fundraising target in the range of £100-150m, which would put it at the top of the range for cultural projects in the UK to date. The project as conceived has the qualities to attract support at this high level.

26.2.4 The vision for the project is very strong, and if adhered to should be very attractive to international philanthropists with business interests in London. The quality of the building itself will be important here.

26.2.5 Outstanding leadership will be the key to success. Sir Simon Rattle’s continued advocacy for and dedication to the campaign will be essential. Exceptional leadership will also be required from senior volunteers and the campaign team. The Capital Campaign Chair and Capital Campaign Director will need to be people of considerable experience in working on appeals of this scale. The active involvement of senior political and City figures with international contacts and influence will be a distinct advantage.

26.2.6 Boldness will also be a necessary quality, especially in not giving away naming rights too cheaply. The bigger the lead gift the less risky the campaign: it is advisable that naming rights to the Centre for Music command around 75% of the entire fundraising target if the campaign is to avoid running into difficulty further down the line.

26.2.7 In the context of the proposed fundraising target of £100m-£150m, this would put the lead gift at around £75m-£100m and the Centre and/or the main auditorium would probably be named for that lead donor. The remaining £25m-£50m would then be made up of smaller gifts from major donors or trusts and foundations who might be offered naming rights over subsidiary spaces.

26.2.8 Given the proposed timeframes for the project, it is vital that action be taken now to put the capital fundraising leadership in place. There is a raft of work for them to undertake before the campaign proper can begin: clarifying the case for support, developing the campaign strategy and galvanising the commitment of key advocates around the globe. In order to leave a sufficient window for the cultivation and solicitation of gifts, this should be set in motion immediately.

26.2.9 The overall conclusion from this analysis is that this project is capable of attracting significant private sector funding provided that the fundraising campaign is well structured and key individuals are involved in drawing in those with the ability to donate significant sums. Equally, the fundraising target should be set at an achievable level bearing in mind the likely amount that could be raised from a lead donor and the balance of funding between the lead donor and other sources.

26.2.10 It is also clear that in order to attract this level of funding the project must be visionary and transformative, both in terms of a landmark and inspirational building and through an ambitious, innovative and far-reaching programme of artistic and educational activity.
26.3 ESTIMATES OF PRIVATE SECTOR FUNDING

26.3.1 Having considered the levels of lead gifts for similar projects and the nature of this one, it is considered that the most that could reasonably be expected to be secured from a lead donor is in the range of £75m to £100m, in line with Ruth Jarratt’s view. This would, for most donors, be a unique lifetime gift for which they would expect recognition in terms of naming rights and prominence as the leading private funder of the project.

26.3.2 If the lead gift were to represent 75% of the total private sector fundraising target, then this would indicate a total target in the region of £100m to £135m, and possibly stretched to £150m. This would leave a sum of £25m to £30m to be raised from a wider campaign of other naming rights, contributions from trusts and foundations, corporate support and gifts from the wider public. These figures, whilst large, are considered broadly achievable given the nature of the project and the organisations’ past fundraising records.

26.3.3 To put the scale of the private sector fundraising target into context, the Royal Opera House which has a very high profile and successful fundraising track record, secured some £100m for its refurbishment prior to reopening in 2000 (in addition to some £78m of lottery funding). This would amount to £150m in 2015 so this is not an entirely unrealistic target, although this is at the upper end of what is considered achievable for this particular project.

26.3.4 Having taken all relevant factors into account, it is considered that a private sector fundraising target of between £100m (cautious) and £150m (ambitious) is likely to be realistic. A target of £125m is considered achievable without being too optimistic (and hence at greater risk of not being achieved) and this has therefore been used in the economic analysis in the Outline Business Case.

26.3.5 It should be noted that these figures are stated in present day terms and the actual cash that would need to be raised would need to increase to reflect inflation which, over the lifetime of the project, would increase these targets by 20% or more. This is another reason for not setting too optimistic a target in present day terms.

26.3.6 The success, or otherwise, of a private sector fundraising campaign will depend on the vision for the project being ambitious and the specific characteristics of the Centre for Music including its location, design, function and reach. The target would need to be reduced from the levels stated above if the scale or quality of the project were to diminish from the currently assumed levels.

26.4 FUNDRAISING CAMPAIGN

26.4.1 The fundraising campaign will build upon the track record of the partner organisations in raising funds from individuals, companies and charitable trusts, both for ongoing activities and for capital projects. Existing supporters will be encouraged to contribute to the project, although securing new donors – including for the lead gift – is likely to be essential for the success of the campaign.

26.4.2 The first step in developing the fundraising campaign will be to appoint the Chairman of the Fundraising Appeal Board and the Campaign Director. Other members of the Appeal Board would also be appointed at an early stage. The shape of the campaign would be developed in conjunction with the further development of the project during Phase 2.

26.4.3 Approaches to potential individual donors would begin early on in Phase 2, through existing relationships and contacts of the partner organisations. These approaches would be progressed over a period of 12-18 months with a view to a lead donor (or donors) being secured by early 2017 i.e. before the end of Phase 2.

26.4.4 Once a lead donor has been secured, work would progress to draw in other major funders – individuals, companies and charitable trusts – as part of the ‘silent’ phase of the campaign. A more public facing campaign would most likely be launched at a later stage, with a view to securing the final elements of the target. The intention would be to ensure that the majority of private sector funding was secured prior to the commencement of Phase 5 of the project (Construction).

26.4.5 The campaign would need to take into account other major fundraising campaigns for cultural projects, although as noted in Ruth Jarratt’s report the general experience in London is that fundraising campaigns for strong projects can succeed even whilst other campaigns are running.

26.4.6 Particular care would be needed to coordinate fundraising with other campaigns for projects within the City of London, such as the Museum of London’s relocation to Smithfield. This is not considered to be problematic since the individuals likely to be approached as lead donors for the Centre for Music are likely to be very specifically interested in supporting the LSO or a musical project more generally.

26.5 PUBLIC SECTOR FUNDING

26.5.1 As with similar major public projects of this nature, a plural funding model is likely to be appropriate. A contribution to the capital costs from the public sector would unlock the private sector funding and assist in realising the significant cultural, social and economic benefits that have been described in this report.

26.5.2 Clearly it is for public sector stakeholders, including the commissioners of this study, to consider whether a contribution to this project is appropriate and, if so, the extent of such a contribution.
27. OPERATIONAL FINANCIAL MODEL

27.1 SUMMARY

27.1.1 The next phase of the Feasibility Study will look to build a detailed operational and management model for Cultural Hub activities taking advantage of potential synergies.

27.1.2 The Outline Business Case (OBC) financial projections have been based on what is being currently achieved in terms of income, space utilisation and operational cost. The next phase of the Feasibility Study will look at ways in which the three organisations can improve performance.

27.1.3 It will look to improve performance targets across all areas of activity, and most especially look at building income streams to reduce reliance on public funding. Initial targets of a 2% improvement in venue utilisation and 5% increase in income over and above the current model will be an aim of the exercise. If achievable, this could significantly reduce the annual revenue shortfall.

27.1.4 Staffing and other operational costs will also be reviewed but more detailed analysis needs to be undertaken to see if further efficiencies can be achieved.

27.2 DETAILED REVIEW OF THE POTENTIAL OPERATIONAL MODEL

27.2.1 The Terms of Reference for this study consider how a new state-of-the-art Centre for Music could be delivered in the City of London and accordingly, the financial case of the OBC is predicated on the new venue as part of the Cultural Hub. The operating model is therefore built on the basis of the obvious synergistic benefits of extending the current working framework.

27.2.2 In effect, therefore, the incremental costs of managing the new venue is part of the OBC model resulting in significantly reduced overall cost. As a consequence the net cost of £5.6m, estimated in the OBC, compares favourably with other similar venues in the country.

27.2.3 The next phase of this project will examine in greater detail the potential, for income and expenditure, of using the venues, skills, brand and overall capabilities of the three organisations. Specifically:

- The design and accommodation of the new venue
- Optimal buildings and venue utilisation
- Further potential for income generation
- Staffing structure and operating model.

27.2.4 Capital costs are based on venue specifications, and the schedule of accommodation and the quality expected of a world-class landmark building. The project’s next phase will investigate how the adjacencies, design and attributes of the venues and facilities could work in the most effective manner.

27.2.5 This detailed model will help to design a building that provides the best experience for audiences and visitors, and through effective design reduce operating costs and improve income. The review will investigate visitor flows and their integration with the buildings’ venues and the staffing to meet these operational needs.

27.2.6 The artistic, education and commercial programme of the three organisations will be delivered through a complex array of venues, facilities and spaces, to include:

- Four concert halls
- Five theatres
- Three galleries
- Three cinemas
- Dedicated education and learning spaces
- A Club Space
- A digital space
- Studios, rehearsal spaces, hospitality spaces
- Conference venues and auditoria
- Commercial Exhibition Hall
- Conservatory and banqueting spaces
- Five restaurants, bars, cafés
- Four retail outlets
- Three car parks.

27.3 THE OPERATING MODEL

27.3.1 The activities of the three organisations, catering for approximately three million visitors a year, will be complex. To maximise value an effective model will need to ensure good utilisation of facilities, matching demand and supply with the organisations’ ability to deliver while meeting audience and visitor expectation.

27.3.2 Focus during the next phase of the operating model will centre on:

- Venue utilisation potential beyond OBC targets for each venue category - target to increase utilisation by minimum 2%
- Value rate card for each venue
- Function, department and staff structure
- Budgets by activity.

27.3.3 The staffing model is likely to be split between an organisational specific structure delivering the specific needs of each organisation and a staffing model for the common platform of functions, largely supporting the venues and their activities.
27.4 INCOME GENERATION

27.4.1 The OBC has set income targets for activities and venues based on the Barbican and LSO’s experience in these areas. The review set out above will investigate improvements to make the conjoined business model more effective in reducing cost and improving income potential.

27.4.2 A key aspect of the next phase will look at the overall income potential of the organisations, particularly in relation to commercial potential. As previously stated, the Barbican has successfully built a professional, sales driven commercial function successfully growing its income streams. With the Centre for Music and a significant increase in potential, the next phase can examine how assets can be used to grow current income streams and build new activities delivering additional income.

27.4.3 Together with venue utilisation, the focus of the study would look to increase income with a possible target of 3% to 5% on current income projections of £12.5m. This is a rough estimate and the next phase will determine what income targets can reasonably be expected.

27.5 GOVERNANCE AND MANAGEMENT MODELS

27.5.1 The governance and management framework review, together with the operational model, will determine the allocation of budgets between the organisations.
28. OPERATIONAL GOVERNANCE MODEL

28.1 INTRODUCTION

28.1.1 The LSO's residency at the Barbican is contractually based, setting out an annual number of its performances in the hall, its grant from the City of London Corporation, rented office spaces and other services. The residency has provided the LSO with financial stability and infrastructure and is an important enabler in its success. In turn, the Barbican's artistic programme is augmented by a world-class orchestra. The relationship therefore is a symbiotic one, benefiting both organisations.

28.1.2 In recent years, with the Guildhall School of Music and Drama, this relationship has grown beyond its contractual base as the three organisations now work together in creating a unique Culture Hub in the City of London. The building of Milton Court and a grant from the Higher Education Funding Council for England (HEFCE) strategic fund helped to build the basis of a common platform of activities, extending the boundaries of what an orchestra, a conservatoire and an arts centre could achieve individually.

28.1.3 The Centre for Music, as this study sets out, could be the catalyst to deliver an extraordinary and transformative artistic and educational offer in the digital age. With world-class organisations, working in world-class facilities, the critical mass of activity can build a Cultural Hub with significant international impact. Inevitably the governance and management arrangements of the three organisations will lay the foundations of this partnership.

28.2 INTERNATIONAL OPERATING MODELS

28.2.1 As part of the Feasibility Study, Adrian Ellis Associates (AEA) undertook a governance benchmarking study, reviewing the operational relationship between venues and orchestras. Of the twelve international models from a long list, their report focuses on six case studies.

28.2.2 Of the six venues reviewed:

- There are two where the venue management and the orchestra are integrated within a single entity – Berliner Philharmoniker and Philharmonie, and Luxembourg's Philharmonic Orchestra (Lützeburger Philharmonisches Orchester) and the venue, the Philharmonie Luxembourg.
- In the other four examples reviewed – San Francisco, Los Angeles, New York and Amsterdam – the venue and the orchestra are independent entities.

28.2.3 The six therefore represent a wide variety of relevant circumstances. The brief synopsis below outlines how the key aspects of a working model have been addressed in these venues.

28.3 INTERNAL GOVERNANCE

28.3.1 The internal governance models of these organisations are varied.

28.3.2 New York Philharmonia, LA Philharmonia, San Francisco Symphony, the LA Music Center and Lincoln Center are charitable organisations registered and governed by self-regulating boards with fiduciary responsibility for the organisation. They co-opt their own members. There is player representation on the orchestra boards but in no cases is it a majority. The orchestras are not self-governed.

28.3.3 The Concertgebouw hall is a private foundation, the orchestra board is self-selected (11 members) and always includes three musicians (elected by the orchestra).

28.3.4 In the case of Berlin, the Philharmonie (hall) is managed by a public foundation, Stiftung Berliner Philharmoniker with overall responsibility for both the Berlin Philharmonic and the Philharmonie. The Board of Trustees of the Foundation itself has nine members and includes three elected members from the German Federal Parliament, the Mayor of Berlin, three members of the Orchestra, members of the Friends of the Orchestra and the Chair of the Orchestra Academy.

28.3.5 Luxembourg Orchestra is run as a department of the Philharmonie, and as such has the weakest constitutional position of the six case studies, so the two examples where the hall and orchestra are part of a single organisation represent very distinct cases.

28.4 PRIMACY

28.4.1 In all cases the orchestra has some sort of ‘primacy’ vis-à-vis the venue. Primacy has, broadly, three dimensions: priority in securing dates for performance or rehearsal; the ability to veto (or otherwise influence significantly) what else happens in the venue; and, third, favourable financial terms compared with other users.

28.4.2 Primacy is usually recorded in a document, variously called a lease, constituency agreement or licence, negotiated between the two parties.

28.4.3 Where the venue and orchestra are co-managed, the relationship is obviously not documented in the same way, and depends on managerial norms and board policy.

28.5 PRIORITY IN SECURING DATES

28.5.1 All the orchestras have this, and there are similar arrangements in all cases, in which the orchestra has a period of time during which it can hold dates. Orchestras plan between one and three years ahead usually, and their rehearsal needs are usually...
In all cases, too, the formal arrangements are supported by a series of informal and ongoing relationships between venue and orchestra, and intelligent expectation management.

28.6 PRIORITY IN PROGRAMMING

28.6.1 Here, in contrast, there is a wide variety in the spirit and letter of arrangements. For example, in the case of LA Philharmonia, it has the right to programme classical, jazz and opera during a nine-month period in Disney Hall – i.e. programme the orchestra and present other entities. At the other end of the spectrum, in Luxembourg, notwithstanding co-management, the orchestra has to compete in the same spectrum, in Luxembourg, notwithstanding co-management, the orchestra has the right to programme classical, jazz and opera during a nine-month period in Disney Hall – i.e. programme the orchestra and present other entities. At the other end of the spectrum, in Luxembourg, notwithstanding co-management, the orchestra has to compete in the same

28.7 PRIORITY IN FINANCIAL ARRANGEMENTS

28.7.1 There is little consistency in the financial arrangements given that they reflect varied ownership and governance models – from shared losses, grant giving, heavily discounted rates on hall use to market rates.

28.7.2 Similarly, with venue management costs, there is a range of practice in terms of who is responsible for stagehands, ushers and box office, but in all cases there are contra-charging arrangements.

28.8 IN SUMMARY

28.8.1 The governance and management models internationally vary significantly and are as likely as not to be a consequence of historical happenstance where over decades models of operation have developed to reflect changing local circumstances. As the AEA report notes, some of these work more successfully than others. See Appendix 10B for a detailed version of the report.

28.9 THE CENTRE FOR MUSIC AND CULTURAL HUB

28.9.1 For the three organisations and their primary stakeholders governance and contractual relationships already exist which, as clearly observable from the AEA report, are not dissimilar to other comparative organisations in that they are reflective of local circumstances. The essential feature is the City of London Corporation.

28.9.2 Delivering a Centre for Music and the proposed changes to the Barbican Hall will be a step change for all three organisations and provides an opportunity to thoughtfully consider a future model that is most fit for purpose.

28.9.3 There are a number of factors that will need to be taken into account in considering a future governance model. Firstly, its implications for the three organisations, particularly their independence and ability to deliver core objectives. Secondly, the relationship with the City of London Corporation, owner of the Barbican Centre and the Guildhall School. Thirdly, long term effectiveness and sustainability and the ability to deliver on the collective vision. Fourthly, the position of the Arts Council in that it is likely to have a more significant role in the Cultural Hub than its current position. And finally, any reasonable requirements set out by a major private funder or funders.

28.9.4 In broad terms, there are three possible scenarios with perhaps a number of variants that could be considered.

- The current working methodologies and practices could be extended to the Centre for Music.
- The Centre for Music could be managed by the London Symphony Orchestra.
- A new working model enabling the three organisations to individually and collectively deliver their strategic objectives and realise the Vision espoused in this Feasibility Study.

28.9.5 The next phase of the Study, with all the participants and stakeholders, will explore the artistic, operational, legal and financial aspects of establishing such a model.

28.9.6 In addition, in the longer term an essential prerequisite for any solution will be the organisations’ ability to build their income base and deliver an increasingly plural funding model. Over the longer term, the level of financial support from the public sector demands such an approach.

28.9.7 A rigorous examination of such a model should start with a completely open and objective review, albeit with the clear understanding that it protects the independence of the LSO and the centrality of the City of London Corporation.

28.9.8 For the purposes of conjecture at this stage, an example of such a model could include an entity, with each affected organisation as a stakeholder, that could manage the operations of the building, maximise income opportunities through a commercial subsidiary all within a cultural organisation.

28.10 THE NEXT STAGE

28.10.1 During the next phase of the study, a working party with support from legal and taxation experts will examine the potential framework for a suitable governance model.
29. STAKEHOLDER CONSULTATION

29.1 INTRODUCTION

29.1.1 The Terms of Reference for the Feasibility Study include the requirements to consider the role of a Centre for Music within the wider musical sector nationally, in London and within the context of the City’s Cultural Hub.

29.1.2 To inform this element of work, two consultations have taken place during the course of the Feasibility Study. Details of these exercises, their findings and an explanation of how they have informed the work of the Feasibility Study are set out below.

29.2 INITIAL STAKEHOLDER CONSULTATION

29.2.1 The specialist arts, heritage and cultural sector management consultancy, Bonnar Keenlyside, were commissioned by Arts Council England (ACE) to undertake an independent sector consultation exercise with a wide range of international, national and regional stakeholders in order that findings from this consultation could inform subsequent stages of the Feasibility Study.

29.2.2 The purpose of this initial phase of sector consultation was to establish who the stakeholders are and the nature of their interest; to capture the broadest range of views about the proposed Centre for Music at this point; and to find out how stakeholders might wish to be consulted through later stages of the project as it develops.

29.2.3 Some 65 consultations were completed between 28 April and 26 May 2015. Individual consultations included the international associates of the Barbican Centre; international venues and other London venues; venue programmers; the BBC; London and regionally based orchestras; agents who manage the careers of major conductors and who also tour international orchestras around the world; and a range of youth music organisations and youth education providers.

29.2.4 A report setting out the results of these consultations was submitted to the Steering Group in June 2015 (copy at Appendix 29A). Key findings from the consultation include:

- The general view of consultees was that London has fallen behind in terms of first class concert venue provision and, although it still holds pole position, if nothing changes it will fall further behind other European and Asian cities, threatening its position for the future.

- A new concert hall with a good acoustic could be electrifying for audiences and of great benefit to London and the rest of the UK, but such a venue should be open to ensembles from across the country.

- The single biggest issue emerging was the assertion that the new venue would be a net consumer of public subsidy, especially in the area of revenue funding, with the clear danger that this could adversely impact the sector.

- Opportunities for regional orchestras and digitally shared work were welcomed on the one hand but on the other were still seen to be London-centric, potentially damaging regional partnerships.

- A view that the proposed location could perpetuate perceptions of elitism and imbalance tilted towards London.

- Strong support for the creation of a cultural hub across the Square Mile.

- The Feasibility Study should address the impact on London’s music ecology.

- The communications strategy of the partners is at present sparse and delivering an inconsistent message.
29.3 SUBSEQUENT CONSULTATION

29.3.1 In order to give guidance and to follow up in more detail the responses given to Bonnar Keenlyside, Peter Phillips was appointed as Independent Adviser to the Feasibility Study in June 2015. Mr Phillips is Chairman of Arts Council England Midlands, an experienced Non-Executive Director in the music sector and author of the 2012 report “Philanthropy Beyond London”. His brief was to:

• Provide guidance to the Steering Group and Review Group about specific aspects of the Feasibility Study’s work, especially in relation to the impact of a new Centre for Music on the arts sector generally and regional organisations in particular.
• Bring an understanding of the national arts and music sector, and support the Steering Group in its consideration of stakeholder issues and their impact in terms of the Feasibility Study.
• Consider and comment on how the proposals for a Centre for Music are responding to the ideas, opportunities and concerns identified through the external consultation.

29.3.2 Peter Phillips undertook focused conversations with over thirty of the people originally consulted by Bonnar Keenlyside, as well as several others, with a relevant balance between the regions and London. He maintained regular contact with the Project Group so that emerging findings from his work could be factored into the work of the Feasibility Study. His final report was submitted to the Project Group in August 2015 (copy at Appendix 29B).

29.3.3 The report found that the concept of a new Centre for Music and the related benefits for London were understood and had a fair level of support, and there was a view that if appropriate funding were available and the project went ahead the Centre should aim for excellence on all fronts.

29.3.4 There were also important issues and concerns, however, the main one being about how the Centre for Music would be funded, both as to its construction and its ongoing running costs. Many considered that if it were partly funded from the public purse it might starve other worthwhile cultural projects of funding. There was also some concern that such a landmark project would be more attractive to private/philanthropic investment to the detriment of fundraising efforts for other vital projects.

29.3.5 Concerns were also expressed about early communication which seemed to suggest that the Centre for Music would be a national one with related national programmes (educational, digital, youth music), something which was strongly questioned by orchestras and venues with highly developed programmes of their own in such areas.

29.3.6 Views were expressed that the Centre for Music will need to convince that it will be doing something different and additional to what is currently achieved at the Barbican Centre. Reference was made to the new facility being ‘a game changer’ and a place that people will want to visit and have access to throughout the day and evening, and with a planned focus on building a wider audience, particularly with regard to age, diversity, and disability.

29.3.7 Questions were also asked about why the Centre for Music should be built in the City of London rather than elsewhere in the capital.

29.3.8 There was concern from some other venues in London about the consequent impact on their audiences that a new Centre for Music might have.

29.4 RESPONSE

29.4.1 Findings from the Bonnar Keenlyside consultation and from Peter Phillips’s work were fed into the project as they emerged and have been taken into consideration in developing proposals for the Centre for Music. The points raised have been addressed in detail elsewhere in this report but a summary is included here of the key themes and concerns.

LOCATION

29.4.2 Section 14 of this report outlines in detail the rationale for locating the Centre for Music in London, specifically the City of London. London is a world-leading city from a wide range of perspectives and has a significant international presence and recognition as a leading hub for music. If London is to remain pre-eminent in this field there is a need for its musical infrastructure to match or exceed that found overseas. Furthermore the population of London is projected to grow by 12% between 2015 and 2025 and there is a need to supply sufficient activity to meet the demand.

29.4.3 Locating the Centre for Music in a very central London location such as the City provides the best transport links to all areas of London and the South East. It also enables the strong synergies achieved between the Barbican Centre, LSO and Guildhall School to be maximised and reduces operating costs by utilising existing operational infrastructure. Locating the Centre for Music outside of the City would only be viable for the LSO if the annual revenue funding it currently receives from the City Corporation could be retained or replaced. A further factor in favour of locating the Centre for Music in the City is the willingness of the City Corporation to consider in principle making a capital contribution.
29.4.4 The earlier sections of this report make clear the ambition that the Centre for Music will give London the facility it needs and inspire a new generation of music-lovers by offering them the very best and most exciting music-making, available to all. It will create world-class performance and digital opportunities marking a step change for the organisations involved, providing immense benefit to the City and advancing London’s reputation as a pre-eminent cultural centre.

29.4.5 It is intended that through partnership working the Centre for Music will act as a base for inspiring music-making, digital development, participation, discovery and learning. It will also offer a London base for visiting orchestras and national youth music organisations. More widely, the Centre for Music will be an inspirational, forward-looking facility. It will transform the traditional model of the concert hall, creating new types of spaces and experiences of music, making it more immediate, more accessible, more intimate and more immersive.

29.4.6 Section 16 sets out the audience demand analysis for the Centre for Music. This assumes that the audience for classical music will grow by between 15% and 25% between 2015 and 2025, based on projections in population growth, coupled with improved transport links and an ambitious outreach programme to bring in new audiences. It concludes that this increased demand will be achieved without adverse impact on the business models of London’s other performance venues. This is clearly something that will require further exploration and discussion during the next phase of the project.

29.4.7 As set out in Section 27, a plural funding model is likely to be appropriate for a major public project of this nature. The total investment involved in the Centre for Music will allow the realisation of the significant cultural, social and economic benefits that are described in this report.
30. CONCLUSIONS AND NEXT STEPS

30.1 This report has:

- set out the case for a new Centre for Music;
- presented a formal Outline Business Case for a project to build a new Centre for Music; and
- assessed the feasibility of delivering such a project.

30.2 The report has demonstrated that the Centre for Music will provide an inspiring model of performance excellence and audience engagement, demonstrating best practice and delivering value for money.

30.3 The Centre for Music will make a critical contribution to London’s status as a world-class destination for music, supporting the UK’s position as a world-leading centre for the cultural and creative industries.

30.4 The Centre for Music will also deliver important benefits to a wide range of stakeholders, including additional tourism spillovers for the UK, wellbeing benefits for audiences arising from engaging with music and consuming music digitally, and longer term benefits for individuals and society at large from the education and engagement activities that would take place. These benefits will deliver a net present value (NPV) of over £890m to the UK economy.

30.5 This report has shown that it is feasible to build a Centre for Music that meets the strategic objectives for the project, and a suitable site in the City of London has been identified that the City Corporation is willing in principle to consider making available at no cost.

30.6 This report is the first substantive step in a long process of design and implementation and further detailed work will be required. It is recommended that the project should proceed to Phase 2, which it is estimated will take approximately 18 months from the start.

30.7 Phase 2 will complete the Full Business Case for the project, agree the terms for the acquisition and development of the preferred site, develop the concept design to RIBA Stage 2 and begin the private sector fundraising with a view to securing a lead funder. In addition, this phase will develop in more detail the full potential of the creative offer and its likely impact, within a digital context.

30.8 As part of this phase, the productive dialogue that has begun with stakeholders will continue.

30.9 It is recommended that the project move to Phase 2 immediately, in order to ensure that the preferred site can be secured and to maintain the momentum that has been built up.
## 31. LIST OF APPENDICES

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32. REFERENCES

1. Note that this compares to the proposed 31,038 m² (Net Internal Area) Centre for Music under shortlisted Option 4.


5. The research notes that: ‘arts audience variables are for watching a film, attending an exhibition (including video or electronic art, or street art), attending plays or dramas, attending a music performance event (including opera), and attending a dance event (including ballet, contemporary dance, and African dance).’ (Fujiwara et al, 2014, p21).

6. The research puts it clearly as follows: ‘these are values in addition to any price paid to participate such as entrance fees.’ (Fujiwara et al, 2014, p30).

7. Note that these values have been uprated to 2015/16 prices.

8. Source: DfT Webtag databook

9. Public refers to events for the public in which visitors can listen, consume, view and interact; participation events involve an element of joining in and contributing; platform events involve the creation of music, rehearsing and performing; and professional development events involve progression and training.

10. High intensity activities engage the participants over a sustained period of time – over several sessions, usually one to one or in small groups; medium intensity activities engage participants over a number of hours, sometimes over more than one session, with a level of direct engagement between the leader/teacher/artist and each member participant; low intensity activity will still be participatory but may be one off, in large groups and not all participants will have a direct engagement with the leader/teacher/artist; non participatory events describe sessions where the participants’ only engagement is as an audience member/observer.

11. In long term impact activity, participants’ engagement will have an effect which is expected to resonate across their lives and change behaviour on a long term basis – e.g. they will learn or develop new skills or progress to a level of achievement they would not otherwise have achieved. Medium term impact activity will have a substantial impact on most participants, but due to the nature of the activity it is likely different people will take different things from it. Finally, immediate impact activity will inspire and enthuse and is likely to lead participants to seek further opportunities to engage, but the activity alone is less likely to develop skills over a long term.


13. Taken as an average of adults with and without degrees


18. Armbricht, J. The value of cultural institutions, Measurement and description. This found that non-use value of the Vara Concert Hall for the region’s residents was 203 SEK ~ €19, and the non-use value of the Royal Theatre for Danish residents was £9.50.


21. Note that it has been assumed that there is zero crowding out of visits to London. This effect can sometimes be observed for one-off major sporting or cultural events, where other more regular visitors to the host area are put off from visiting due to negative effects caused by the event, such as congestion. In such cases, the additional visits and expenditure generated by the event serve to “crowd out” visits and expenditure that would otherwise have occurred. Given the number of overseas visits in the context of London’s visitor economy and their ongoing (rather than one-off) nature, it has been assumed that the overseas audiences for the Centre for Music would not generate such crowding out effects.


23. Westwood, 2011


28. E.g. Gramophone magazine ranks the LSO as the world’s fourth best orchestra. http://www.gramophone.co.uk/editorial/the-world%E2%80%99s-greatest-orchestras


30. E.g. No London concert halls were ranked in the top 20 in a recent ranking by the Guardian Newspaper.


33. This study highlights some important caveats. Firstly, the study is analysing the aspirations of young people to go onto further education rather than their actual behaviour. Secondly, further education does not necessarily mean undertaking a university degree and other programmes will have different wage outcomes. Finally, participating in musical activities may also be related to other factors which promote and enable academic attainment such as attending a high achieving school, having a supportive home environment.


44. An average graduate working lifetime of 43 years has been assumed.

45. For example, the Office for Budget Responsibility (OBR) projects that per capita health spending will increase in real terms by 2.2% per annum (OBR, Fiscal Sustainability Report, July 2014) from 2019/20 onwards.

46. Here this refers to jazz, world, folk, electronica and classical crossover.


48. Note: Construction cost only.

49. Calculated as (100% – 35%) X 51%.

50. Note that this BCR is based on including all revenue costs of running the Barbican and LSO at present, rather than just the recurring public sector grant, which is much smaller. Calculating the annual BCR on the basis of the annual public sector grant only would yield a much higher BCR for the do nothing scenario.

51. James Ainscough, Chief Operating Officer, Royal Albert Hall. Mark Beddy, Partner Deloitte, former Finance Director Glyndebourne. Lisa Burger, Executive Director, Royal National Theatre. Caroline Al-Beyerty, Financial Services Director, City Corporation of London.

33. ACKNOWLEDGMENTS

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PART IV
APPENDICES

CENTRE FOR MUSIC
OUTLINE BUSINESS CASE AND FEASIBILITY STUDY

PART IV
APPENDICES