Appendix A

Strategic Outline Case

Kirklees Cultural Heart Strategic Outline Case









₩ Turner & Townsend

Queensberry



October 2021



Basis of information

It is not possible to guarantee the fulfilment of any estimates or forecasts contained within this report, although they have been conscientiously prepared on the basis of our research and information made available to us at the time of the study.

Neither IPW..., nor the authors, will be held liable to any party for any direct or indirect losses, financial or otherwise, associated with any contents of this report. We have relied in a number of areas on information provided by the client (and other organisations), and have not undertaken additional independent verification of this data in all cases.

Confidentiality

This report contains confidential information and is not to be made public without the prior consent of IPW..., which may be given subject to the removal of any sensitive or confidential information.

COVID-19

It should be noted that this Report was prepared during the COVID-19 outbreak and ensuing change of circumstances. At the time of writing (October 2021) the economic consequences of the pandemic, both short and long-term, are still subject to speculation. Therefore, information provided and assumptions made, could date very quickly if Government Guidance changes or the impact on the entertainment and business events industry is more severe or lengthy than anticipated. Therefore, readers are advised to check the validity of any/all information provided, at the point of which any decisions are made/actions taken.



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Appendices

Appendix A: Strategic Review

The remaining Appendices are not attached for reasons given in the Cabinet report.

Appendix B: List of consultees

Appendix C: Risk Register

Appendix D: Skills and Capacity Assessment

Appendix E: Cost Report

Appendix F: Programme Execution Plan

Appendix G: Outline Delivery Strategy

Appendix H: BIM Strategy

Appendix I: Project Programme



ES. Executive Summary

Introduction

- E.S.1 IPW... was appointed by Turner & Townsend on behalf of Kirklees Council (the Council) to prepare the Business Case for the Kirklees Cultural Heart project.
- E.S.2 The Strategic Outline Case (SOC) is the first of three stages of business case development, that includes an Outline Business Case (OBC) and a Full Business Case (FBC) respectively. The purpose of an SOC is to confirm the strategic context for the project, make the case for change and determine a Preferred Way Forward. This SOC has been prepared using the Treasury Five Case Model methodology.

The Strategic Case

- E.S.3 The Cultural Heart programme is a key Council led regeneration scheme in Huddersfield Town Centre. This is part of a wider blueprint for Huddersfield Town Centre to create:
 - a vibrant culture, art, leisure and nightlife offer
 - thriving businesses
 - a great place to live
 - improved access and enhanced public spaces.

Strategic context

- E.S.4 This project strongly supports the delivery of some of the Council's key strategic objectives. The Cultural Heart is one of six key regeneration areas and is seen as the catalyst for change in the town centre. It brings together Kirklees Council's current cultural services into a holistic and seamless experience. The project has the potential to enhance the existing leisure and cultural offer available and attract more residents and visitors to its town centre.
- E.S.5 The role of town centres has changed nationally and these changes have had an impact on Huddersfield Town Centre. The traditional shopping streets of Huddersfield have struggled in recent years with the challenge of internet shopping and the changing role of town centres resulting in higher vacancies and a higher proliferation of "discount" retailers. Residents and visitors are seeking experiences through leisure and culture and this project will support the provision of those amenities.
- E.S.6 It also provides a major opportunity to increase its foothold on the cultural, entertainment and business events market by providing a platform to support the growth in events and putting Kirklees on the map as a destination for those events.



The Case for Change

The current situation

- E.S.7 The Cultural Heart site area is approximately 7.8 acres and currently consists of the Queensgate Market (Grade II listed), the library and art gallery (Grade II listed), the Piazza Shopping Centre and the site of the former multi storey car park. In addition to the buildings there is an extensive network of tunnels servicing the Piazza Shopping Centre and the market.
- E.S.8 The Council owns all of the key facilities and currently operates all of the facilities directly, with the exception of the Piazza Shopping Centre (which is managed by agents). The facilities are not maximising their potential reach, in particular due to the short opening hours for some. The net revenue cost in relation to all of the facilities combined is c£1.5m per annum.

Project objectives

E.S.9 The Cultural Heart project objectives are as follows:

- Re-develop the Queensgate area to compliment a modern-day town centre that will be busy, inclusive, family-friendly and stay open longer creating a tangible sense of community
- Create a vibrant and dynamic destination where visitors and residents of all communities and ages can gather and enjoy leisure, arts and music throughout the day, evening and into the night
- Be full of diverse and rich experiences that, not only bring people together, but are familiar, celebratory, and innovative and places Huddersfield's cultural heritage at the centre of the programme
- Be accessible, providing open opportunities to participate, learn new skills, explore and discover.
- Increase town centre footfall, supporting local businesses and venues, employees and creating new commercial opportunities making the proposition attractive to stakeholders.
- Adapt and respond positively from the lessons learned and the impact of the pandemic, particularly the changing needs and aspirations of the town centre's catchment population
- Have a masterplan that provides flexible spaces, high quality design and a variety of architecture bringing out the unique characteristics of the setting of the Cultural Heart and the listed buildings within it.
- Enhance the use of the retained buildings and structures as destinations, increasing public access, while enabling them to perform an increased number of municipal and commercial functions more effectively
- Encompasses the Councils 2038 Carbon Neutral Vision and policies encouraging sustainability and minimising the carbon footprint of the development
- Provide for the creation of high-quality digital and physical infrastructure



- Have a design where activities in the buildings spill out into a high-quality urban park that is welcoming, safe and with facilities for outside events of scale
- Maintain and enhance connectivity to the rest of the town centre and its neighbourhoods, including essential links to the University
- Create social value benefits
- Produce a master plan and completed assets that are financially viable and can be managed within affordable operational budgets.
- Be deliverable within agreed timescales and budget

Business needs and market assessment

E.S.10 A business needs and market assessment was undertaken for each of the major use types that may be included in the project. The key findings and the resultant facilities requirements are set out in Table ES.1.

Facility	Key findings of market assessment	Facilities required
/enue	 Huddersfield has a large catchment within a 30-minute (1,037,591) and 45-minute (3,571,224) drivetime. However, there is significant overlap in catchment with Leeds and Sheffield, within a 30-minutes drivetime, and a small overlap with the Manchester catchment. This leaves Huddersfield with a small unique catchment to attract audiences The level of engagement and propensity to consume arts and cultural activities is in line with the national average Number of small-scale entertainment facilities in the locale. Huddersfield Town Hall, The Parish and the Lawrence Batley Theatre, due to their adjacency to the Cultural Heart, are venues that are seen as key supporting elements to any new venue and not regarded as competition. The core cities of Leeds, Sheffield and Manchester both have a large indoor arena capable of attracting national and international touring product, and a portfolio of other entertainment facilities up to 3,500 	 Multi-purpose venue capable of accommodating both entertainment and business events Scale of venue to be finalised at the next stage - options of between 800 seated/1,200 seated and standing and 2,500 seated and standing capacity being considered, reflecting market feedback and ambition programme for the Cultural Hear Considering opportunity for flexible space to share with some of the other cultural uses e.g. gallery and exhibition space Consideration of joint provision and management with Food Hall Opportunity to develop esports facilities

Table ES.1 Summary of market needs and facilities required



Facility	Key findings of market assessment	Facilities required
	 capacity, covering all key genres of entertainment. New venue opening in Bradford (4,000 capacity) will also provide strong competition for any venue in Huddersfield Based on the location, accessibility, presence of the University and ambition for the Cultural Heart scheme, a new venue would be able to attract a range of events (entertainment & business) with the right mix of facilities 	
Library	 High number of annual visits – c.360,000 p.a. – suggesting hyper- local audience Large number of IT uses (almost 60,000) – suggesting frequent visits and solid user base (c.14,000 members) High student use of research rooms and study area Potential for new facility to increase usage by 10-15% i.e. additional 36,000-54,000 p.a. Demographic in often hard-to- reach groups; very different user profile to museum and gallery Creates 'safe' environment – high access value for visitors – good 'front-door' facility 	 New centrally located library Multi-purpose flexible space for education, storytelling/performance, and book lending. Children's library/reading area Research space, including digital/computer terminal access Exhibition area Cafe (preferred; could be shared) Minimum: Storage - primarily books, also display cases, staging etc. Optimum: storage for Home delivery operation - this also requires vehicle access to a distribution point Optimum: offices for local team Potential for facility combining/sharing Shared storage solution preferred on-site.
Museum	 Currently, the majority of museum visits come from within a 20 minute drive-time, therefore, a very local audience 26,000 visits p.a. to Tolson accounts for just 18% of all museum visits in Kirklees A centrally-located museum should have greater attractiveness – increasing to 30 minute drivetime alone could generate c.57,000 visits p.a. 	 New centrally located facility Shared storage solution preferred on-site Minimum: Three exhibition areas that allow permanent, semi- permanent and touring/temporary exhibitions- areas should allow for display of large-scale items, such as weaving looms and vehicles Optimum: an additional 2-3 smaller flexible exhibition areas, potentially to be co-programmed with library and/or gallery or even the venue



Facility	Key findings of market assessment	Facilities required
	 Large socio-economic gap in visitors (24% between upper and lower) and ethnic diversity (5% between white and BAME) Collection's strength primarily in paintings; artefacts of significance are often large/industrial Solution for Tolson could create complementary heritage offer 	 Minimum: on-site storage for smaller number of artefacts, including area for set-up and take- down of exhibitions; also exhibition cases Teaching and education spaces (can be shared) Technical workshop: for repair, framing, etc Cafe (preferred) Optimum: Offices Informal pop-up performance
Gallery	 Currently, the majority of gallery visits come from within a 20 minute drive-time, therefore, a very local audience Current Gallery attracts 15,000 visits p.a. – a modest amount for a central location, reflecting a) subsuming of profile within library building, and b) limited space for large touring exhibitions A new facility would have greater attractiveness – increasing to 30 minute drivetime alone could generate c.32,000 visits p.a. Painting's collection currently under-exploited (value of collection is £50m) - needs permanent display area and secure storage nearby. Galleries can be stand-alone exhibition facility servicing the needs of museum, library and conference markets, or integrated within each Visitor demographic/challenges similar to museums 	 Flexible exhibition spaces to accommodate a) Items from permanent collection, b) loaned items, c) touring exhibition/s, d) community/University exhibitions - these spaces can be configured in different size combinations depending on nature of exhibitions at any one time Optimum: sufficiently large exhibition space to accommodate large scale works on loan Storage: secure and environmentally controlled area that can accommodate entire civic collection; display cases; holding area for exhibition take-down and set-up Technical workshop: repair, framing, etc. Pop-up performance area Cafe (preferred) Optimum: offices Optimum: screen room Teaching/education spaces (can be shared) Shared storage solution preferred on-site
Food Hall	• A well-built food hall can be a key feature of a real estate project. With an exciting selection of food from around the world, a good food hall has a feeling of authenticity that pulls in daytime and evening diners.	 A footprint size of between 800 to 1,500 sqm (net) Assumed gross 2,000sqm A plant zone to serve the area with air changes and incoming services and a floor slab clear of obstruction and ready for finishes to be applied



Facility	Key findings of market assessment	Facilities required
	 The food hall can provide an interface with the other cultural uses which in turn increase the footfall to the food hall itself. Food halls showcase local identity, and also serve nearby office and residential communities and promote local industries and small businesses. Food Halls have an offer that suits the convenience lifestyle and has the degree of flexibility needed for today's consumer. Customers like that they don't need to pre-book or pay a deposit; the ability for different members of their party to choose their own dishes, not bound by what the others want; and they like the "artisan" food, cooked in front of them from real ingredients. 	 A connection to external areas to provide outside seating and dining space Opportunity to provide F&B provision for the other cultural uses Can provide the 'glue' to link other uses in the Cultural Heart Potential to link management with the Venue
Car Park	 The Census data indicates that over a third of households in Huddersfield do not have access to a car. This is greater than the proportion for Kirklees (26%) as a whole. In Huddersfield town centre, the total number of car parking spaces for public use (excluding dedicated disabled user parking) is just under 5,500. The Council owns and operates 51% of these spaces, and the private sector 49%. Off-street car parks provide 85% of the spaces, and on-street 15% in Huddersfield. In Huddersfield, the average weekday peak occupancy was between 12:00 and 13:00 at 70%. The average length of stay across Huddersfield was just under three hours. The university currently operates 686 car parking spaces for staff and visitor use, across 16 sites around campus. The majority of spaces are for staff use and only those with 	 500 space MSCP Electric Vehicle charging points to be provided Confirmed MSCP needs to be at the south of the site Potential for other uses to be integrated into the building block including library and gallery overspill from the adjoining Market Hall Potential for sustainable design with alternative legacy use Potential to utilise other parking locations near town centre (University, Sainsburys, Stadium) for larger events



Facility	Key findings of market assessment	Facilities required
	permits (priced at £740 per annum)	
	are allowed to park on campus,	
	with entry restricted by barriers.	
	There is a waiting list of	
	approximately 200 for staff	
	permits.	
Urban Park	 Providing an urban park gives an 	Outdoor space to support the
orbailt ark	opportunity to not only enhance	core facilities, enhanced public
	the public realm and provide a	realm (subject to wider site
	quality space but to also create	layout/ opportunities)
	connections and linkages to other	Potential for permanent outdoor
	parts of the town.	performance area and structures
	 Currently, the ring road causes a 	[study currently being undertaken
	disconnect between the town	by the Council and will be further
	centre and the University of	explored at OBC]
	Huddersfield, exacerbated by the	
	service tunnels and blanket wall	
	structure of the Piazza. With the	
	development of an urban park	
	there is an opportunity to draw the	
	university into the town centre as	
	well as being an improved space	
	for the public and visitors to	
	engage with.	
	Opportunity to incorporate an	
	outdoor event space as part of the	
	urban park	
	• The overall ambition for the urban	
	park is to create enhanced public	
	realm and green spaces within a	
	flexible, multi-functional space that	
	complements the existing and new	
	cultural uses and brings people into the new cultural heart.	
	• The Council has commissioned a	
	separate outdoor venue feasibility	
	study. TG Events have been	
	appointed to review all outdoor	
	spaces across Kirklees to	
	understand their scope for outdoor	
	events. The study will also consider	
	event site plans for the sites most	
	suitable for outdoor events, with	
	the idea of increasing events	
	delivery and commercialising them.	
	The outcomes of that study will be	
	incorporated in to the OBC.	



The scope of the project

E.S.11 The scope of the overall scheme is to redevelop the 7.8 acre (approx.) site in Huddersfield Town Centre to provide the following core facilities:

- A new event space/entertainment venue of between 1,200 and 2,500 capacity
- Museum
- Art Gallery
- New library (and potentially archive front of house tbc.)
- A Food Hall
- Urban park
- New multi-storey car park
- Improved linkage to the University
- Demolition of the Piazza
- Potential additional commercial uses including hotel, restaurants, bars and in the medium term offices and residential.

Project benefits, risks, constraints and dependencies

E.S.12 The Case for Change identified the key benefits of the project as follows.

Description
1. Increased number of visitors to Huddersfield
2. Increased visitor stay and spend in Huddersfield
3. Increased level of usage of cultural facilities by residents
4. Higher national and regional profile for the town
5. Additional economic Gross Value Added (GVA) to Kirklees
6. Generate new FT and PT jobs
7. Catalyst for further private sector investment in town
centre (in retail, leisure and accommodation sectors)
8. To support the delivery of the Huddersfield Blueprint
9. Greatly enhanced community facilities
10. Protecting key cultural assets and cultural benefit
11. Enhanced green amenity in the town centre





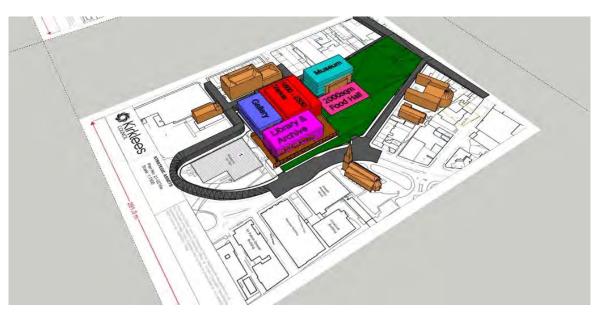
E.S.14 A full risk register for the project has been developed, and a risk management process put in place.

The Economic Case

- E.S.15 A total of 15 long-list options were developed and assessed. This included 13 project options, each comprised of the core facilities required at varying scales (e.g. small, medium and larger scale venue) and in different grouped combinations (in terms of uses grouped in areas of the site) and on different parts of the site. A Business As Usual and Do Minimum Option was also scoped out.
- E.S.16 The long-list of options was assessed against 18 key criteria, using a RAG (Red, Amber, Green) methodology, during facilitated workshops with the SDP and the Council. As set out above, the site constraints played a significant role in reducing the number of deliverable options. The assessment resulted in the identification of a Preferred Way Forward (with two venue variants) and two other project option alternatives.
- E.S.17 The Preferred Way Forward is Option 10b, as shown in Figure ES.1. This provides for the Gallery and the Library to be located into the refurbished Market Hall. The Gallery has the potential to exhibit national quality exhibits in a high quality built environment as well as take national touring exhibits. This will attract visitors from beyond the town, from the region and nationally. The Library is the largest footfall driver and as such the greatest number of local residents will have the best environment to use the library services. The Venue will be new build, as it is in all options, and we will continue to develop the final preferred scale of the venue at the next stage. It will be multi use for entertainments, conferencing, exhibitions and events. It will likely dovetail its activities with the other gallery and exhibition spaces proposed for the library, museum and the gallery. A majority of the museum at Tolson will move into the town centre into the refurbished library building, potentially taking advantage of the service tunnels/undercroft space for an exciting exhibit space. The Food Hall will be new build and provide the 'glue' to bring together all of the other features and support the F&B requirements in each of the individual spaces. It will open out into the urban park which is maximised in this option. The park will encourage the permeability of the scheme providing the easy link with the university and opening out the Laurance Batley Theatre and the Town Hall so both venues can be properly integrated into the Cultural Heart scheme.
- E.S.18 Option 10b as the Preferred Way Forward maximises the assets that are available, in particular the heritage buildings, a strong town centre profile and urban park, creates a platform for improved services, whilst being deliverable and achievable in the project timetables. It has the strongest sustainability and financial credentials and in addition provides additional land for potential future development at the north of the site.







	Criteria																
Deliverability				So	cial Imp	act	Cultural Impact Economic Impac			npact	Strategic Impact						
Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13	Criteria 14	Criteria 15	Criteria 16	Criteria 17	Criteria 18
	+		++	+	+		+			+				+			++

- E.S.19 Therefore, a total of four short-listed options will be considered at the OBC stage, namely:
 - Business as Usual (BAU)
 - Do Minimum (minimum required to deliver on project objectives likely to be a combination of refurbishment and repositioning of existing facilities/buildings)
 - Preferred Way Forward (Option 10b) with
 - 1,200 total capacity venue with 800 seated
 - Up to 2,500 total capacity venue.

Commercial Case

- E.S.20 The commercial case sets out the working assumptions relating to the procurement and contracting of the key services required to deliver the Preferred Way Forward. These include:
 - The Council appointment of a Strategic Development Partner (Turner & Townsend) to manage the programme on its behalf
 - The professional team procurement via the SBS Framework using a NEC4 Professional Services Contract, anticipated appointment in October 2021



- The construction procurement approach is being developed through a series of workshops between the SDP, Kirklees Council and Addleshaw Goddard. A key factor is that there are a limited number of contractors with the relevant skills and experience to deliver a programme of this complexity and scale. The current working assumptions for developing the procurement strategy include: a 2-stage procurement process, either through a framework or restricted process concluding in a single contractor on the programme site at any one time, with the option to have separate enabling and construction stages. The form of contract is to be agreed, however the most likely procurement route is a Design and Build contract form, subject to definition of design detail around the listed building elements of the programme.
- It is likely that there will be a mix of operational/management approaches across the site, including direct Council operation (e.g. Library, Gallery and Museum) and third party operators or tenants (e.g. Venue and Food Hall). The form of contract for the external operators will depend upon the market appetite for each facility, and the procurement process will need to take this into consideration

Financial Case

- E.S.21 The estimated capital cost of the Preferred Way Forward is £196m including fees and contingency but excluding build cost inflation. This is only just below the Council's indicative budget of £200m. Adding inflation to the first quarter of 2024 takes the overall cost to £210m, c£10m above the historic budget. This scheme includes the construction cost of the revenue generating replacement car park. As the scheme develops at OBC stage further analysis of the costs will be undertaken to account for exploring shared space propositions and best fit into the existing refurbished buildings and a more defined demolition and construction strategy.
- E.S.22 The anticipated operational impact of the Preferred Way Forward on the Councils current revenue position for the current facilities is expected to be limited only to the additional costs of operational changes. The new venue is expected to have no operational financial impact on the Council and the new Food Hall would provide an additional **per annum of** revenue and the car park is expected also to have a positive revenue impact.
- E.S.23 There is the potential for additional built development for secondary/commercial activities and these would provide additional future revenues. The scale of the revenues would be based on a separate business case depending upon the future developments proposed.

- E.S.25 There would be additionally savings to the Councils expected future capital spend on the current facilities which would need to be incurred under the Business as Usual scenario.
- E.S.26 The biggest impact on the Council in both the income and expenditure account and its balance sheet would be as a result of the additional Council borrowing required to fund the project. At this stage we understand that an amount of c.£200m has been included in the Councils medium term treasury plan for the project.
- E.S.27 Whilst the scheme is a major investment for the Council in both capital and revenue terms the economic and social impact will be very significant. The SOC recognises that the scheme will attract between 750,000- 1,000,000 visitors and they will generate a large GVA for the town



and the authority, let alone the region. These visitors will be from a local, regional and national catchment and subsequently we expect the GVA for the project to be a major boost to the social, economic and cultural fabric of the area. A full economic assessment will be carried out at OBC which will quantify the GVA.

Management Case

- E.S.28 The management case is relatively well developed for this stage of a project. The project governance structures are established including a Programme Board, Committees, Working Groups and Workstream resourcing. The Council's use of specialist advisors has been established and further procurements are ongoing.
- E.S.29 The key programme milestones are as follows:
 - Gateway 1 SOC Nov 2021
 - Gateway 2 OBC July 2022
 - Planning application submitted July 2022
 - Gateway 3 detailed design March 2023
 - Demolish commencement Dec 2023
 - Practical completion Dec 2025
- E.S.30 The change management and risk management systems are clearly defined, and the SDP will continually monitor the programme as the project evolves.

Next steps and contacts

E.S.31 The Councils cabinet is set to review and requested to approve the SOC in November, the architectural and multidisciplinary design teams will commence works, supported by the venue planning team, on the development of the facility descriptions for each of the facilities in October. The next stages of the OBC will be progressed including the detailed financial and economic impact assessment for the Preferred Way forward. These works are likewise due to commence in October.

E.S.32	For further information on the SOC contact	IPW

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1. Introduction

Introduction and background

- 1.1 IPW... was appointed by Turner & Townsend on behalf of Kirklees Council (the Council) to develop the Business Case for the Kirklees Cultural Heart project.
- 1.2 The Cultural Heart is part of a wider blueprint for Huddersfield Town Centre to create a vibrant culture, art, leisure and nightlife offer, thriving businesses, a great place to live, improved access and enhanced public spaces.
- 1.3 The Cultural Heart is a key Council led regeneration scheme in Huddersfield town centre. The overall site area is 7.8 acres and consists of the Queensgate Market (Grade II listed), the library and art gallery (Grade II listed), the Piazza shopping centre and the site of the former multi story car park. In addition to the buildings there is an extensive network of tunnels servicing the Piazza shopping centre and the market. The scope of the regeneration is to redevelop the area in its entirety to provide the following core facilities:
 - A new event space/entertainment venue
 - Museum and art gallery
 - New library
 - A food hall
 - Urban park and outdoor events space
 - Demolish the Piazza
 - New multi-storey car park
 - New/improved links to the University
 - Additional uses potentially including hotel, restaurants and bars.

Purpose of a Strategic Outline Case



- 1.4 The Business Case development process, as set out in 'Better Business Cases', includes the following three key stages:
 - Stage 1: Scoping the scheme and preparing the Strategic Outline Case (SOC)
 - Stage 2: Planning the scheme and preparing the Outline Business Case (OBC)
 - Stage 3: Procuring the solution and preparing the Full Business Case (FBC)



- 1.6 The purpose of an SOC is as follows:
 - To confirm (or reaffirm) the strategic context for the project
 - To make the Case for Change; and
 - To determine the 'Preferred Way Forward'
- 1.7 This report sets out the Strategic Outline Case (SOC) for the project and has been prepared using the Five Case Model methodology.

Structure of report

- 1.8 This report is structured as follows:
 - Section 2: **Strategic Case** sets out the strategic context of the project including an identification of how the project fits within local, regional and national strategies, as well as identifying the project objectives. It presents the case for change, through identification of the service gap, a market assessment for each of the proposed uses, outlining the project scope and identification of the anticipated project benefits, constraints, dependencies and risks
 - Section 3: **Economic Case** details the long-list of project options identified and the outcomes of the long-list options appraisal to identify a preferred way forward
 - Section 4: Commercial Case sets out the early thinking on the commercial case for the project, including an overview of how the Preferred Option will be managed and procured effectively
 - Section 5: **Financial Case** sets out indicative financial information and working assumptions relating to the Preferred Way Forward
 - Section 6: Management Case sets out the management case for the project, detailing the programme management and governance arrangements, project timetable and risk management arrangements
 - Section 7: Summary and conclusions.



2. The Strategic Case

Introduction

- 2.1 This section sets out the strategic context for the project and presents the case for change, including the following key elements:
 - an organisational overview of the Council
 - identification of the Council's business strategy and aims, as set out in its key economic and spatial strategies
 - the wider strategic context
 - an overview of the existing arrangements and identification of the service gap
 - a summary of the market assessments undertaken in relation to the core Cultural Heart uses (i.e. venue, museum, gallery, library, archive) and commercial supporting uses, including the Food Hall
 - setting out the scope of the project and
 - identification of the anticipated project benefits, constraints, dependencies and risks.

STRATEGIC CONTEXT

Organisational overview

- 2.2 This project is owned by Kirklees Council (the Council) and falls under the governance of the Council's Growth and Regeneration department.
- 2.3 Kirklees Council is the local authority providing local government services for the borough of Kirklees in West Yorkshire, England. It is a Metropolitan District Council and one of five constituent councils of the West Yorkshire Combined Authority. The Council is composed of 69 councillors, three for each of the district's 23 wards.
- 2.4 Kirklees Council was established in 1974 by the Local Government Act 1972, with the first elections being held in advance in 1973. The Council was initially a second-tier authority, with West Yorkshire County Council providing many key services. However, the metropolitan county councils were abolished by the Local Government Act 1985, and so in 1986 Kirklees Council took over responsibility for most of these functions within the borough.
- 2.5 Since the Council's inception it has been controlled by both Labour and the Conservatives at times. From 1999 to 2018 the Council was under no overall control as no political party held a majority of seats. Labour gained overall control of the Council in 2018. Following the 2019 elections again there is no overall control of the Council, and it currently operates as a minority Labour administration.



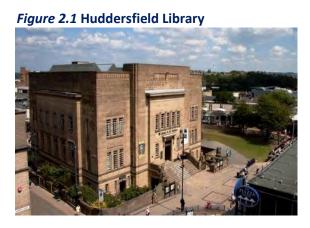


Figure 2.2 Queensgate Market



Business strategy and aims

- 2.7 The Council's business strategy and aims are set out in its key economic and spatial strategies.
- 2.8 Table 2.1 sets out the relevant strategies and how this project fits or could contribute to the key aims and objectives of each. A review of each of the key documents is provided in Appendix A.

Table 2.1 Local strategic fit

Strategy	Project fit/ contribution
Huddersfield Blueprint – 10 year vision	 A ten-year vision aimed at kick-starting the regeneration of Huddersfield town centre Cultural Heart one of six key regeneration areas Cultural Heart will be the catalyst for change in the town centre, and the most iconic vision within The Blueprint Open up the area for a large family-friendly Town Park Make it easier for pedestrians and cyclists to move around the town centre
Huddersfield Blueprint – Cultural Heart Vision	 Cultural Heart uniquely brings together Kirklees Council's current cultural services into a holistic and seamless experience Builds on the achievements of the town's generations of innovators Friendly, accessible, and welcoming to all, it will be multipurpose and multi-agency with experimentation, education and experience at its very core
Kirklees Economic Strategy 2019-2025	 Growing an inclusive and productive economy Provide the flexibility to plan for change and sustainability Respond to the impacts of Brexit
Culture Kirklees	 Work with communities and volunteers to care for collections and buildings and jointly curating exhibitions which reflect the interests of the community and tell their stories Enable communities to plan and deliver their own cultural activities and events rather than provide for them

Kirklees Cultural Heart – Draft Strategic Outline Case



Strategy	Project fit/ contribution
	 Increase the income generated from activities plus attract
	more external investment
	 Greater collaboration with public sector partners,
	businesses, and community organisations
Kirklees Local Plan Strategy	✓ Strengthen the role of town centres to support its vitality
and Policies	and viability
	 Enhance the main cultural hub within the town centre
	 Protect and enhance the characteristics of the built, natural
	and historic environment, and local distinctiveness which
	contribute to the character of Kirklees
Library Strategy	 Developing links with other services and partners to deliver
	initiatives in local communities
	 Meet community needs and maximise the impact on early
	intervention and prevention
	 Ensure an efficient and cost-effective delivery model
Kirklees Joint Health and	 Support the innovative approaches required to enable
Wellbeing Strategy	change, given the changing needs of local people and the
	current economic climate
	 Provide a context, vision, and overall focus for improving the
	health and wellbeing of local people and reduce inequalities
Kirklees Events Policy	 Identifying key council-controlled spaces, highlighting the
	types of events that will be suitable for different high profile
	and in demand spaces and setting clear conditions and
	criteria by which applications to use Council land will be
	assessed
	 Use a wide range of events and festivals as an opportunity
	for celebration, civic pride and for communities to come
	together in shared experiences
Invest in Kirklees	✓ The Cultural Heart is part of the Council's ambitious new
	plans which could see almost £500m invested over the next
	 10 years to transform the district The industrial heritage, quality schools and colleges and a
	unique mix of thriving town centres, picturesque countryside
	and iconic villages, make Kirklees a place widely recognised
	for its quality of life
Library ambition	 Increasing reading, literacy, and early language development
	 Improving digital access and literacy
	 Supporting everyone to achieve their full potential
	 Supporting everyone to live healthier and happier lives
	 Supporting everyone to invertient and happier lives Enabling greater prosperity
	 Building stronger, more resilient communities
	 Offering everyone access to culture and the opportunity to
	be creative
Culture, Heritage and Tourism	 Support the cultural sector including cultural organisations,
Strategies	
	creative businesses, freelancers and voluntary and
	community arts organisations, to recover from the impact of
	Covid-19 including business and skills development

Kirklees Cultural Heart – Draft Strategic Outline Case



Strategy	Project fit/ contribution
	 programmes; supporting them to develop new business and delivery models; generate more income; and work together to develop a strong infrastructure. Develop cultural programmes which achieve outcomes related to learning, health and well-being, cohesion, town centre regeneration and youth employment and also enable communities to produce their own cultural activities Establish a global reputation for Kirklees for its creative approach to music and textiles and using these assets to bring communities together and promote the district plus using cultural and heritage activities to create attractive places and integrate a cultural offer into non-traditional venues such as town and village streets, parks, community centres and markets to open up access.
Huddersfield public art plan	 Improve the centre of Huddersfield alongside the developments laid out in the Huddersfield Blueprint Utilise the power of temporary interventions to stimulate new perceptions Reimagine Huddersfield town centre Support and influence future decision-making to embed the arts into new developments rooted in the rich heritage of the area, diverse communities and unique landscape.
Kirklees public art policy	 Attract new developments that create quality places and make a positive difference to how people experience the places in which they live and work Diverse communities and young people to be integral to the creative engagement and thinking Public art integrated into regeneration and development schemes built on best practice and partnerships to achieve the highest quality public art and public realm The diverse local heritage and stories to be visible, shared and celebrated

- 2.9 This project strongly supports the delivery of some of the Council's key strategic objectives. The Cultural Heart is one of six key regeneration areas and is seen as the catalyst for change in the town centre. It brings together Kirklees Council's current cultural services into a holistic and seamless experience.
- 2.10 The project has the potential to enhance the existing leisure and cultural offer available and attract more residents and visitors to its town centre.



- 2.12 The role of town centres has changed nationally and thus these changes have had an impact on Huddersfield Town Centre. The traditional shopping streets of Huddersfield have struggled in recent years with the challenge of internet shopping and the changing role of town centres resulting in higher vacancies and a higher proliferation of "discount" retailers. Therefore now citizens are seeking experiences through leisure and culture and this project will support the provision of those amenities.
- 2.13 It also provides a major opportunity to increase its foothold on the entertainment and business events market by providing a platform to support the growth in events and putting Kirklees on the map as a destination for those events.

Other relevant strategies

- 2.14 This project sits within a broader strategic context, ranging from regional plans to build on the city regions strengths to a national level push to become a hub for cultural and creative activities.
- 2.15 The key relevant strategies and the potential project fit is summarised in Table 2.2, and a review of each of the key documents is provided in Appendix A.

Strategy	Potential project fit
West Yorkshire Economic Recovery Plan	 Capitalise on pro-environmental behaviours Build on city region strengths, delivering investment opportunities, jobs & better health outcomes Cementing existing strengths in digital and manufacturing and addressing digital skills and access gaps
Leeds city region strategic economic plan	 Address long term challenges, unlock opportunities and fulfil the City Region's potential Become a positive, above average contributor to the UK economy Seek to exceed the national average on high level skills and to become a NEET(not in employment, education or training)-free City Region Make good progress on Headline Indicators of growth and productivity, employment, earnings, skills and environmental sustainability
Leeds city region culture and creative industries proposition	 Maximise the potential of culture and creative industries in driving economic recovery in West Yorkshire Enhance quality of life
Leeds city region industrial strategy	 Accelerate economic growth across the City Region through technology and innovation Make sure the environment promotes healthy lifestyles and is fit for future generations to enjoy Put health at the heart of the region Address the productivity gap with the rest of the UK
Let's Create Strategy 2020- 2030 (Arts Council England)	 Become a hub for cultural & creative activities

Table 2.2 Regional and national strategic fit



Strategy	Potential project fit						
	 Give access to a range of cultural events in towns and rural areas from all economic and social backgrounds 						
National Planning Policy Framework (NPPF) and National Planning Policy Guidance (NPPG)	 Support the role of town centres by taking a positive approach to their growth, management and adaptation 						

- 2.16 The Cultural Heart project can be deemed to have regional influence and significance as Huddersfield has been identified as an Urban Growth Centre Spatial Priority Area in the Leeds City Region Strategic Economic Plan. Priorities include supporting mixed infrastructure including employment, commercial and residential opportunities. This project has the potential to deliver on those priorities. The project will also maximise the potential of culture and creative industries in driving economic recovery in West Yorkshire.
- 2.17 From a national planning policy perspective, local authorities can take a leading role in promoting a positive vision for town centres, bringing together stakeholders and supporting sustainable economic and employment growth. The Cultural Heart project has been a Council led scheme that envisions a new town centre which is family friendly, future focused, resilient and flexible to change. The project is also seeks to change the cultural dynamic of the town and provide a more engaging offer. This follows the guidance of the NPPF/NPPG which states that local authorities need to consider structural changes in the economy, in particular changes in shopping and leisure patterns and formats and the impacts these are likely to have on individual town centres.

Strategic Sustainability Strategy (executive summary extract)

2.18 National, regional, and local governments have declared climate emergencies with accompanying net zero carbon targets. Within the West Yorkshire Combined Authority and Kirklees Council there is a Net Zero Carbon target for 2038, and the 2019 Climate Emergency Declaration and the Kirklees Air Quality Strategy and Five Year Air Quality Action Plan emphasises the importance of delivering Net Zero Carbon programmes and projects in the statement:

"At 2017 emissions levels, Kirklees would use this entire [carbon] budget within 7 years from 2020. This means that Kirklees, as a district, needs to reduce its emissions as an urgent priority"

2.19 Regeneration programmes, such as the Cultural Heart, must deliver in line with net zero aspirations to support the wider transition to a net zero economy and to meet the requirements of the Councils declarations. A net zero economy and net zero carbon design, construction and operation cannot be achieved overnight, but will be a process of incremental and positive actions to meet 2038 targets. The implementation of progressive and positive step change must be embraced to support the Councils' declaration of a Climate Emergency.



2.21 The Cultural Heart programme has an opportunity to showcase how sustainability can be embedded in an ambitious regeneration programme, to demonstrate positive net zero carbon design and construction, and to be a regional and national exemplar of sustainable development within a local authority context with potentially constrained resources.

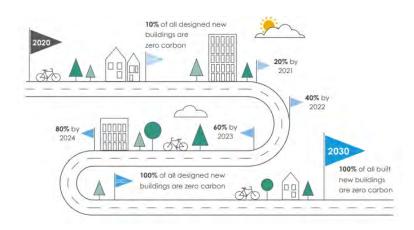


Figure 2.3 LETI Roadmap to net zero construction

Source: LETI Climate Emergency Design Guide

- 2.22 A Sustainability Strategy Report has been produced by Turner & Townsend that outlines the steps that should be taken by the Council and its delivery partners to achieve net zero and wider sustainability aspirations. The report has been designed to align to the Kirklees Climate Emergency declaration as well as the regeneration aspirations of the Cultural Heart Programme. The report also considers national trends that will need to be reflected in current plans or which will be integrated over time to future proof the regeneration programme in terms of increasingly wider ranging sustainability and climate regulations. The overall aim of the strategy is to:
 - Define a Net Zero Carbon and Climate Resilience Strategy for the Cultural Heart Programme - outlining and considering options to meet Climate Emergency aspirations.
 - Align the programme of works to Kirklees Council strategic objectives, policies and general feedback received, notably to support the delivery of the Net Zero Carbon (NZC) emissions 2038 target.
 - Establish a framework of topic-specific focus areas to deliver a sustainable Cultural Heart
 - Establish sustainability and net zero carbon targets and metrics that can be adapted and aligned to core programme, project, and council wide KPIs and targets
 - Outline a performance management, assurance and reporting framework, ensuring transparency around the carbon performance of the programme of works and individual projects over defined timescales.



- 2.24 This strategy therefore addresses the wide range of sustainability topic areas that are now vital to realising net zero, sustainable schemes. Each key theme that has been identified is supported with a vision, strategic approach, and delivery approach. Proposed key performance indicators (KPIs) are included for review and agreement, but further support the delivery of each theme to deliver in-line with Climate Emergency and net zero aspirations.
- 2.25 A suggested governance structure includes the creation of a Kirklees Council Net Zero Carbon and Sustainability Committee to provide a dedicated gateway for decision making prior to Cultural Heart project and programme board approvals. It is suggested that this group includes consultees who contributed to this report as well as an appointed third-party specialist. This approach combines project management and sustainability expertise to highlight the critical importance of delivering on sustainability requirements, while also being a conduit to share best or innovative practice across the Cultural Heart programme. This recognises that sustainability and net zero aspirations are among many likely critical success factors. Programme-specific priorities should be agreed with minimum standards, so that decisions can be made through a timely and confident process.
- 2.26 The targets within the report are reflective of industry benchmarks and best and innovative practices to allow decisions to be made for the Cultural Heart programme whilst recognising that there will potentially be competing budgetary and other pressures. The suggested minimum standards and stretch standards can be used as required whilst still representing a positive progression from recognised business-as-usual baselines (as noted in the below graphics). It is proposed that these are supported by certification through recognised bodies such as BREEAM, the UKGBC and NABERS.

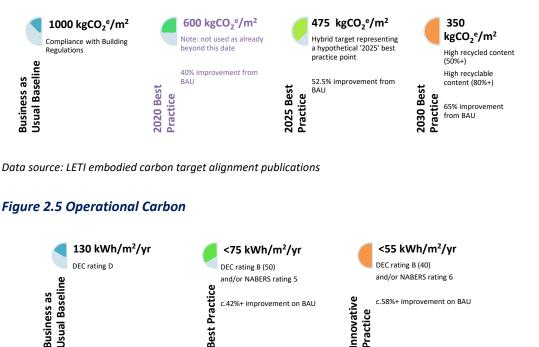


Figure 2.4 Embodied Carbon

Data source: RIBA Sustainable Outcome Metrics (2030 Challenge)



Objectives

- 2.27 The project objectives were developed and provided by the Programme Board (membership of which is set out in Section 6). The Programme Board wanted to drive forward and co-ordinate delivery of the project in a way that would:
 - Re-develop the Queensgate area to compliment a modern-day town centre that will be busy, inclusive, family-friendly and stay open longer creating a tangible sense of community
 - Create a vibrant and dynamic destination where visitors and residents of all communities and ages can gather and enjoy leisure, arts and music throughout the day, evening and into the night
 - Be full of diverse and rich experiences that, not only bring people together, but are familiar, celebratory, and innovative and places Huddersfield's cultural heritage at the centre of the programme
 - Be accessible, providing open opportunities to participate, learn new skills, explore and discover.
 - Increase town centre footfall, supporting local businesses and venues, employees and creating new commercial opportunities making the proposition attractive to stakeholders.
 - Adapt and respond positively from the lessons learned and the impact of the pandemic, particularly the changing needs and aspirations of the town centre's catchment population
 - Have a masterplan that provides flexible spaces, high quality design and a variety of architecture bringing out the unique characteristics of the setting of the Cultural Heart and the listed buildings within it.
 - Enhance the use of the retained buildings and structures as destinations, increasing public access, while enabling them to perform an increased number of municipal and commercial functions more effectively
 - Encompasses the Councils 2038 Carbon Neutral Vision and policies encouraging sustainability and minimising the carbon footprint of the development
 - Provide for the creation of high-quality digital and physical infrastructure
 - Have a design where activities in the buildings spill out into a high-quality urban park that is welcoming, safe and with facilities for outside events of scale
 - Maintain and enhance connectivity to the rest of the town centre and its neighbourhoods, including essential links to the University
 - Create social value benefits
 - Produce a master plan and completed assets that are financially viable and can be managed within affordable operational budgets.
 - Be deliverable within agreed timescales and budget



THE CASE FOR CHANGE

COVID-19

- 2.28 This strategic outline case has been prepared during the COVID-19 outbreak and ensuing change of circumstances. At the time of writing (October 2021) the economic consequences of the pandemic, short and long-term are still subject to speculation, however, there has been a significant impact across a range of sectors, including the entertainment, culture and business events industries.
- 2.29 It has been assumed that by the time that new cultural facilities open following development, the entertainment, business events and wider visitor markets will have re-established themselves to 2019 levels. The implications of COVID-19 will be discussed further in this strategic outline case.
- 2.30 COVID compounds some of the existing reasons for developing the Cultural Heart project, primarily addressing some of the shortcoming within the existing cultural infrastructure in the town. Specifically:
 - Tolson Museum: Kirklees Council decided in 2018 that the existing museum facilities at Tolson should be closed down and a new use found for the building in line with the charitable purposes of the Trust that owns it. This requires new museum facilities to be found for exhibition and storage
 - Library building: the current building from the 1930s is in a poor state of repair and requires extensive remedial attention
 - Gallery building: as per the library building. In addition, there has been water ingress into the art store necessitating the entire collection to be relocated while remedial work is undertaken
 - Storage: currently the museum collections and the civic archives are housed in several buildings across the Kirklees estate, none of which meet required environmental standards and, in the case of the archives, has resulted in the threat of the Council potentially jeopardising its status as legal custodian

Consultation

- 2.31 IPW... has planned a wide range of consultations to take place throughout the development of the business case.
- 2.32 We have undertaken the following consultations to date with internal Council stakeholders:
 - Individual meetings with nine Council Heads of Service
 - Five Group consultations encompassing specific topics with key Council Officers covering: Museums, Venue, Library, Archive and Development
- 2.33 The key topics explored with internal stakeholders were:
 - Their relationship/involvement to date with the Cultural Heart project



- Which of the principal objectives of the project is of most importance to them/their service area
- View on Huddersfield's cultural offer in its current state
- What differences would they like to see the Cultural Heart make to the town e.g. increased footfall, different ambience, increased civic confidence, higher city profile, etc.
- View on what the nature of the principal spaces should be
- View on the demand for each of the elements of the Cultural Heart
- 2.34 We have also identified a list of thirty-six external stakeholders, including venue operators, events promoters, local stakeholders (e.g. University, Cultural Groups and Festivals) and national stakeholders (e.g. Arts Council England). We have undertaken ten consultations to date and will complete the remaining consultations early in the next stage of the process. The subjects for exploration with external stakeholders include:
 - How a new venue in Huddersfield would fit within the regional and national event context from an entertainment and business events perspective
 - Views on the likely programme and ability to attract content/ events / audiences
 - Views on the wider mix of facilities on site
 - Interest in operating the proposed new venue (and potentially wider site components), and if so on what basis
 - Would you be open to a partnering approach with other venue or service operators to give a balanced programme of events (if you do not have all of the relevant experience in-house)

2.36 The key findings from the sessions undertaken to date are reflected in the Case for Change section below.

Existing arrangements

- 2.37 The Cultural Heart programme is a key Council led regeneration scheme in Huddersfield Town Centre. This is part of a wider blueprint for Huddersfield Town Centre to create a vibrant culture, art, leisure and nightlife offer, thriving businesses, a great place to live, improved access and enhanced public spaces.
- 2.38 The overall site area is approximately 7.8 acres and currently consists of the Queensgate Market (Grade II listed), the library and art gallery (Grade II listed), the Piazza Shopping Centre and the site of the former multi story car park. In addition to the buildings there is an extensive network of tunnels servicing the Piazza Shopping Centre and the market.



2.39 The approximate extent of the site is shown on the drawing in Figures 2.6, with the site boundary marked up in red. A split of the key areas can be seen in figure 2.7.

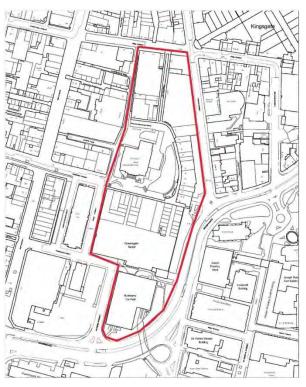
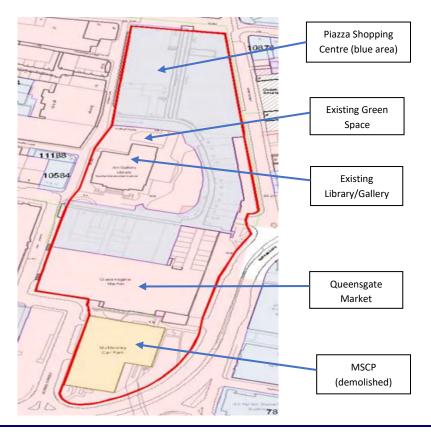


Figure 2.6 Boundary of the Cultural Heart site

Figure 2.7 Key Areas within the Cultural Heart boundary





Current Facilities

- 2.40 At the current time all of the facilities with the exception of the Piazza shopping centre are operated by the Council under a departmental operating strategy model. As part of the Council's finance structure, each facility operates with its own dedicated budget and financial accounts. The Queensgate Market is operated by the Markets Team, the library by the Libraries Team and the gallery and museum by the Cultural Team. Although owned by the Council the Piazza Shopping centre is operated by a third party agent (Carter Jonas) in respect of rental income and another agent (Colliers) in respect of any service charge income and costs.
- 2.41 Further detailed information on the current existing facilities in the Cultural Heart can be found in table 2.3 below.

Facility	Further Information	Summary					
Queensgate Market	Background	Opened on April 6 th , 1970, the Queensgate Market Hall was built with a bespoke roof system of 21 asymmetric curved shells. The design allows for maximum light into the market and is considered to be the best example still standing of a retail market from the 1960s and 1970s. It a Grade II listed building, the listing includes the entire building, including its interior.					
	Operational Arrangements and Performance	The building currently operates as an indoor market with a variety of market traders operating from the site. It is operationally controlled by the Council's markets team who also run the boroughs other markets. The market team let out the stalls on a variety of operating agreements to individual traders. Some additional uses have been trialled including use by the UniversityFinancial year 2020 (note COVID-19 impact)• Income£510,000• Operating Costs(£460,000)• Net Operating Contribution£50,000					
	Current Situation	Whilst the venue still operates as an indoor market, the number of operating stallholders had been declining over the years, as result many of the existing units are unlet. In addition, there has also been a steady deterioration in the variety of the offer at the market resulting in steady decline in visitors to the market. The Queensgate Market is one of two markets located in the centre of the town. It is currently projected that there will only be a need/ demand for one market in the town. A new combined market is currently being planned on Brook Street, home of the current outdoor market . As a result an alternative use is needed for this Grade listed structure.					

Table 2.3 Current situation – core facilities



Facility	Further Information	Summary					
	Condition Survey	The Queensgate Market Condition Report prepared by Aedas building consultancy in December 2009 indicated a future capital spend requirement of £4.4m.					
Huddersfield Library / Gallery	Background	The library and art gallery were built in 1937 and is a Grade II listed building. The listing includes the entire building, including its interior.					
	Operational Arrangements And Performance	The current library building in the town centre is shared between the Library Service and the Gallery Service. The current library facility is operated by the Council's Library Service, which also operates the other libraries in Borough Whilst the building is shared with the gallery, the Library Service is fully responsible for all the building costs including building maintenance. The Galleries Team are only responsible for the variable costs of operating the gallery.					
		 Library - Financial Year 2020 (note COVID-19 impact) Income £24,000 Operating Costs (£1,276,000) Net Operating Contribution (£1,252,000) The Library currently is a net annual cost of c£1.25m per annum to the Council, including £350k allowance for replacement books and other materials. 					
		Gallery - Financial Year 2020 (note COVID-19 impact)Income£8,000Operating Costs(£51,000)Net Operating Contribution(£42,000)					
	Current Situation	Both the Library Service and the Galleries Team do not consider that the existing building is suitable and does n provide sufficient space for either use. Both organisation ideally require additional space. The gallery in particular cannot exhibit a large part of its collection, with many go works remaining in storage. The gallery has been closed down and as a temporary solution the Council is currently trying to relocate the gallery to an alternative location within the borough.					
	Condition Survey	The Library Condition Report prepared by AHR Building Consultancy Limited in August 2020 indicates an estimated future capital spend pf £7.86m excluding VAT is required.					
Piazza Shopping Centre	Background	The Piazza was built 1970-74 as a retail shopping centre to enhance the shopping experience in the town and contains numerous retail units of varying sizes some of which are let to national chains.					



Facility	Further Information	Summary
	Operational Arrangements and Performance	Part of the Piazza is attached to the Queensgate Market and is included as part of that listing. But the list description states that the "attached shops, mostly built 1970-74, are not of special interest", nonetheless building consent would be required for adaptation or demolition. The Council in June 2019 purchased the shopping centre as part of its long term strategy for the town centre. At the time of purchase the centre was already in considerable decline with many of the shop units particularly the smaller units' empty. As a result of the changes in the retail environment over the last few years there has been a steady reduction in the demand for retail space throughout the town centre as a result there is a current over supply of retail space within the town centre. The centre continues to experience the further closure of units as the current leases expire. The Centre is operated on behalf of the Council by the specialist agent Carter Jonas who collect the rents. The service charge is overseen by Colliers.
	Current Situation	The demand for retail space in the town continues to decline, resulting in an increasing number of empty properties.
	Condition Survey	Piazza Condition Report prepared by the specialists Watts Limited in August 2020 indicates an estimated future capital spend of £981,000 excluding VAT is required.

2.42 A number of facilities proposed as part of the scope of this project, such as the venue and Food Hall do not currently exist in Huddersfield, as described later in this section.



Contextual Facilities

2.43 There are other facilities in close proximity of the Cultural Heart which may have implications on the project. Further information on these facilities can be found in table 2.4 below.

Facility	Further	Summary			
	Information				
Huddersfield Town Hall	Background	The Town Hall not only serves as a working administrative Town Hall it is also home to a 1,200 capacity music venue. The Venue holds a variety of events including Music and Comedy. It has a spectacular organ and is especially suited for classical concerts, with an excellent acoustic quality particularly suited to the music rather than the spoken word. The Town Hall is internally managed by the Council			
	Arrangements and Performance	Venues Team who have direct responsibility for the events at the hall.			
	Current Situation	As its location is directly adjacent to the proposed Cultural Heart, it would in reality be classed as part of the Cultural Heart. As its event programme is more classical music focussed it would be complementary to any music programme at the proposed new venue. The town hall has limitations in regards to the type of events it can host. It cannot accommodate any standing events due to the dancing / jumping to music causing the plaster on the meeting rooms below to crack. It is also acoustically not fit to host rock/pop events and does not have the appropriate infrastructure for crowd			
Lawrence Batley Theatre	Background	management.The Lawrence Batley Theatre originally opened as a church mission in 1819 eventually closing in 1970. After extensive fundraising it reopened in 1994 as a 477 seat theatre operating a varied theatrical programme			
	Operational Arrangements and Performance	including an annual pantomime. The theatre is operated by the independent Kirklees Theatre Trust, a registered charity.			
	Current Situation	The venue, following the Covid 19 closure, continues to operate as a theatre with a full theatrical programme. Due to its close proximity to the Cultural Heart the theatre would also be classed as part of the Cultural Heart.			
Tolson Museum	Background	The Tolson Museum is located in what is formally known as Ravensknowle Hall. The building was donated to the Council in 1919 by Legh Tolson and was opened as a museum in 1922. It is currently home many of the borough's historic artifacts including rare vehicles, textiles and other civic memorabilia.			

Table 2.4 Current situation – contextual facilities

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Facility	Further Information	Summary	
	Operational Arrangements and Performance	The museum is operated by the department of the Council.	museums and galleries
		Tolson - Financial Year 2020	
		Income	£27,000
		 Operating Costs 	(£141,000)
		Net Operating Contribution	(£114,000)
	Current Situation	The current location of the Mus is seen as far from the ideal loca collections and the ability of the enjoy them. There is also need f fully exhibit many of the collecti throughput numbers for the mu c.26,000.	ition for the borough's local population to or additional space to ons held. The

Business needs – current and future

- 2.44 This sub-section provides an overview of the market assessment undertaken for each of the key uses proposed as part of this project, namely:
 - Venue (entertainment and business events)
 - Library
 - Museum
 - Gallery
 - Food hall
 - Urban park

Venue Market Assessment – Entertainment

2.45 Prior to the development of this SOC, IPW. produced a feasibility study on behalf of the Council to test the capability of the existing Queensgate Market building as the site for delivery of a new music and entertainment venue. This work was completed in 2020 and has been updated in 2021 to support this SOC.

Background and market trends

2.46 The strength of the venue business is particularly contingent on the health of the live event sector. Particularly, this relates to the availability of touring 'product' – events which are touring and can attract large numbers of fans. Events directly drive higher revenues and are also the critical driver of the secondary event revenues that determine a venue's financial performance.



- 2.47 The nature of the live music industry has changed significantly in the last 15-20 years, with the advent of digital file-sharing and streaming services hitting traditional revenues. In the US, album sales have fallen from 940m CDs in 1999 to just 102.4m million copies in 2020 (source: <u>Nielsen Music & RIAA data</u> and <u>MRC Billboard Year End Report U.S. 2020</u>). In the UK, album sales fell by over 77% between 2010 and 2020 (source: BPI, based on Official Charts Company data, cited by <u>Music Business Worldwide</u>).
- 2.48 Whereas bands used to tour in order to sell records, live performances are now critical to their survival and many acts are effectively touring performers that make records rather than vice versa. Since the act takes the lion's share (often 80-85%) of any ticket revenue, particularly compared to the return they can expect to make from an album sale, touring is an attractive proposition and appears set to remain that way.
- 2.49 The growing importance of the live sector is reflected in the fact that National Arena Association (NAA) data shows that there were fewer than 1,600 events per year before 2005 and rising to just below 2,000 events per year before 2008. Each of the 10 subsequent years had over 2,000 events, rising to almost 2,400 events in 2018.
- 2.50 UK Theatre collects sales data from over 200 auditoria across the UK. This data is then collated and analysed giving insight into theatre trends around the UK. Table 2.5 presents a summary of the 2018 (latest year available) UK Theatre Sales Data Analysis compared to previous years.

Year	Number of	Number of	Total tickets	То	tal Box Office	% capacity	% cash value	Average ticket		Average ticket
real	productions	performances	sold		Income	achieved	achieved	price asked for		price achieved
2013	4,933	40,889	17,615,000	£	397,000,000	59%	60%	£ 22.0	8	£ 22.53
2014	5,280	43,952	19,085,000	£	455,000,000	59%	61%	£ 23.2	9	£ 23.86
2015	5,237	43,308	19,190,000	£	455,000,000	59%	59%	£ 23.7	6	£ 23.72
2016	5,496	42,638	19,020,000	£	470,000,000	61%	61%	£ 24.6	8	£ 24.71
2017	5,349	44,135	18,745,000	£	470,000,000	59%	59%	£ 25.3	2	£ 25.09
2018	-	44,237	18,806,000	£	510,000,000	61%	59%	£ 27.6	8	£ 27.10
Change 2013-18	416	3,348	1,191,000	£	113,000,000			£ 5.6	0	£ 4.57
Change 2017-18		102	61,000	£	40,000,000			£ 2.3	6	£ 2.01

Table 2.5 UK Theatre Sales Data 2013 – 2018

2.51 Since 2013, there has been a general upward trend in the number of productions, performances and attendances (ticket sold). Whilst total attendances in 2018, 18.81m was not as high as in 2015 (19.19m), it was an increase on 2017 figures. Additionally, the following positive trends are noted:

- the % of theatre capacity sold has increased from 59% to 61% since 2013
- the average ticket price achieved by theatres has also increased from £22.53 to £27.10 since 2013
- £2.01 of the £4.57 ticket price increase, occurred between 2017 and 2018.

Market assessment – supply and demand

2.52 When considering the development of any entertainment space, it is important to consider the market demand for, or likely response to its development. The demand for entertainment facilities in Huddersfield is determined by the interaction of three key considerations: namely catchment, product and competition. As described below.



- Catchment: a venue requires a strong population catchment in order to maximise ticket sales and attendances. This is both in terms of the number of people that can access the venue within an acceptable travel time and also the strong propensity for people to attend and pay for events/ tickets
- **Product**: 'product' i.e. events to fill its calendar, which could include concerts, conferences, comedy, theatre etc.
- Competition Catchment Product

Figure 2.8 Determinants of demand

- Competition: includes catchment competition from surrounding venues, but also product competition, whereby artists are only playing a certain number of shows in a country or area, and will choose between venues where to play (which is heavily dependent on the promoter's view)
 - example catchment competition: a new venue will compete with other venues for audiences. This competition could include other arenas/ performance venues that people within the Huddersfield catchment could visit e.g. Huddersfield Town Hall, First Direct Arena Leeds and other venues in the town, and also other types of entertainment events such as rugby/ football matches, cinema etc.
 - example of product competition: there are a finite number of recording artists touring in one year, playing a certain number of concerts in a geographical area (which could be UK-wide or Europe-wide, for example). The venues the artists choose to play is heavily dependent on the promoter view of the potential to maximise ticket sales. Factors affecting the promoter's choice of venue are illustrated in Figure 2.9.

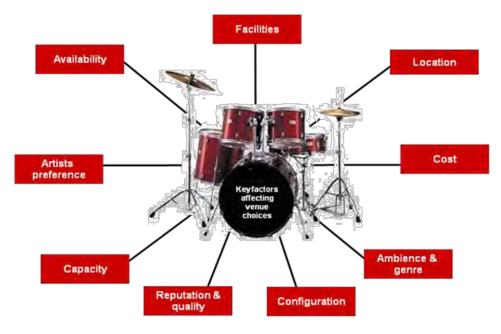


Figure 2.9 Factors affecting promoter choices



Catchment analysis

2.53 A catchment analysis for a 30 and 45-minute drivetime from Queensgate Market has been undertaken, as mid-scale venues (i.e. below a large arena level) typically draw from these catchments (subject to scale and product). Table 2.6 sets out the population within a 30 and 45-minute drivetime and the catchments are also illustrated in Figures 2.10 and 2.11 overleaf.

Table 2.6 Drivetime populations for Huddersfield

	30-minute drivetime catchment	45-minute drivetime catchment
Total Population	1,037,591	3,571,224
Adult (15+) Population	829,656	2,875,359

Source: The Audience Agency

Figure 2.10 30 minute drivetime catchment for Huddersfield







Figure 2.11 45 minute drivetime catchment for Huddersfield

- 2.54 Both the 30-minute and 45-minute drivetime catchments are considered to be large in relation to mid-scale venues. From Figure 2.8, it can be seen that the 30-minute drivetime catchment encompasses parts of Leeds with some potential for an overlap in catchment with Manchester as well.
- 2.55 To establish the level of overlap with Leeds and Manchester (core cities with significant venue provision), a 30-minute drivetime catchment from the centre of Leeds and Manchester was superimposed onto the 30-minute catchment from Queensgate Market. This is illustrated in figure 2.12, which shows the Huddersfield 30-min catchment in orange, with the catchment of Leeds and Manchester shown in blue.



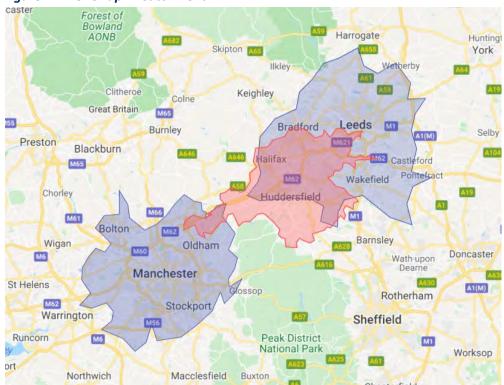


Figure 2.12 Overlap in Catchment

- 2.56 Figure 2.10 shows that there is significant overlap in catchment with Leeds with a smaller overlap with parts of the Manchester catchment. Alongside those core cities, there will also be significant overlap in catchment with Bradford which is in the process of opening a new venue (Bradford Odeon). This shows that there is a limited amount of unique catchment for Huddersfield to attract audiences from and venues in each catchment will compete with the other for audiences and product.
- 2.57 The promoter view in this case will be key to determining what kind of acts could be attracted to Huddersfield, compared with Leeds and Bradford. The full range of factors impacting a promoters venue choice are set out in Figure 2.9, but the most important is their belief on where they can sell most tickets/make most money from holding an event.
- 2.58 We have also compared Kirklees to its 'CIPFA Nearest Neighbours'¹ benchmarking group. Table 2.7 shows the comparable Local Authorities to Kirklees, alongside the population and 30-minute drivetime catchment of each location. Kirklees has larger population than all of its nearest neighbours, other than Bradford. However, the Kirklees 30-min drivetime catchment is slightly lower than most of its nearest neighbours, despite the significant overlap with Leeds.

¹ Details of how the 'nearest neighbours' are identified by CIPFA can be found at https://www.cipfa.org/services/cipfastats/nearest-neighbour-model



CIPFA Nearest Neighbours	Population	30-min drivetime catchment
Kirklees	441,000	1.04 million
Bradford	542,000	1.46 million
Wakefield	352,000	1.25 million
Wigan	331,000	1.23 million
Dudley	322,000	1.57 million
Doncaster	313,000	1 million
Rotherham	265,000	1.29 million
Derby	257,000	1.1 million
Barnsley	248,000	925,000

Table 2.7 Kirklees Nearest Neighbours

- 2.59 In addition to the scale of catchment populations, it is important to consider the propensity of audiences to attend events. Audience Agency (AA) data was commissioned to identify the overall size and demographic composition of the catchment. Based on the significant overlap in catchments (which increases for the 45-minute catchment), we have focused our analysis on the 30-minute drivetime catchment only.
- 2.60 The AA area profile reports contain data on resident populations and provide insight into the demographics and cultural engagement of specific area, using information derived from Experian population data, BMRB International's Target Group Index Survey and the Census.
- 2.61 At a regional level, reports include an analysis of defined catchments around cities/ central points. For each catchment analysed the report gives an overview of the size and demographic characteristics of the population and, the number of adults with a propensity to attend live music performance, go to the theatre, or visit other cultural venues.
- 2.62 Table 2.8 overleaf sets out the Audience Agency data, which is explained in the following paragraphs.



Attended in past 12 months	30 Minute Drive Time from HD1 2UJ		England		Index	
	Count	%	Count	%		
Art galleries	215,084	26%	12,677,122	28%	94	-6
Art gallery once a month or more	15,316	2%	548,580	1%	155	55
Ballet	93,706	11%	5,143,185	11%	101	1
Classical concerts	107,145	13%	6,672,412	15%	89	-11
Comedy shows	188,868	23%	10,861,174	24%	96	-4
Contemporary dance	70,179	8%	4,135,846	9%	94	-6
Jazz concerts	73,459	9%	4,688,459	10%	87	-13
Opera	75,838	9%	4,497,881	10%	93	-7
Plays	232,352	28%	14,898,978	32%	86	-14
Popular/rock concert	303,754	37%	17,583,489	38%	96	-4
Theatre	318,644	38%	20,098,100	44%	88	-12
Theatre once a month or more	23,149	3%	1,176,660	3%	109	9
Adults 15+ estimate 2016	829	,656	46,00	6,851		

Table 2.8 Audience Agency 30 minute drivetime catchment breakdown

Source: The Audience Agency * The national index, details how a catchment compares to the national average (where 100 is the average, 200 is double and 50 is half, for example)

- 2.63 In the 30-minute catchment, the target population has similar levels of cultural engagement to the base population (i.e. national average). The arts activities with the highest levels of engagement are theatre (38%), popular/ rock concert (37%), and plays (28%).
- 2.64 When compared to the national index, the arts activities with the closest engagement to that of a national level are the attendance at ballet (101), comedy (96) and popular/ rock concert (96). Any findings within +10/-10 of the national level are considered in line with the national level. The conclusion is thus that whilst engagement is slightly below the national attendance propensity on cultural events, in reality the local catchment is keeping in line with the national average.
- 2.65 This information correlates with the Audience Spectrum findings. Audience Spectrum is a profiling tool which describes attendance, participation and engagement with the arts, museums and heritage, as well as behaviours, attitudes and preferences towards such organisations. Table 2.9 overleaf, outlines the key findings from the Audience Spectrum profile within a 30-minute catchment.
- 2.66 The most prominent Audience Spectrum segments in the catchment area are:
 - Trips & Treats (21%): Suburban households, often with children, whose cultural activities usually are part of a day out or treat (Medium engagement)
 - Facebook Families (19%): Harder pressed suburban and semi-urban households for whom arts and culture plays a small role (Lower engagement)
 - **Kaleidoscope Creativity (12%):** Urban and culturally diverse, their arts and cultural activity happens in their community and outside (Lower engagement)



Audience Spectrum segment	30 Minute Drive Time from HD1 2UJ		England		Index	
	Count	%	Count	%		
Metroculturals	134	0%	2,342,194	5%	0	-100
Commuterland Culturebuffs	46,620	6%	5,315,818	12%	49	-51
Experience Seekers	31,980	4%	3,921,781	9%	45	-55
Dormitory Dependables	99,754	12%	6,998,182	15%	79	-21
Trips & Treats	171,675	21%	7,169,496	16%	133	33
Home & Heritage	69,735	8%	4,626,424	10%	84	-16
Up Our Street	98,617	12%	3,959,433	9%	138	38
Facebook Families	153,288	19%	5,188,457	11%	164	64
Kaleidoscope Creativity	100,930	12%	4,090,824	9%	137	37
Heydays	48,499	6%	1,983,510	4%	136	36
Adults 15+ estimate 2017	821,	,232	45,59	6,119		

Table 2.9 Audience Spectrum segments 30 minute drivetime catchment

2.67 Another segmentation tool considered is the Mosaic group profile. The Mosaic group profile combines a wide range of information from over 400 sources to create a summary of the likely characteristics of each UK household, which describes their socio-economic and cultural behaviour. This can be found in table 2.10 below.

Mosaic group	30 Minute Drive Time from HD1 2UJ		England		Index	
	Count	%	Count	%		
A City Prosperity	150	0%	2,270,240	5%	0	-100
B Prestige Positions	38,282	5%	3,379,700	7%	63	-37
C Country Living	12,078	1%	2,811,430	6%	24	-76
D Rural Reality	20,122	2%	2,560,086	6%	44	-56
E Senior Security	71,430	9%	3,947,769	9%	101	1
F Suburban Stability	70,335	9%	2,728,096	6%	143	43
G Domestic Success	48,898	6%	3,919,134	9%	69	-31
H Aspiring Homemakers	94,940	12%	4,295,390	9%	123	23
I Family Basics	83,331	10%	3,481,088	8%	133	33
J Transient Renters	101,274	12%	2,846,331	6%	198	98
K Municipal Challenge	34,492	4%	2,428,016	5%	79	-21
L Vintage Value	57,985	7%	2,550,898	6%	126	26
M Modest Traditions	64,289	8%	1,951,417	4%	183	83
N Urban Cohesion	91,712	11%	2,662,242	6%	191	91
O Rental Hubs	27,359	3%	3,549,639	8%	43	-57
Adults 15+ estimate 2016	816	,677	45,38	1,476		

Table 2.10 Mosaic group profile



2.69 Most prominent Mosaic groups in the catchment area are:

- **Transient Renters (12%):** Single people privately renting low cost homes for the short term
- Aspiring Homemakers (12%): Younger households settling down in housing priced within their means
- Urban Cohesion (12%): Residents of settled urban communities with a strong sense of identity

Key findings – catchment

- Large 30-minute and 45-minute drivetime catchment (1,037,591 and 3,571,224 respectively)
- Significant overlap with Leeds catchment within 30 minutes, small overlap with Manchester catchment
- The most prominent Audience Spectrum segments in the catchment area were Trips & Treats, Facebook Families and Kaleidoscope Creativity. 52% of the catchment belong to one of these three segments, compared with 36% of the England population as a whole.
- Catchment has similar levels of propensity to engage with arts/ culture as the national average

Local Competitor analysis

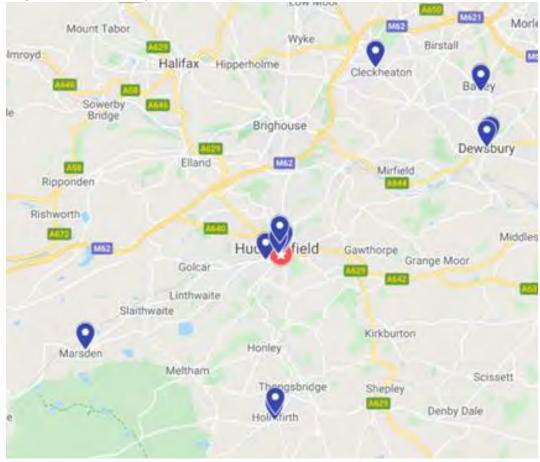
- 2.70 For most leisure and cultural facilities, competition can be defined within a specific geographical area. However, this is not strictly the case for performance venues. Whilst attendance will be impacted by geography (accessibility, catchment size) and the competing facilities within a defined radius, securing product and events is subject to local, regional and national competition.
- 2.71 There are a significant number of small-scale local entertainment venues in Huddersfield and the surrounding areas. The key local competing entertainment venues are detailed in table 2.11 and illustrated in figure 2.13 overleaf. These venues are all within a 30-minute drivetime of Queensgate Market.
- 2.72 Huddersfield Town Hall is an orchestra hall which holds up to 1,200 people and is the largest entertainment facility in Huddersfield. It hosts numerous events ranging from comedy, live music, weddings, conferences, award ceremonies, meetings, multi-cultural events, and other celebrations. Despite its size and location (adjacent to Queensgate Market), this venue is not seen as a direct competitor to a new venue in Huddersfield. The Town Hall is considered not fit for purpose for large standing concerts and the venue has other limitations. It is seen as a facility that can support the entertainment infrastructure in Huddersfield alongside a new multi-purpose venue.
- 2.73 Dewsbury Town Hall is a Victorian town hall that stands in front of the old marketplace in the centre of Dewsbury. The venue contains a 700-seat concert hall, function and meeting rooms, and an old court room. It is a Grade II* listed building.
- 2.74 The Holmfirth Picturedrome is an entertainment venue with a capacity of around 650. The venue hosts live music and touring bands, alongside showing films, theatrical performances, and stand-up comedy.



Table 2.11 Local competitor entertainment venues

Venue	Drivetime from site (mins)	Capacity
Huddersfield Town Hall	1 min	1,200
Dewsbury Town Hall	22 min	700
Holmfirth Picturedrome	15 min	650
Lawrence Batley Theatre	2 min	477
St Pauls Hall, Huddersfield University	2 min	400
Bassment Studios	5 min	400
Cleckheaton Town Hall	20 min	398
Holmfirth Civic Hall	15 min	320
Dewsbury Minster	25 min	300
Batley Town Hall	26 min	288
The Parish	2 min	170
Marsden Mechanics Community Hall	18 min	200
Small Seeds	4 min	150
Vinyl Tap	7 min	100







- 2.75 The Lawrence Batley Theatre is a mid-scale theatre based in the centre of Huddersfield, housed in a Grade II* listed building, that presents a wide ranging year-round programme of in-house and visiting productions from drama and contemporary dance to circus and pantomime. The building has three performance spaces – the Main House seating 477 people, the Cellar Theatre with up to 120 seats, and the Attic Theatre, with up to 60 seats. This is another venue that is adjacent to the Cultural Heart and is considered to be an important facility which will support the wider entertainment infrastructure of Huddersfield.
- 2.76 St Paul's Hall is located inside of Huddersfield University and is a converted Georgian church built in 1829 that now provides a 400-capacity venue for a range event. In November, each year the Hall also hosts many of the Huddersfield Contemporary Music Festival events the festival's home is at the University of Huddersfield.
- 2.77 Bassment Studios is another venue located in Huddersfield and the 400-capacity venue plays host to a range of upcoming and established artists.
- 2.78 Built in 1892, Cleckheaton Town Hall is situated in the centre of Cleckheaton, and the venue has a 398-seat theatre, which hosts local amateur dramatic, dance and drama productions.
- 2.79 Holmfirth Civic Hall is a not-for-profit venue, run by its registered charity, Holmfirth Civic Hall Community Trust. The venue can accommodate a range of events from small meeting of 6 up to a 320-seat capacity concert.
- 2.80 Dewsbury Minster is a Church that offers a space for up to 300 people for a variety of uses, including creative installations and music concerts, in its Worship area. The Upper Hall, which can be used for meetings and events, holds up to 100 people.
- 2.81 The Batley Town Hall opened in 1853 and is situated in the centre of Batley overlooking the town's Market Square, with a concert hall seating up to 288 people. It is a Grade II* listed building.
- 2.82 The Parish is a pub located in the heart of Huddersfield, with capacity for just over 150 people. The venue hosts local artists and gigs throughout the year.
- 2.83 Marsden Mechanics Community Hall is a community run 200 capacity venue located in the village of Marsden, West Yorkshire. The venue plays host to gigs, events, fairs, festivals, and meetings.
- 2.84 Small Seeds is a bar and live music venue in Huddersfield, with capacity of up to 150 people. The venue plays hosts to regular live gigs from small touring, and local artists.
- 2.85 Vinyl tap is a record store located in Huddersfield, that specialise in rare, deleted and promo items. As well as this, the venue can host small gigs for local artists, for up to 100 people.

Regional Competitor analysis

2.86 Alongside the local competition, there are also numerous mid to large-scale venues in the wider region, within a 60-minute drivetime from the site, with the majority of venues concentrated within Leeds and Manchester. The key regional competing entertainment venues, with a capacity of over 350, are illustrated in Figure 2.14 and are detailed in Table 2.12. overleaf.



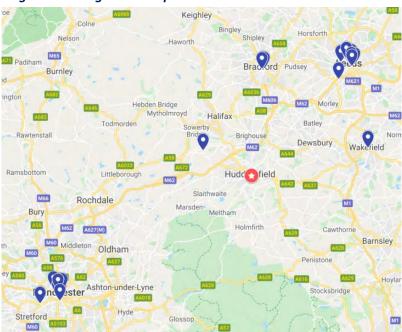


Figure 2.14 Regional Competitor Entertainment Venues

Region	Venue	Drivetime from site (mins)	Capacity (max)
Leeds	First Direct Arena	30	4,000 - 13,000
Leeds	O2 Academy Leeds	32	2,300
Leeds	Leeds Grand Theatre	30	1,550
Leeds	Leeds Town Hall	25	1,200
Leeds	Leeds Playhouse	40	1,100
Leeds	The Space	40	600
Leeds	University of Leeds	40	550
Leeds	City Varieties Music Hall	35	467
Leeds	The Carriageworks	41	350
Leeds	Leeds College of Music	41	350
Leeds	The HiFi Club	32	350
Manchester	AO Arena	45	21,000
Manchester	O2 Victoria Warehouse	55	3,500
Manchester	The Bridgewater Hall	45	1,800
Manchester	Audacious Church	50	1,400
Manchester	The Union	52	1,000
Manchester	Factory Manchester	55	800
Manchester	Royal Exchange Theatre	50	700
Manchester	City Varieties Music Hall	35	467
Bradford	Bradford Live (Odeon)	24	4,000
Bradford	St Georges Hall	28	1,500
Bradford	Alhambra Theatre	25	1,400
Wakefield	Unity Works	39	600
Halifax	The Venue Bowers Mill	20	400



- 2.87 As can be seen from Figure 2.13 and Table 2.12, there are 25 regional venues (over 350 capacity) and they are predominantly located in the key neighbouring cities of Leeds and Manchester, with three venues located in Bradford and a single venue each located in Wakefield and Halifax.
- 2.88 The largest venues in Leeds are the First Direct Arena (4,000 13,000), O2 Academy Leeds (2,300) and Leeds Grand Theatre (1,550) and alongside these there are a number of other venues in Leeds which provide entertainment facilities.
- 2.89 First Direct Arena is one of the major regional and national entertainment venues located in Leeds, hosting live music, comedy, entertainment shows and sporting events. The O2 Academy Leeds is a versatile events space available for a range of events from live music, filming, parties, awards ceremonies, exhibitions, product launches and corporate conferences. It also has a secondary space downstairs 'Underground' (capacity 400) designed to function as a standalone second room for events. Leeds Grand Theatre is a theatre and opera house and was opened in 1878. The theatre is a large scale receiving house and hosts touring productions of West End and Broadway musicals and plays, comedians and music. The theatre is also home to Opera North and is regularly visited by Northern Ballet.
- 2.90 The largest venues in Manchester are the AO Arena (21,000), O2 Victoria Warehouse (3,500) and The Bridgewater Hall (1,800). Similar to Leeds, there are also a number of other venues which provide entertainment facilities.
- 2.91 Manchester's AO Arena is one of the busiest venues in the world and the largest indoor arena in Europe. Since opening in 1995, the Arena has hosted the biggest names in live entertainment. In addition to live music, the venue has also staged some of the biggest events in the UK sporting calendar. The AO Arena attracts over one million visitors each year. The O2 Victoria Warehouse (formerly Victoria Warehouse) is a live music venue and is made up of two storage warehouses used during the early to mid-20th century. It was redeveloped as a music venue in 2012 and is now a flexible space that hosts a range of events. The Bridgewater Hall is a concert venue in Manchester city centre and hosts over 300 performances a year including classical music, rock, pop, jazz and world music. The Hall is home to the Hallé Orchestra, and also hosts the BBC Philharmonic and Manchester Camerata regularly. The Hall also programmes its own classical music season, the International Concert Series.
- 2.92 There are three main entertainment venues in Bradford, which could be considered as competition for any new venue in Huddersfield. Bradford Live is a new venue set to open in 2022 and sees the redevelopment of the old Bradford Odeon into a new 4,000 capacity multipurpose venue. When it open, the venue is expected to attract 300,000 visitors each year and will host a calendar of 200+ music, comedy and family entertainment events as well as providing conference, meeting and banqueting spaces. St George's Hall (1,500) is a grade II* listed Victorian building. It is one of the oldest concert halls still in use in the United Kingdom. The venue hosts one of the UKs longest running Orchestral Seasons, with the Hallé as resident orchestra. The hall also hosts entertainment events, children's shows and amateur productions.



2.93 The remaining two venues are in the neighbouring towns of Wakefield and Halifax but due to the nature of the offer and the available capacity, may not be considered direct competition for any new venue in Huddersfield. The venue in Wakefield is Unity Works (600). It is a multi-purpose venue hosting live music concerts, comedians, free community events, film, dance, theatre and spoken word. It also has conference spaces available to hire and provides hot desking and co-working areas. The Venue Bowers Mill (400) in Halifax is a former textile mill and the building offers a flexible space to host a range of events.

Key findings – competition

- Number of small-scale entertainment facilities in the locale, with the largest venue in Huddersfield being the Huddersfield Town Hal (1,200) but venue has many limitations. The Town Hall alongside the Lawrence Batley Theatre, due to the adjacency of these two venues with the Cultural Heart, are venues that are seen as key supporting elements to any new venue and not regarded as competition.
- The core cities of Leeds and Manchester both have a large indoor arena capable of attracting national and international touring product, and a portfolio of other entertainment facilities going up to 3,500 capacity, covering all key genres of entertainment.
- New venue opening in Bradford (4,000 capacity) will also provide strong competition for any venue in Huddersfield

Summary of entertainment venue demand

- 2.94 The market trends for entertainment suggest that it is a growing market. There has been an increasing number of productions, performances, attendances (ticket sold) and an increase in % of capacity achieved by theatres, as well as an increase in the average ticket price achieved by venues.
- 2.95 Huddersfield has a large catchment within a 30-minute (1,037,591) and 45-minute (3,571,224) drivetime. The level of engagement and propensity to consume arts and cultural activities is in line with the national average. However, there is significant overlap in catchment with Leeds within a 30-minutes drivetime and a small overlap with the Manchester catchment. This leaves Huddersfield with a small unique catchment to attract audiences from.
- 2.96 Considering the competition for entertainment facilities, there are a number of small-scale venues in the locale and this market is well catered for. The largest venue in Huddersfield is the Huddersfield Town Hal (1,200) but this venue has many limitations so it would not be considered as direct competition for any new venue. Due to the adjacency of the Town Hall and Lawrence Batley Theatre to the Cultural Heart, these two venues are considered to be key supporting infrastructures for any the new venue. On a regional level, the core cities of Leeds and Manchester both have a large indoor arena capable of attracting national and international touring product, and a portfolio of other entertainment facilities going up to 3,500 capacity, covering all key genres of entertainment. The new venue opening in Bradford (4,000 capacity) will also provide strong competition for any venue in Huddersfield.



2.98 Considering the market and the competition in the local and regional area, the potential scale for a new venue in Huddersfield should be between 800 – 1,200 capacity. A venue of this scale would position itself as the primary entertainment facility in Huddersfield and could also compete on a regional scale, depending on what product it is able to attract. However, further work still needs to be done to finalise the scale of the venue which will be done at the next stage and taking into account the ambition of the Council, a venue of up to 2,500 seated and standing capacity is also being considered.

Venue – Business Events

- 2.99 The scope of this project does not include a standalone purpose-built conference and exhibition centre. However, when assessing the options for development of an entertainment or multi-purpose venue, it is important to consider whether there is any potential to generate additional usage of the facilities through business events. The additional usage, revenue and economic benefits of attracting these events, can be achieved at a comparatively low cost when making specific adjustments to a multipurpose venue to ensure it is attractive to business events.
- 2.100 The term business events covers a wide range of events, including conventions, association conferences, conferences and corporate events, meetings, exhibitions, and trade shows, consumer exhibitions and incentive programmes. The conference and meetings market is considered in more detail below.

Market Trends

- 2.101 For the past 25 years (since 1993), estimates for the size and value of the UK's conference and meeting sector have been based on annual research undertaken among meeting and event venues, providing a supply-side perspective on this key part of the national economy.
- 2.102 The 'UK Conference and Meeting Survey' (UKCAMS) complements annual research undertaken among conference and event organisers (i.e., demand-side research) by CAT Publications which is published as the 'British Meetings and Events Industry Survey' (BMEIS).
- 2.103 The following data was sourced form the latest UKCAMS 2020 report, which relates to 2019 business:
 - An estimated 1.40m meetings and conferences took place in the UK in 2019. Numbers of conferences, meetings and similar business events were down slightly on 2018 but were still above the average for the last decade (an average of 1.34m per annum).
 - The corporate sector accounted for just under half of all conferences and meetings (46%). This was followed by the public sector (35%) and associations (19%). Compared to 2018, the government and public sector was up (35% of events compared 27% in 2018) with a decrease in the corporate sector.
 - It should be noted that purpose-built convention centres achieved a greater proportion of corporate events at 40%, and a lower proportion of associations (34%) and public sector (27%) events.



Year	Corporate %	Association %	Public sector/ government %				
2019	46	19	35				
2018	54	19	27				
2017	55	17	28				
2016	55	16	29				
2015	52	17	31				
2014	57	18	26				
2013	56	19	25				
2012	56	21	23				
2011	57	20	23				
2010	51	21	28				
2009	47	16	37				
2008	47	17	36				

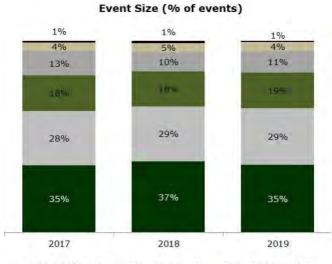
Table 2.13 Proportion of events

Source: UK Conference and Meeting Survey

- 67% of event business was generated from the region within which the venue is located, with 27% from the rest of the UK and 6% from overseas. However, for purpose-built convention centres although they still generate the majority of their events from within the region at 46%, a greater proportion are attracted from the rest of the UK (43%) and overseas (11%).
- Across all type of facilities: most events (64%) were for under 50 delegates; c. 5% of events had over 200 delegates. Purpose built centres typically target and attract the larger events, the survey recorded that the average size of all events at these facilities was 334.
- Four fifths of venues (81%) had undertaken some investment in 2019, with the majority (51%) had invested under £100k, and 6% invested over £1,000,000.
- 2.104 The British Meetings and Events Industry Survey (BMEIS) provides an understanding of the volume and characteristics of the UK events industry through surveying business event organisers.
- 2.105 Table 2.14 overleaf details the average number of delegates attending events. It can be seen that delegate numbers have fluctuated significantly since 2015. Both corporate and association markets have seen large increases in attendance between 2018 19 to their main annual event, but a fall for other events.



Figure 2.15 National industry KPIs – event size



■ 10 - 20 delegates ■ 21 - 50 delegates ■ 51 - 100 delegates ■ 101 - 200 delegates ■ 201 - 500 delegates ■ 501 + delegates

Source: UKCAMS data 2020

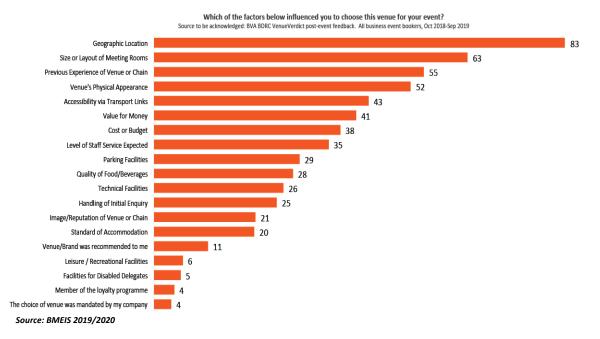
Table 2.14 Number of delegates attending events

Year M	Corporate		Association		
	Main Annual Event	Other events	Main Annual Event	Other events	
2019	477	81	660	96	
2018	368	130	403	121	
2017	238	79	292	86	
2016	276	97	384	153	
2015	288	112	398	137	
Average	329	100	407	593	

2.106 BEMIS also provides an insight into the main factors affecting the choice of destination and venue. This is set out in figure 2.16.



Figure 2.16 Key influencing factors on venue selection



- 2.107 The most important factor influencing the choice of venue is geographic location. The current Queensgate Market site benefits from a town centre location. Huddersfield is well served by the M62, with a number of major routes from the town centre to the motorway in most directions, providing a key arterial route connecting Huddersfield with Leeds to the Northeast and Manchester to the Southwest. There are also strong A road links to the south and east connecting with the M1. Another beneficial factor for Huddersfield is that it is in close proximity to two airports, with Leeds Bradford International (LBA) located approximately 22 miles away and Manchester International (MAN) located approximately 44 miles away.
- 2.108 Alongside that, accessibility via transport links was the fifth most important factor. Huddersfield station is located in close proximity to Queensgate Market and is a core station within the TransPennine Express North Route, with frequent services to Liverpool, Manchester, Leeds and more than 100 other stations which can be reached from Huddersfield in under an hour.
- 2.109 Figure 2.14 also highlights that there are a series of important factors which can be addressed directly by the development of a new venue, such as the size and layout of meeting rooms, physical appearance, value for money, and factors relating to the quality of facilities, food & beverage provision etc. It will be important for any future works to create a quality facility to enable it to compete in the growing marketplace.

Local Competitor Analysis

2.110 There are a number of existing business event facilities in close proximity of the new proposed venue. The key competing local business event venues are illustrated in Figure 2.17 and are detailed in Table 2.15. The table and figure are colour coded to illustrate the different types of venue being used, these include conference and exhibition facilities, hotels, sports venues, educational sites and unique venues.



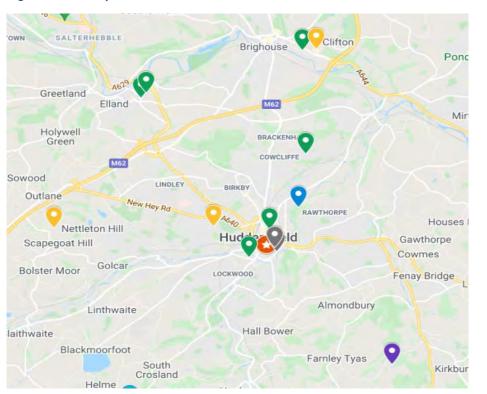


Figure 2.17 Competitor local business event venues

Table 2.15 Competitor local business event venues

KEY Conferencing and Exhibition Hotels Sports Venue Educational Site Unique Venues

Venue	Type of venue	Drivetime from site (mins)	Capacity (max)
Bertie's	Conference and exhibition	15	250
Huddersfield Mission	Conference and exhibition	5	180
Junction 25 Conference & Meeting Venue	Conference and exhibition	15	110
The Meeting Room	Conference and exhibition	15	100
Enterprise Solution Training Ltd	Conference and exhibition	5	80
Cedar Court Hotel	Hotel	12	500
Holiday Inn Leeds Brighouse	Hotel	15	200
Pennine Manor Hotel Huddersfield	Hotel	14	120
John Smith's Stadium	Sports	9	440
3M Buckley Innovation	Educational	3	100
University of Huddersfield	Educational	3	270
Storthes Hall Park	Unique	16	140

2.111 There are currently five dedicated conference and exhibition venues within a 15-minute drivetime of the Cultural Heart. The largest in terms of capacity is, Bertie's, which can hold up to 250 delegates in its three conference rooms. Other venues providing conferencing facilities include, the Huddersfield Mission (180 delegates), Junction 25 Conference & Meeting Venue (110 delegates), The Meeting Room (100 delegates), and Enterprise Solution Training Ltd (80 delegates). These are all relatively small facilities and would not be considered as major competition for any new venue being proposed in the Cultural Heart.



- 2.112 There are currently 3 hotels within a 15-minute drivetime of Huddersfield which provide conferencing facilities for more than 100 delegates. The largest of these is the 4* Cedar Court Hotel, which offers a range of conferencing facilities in a versatile space, accommodating up to 500 delegates. Holiday Inn Leeds Brighouse is a 3* Hotel, providing conferencing facilities for up to 200 delegates and is suitable for meetings, product launches and corporate events. Pennine Manor Hotel Huddersfield also provides conferencing facilities for up to 120 delegates in a 3* Hotel.
- 2.113 There is one sports venue in the local area which provides a conferencing offer. Huddersfield Town Football Club (HTFC) provides conferencing facilities at its home ground, the John Smith's Stadium, and can accommodate for up to 440 delegates. Due to the Stadium's size, in comparison to other venues, the facility is able to offer a large number of breakout spaces and meeting rooms to hold a variety of events, ranging from board meetings to product launches. This would be considered as one of the primary conferencing offers in Huddersfield.
- 2.114 There are currently two academic venues providing conferencing facilities, both located inside of Huddersfield University. Located under a mile from the site, Huddersfield University offers a range of meeting rooms and lecture theatres, providing conferencing facilities for up to 280 delegates and the 3M Buckley Innovation Centre which can accommodate up to 100 delegates.
- 2.115 Storthes Hall Park, a recently refurbished country house, offers conferencing facilities for up to 150 delegates. The venue provides flexible spaces to host conferences, weddings, away days, team building events, and meetings.
- 2.116 The largest conferencing facilities in the Huddersfield area are provided by Cedar Court Hotel (500) and John Smith Stadium (440). However, they are c9-12 minutes drivetime from the Cultural Heart site. The facilities closer to the site are smaller in scale.
- 2.117 Whilst there is a range of conference facilities provision in the Huddersfield area, the dedicated conference facilities are at the smaller-scale, and the larger facilities are a football stadium and hotel some distance from the Cultural Heart. Therefore, a high-quality mid-larger scale offer at the Cultural Heart, as part of a venue, would provide an additional attraction for business events in Huddersfield.

Regional Competition

2.118 Due to the nature of the conference and events market, not only will a new multipurpose venue in the Cultural Heart compete locally for events but also regionally and to an extent nationally. A summary of the existing regional facilities in the market has been presented below. The summary below only considered venues with a capacity of more than 300 delegates, within a 45-minute drivetime of the Cultural Heart. The regional venues have also been categorised in the same way as the local competitor venues.



Figure 2.18 Competitor regional business event venues



Conferencing and Exhibition Hotels Sports Venue Educational Site Unique Venues Other

Table 2.16 Competitor regional business event venues

Venue	Drivetime from site (mins)	Capacity (max)
Harrogate Convention Centre	60	2,000
The Sheridan Suite Manchester	36	1,800
Unity Works	35	600
The Space	40	600
The Venue Barkisland	20	400
The HiFi Club	30	350
Well Met Conferencing	30	350
The Carriageworks	40	350
Cedar Court Hotel Bradford	24	800
The Bradford Hotel	36	700
Cedar Court Wakefield	32	500
Village Leeds North	38	400
Holiday Inn Barnsley	38	400
Mercure Leeds Parkway Hotel	45	325
Hilton Leeds City	35	300
The Queens	36	500
Oulton Hall	45	350

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Venue	Drivetime from site (mins)	Capacity (max)
Campanile Bradford	20	300
Leeds United Football Club	31	1600
Etihad Stadium	42	1500
Old Trafford	45	1200
Emerald Headlingley Stadium	43	350
University of Manchester	45	1,000
University of Salford	40	1,000
Leeds Grammar School	38	600
University of Leeds	40	550
Leeds College of Music	41	350
The Lowry Salford Quays Manchester	45	1,700
Royal Armouries and New Dock Hall	30	1,500
Imperial War Museum North	44	700
The Monastery Manchester	42	600
Victoria Warehouse	45	2,500
LIFE Centre Events	30	1,600
The Victoria Theatre	25	1,512
The Faversham Lounge	35	760
West Yorkshire Playhouse	41	750
Cineworld Leeds White Rose	39	460

- 2.119 There are eight purpose-built conference and exhibition centres in the region, outside Huddersfield. The primary dedicated conferencing and exhibition facility in the region is Harrogate Convention Centre, which can accommodate up to 2,000 delegates. It has 10 event halls and provides 16,500m2 of exhibition space. However, Harrogate is c1 hour drivetime from Huddersfield and is arguably less well connected.
- 2.120 There are ten hotels (3* to 4*) in the region which offer conferencing facilities, with seating capacities ranging from 300-800 delegates. The hotels providing the largest delegate capacities are the Cedar Court Hotel Bradford (800), The Bradford Hotel (700) and The Queens, and Cedar Court Hotel Wakefield (500). Whilst majority of these hotels are located in Bradford, there are hotels also located in Leeds, Wakefield and Barnsley providing conferencing facilities.
- 2.121 There are four sports venues in the region offering conferencing facilities, including 3 Premier League football stadiums and 1 interlinked cricket and rugby venue. The largest sports venue conferencing offer is provided by Leeds United Football Club at Elland Road (1,600), followed by the Etihad Stadium (1,500) of Manchester City Football Club and Old Trafford of Manchester United Football Club (1,200). The other offering is at the Emerald Headingley Stadium (350), home to Leeds Rhinos RLC, Yorkshire County Cricket Club and Leeds Tykes RFC.
- 2.122 There are five educational sites which provide conferencing facilities, including 3 universities, a college, and a secondary school. The largest conferencing offers are provided by the University of Manchester campus and the University of Salford campus, both holding up to 1,000 delegates. This is then followed by Leeds Grammar School (600), the University of Leeds campus (550) and Leeds College of Music (350).



- 2.123 There are four unique venues in the region which provide conferencing facilities. These venues are not traditional sites for business events but due to their distinctive offers, they will attract audiences. The largest of the 4 unique venues is The Lowry Salford Quays, which can hold up to 1,730 delegates in its large range of flexible event spaces. Adjacent to the Royal Armouries Museum, one of Leeds's largest banqueting and exhibition venue, New Dock Hall (1,500), is the regions next largest facility. Other unique venues offering conferencing facilities include the Imperial War Museum North (700) and The Monastery Manchester (600).
- 2.124 There are six other venues within the region that offer conferencing facilities in some capacity. The largest of these other venues is the Victoria Warehouse and the Victoria Theatre, which can hold up to 2,500 and 1,512 delegates, respectively. LIFE Centre Events in Leeds is a flexible events space provided through a Christian community which can host up to 1,600 delegates. Following these is the Faversham Lounge (760), the West Yorkshire Playhouse (750) and Cineworld Leeds White Rose (460).

Key findings – business events

- Largest conferencing facility in Huddersfield provided by Cedar Court Hotel (500) and John Smith Stadium (440), but both distant from the Cultural Heart site
- Small business events venue well catered for locally but lack of any mid-large scale conferencing facility in the town centre
- 35+ facilities c.60 minute drivetime (over 300 delegate capacity)
- Strong regional provision provided for by a range of different venues
- However, based on the location, accessibility, presence of the University, ambition for the Cultural Heart scheme, a new venue would be able to attract business events with the right mix of facilities

Library

- 2.125 Through the DCMS, Arts Council England have a national role developing public libraries, recognising that they have a key role to play in the delivery of cultural strategies and activities. In addition to this, "Libraries Connected", as one of the key national development agencies for libraries, have recognised culture as one of their four key drivers, known as the Universal offers. They recognise that "Public libraries understand how to create a quality cultural experience and are often the first place that children and young people experience cultural events. No other public body has the same reach across the UK's most diverse local communities and the flexibility to respond to local needs. Reaching people who do not normally take part in the cultural activity and helping them to develop a love of and appreciation of the arts is at the core of our Culture Offer".
- 2.126 In response to this and to the Libraries Taskforce seven ambitions for libraries, access to culture was developed as a key strand of Kirklees library's strategic "Ambitions" document "we provide opportunities to participate in, and access, culture, regardless of background".
- 2.127 In addition to being a statutory service, libraries in Kirklees closely align all their work to the Council outcomes, to ensure residents get best value out of their library service. A great Central library should be accessible to all ages, all communities, in all circumstances; social, emotional, economic and physical, where everybody is welcome, and nobody is left behind. It



should be a building which reflects the community's past, meets current needs and opportunities, and which is prepared for the future.

- 2.128 Kirklees already provides a significant amount of high-quality cultural events and activities through its library service and a new library offer in the town centre would create an opportunity to improve and expand that offer further. In 2019, Huddersfield Library held over 1,000 events in 18-19 attended by almost 16,000 people 230 people came to see "The Orielles" at one of the "Get it Loud in libraries" gigs
- 2.129 In order to deliver outstanding library provision for all who live, work and visit Huddersfield, the town centre library needs to be fit for purpose, and in a good state of repair internally and externally. The space needs to feel safe, inclusive and be a welcoming destination which the community of all ages wants to use, where their needs are met and they feel comfortable to stay, sometimes for long periods.

Library – context

2.130 Kirklees has a relatively stable library attendance figures, with a small annual decrease (1%) in library visits overall, as can be seen in table 2.17 from the last two years of pre-pandemic operation.

	2017/18	2018/19
No of Visitors	1,377,114	1,362,117
Total book stock#	461,303	443,495
Total book issues*	950,750*	921,303*
ICT no of uses	186,434	171,617
No of public access PC's	179	179
New members	10,036	9,944
Events Attendance Hours volunteered	7,178 108,048	8,385 117,485 38,717
#Book stock only (no audio). *Inclu	ides eproducts.	0.000

Table 2.17 Kirklees Library KPI's

2.131 There is a high annual footfall (360,000+) at Huddersfield central library, with significant IT usage (c.58,000), as illustrated in the table overleaf.



Location	Vistor figures	lssue figures	IT uses	New members	Active members	Hours volunteered
Almondbury	15,842	12,924	437	263	687	582
Batley	118,349	55,611	11,672	1,025	3,693	1,603
Birkby	Library closed	ł l			337	
Birstall	86,280	30,616	3,834	442	1,561	2,485
Cleckheaton	85,254	93,500	5,872	783	3,355	2,098
Chestnut Centre	61,072	4,958	2,783	167	552	0
Denby Dale	6,473	17,101	572	489	1,024	1,253
Dewsbury	166,741	108,538	38,502	2,003	7,206	2,604
Golcar	15,997	16,990	650	194	734	859
Heckmondwike	36,459	20,463	5,333	360	1,455	718
Holmfirth	74,657	61,646	4,189	594	2,531	1,386
Home Service	8,961	39,364		49	521	156
Honley	19,834	23,123	1,562	191	760	1,031
Huddersfield	362,092	258,312	57,633	3,833	13,863	3,332
Kirkburton	29,042	26,458	1,545	209	941	3,312
Kirkheaton	10,340	7,787	434	84	290	1,556
Lindley	47,252	64,050	4,255	680	2,282	3,743
Marsden	24,995	13,402	1,365	160	718	1,762
Meltham	Shared space	24,637	1,223	242	995	1,921
Mirfield	60,091	66,385	4,542	697	2,505	4,693
Greenwood	18,724	6,507	5,550	197	972	858
Rawthorpe	13,391	7,094	1,462	145	495	540
Shepley	14,239	13,241	443	98	514	1,174
Skelmanthorpe	26,637	17,654	707	213	790	2,659
Slaithwaite	19,212	16,970	871	244	878	950
Transcription Services	2,749	10,393	0	0	0	545
Online resources		223,483				
Total	1,324,683	1,241,207	155,436	13,362	49,659	41,818

Table 2.18 Kirklees Library Visits – detail (2019-20)	
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2.132 As can be seen from the table overleaf, the two largest library user groups are:

- Harder pressed and financially stretched suburban and semi-urban households for whom arts and culture plays a small role
- Suburban households, often with children, whose cultural activities are usually part of a planned day out or treat.



Audience Spectrum segment		Huddersfield Library Members		Kirklees population	Index
		Count	%	%	
	Metroculturals	109	0%	481	78
High engagement	Commuterland Culturebuffs	4,134	6%	83	139
engagement	Experience Seekers	4,378	7%	172	31
	Dormitory Dependables	7,326	11%	82	141
Medium engagement	Trips & Treats	11,851	18%	84	99
en5a5emene	Home & Heritage	4,018	6%	63	130
	Up Our Street	8,223	12%	110	74
Low	Facebook Families	14,890	23%	138	135
engagement	Kaleidoscope Creativity	8,566	13%	119	17
	Heydays	2,578	4%	69	61
Base		66,0	73	355,716	

Table 2.19 Huddersfield Library Demographic Breakdown (Mosaic)

Please note: base totals and percentages do not include unclassified records

2.133 The library is currently reaching several key typically low-engagement groups, as can be seen in the columns on the right-hand side of the figure below:

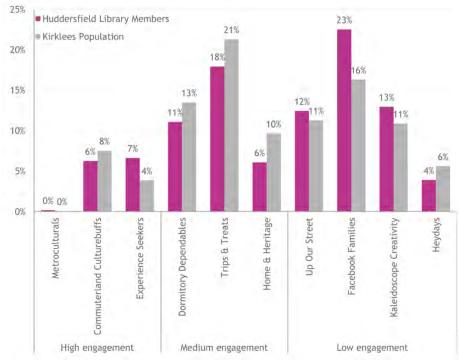


Figure 2.19 Huddersfield Library Demographic Breakdown (Mosaic)

Library - Services on offer

2.134 The library should look to create spaces that can provide a range of services, including:

• Books - a celebration, ease of access, representing of local community as well as embracing a world of opportunity, knowledge and adventure



- Information support trusted professionals offering guidance and advice, including a strong business support offer
- Space and comfort where visitors should feel safe, inspired, and no money is required
- Child /family /school group friendly this space should be a destination and not an addon to the adult space, where noise is not frowned upon and creative play and learning is anticipated and accepted; a space where children of all ages are supported in getting the best start; a space which allows work with vulnerable children in a place where they feel safe to learn, share and create.
- Welcoming and appropriate spaces and activity for young people individually and in groups
- Be made equally accessible for rapid use (quick drop ins) and all day stays
- Spaces for Council departments, local health services, 3rd sector organisations, community groups to meet, inform, advise, and support the community. Spaces which can be adapted for large drop-in events as well as for private appointments, including helping to support people to improve their health and wellbeing.
- Showcasing, interpreting and easy access to local heritage through a local and family history service reflecting communities across Kirklees
- Study/quiet space available for students (of all ages), for business start-ups, for aspiring writers, for writing CVs, for bloggers, for readers, for tourists to write postcards, for carers to fill in forms, for report writers, for artists, for whoever needs a moment of peace in a world full of noise.
- Dedicated space to support the growth of scientific and other types of creativity, equipped with the necessary tools to allow people to experience the possibilities of coding and electronic construction and prototyping, and other craft or maker-space type activity utilising equipment which would be unaffordable to most individuals.
- Designated exhibition space to accommodate British Library touring exhibitions. The service already has a unique relationship with the British Library, which can bring high quality, professional exhibitions to Kirklees
- Cultural opportunities which tie in with the Cultural Heart neighbours and beyond. Libraries are used by sections of the community who do not access other forms of culture. The library space could introduce and demystify other cultural offers and offer springboard experiences that would help to empower people to expand their creative horizons, through performance and activity spaces.
- For many people this library will be their local library and should, therefore, meet the same expectations that we would have for any other library, such as regular storytimes, reading groups, community spaces for community run activities
- The ability to run with confidence large-scale events, for example Get it Loud in Libraries gigs, author talks, festivals, children/young people takeover days, Fun Palaces etc.



- 2.135 In designing a new space for library provision, the Council's Library Service believe following principles should be considered:
 - Unfixed flexible spaces designing spaces with flexibility in mind supports the evolving needs as the service. For example, fewer built-in service counters and computer stations or study carrels, modular furniture pieces to accommodate these functions and allow for future reconfiguration with minimal disruption and cost, fewer fixed PC stations, mobile furniture, and the use of furniture and shelving to designate spaces without walls.
 - Light and airy open spaces whether the library is a brand-new space or an existing one, light open spaces are being emphasized in current building design. Sustainable practices and the general trend for healthier lifestyles have driven the demand for more natural light and views to the outside. This can be achieved by adding or building larger windows, adding interior windows to bring light farther into the building, having lower library shelving to extend natural daylight, and even clever use of colour or floor pattern changes.
 - **Power** electricity demands continue to increase across the board and are an important design consideration. Because of emerging technologies, locations where devices are being used continually change, and this creates a demand for multiple types of access to power; for example, powered tables, powered lounge furniture, charging stations, or wireless charging areas. Planning for power and data infrastructure is imperative to keep up with the changing demands in a cost-effective way.
 - **Collaborative spaces** library spaces are in demand. Many new library designs are incorporating rooms or "rooms within a room" for collaboration and meeting spaces. Manufacturers are producing some great solutions for varying degrees of need, such as demountable partitions or moveable walls, makerspaces with accessible wall panels for changing technology upgrades, meeting rooms that include writable marker board walls, acoustic separation, as well as free standing lightweight partitions and screens.
- 2.136 Whilst there are some slight advantages for the Home library service being run out of the Central library (e.g. access to a fuller range of Book stock, closer working relationships with colleagues etc.) if alternative accommodation could be found (they require a loading bay) then this is a service which does not have to be in the centre.
- 2.137 Library Managers, including the Senior Team, the Development librarians, the librarians and the CSMs are all currently based in the Central Library. This is the preferred model, which would require staff accommodation, however, if there was insufficient space and alternative accommodation could be found elsewhere these officers do not necessarily have to be in the centre.
- 2.138 In order to maintain a sense of community ownership, it will be important to engage with current library users, all stakeholders and the wider community to establish their views on future library provision in the town centre. Community participation should help in the creation of a vibrant, relevant space. In addition, it is important to explore the feasibility of co-location of spaces and/or services with museums, galleries and archives to create a flexible and fluid space to provide the best customer experience.



- 2.139 The West Yorkshire Archive Service, exists to preserve the past, serve the present and protect the future. It does this by collecting and looking after the unique documentary heritage of the region and by helping members of the public use and enjoy these records. It currently has a front-of-house presence in the library, which includes a modest level of storage on-site. The archive service is a good fit with the broader range of library services, sitting well alongside the research facilities.
- 2.140 In terms of current research visitors, WYAS Kirklees users tend to be younger than the sector average and are also distinct in that they are more interested in using archives collections for more active/democratic purposes as part of their daily life (e.g., relating to their home, street, local community) rather than for purely historical purposes. There is a modest number of annual visitors, however, maintain and creating public access to the civic archives is a statutory duty. The majority of archives material is housed off-site in locations that are deemed unfit for purpose and the Council has been warned they risk losing their status as an approved custodian of the archives if this is not addressed. It is important to note however that this facility does not necessarily need to be in the Cultural Heart.

2.141 In summary, therefore, the Central library currently has

- High number of annual visits c.360,000 p.a. suggesting hyper-local audience
- Large number of IT uses (almost 60,000) suggesting frequent visits and solid user base (c.14,000 members)
- High student use of research rooms and study area
- Potential for new facility to increase usage by 10-15% i.e. additional 36,000-54,000 p.a.
- Demographic in often hard-to-reach groups; very different user profile to museum and gallery
- Creates 'safe' environment high access value for visitors good 'front-door' facility
- Potential for facility combining/sharing
- Shared storage solution preferred on-site.

Museum and Gallery

2.142 To quantify the potential market for the new museum in the Cultural Heart, it is helpful to consider the national context. We have assumed that pre-pandemic levels of attendance are likely to be reached within three years i.e. well within the time of the Cultural Heart planning and construction period. The proportion of adults who visited a museum or gallery in the area in the last pre-pandemic 12 months (by region, 2018/19) is under 50%.



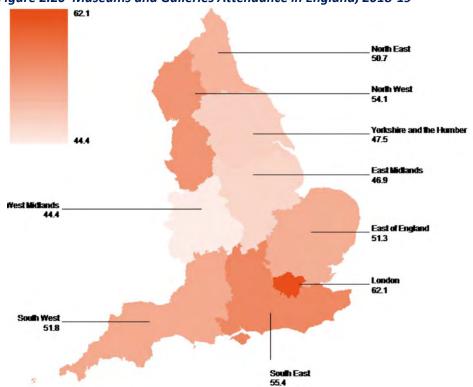


Figure 2.20 Museums and Galleries Attendance in England, 2018-19

2.143 The Proportion of adults who visited a museum or gallery in the area in the last 12 months (by frequency of visit, 2005/06 - 2015/16) has increased in all areas i.e. from occasional to frequent users, as illustrated in the figure below:

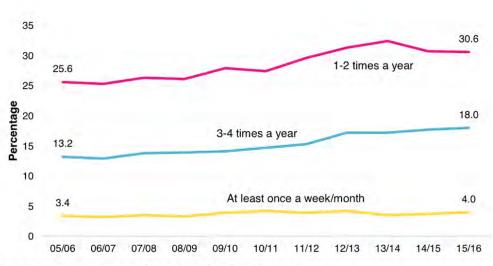


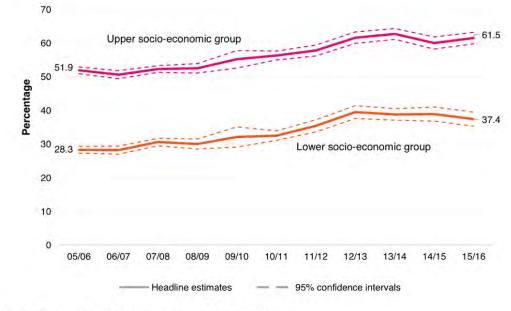
Figure 2.21 Museums and Galleries – frequency of attendance in England

Note: Confidence intervals range between +/-0.1 and +/-1.7

2.144 Perhaps of more importance within the context of the social impact ambitions of Cultural Heart, is the potential to attract more, new users to the library. In that event it is important to be aware of what groups are **not** attending/visiting. The socio-economic aspect is illustrated in the figure below:



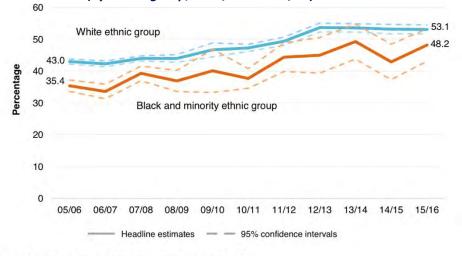




Note: Confidence intervals range between +/-1.0 and +/-3.0

2.145 The ethnic-origin aspect is illustrated in the table below, showing a 5% difference in attendance between white and BAME attenders.

Figure 2.23 The Proportion of adults who visited a museum or gallery in the area in the last 12 months (by ethnic group, 2005/06 - 2015/16)

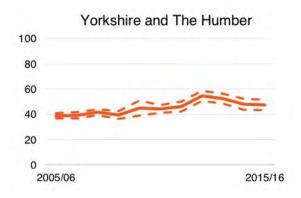


Note: Confidence intervals range between +/-0.8 and +/-6.8

2.146 Between 40-48% of adults visited a museum or gallery over a 10-year period in the Yorkshire and Humber region (2005/06 - 2015/16). This is around 4% lower than national average, as illustrated in the figure below, suggesting there is capacity to increase the attendance to, at least, meet the national average.



Figure 2.24 Museum and Galleries attendance – regional trend (Yorkshire and Humber)



2.147 Regionally, there is a higher than national average for frequency of gallery visits in catchment area, but a lower overall number of individuals attending, indicating a smaller number of attenders visiting more frequently, as indicated in the table below.

Attended in past 12 months	45 Minute Drive Time from HD1 2UJ		England	
	Count	%	Count	%
Art galleries	730,321	25%	12,677,122	28%
Art gallery once a month or more	47,004	2%	548,580	1%
Ballet	291,051	10%	5,143,185	11%
Classical concerts	353,218	12%	6,672,412	15%
Comedy shows	660,516	23%	10,861,174	24%
Contemporary dance	221,839	8%	4,135,846	9%
Jazz concerts	239,444	8%	4,688,459	10%
Opera	242,781	8%	4,497,881	10%
Plays	802,043	28%	14,898,978	32%
Popular/rock concert	1,052,195	37%	17,583,489	38%
Theatre	1,098,706	38%	20,098,100	44%
Theatre once a month or more	75,313	3%	1,176,660	3%
Adults 15+ estimate 2016	2,875,	359	46,006,	851

Table 2.20 Cultural attendance – regional trend

The Audience Agency

2.148 It's useful to consider the comparative data with other creative pastimes, for example, the table overleaf illustrates the 50% gap between Museum and Cinema attendance with almost 3 times as many attending the latter.



Visited in past 12 months	ed in past 12 months 30 Minute Drive Time from HD1 2UJ		England	
	Count	%	Count	%
Museums	225,110	27%	13,103,913	28%
Archaeological sites	43,237	5%	3,079,551	7%
Stately homes/castles	152,288	18%	9,673,160	21%
Adults 15+ estimate 2016	829.0	656	46,006,	851
Cinema visits				
Cinema visits Cinema visits	30 Minute Driv HD1 :		Engla	nd
			Engla Count	nd %
and the second	HD1	2UJ		
Cinema visits	HD1 : Count	2UJ %	Count	%
Cinema visits Ever go to the cinema Go every two or three months	HD1 : Count 639,318	2UJ % 77%	Count 36,586,820	% 80%
Cinema visits Ever go to the cinema	HD1 : Count 639,318 122,514	2UJ % 77% 15%	Count 36,586,820 7,304,218	% 80% 16%

Table 2.21 Regional Cultural Trends – Museums and Cinema: HD1 postcode catchment

2.149 Around 28% of current Museums and Galleries visits (41,000) are to the current museum and gallery buildings, as the table below illustrates. This is a comparatively low level on which the new facilities could build quite considerably. The Tolson Museum attendance can in pat be explained by its location, which is not central.

Number of Visitors	2017/18	2018/19
Bagshaw Museum	28,785	27,078
Oakwell Hall	7,388	7,137
Oakwell Visitor Centre	77,901	69,159
Tolson Museum	27,355	26,042
Huddersfield Art gallery	17,938	15,203
Total	159,367	144,619
Number of class visits	767	331
Number of school pupils	6,184	5,105

Table 2.22 Kirklees Museums and Gallery: Current Visitor Attendance

Summary

2.150 The key museum and gallery issues are, therefore:

- Currently, the majority of museum visits come from within a 20m drive-time, therefore, a • very local audience
- 26,000 visits p.a. to Tolson accounts for just 18% of all museum visits in Kirklees ٠
- A centrally-located museum should have greater attractiveness increasing to 30m ۲ drivetime alone could generate c.57,000 visits p.a.
- Large socio-economic gap in visitors (24% between upper and lower) and ethnic diversity (5% between white and BAME)



- Collection's strength primarily in paintings; artefacts of significance are often large/industrial
- Shared storage solution preferred on-site
- Solution for Tolson could create complementary heritage offer
- Currently, the majority of gallery visits come from within a 20m drive-time, therefore, a very local audience
- Current Gallery attracts 15,000 visits p.a. a modest amount for a central location, reflecting a) subsuming of profile within library building, and b) limited space for large touring exhibitions
- A new facility would have greater attractiveness increasing to 30m drivetime alone could generate c.32,000 visits p.a.
- Painting's collection currently under-exploited (value of collection is £50m) needs permanent display area and secure storage nearby.
- Galleries can be stand-alone exhibition facility servicing the needs of museum, library and conference markets, or integrated within each
- Visitor demographic/challenges similar to museums
- Shared storage solution preferred on-site

Food Hall

- 2.151 The creation of a food hall as part of the Kirklees Cultural Heart is listed as a core requirement of the development project and a necessary offer to provide. A well-built food hall can be a key feature of a real estate project. With an exciting selection of food from around the world, a good food hall has a feeling of authenticity that pulls in daytime and evening diners. It can act an as anchor of a development project and support footfall and increase consumer dwell time. The food hall can provide an interface with the other cultural uses which in turn increase the footfall to the food hall itself. Food halls showcase local identity, and also serve nearby office and residential communities and promote local industries and small businesses.
- 2.152 The template that has recently emerged in the United States and which includes a mix of authentically prepared food and drink offers, with an emphasis on communal dining, is the best indication of how European food halls are developing. In fact, the term 'food hall' in its modern sense is not yet widely recognised across Europe, where the word 'market' (with its clear heritage of high quality, fresh produce) is much more common. It is no accident that one of the leading European operators (Time Out Group) has chosen to use that word in its title. However, that as concepts are developed and refined over the next few years, the use of the term 'food hall' will increase. It would be much easier for the commercial real estate industry if there was a single, widely understood term. That is unlikely to occur soon. In the meantime, it is at least clear what a food hall/market is not.



- 2.154 Food hall concepts have exploded in recent years. What was innovative in 2011 and on-trend in 2017 is now rapidly becoming ubiquitous in most UK and European metropolitan markets and this needs to continue to be a viable model in coming years. The key to maintaining viability is making sure the fundamentals are in place, the strategy is clear, and the execution is well managed.
- 2.155 Food halls have an offer that suits the convenience lifestyle and has the degree of flexibility needed for today's consumer. Customers like that they don't need to pre-book or pay a deposit; the ability for different members of their party to choose their own dishes, not bound by what the others want; and they like the "artisan" food, cooked in front of them from real ingredients. With any format comes challenges of course, and customers often complain of limited and uncomfortable seating, long waits for food from inexperienced operators and the interruption to a night out by queuing several times.
- 2.156 A footprint size of between 800 to 1,500 sqm (net) should be provided as 'warm shell' space. A plant zone to serve the area with air changes (ventilation and air supply) and incoming services (electrical and gas) and a floor slab clear of obstruction (internal walls) and ready for finishes to be applied. The construction fit out works are likely to be undertaken by the tenant (see below). A connection to external areas to provide outside seating and dining space is an essential component in connecting the food hall space to other offers and will improve the creation of a social day time and night space.

Urban Park

- 2.157 As part of the Cultural Heart vision, the urban park is considered a key element in the scheme. Huddersfield is surrounded by the countryside but has very little public green space and nature in the town centre. There is a direct correlation between access to nature and a natural environment, and health and wellbeing.
- 2.158 Providing an urban park gives an opportunity to not only enhance the public realm and provide a quality space but to also create connections and linkages to other parts of the town. Currently, the ring road causes a disconnect between the town centre and the University of Huddersfield, exacerbated by the loading bay structure of the Piazza. With the development of an urban park there is an opportunity to draw the university into the town centre as well as being an improved space for the public and visitors to engage with.
- 2.159 The vision form the Huddersfield Blueprint is to develop a Cultural Heart for the town centre where leisure, arts, music and events spill out into high quality spaces. By breaking down the physical and perceived separation experienced between Queensgate and the university together with opening up views of the Town Hall, improved links to the Lawrence Batley Theatre and to other parts of the town centre, there is scope to enhance the nature of this area.
- 2.160 Alongside providing an urban park, there is opportunity to incorporate an outdoor event space. As laid out in the Kirklees Events Policy (2016), the Kirklees Public Art Policy (2017) and subsequent Huddersfield Public Art Plan (2019), events in various scales are important to the cultural life of the town. The different types of events which could be considered for this space include:
 - **Events that are of benefit to the community**: Events have direct and indirect impacts on communities. They provide opportunities for participation, skills development,



volunteering and social, cultural, economic and environmental developments. Community events and festivals can attract tourists and visitors at regional, national and sometimes on an international level. Events help to capture attention and promote attractions and infrastructures. The Council should recognise the value of community events for the benefit and cohesion of the community and local residents and could therefore provide additional support to encourage these events, for example marketing support through Creative Kirklees or a reduced rate on charges.

- **Civic Events:** It is important that civic events are recognised as they bring together different communities under a shared banner, for example, Freedom Parades, Remembrance Sunday Parades or the Queen's Birthday. Similar to the 'events for the benefit of the community,' these events are important to the fabric of the community. For national celebration events, organisers could be signposted to where they can join in and be supported to link with spaces and places across the district to reduce their costs and those of the Council.
- **Parades:** Parades are important to different festivals and events and are integral to different cultural celebrations. However, the impact of road closures is significant, therefore, to support such activity within the town, designated routes would need to be established to ensure minimal impact on the wider community and local businesses whilst ensuring the events can take place safely.
- **Commercial events:** Whereby the organiser seeks to make commercial gain with no direct benefit to the community whether they themselves are a profit distributing company/organisation and/or the activity is to purely gain profit for no benefit to the community. For events whose purpose is commercial, and the event is part of an organisation's business model whereby they aim to generate a profit, the Council should seek to implement a clear set of charges and expectations. In addition to this, the Council should also have a clear set of terms and conditions with regard to the booking and deposit/bond and should stipulate requirements for how the event management company will behave with regard to local business operations and other requirements.
- Events that bring vibrancy and are delivered in partnership: The Council should seek to develop a strategy to look at with which events it wishes to be a partner. Such a partnership will be targeted on specific activity, for example regional sporting events. As a result of participation in these regional events, the profile and reputation of Kirklees and its towns and villages will be raised significantly. Regional partnerships on cultural activity will enable Kirklees to host and deliver high quality and high profile activity with multiple benefits for the economy and our communities.

2.161 A breakdown of the kind of activities that can take place is detailed in table 2.23 below:

Activity type	Activity Breakdown
Animation	 public art installations, temporary sculptures decoration / beautification sites screenings - sport / films lighting – attracting people for festive or other types of events Small markets – pop up small scale

Table 2.23 Urban Park Activities



Activity type	Activity Breakdown
	Large markets – international or Christmas markets
Commercial	Small scale commercial activity and promotions
	Large scale commercial events – festivals, food and drink events
Events/Festivals	 Small scale events – community fairs, live performance – theatre/music, outdoor celebrations, Large scale events – live performance, festivals, outdoor celebrations – festive celebrations

- 2.162 The overall ambition for the urban park is to create enhanced public realm and green spaces within a flexible, multi-functional space that complements the existing and new cultural uses and brings people into the new Cultural Heart.
- 2.163 The Council has commissioned a separate outdoor venue feasibility study. TG Events have been appointed to review all outdoor spaces across Kirklees to understand their scope for outdoor events. The study will also consider event site plans for the sites most suitable for outdoor events, with the idea of increasing events delivery and commercialising them. The outcomes of that study will be incorporated in to the OBC.

Car parking

- 2.164 Kirklees Council commissioned SYSTRA to produce a car parking study for public parking provision in Huddersfield in 2019. The aim of the study was to provide a locally specific parking strategy and accompanying delivery plan for Huddersfield, which supported the aims of the Local Plan and the more specific spatial aspirations contained within the Huddersfield Blueprint within the plan period to 2031.
- 2.165 An overview of the local context, existing supply and occupancy survey considered in the study is as follows:
 - The Census data indicates that over a third of households in Huddersfield do not have access to a car. This is greater than the proportion for Kirklees (26%) as a whole.
 - The Census data indicates that 67% of residents in Huddersfield are economically active. This figure compares to 68% for Yorkshire and the Humber and 70% for the whole country, which further demonstrates that Huddersfield is performing below the regional and national averages in terms of economically active residents.
 - Huddersfield has the lowest proportion of car users for commute purposes at 59%. This is in contrast to 65% for Kirklees. This would be expected given the car ownership trends noted above and the better accessibility of Huddersfield town centre by sustainable modes.
 - In Huddersfield town centre, the total number of car parking spaces for public use (excluding dedicated disabled user parking) is just under 5,500. The Council owns and operates 51% of these spaces, and the private sector 49%. Off-street car parks provide 85% of the spaces, and on-street 15% in Huddersfield.
 - Quality of Market Hall car park on the Cultural Heart site (now demolished):



- Levels 1-6 70% occupied. Levels 7-8 90% occupied.
- \circ Condition of payment machines is poor, and they are difficult to find.
- Machines do not appear to accept payment after 6pm, despite a £1 charge. This leads to anxiety over gaining a parking ticket.
- General appearance of the car park is poor, with low levels of lighting and cleanliness and poor quality pedestrian routes which could be significantly improved.
- Signage from the highway network is good, including a dynamic sign displaying the number of spaces available.
- In Huddersfield, the average weekday peak occupancy was between 12:00 and 13:00 at 70%. The average length of stay across Huddersfield was just under three hours.
- In Huddersfield, the average Saturday peak occupancy was between 13:00 and 14:00 at 57%, with an average length of stay of just over two hours. This peak is slightly later and lower than on a weekday, with the average length of stay approximately an hour shorter.
- The Influence of Huddersfield University:
 - The university is the largest private employer in Huddersfield, with over 2,000 permanent and fixed-term staff as well as approximately 18,500 students who attend the campus regularly.
 - The university campus is located to the south-east of the town centre between Wakefield Road and Queensgate. The university currently operates 686 car parking spaces for staff and visitor use, across 16 sites around campus. The majority of spaces are for staff use and only those with permits (priced at £740 per annum) are allowed to park on campus, with entry restricted by barriers. There is a waiting list of approximately 200 for staff permits, although the university has enjoyed success with the implementation of their Travel Plan, with an 11-percentage point reduction in lone car driving amongst staff from 54% to 43% between 2008 and 2017.
 - The university does not provide any designated parking for student use. The key
 parking areas for students are understood to be in the St Andrew's Road, Colne
 Road and Newsome areas, as well as other residential areas surrounding the
 university such as around Wakefield Road.
- 2.166 Based on this context, the car parking study drew up recommendations relating to individual car parks in order to provide a better user experience. The summary of the recommendations for the Market Hall car park are summarised below. Note that at the time of writing this SOC, the Market Hall car park has been demolished.
- 2.167 In order to support the major regeneration of the Cultural Heart of Huddersfield identified in the Blueprint, it is recommended that a new high quality multi-storey car park in keeping with the design of surrounding buildings is provided as part of the Cultural Heart programme. The car park is currently well utilised, with the October survey data demonstrating that it is close



to 100% occupancy during the peak. If the multi-storey car park was not replaced with a similar level of provision, this could have a significant negative impact on the regeneration of the market and cultural areas, the University and the economic performance of the town centre as a whole.

- 2.168 Kirklees Council has undertaken financial modelling for a replacement car park of similar capacity to the existing structure at around 550 spaces on the existing site. This level of provision was highlighted as necessary to support future demand for car parking.
- 2.169 Due to its convenient location adjacent to the ring road and close to retail and leisure facilities in Huddersfield town centre, it would accommodate both long and short stay parking in a similar way to the current Market Hall car park. Additionally, this car park would provide a high quality facility for visitors to the nearby University of Huddersfield, which has been identified as being very limited on campus.
- 2.170 Given the opportunity that the significant capital investment presents, it is recommended that the highest design standards for multi-storey car parks are adopted, and options are explored to utilise the most modern technology for example a car park management system and real time information regarding the availability of spaces. These include efficient, user-focussed access and egress systems, remote access for user assistance, potential operating cost savings with the system being self-enforcing and full auditing, control and reporting of revenue. Value added services commonly offered at similar high-quality facilities such as car washing, valeting and shop-mobility should also be considered as part of the design. Given the strategic location of the car park, adjacent to the proposed Cultural Heart, it would also be preferable for access and egress to be achieved both east and west on the ring road, as now, so that the site conveniently serves the whole of the town, avoiding the need to undertake U-turns further along the ring road and reducing overall vehicle mileage. Figure 2.25 illustrates a recently completed high quality car park alongside a shopping centre in Leeds.



Figure 2.25 Leeds Shopping Centre Car Park



Summary of business needs

2.171 Table 2.24 below provides a summary of the business needs/ market demand for each of the key facilities.

Facility	Key findings of market assessment	Facilities required
Venue	 Huddersfield has a large catchment within a 30-minute (1,037,591) and 45-minute (3,571,224) drivetime. However, there is significant overlap in catchment with Leeds within a 30-minutes drivetime and a small overlap with the Manchester catchment. This leaves Huddersfield with a small unique catchment to attract audiences. The level of engagement and propensity to consume arts and cultural activities is in line with the national average Number of small-scale entertainment facilities in the locale. Huddersfield Town Hall and the Lawrence Batley Theatre, due to their adjacency to the Cultural Heart, are venues that are seen as key supporting elements to any new venue and not regarded as competition. The core cities of Leeds and Manchester both have a large indoor arena capable of attracting national and international touring product, and a portfolio of other entertainment. New venue opening in Bradford (4,000 capacity) will also provide strong competition for any venue in Huddersfield Based on the location, accessibility, presence of the University, ambition for the Cultural Heart scheme, a new venue would be able to attract business events with the right mix of facilities 	 Multi-purpose venue capable of accommodating both entertainment and business events Scale of venue to be finalised at the next stage - options of between 800 seated/1,200 seated and standing and 2,500 seated and standing capacity being considered, reflecting market feedback and ambition programme for the Cultural Heart Considering opportunity for flexible space to share with some of the other cultural uses e.g. gallery and exhibition space Consideration of joint provision and management with Food Hall Opportunity to develop esports facilities

Table 2.24 Summary of business needs/ market demand (Core Facilities)



Facility	Key findings of market assessment	Facilities required
Library	 High number of annual visits – c.360,000 p.a. – suggesting hyper- local audience Large number of IT uses (almost 60,000) – suggesting frequent visits and solid user base (c.14,000 members) High student use of research rooms and study area Potential for new facility to increase usage by 10-15% i.e. additional 36,000-54,000 p.a. Demographic in often hard-to- reach groups; very different user profile to museum and gallery Creates 'safe' environment – high access value for visitors – good 'front-door' facility 	 New centrally located library Nulti-purpose flexible space for education, storytelling/performance, and book lending. Children's library/reading area Research space, including digital/computer terminal access Exhibition area Cafe (preferred; could be shared) Minimum: Storage - primarily books, also display cases, staging etc. Optimum: storage for Home delivery operation - this also requires vehicle access to a distribution point Optimum: offices Potential for facility combining/sharing Shared storage solution preferred on-site.
Museum	 Currently, the majority of museum visits come from within a 20m drive-time, therefore, a very local audience 26,000 visits p.a. to Tolson accounts for just 18% of all museum visits in Kirklees A centrally-located museum should have greater attractiveness – increasing to 30m drivetime alone could generate c.57,000 visits p.a. Large socio-economic gap in visitors (24% between upper and lower) and ethnic diversity (5% between white and BAME) Collection's strength primarily in paintings; artefacts of significance are often large/industrial Solution for Tolson could create complementary heritage offer 	 New centrally located facility Shared storage solution preferred on-site Minimum: Three exhibition areas that allow permanent, semi- permanent and touring/temporary exhibitions- areas should allow for display of large-scale items, such as weaving looms and vehicles Optimum: an additional 2-3 smaller flexible exhibition areas, potentially to be co-programmed with library and/or gallery Minimum: on-site storage for smaller number of artefacts, including area for set-up and take- down of exhibitions; also exhibition cases Teaching and education spaces (can be shared) Technical workshop: for repair, framing, etc Cafe (preferred) Optimum: Offices Informal pop-up performance



Facility	Key findings of market assessment	Facilities required
Galley	 Currently, the majority of gallery visits come from within a 20m drive-time, therefore, a very local audience Current Gallery attracts 15,000 visits p.a. – a modest amount for a central location, reflecting a) subsuming of profile within library building, and b) limited space for large touring exhibitions A new facility would have greater attractiveness – increasing to 30m drivetime alone could generate c.32,000 visits p.a. Painting's collection currently under-exploited (value of collection is £50m) - needs permanent display area and secure storage nearby. Galleries can be stand-alone exhibition facility servicing the needs of museum, library and conference markets, or integrated within each Visitor demographic/challenges similar to museums 	 Flexible exhibition spaces to accommodate a) Items from permanent collection, b) loaned items, c) touring exhibition/s, d) community/University exhibitions - these spaces can be configured in different size combinations depending on nature of exhibitions at any one time Optimum: sufficiently large exhibition space to accommodate large scale works on loan Storage: secure and environmentally controlled area that can accommodate entire civic collection; display cases; holding area for exhibition take-down and set-up Technical workshop: repair, framing, etc. Pop-up performance area Cafe (preferred) Optimum: offices Optimum: screen room Teaching/education spaces (can be shared) Shared storage solution preferred on-site
Food Hall	 A well-built food hall can be a key feature of a real estate project. With an exciting selection of food from around the world, a good food hall has a feeling of authenticity that pulls in daytime and evening diners. It can act an as anchor of a development project and support footfall and increase consumer dwell time. The food hall can provide an interface with the other cultural uses which in turn increase the footfall to the food hall itself. Food halls showcase local identity, and also serve nearby office and promote local industries and small businesses. 	 A footprint size of between 800 to 1,500 sqm (net) A plant zone to serve the area with air changes and incoming services and a floor slab clear of obstruction and ready for finishes to be applied A connection to external areas to provide outside seating and dining space





Facility	Key findings of market assessment	Facilities required
	with entry restricted by barriers.	
	There is a waiting list of	
	approximately 200 for staff	
	permits.	
Urban Park	 Providing an urban park gives an opportunity to not only enhance the public realm and provide a quality space but to also create connections and linkages to other parts of the town. Currently, the ring road causes a disconnect between the town centre and the University of Huddersfield, exacerbated by the loading bay structure of the Piazza. With the development of an urban park there is an opportunity to draw the university into the town centre as well as being an improved space for the public and visitors to engage with. Opportunity to incorporate an outdoor event space as part of the urban park The overall ambition for the urban park is to create enhanced public realm and green spaces within a flexible, multi-functional space that complements the existing and new cultural uses and brings people into the new Cultural Heart. The Council has commissioned a separate outdoor venue feasibility study. TG Events have been appointed to review all outdoor spaces across Kirklees to understand their scope for outdoor events, with the idea of increasing events delivery and commercialising them. The outcomes of that study will be incorporated in to the OBC. 	 Outdoor space to support the core facilities, enhanced public realm (subject to wider site layout/ opportunities) Potential for outdoor performance area linked to ongoing study being undertaken by the Council



2.172 Table 2.25 sets out the key findings in relation to an archive facility, which is not a core facility need, but adds some key benefits.

Table 2.25 Su	mmary of business needs/ market dema	Ind (Optional Facilities)
Facility	Key findings of market assessment	Facilities required
Archives	 Integrated with current library facilities for FOH and research purposes Some limited storage on library site Modest annual usage - focussed on local research (leisure, professional and academic markets) Statutory requirement for proper maintenance and storage of civic archives 	 Retain integrated FOH facility with library Share research space with library - requires some quiet/private areas Small space for handling sensitive/fragile archival artefacts Area for temporary exhibitions of archival material Minimum: storage to accommodate most frequently requested material requires to be secure and potential environmentally controlled Optimum: on-site storage that reconciles all current archive material, currently housed in separate sites - requires secure status and appropriate environmental controls for sensitive, largely paper-based material The front of house facilities could be within the Cultural Heart whilst the main storage could be located elsewhere

. -

Potential scope and service requirements

- 2.173 The scope of the overall scheme is to redevelop the 7.8 acre (approx.) site in Huddersfield Town Centre. The scope of the regeneration is to redevelop the area in its entirety to provide the following core facilities:
 - A new event space/entertainment venue of between 800 and 2,500 capacity •
 - Museum •
 - Art Gallery .
 - New library (and potentially front of house archive)
 - A Food Hall
 - Urban park ۲



- New multi-storey car park
- New link to the University
- Demolish the Piazza
- Potentially additional secondary spaces including hotel, restaurants and bars.

Main benefits

2.174 The anticipated project benefits and risks are set out below. Many of the project benefits are outlined in the objectives (outlined earlier) and, generally, these can be considered as having social impact, economic impact, and cultural impact. Table 2.26 below sets out the anticipated financial and non-financial benefits of the project.

Table 2.26 Project benefits

Description
1. Increased number of visitors to Huddersfield
2. Increased visitor stay and spend in Huddersfield
3. Increased level of usage of cultural facilities by residents
4. Higher national and regional profile for the town
5. Additional economic Gross Value Added (GVA) to Kirklees
6. Generate new FT and PT jobs
7. Catalyst for further private sector investment in town centre (in retail, leisure and
accommodation sectors)
8. To support the delivery of the Huddersfield Blueprint
9. Greatly enhanced community facilities
10. Protecting key cultural assets and cultural benefit
11. Enhanced green amenity in the town centre

- 2.175 In the short-term, it is recognised that the impact of COVID-19 may create additional risks and potential opportunities that will need to be monitored and managed. For example, it will be necessary to regularly monitor the impact upon the construction sector in West Yorkshire and any resulting impacts on capacity and pricing and the commercial issues that may be facing third party organisations (e.g. tenants).
- 2.176 COVID-19 may also present opportunities for the project, as it is a key strategic funding/ investment opportunity capable of immediate progression (whereas some other projects may stall), and therefore have an even stronger case for public benefit. Further, it is capable of stimulating additional growth on the northern area of the site (Piazza), or in extending the green footprint of the Urban Park to cover this area.

Main risks

2.177 The principal risks associated with the project are outlined in detail in the Risk Register and can broadly be categorised as financial, legal/policy sustainability, cost and time over-runs, and commercial viability. These issues are summarised in the table below.



Table 2.27 I	Project Risks
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Description	Likelihood	Impact
Affordability gap too large to fulfil the masterplan	Low	Critical
Unanticipated repair costs for Library and Market Hall	Medium	Critical
Design exceeds initial cost estimates	Medium	Critical
Site abnormals increase costs	High	Critical
Project costs run over budget / inflation	Medium	Critical
Council funding not secured	Low	Critical
Revenue budget requires additional Council subsidy	High	Marginal
Differing opinions from stakeholders delay the design	Low	Critical
Delay in obtaining planning permission	Low	Critical
Public objection at the consultation and planning	Low	Critical
stages		
Appropriate secondary usage not secured	High	Marginal
Loss of political support	Low	Critical
Delays during construction and project overrun	Medium	Critical
Visitor/resident numbers are not achieved	Low	Marginal
Poor stakeholder and public response to the	Medium	Critical
completed project		
Revenue performance is poorer than projected	Low	Marginal
Partnership with venue promoter not secured	Medium	Critical
Support from national cultural bodies not secured	Medium	Marginal
Loss of key personnel	Low	Marginal
Fire/accident during the renovation works	Low	Critical
Failure to secure catering operations suitable for a	Low	Critical
quality Food Hall		
Does not meet appropriate heritage and built	Low	Critical
environment standards		
Impact of Covid-19	High	Critical
Impact of BREXIT	High	Critical

2.178 The approach to risk management is described in Section 6.

Constraints

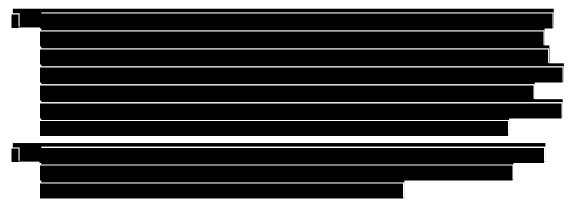
2.179 The key project constraints identified by the project team are as follows:

- Structural limitations of the listed buildings (Market Hall; Library)
- Listed building status the library and art gallery, built in 1937, Grade II listed; Queensgate Market, constructed 1968-70, Grade II listed; and part of The Piazza, built in 1970-74, listed as part of the Queensgate Market envelope
- Potential lack of easily accessible car parking





- Potential requirements of 3rd party operators
- Service delivery access
- Landscaping/Urban Park limited by nature of topography
- Complexity of delivering several new/refurbished buildings in parallel
- Construction budget available
- Programme working to an accelerated schedule to achieve the benefits at the earliest possible date



- Adjoining owners The site contains a number of directly adjoining owners as shown on the Site Plan. The proximity of these owners presents a physical constraint, which will require consideration at all times.
- Sustainability The programme must meet the requirements of the Kirklees Council climate emergency declaration and carbon neutral vision.
- Legal include:



- Statutory
 - o Planning and listed building consent approvals
 - o Potential for tree preservation orders
 - o Usual statutory consultees



Dependencies

2.180 The key project dependencies identified by the project team are as follows:

- Achieving planning permission and listed building consent
- Funding
- Ensuring the car park is provided for the Cultural Heart but in particular the venue
- Future secondary or commercial uses will depend upon the initial development of the cultural facilities to prove the increased footfall before they are likely to be commercially deliverable.



3. The Economic Case

Introduction

3.1 This section sets out the Critical Success Factors (CSFs) for the project, identifies the long-list of project options considered, describes the long-list appraisal process and confirms the outcomes including a Preferred Way Forward.

Critical Success Factors

- 3.2 The Programme Board set the following Critical Success Factors for the project:
 - Re-develop the Queensgate area
 - Create a vibrant and dynamic destination
 - Be full of diverse and rich experiences
 - Be accessible
 - Increase town centre footfall
 - Adapt and respond positively from the lessons learned and the impact of the pandemic
 - Have a master plan that provides flexible spaces, high quality design and a variety of architecture
 - Enhance the use of the retained buildings and structures as destinations, increasing public access
 - Encompasses the Councils 2038 Carbon Neutral Vision and policies
 - Provide for the creation of high-quality digital and physical infrastructure
 - Have a design where activities in the buildings spill out into a high-quality urban park
 - Maintain and enhance connectivity to the rest of the town centre
 - Create social value benefits
 - Produce a master plan and completed assets that are financially viable and can be managed within affordable operational budgets.
 - Be deliverable within agreed timescales and budget
- 3.3 These CSF's have been used to inform the development of key criteria against which to assess the long-list of project options.

Long listed options

3.4 The long-list of project options has been developed in stages, described below.

Scope and scale of key facilities

3.5 The strategic, business needs and market assessment set out in Section 2 informed the development of the scope, scale and technical requirements for each of the key facilities that will form part of the Cultural Heart. This was then developed into an indicative area schedule for each of the facilities, to inform the potential options for delivery on the site for each of the uses. The areas, bulk, fit and massing will be developed at the next stages of the project.



	Total GIA	Footprint	Footprint	Length	Length	Width	Height	Floors	Basement
	sqm	building only	inc serv yard	building only	inc serv yard		(inc below ground)	(inc below ground)	Floors
Museum & Gallery	7,472	1,531		51		30	29	6	2
Museum	6,730	1,661		55		30	25	5	1
Gallery	3,334	1,524		51		30	15	3	0
Library & Archive	6,360	1,840		61		30	20	5	1
Library Only	4,115	1,100		44		25	20	5	1
Venue - scale options									
Venue 3500 capacity	8,186	3,829	4,441	66	77	58	22	5	0
Venue 2500 capacity	7,609	3,008	3,620	60	72	50	22	5	0
Venue 1600 capacity	6,203	2,393	3,005	56	70	43	22	5	0
Venue 1200 capacity	5,061	2,105	2,717	53	68	40	22	5	0
Urban Park	3,000-15,00	D							
Archive only	2,000								
Food Hall	2,000								

Table 3.1 - Accommodation Schedule/Areas

Location on site (physical considerations)

- 3.6 The key facilities were then tested for their suitability against four development location options, as follows:
 - In the Market Hall refurbished
 - New Build located in Cultural Heart
 - In the Library refurbished
 - New Build located outside the Cultural Heart
- 3.7 The potential for each use to be integrated with other elements of the Cultural Heart was also considered.
- 3.8 Table 3.2 below shows what combinations were possible, restricted or not possible:

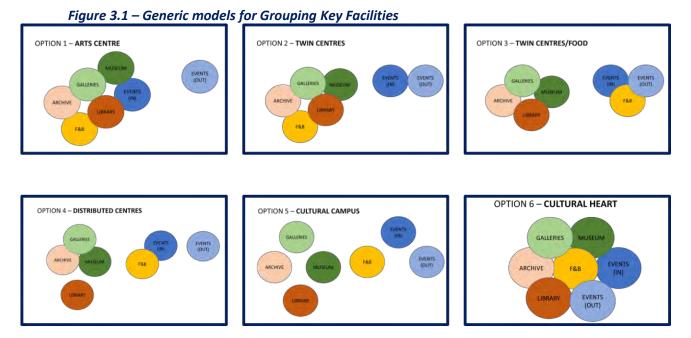
Facility / Use Option for Development	Gallery (G)	Museum (M)	Library (L)	Archives (A)	Venue (V)	Food Hall (FH)	Urban Park (UP)	Car Park (CP)	Other Commercial (OC)
In market / refurb				1					1
New build CH				· · · · · · · · · · · · · · · · · · ·					
In library / refurb		Part	Part	Part		-			
New build elsewhere			1	1					
Integrated with	M,L,A,V,FH	G,L,A	M,G,A,FH	G,M,L	G, FH, UP,	V,G,L,UP	V		
		Yes							
		Potential							
		No							

Table 3.2 – Long list options: Location

Location on site (visitor and user experience considerations)

3.9 The best fit for these elements on the site was considered and several generic templates produced that considered how the building elements might be grouped together in a way that was optimised for the visitor experience and also made effective use of adjacencies/shared space opportunities etc. These models are outlined in figure 3.1 overleaf.





- 3.10 From this initial appraisal process, a long-list options matrix was prepared that considered where each of those elements might be located on the Cultural Heart site. These options all included the following three core assumptions, that:
 - The Urban Park will be as large an area as possible, which can be accommodated between developments on the north (piazza) side of the site and the south (Queensgate/Market Car Park)
 - Some car parking provision on site of former Market Car Park
 - The large venue option can only be built on either the north or south site; the smaller venue can fit on all sites
- 3.11 The matrix overleaf sets out the options for where each of the key facilities would be located on the site (north, south, in the market building or in the library building) in each of the grouping models set out in Figure 3.1. For most of the grouping models there are two potential site layout options identified.



	e 3.3 – Matrix of Long Location	Other Pote	ntial Uses					
		Gallery	Museum	lural Heart Co Library	Venue	Food Hall	Commercial	Archive
	Twin Centre - v1							
	North							
1	Library							
-	Market							
	South							
	Twin Centre v2			L		1		
	North			[
2	Library							
-	Market							
	South							
	Cultural Heart (single site)	v1		1		1		
	North	<u> </u>		[1	1		
3	Library							
3	Market							
	South							
	Cultural Heart (single site)							
	North	V2						
4	Library							
4	Library Market							
	South							
	Cultural Campus				1			
_	North							
5	Library							
	Market					_		
	South							
	Distributed v1				1			
	North							
6	Library							
	Market							
	South							
	Distributed v2		1	0	-	1		
	North							
7	Library							
	Market							
	South							
	Arts Centre v1							
	North							
9	Library							
	Market							
	South							
	Arts Centre v2							
	North							
9	Library							
	Market							
	South							
	Refurbished v1							
	North							
10	Library				1	1		
	Market							
	South							
			1	I	1	1		
	Refurbished v2							
	Refurbished v2							
11	North							
11								

Table 3.3 – Matrix of Long List Options: Location on Cultural Heart site



- 3.12 Table 3.3 presents a total of 11 initial long-list options (it is worth noting that several of these options also had two or more versions that amended the location of one of the elements). These options were then located onto the Cultural Heart footprint informed by the area schedules to see how and where the building elements could be positioned.
- 3.13 Following discussion, the number of refurbished options was increased by two to give a total of 13 long list options for consideration. These options are illustrated in Figures 3.2 to 3.15 on the following pages.

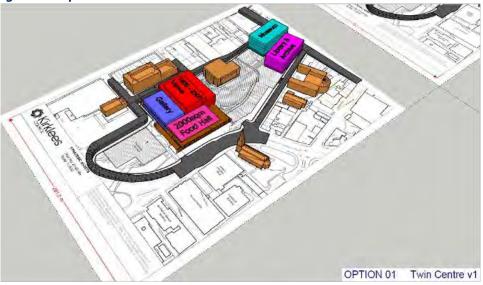
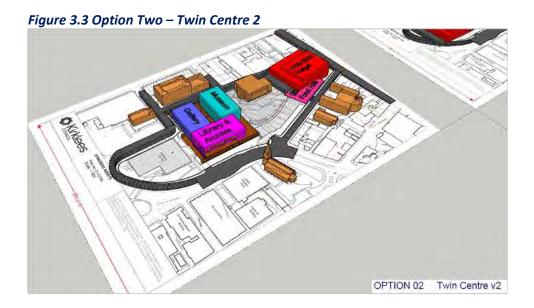


Figure 3.2 Option One – Twin Centre 1





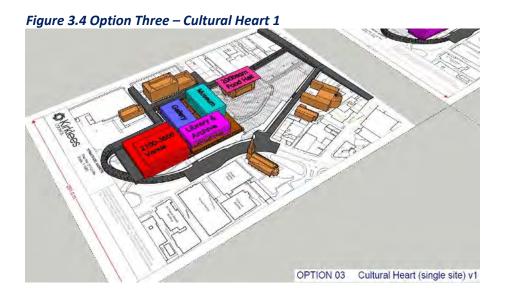
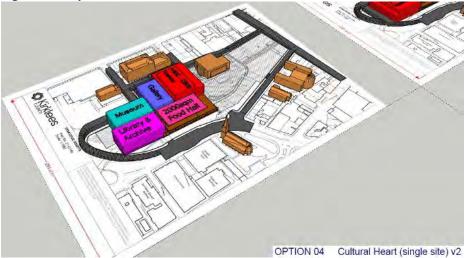
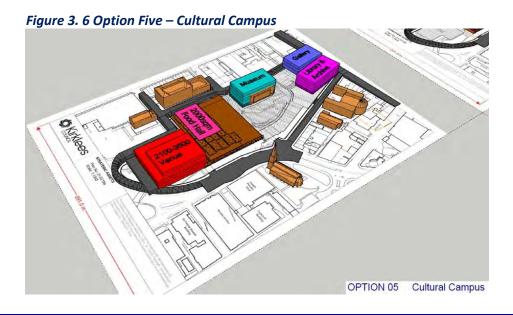


Figure 3. 5 Option Four – Cultural Heart 2







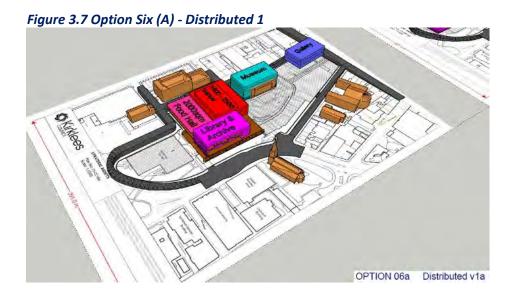
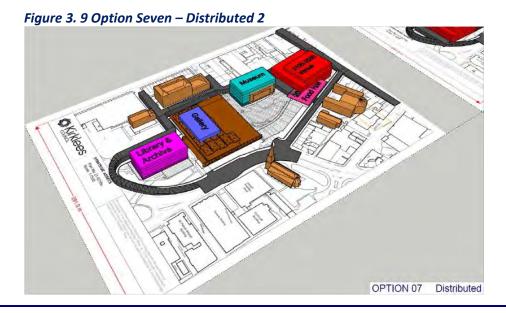


Figure 3.8 Option Six (B) - Distributed 1





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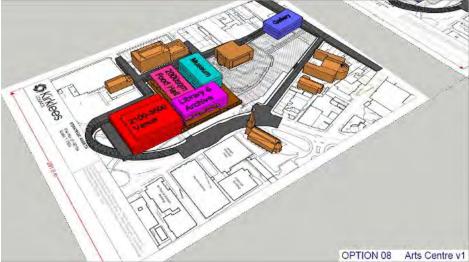
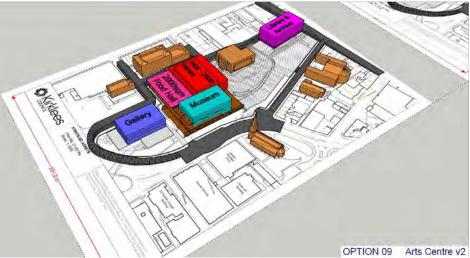
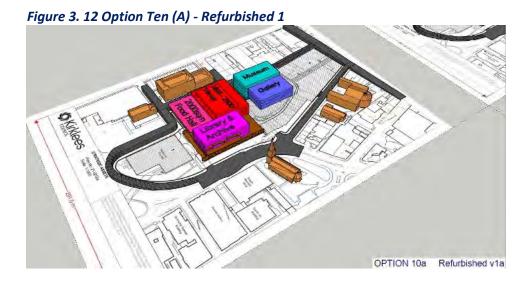


Figure 3. 11 Option Nine – Arts Centre 2







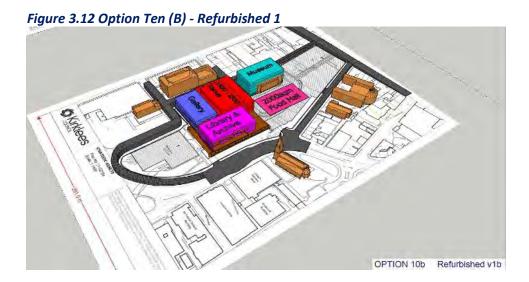


Figure 3.13 Option Eleven – Refurbished 2

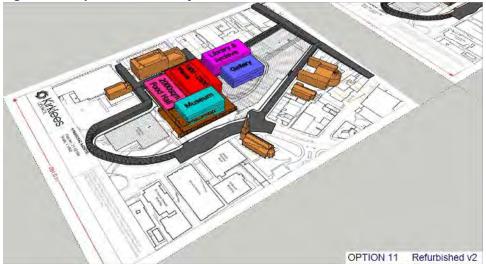
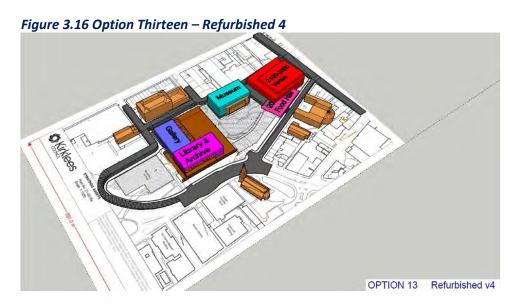


Figure 3. 15 Option Twelve - Refurbished 3





- 3.14 In addition to the project options set out above, we have scoped a Business As Usual and a Do Minimum option, as follows:
- 3.15 The Business As Usual (i.e. do nothing) option will still require actions and incur expenditure of c £17.5m, specifically:
 - Maintenance of the library building circa £8m
 - Maintenance of the Market Hall circa £8m
 - Decant costs for the Market Hall circa £1m
 - Works to car park site to make safe circa £500k.
- 3.16 The Do Minimum option requires some actions to be undertaken that will improve the current provision of services, however, it is much less than the full Cultural Heart options. We will review this Do Minimum option further at the next stage to assess whether it really does meet the project objectives. Currently this option would be as follows:
 - Library remains in the existing library building
 - The northern retail section remains including tunnels
 - No urban park/minimal urban park
 - Museum collection principally stays where it is with some small exhibits in the Market Hall
 - Food Hall in the Market Hall
 - Demolish the retail wrapper around the Market Hall
 - Small venue of 1,200 capacity
- 3.17 For the Do Minimum option, all of the costs associated with the BAU option would be included as they are health and safety works. The current estimate for this version of the Do Minimum option is c £80m incl. fees and contingency. The definitions and costs for both these options will be developed further during the next phase of the Outline Business Case.



Long-list options assessment

- 3.18 Based on the work undertaken to date, we consider that there are five principal categories of criteria for assessing the various Cultural Heart options that cover the various expressed Council policy ambitions for the project and, when combined, represent the overall components of regeneration:
 - Deliverability exploring the pragmatic elements required to plan, build, deliver, operate and sustain a complex multi-building capital development
 - Social Impact addressing the increasing residential nature of the town centre and overall amenity for Kirklees residents
 - Cultural Impact considering how this maximises and raises the profile of the national and regional status of the various civic collections, activities and buildings
 - Economic Impact establishing the areas of primary direct and indirect economic benefit from residents and potential visitors
 - Strategic ensuring the broader long-term policy objectives of Kirklees are being addressed, and its role in relation to other town infrastructure initiatives
- 3.19 The specific criteria within in each category are set out in Table 3.4. These are the criteria that were developed with the Programme Board against which the long-list of options were assessed.

Criteria	Criteria	Criteria Description					
Category	Number						
	1	Land availability					
	2	Likelihood of planning/heritage consent					
	3	Scale of construction challenge (buildability)					
Deliverability	4	Affordable (likely to meet financial targets)					
	5	Anticipated scale of operational costs					
	6	Anticipated scale of construction costs					
	7	Achievable within timescale					
	8	Maximising quality and delivery of existing services					
Social Impact	9	Improving built-environment amenity					
	10	Increasing green space					
	11	Increasing town profile nationally					
Cultural	12	Maximising existing cultural assets					
Impact	13	Enhances access to/use of adjacent cultural buildings					
	14	Maximising footfall: residents					
Economic	15	Maximising footfall: visitors					
Impact	16	Increasing dwell time					
Strategic	17	Fit with Blueprint objectives					
Impact	18	Meeting Kirklees' Green/Net-Carbon agenda					

Table 3. 4 Assessment criteria



3.20 Through facilitated workshops with the SDP and the Council, each of the thirteen options was RAG-rated (Red, Amber, Green) against these criteria, with the following key: *Figure 3.17 RAG key*

	meets criteria
	some concern against criteria
	fails criteria
++	increased positivity

3.21 Prior to rating, two further practical issues were noted that feed directly into both the land availability criteria and the timetable delivery criteria:



- Car parking can only be delivered on the former MSCP area at the south end of the site). Technically, some of the building elements could still be constructed over this, although not the Venue due to the servicing needs of the building required to meet operator and promoter requirements
- 3.22 The outcome of the assessment is recorded and shown in Table 3.5 below.

									Crit	teria								
			De	eliverabil	lity			Social Impact			Cultural Impact			Economic Impact			Strategic Impact	
	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13	Criteria 14	Criteria 15	Criteria 16	Criteria 17	Criteria 18
Option 1: Twin Centre v1				+				+			+							
Option 2: Twin Centre V2					+			+			+							
Option 3: Cultural Heart v1					+			++	+	++	+				+	+		
Option 4: Cultural Heart v2								++	+	++	+				+	+		
Option 5: Cultural Campus] max								++		+						
Option 6a: Distributed v1a		+																
Option 6b: Distributed v1b								+			+	+			+	+		
Option 7: Distributed v2									+	+	+		-		-+	+		
Option 8: Arts Centre v1								+		+								
Option 9: Arts Centre v2									+	+								
Option 10a: Refurbished v1a		+			+			+						_				+
Option 10b: Refurbished v1b		+		++	+	+		+			+				+			++
Option 11: Refurbished v2		+		+	+	+												
Option 12: Refurbished v3						+		+			+	+		+	+	+		
Option 13: Refurbished v4				-				+	+		+	+	+	+	+	+		

Table 3.5 RAG Assessment of Long-List of project options



3.24 When the options that are not technically possible (i.e. contain red) are discounted, the remaining options are as shown in Table 3.6.

									Crit	teria								
	Deliverability					Social Impact			Cultural Impact			Economic Impact			Strategic Impact			
	Criteria 1	Criteria 2	Criteria 3	Criteria 4	Criteria 5	Criteria 6	Criteria 7	Criteria 8	Criteria 9	Criteria 10	Criteria 11	Criteria 12	Criteria 13	Criteria 14	Criteria 15	Criteria 16	Criteria 17	Criteria 18
Option 4: Cultural Heart v2					+			++	+	++	+				+	+		
Option 10a: Refurbished v1a		+		+	+			+										+
Option 10b: Refurbished v1b		+		++	+	+		+			+				+			++
Option 11: Refurbished v2		÷		+	+	+												

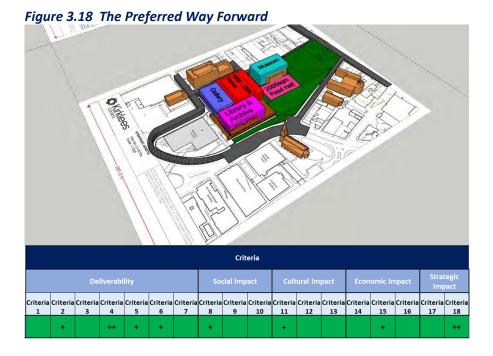
Table 3.6 Technically achievable project options

- 3.25 From this assessment, the Preferred Way Forward is the one with the fewest amber and greater number of positive green ratings, which is option 10b. This approach and the conclusion were confirmed in a workshop with the Programme Board.
- 3.26 This option provides for the Gallery and the Library to be located into the refurbished Market Hall. The Gallery has the potential to exhibit national quality exhibits in a high quality built environment as well as take national touring exhibits. This will attract visitors from beyond the town, from the region and nationally. The Library is the largest footfall driver and as such the greatest number of local residents will have the best environment to use the library services. The Venue will be new build, as it is in all options, and we will continue to develop the final preferred scale of the venue at the next stage. It will be multi use for entertainments, conferencing, exhibitions and events. It will likely dovetail its activities with the other gallery and exhibition spaces proposed for the library, museum and the gallery. The museum at Tolson will move into the town centre into the refurbished library building, potentially taking advantage of the undercroft space for an exciting exhibit space. The Food Hall will be new build and provide the 'glue' to bring together all of the other features and support the F&B requirements in each of the individual spaces. It will open out into the urban park which is maximised in this option. The park will encourage the permeability of the scheme providing the easy link with the university and opening out the Laurance Batley Theatre and the Town Hall so both venues can be properly integrated into the Cultural Heart scheme.
- 3.27 Option 10b as the Preferred Way Forward maximises the assets that are available, in particular the heritage buildings, a strong town centre profile and urban park, creates a platform for improved services, whilst being deliverable and achievable in the project timetables. It has the strongest sustainability and financial credentials and in addition provides additional land for potential future development at the north of the site.



Short listed Options

- 3.28 The short list to be examined in further detail at the Outline Business Case stage will, therefore include an assessment of the following options:
 - Business as Usual (BAU)
 - A realistic "do minimum" based on the core requirements for the project
 - The recommended Preferred Way Forward (Option 10b)
 - Two alternative project options 10b with either a larger (up to 2,500) or smaller (1,200 capacity) venue component. This element of the scheme will be subject to further market testing and represents a more ambitious and less ambitious option within the Preferred Way Forward



3.29 The Preferred Way Forward option is 10b, illustrated below:

3.30 Thus, four short-listed options, including the two variants of the Preferred Way Forward will be assessed in detail in the Outline Business Case.

Net Present Social Cost/Net Present Social Value

3.31 A full assessment of the NPSC/NPSV of each of the short-listed options will be undertaken as part of the OBC.



4. The Commercial Case

Introduction

4.1 This section provides an overview of the current assumptions regarding the most effective way to manage the procurement of the Preferred Option.

Procurement Strategy and route

- 4.2 The Council has appointed Turner & Townsend as its Strategic Development Partner (SDP) for the project, using the SCAPE (MACE) Framework. The SDP role includes that of Programme Management, Development Management, Project Management, Cost Manager, Business and Venue Planning consultant, Planning Consultant, BIM lead and information management and sustainability.
- 4.3 The SDP will manage the main procurement activities for the programme on behalf of the Council. The current assumptions relating to the key procurements, namely that of the professional team, contractor and tenants are described below.

Professional team procurement strategy

- 4.4 The SDP is responsible for managing the procurement of professionals and specialist advisors. At this stage, these have been grouped into the following three packages:
 - Package 2 Master planning team the architect responsible for master planning and the design team to deliver the master plan for the Cultural Heart and achieve two key objectives, outline planning permission and full plans approval
 - Package 3 A multidisciplinary engineer providing civils, structural, MEP, sustainability and specialist engineering services



- 4.5 Packages 2 and 3 are currently being procured via the SBS Construction Consultancy Services framework. Package 2 services are being procured under Lot 1 (Architectural Services) with package 3 services being procured under Lot 12 (Multi-Disciplinary team and Ancillary Services).
- 4.6 An initial sifting process was undertaken based on Consultant's responses to a Capability Assessment. The responses were assessed by an Evaluation Panel and the outcome of the process was that a shortlist of six consultants were invited to bid for each Lot.
- 4.7 An Invitation to Bid (ITB) was issued via Kirklees Council's YORtender procurement portal on 6 August 2021. Six bids were uploaded to the procurement portal by the deadline of 9th September 2021 in respect of Lot 1. Three bids were received in respect of Lot 12.



4.9 The tenders were assessed using the award criteria set out in Table 4.1.

 Table 4.1 Professional Team Procurement Award Criteria

Criteria Description	Weighting
Mandatory Criteria	Pass/ Fail
Quality	60%
Social Value	10%
Price	30%
Overall Total	100%

- 4.10 The SDP procurement lead undertook a review of the bids received to establish that they were complaint with the Invitation to Bid prior to circulation to the Evaluation Panel members.
- 4.11 The Quality Evaluation Panel members were not provided with any details of the Bidders commercial offer. Evaluation of the quality questions and the Bidders price submission has been completed. Kirklees Council were assessing the social value submissions received from the Bidders.
- 4.12 Three of the Lot 1 Bidders submitted comments in respect of the proposed contract terms and conditions. These were forwarded to Kirklees Legal's appointed lawyers Addleshaws to address/review.
- 4.13 Appointments will be finalised in October 2021.

Construction contract procurement

- 4.14 The procurement strategy for the construction works is a key element of the programme delivery phase. The approach is being developed through a series of workshops between the SDP and the Council. Two procurement workshops have taken place to date, with more scheduled. The early considerations and findings are set out below.
- 4.15 It is likely that there will be a limited number of suitably qualified and experienced contractors that could deliver a programme of this scale. Therefore, the SDP will use its market knowledge to identify potential contractors that would be capable of delivering the scheme. Early market engagement is also under consideration.
- 4.16 At this stage the proposals being considered are as follows:
 - A 2-stage competitive tender process
 - A single contractor on-site at any time, but potentially splitting the enabling and main works contracts
 - Using either an existing framework/ or a restricted process
- 4.17 It is important for programme delivery and obtaining best value, that the process is competitive for as long as possible, and the amount of negotiation limited.



Tenants and occupiers

- 4.18 The procurement process for future cultural tenants and occupiers will be identified at the OBC stage. However, it is assumed that the procurement process will be determined by a combination of:
 - the form of contract and scope of services sought from the market
 - applicable procurement regulations
 - level of market interest in any opportunities (and therefore potential level of competition and market appetite for various procurement processes)
 - maximising value for money .
 - industry best practice.
- 4.19 It should be noted that a number of different types of procurement process may be required across all of the uses. This is expanded upon further later in this section in relation to the operation of the food hall.

Service requirements and outputs

4.20 The service requirements and outputs will be scoped in detail at the OBC stage.

Risk Allocation

4.21 Table 4.2 below sets out working assumptions on risk allocation between the public and private sector. These assumptions have been developed with the SDP team and will be tested through the development of the OBC.

Table 4.2 Risk apportionment	
Dick cotogory	

Risk category	Pote	Potential allocation					
	Public sector	Private sector	Shared				
1. Design risk			Х				
2. Construction and development risk			Х				
3. Transition and implementation risk	Х						
4. Availability and performance risk			Х				
5. Operating risk			Х				
6. Variability of revenues risk			Х				
7. Termination risks	Х						
8. Technology and obsolescence risks			Х				
9. Control risks			Х				
10. Residual value risks	Х						
11. Financing risks	Х						
12. Legislative risks			Х				
13. Other project risks			Х				



Key contractual arrangements

4.22 An initial view on the potential contractual arrangements for the key contracts are set out below and will be subject to further development during the OBC stage.

Professional team

- 4.23 As set out above, the professional design team is being procured through the SBS Framework, which comes with a standard set of contract documents. However, the Council will not use the Framework's Service Level Agreement or Call-Off Terms and Conditions to form the Contract.
- 4.24 Instead, the Council will contract on a form of NEC4 Professional Services Contract June 2017 (as amended in January 2019 and October 2020) with a bespoke set of Z clauses, provided to the bidders during the procurement process.

Build contract

4.25 The form of contract is to be agreed, however the most likely procurement route is a Design and Build contract form.

Operating contracts

4.26 There are a range of facilities within the preferred scheme, with potentially different options for operating parties/ contracts. Table 4.3 below sets out the potential options for each facility, with the most likely option highlighted in green. These assumptions will be tested at the OBC stage.

Facility	Contract options											
	Council in- house	Trust operation	Commercial operator – lease	Commercial operator – management agreement	Other?							
Museum	✓											
Gallery	✓											
Library	✓											
Archive					✓							
Venue	✓		✓	✓								
Food Hall	✓		✓	✓								
Car park	✓		✓	✓								
Urban park	✓											

Table 4.3 Operating contract options

- 4.27 As set out earlier in this SOC, the library and museum are already operated in-house by the Council, and this is expected to continue.
- 4.28 The archive is currently operated by the West Yorkshire Archive Service that manages the other archives in the region, this arrangement is expected to continue.
- 4.29 It is anticipated that the urban park will be managed by the Council, as a public asset.



- 4.30 There are a range of options for the potential operation of the venue, including in-house Council operation or outsourcing to a commercial operator on either a lease or management agreement basis. A more detailed assessment of these options will be undertaken during the OBC stage, however the (prudent) working assumption is that the venue would be operated by a commercial operator under a management agreement potentially with an agreed minimum cost position for the Council.
- 4.31 The current working assumption is that the Car Park will continue to be managed by the Councils in house team, although this can be tested during the OBC stage.

Food Hall

- 4.32 The management options for the food hall have been developed by Queensbury (part of the SDP team) and are set out below. As described, the preferred option will, in part be determined by market interest in the opportunity, which will be tested at OBC stage.
 - Traditional Leasing Arrangement the Council lease the space as an area to a tenant who will then pay a rent (fixed amount or fixed amount with turnover top up) to lease the space from the landlord (the Council) and then will run the bars and curate a mix of kitchens usually via sub-leases to food & beverage vendors. Agreement will be required on the areas included within a lease arrangement i.e. if toilets and washroom facilities are dedicated to the food hall or are shared with other areas could or could not be included within the lease.

In a lease arrangement it is typical, in the current market, that the operator will undertake fit out works from the warm shell and this will be part funded by a capital contribution as part of the leasing deal. A rent free period of approximately 12 months would also be expected. This approach passes the risk to the operator as they are contracted to pay a rent regardless of performance however it will remove an element of control the Council could demand if adopting the alternative options.

- **Council Owned and Operated** the Council retain control of the food hall space and take full responsibility for the operation and management of the food hall including securing tenants, delivery and management of the space, fit out and design. All fit out works are undertaken by the Council as landlord and then kitchen and bar spaces would be let to individual food or bar vendors. Furniture in communal dining areas is provided by the Council as the operating entity. This option would not typically be recommended unless the council already have an operational / management arm which has the knowledge and expertise to deliver and manage this type of venture. Again, all risk would sit with the council if this option was progressed.
- Management Agreement the Council procures an agreement with a food hall operator who will run the management and operation of the food hall including responsibility for securing vendors. The management company will be paid a management fee (that may include a turnover related incentive). The council will retain the profits (or a share of depending on deal structure). All fit out works will be undertaken by the Council however this will be done in partnership with the operator who will advise on design and logistics. A management agreement would be most attractive to the if there was no demand from the market to take on a traditional lease or in the event that the wanted more control over the offer being delivered. In this model the council would be taking on the risk as the management fee would be payable regardless of performance. As the council would be



paying for a service there would be more ability to influence/direct the approach taken. As the food hall is essentially a new business created specifically as part of the Cultural Heart development, the current recommendation would be that Council explore either a traditional lease arrangement or service management contract with an experienced operator. This would represent a lower risk to the Council and give more security of operating cost and establishment of a successful facility.

4.33 A period of soft market testing will determine market appetite and the most appropriate form of contract and in turn procurement approach. For example, if demand is strong a traditional marketing campaign would be recommended. If a management agreement is the preferred approach, it is likely a more formal tender would be undertaken with operators bidding on management cost and concept design. Based on current market conditions expectancy will be to see appetite from the active operators on a traditional lease basis.

Personnel implications

- 4.34 The SDP carried out a full Skills and Capacity Assessment of the Council in March 2021. This included interviewing 16 Council employees from 16 departments/ disciplines to identify the current skills and resource position and identify what it needs to be in the future to support the delivery of this programme.
- 4.35 Key themes raised in the process are set out in Figure 4.1 below.



Figure 4.1 Key themes raised in Skills and Capacity Audit

4.36 The report identified the strengths and weaknesses of the Council departments, whether they had sufficient resources for the future roles required, set out the role of each department in delivering the programme and made recommendations as to how to move the current situation to where it will need to be.



4.37 Overall, there were a number of gaps identified in terms of skills and capacity, that will be addressed for the delivery of this programme.



5. The Financial Case

Introduction

- 5.1 This section sets out the headline financial information for the Preferred Way Forward identified in Section 3. This includes indicative capital cost estimates, broken down into key scheme components. It also sets out the overall anticipated operating costs and revenues for each element to the extent they are known at this stage.
- 5.2 It will cover the expected overall financial impact of the Preferred Way Forward from the current Business as Usual position focusing on the overall revenue impact. Included will be the initial financial feasibility of the Preferred Way Forward and an assessment on affordability in line with the overall objectives set out above in section 2. It identifies any key substantial financial risks for the project funding.

Outline Capital Costs

5.3 Turner & Townsend has prepared a cost analysis report for the Preferred Way Forward, The headline costs are summarised in Table 5.1 below.

		Capital Cost Preferred Option
		£
-		
Total Cost including Inflation		209,938,964

 Table 5.1 Preferred Way Forward Capital Cost Estimate



5.4 As highlighted in Table 5.1 above the estimated capital cost of the scheme is £197m excluding build cost inflation. Including the estimated impact of build cost inflation to the first quarter of 2024 increases the overall cost by 6.7%, £13m taking the total estimated project cost to just under £210m.



- 5.9 As the project develops further additional work will be undertaken by all parties including the cost consultants on the overall expected capital costs of the Preferred Way Forward. At the next stage of the project additional work will be undertaken as part of the development and cost review which will also consider:
 - Venue planning to optimise the existing buildings and the potential to utilise shared spaces such as front of house activities for both Library and Gallery
 - Further development of the venue design and overall brief for each of the facilities
 - Additional engineering work on the demolition options
 - Testing professional fees and the required contingency levels.

Revenue Position

5.10 The net revenue position for the existing facilities is set out in the Strategic Case section. We have been provided by the Councils Finance Department the current net operating costs for each of the areas under their control.

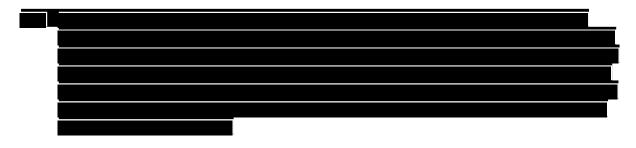


- 5.12 These figures that have been provided are for the year 2020 and as a result they would be affected by Covid-19 closures. They also reflect the considerable operational savings that have been made over the previous years as a result of the Councils austerity programme including reduced opening hours. However, from discussions with the Councils finance team, they confirmed that the numbers below are representative of the operating position for these facilities.
- 5.13 As the project progresses into the next stage additional work will be undertaken in conjunction with the Councils finance team to fully establish the underlying revenue position of the existing facilities. This would include taking into full consideration any financial impact the Covid 19 closures and the additional costs of any proposed increased opening hours.
- 5.14 Whilst the Council retain ownership of the Piazza Shopping Centre, the management of the centre is outsourced to a third party agent, Carter Jonas. We have been provided with figures from Carter Jonas as to the current financial position of shopping centre including rents received, unrecoverable service charges and business rates in respect of empty units.
- 5.15 In summary in the business as usual position the overall net operating cost for the current facilities is set out in table 5.3 below.

	Current Annual Net Operating Costs £
Library Gallery Museum	(1,615,000) (45,000) (114,000)
Total	(1,524,000)

Table 5.3 Current net operating costs of current facilities

5.16 As highlighted in table 5.3 above, our current understanding of the financial net operating position of the current facilities is that in total they cost the Council annually c£1.5m. The current library having the largest impact on the current financial position costing c£1.6m per annum including a £325k annual sum for books and other equipment.





- 5.18 At this stage of the process, detailed financial business plans and projections have yet to be developed for the Preferred Way Forward. This work will be undertaken at the next stage of the project. We will only then be able to fully assess the financial case for the preferred option.
- 5.19 However, it should be noted that as part of the process in developing the Preferred Way Forward some key financial parameters have will be taken into account. These include
 - The net revenue cost of operating the Museum, Library and Gallery should be no more than the current position on a like for like basis
 - Additional revenue costs may be incurred for these facilities but only if they reflect a change in operating strategy such as increased opening hours etc.
 - It is anticipated that the proposed new venue will operate at nil cost to the Council, but this is subject to the operating strategy adopted for this venue
 - The proposed food court and car park should make a positive contribution to the operating revenue position
 - Any additional commercial development at the site will only be undertaken if it has an overall positive contribution for the Council using normal development principles

As outlined above the project will include a number of commercial elements including the Food Hall which is an integral part of the Preferred Way Forward. At this stage based on achieving average rents of between **section** per square foot and with an external management solution it is expected that the Food Hall should generate a positive contribution of between **section** per annum.

5.21 The proposed new 500 space car park to be constructed as part of the scheme will also make a positive contribution the Councils revenues. Additional work is required at the next stage to fully assess the quantum of these car park revenues.

Impact on balance sheet

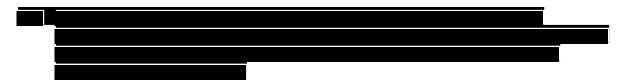
- 5.22 At this early stage of the project, it is not possible to fully assess the impact on the Councils balance sheet in respect of the Preferred Way Forward. As the scheme is developed and the scheme costs become more known the impact will be fully assessed.
- 5.23 The scheme proposed is a large scheme and will result in additional assets being owned by the Council and being included in its balance sheet. This would include the new venue and the food court. The other venues would be some new build element and also a considerable amount of refurbishment including the current Queensgate market and current library. This will also have an effect on the carrying values of these assets on the Councils balance sheet.
- 5.24 An additional potential impact would be the value in the Councils balance sheet of the current Tolson museum building and the potential need for any impairment provision to be included in the balance sheet.



- 5.25 As outlined below the funding strategy is still in the early stages of development. But it is likely that some or all of the capital costs incurred will be funded from existing Council resources or by additional borrowing.
- 5.26 Regardless of the funding strategy chosen it would have a significant effect on the liabilities carried in the Councils balance sheet. If some of the funding is to be from existing resources, this would result in a reduction of these in the balance sheet.

Impact on income and expenditure account

5.27 The current venues to be included already have a £1.5m impact on the Councils income and expenditure account. It is one of the financial objectives that these facilities do not have any additional negative impact on the income and expenditure account unless there is a change in service levels.



- 5.29 Of the additional facilities to be built the proposed new venue is expected to have no impact either positive or negative on the Councils income and expenditure account. The food hall is estimated to have a positive contribution per annum. The level of any positive contribution from the car park is still to be determined Any other commercial activities to be incorporated into the scheme would have a positive impact on the income and expenditure account and would only be undertaken if that was the position.
- 5.30 At this stage it is assumed that an amount would be borrowed by the Council to enable the scheme to take place. If c£200m were borrowed from the Governments Public Works Loan Board (PWLB), the annual loan repayments would be around £6.5m to £7.5m (based on current interest rates). Interest on this loan would be c£2m a year initially and would need to be accounted by the Council in its income and expenditure account.
- 5.31 The Council would additionally need to consider the impact of any loan repayments for its annual budget particularly its cashflow budgets, having due consideration for any Minimum Revenue Protection Rules (MRP) that may be in place.

Overall affordability and funding

- 5.32 We understand from senior Council officials that discussions have taken place and are ongoing as to the funding strategy to be adopted for the scheme. This includes obtaining political support from members. At this stage our understanding is that an amount of £200m has been assumed will be needed to fund the project.
- 5.33 As part of such funding strategy the scheme has been incorporated into the medium and long term treasury plan of the Council and that the senior members of the Council are aware of the likely annual costs of the scheme, particularly the cost of borrowing as outlined above and that this has been fully incorporated into the Councils overall financial plan.



- 5.35 As regards affordability, it is understood that at this stage the overall targeted cost of £200m is reported as being in the Councils Financial Strategy and the scheme is affordable, having considered all the financial implications of the project as it stands. However, the Council are still investigating the best funding option and as the scheme progresses to the next stage the affordability of the project will be under constant review and the final solution for funding will continue to be explored, to ensure that the scheme will remain within the Councils affordability envelope.
- 5.36 There are a number of financial risks that need to be considered and constantly reviewed and re-evaluated as the scheme progresses thought the stages
 - Affordability The overall affordability of the scheme needs to be constantly reviewed in the light of changing circumstances both for the scheme itself but also for the Council in general. This could include a change for example in its revenue projections as a result of a change in Central Government policy
 - Deliverability Can the Preferred Way Forward be delivered within the financial envelope set by the Council or will any changes need to be made to keep it affordable including any revaluation of the preferred option
 - Interest Rates As the scheme is to be funded as part of the Councils Treasury plan. Any change in interest rates may change the treasury plans and as a result the affordability of the scheme
 - Unexpected events There always remains a risk that a circumstance beyond what could be reasonably foreseen happens which results in an impact to the Councils funding and financing plans meaning the scheme would need to be reconsidered. An example would be the impact on Council finances of the recent Covid 19 restrictions.

Stakeholder support

5.37 At the current time the scheme has considerable support from all key stakeholders including the officers and members of the Council who are committed to funding the project. At this stage of the project, it is assumed that no other organisations including any central government departments or other non-governmental organisations are necessary for the successful delivery of the project in terms of providing any funding.

Summary

5.38 The scheme is a large project for the Council and will have a significant impact on the Councils financial position. The overall costs of the Preferred Way Forward including an allowance for inflation is just under £210m. Additional work will be performed by all parties to reduce the costs where possible including identifying any savings that may be possible in combining and sharing ancillary functions such as front of house activities.



- 5.40 There will be an impact on the Councils income and expenditure accounts although it is expected that the net operational costs for the existing facilities will not increase substantially unless there is a change in operational strategy. The new venue is expected to operate at no additional costs and the car park and Food Hall will have a positive contribution. Additional work will be undertaken at the next stage to fully establish the financial dynamics of the Preferred Way Forward.
- 5.41 The project will have a significant impact in respect of the funding for the scheme and it is expected to cost the Council c£7m per year in debt repayments. Our understanding is that this is fully in line with the Council's medium term treasury management plan and both officers and members fully aware of the impact the project will have on the overall council finances including the impact on the balance sheet and income and expenditure account.
- 5.42 Whilst the scheme is a major investment for the Council in both capital and revenue terms the economic and social impact will be very significant. The SOC recognises that the scheme will attract between 750,000- 1,000,000 visitors and they will generate a large GVA for the town and the authority, let alone the region. These visitors will be from a local, regional and national catchment and subsequently we expect the GVA for the project to be a major boost to the social, economic and cultural fabric of the area. A full economic assessment will be carried out at OBC which will quantify the GVA.



6. The Management Case

Introduction

- 6.1 The Council has appointed Turner & Townsend as its Strategic Development Partner (SDP) for the project, using the SCAPE (MACE) Framework. The SDP role includes that of Programme Management, Development Management, Project Management, Cost Manager, Business and Venue Planning Consultant, Planning Consultant, BIM lead and information management and sustainability.
- 6.2 The SDP has prepared a detailed Programme Execution Plan (PEP) which sets out the key elements of the management case in detail.
- 6.3 This section provides an overview of the management case, supported by the detailed information in the PEP.

Programme and project management governance arrangements

6.4 The Programme Governance structure is set out in Figure 6.1 overleaf and explained below.

Cabinet

6.5 The cabinet is the executive decision-making body of Kirklees Council. The Council has appointed a leader who is responsible for cabinet, the executive decision-making body of the council. The leader has appointed cabinet members, who have responsibility for work on a particular portfolio area and lead on policy development. The cabinet takes decisions collectively in public and cabinet members are jointly accountable for its decisions.

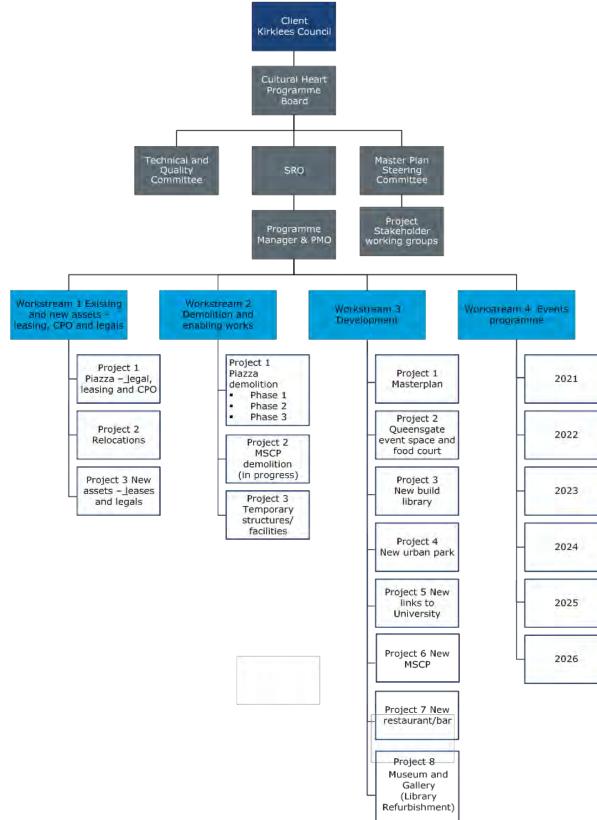
Programme Board

6.6 The Programme Board's prime purpose is to drive the programme forward and deliver the outcomes and benefits. Members will provide resource and specific commitment to support the Senior Responsible Officer who is accountable for the successful delivery of the programme. The members of the Kirklees Council Cultural Heart Programme Board are listed in the PEP.

Committees

- 6.7 The main committees associated with the programme are
 - Master plan steering committee
 - Technical and quality steering committee
 - Finance committee







Masterplan steering committee

- 6.8 The masterplan steering committee are responsible at this stage for the review and approval of the functional elements for SOC:
 - Viability of commerciality of the programme to SOC
 - Approving the SOC
 - Agreeing the functional requirements are met
 - Agreeing operational requirements are met.
- 6.9 This will be reviewed and updated at each Gateway. The master plan steering committee is consulted with on an ad hoc basis as needed during the schedule of the programme.

Technical and quality steering committee

- 6.10 The technical and quality steering committee are responsible for confirming technical and quality standards and completing the technical review and approval of the masterplan as it develops at the Gateways.
- 6.11 The technical and quality committee is consulted with on an ad hoc basis as needed during the schedule of the programme.

Finance Committee

6.12 It is understood that the Council wishes to set up a Finance Committee for the project which will be established during the OBC stage.

Approvals process – Gateway model

6.13 A Gateway model will be used to insert management and Kirklees Cabinet approval interventions into the programme lifecycle in order to maintain control over key decisions as the programme and any individual projects within the master plan develop. The Gateways will be employed at the following key programme stages (table 6.1 overleaf):



Table 6.1 Key Gateways

Gateway	Output
Gateway 1 (GW1)	Strategic Outline Case (SOC)
Gateway 2 (GW2)	Concept design and master plan [RIBA 1/2] Outline Business Case
Gateway 3 (GW3)	Detailed scheme design [RIBA 3/4]
Gateway 4 (GW4)	Procurement – Approval to award contract
Gateway 5 (GW5)	Readiness for service – Handover
Gateway 6 (GW6)	Programme review – Review programme against success criteria

Programme and Project Management

6.14 The Cultural Heart programme management approach will adopt the best practice of the Managing Successful Programmes (MSP) principles and themes to give a clear set of actions to set up, assure and deliver the programme to Kirklees Council's required objectives.

An Outline Delivery Strategy (ODS) has been produced which sets out the overall approach and how the programme will be mobilised, set up and

The project will utilise a common information management protocol and Building Information Modelling (BIM). Details of the common information management approach are contained the Programme Execution Document **Contraction** and the BIM Strategy

Key milestones

The key milestones for the overall programme are set out in Table 6.2.

Table 6.2 Key Milestones

Activities	Programme schedule
Cabinet approval	22/06/2021
Programme initiation	05/07/2021
Tender packages 2 (Architectural Services) & 3 (Multi-Disciplinary Engineering Services)	06/08/2021
Surveys and investigations	28/01/2022

Kirklees Cultural Heart – Draft Strategic Outline Case



Activities	Programme schedule
Gateway 1 – Strategic Outline Case (SOC)	16/11/2021
Gateway 2 – Outline Business Case (OBC)	26/07/2022
Tenant fit out	25/03/2026

Use of specialist advisers

- 6.18 As set out earlier, the Council has appointed Turner & Townsend as its Strategic Development Partner (SDP) for the project. The SDP is the programme and PMO function with subject matter experts providing wider programme support.
- 6.19 The various parties to the strategic delivery partner (SDP), their roles, responsibilities, and relationships are described below.

Role	Name	Responsibility
Programme Management Office (PMO)	Turner & Townsend	Provides a central core of services and management for all projects carried out under the programme
Programme Manager	Turner & Townsend	Overall responsibility for programme management of the Cultural Heart programme

Table 6.3 Strategic Development Partner roles



Role	Name	Responsibility
Cost Manager	Turner & Townsend	Overall responsibility for cost management of the programme
Procurement	Turner & Townsend	Responsible for framework selection and procurement of design packages 2 and 3
BIM	Turner & Townsend	BIM execution plan (organisation information requirements, asset information requirements, contract review)
Sustainability	Turner & Townsend	Responsible for sustainability strategy (targets, KPIs, delivery plan)
Health and Safety	Turner & Townsend	Appointed as Principal Designer for the programme under CDM 2015. T & T will fulfil duties detailed under CDM Regs 11 & 12 and aid the client in fulfilment of 'part 2 client duties' regs. 4, 5 and 6 under CDM 2015
Business Case and Cultural Specialists/Development Manager	IPW	Responsible for production of the SOC and OBC and advice on the development of the scheme
Development Manager	Queensberry Real Estate (QRE)	Support production of the SOC and OBC and advice on the development of the scheme
Planning Consultant	Pegasus Group	Responsible for outline planning strategy and heritage assessment

- 6.20 The SDP will manage the procurement of a range of other professional and specialist advisors. These have been grouped into the following three packages (note package 1 is the SDP itself):
 - Package 2 Master planning team the architect responsible for master planning and the design team to deliver the master plan for the Cultural Heart and achieve two key objectives, outline planning permission and full plans approval.
 - Package 3 A multidisciplinary engineer providing civils, structural, MEP, sustainability and specialist engineering services.





Change and Contract management arrangements

- 6.21 The SDP is in the process of finalising a change management process for the programme. A draft is included in the PEP, the key principles are as follows:
 - The SDP is responsible for delivering the change control procedure and all parties are responsible for engaging properly in the process
 - The approval of change is subject to limits on delegated financial authority
 - The impact of all changes should be considered in terms of scope, cost, time, quality, safety, environment, risk and opportunity
 - The key points of reference when considering change are:
 - The baseline cost/schedule plan (and subsequent cost plan revisions)
 - The Strategic Outline Case and developing design
 - The latest approved designs and specification
- 6.22 Figure 6.2 overleaf illustrates the proposed procedure for processing change requests (outside of delegated authority), that is subject to agreement with the Council.



Figure 6.2 Proposed process for change requests

Any Party can raise a change request by formally writing to the SDP either on a predetermined form or by email. Provide details of the enquiry or proposed scope of works, and the nature of the change in the **proposed change** & **reasons for change**

The programme manager logs the change on the register and issues the change control form to the cost manager, and contractor for consideration and response.

In consultation with the contractor and design team, the programme manager completes the **cost assessment** & **programme assessment** sections of the change control form providing a description of the works and associated capital costs,

The programme manager issues the change control form to the design team, for comment. The design team make comment and return the form to the programme

Kirklees Council authorises the change either by confirming in writing to the programme manager or by completing the authorisation part of the form indicating whether the costs and/or programme implications have been accepted or rejected.

It is requested that Kirklees Council provides a decision to the programme manager

If Kirklees Council has rejected the change, the programme manager records the decision on the change control log and informs the contractor.

If the change request has been approved, the programme manager issues the change control form to the contract administrator (if different), and requests that a formal contract instruction is raised.



Benefits Realisation arrangements

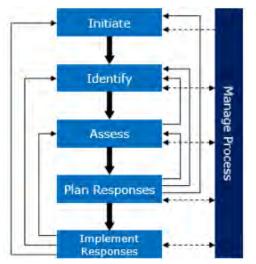
- 6.23 A Benefits Register will be developed, and regularly updated throughout the project development and execution phases.
- 6.24 The Benefits Register will establish the following:
 - Description of benefit (as per project benefits identified in Section 2)
 - Party/person responsible for measuring the benefit
 - When the benefit is expected to be realised
 - How and when the benefit will be measured
 - Establishing a baseline/current measurements.

Risk management arrangements

6.25 The risk management arrangements are identified in the PEP and summarised below.

Overview

6.26 Risk management is a process whereby the threats and opportunities associated with the programme are identified, assessed and managed in order to reduce the potential impact on either schedule, cost or performance goals. Effective risk management is a programme wide discipline, which will require the input of the Council, the SDP, and the whole team. By integrating risk management into the day-to-day management of a programme, threats and opportunities will be more effectively identified and managed.



Definition of risk

- 6.27 Risk management is a process that allows individual risk events and overall risk to be understood and managed proactively, optimising success by minimising threats and maximising opportunities.
- 6.28 With a risk event being "an uncertain event or set of circumstances that, should it occur, will have an effect on achievement of one or more objectives".



Identification of risks and opportunities

6.29 The early identification of potential threats and opportunities is critical in providing for their effective management. A risk workshop will be scheduled initially in order that all SDP parties may provide input. This will be supplemented by risk review workshops with the extended team at regular intervals. Once a threat or opportunity has been identified it will be recorded on the risk register which acts as the tool to record and control the risk management process.

Risk categories

6.30 A programme risk workshop will be held with representatives from the SDP and Kirklees Council to determine the risk categories that will be used on the programme.

Assessment of risk

6.31 Further to identification, each threat and opportunity will be scored by assessing its probability of occurrence and impact on the programme objectives. The scoring is based on the following:

Tuble 0.4 Sconing risk				
Probability categories	Score	Risk categories	Score	
Unlikely	1	Very low	1	
Possible	2	Low	2	
Average	3	Medium	3	
Probably	4	High	4	
Certain	5	Very High	5	

Table 6.4 Scoring risk

6.32 To calculate a risk rating the probability score is multiplied by the risk score. The probability and impact will be assessed by the SDP at the risk workshop or subsequent meetings.

Risk register

- 6.33 The SDP will maintain the live risk register for the programme, formally updating it on a monthly basis and issued as part of the programme manager's monthly status report. This register will be created through risk workshops to highlight the potential threats and opportunities throughout the programme and will be updated and monitored regularly. Mitigation measures will be identified and assigned against the associated risks.
- 6.34 The SDP will progressively monitor the implementation and success of these mitigation measures and include changes to these measures in the risk register updates.

Risk contingency management

6.35 On completion of the risk register, a contingency sum will be agreed with respect to the potential additional costs should such risks occur, and the benefit if an opportunity can be taken up.



Post implementation and evaluation arrangements

- 6.36 The project will be monitored and evaluated by the SDP against the projected timeline, financial allocation and project outcomes. Progress reports will be made on a regular basis to the Programme Board. Overall performance will be measured against the Critical Success Factors set out in section 3.
- 6.37 A thorough and robust project evaluation will be undertaken at key stages in the process in order to 1) ensure benefits will be realised and 2) ensure that positive lessons may be learned from the project.
- 6.38 An Evaluation Framework will be developed during the OBC stage from the project's outlined Benefits, Objectives and Strategic Fit and follow a best practice approach. As part of the development phase, a logic model will be developed to link project outputs and long-term outcomes. A programme of ongoing data collection and research such as surveys and interviews and focus groups will be deployed in order to measure performance.
- 6.39 Once the Cultural Heart is operational, maintenance and review of project outcomes will transfer to an identified responsible person.

Contingency arrangements and plans

6.40 Contingency plans and arrangements to be considered with the SDP at the OBC stage.



7. Summary and contacts

Introduction

- 7.1 This SOC has set out the strategic context for the Cultural Heart project, presented a strong case for change and identified a Preferred Way Forward. It has also set out the current assumptions relating to the financial, commercial and management cases.
- 7.2 There is a full Executive Summary at the beginning of this report.

7.3 Contact details

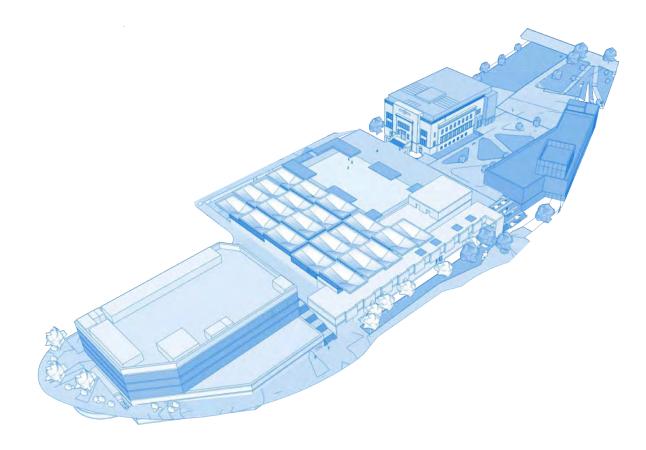
7.4 For further information about any aspect of this report please contact:

	IPW
	46 Aldgate High Street
	London
	EC3N 1AL
Telephone:	020 3195 1811
Mobile:	
Email:	

Appendix B

Strategic Sustainability Plan

KIRKLEES CULTURAL HEART HUDDERSFIELD



ENERGY AND SUSTAINABILITY STAGE 2 REPORT

May 2022 | Rev B



Executive Summary

Introduction

The Kirklees Cultural Heart presents a fantastic opportunity to regenerate Huddersfield's town centre, to provide a thriving cultural hub that excels in terms of energy and sustainability performance. The spectrum of opportunity at this point is vast. Etude's role at RIBA stage 2 was to help align the project's performance with Kirklees Council's strategic sustainability goals. Throughout Stage 2 Etude have provided input, and advised on, the following topics:

1. Energy efficiency strategy

- Reviewed emerging Stage 2 designs for all buildings and advised on energy efficiency improvements
- Provided target building fabric performance for all buildings
- Undertook predicted operational energy modelling using PHPP for both the Museum (existing library) and the New Gallery

2. Low carbon heating appraisal

• Reviewed several different heating strategies for the emerging masterplan. This analysis included predicted operational carbon and energy costs of leading options.

3. Renewable energy feasibility

• The opportunity for maximising PV deployment has been investigated across the site.

4. Embodied carbon

• The embodied carbon of the proposed buildings and landscape have been assessed.

5. Energy and sustainability Key Performance Indicators (KPIs)

• An overarching set of targets have been developed for the project.



ENERGY AND SUSTAINABILITY CATEGORIES PROPOSED FOR KIRKLEES CULTURAL HEART





FCBS : Existing site and proposed development of the Kirklees Cultural Heart

Executive Summary | The Brief

This report summarises the energy and sustainability input provided by Etude at RIBA Stage 2 as part of the proposed development of the Kirklees Cultural Heart. This page provides context to the work undertaken to work towards the net zero carbon, energy and sustainability aspirations for the development in line with the Brief provided at Stage 1. For clarity this is the *Strategic Sustainability Plan* produced by Turner and Townsend (issued 14/12/21), in addition to the Climate Emergency declaration made by Kirklees council in 2019. The report addresses the key themes of energy, carbon and sustainability; setting the vision, as well as providing guidance on the approach to be adopted strategically and in terms of delivery. In response to this the team have proposed a preliminary set of targets and commitments to be discussed and agreed with the client and Turner and Townsend.



Turner and Townsend - Stage 1 Strategic Sustainability Plan

Headlines of the energy and sustainability brief

"Regeneration programmes, such as the Cultural Heart, must deliver in line with net zero aspirations to support the wider transition to a net zero economy and to meet the requirements of Kirklees Council declarations. A net zero economy and net zero carbon design, construction and operation cannot be achieved overnight, but will be a process of incremental and positive actions to meet 2038 targets. The implementation of progressive and positive step change must be embraced to support the Kirklees Council declaration of a Climate Emergency."

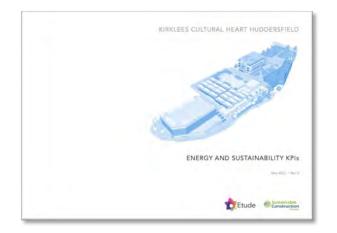
"The Cultural Heart programme has an opportunity to showcase how sustainability can be embedded in an ambitious regeneration programme, to demonstrate positive net zero carbon design and construction, and to be a regional and national exemplar of sustainable development within a local authority context with potentially constrained resources."

Executive Summary | Next Steps

As part of the RIBA Stage 2 works, Etude have reviewed several key areas associated with the energy and sustainability strategy for the proposed development. As part of this RIBA Stage 2 submission, several key recommendations have been proposed, which are explored in more detail in the individual reports presented below. The following page summarises the key topics and decisions that need to be made by the Kirklees Cultural Heart client team.

These reports are appended to this Stage 2 report for information.

Etude have sought to set out ambitious targets in keeping with the Strategic Sustainability Plan. As such there will be strategies and figures within this report that have set a target for the designs to explore over the course of the Stage 2, and further into Stage 3.

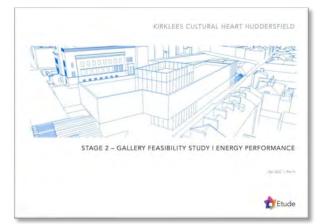












Executive Summary | Decisions & Next Steps Matrix

ID	Issue	Responsibility(s)	Decision or Confirmation Request
1.1	Energy & Sustainability Key Performance Indicators	КСН	Confirm the proposed Energy and Sustainability KPIs are aligned with the project brief and are to be used to inform design at RIBA Stage 3.
1.2	Energy & Sustainability Key Performance Indicators	КСН	Confirm the proposed approach for monitoring and assessing performance against Energy and Sustainability KPIs is acceptable
1.3	Energy & Sustainability Key Performance Indicators	КСН	Confirm the proposed dynamic approach for reviewing embodied carbon and operational energy KPIs during Stage 3 as additional modelling and analysis is undertaken
2.1	Demolition and Refurbishment Strategy	КСН	Confirm the extent of the demolition and refurbishment for the KCH project and for each building
3.1	Operational Energy	КСН	Confirm proposed fabric performance targets (eg U-values, triple glazing and air tightness targets) as per the architectural specifications set out by FCBS.
3.2	Operational Energy	Etude	In Stage 3, Etude to undertake PHPP predicted operational energy modelling to assess the likely operational energy performance.
3.3	Operational Energy	КСН	Confirm the approach for either a decentralised, centralised or hybrid heating and cooling system. NOTE – It is understood that the client's preference is a decentralised option, however formal confirmation of this as part of the Stage 2 sign off is kindly requested.
3.4	Operational Energy	КСН	Confirm the approach proposed for a ventilation system heat recovery
4.1	Renewable Energy	FCBS	Review opportunities for maximising the area of PV in line with Etude Stage 2 recommendations.
5.1	Passivhaus	КСН	During Stage 3, Etude to advise KCH on the feasibility of achieving Passivhaus for new buildings. Following this, KCH to confirm whether Passivhaus should be a target.
6.1	Carbon Offsetting	КСН	Confirm the approach and mechanism for offsetting carbon emissions from the proposed development,
7.1	BREEAM	КСН	Confirm approach to target BREEAM Excellent as minimum target
8.1	Embodied Carbon	Arup	Confirm utilisation factor of structural elements
8.2	Embodied Carbon	Arup	Arup to confirm scope and measures to help achieve embodied carbon KPI targets

Executive Summary | Energy & Sustainability Headlines



EMBODIED CARBON

kgCO_{2e}/m²

- Decision on demolition informed by high level whole life carbon assessment
- A target have been developed based on the level of new-build and retrofit.
- Focus on lean structural design to reduce the need for materials
- Optimise and report the utilization factors of structural designs and elements
- Specify material palette with low embodied carbon

CIRCULAR ECONOMY

"Use it or lose it'

- The existing building stock will be evaluated to prioritise retention and refurb
- · Pre-demo audits will be undertaken to evaluate and prioritise material reuse
- Flexible and adaptable spaces to maximise future viability.
- Identifying waste streams and targeting "0"

0... 🗲 📱 🏠

NET ZERO OPERATIONAL CARBON kWh/m²/yr | Tonnes CO2

- No fossil fuels used on-site during building operation
- Predicted operational energy assessments TM54 | PHPP
- Ambitious space heating / cooling demand and energy use intensity targets
- Low carbon heating systems (eg Heat Pumps)
- Maximise deployment of PV across the site
- Carbon offsetting for remaining regulated and unregulated emissions

N.

CERTIFICATION

"Recognising the achievement"

• Apply suitable certification schemes to mitigate climate change

🔕 WATER USE

"Every drop counts"

• Adopt low flow and water efficient appliances

(Jul)

BIODIVERSITY, ECOLOGY & SUDS

"Green & Blue"

• A net-positive biodiverse masterplan that integrated the SuDs hierarchy

CLIMATE RISK

"Mitigation & Resilience"

- A future proofed masterplan that considers the impacts of tomorrow, today
- Flood risk, drainage and climate change/temperature

Å.

TRANSPORT

"A modal shift"

- A pedestrian and cycle friendly scheme supported by EV infrastructure
- Integration into wider public transport and infrastructure networks

• × • × • ×

HEALTH & WELLBEING

"Pure & Simple"

• An air quality positive scheme

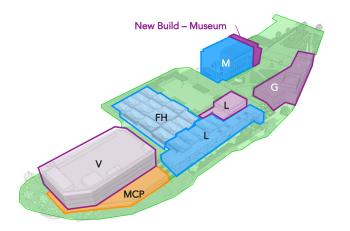
Executive Summary | Circular Economy and Embodied Carbon – KPIs Summary

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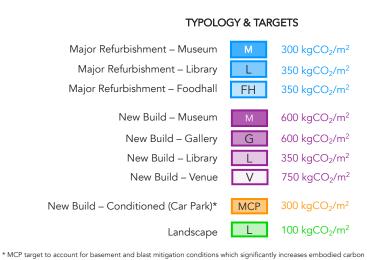
CIRCULAR ECONOMY & EMBODIED CARBON

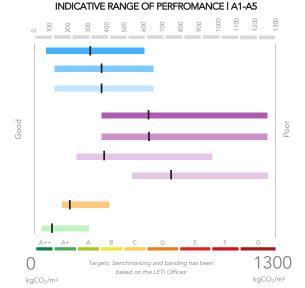
CORE TARGETS	METRIC
Undertake a pre-demo & refurbishment audit Target best practice embodied carbon performance	TBC Per Building
Waste diversion from landfill	100%
Construction Waste Management Refurbishment	≤ 3.5 tonnes / 100m² GIA
Construction Waste Management New Build	≤ 11.1 tonnes / 100m² GIA
Sustainable and responsibly sourced timber	100%
Responsibly sourced materials - EPDs	50%
ASPIRATIONS	METRIC

Construction Waste Management Refurbishment	≤ 0.4 tonnes / 100m² GIA
Construction Waste Management New Build	≤ 3.2 tonnes / 100m² GIA

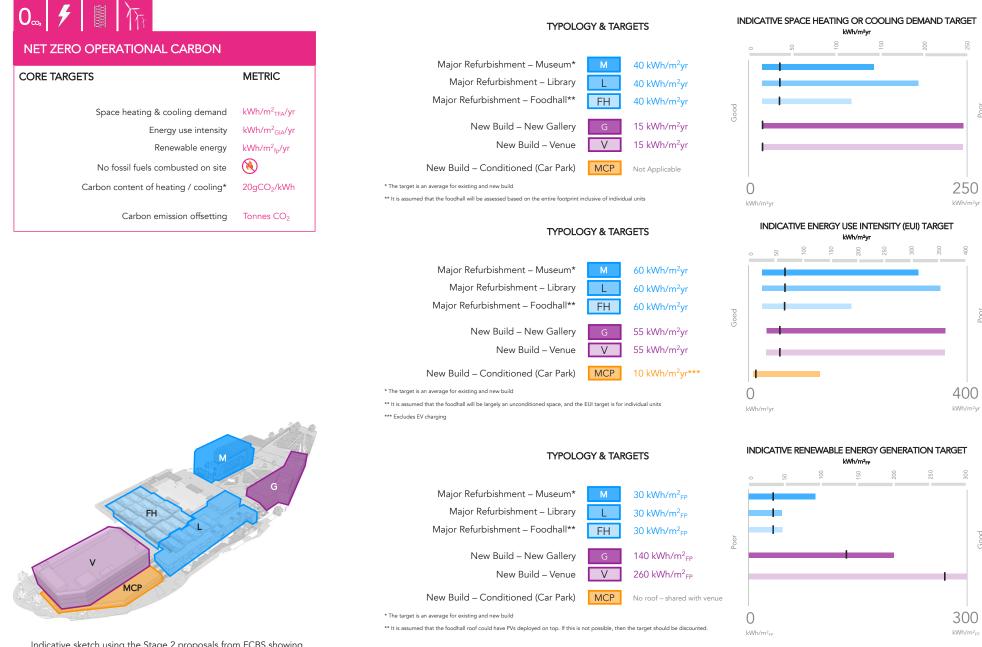


Indicative sketch using the Stage 2 proposals from FCBS showing the different buildings and boundaries





Executive Summary | Net Zero Operational Carbon – KPIs Summary



Indicative sketch using the Stage 2 proposals from FCBS showing the different buildings and boundaries

Executive Summary | Sustainability – KPIs Summary

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CERTIFICATION				
SCHEME		METRIC		
	BREEAM New Construction 2018 BREEAM Refurb & Fit-out 2014	Excellent		
	DREEAINI REIUID & FIL-OUL 2014	Excellent		
	ASPIRATIONS	METRIC		
	BREEAM New Construction 2018	Outstanding		
	BREEAM Refurb & Fit-out 2014	Outstanding		
	Passivhaus Certification	Pilade Hazer		
	EnerPHit Certification	12.00		
Ρ	assivhaus Process with Bespoke Targets	Passive House		

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WATER USE & SUSTAINABLE URBAN DRAINAGE

CORE TARGETS	METRIC
Internal water use	13 litres/person/day AECB Standard flowrates
External (landscapes) area water use	No irrigation
Sustainable Urban Drainage	40% Improvement over Greenfield Rates
ASPIRATIONS	METRIC
Internal water use	10 litres/person/day

Æ

BIODIVERSITY, ECOLOGY & SUDS

CORE TARGETS	METRIC
Protection of existing features of high importance	100%
Biodiversity Net Gain	50% +
Kirklees Council's Biodiversity Action Plan - Planting	100%
Urban Greening Factor	>0.4
Tree canopy cover	10%
ASPIRATIONS	METRIC
Building with Nature certification	
Carbon Sequestration	Report

Æ TRANSPORT CORE TARGET METRICS Cycle spaces* 1 per 10 people Electric car charging points 20% Active 80% Passive 100% Accessibility for all users ASPIRATIONS METRIC Electric Bike charging points Report Enhanced (larger) bike spaces Report * Regular Full Time Employees / Staff

-**CLIMATE RISK** CORE TARGETS METRIC \checkmark Designing comfortable places – CIBSE TM52 Climate resilient SuDs 40% + improvement on greenfield runoff Designing for durability and climate change 100% Extreme weather resilience Ensure floor levels are more than 600mm above the flood level predicted for a 1:100 year flood event (plus climate change).

• × • × • ×	
HEALTH & WELLBEING	
CORE TARGETS	METRICS
An air quality neutral scheme No fossil fuels combusted on site Daylighting Performance	Improve air quality Varies depending on building type
ASPIRATIONS	METRIC
Reduced NO _x & O ₃ levels Plant & Tree planting to improve air quality	Report Report

Introduction

Aligning to a 1.5°C pathway | Intergovernmental Panel on Climate Change

International Context

There is overwhelming scientific consensus that climate change is happening. The Intergovernmental Panel on Climate Change (IPCC AR6) sixth assessment reports are sobering reading. The report Impacts, Adaptation and Vulnerability" released in February 2022, is a "dire warning about the consequences of inaction," said Hoesung Lee, Chair of the IPCC. It concludes that . "Any further delay in concerted global action will miss a brief and rapidly closing window to secure a liveable future."

In 2018, the Intergovernmental Panel on Climate Change published a special report on the effects of global warming above 1.5°C. The report found that warming above this level brought unacceptable increases in the risk of:

- · irreversible tipping points in ice sheet stability
- irreversible tipping points in permafrost thaw
- species loss
- ecosystem transformation, including near total loss of the world's coral reefs
- vector borne disease
- water stress
- extreme weather events

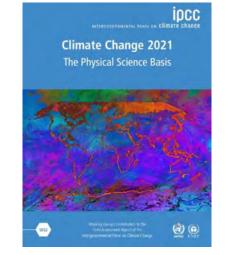
The Paris Agreement (2015)

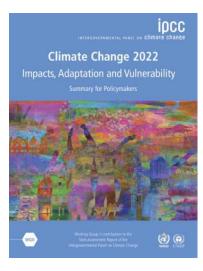
The Paris Agreement (2015) is a legally binding international treaty on climate change. 196 countries, including the UK, signed up to the agreement whose goals are to:

i) Limit global warming to 1.5-2 °C

ii) reach global peaking of greenhouse gas emissions as soon as possible and to achieve a climate neutral world by mid-century.

- iii) Enhance resilience and adaptation to climate impacts
- iv) Align financial flows in the world with these objectives.





UNITED NATIONS PARIS CLIMATE AGREEMENT SIGNING CEREMONY 22 APRIL 2016

4-5°C the temperature rise we are likely to see if we continue on a **business as usual** path

1.5-2°C The maximum temperature rise above pre-industrial levels the IPCC recommends.

1°C The global temperature rise already created

Aligning to a 1.5°C pathway | Carbon Budgets

Cumulative carbon is more important than a zero carbon target date

Cumulative carbon is directly proportional to global temperature rises. Informed by the latest climate science, the IPCC has developed global carbon budgets for limiting global temperature rises to 1.5-2C.

We will exceed our carbon budget in 7 years unless action is taken

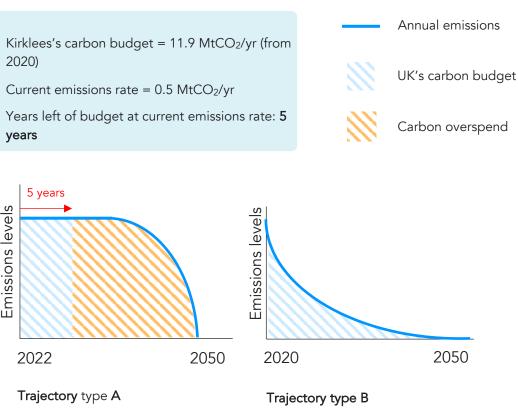
Tyndall Carbon Budget Reports derive carbon budgets for each UK local authority from the IPCC's global carbon budget. They are powerful in their simplicity, since they are directly related to actual CO₂ missions from energy (representing 80% of the UK's greenhouse gas emissions). A local authority can monitor their own local CO2 emissions from energy (using BEIS datasets) and plan to reduce them in line with the recommended trajectory.

In summary, the report recommends:

- Kirklees stays within a maximum cumulative CO₂ emissions budget of 11.9 million tonnes (MtCO₂) for the period 2020-2100.
- If emissions continue at 2017 levels, the entire carbon budget for the area would be used within 7 years (from 2020), i.e. by 2027.
- Emissions cuts must average -13.3% per year to deliver a Paris aligned carbon budget.
- Reach net zero no later than 2041, at which point 5% of the budget remains.
- Meeting the budget must not rely on carbon offsets.

A zero carbon target date is not enough

The UK government's zero carbon by 2050 target is not enough without also taking a carbon budgets approach. The two graphs on the right illustrate different emissions trajectories - both of which get to zero carbon by 2050. However, trajectory A emits three times as much carbon as trajectory B, and would put us on a path to much higher global temperature rises than the target 1.5-2 C.



This trajectory continues at current emissions rates until the 2030s at which point it drops off steeply.

It is zero carbon by 2050 but the carbon budget is far exceeded.

This trajectory sees a 13.3% reduction in emissions year on year. Cumulative emissions stays within the carbon budget.

Other trajectories are possible but it's imperative that we do not overspend on carbon, otherwise we will not be on a Paris compliant trajectory.

How do we get there? | Recommendations of existing bodies

The Climate Change Committee's recommendations

The Climate Change Committee is an independent body appointed to advise the government on how to achieve its climate change target of being net zero carbon by 2050 (legislated by the Climate Change Act). Their 2019 report "Net Zero: The UK's contribution to stopping global warming" provides an in-depth analysis of the actions required across different sectors: buildings; industry; power; transport; aviation & shipping; agriculture & land-use; waste; fluorinated gases and greenhouse gas removals. These are summarised on the right.

Emissions from industry, commerce, freight, air travel and land-use and agriculture emissions are shown to be difficult to abate. This makes it imperative that housing, light transport and waste sectors achieve maximum possible reductions.

The National Grid

The National Grid in its Future Energy Scenarios 2021, predicts that:

- Demand for electricity will roughly double by 2050.
- Around 20% of that electricity will need to be generated at the local level through solar photovoltaics and onshore wind.
- Total energy demand from all homes will need to reduce by 68% from 2020 levels despite increases in the number of homes.

LETI

The London Energy Transformation Initiative (LETI) undertook research culminating in the Climate Emergency Design Guide, which outlines the Key Performance Indicators (KPIs) of new buildings to ensure our emissions reductions targets are met. In summary,

- New buildings must be designed to be net zero carbon.
- New buildings must be extremely energy efficient
- New buildings must be heated by low-carbon heat e.g. heat pumps. There should be no gas boilers installed in new buildings.



Guidance on the need for net zero carbon buildings and total energy use targets has been published by the Climate Change Committee, UKGBC, the RIBA and LETI

Key actions required for meeting carbon reduction targets, from the Climate Change Committee on

- Fully decarbonise electricity by 2035 while meeting a 50% increase in demand
- All new homes are zero carbon by 2025 at the latest
- Ultra-efficient new homes and non-domestic buildings
- Low carbon heat to all but the most difficult to treat buildings.
- Ambitious programme of retrofit of existing buildings.
- Complete electrification of small vehicles (100% of new sales by 2030).
- Large reduction in waste, zero biodegradable waste to landfill by 2025, zero all waste to landfill by 2040.
- Significant afforestation and restoration of land, including peatland.
- Greenhouse gas removals will likely be required to achieve net zero carbon (but theses are untested and unproven technologies).

Defining Net Zero Carbon

In order to achieve Net Zero, it is crucial that all buildings become part of the solution as soon as possible instead of adding to the problem. In order to do this, and from now on, new and existing buildings need to use energy much more efficiently and be powered by renewable energy sources. Emphasis must also be placed on reducing their embodied carbon during construction and their long term environmental impact, including demolition and re-use.

It is clear that current regulatory requirements such as Part L, and planning policy and are not yet sufficient to align with the emission's reductions necessary in the building sector, as evidenced by the Climate Change Committee. The key requirements applicable to the Kirklees Project are:

- Build ultra-efficient new non-domestic buildings
- Low carbon heat to all but the most difficult to treat buildings.
- Ambitious programme of retrofit of existing buildings.
- Large reduction in waste, zero biodegradable waste to landfill by 2025, zero all waste to landfill by 2040.

A growing evidence base have led to an industry definition

A significant amount of work has been undertaken over the last 3 years to define and articulate the requirements of a "new build" Net Zero Carbon building. This includes the work undertaken and published by the Climate Change Committee, the Royal Institute of British Architects (RIBA), the Chartered Institute of Building Services (CIBSE), the UK Green Building Council (UKGBC), the Better Buildings Partnership (BBP), the Passivhaus Trust, the Good Homes Alliance (GHA) and the London Energy Transformation Initiative (LETI).



Guidance on buildings to help them meet our climate change targets has been published by the the CCC, the RIBA, the UKGBC and LETI. Net Zero Carbon buildings will create many other co-benefits, including lower energy costs, improved health and comfort and reduced pollution, particularly in terms of local air quality.

Defining a Net Zero Carbon Kirklees Cultural Heart

Applying a NZC definition to the Kirklees Cultural Heart

It should be recognised that the consensus of a definition and set of targets associated with NZC buildings has been formed around "typical" typologies such as residential, office, school and retail developments. Additionally, the focus of efforts has primarily been on agreeing a definition for new buildings.

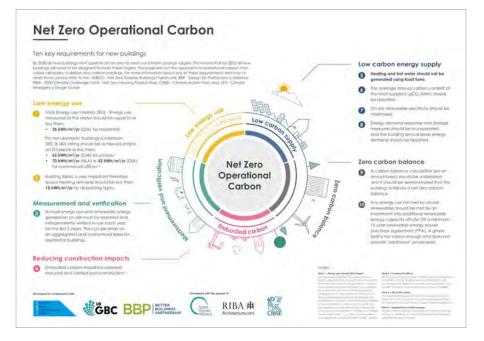
There is emerging evidence and a collective industry response to helping shape a NZC definition and set of targets for refurbished buildings, however the focus has largely been on the retrofit residential and commercial sectors.

Considering this, there is no agreed governmental or industry consensus on a set of targets which can easily or clearly define "A Net Zero Carbon Kirklees Cultural Heart".

This creates a risk that in the absence of a clear definition of Net Zero Carbon, or a set of targets, that the Kirklees Cultural Heart will not align achieve the levels of carbon reduction or energy performance necessary to align to the UK's climate budget.

What constitutes a net zero carbon building?

In response to the Stage 1 brief of working towards achieving a Net Zero Carbon Kirklees Cultural Heart, Etude have worked with Kirklees Cultural Heart team from Kirklees Council and the project team, namely FCBS, ARUP and Reform Landscape to propose a set targets which can be robustly defined to align to the intent of the Net Zero Carbon Definition developed by LETI, in collaboration with UKGBC and BBP, and supported by the Good Homes Alliance, RIBA and CIBSE.



Ten key requirements for a Net Zero Operation Carbon - A summary

Developed by LETI in collaboration with UKGBC and BBP, and supported by the Good Homes Alliance, RIBA and CIBSE.

Different criteria form the definition

We have learnt over the last 15 years that delivering high quality energy efficient and low carbon buildings requires us to address several aspects. The definition is not a one-dimensional target, hence why the delivery of Net Zero carbon buildings relies on meeting requirements in different areas.

Defining a Net Zero Carbon Kirklees Cultural Heart

Net Zero carbon buildings in operation are supported by four core principles: energy efficiency, low carbon heat, renewable energy and embodied carbon.

1 - Energy efficiency

Buildings use energy for heating, cooling, hot water, ventilation, lighting, cooking and appliances. The efficient use of energy reduces running costs and carbon emissions. It also reduces a building's impact on the wider energy supply network, which is also an important consideration.

2 - Low carbon heating

Low carbon sources of heat are an essential feature of Net Zero carbon buildings. All buildings should be built or refurbished with a low carbon heating system and must not connect to the gas network.

3 - Renewable energy generation

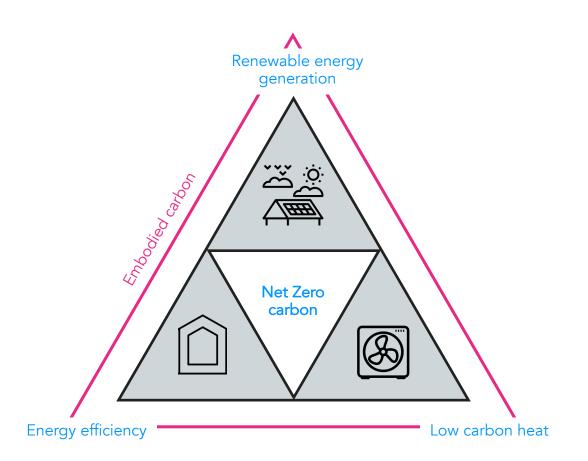
In new buildings, renewable energy generation should be at least equal to the energy use of the building on an annual basis for it to qualify as Net Zero carbon in operation. This can be achieved through the use of solar photovoltaic (PV) panels.

4 - Embodied carbon

Operational carbon is only part of the story. Net Zero buildings should also minimise embodied carbon in materials.

Inter-relationships

The core components of a zero carbon building are all interrelated, and all three impact each other. They also affect a building's impact on the local electricity grid, and smart electrical systems play an important role too.



The four core principles of a "net zero" building: energy efficiency, low carbon heat, renewable energy generation and embodied carbon.

Carbon Offsetting

It is recognised that to deliver true net zero carbon buildings an operational energy balance must be achieved. This equates to energy generated on site meeting the demands of the building. It is noted however, that this may not always be possible and so a carbon offset may be required to account for this deficit.

Carbon Offsetting

Various forms of offsetting have been used by local authorities in the UK for over a decade now. Traditionally it has provided a mechanism which enables buildings that cannot technically achieve net zero carbon on site to comply with planning policy.

For example, it is technically challenging for a Grade II listed building to generate as much renewable energy as it uses on site, so the applicant could be required to pay carbon offset funds.

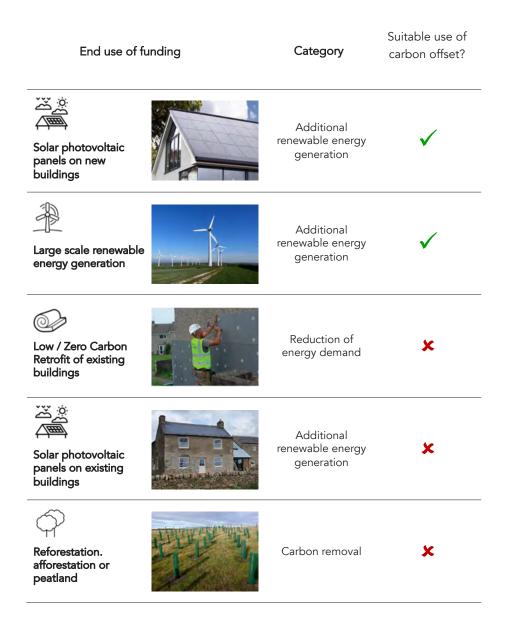
This mechanism, whilst well intentioned, does not always deliver the carbon savings anticipated. According to the Climate Change Committee and others, the UK's total capacity for offsetting (e.g. reforestation, peat restoration, carbon capture and storage) is already required for 'hard to treat' sectors such as aviation and agriculture. Due to this, carbon offsetting should not be actively encouraged unless demonstrated necessary.

How and where to offset emissions

Where carbon offsetting is required, it is suggested that provision of renewable energy on new buildings, and investment in large scale renewable energy generation is adopted. Other measures traditionally proposed such as paying for low energy retrofit are not encouraged. This risks carbon leakage between sectors, which complicates carbon accounting and muddies responsibility.

Collectively, all building stock must be zero carbon, and new buildings cannot rely on existing buildings to achieve their own savings.

It is therefore recommended that where a carbon offsetting is required, that investment in large scale renewable energy generation projects are prioritised.



Net Zero Design | Modelling building performance

Using building regulations methodology alone is risky

There is a well known performance gap between predicted energy use from building regulations compliant models (SBEM for nondomestic buildings) and real life performance. The models created for Part L assessments were designed as a compliance tool rather than a design tool. But often they are the only energy model completed for a building and designers will use them to make important decisions.

Additionally planning policy often refers to energy performance in the context of Part L, making planning targets which are seemingly ambitious, fall short of the expectation.

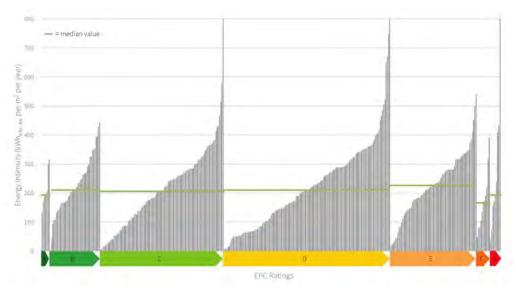
There are however modelling methodologies that have been shown to better represent real life building performance, choosing these methods will significantly help a building meet the Net Zero KPIs proposed for the Kirklees Cultural Heart.

Modelling for Net Zero carbon performance

Best practice energy modelling requires design teams to be more inquisitive and comprehensive. Fundamentally models must include:

- Coverage of all energy uses in a building.
- Variables that represent reality for the building (internal heat gains, building location etc) and are fully justified by the modeller.
- Detailed modelling of complex systems (centralised HVAC for example) which significantly contribute to the EUI.
- Stress testing to understand how performance will vary if the building is used in a different way.
- Honesty about how the model has been built to allow others to interact, interrogate and use the models to improve performance in-use.

There are two main modelling methodologies that have been demonstrated to produce estimates that match real life performance: the Passivhaus Planning Package (PHPP) and CIBSE TM54.



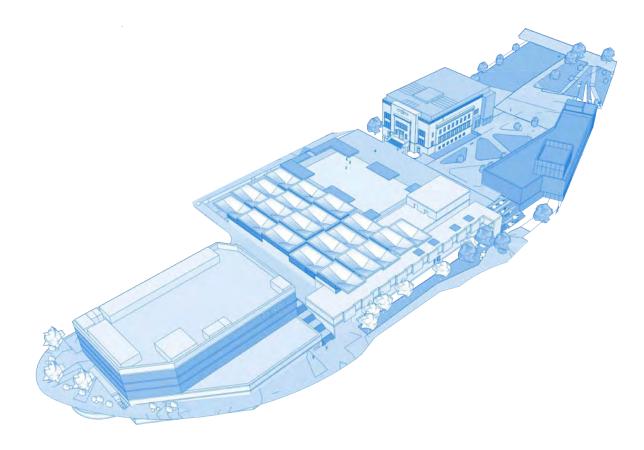
There is substantial and well-proven gap between the modelling methods used to create EPCs (and demonstrate compliance with the Building Regulations) and actual building EUIs. PHPP and CIBSE TM54 represent better options for modelling in order to meet Net Zero standards.

The Better Buildings Partnership (BBP), a collaboration of London's leading commercial property owners and allied organisations, produced the Real Estate Energy Benchmark (REEB) 2019 energy snapshot (2020). The key conclusion from this report shown in the chart above is that, across a sample of 400 large offices, there is a little to no correlation between EPC scores and actual energy performance (as defined by energy intensity). When EPC scores were compared against actual associated carbon emissions in the same buildings, again there was little to no correlation. Whilst this looked specifically offices, this trend can be assumed typical against all non-domestic building sectors.

It is clear that EPCs focus on 'design intent' or theoretical energy efficiency. The evidences suggests demonstrates that there is little to no correlation between the EPC of a non-domestic building and its actual energy use.

Key Performance Indicators

KIRKLEES CULTURAL HEART HUDDERSFIELD



ENERGY AND SUSTAINABILITY KPIs

May 2022 | Rev D



Background & Context

Introduction

The Kirklees Cultural Heart presents a fantastic opportunity to regenerate the town centre, to provide a thriving cultural hub that excels in terms of energy and sustainability performance.

The spectrum of opportunity at this point is vast, and Etude's role at RIBA stage 2 is to clearly articulate these opportunities, and advise on the implications.

As part of the redevelopment the Council are looking at developing the Cultural Heart on the following principles:

- **Retention and reuse** of a significant amount of the gross floor area of the existing property
- Retention of some of the existing redundant areas and repurposed for cultural and community uses
- New and existing buildings to be 'Huddersfield Heat Network ready' via the sizing and location of new and existing Plant Rooms
- Extensive provision for **Electric Vehicle charging points** as part of a Town Centre Parking Strategy
- The development of new and existing buildings will actively engage in a whole-building approach to achieving Part L of the Building Regulations compliance, particularly with respect to Regulation 25b and so will be looking to promote decentralised energy supply systems based on energy from renewable sources particularly with respect to PVs, both roof and facade mounted.
- Exploration of low and zero carbon technologies and products such as 'Low Carbon Concrete'



FCBS : Existing site and proposed development of the Kirklees Cultural Heart

What is the purpose of this document?

It is essential that the proposed development responds to Kirklees Council's climate emergency declaration, as shown on this page.

This document has been developed to help respond to this declaration, and set a clear pathway to follow align with the Council's Net Zero Carbon 2038 objectives.

In responding to the climate emergency and biodiversity crisis, Etude and project team have developed a set of Key Performance Indicators which are directly linked to

- 1. Mitigating the impacts of the climate emergency
- 2. Being **Resilient** to the likely future changes and impacts associated with climate change

It is recognised that environmental assessment schemes like BREEAM have been developed with the intent to promote sustainable development, however they fall short in delivering in some crucial areas such as Operational Energy performance.

This document therefore looks to set KPIs based on current industry consensus, best practice guidance and align to the Climate Change Committee's recommendations to the UK Government on meeting Carbon Budgets.

For each section of this report, context for why the topic is required, and where the KPIs have been derived from will be summarised. It should be recognised that whilst the aim is to meet or achieve certain KPIs, ranges have been provided for certain metrics as there is a high degree of uncertainty regarding performance in this area. Namely targets set for operational energy and embodied carbon are likely to be reviewed at each RIBA Stage to ensure feasibility given the nature of the building typologies and context (ie Heritage impacts).

The intent of this document seeks to help drive a truly sustainable development, and create a process whereby decisions are made with the environmental impact appropriately considered.

Where a KPI is likely to have an impact on the assumed base rates in the cost plan, these will be clearly identified in this report.



In 2019 Kirklees Council declared a Climate Emergency

"We declared a climate emergency in 2019 because we all must take urgent action to improve and protect our environment.

Greenhouse gases such as carbon dioxide trap heat, helping to warm the globe. The amount of carbon emissions are now causing an overall warming of the planet with corresponding devastating impacts starting to be felt.

Cases of extreme weather such as heat waves and rainfall are having consequences already in Kirklees with issues such as moorland fires and flooding in particular affecting the region."



What is the Climate Change Committee, and what do they do?

The Climate Change Committee (CCC) is an independent, statutory body established under the Climate Change Act 2008. Their purpose is to advise the UK and devolved governments on emissions targets and to report to Parliament on progress made in reducing greenhouse gas emissions and preparing for and adapting to the impacts of climate change.

What are others doing?

To help discussions with Kirklees, an appraisal of what other councils in UK are adopting was undertaken.

UK council's are adopting Passivhaus performance targets and Energy Use Intensity targets to help deliver low energy buildings as it is recognised that Building Regulations do not predicate good performance. This is discussed further in the energy KPI section.

This demonstrates that some councils are setting energy and carbon targets above and beyond the regulatory requirements.

Upon declaring a climate emergency, many Councils and Districts in the UK are currently reviewing their energy and carbon policy targets and are likely to adopt absolute space heating demand targets and Energy Use Intensity targets, similar to what is proposed for the Kirklees Cultural Heart. It is unclear as to what the level of expectation Kirklees Council will set with regards to building performance until the ongoing review has concluded.









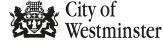


















Passvhaus is being adopted, encouraged or mandated as an assessment scheme across many councils in the UK. The council's above are confirmed to be adopting Passivhaus in some capacity (Passivhaus Trust 2021). It is suggested that targeting a space heating demand target like in Passivhaus would help the buildings achieve an energy efficiency target in line with carbon targets.

Our Approach So Far...

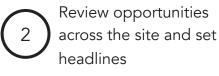
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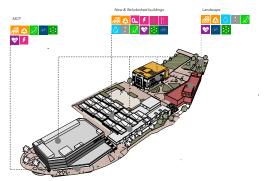
The following sections will provide a bit of background and context to the KPIs, why they are required, and give an indication of what good looks like, and what the impact on the cost plan is likely to be. This page looks to summarise the process taken by the team to date, and how the process of refining and validating the KPIs will be undertaken.



Look to agree energy and sustainability topics



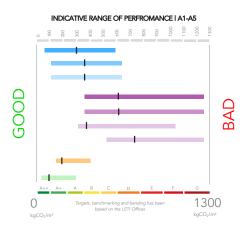




Set Context: 3 What does Good & Bad Looks like?



Develop KPIs with Kirklees and Design team









Refine and Validate KPIs in **RIBA Stage 3**

...

Get to work...

Building on the T&T Strategic Sustainability Plan

Etude and Sustainable Construction Services (SCS) have been appointed to provide energy, sustainability and BREEAM support to Feilden Clegg Bradley Studios (FCBS), and the project team, to help shape the proposed redevelopment of Kirklees Cultural Heart in Huddersfield.

This report has been produced to help distil the team's understanding of the energy and sustainability targets with a view of confirming the brief with the client in RIBA Stage 2.

What is the brief?

In addition to the ITT and initial briefing documentation, Turner & Townsend (T&T) have also produced a Strategic Sustainability Plan for the area which sets the expectations and tone for sustainable regeneration.

This is a really great report, and sets the expectations towards a more progressive and necessary response to mitigating climate change.

The report addresses the key themes of energy, carbon and sustainability; setting the vision, as well as providing guidance on the approach to be adopted strategically and in terms of delivery.

In response to this the team have proposed a preliminary set of targets and commitments to be discussed and agreed with the client and T&T.

These and the KPIs proposed are summarised briefly on the following pages.



O Kirklees

Realigning the Themes

In response to the themes raised in the Turner and Townsend Report, the Design Team has looked to group some of these topics more closely.

Explicitly, there is a lot of cross over between the approach envisaged with regards to reducing the carbon emissions associated with MATERIALS and ENERGY. In response to this, the team has grouped these together, and added graphical note/icon to help visualise the strategies more easily.



Energy & Sustainability Headlines

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EMBODIED CARBON

kgCO_{2e}/m²

- Decision on demolition informed by high level whole life carbon assessment
- A target has been developed based on the level of new-build and retrofit.
- Focus on lean structural design to reduce the need for materials
- Optimise and report the utilization factors of structural designs and elements
- Specify material palette with low embodied carbon

CIRCULAR ECONOMY

"Use it or lose it'

- The existing building stock will be evaluated to prioritise retention and refurb
- · Pre-demo audits will be undertaken to evaluate and prioritise material reuse
- Flexible and adaptable spaces to maximise future viability.
- Identifying waste streams and targeting "0"

0., 🗲 📱 🏠

NET ZERO OPERATIONAL CARBON kWh/m²/yr | Tonnes CO2

- No fossil fuels used on-site during building operation
- Predicted operational energy assessments TM54 | PHPP
- Ambitious space heating / cooling demand and energy use intensity targets
- Low carbon heating systems (eg Heat Pumps)
- Maximise deployment of PV across the site

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CERTIFICATION

"Recognising the achievement"

• Apply suitable certification schemes to mitigate climate change

🔕 WATER USE

"Every drop counts"

• Adopt low flow and water efficient appliances

(Jul)

BIODIVERSITY, ECOLOGY & SUDS

"Green & Blue"

• A net-positive biodiverse masterplan that integrated the SuDs hierarchy

CLIMATE RISK

"Mitigation & Resilience"

- A future proofed masterplan that considers the impacts of tomorrow, today
- Flood risk, drainage and climate change/temperature

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TRANSPORT

"A modal shift"

- A pedestrian and cycle friendly scheme supported by EV infrastructure
- Integration into wider public transport and infrastructure networks

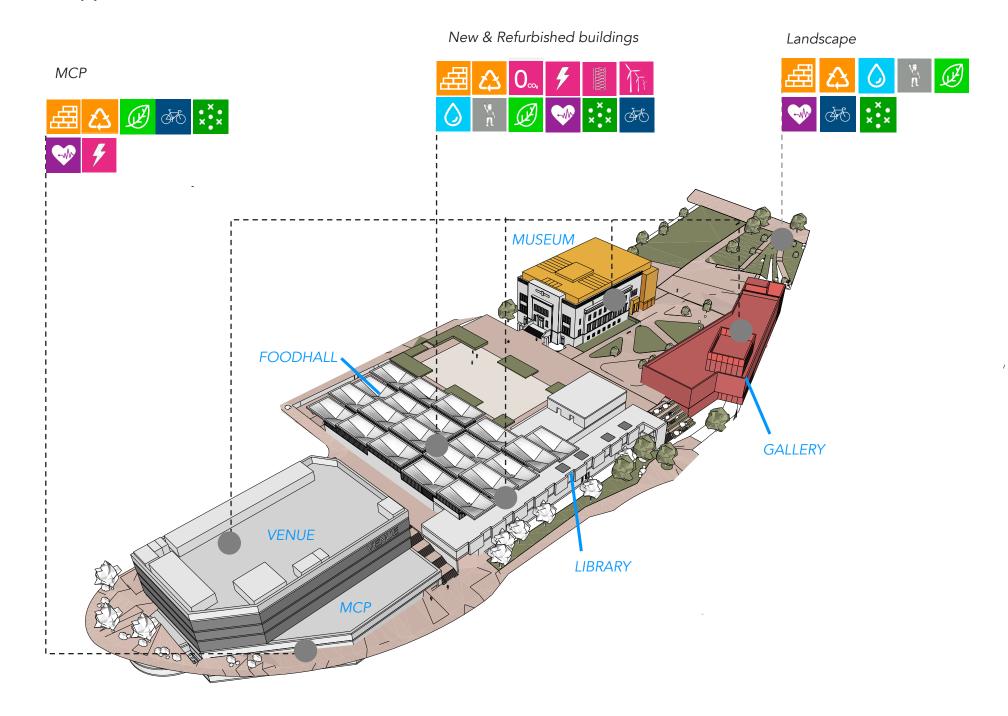


HEALTH & WELLBEING

"Pure & Simple"

• An air quality positive scheme

Initial opportunities across the site





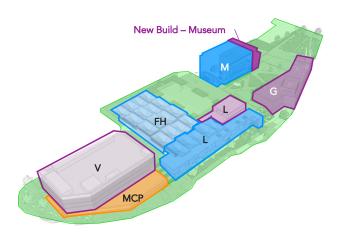
Circular Economy and Embodied Carbon – KPIs Summary



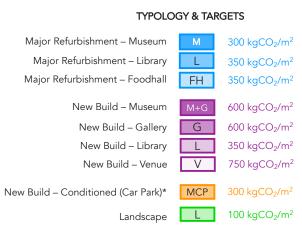
CIRCULAR ECONOMY & EMBODIED CARBON

CORE TARGETS	METRIC
Undertake a pre-demo & refurbishment audit	ТВС
Target best practice embodied carbon performance	Per Building
Waste diversion from landfill	100%
Construction Waste Management Refurbishment	≤ 3.5 tonnes / 100m² GIA
Construction Waste Management New Build	≤ 11.1 tonnes / 100m² GIA
Sustainable and responsibly sourced timber	100%
Responsibly sourced materials - EPDs	50%
ASPIRATIONS	METRIC

Construction Waste Management Refurbishment	≤ 0.4 tonnes / 100m² GIA
Construction Waste Management New Build	≤ 3.2 tonnes / 100m² GIA



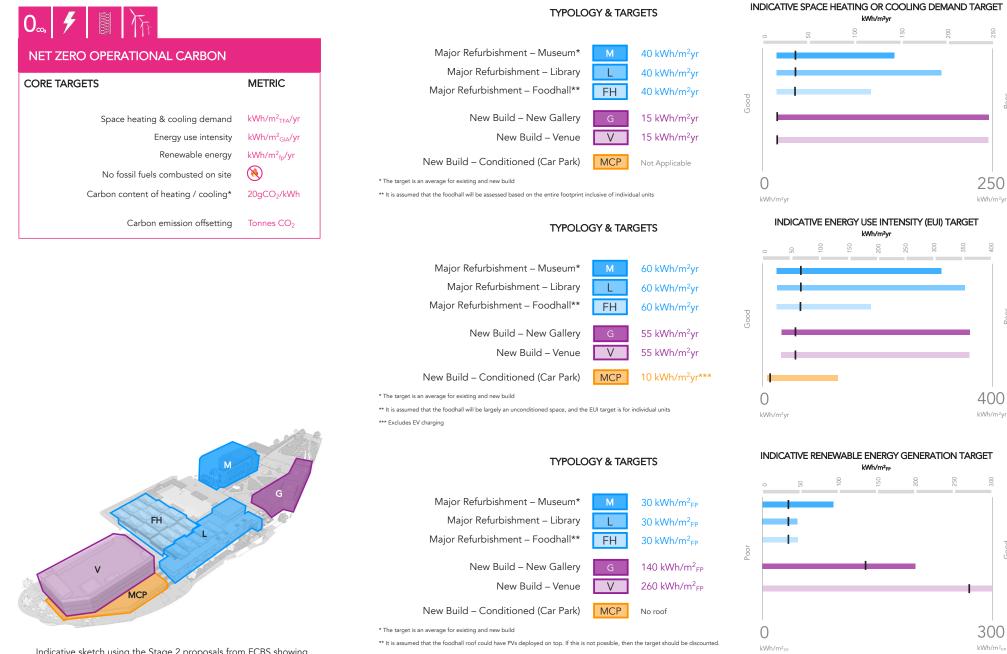
Indicative sketch using the Stage 2 proposals from FCBS showing the different buildings and boundaries



* MCP target to account for basement and blast mitigation conditions which significantly increases embodied carbon

INDICATIVE RANGE OF PERFROMANCE | A1-A5 000 1100 300 500 600 200 00 00 8 8 00 Good A++ A+ 1300 0 Targets, benchmarking and banding has been based on the LETI Offices kgCO₂/m² kgCO₂/m²

Net Zero Operational Carbon – KPIs Summary



Indicative sketch using the Stage 2 proposals from FCBS showing the different buildings and boundaries

Sustainability – KPIs Summary

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CERTIF	FICATION	
SCHEME		METRIC
	BREEAM New Construction 2018 BREEAM Refurb & Fit-out 2014	Excellent Excellent
	ASPIRATIONS	METRIC
	BREEAM New Construction 2018	Outstanding
	BREEAM Refurb & Fit-out 2014	Outstanding
	Passivhaus Certification	Pelavie Hozer
	EnerPHit Certification	Yam.
	Passivhaus Process with Bespoke Targets	Passion House

\bigcirc

WATER USE & SUSTAINABLE URBAN DRAINAGE

CORE TARGETS	METRIC
	METHO
Internal water use	13 litres/person/day AECB Standard flowrates
External (landscapes) area water use	No irrigation
Sustainable Urban Drainage	40% Improvement over Greenfield Rates
ASPIRATIONS	METRIC
Internal water use	10 litres/person/day

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BIODIVERSITY, ECOLOGY & SUDS CORE TARGETS METRIC Protection of existing features of high importance 100% 50% + Biodiversity Net Gain Kirklees Council's Biodiversity Action Plan - Planting 100% Urban Greening Factor >0.4 Tree canopy cover 10% ASPIRATIONS METRIC Building with Nature certification \checkmark

GF6	
TRANSPORT	
CORE TARGET	METRICS
Cycle spaces*	1 per 10 people
Electric car charging points	20% Active 80% Passive
Accessibility for all users	100%
ASPIRATIONS	METRIC
Electric Bike charging points	Report
Enhanced (larger) bike spaces	Report
* Regular Full Time Employees / Staff	

Carbon Sequestration

Report

-10 **CLIMATE RISK** CORE TARGETS METRIC \checkmark Designing comfortable places – CIBSE TM52 Climate resilient SuDs 40% + improvement on greenfield runoff Designing for durability and climate change 100% Extreme weather resilience Ensure floor levels are more than 600mm above the flood level predicted for a 1:100 year flood event (plus climate change).

• × • × • ×	
HEALTH & WELLBEING	
CORE TARGETS	METRICS
An air quality neutral scheme No fossil fuels combusted on site Daylighting Performance	Improve air quality Varies depending on building type
ASPIRATIONS	METRIC
Reduced NO _x & O ₃ levels Plant & Tree planting to improve air quality	Report Report

3.



Circular Economy & Embodied Carbon



Three key themes which are inherently linked include circular economy principles, embodied carbon and waste. As part of the proposed recommendations, targets have been set for embodied carbon, waste and also to adopt a quantifiable target related to implementing circular economy strategies. These have been informed by the guidance documents indicated on this page.

Circular Economy

The philosophy of the circular economy has gathered momentum in recent years, however it has been difficult to quantify or score the impact of good or best practice. For the proposed development, a full review of the the existing development is proposed to evaluate what level of retention is possible considering the development proposals. Apart from adopting a "use it or lose it" approach, the team also proposes to consider the future use of the new buildings and review whether there is an opportunity to future proof development, without having knock on impacts on the embodied carbon of the building.

Embodied Carbon

Embodied carbon refers to the greenhouse gas emissions associated with the manufacture, transport, construction, repair, maintenance, replacement and deconstruction of all building elements.

As the operational emissions associated with our buildings reduces, the impact of embodied carbon increases. To ensure we can work towards achieving net zero carbon buildings the embodied carbon of buildings must be reduced throughout the building life cycle. In line with recent guidance and best practice, a series of targets have been set. The embodied carbon analysis should use RICS Whole Life Carbon (modules A1-A5, excl sequestration) and include a minimum of 95% of cost (as per guidance), include substructure, superstructure, finishes, fixed FF&E, building services and associated refrigerant leakage.



LETI – Climate Emergency Design Guide



GLA Circular Economy Primer



RIBA 2030 Climate Challenge



BREEAM New Construction (NC UK 2018)



ISTRUCT Guidance on Embodied Carbon



RICS Whole Life Carbon Guidance 2017

3



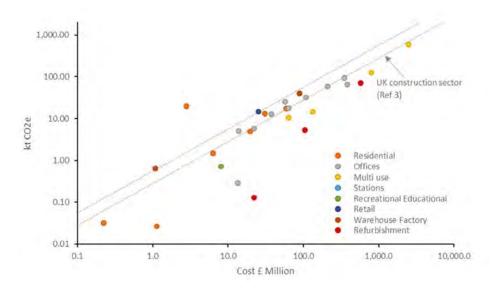
Embodied Carbon continued...

The relationship between reducing embodied carbon and additional costs is not well evidenced. It is however recognised that some measures to reduce embodied carbon may result in unconventional approaches, which will increase costs. For example, significant carbon savings would be achieved if mass timber or cross laminated timber (CLT) structural solutions were adopted in the new buildings, but would likely be more expensive than a traditional reinforced concrete structure.

Costs

Whilst there is evidence that increased capital costs lead to higher embodied carbon as evidenced by the ISTRUCTe, there is little public evidence which corroborates this at a project specific level when comparing different options. It is however clear that many of the principles used to reduce embodied carbon also lead to reduced costs:

- **Building reuse** Whilst obvious, the costs and embodied carbon of retrofitting an existing building are lower than that associated with new construction.
- Lean design Building a structurally lean building will reduce material use.
- Reduced complexity and simple forms reducing the form factor will reduce material use and positively impact the net to gross of the building.
- Rational structural grids and structural continuity Reducing large spanned areas and cantilevered spaces
- **Structural utilisation** Ensuring the structure is operating at or near its maximum utilisation.



ISTRUCTe.- Capital carbon content, structure only (1000 tCO2e) with capital cost (£M) and building type, data plotted on Log-Log scale. This shows the capital carbon content with cost for the available data. There is a clear positive correlation between increased cost and with higher embodied carbon. The evidence suggests that refurbishment projects again tend to be below the general trend.



Embodied Carbon - What does good look like?

As more embodied carbon assessments are undertaken, and the data becomes more robust, there is growing confidence in what a good performing building is, and what a poor performing building is. In the context for Kirklees, this is somewhat different as there is a mix of refurbishment buildings, and typologies which are quite atypical for non-domestic buildings. Given there will be a degree of uncertainty around these buildings, it is proposed that the KPIs are set at RIBA Stage 2 based on approximate benchmark data and refined based on analysis undertaken at RIBA Stage 3.



	Band	Office	Residential (6+ storeys)	Education	Retail
	A++	<100	<100	<100	<100
	A+	<225	<200	<200	<200
LETI 2030 Design Target	A	<350	<300	<300	<300
	В	<475	<400	<400	<425
LETI 2020 Design Target	C	<600	<500	<500	<550
	D	<775	<675	<625	<700
	E	<950	<850	<750	<850
	F	<1100	<1000	<875	<1000
	G	<1300	<1200	<1100	<1200

Upfront Embodied Carbon, A1-5 (exc. sequestration)



Waste and Material Efficiency

An outline Site Waste Management Plan (SWMP) should be developed as part of the principle contractor's requirements. The contractor should also produce and implement a compliant SWMP covering the waste arisings from construction with the aim of minimising waste, recording and reporting accurate data on waste arisings. To ensure that the waste is responsibly sourced on site, the SWMP produced by the contractor should be developed to include strategies to achieve the minimum targets suggested on this page which align to BREEAM requirements. It should be noted that these are considered good practice, and not exemplary levels of performance. The rational for this is that given the site conditions and likely level of demolition, these are considered achievable. These requirements would typically be embedded with the contractor's employers requirements, and would not likely lead to a cost up lift.

Procurement of materials and sustainable sourcing

It is often difficult to obtain robust information regarding the embodied carbon for different products and materials. Manufacturers are now producing Environmental Performance Declarations (EPDs) which show the embodied carbon associated with the lifecycle of the product, in line with the life cycle assessment ISO standards.

Sustainability accreditation for sustainable sourcing is offered through schemes such as BES 6001 – The Framework Standard for Responsible Sourcing, or ISO 14001 Environmental Management Systems and FSC or PEFC certification for timber. It is suggested that these schemes are used to help inform more sustainable procurement, as they align with BREEAM targets for the project.



The targets above have been developed by the BRE as benchmarks for waste diversion from landfill and also material resource efficiency. The refurbishment standards proposed align to good practice as suggested by BREEAM Refurbishment and Fit-Out 2014. The new construction standards proposed align to good practice as suggested by BREEAM New Construction 2018.

It is recognised that achieving these targets is largely based on the level of refurbishment and demolition on site within the boundary of each building.



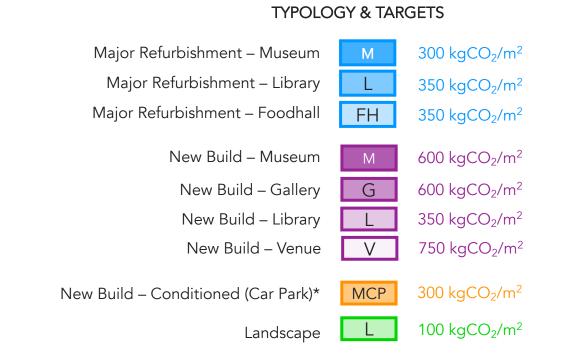
METRIC **CORE TARGETS** Undertake a pre-demo & refurbishment audit TBC Target best practice embodied carbon performance Per Building 100% Waste diversion from landfill < 3.5 tonnes / Construction Waste Management | Refurbishment 100m² GIA \leq 11.1 tonnes / Construction Waste Management | New Build 100m² GIA Sustainable and responsibly sourced timber 100% Responsibly sourced materials - EPDs 50% **ASPIRATIONS METRIC** ≤ 0.4 tonnes / Construction Waste Management | Refurbishment 100m² GIA \leq 3.2 tonnes / Construction Waste Management | New Build 100m² GIA

ACTIONS

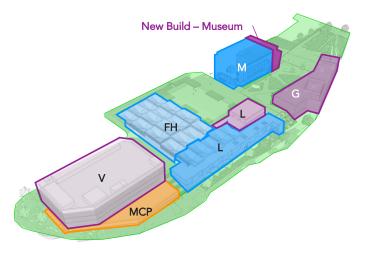
- 1. Undertake a pre-demo & refurbishment audit
- 2. Identify buildings, elements and building components for reuse
- 3. Investigate feasibility for re-use onsite and summarise opportunities
- 4. Apply low embodied carbon principles to developing designs
 - Estimate material quantities and building forms to drive leaner design
 - Evaluate structural design & utilisation factors for superstructure
 - Rationalise structural loadings and setting out to optimise "poor design"
- NEW BUILDINGS & LANDSCAPE Undertake Embodied Carbon assessment for new buildings and landscape proposed
- 6. REFURB BUILDINGS Undertake Embodied Carbon assessments on new components
- 7. Specify low embodied carbon materials



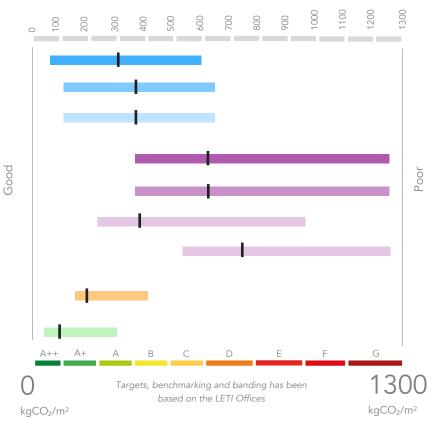
EMBODIED CARBON



* MCP target to account for basement and blast mitigation conditions which significantly increases embodied carbon



INDICATIVE RANGE OF PERFROMANCE | A1-A5

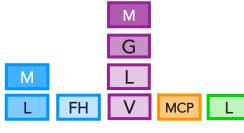


The targets above indicate the likely range of performance and the recommended target for embodied carbon (kgCO₂e/m²) for each of the different refurbished and new build elements. These ranges have been developed by using the LETI Carbon Alignment Targets, using the benchmarks for a new build Office. It should be noted that there is very little data or evidence on the embodied carbon performance of buildings like galleries, museums, venues or car parks. The office benchmark has been used as a guide in the absence of more specific targets.

The intent of having this target is to ensure that "Best Practice" is recognised, and design decisions are made which can be compared to this target. These targets should be validated at RIBA Stage 3 through a robust RICS WLC compliant embodied carbon model. It is recognised that these targets will be challenging to meet. The design proposed and costing undertake at RIBA Stage 2 will be aligned to these targets.

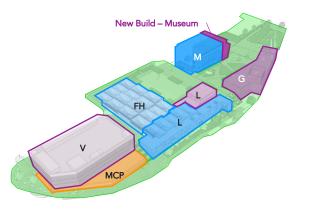


EMBODIED CARBON



TYPOLOGY & TARGETS

300 kgCO ₂ /m ²
200 kgCO ₂ /m ²
200 kgCO ₂ /m ²
600 kgCO ₂ /m ²
600 kgCO ₂ /m ²
350 kgCO ₂ /m ²
750 kgCO ₂ /m ²
300 kgCO ₂ /m ²
100 kgCO ₂ /m ²



Building part/Element group	Building element	L	FH	V	MCP	L
Demolition	0.1 Toxic/Hazardous/Contaminated Material treatment	?	?	?	?	
Demolition	0.2 Major Demolition Works	?	?	?	?	
	0.3 & 0.5 Temporary/Enabling Works	?	?	?	?	
0 Facilitating works	0.4 Specialist groundworks	?	?	?	?	
1 Substructure	1.1 Substructure			\checkmark	\checkmark	
	2.1 Frame	?		\checkmark	\checkmark	
	2.2 Upper floors incl. balconies	?		\checkmark	\checkmark	
	2.3 Roof	\checkmark	\checkmark	\checkmark	\checkmark	
	2.4 Stairs and ramps	\checkmark	?	\checkmark	\checkmark	
2 Superstructure	2.5 External Walls	\checkmark	\checkmark	\checkmark	\checkmark	
	2.6 Windows and External Doors	\checkmark	\checkmark	\checkmark		
	2.7 Internal Walls and Partitions	\checkmark	\checkmark	\checkmark		
	2.8 Internal Doors	\checkmark	\checkmark	\checkmark		
	3.1 Wall finishes	$\overline{\checkmark}$	\checkmark	$\overline{\checkmark}$		
3 Finishes	3.2 Floor finishes	\checkmark	\checkmark	\checkmark		
	3.3 Ceiling finishes	\checkmark	\checkmark	\checkmark		
4 Fittings, furnishings and equipment (FF&E)	4.1 Fittings, Furnishings & Equipment incl. Building-related* and Non-building-related**	<	\checkmark	<		
5 Building services/MEP	5.1–5.14 Services incl. Building-related* and Non-building- related**	<	<	<	<	
6 Prefabricated Buildings and Building Units	6.1 Prefabricated Buildings and Building Units					
7 Work to Existing Building	7.1 Minor Demolition and Alteration Works	<				
	8.1 Site preparation works					?
	8.2 Roads, Paths, Pavings and Surfacings					
	8.3 Soft landscaping, Planting and Irrigation Systems					
8 External works	8.4 Fencing, Railings and Walls					
	8.5 External fixtures					
	8.6 External drainage					?
	8.7 External Services					?
	8.8 Minor Building Works and Ancillary Buildings					?

Embodied Carbon assessments should include a minimum of 95% of cost (as per guidance RICS 2017 Whole Life Carbon Guidance)

0



PRECEDENT

Sky Health and Fitness Centre, DRMM



The building is designed to have a very low embodied carbon through the use of:

- A building frame of glue laminated bifurcated timber columns and beams and cross- laminated timber (CLT) perimeter walls.
- It has an efficient, rectilinear form that is clad in lightweight materials, predominantly a stratified composite timber cladding was selected for its natural characteristics and minimal embodied carbon.







PRECEDENT

Weston Library, University of Oxford, Wilkinson Eyre







The refurbishment of the New Bodleian Library, a Grade II listed building extends over 11 floors. All of the major features of Gilbert Scott's original architecture were retained during refurbishment, including the 77 year old anodised aluminium windows.



PRECEDENT

The Enterprise Centre, University of East Anglia, Architype



The Enterprise Centre at UEA has minimised the emissions associated with construction through the use of natural and recycled materials for every part of the building. This includes the use of:

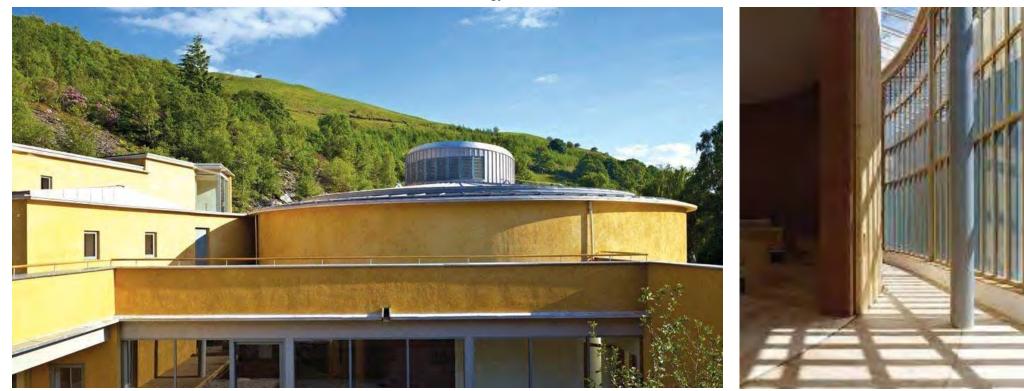
- Recycled aggregates and reinforcement,
- a timber structural frame,
- external thatched panelling
- Reclaimed timber was also used from the original lab benches and a local fallen tree.





PRECEDENT

The Wales Institute for Sustainable Education, Centre for Alternative Technology, David Lea and Pat Borer



The WISE building is designed to have a very low environmental impact in construction and in use, through the use of:

- natural materials with a low embodied energy including timber, earth and hemp.
- An internal rammed earth wall
- Render finish and low embodied carbon external wall





Context

The Climate Change Committee highlight that the UK needs to build new buildings with 'ultra-low' levels of energy use. A supporting technical study undertaken by Currie & Brown and AECOM confirms that a switch to low carbon heating is essential in achieving long term carbon savings, but that this must be supported by significant improvements in energy efficiency in order to manage running costs and avoid external costs to the wider energy system (e.g. electricity infrastructure).

There is also a growing consensus on the need for total energy use as a key metric, expressed as an Energy Use Intensity (EUI). Energy budgets are often referred to as energy use intensity (EUI) targets – measured in kWh/m².yr. For fossil fuel free buildings, the EUI is measured in-use through the incoming electricity meter. This is a simple metric that can be predicted at the design stage using software such as PHPP or CIBSE TM54.

One of the key advantages is that it can be checked once the building is occupied without further modelling or analysis. Generally, these research or guidance documents also highlight that the potential for offsetting from new buildings is extremely limited and should be reserved for exceptional circumstances, rather than standard practice. As noted by the Climate Change Committee, carbon offsetting should be focused on industries and sectors of the economy which are difficult to decarbonise like manufacturing and aviation. Therefore, it is important that all new buildings become net zero carbon in operation, as the UK has a limited renewable energy resource.











Guidance on the need for net zero carbon buildings and total energy use targets has been published by the UKGBC, the RIBA, LETI and the Green Constriction Board

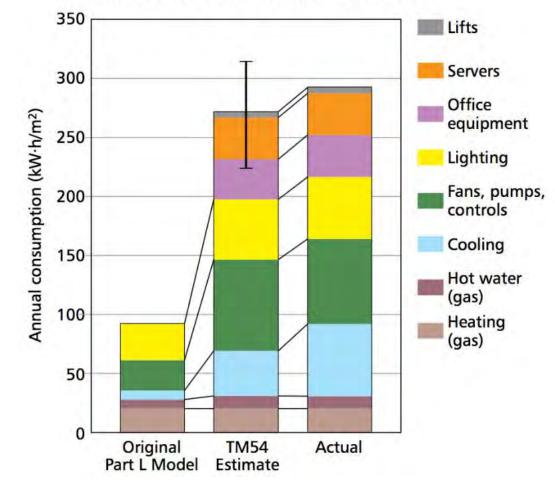


What Metric should we use?

One of the main issues with the current regulatory approach is that there is a high difference between design and in-use energy performance. This is illustrated by the chart on this page which shows the results for a Part L Assessment compared with a predicted energy use model (TM54) that estimates the kWh/m²/yr and the in-use energy consumption. In the UK, energy models carried out for Part L Building Regulations compliance (i.e. according to the National Calculation Methodology (NCM) for non-domestic buildings) are often used at the design stage to compare design options and to check compliance with Building Regulations. These energy models are not intended as calculations of actual energy use, but are sometimes mistakenly used as such, especially in the absence of energy performance modelling such as PHPP or TM54 modelling.

Calculating space heating and cooling demand more accurately

Use of TM54 calculations can improve design stage prediction of various end uses for energy, but does not necessarily address inaccuracies in Part L calculations for space heating demand. Combining TM54 with a more accurate space heat and cooling demand calculation, through the use of software such as the PassivHaus Planning Package, can increase the accuracy of space heat demand and overall design stage energy calculations.



Part L model versus TM54 estimate versus actual

Extract from CIBSE TM54 – Evaluation of operational energy performance of buildings at the design stage. The graph above shows the disparity between Part L of the building regulations and the actual energy performance of buildings. It is suggested that predicted energy modelling TM54/PHPP are adopted to advise on the energy strategy and design decisions.



ENERGY & NET ZERO CARBON

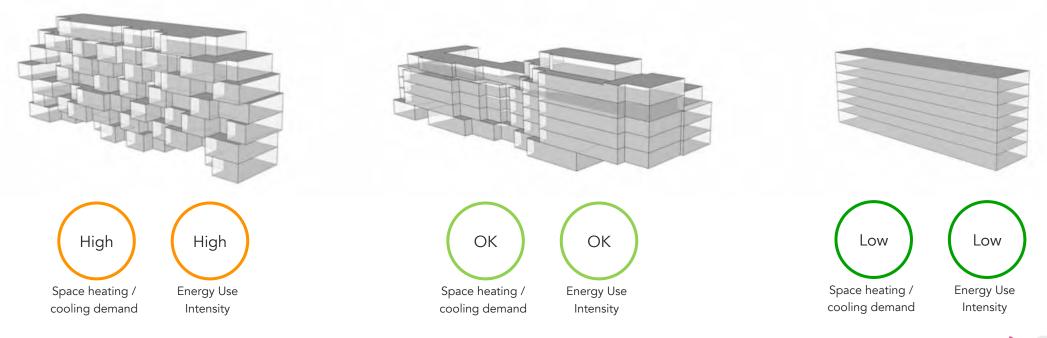
Suggested approach to estimating predicted space heating/cooling demand and energy in use performance

There is a growing consensus on the need for total energy use as a key metric, expressed as an Energy Use Intensity (EUI). One of the key advantages is that it can be checked once the building is occupied without further modelling or analysis. Additionally it is essential to ensure buildings are energy efficient, and so a Space heating / cooling demand target is also proposed to ensure the energy demand is minimised.

Carbon offsetting should generally not be regarded as an option for new buildings. Carbon sequestration should be reserved for the hardest to treat sectors (ie manufacturing, industry and aviation). Limited use of renewable energy offsetting for buildings with no fossil fuel combustion on site, and where the site has maximised renewable energy generation, is compatible with decarbonisation pathways.

METRIC kWh/m²yr Predicted energy use that can be validated using the energy meter in use.

Considering the three options below, a simple building option will have a lower space heating/cooling demand assuming the fabric performance and building services specification is the same.

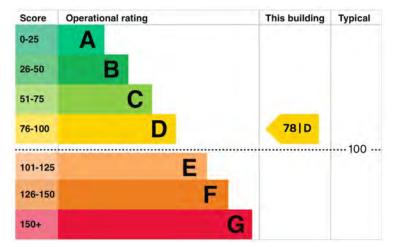




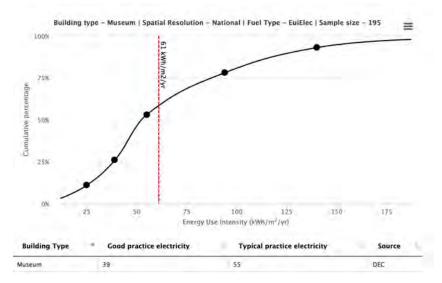
Benchmarking – Huddersfield Library to be refurbished for use as a museum

On review of a Display Energy Certificate for the Library, a typical year in operation shows a D rating is achieved. The data from the DEC has been benchmarked using the CIBSE benchmarking tool and is shown on the charts on this page – for museums. This shows that the building is very inefficient, and there is a great opportunity to make huge improvements.

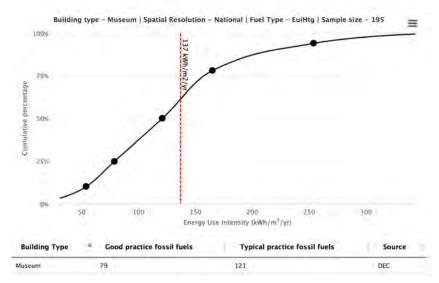
The proposed refurbishment of the Huddersfield library to a museum presents a great opportunity to maximise the interventions, and improvements to building fabric are a key factor. Assuming the gas consumption 137kWh/m²/yr is providing a small amount of domestic hot water, it can confidently be assumed that the space heating demand of the existing building is in the region of 90-120kWh/m²/yr. With improvements to the building fabric, it is possible to significantly improve this by upwards of 50%. This is demonstrated through the PHPP analysis undertaken by Etude at Stage 2. For context an EnerPHit project would need to achieve a SHD of 25 kWh/m²/yr.



Display Energy Certificate for the Huddersfield library (2018)



CIBSE Benchmarking Tool – Distribution of performance of museums (Electricity) showing where the Huddersfield Library would appear if it was a museum.

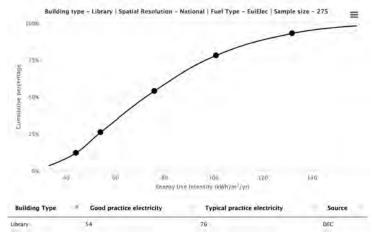


CIBSE Benchmarking Tool – Distribution of performance of museums (Gas) showing where the Huddersfield Library would appear if it was a museum.

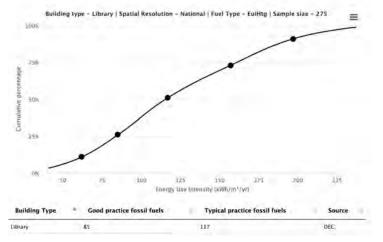


Benchmarking – Gallery and Library

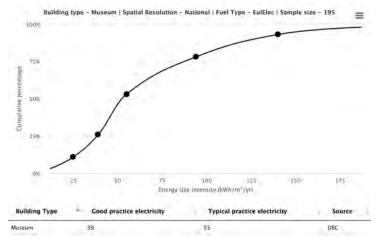
Unfortunately the CIBSE Benchmarking tool does not show energy data specifically for galleries. To help inform the indicative range of performance likely for this type of building, library and museum data has been shown on this page to show an indication of similar typologies and their range of performance. Library data has been used to inform the indicative range of performance.



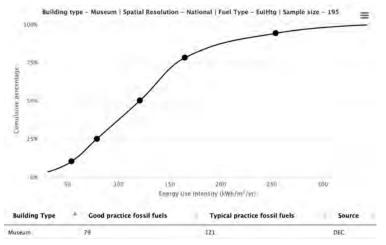
CIBSE Benchmarking Tool – Distribution of performance of libraries (Electricity)



CIBSE Benchmarking Tool – Distribution of performance of libraries (Gas)



CIBSE Benchmarking Tool – Distribution of performance of museum (Electricity)



CIBSE Benchmarking Tool – Distribution of performance of museum (Gas)



Benchmarking – Gallery and Library

The table below shows a summary of the CIBSE Benchmarking tool output showing good practice and typical practice for gas and electricity consumption for library's and museums. This has been used to estimate the likely performance for the new gallery building.

Benchmarking 🛦 category	Building Type	Year	Good practice fossil fuels	Typical practice fossil fuels	Good practice electricity	Typical practice electricity	Units	Source
Public buildings	Library	2021	75	106	51	69	kWh/m2 (Gross floor area)	DEC
Public buildings	Museum	2021	82	109	42	72	kWh/m2 (Gross floor area)	DEC

CIBSE Benchmarking Tool – summary of good practice and typical practice for gas and electricity consumption for library's and museums.



Benchmarking - Venue

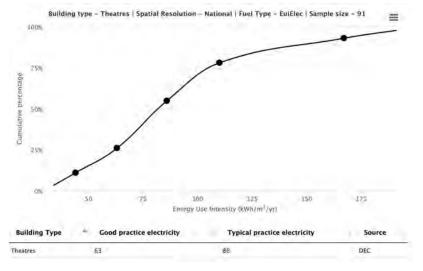
Unfortunately the CIBSE Benchmarking tool does not show energy data specifically for venues. To help inform the benchmarks for the Kirklees Cultural Heart Venue, theatre data has been shown on this page to show an indication of similar typologies and their range of performance.

In addition to reviewing the CIBSE Benchmarking Tool, Etude have also reviewed CIBSE Guide F – Energy Efficiency in Buildings (2012) to appraise benchmark data for this type of building. The closest typology to a venue would appear to be a cinema. CIBSE Guide F suggests the following benchmarks which suggests there is a huge opportunity to considerably reduce energy consumption from a business as usual approach.

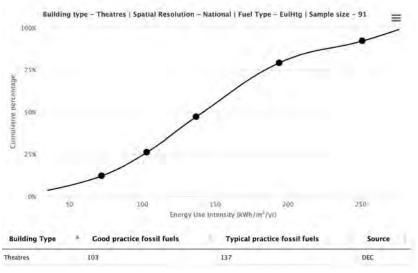
Building Type	* Good practice electricity	Typical practice electricity	Source
Cinemas	135	160	Guide F
Building Type	 Good practice fossil fuels 	Typical practice fossil fuels	Source
Clnemas	515	620	Guide F

Benchmarking – Multi story car park

Etude have reviewed CIBSE Guide F – Energy Efficiency in Buildings (2012) to appraise benchmark data for MCPs. Enclosed car parks are suggested to have a typical performance of 15 kWh/m²/yr. This would take into account the electrical consumption associated with lighting, ventilation and small power.



CIBSE Benchmarking Tool – Distribution of performance of theatres (Electricity)



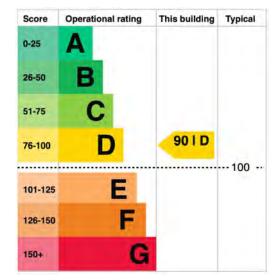
CIBSE Benchmarking Tool – Distribution of performance of theatres (Gas)



Benchmarking – Foodhall

On review of a Display Energy Certificate for the Foodhall, a typical year in operation shows a D rating is achieved. The data from the DEC has been benchmarked using the CIBSE benchmarking tool for small food shops. CIBSE Guide F suggests the following benchmarks which suggests there is a huge opportunity to considerably reduce energy consumption from a business as usual approach.

Good practice electricity	Typical practice electricity	Source
400	500	Guide F
Good practice fossil fuels	Typical practice fossil fuels	Source
80	100	Guide F
	400	400 500 Good practice fossil fuels Typical practice fossil fuels



Display Energy Certificate for the Queensgate Market Hall (2017)



Suggested approach to calculating renewable energy

It is suggested to use the "building footprint" as the metric to calculate the performance of the renewable energy generated using PV.

This metric allows a fair comparison between buildings, irrespective of their height. The image below shows the performance varies depending on the approach for deploying PV.

METRIC kWh/m²FP Energy generated per m2 of the building footprint





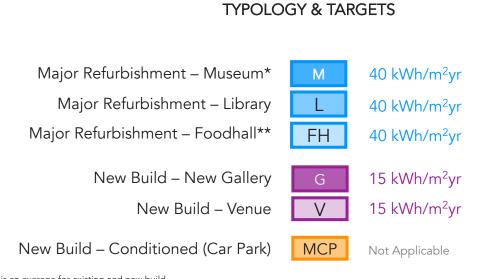
ENERGY & NET ZERO CARBON

CORE TARGETS METRIC
Space heating & cooling demand kWh/m ² _{TFA} /yr
Energy use intensity kWh/m ² _{GIA} /yr
Renewable energy kWh/m² _{fp} /yr
No fossil fuels combusted on site 🛛 🛞
Carbon content of heating / cooling* 20gCO ₂ /kWh * Assuming BEIS forecast electrical grid decarbonisation - HM treasury green book grid carbon intensities for 2022-2050
Carbon emission offsetting Tonnes CO ₂
ASPIRATIONS METRIC

ACTIONS

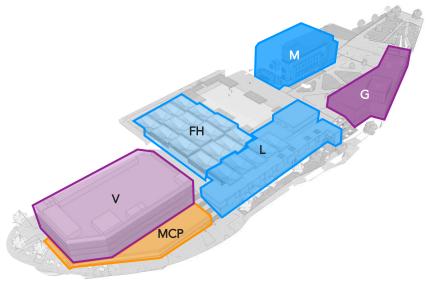
- 1. Develop initial targets per building, based on best practice net zero new build and refurbishment.
- 2. Refine targets, based on predicted operational energy modelling (ie PHPP) for Museum, Art Gallery and New Library.
- Refine renewable generation targets based on scenario analysis for solar photovoltaic deployment with design team.
- 4. Use PHPP modelling to keep design on track to achieve targets.
- 5. Confirm the target carbon content of heating and cooling to ensure a low carbon heating system is truly low carbon.
- 6. Calculate the total carbon emissions (regulated and unregulated) associated with the proposed development required for carbon offsetting.

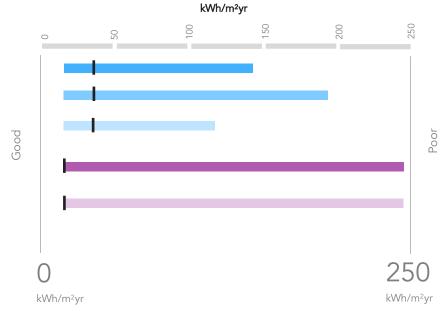




* The target is an average for existing and new build

** It is assumed that the foodhall will be assessed based on the entire footprint inclusive of individual units





The targets above indicate the range of performance for each of the different buildings, and the recommended target for space heating or cooling demand. These ranges have been developed by using the CIBSE Benchmarking Tool for existing buildings.

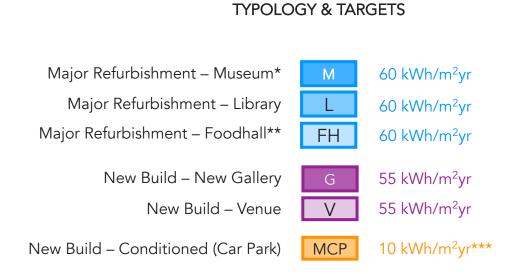
Energy targets are proposed for each building, and in the instance where an extension is proposed to an existing building, the target is an average across both elements.

The target is interchangeable between heating or cooling demand depending on the building type and whether the building is cooling or heating led.

The intent of having this target is to ensure that "Best Practice" is recognised, and design decisions are made which can be compared to this target. These targets should be validated at RIBA Stage 3 through a robust predicted operational energy model (ie PHPP or using CIBSE TM54). It is recognised that these targets will be challenging to meet. The design proposed and costing undertake at RIBA Stage 2 will be aligned to these targets.

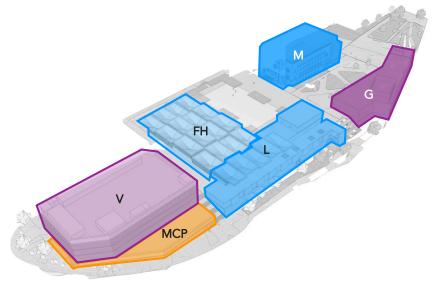
INDICATIVE SPACE HEATING OR COOLING DEMAND TARGET

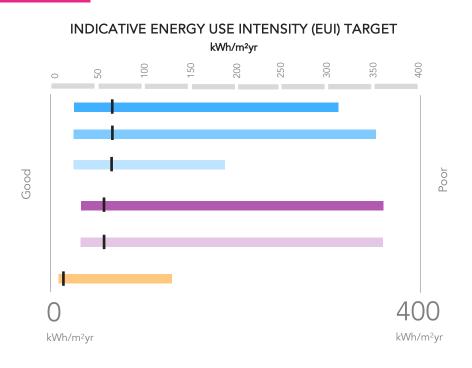




* The target is an average for existing and new build

** It is assumed that the foodhall will be largely an unconditioned space, and the EUI target is for individual units *** Excludes EV charging





The targets above indicate the range of performance for each of the different buildings, and the recommended target for energy use intensity (EUI). These ranges have been developed by using the CIBSE Benchmarking Tool for existing buildings and building Display Energy Certificates (DECs).

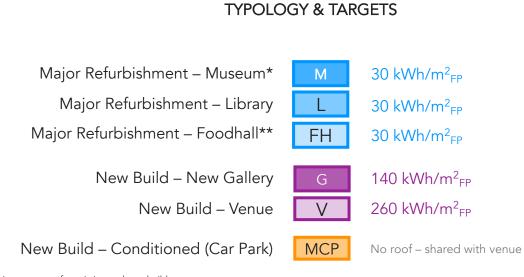
Energy targets are proposed for each building, and in the instance where an extension is proposed to an existing building, the target is an average across both elements.

The target encompasses ALL energy use, with the exception of EV charging as this is not "building consumption" but energy use associated with "Transport".

The intent of having this target is to ensure that "Best Practice" is recognised, and design decisions are made which can be compared to this target. These targets should be validated at RIBA Stage 3 through a robust predicted operational energy model (ie PHPP or using CIBSE TM54). It is recognised that these targets will be challenging to meet. The design proposed and costing undertake at RIBA Stage 2 will be aligned to these targets.

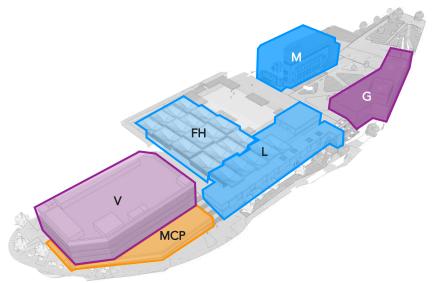
Indicative sketch using the Stage 2 proposals from FCBS showing the different buildings and boundaries

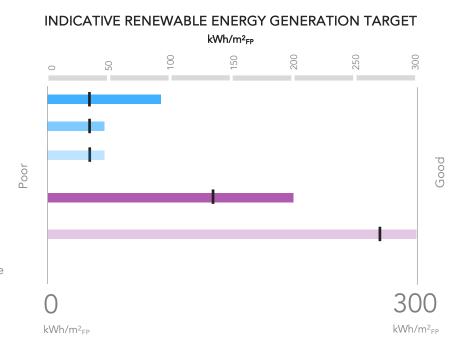




* The target is an average for existing and new build

** It is assumed that the foodhall roof could have PVs deployed on top. If this is not possible, then the target should be discounted.





The targets above indicate the range of performance for each of the different buildings, and the recommended target for renewable energy generation through the use of PV panels. These ranges have been developed by reviewing best practice PV design and deployment, likely available roof areas and consideration for heritage and access.

The PV targets are proposed for each building, and in the instance where an extension is proposed to an existing building, the target is an average across both elements.

The intent of having this target is to ensure that "Best Practice" is recognised, and design decisions are made which can be compared to this target. These targets should be validated at RIBA Stage 3 through a detailed PV array markup and generation analysis. It is recognised that these targets will be challenging to meet. The design proposed and costing undertake at RIBA Stage 2 will be aligned to these targets.

Indicative sketch using the Stage 2 proposals from FCBS showing the different buildings and boundaries



ENERGY & NET ZERO CARBON

PRECEDENT

Headquarters of Métropole Rouen Normandie / Jacques Ferrier Architecture



A Passivhaus office, which has exceptionally high levels of operational energy performance. This building has:

- Simple form
- Triple glazing
- Efficient mechanical ventilation with heat recovery
- Low levels of air tightness
- Reduced solar gain from external shading



PRECEDENT

Delta Green / CR&ON



A Passivhaus office, which has exceptionally high levels of operational energy performance. This building has:

- Simple form
- Triple glazing
- Efficient mechanical ventilation with heat recovery
- Low levels of air tightness
- A large PV array
- Reduced complexity for reduced thermal bridging



PRECEDENT

Europa conference centre / Izaskun Larzabal



A Passivhaus conference centre, which has exceptionally high levels of operational energy performance. This building has:

- Simple form
- Triple glazing
- Efficient mechanical ventilation with heat recovery
- Low levels of air tightness
- A large PV array
- Reduced complexity for reduced thermal bridging



PRECEDENT

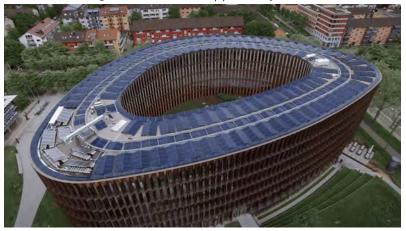
A series of precedents below showing ambitious PV deployment that demonstrates how buildings have taken the opportunity to maximise renewable energy on site.



Bullitt Centre, Seattle



Freiburg, Germany



Freiburg Town Hall, Germany



Hochschule Niederrhein, Germany, © kadawittfeldarchitektur



Context

It is recognised that a consistent and robust framework should be used to benchmark building performance. Traditionally BREEAM has been used as this framework in the UK, and is often a planning requirement or client requirement depending on the location and type of project. In recent years, the emergence of Net Zero Carbon buildings has helped focus on using absolute energy targets, and using a kWh/m²/yr as an operational energy metric. BREEAM does not use this metric in the Energy category in the most recent schemes - 2018 for new building and 2014 for refurbishment. Considering this, and the importance of meeting Net Zero Carbon targets, it is suggested to review alternative schemes to deliver operational energy performance. Passivhaus and EnerPHit are recognised as schemes which deliver energy performance. To date, over 65,000 buildings have certified to these standards, including 1,300 in the UK.

Proposing a pick and mix approach to certification

To ensure that broader sustainability targets are delivered, it is suggested that all non-domestic elements both new build and refurbished undertake a BREEAM assessment. A target of "Excellent" has been set with an aspiration of "Outstanding". This is with the exception of the Multi-story car park which will not be assessed under BREEAM. Topics which are relevant for the landscape and public realm will also be considered as part of the BREEAM Assessments. We propose that operational energy performance is assessed using a combination of PHPP, complemented with TM54 where appropriate. The feasibility of pursuing Passivhaus and the Passivhaus retrofit standard, EnerPHit, has been appraised at Stage 2 for the Museum and Gallery buildings to understand which buildings could reasonably achieve these levels of performance.





Operational energy targets proposed to align with Passivhaus and EnerPHit standards where feasible.





BREEAM New Construction (NC UK 2018)

BREEAM Refurbishment (RFO 2014)



As well as ensuring a minimum standard is achieved, several of the following sections will set key performance indicators which align with the BREEAM targets.

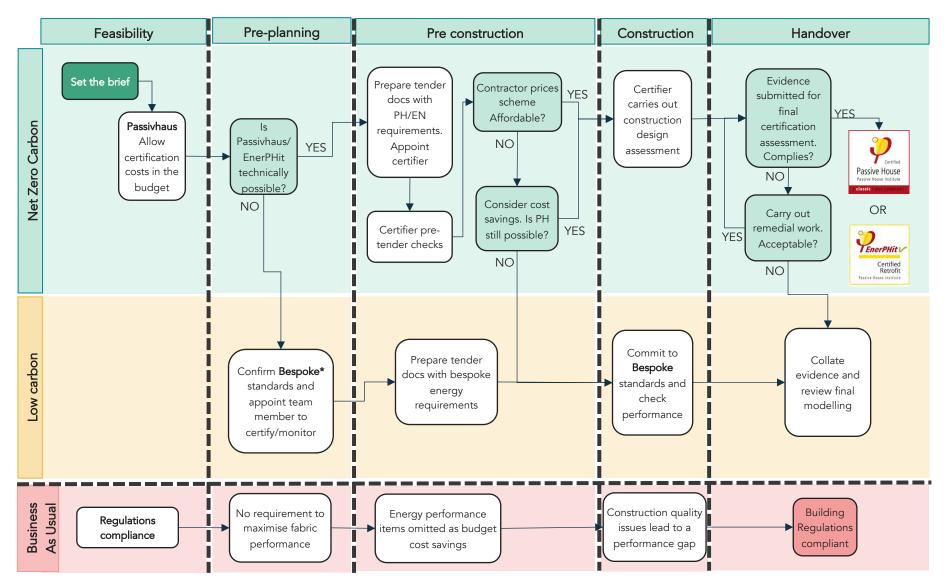
The proposed approach aligns with the Turner and Townsend Stage 1 recommendations for energy and sustainability KPIs.

The table below presents and ranks environmental assessment schemes against how effective these schemes are in delivering environmental performance. Broadly this shows that BREEAM acts as a useful framework to deliver on many sustainability topics whilst Passivhaus and EnerPHit are proven to deliver energy performance and promote excellent indoor air quality.

			ENERGY & CARBON	CIRCULAR ECONOMY, MATERIALS & WASTE	WATER & SUDS	ECOLOGY & BIODIVERSITY	CLIMATE RESILIENCE	AIR QUALITY	TRANSPORT
	Environmental Assessment Scheme	General Description		盘公	\bigcirc	Æ		• * • * • * *	₫£
	BREEAM New Construction UK (2018)	An environmental assessment scheme for existing buildings that sets performance targets across a wide spectrum of environmental issues.	**	***	****	****	***	***	****
DELM Del del del del del del del del del del d	BREEAM Refurbishment and Fit-Out UK (2014)	An environmental assessment scheme for existing buildings that sets performance targets across a wide spectrum of environmental issues.	**	***	****	****	***	***	***
Passive Mouse Passive Mouse Present Mouse Institute	Passivhaus	Passivhaus is the world's leading low-energy building standard. It is a tried & tested solution that gives a range of proven approaches to deliver net-zero buildings augmented for occupant health and wellbeing.	****	-	-	-	-	****	_
PenorPhile or Carathed Resolutions	EnerPHit	EnerPHit similar to Passivhaus, but is a slightly relaxed standard for retrofit projects, where the existing architecture and conservation issues mean that meeting the Passivhaus standard is not feasible.	****	-	-	-	-	****	-



The process flow chart below shows a potential route for helping shape the brief for delivering energy efficient buildings in line with working towards Net Zero Carbon buildings. One of the most effective ways for delivering energy efficient buildings is by adopting Passivhaus of EnerPHit as they are proven certification schemes that deliver low carbon performance and reduce the performance gap.



0



Recommended approach

This page summarises the recommended environmental assessment and certification strategy across the masterplan. It is suggested that all buildings, except the MCP, will have a BREEAM Assessment undertaken. The feasibility of whether Passivhaus or EnerPHit will be suitable has been appraised at Stage 2, and details of the energy analysis has been included in Etude's Stage 2 report. From the analysis undertaken, it us unlikely that the museum could meet EnerPHit levels of performance. There is a possibility that the new gallery and venue buildings could achieve Passivhaus. This is subject to additional PHPP modelling in Stage 3, and confirmation of the level of performance agreed with the client.



BREEAM New Construction (NC UK 2018)*

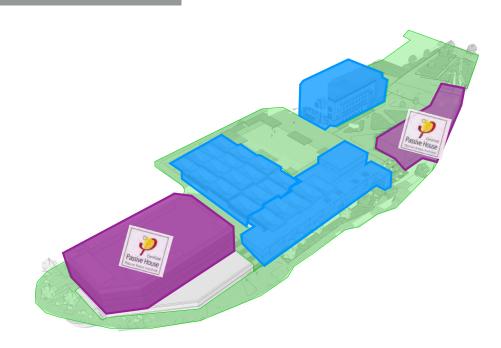
*A Bespoke Assessment may be required

BREEAM New Construction Sitewide related requirements

BREEAM NC 2018 will be adopted for the new build elements and the landscape requirements



BREEAM Refurbishment and Fit-out (NC UK 2014)





Passivhaus – It is suggested that new buildings seek to achieve Passivhaus levels of performance, and ideally undergo certification subject to approval from Kirklees Council and feasible. It is recognised that this has not been taken into account as part of the initial brief or cost plan, and so is likely to lead to increase costs. It is proposed to appraise the new buildings at RIBA Stage 3 and advise on feasibility.



EnerPHit – Whilst it would be beneficial for the refurbished buildingsto seek to achieve EnerPHit levels of performance, it is not currently deemed feasible given the Stage 2 PHPP modelling undertake by Etude. It is proposed to report the predicted operational energy performance against the EnerPHit benchmark to show the relative level of performance.

BREEAM RFO 2014 will be adopted for the refurbished buildings



SCHEME		METRIC
	BREEAM New Construction 2018	Excellent
	BREEAM Refurb & Fit-out 2014	Excellent
	ASPIRATIONS	METRIC
	BREEAM New Construction 2018	Outstanding
	BREEAM Refurb & Fit-out 2014	Outstanding
	Passivhaus Certification	Passive House
	EnerPHit Certification	PenerPhile - Certified Restolt: Fuire Rest solution
Passivh	naus Process with Bespoke Targets	Passive House

ACTIONS

- 1. Undertake feasibility on Passivhaus, EnerPHit, and bespoke performance targets for new and existing buildings
- 2. Identify certification route for each building
- 3. Set roadmap for BREEAM strategy and undertake pre-assessment
- 4. Identify sitewide issues / strategies which can be adopted across the project
 - Transport
 - Land Use & Ecology
 - SuDs strategy
 - Acoustics & Noise Impact Assessment
- 5. Align scopes and workstreams to responsible team members

WATER USE & SUSTAINABLE URBAN DRAINAGE



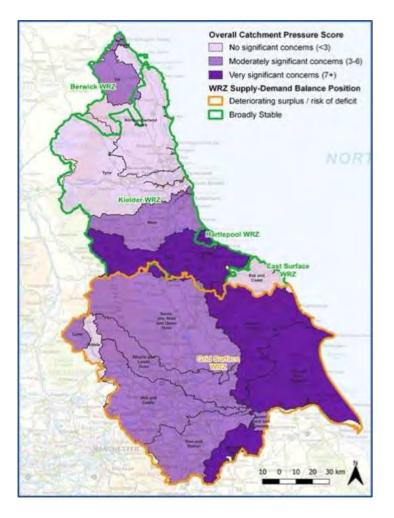
INTERNAL AND EXTERNAL WATER USE

Context

Our fresh water resources are coming under increasing pressure. On review of the current position on water use in the Kirklees areas (Aire and Calder catchment), Water Resources North suggest there are currently no significant concerns. When looking forward however, given the impacts of climate change and increased use, it is suggested there are moderately significant concerns associated with water catchments deteriorating and catchments are at an increased risk of deficit.

Considering this, Water Resources North suggest measures to reduce water use in the Aire and Calder catchment. Practically at a building or project level, measures such as demand reduction for reducing leakage and customer use are suggested by Water Resources North as strategies to reduce water use pressure.

Given this context, it is proposed to set potable water use targets for the buildings and landscape on the Kirklees Cultural Heart to align with the recommendations of Water Resources North.



The Water Resources Position Statement (2021) from Water Resources North confirms there is a deteriorating surplus and risk of deficit to Kirklees Council District and wider Water catchment area.

INTERNAL AND EXTERNAL WATER USE

Given the need for reduced water use for the project, a review of industry best practice guidelines and targets have been reviewed as means of ensuring best practice is achieved.

RIBA 2030 Climate Challenge Targets

The RIBA 2030 Climate Challenge sets targets for residential and non-residential buildings.

For non-domestic buildings, target the RIBA 2030 Climate Challenge target for water consumption of < 13 l/p/day. This is a suitable target to use as it aligns to good practice, and can be achieved without the need for rainwater or greywater recycling systems.

Adopting AECB water standards

The AECB water standard defines good and best practice in water and energy performance in buildings.

For ultra-low energy efficient buildings the energy required to heat hot water can exceed the energy required for space heating. For these reasons, the AECB Water Standards prioritise hot water savings and are a suitable standard to target.

AECB Water Standards						
AECB						
6 to 8 l/min measured at installation. Mixer to have separate control of flow and temperature although this can be achieved with a single lever with 2 degrees of freedom (lift to increase flow, rotate to alter temperature). All mixers to have clear indication of hot and cold, and with hot tap or lever position to the left where relevant.						
4 to 6 l/min measured at installation (per pillar tap or per mixer outlet). All mixers to have clear indication of hot and cold with hot tap or lever position to the left.						
ixers to have clear ever position to the						
supply connected. All valve-flush (as e fitted with an easily a hand-operated the Home User for leaks and						

Appliance /

Fitting

Showers

Basin taps

Kitchen sink

taps

WCs

Baths
(where
applicable)≤ 180 litres measured to the centre line of overflow without
allowing for the displacement of a person. Note that some
product catalogues subtract the volume of an average bather.
A shower must also be available. If this is over the bath then it
must be suitable for stand-up showering with a suitable screen
or curtain.

AECB Water Standards - Delivering buildings with excellent water and energy performance.

Refer to the full AECB Water Standard documents Volume 1 and Volume 2 for more information.

SUSTAINABLE URBAN DRAINAGE

Climate change is bringing a higher incidence of prolonged, heavy rainfall and with it increased risk of flooding across all areas - both from rivers and overwhelmed surface water drainage systems. In the future this will increase. It is necessary to plan for flood events in the design of all buildings and their environments.

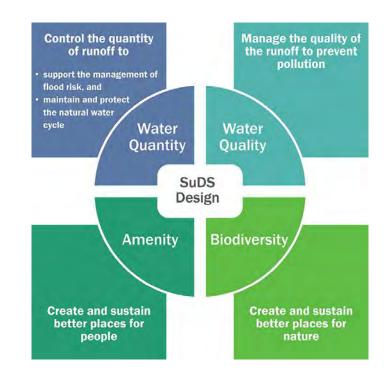
Sustainable Urban Drainage

Sustainable Urban Drainage systems help to manage surface water run-off at source through absorbing water, retaining it and releasing it slowly through evaporation or controlled release to sewers or watercourses.

- SuDs should be designed in from the beginning of the project.
- Store water through rainwater harvesting, green roofs, permeable paving, bioretention systems (e.g. rain gardens), trees, ponds and soakaways.
- Increase infiltration through creating permeable surfaces.
- Intercept rainfall Vegetation, especially tree leaves, intercept rainfall so it doesn't reach the ground.

Greenfield Run-Off Rates

As per the Stage 1 Energy and Sustainability suggested KPIs by T&T, it is recommended the Kirklees site should reduce run-off rates more than the minimum regulatory requirements. The recommendation is to target run-off rates that are a 40% on greenfield run-off rates (runoff rates from a site, in its natural state, prior to any development – to be confirmed for the Kirklees Cultural Heart site).



SuDS can deliver multiple benefits

CIRIA's SuDS manual is structured around "Four Pillars" of SUDs design. SUDs should be designed and implemented to achieve co-benefits of improving water quality, providing amenity for people and habitat for biodiversity.

Impact on Costs

The design proposed and costing undertake at RIBA Stage 2 will be aligned to these targets.

WATER USE & SUSTAINABLE URBAN DRAINAGE

METRIC **CORE TARGETS** Internal water use 13 litres/person/day **AECB Standard** flowrates External (landscapes) area water use No irrigation Sustainable Urban Drainage 40% Improvement over Greenfield Rates **ASPIRATIONS METRIC** Internal water use 10 litres/person/day

ACTIONS

- 1. Evaluate feasibility of retaining existing water fixtures and retrofitting flow restrictors.
- 2. Propose low flow fixtures and fittings
- 3. Propose flow control and leak detection equipment to all buildings
- 4. Investigate the use of Waste Water Heat Recovery
- 5. Integrate AECB Standards for water efficiency
- 6. Adopt a water efficient water strategy for landscaped areas
- 7. Adopt SuDs hierarchy principles to improve water quality, and reduce peak and volume water run-off to greenfield levels
- 8. Produce a SuDs maintenance plan to align to the sitewide and individual systems





Summary

Nature and wildlife brings many benefits – seen and unseen. Our natural support mechanisms, which humans reply upon, are being degraded with potentially devastating effects. Kirklees Cultural Heart should play a positive role in supporting nature and wildlife to thrive. By doing so, it can provide an important link to other sites

High quality, resilient and contextually appropriate ecological and green infrastructure should be created through applying the following principles:

Connectivity – Provide ecological habitats that build upon existing networks (including any local Nature Recovery Networks), create new stepping stones and corridors that increase connectivity allowing wildlife places to forage and shelter and routes along which to travel.

Context – Assess the natural capital within and beyond the site. **Diversity and complexity** - Create diverse, complex and locally appropriate habitats.

Wellbeing - Design multifunctional green infrastructure that supports the health and wellbeing of people through creating space for active travel, recreation, and connection with others and with nature.

Nature recovery - Create habitats that positively enhance biodiversity contributing to the Nature Recovery Network, successfully delivering biodiversity net gain.

Resilience – Design green infrastructure and select species with consideration to their resilience to the effects of climate change and long term sustainability in mind. Planting should not require irrigation.





BREEAM New Construction (NC UK 2018)

BREEAM Refurbishment (RFO 2014)

BREEAM

It is proposed that the landscape be assessed using the BREEMA methodology as this will help promote increases to biodiversity and ecology, improve connectivity, safety and promote sustainable transport.

Whilst BREEAM provides a useful framework for demonstrating improvements, it does not capture the current best practice considerations with regards to landscape improvements. Additional measures are therefore proposed on the following page which build upon the landscape requirements associated with BREEAM. This will ensure that the landscape design responds to the opportunity presented as part of the Kirklees Cultural Heart brief.



Urban Greening Factor

The Urban Greening Factor (UGF) is a tool that evaluates and quantifies the urban greening proposed in new developments. The UGF works by assigning a factor score to each surface cover type proposed in a planning application. Scores range from 1 for semi natural vegetation, through to 0 for impermeable sealed surfaces. It is recommended that Kirklees Cultural Heart target an Urban Greening Factor of 0.4 or greater, calculated using the <u>Urban Greening Factor</u> <u>Calculator</u>. The 0.4 target aligns with current minimum performance for major developments currently seeking planning permission in London.

Tree canopy cover - i-Tree / Capital Asset Value for Amenity Trees (CAVAT) assessment

It is recommended to undertake either an i-Tree (LINK) or CAVAT (LINK) assessment for the development. This will help contribute to a resilient and biodiverse tree canopy cover across Kirklees for years to come.

Biodiversity Net Gain (BNG)

Biodiversity net gain is an approach which aims to leave the natural environment in a measurably better state than beforehand. In 2023 it is likely to become law to achieve a minimum of 10% BNG. We recommend that Kirklees Cultural Heart target 50% BNG.

Building with Nature

The Building with Nature Standards offer and evidence-based, howto, guidance on delivering high-quality green infrastructure. Through supporting and championing best-practice, their aim is to help great schemes get built, raise the bar for industry, and mainstream green infrastructure in placemaking. Building with Nature also offers accreditation for sites that wish to formally recognise their achievements.





Biodiversity Net Gain -CIEEM, CIRIA, IEMA 2016 Biodiversity Net Gain Practical Guide - CIEEM, CIRIA, IEMA 2019



Building with Nature Standards Framework

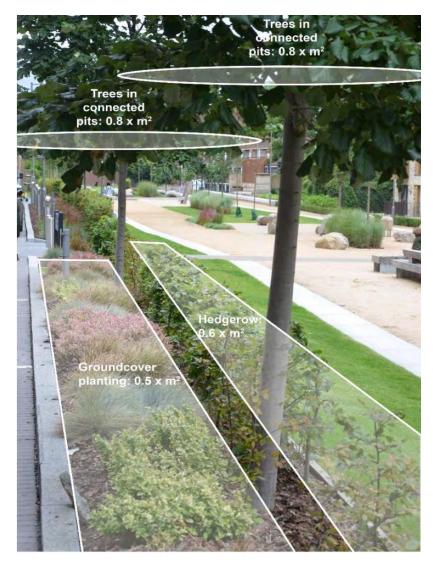
Evaluating the scheme

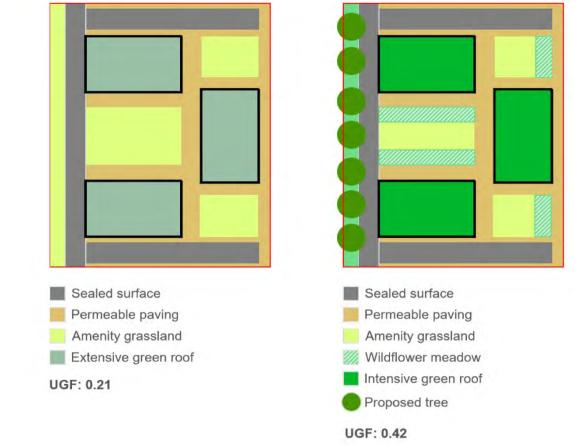
Reform landscape and Arup's Ecology team have been engaged to advise and ensure that the proposed landscape will promote a functional, accessible and biodiverse design.

They have advised that the final Stage 2 landscape proposals will be evaluated and tested against the current targets. It is likely that the scheme will show great improvements relative to the existing site, and so the KPIs may need to be refined to ensure that the scheme is maximising the opportunities of providing a new park.



The images below show an example of how the Urban Greening Factor is calculated. This methodology is favoured for its simplicity and consistency between the assumed calculation methodology. For context a Urban Greening Factor of 0.4 or higher is considered to be good practice for urban and developed areas.

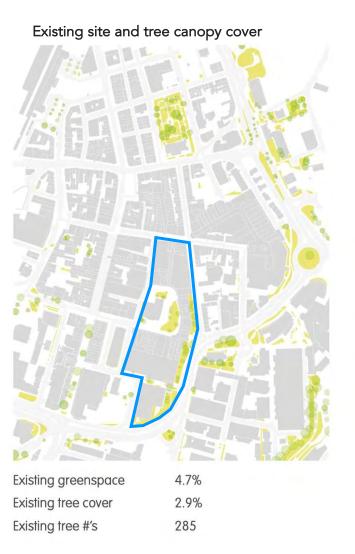


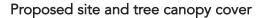


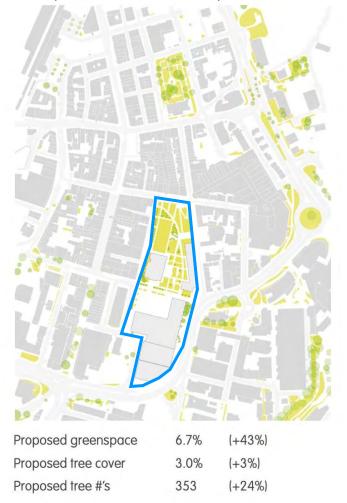
Urban Greening Factor guidance demonstrating how different landscaped options can have a more positive approach on ecological value and biodiversity.



The images below the potential impact the Kirklees Cultural Heart could play in terms of increasing tree canopy to the wider city. Reform Landscape have undertaken an initial appraisal and demonstrated that the project could increase tree numbers by approximate 24%. As the development will improve the wider townscape, it is proposed to include a target for tree canopy for the site.







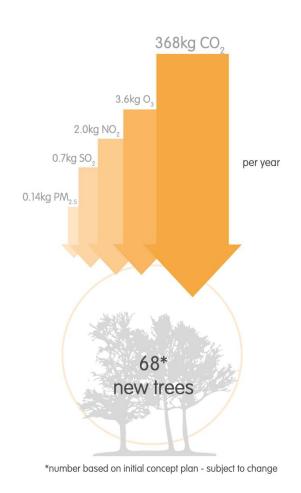


One of the primary mechanisms required for the UK to meet it's carbon budget is to sequester or capture atmospheric carbon and greenhouse gases. At a national level this has promoted reforestation and tree planting initiatives. Whilst the scale of opportunity of the proposed regeneration of the site is limited, it is still recommended to promote a target associated with tree planting and tree canopy. Whilst helping sequester carbon, it also has wider benefits and can improve air quality locally.

Proposed site and tree canopy cover



Potential carbon sequestration and air quality improvements





CORE TARGETS	METRIC
Protection of existing features of high importance	100%
Biodiversity Net Gain	50% +
Kirklees Council's Biodiversity Action Plan - Planting	100%
Urban Greening Factor	>0.4
Tree canopy cover	10%
ASPIRATIONS	METRIC
Building with Nature certification	
Carbon Sequestration	Report

ACTIONS

- Identify and protect all existing ecological features of high importance as part of the landscape proposals
- 2. Propose landscape strategy to achieve a net biodiversity gain of 50%
- Review carbon sequestration opportunities for the landscape either through the use of the Climate Positive Design tool or ITree
- 4. Undertake feasibility and trade offs between green roofs, bio-solar roofs and PV roofs.
- 5. Propose planting strategy aligned to Kirklees Council's Biodiversity Action Plan
- 6. Integrate SuDs hiereachy into the landscape strategy through use of swales, permeable paving etc.
- 7. Produce a habitat management plan to cover maintenance
- 8. Report on likely carbon sequestration from new planting



CLIMATE RISK



CLIMATE RISK

Context

Climate change is happening, and its effects will continue to become more pronounced. Progress on limiting greenhouse gas emissions and climate change is not in line with recommendations from climate science. It is therefore essential that we are able to adapt to a changing climate and design developments that are resilient to increased temperatures, more severe weather conditions and flood events.

Mitigating overheating

Increasing summer temperatures place additional demands on buildings to stay cool. Overheating in buildings is becoming an increasing risk, at a time when we need to reduce energy consumption of buildings. It is necessary to take design measures that minimise overheating risks and reduce cooling demands.

Dynamic thermal modelling should be utilised, in accordance with CIBSE's TM52 The limits of thermal comfort: Avoiding overheating in European buildings, to help reduce cooling demands.

Incorporation of trees and green spaces will help provide natural shading and a cooling effect to the local environment.

Resilience to flooding

Design buildings and open spaces that are resilient to flooding, utilising flood resilient construction and implementing flood mitigation measures.

- Ensure floor levels are more than 600mm above the flood level predicted for a 1:100 year flood event (plus 40% improvement to account for impacts of climate change).
- Utilise flood resilient materials and construction methods that allow a building to recover more quickly after a flood.
- Provide safe access/egress routes above the predicted flood level.



BREEAM New Construction (NC UK 2018)



BREEAM Refurbishment (RFO 2014)





CLIMATE RISK

METRIC **CORE TARGETS** \checkmark Designing comfortable places - CIBSE TM52 Climate resilient SuDs 40% + Designing for durability and climate change 100% Extreme weather resilience Ensure floor levels are more than 600mm level predicted **ASPIRATIONS METRIC**

improvement on greenfield runoff

above the flood for a 1:100 year flood event (plus climate change).

ACTIONS

- Overheating Risk mitigation assessment will be 1. undertaken to minimise the risk, and avoid cooling unless necessary
- 2. A future proofed energy strategy will be developed to test future scenarios of climate change
- The SuDs strategy and attenuation sizing will be 3. developed to account for a 40% increase in rainfall due to climate change
- All external building components and major 4. landscaped areas will be evaluated and appraised against the impact of climate change
- Utilise flood resilient materials and construction 5. methods that allow a building to recover more quickly after a flood.
- Provide safe access/egress routes above the 6. predicted flood level



TRANSPORT



TRANSPORT

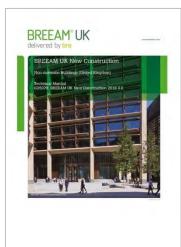
Context

Transport contributes 37% of Kirklees's CO_2 emissions - and almost all of these are from road transport. This proportion is growing year on year: as other sectors are decarbonising, emissions from transport have remained static since 2008.

It's important to support shifts in transport and travel behaviour towards the sustainable transport hierarchy on the right. Kirklees Cultural Heart should review the wider context of its site and provide strong and continuous links to existing footpaths, cycle routes and public transport nodes.

This has multiple benefits beyond saving energy and carbon: improved local air quality; health and wellbeing benefits from being more active; greater potential for social interactions and facilitating a car free life.

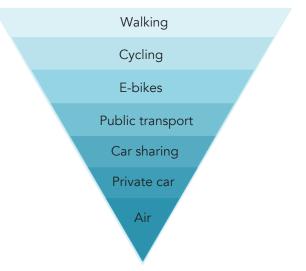
- Provide strong and continuous links to existing footpaths
- Provide strong and continuous links to cycle routes.
- Provide secure, visible and covered cycle storage in line with BREEAM standards.
- Provide facilities for cyclists (showers, changing space, lockers) in line with BREEAM standards.
- Consider the provision of a shared e-bike scheme.
- Provide strong links to public transport.
- Provide car club parking spaces for car clubs.
- Consider how car sharing can be supported.
- Provide at least 20% of car parking spaces with active electric car charging points and the remainder (80%) with passive provision for future deployment of electric car charging points.





BREEAM New Construction (NC UK 2018)

BREEAM Refurbishment (RFO 2014)



The Transport Hierarchy - applications should prioritise the modes of transport in the order they appear in the transport hierarchy, in the design and amenity provided in developments.



TRANSPORT

CORE TARGET **METRICS** Cycle spaces* 1 per 10 people Electric car charging points 20% Active 80% Passive Accessibility for all users 100% **ASPIRATIONS** METRIC Electric Bike charging points Report Enhanced (larger) bike spaces Report * Regular Full Time Employees / Staff

ACTIONS

- Propose a masterplan that promotes sustainable modes of transport and actively encourages pedestrian use and cycle friendly infrastructure
- 2. Cycle storage will be provided for 1 in 10 building staff.
- 3. Active electric vehicles charging points will be provided for 20% of parking spaces.
- 4. The masterplan will be accessible to all individuals inclusive of mobility impairments and disability



HEALTH & WELLBEING



HEALTH & WELLBEING

Context

Our buildings and built environment should support people's health and wellbeing – they should be places that people want to be. BREEAM standards are an effective way of addressing health and wellbeing and should be applied across the following areas:

Indoor Air Quality

Volatile organic compounds used in building materials and adhesives have an adverse impact on people's health. Low VOC alternatives should be sought. Indoor Air Quality Plan should be made and followed by the design team and contractors.

Outdoor Air Quality

Local air quality is primarily affected by the combustion of fossil fuels. The Kirklees Cultural Heart should not include gas boilers, which emit NOx, SOx and particulates.

Through supporting a shift towards active travel (see Transport pages) air pollution from road transport can also be minimised.

Daylighting

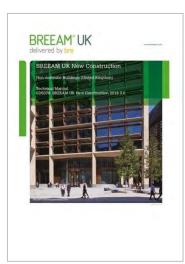
Good natural daylighting supports a sense of wellbeing and should be sought for occupied spaces where possible.

Acoustic environment

A high quality acoustic environment improves comfort – especially when large numbers of people are gathered.

Outdoor space

High quality outdoor space should be created to support wellbeing through providing access to nature, and space for people to congregate and socialise.





BREEAM New Construction (NC UK 2018)

BREEAM Refurbishment (RFO 2014)



HEALTH & WELLBEING

CORE TARGETS

METRICS

An air quality neutral scheme

No fossil fuels combusted on site



Daylighting Performance

Varies depending on building type

Improve air quality

ASPIRATIONS METRIC

Reduced NO_x & O₃ levels Report

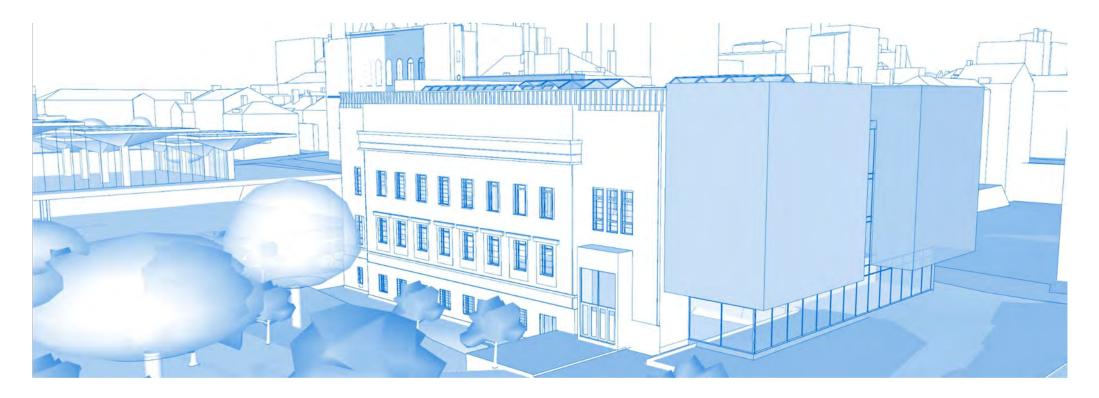
Plant & Tree planting to improve air quality Report

ACTIONS

- The energy strategy will be developed based on the fundamental principle that no fossil fuels will be used
- 2. A review of the car parking capacity will be undertaken to help drive a modal shift away from individual car use
- Cycle storage will be provided for 1 in 10 building staff. The team will look to review provision of space for cargo bikes, and larger cycles.
- 4. Active electric vehicles charging points will be provided for 20% of parking spaces.
- 5. The masterplan will be accessible to all individuals inclusive of mobility impairments and disability
- 6. The planting strategy will look to promote trees and planting that improve air quality
- Low VOC and Formaldehyde finishes will be specified throughout

Energy Efficiency & Predicted Energy Modelling

KIRKLEES CULTURAL HEART HUDDERSFIELD



STAGE 2 – MUSEUM FEASIBILITY STUDY | ENERGY PERFORMANCE

May 2022 | Rev B



Introduction

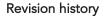
Kirklees council declared a climate emergency in 2019 and pledged to work towards making Kirklees net-zero carbon by 2038.

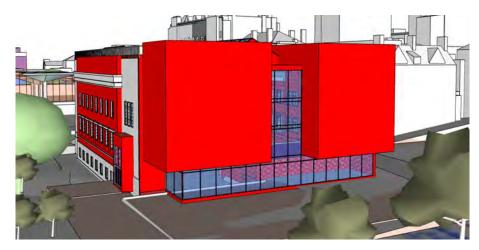
The Kirklees Cultural Heart is a complex of buildings in the town centre, presenting a fantastic opportunity to provide a thriving cultural hub that excels in terms of energy and sustainability performance. Energy efficiency and low carbon design are therefore key considerations for all buildings proposed for Kirklees Cultural Heart.

This report presents the findings of a Stage 2 low energy retrofit feasibility study for the proposed **Museum**. The building was modelled using the Passivhaus Planning Package software (PHPP 9.6a), which allows for an accurate assessment of the predicted energy demand.

Commentary on the emerging design and recommendations for next steps are also made.







Views of the museum and extension thermal model at early Stage 2

Energy modelling | Building description

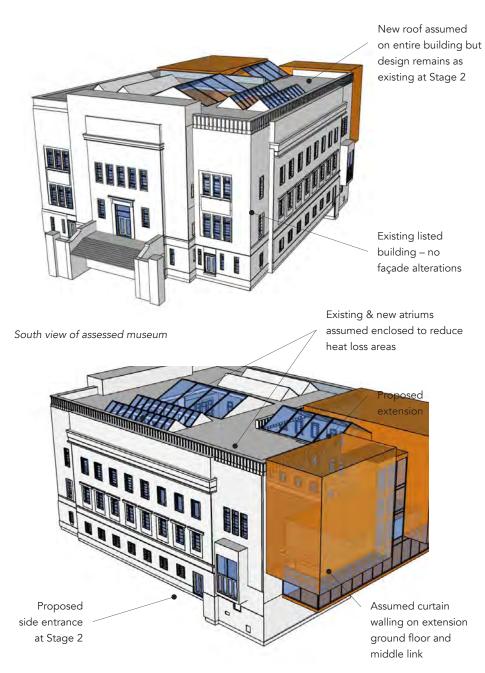
The Museum building is a large facility with multiple occupancy patterns. It consists of the current listed Library building and a new extension. Due to the building's complexity, an early-stage review was conducted in order to assess the impact of various retrofit levels.

The assessed building form was based on the early Stage 2 design proposals, considering that the existing listed building will remain unaltered in terms of form and appearance. The new museum has an estimated gross internal floor area of approx. 4,605m². The main entrance faces the street to the South, while a new side entrance will be added on the Northeast side. The glazing proportions remain the same in the existing part of the building, whilst the new extension includes curtain walling along the galleries' link and ground floor façade. The whole roof is assumed to be replaced, but for the current thermal performance assessment the existing side roof design remains as it is at this stage. Finally, it has been assumed that both the existing and proposed areas are enclosed to reduce the amount of heat loss to the exterior.

The tested building has got a form factor of **1.74**; it is quite high for a building of this type, but it accounts for the open staircases and the very high ceilings/voids over the atriums.

The modelling examined four fabric scenarios which are described on the following page.

It should be noted that this analysis was undertaken on a mid RIBA Stage 2 massing option to inform the likely performance, and has not been updated based on the final Stage 2 proposals.



Northeast view of assessed museum

Energy modelling | New Museum Fabric Specification assumptions

Scenarios	Baseline 1	Baseline 2	Interim fabric improvement	Best practice fabric improvement
Description	No alterations to existing building – Fabric Part L compliance for new extension	No alterations to existing building – Fabric best practice for new extension	Existing babric upgraded with best practice new extension to achieve <40 KWh/m ² yr heating demand and <75KWh.m ² yr energy demand*	EnerPHit Certification standard compliance (25 kWh/m²/yr heating demand, <72KWh/m²yr energy demand)
Existing Floor (W/m ² K)	3.2	3.2	0.25 (assumes insulation under existing floor is possible)	0.25
New Floor (W/m ² K)	0.22	0.15	0.15	0.15
Existing Wall Type 1 (W/m ² K)	1.3	1.3	1.3	0.38
Existing Wall Type 2 (W/m ² K)	1.3	1.3	0.38	0.38
New Wall (W/m ² K)	0.28	0.13	0.13	0.13
Roof (W/m ² K)	0.18	0.11	0.11	0.11
Soffit (W/m ² K)	0.2	0.18	0.18	0.18
Windows (existing) (W/m ² K)	5 (listed steel single glazed)	5	1.4 (new thermally broken steel window)	1.3 (best practice secondary double glazing)
Windows (new) (W/m ² K)	0.9 (triple glazing)	0.9 (triple glazing)	0.9 (triple glazing)	0.9 (triple glazing)
Doors (existing) (W/m ² K)	5	5	1.0 – 1.3	1.0 – 1.3
Doors (new) (W/m ² K)	1.0 – 1.3	1.0 – 1.3	1.0 – 1.3	1.0 – 1.3
Thermal bridging (kWh/m²/yr)	5	6	6.5	7
Air Permeability (m³/m²/hr)	10	10	3	1
Ventilation	AHU, new insulated ducts	AHU, new insulated ducts	AHU, new insulated ducts	AHU, new insulated ducts

* AECB Standard compliance

Fabric assumptions proposed above align with scenarios tested during Stage 2. To be refined during RIBA Stage 3.

Energy modelling | Further general modelling assumptions

Assumption	PHPP heating energy calculation	Notes
General		
Weather file	BRE GB0012a-Waddignton	Passivhaus climate file for Kirklees
Occupancy	Current general assumption of average 600 .	Tbc with FCBS
Floor area	Gross internal area 4,605m ² Passivhaus treated floor area 3,684m ²	Space heating demand is calculated using Passivhaus treated floor area.
Winter design temperature	All occupied room areas 20°C Atrium 20°C	Average air temperature for whole period, includes shut down and out of hours. Meets museum requirements.

Building Fabric

Air permeability & U-values	See scenarios in previous page	
Glazing g-value	Generally > 0.45 0.3 to rooflights	
Fixed shading	Calculated from 3D model including surrounding buildings.	

Heating

Heating system	Assumption used only for PHPP modelling pending a low carbon heat assessment and further MEP development

Assumption	PHPP heating energy calculation		Notes
Lighting			
Lighting efficacy			

Lighting efficacy (all areas average)	Not used at this stage	
Lighting controls:		

Ventilation Systems

System	To Arup design Mixed mode ventilation with full mechanical ventilation with heat recovery during winter.	
AHU system efficiency	AHUs (internal) SFP <1.6W/I.s operating duty, achieving building regulations for peak duty, HR% External duct connections are insulated to >50mm	Heat recovery based on exhaust air temperature SFP includes both fans and controller
Ventilation rates	General assumption of 2l/s/m2 for generic museum function. Assuming controlled conditions in enclosed spaces for potential exhibits that need protection are discounted at Stage 2. Circulation spaces considered part of the main space.	Includes impact of demand control and operating hours. Total annual volume of air through building divided by total time in year.
Control	Ventilation systems run during occupied hours. VAV to internal rooms	Spec tbc with Arup

Hot water

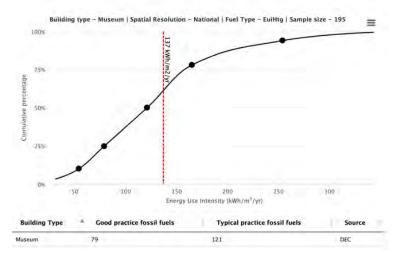
Source	Not used at this stage	
Distribution losses	Not used at this stage	

Estimates of heating energy demand at this stage are based on assumed use, and performance of products, materials, systems and construction quality in the building. There is a substantial margin for error. The assumptions that effect the estimated heating energy are summarised for each building. It is very important that these specification items are maintained through technical design and construction. Small changes in specification could have a disproportionate effect on the performance of the building.

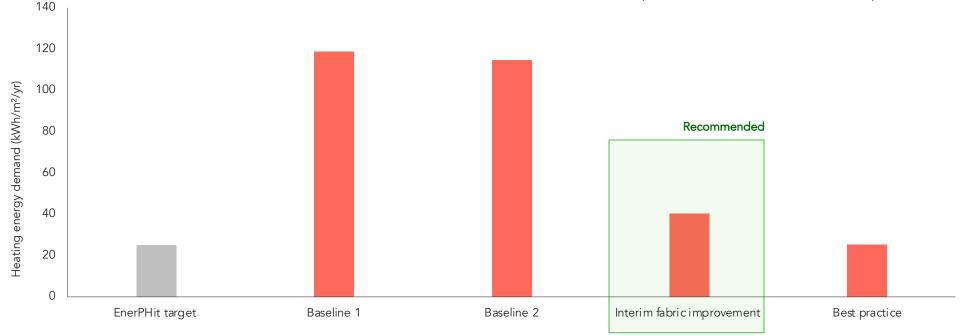
Energy Modelling | Space heating demand

Heating demand modelling to achieve 40kWh/m²/yr

- PHPP modelling indicates that with a medium fabric improvement in the existing building, considering the brick freezing risk on the existing building as well as certain walls that may not get permission for insulation, it is still possible to achieve an overall heating demand of 40 KWh/m²/yr.
- Due to the added extension, the current existing and proposed building volumes are not directly comparable. However, according to the modelling results, avoiding to do any works to the existing building which forms the biggest part of the newly proposed volume, will do little to improve the current recorded performance, no matter how well the new extension is insulated.
- The application of secondary glazing, insulation of all the existing building's walls and best practice air tightness can make the proposed museum achieve the EnerPHit standard.



Current of existing building (library) against the CIBSE Benchmarking Tool – Distribution of performance of museums (Gas) – see also KPI report

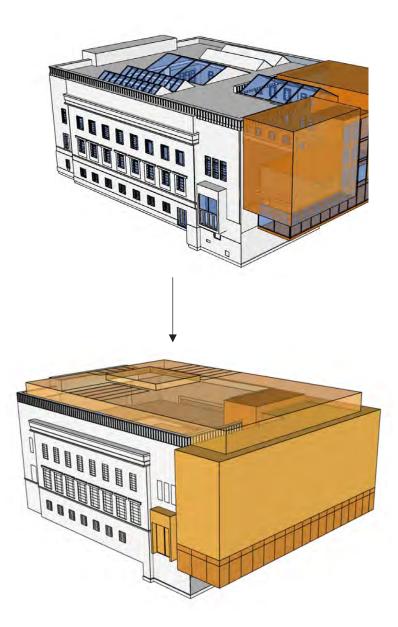


Space heat demand calculated by PHPP 9.6a for each fabric upgrade scenario. Baseline 1 & 2 that involve fabric improvement of the extension only produce only marginally better results when compared to the existing building's performance, estimated by bills.

Energy Modelling | Next Steps – Stage 3

The model and its assessment presented in this report are indicative and are based on an early stage building volume. Following this assessment, the next steps prior to planning submission would be to:

- Confirm the Museum's energy performance target. This will help define the energy strategy to be pursued for the listed part of the building.
- Confirm the form of the extension, the new façades' design (opening shape, type, glazing ratio) and the roof design, wall thicknesses
- Confirm the Museum's Low Carbon heat strategy.
- A detailed Stage 3 thermal model analysis, including more solid assumptions regarding occupancy, ventilation & heating system, hot water consumption, as well as structural considerations to confirm the building's potential with better accuracy. The current design progress to a more unified extension volume with the curtain walling limited on the ground floor and a more even roof surface, will most probably be beneficial to its overall thermal performance.



View of the museum extension volume and roof development during Stage 2 (Source: FCBS 3d model)

Precedents





13 Adams Row, Mayfair, London (conservation area) Grosvenor Estate Sturgis Carbon Profiling EnerPHit certified (by component)





11 Passmore Street, Belgravia, London (conservation area) Grosvenor Estate Sturgis Carbon Profiling EnerPHit certified (by heating demand)

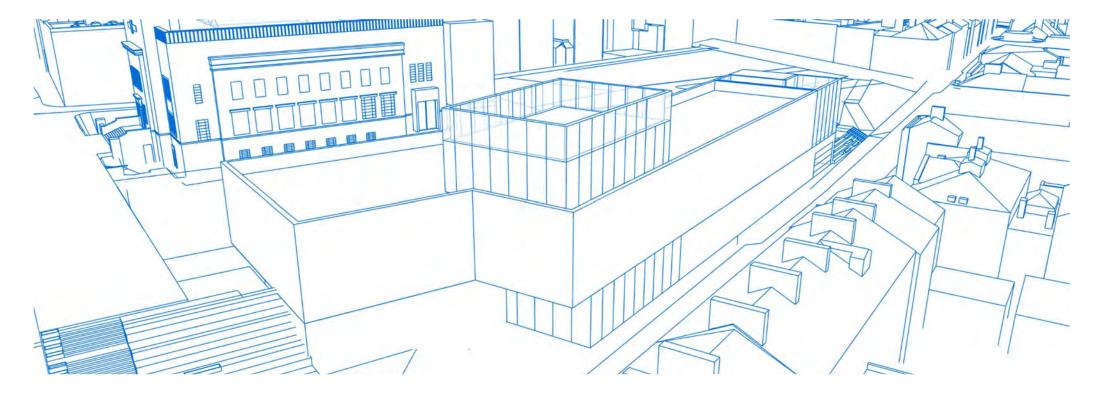


126 Pavilion Road, Chelsea, London (conservation area) Cadogan Estate Latitude Architects EnerPHit certified (by heating demand) – BREEAM Outstanding – BREEAM Awards 2018 winner



2 Gloucester Place Mews, Marylebone, London (Listed II) Portman Estate Feilden + Mawson EnerPHit certified (by component) – 1st listed London EnerPHit

KIRKLEES CULTURAL HEART HUDDERSFIELD



STAGE 2 – GALLERY FEASIBILITY STUDY | ENERGY PERFORMANCE

May 2022 | Rev B



Introduction

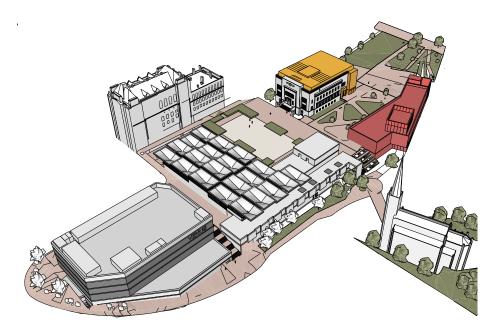
Kirklees council declared a climate emergency in 2019 and pledged to work towards making Kirklees net-zero carbon by 2038.

The Kirklees Cultural Heart is a complex of buildings in the town centre, presenting a fantastic opportunity to provide a thriving cultural hub that excels in terms of energy and sustainability performance. Energy efficiency and low carbon design are therefore key considerations for all buildings proposed for Kirklees Cultural Heart.

This report presents the findings of a Stage 2 Passivhaus feasibility study for the proposed **New Gallery** building. The building was modelled using the Passivhaus Planning Package software (PHPP 9.6a), which allows for an accurate assessment of the predicted energy demand.

Commentary on the emerging design and recommendations for next steps are also made.

Revision history



Stage 2 depiction of the Kirklees Cultural Heart, Feilden Clegg Bradley Studios. The New Gallery building is shown in red.

Energy modelling | Building description

The New Gallery building is a reasonably large facility that is likely to have multiple occupancy patterns. It will incorporate over 1,400m² of gallery and exhibition spaces, along with storage rooms, a café, a small office and a teaching space.

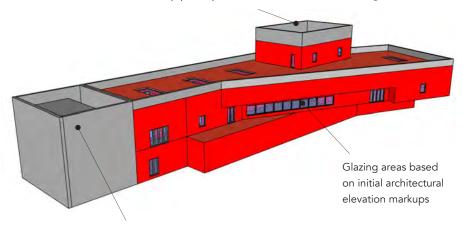
So that the gallery can display collections on loan it will have to host spaces with highly controlled environmental conditions (GIS). This includes close control on temperature, humidity and lighting conditions.

Designing to Passivhaus, or similar levels of performance, will ensure a high level of fabric performance and controlled ventilation environment, with minimal infiltration. This will help ensure stable internal conditions and low energy use.

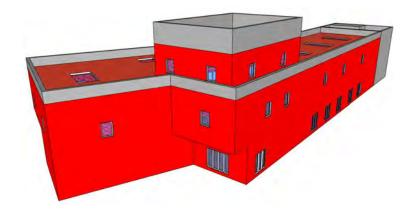
The assessed building form was based on the early Stage 2 design drawings, with glazing areas based on concept mark-ups of elevations. The New Gallery when modelled during RIBA Stage 2 had an estimated gross internal floor area of approx. 2,907m². It is understood that the final Stage 2 area is approx. 2,931m². The main entrance lobby is to the south of the building adjoining Queen Street. There is also an entrance lobby on the upper ground floor next to the café space facing west. Gallery and exhibition spaces are situated on all floors, lower ground, upper ground and first floor level.

The tested building has got a form factor of **2.64** which is quite high for a building of this type. This is partially due to high ceilings and voids that reduce internal floor area, and also as it's a low-rise building.

The modelling examined a single fabric scenario, with the aim to meet Passivhaus energy standards.



Management base above tunnel access. This is separate from the thermal envelope of the building. Implications will be explored as design develops.



Views of the new gallery thermal model at early Stage 2. The buildings thermal envelope, enclosing the warm and conditioned space, is shown in red.

Top: view looking south-east Bottom: view from Queen Street looking north-west

Energy Modelling | Results

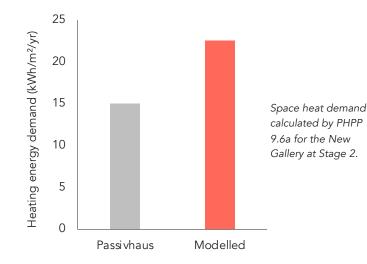
Space heating demand – 23 kWh/m²/yr

The annual space heating demand (ignoring system efficiency and losses) in $kWh/m^2/yr$ gives a good measure of the fabric performance of the building and is the metric used in Passivhaus. To meet the Passivhaus standard it must be less than 15 $kWh/m^2_{TFA}/yr$.

Early PHPP modelling indicates that the New Gallery design can achieve a space heating demand of 23 kWh/m²/yr. Although this does not meet the Passivhaus target it still represents a high performing buildings and is a good baseline for an initial assessment.

Areas that may reduce space heat demand further:

- Rationalizing the building form and internal floor area
- Review of fabric U-values
- Maximising solar gain through optimizing glazing proportions for each elevation
- Fine tuning the ventilation strategy and controls. The ventilation rate and unit heat recovery efficiency has a big impact on the heat demand for large public buildings. As the M&E design develops the prediction of energy related to ventilation will improve.



Total energy demand – 63 kWh/m²/yr

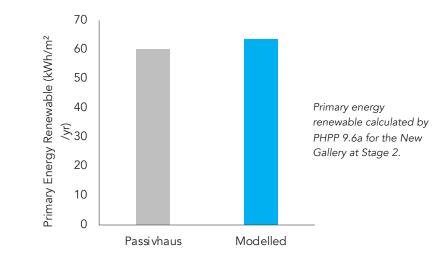
The Passivhaus criterion associated with total energy use is expressed in terms of Primary Energy Renewable consumption. To meet the Passivhaus standard it must be less than 60 kWh/m 2 _{TFA}/yr.

The primary energy consumption for the New Gallery building at Stage 2 is just above this target at 63 kWh/m²/yr. Although it is too early in the design to accurately predict whether the building can meet this criterion, the Stage 2 estimation is a promising figure.

Key to minimising energy use related to the space heating and hot water use for the building is the assumption of a heat pump system. If a heat pump solution is maintained the project should have a good chance of meeting this target.

Along with more detailed understanding of the heating system, the following will need to be considered:

- Maximising lighting efficiency and control
- Average daily lift use
- Office equipment
- Understanding other plug loads / appliances



Energy Modelling | Next Steps – Stage 3

The model and its assessment presented in this report are indicative and are based on an early stage building volume. Following this assessment, the next steps during Stage 3 would be to:

- Confirm the New Gallery's energy performance target.
- Confirm the form and thermal line of the building along with construction thicknesses (walls, roofs, floors)
- Confirm the elevation design, roof design, and in both cases the associated glazing areas
- Confirm the New Gallery's Low Carbon heat strategy.
- Produce a detailed Stage 3 thermal model. This will include more solid assumptions regarding occupancy, ventilation & heating system, hot water consumption, as well as any structural and thermal bridging considerations. The Stage 3 model will help confirm the building's potential with better accuracy.

Energy modelling | New Gallery assumptions

Assumption	PHPP heating energy calculation	Notes
General		
Weather file	BRE GB0012a-Waddignton	Passivhaus climate file for Kirklees
Occupancy	Current general assumption of average 360 .	High level assumption, approximately 6m ² floor area allowed per person. Average real occupancy to be calculated as design progresses
Floor area	Gross internal area 2,907m ² Passivhaus treated floor area 2,446m ²	Space heating demand is calculated using Passivhaus treated floor area.
Winter design temperature	All occupied room areas 20°C	Average air temperature for whole period, includes shut down and out of hours.

Building Fabric

Floor U-value	0.11 (W/m ² K)	Does not include the ground effect
Soffit U-value	0.15 (W/m ² K)	
Wall U-value	0.14 (W/m ² K)	
Roof U-value	0.10 (W/m ² K)	
Terrace U-value	0.15 (W/m²K)	
Window U-value	0.9 (W/m ² K)	Triple glazing
Door U-value	1.2 (W/m ² K)	Glazing areas of doors also assumed to be triple glazing
Thermal bridging	5 (kWh/m²/yr)	
Air permeability	0.9 (m ³ /m ² /hr)	
Glazing g-value	Generally 0.5 0.3 to rooflights	
Fixed shading	Calculated from 3D model including surrounding buildings.	

Heating

Heating system	Heat pump system	Assumption used only for PHPP modelling pending a low carbon heat assessment and further MEP development
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Assumption	PHPP heating energy calculation	
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Lighting

Lighting		
Lighting efficacy (all areas average)	Not calculated at this stage	To be developed
Lighting controls:	Motion detection assumed for temporary occupied spaces	To be developed

Notes

Ventilation Systems

System	Mixed mode ventilation with full mechanical ventilation with heat recovery during winter.	To be updated in line with Arup design
AHU system efficiency	SFP <1.6W/l.s operating duty, achieving building regulations for peak duty, Heat recovery efficiency 84% External duct connections are insulated to >50mm	SFP includes both fans and controller Heat recovery based on exhaust air temperature
Ventilation rates	General assumption of 2l/s/m2 for generic gallery function. Assuming controlled conditions in enclosed spaces for potential exhibits that need protection are discounted at Stage 2. Circulation spaces considered part of the main space.	Includes impact of demand control and operating hours. Total annual volume of air through building divided by total time in year.
Control	Ventilation systems run during occupied hours. VAV to internal rooms	Spec tbc with Arup

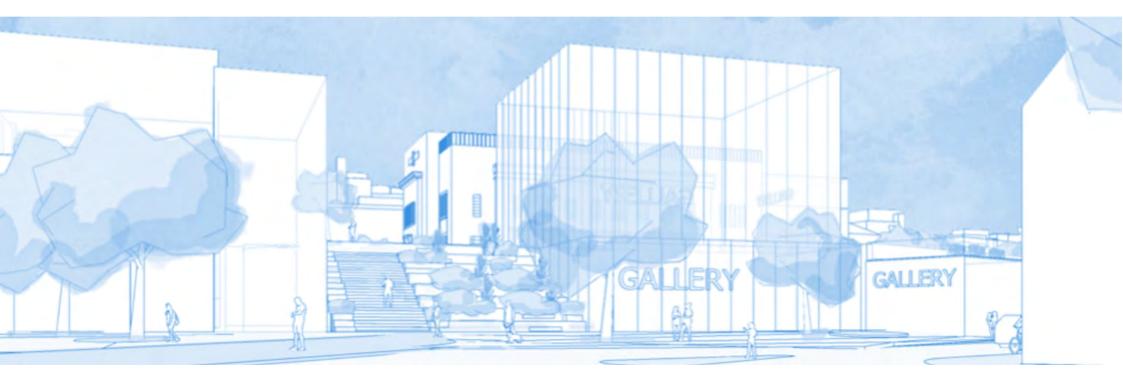
Hot water

Source	Heat pump system	Assumption used only for PHPP modelling pending a low carbon heat assessment and further MEP development
Distribution losses	Not calculated at this stage	

Estimates of energy demand at this stage are based on assumed use, and performance of products, materials, systems and construction quality in the building. There is a substantial margin for error. It is very important that these specification assumptions are developed at Stage 3 and then maintained through technical design and construction. Small changes in specification could have a disproportionate effect on the performance of the building.

Target Fabric Assumptions

KIRKLEES CULTURAL HEART HUDDERSFIELD



STAGE 2 – PRELIMINARY FABRIC SPECIFICATIONS

Mar 2022 | Rev B



Fabric Specifications | Introduction

The Importance of thermal performance

The Climate Change Committee, RIBA, UKGBC, LETI and others have all set out clear performance targets for the energy efficiency of building fabric, which is required to deliver net zero carbon compliant buildings.

Energy efficient fabric achieves a range of objectives, which are important to achieving net zero carbon:

- Low energy demand for space heating, which in turn means less energy generation infrastructure is required
- Low peak heat loads, which in the case of buildings that use a heat source powered by electricity, also reduces peak loads on the electricity grid
- Flexibility in when the building needs to import electricity from the grid. This enables the building to use cheaper cleaner renewable energy that is available when it is windy and sunny.
- A healthy and comfortable indoor environment

Principles of building fabric efficiency

The adjacent images summarise the core principles of energy efficient building fabric. Applied together, these five core principles consistently deliver buildings with excellent thermal performance.

New build and retrofit

Building fabric performance will necessarily vary between new and existing buildings. While more general levels of performance can be targeted for new buildings, improvements to the performance of existing buildings must be carefully planned to fit with the character of the building. While this introduces additional constraints, good levels of performance can still be achieved. Fabric assumptions proposed in this report align with scenarios tested during Stage 2. They were proposed to help inform the overall targets and performance at Stage 3.



Building Form

Simple form minimizes heat loss area and reduces the number of complex junctions. This means less insulation is required to achieve good levels of thermal performance.

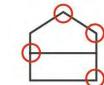
High Performance Glazing

Triple glazing with low-e coatings, inert gas fillings, and thermally broken glazing spacers and frames. Glazing proportions and orientation should be optimised to utilize solar energy while avoiding overheating.



Insulation

Thick insulation and thermal bridge free design is required.



Airtightness

Reduces amount of warm air escaping. Existing buildings should aim for < 3 m^3/m^2h and new buildings should aim for <1 m^3/m^2h

Heat Recovery Ventilation

Captures up to 90% of outgoing heat. Can be combined with summertime window opening to reduce overheating risk.

These principles of low energy building should be applied across the Cultural Heart to achieve levels of thermal performance in line with net zero requirements.

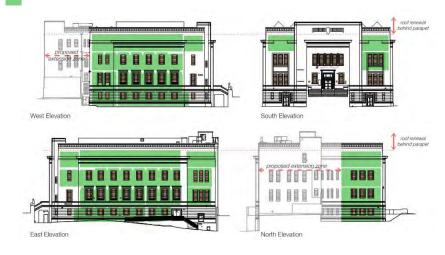


Fabric Specifications | Museum and Gallery Retrofit

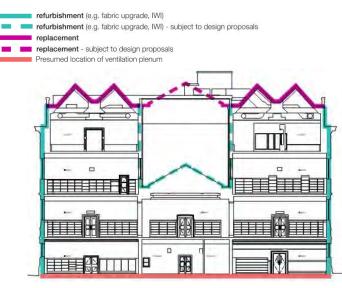
Heating 100 – 140 kWh/m²/yr tbc demand To be determined at Stage 2 once PHPP modelling comp					
Floor insulation	 The floor is uninsulated and has partial ventilation ducting beneath. Retrofit options to be considered: 1. Full fill plenum with poured insulation, or through access from below. Assume 100mm could be possible to achieve U-value of 0.35W/m²K for floor build up only. 2. Uninsulated floor, investigate taking wall insulation below floor level around perimeter to reduce floor heat loss. 				
Roof insulation	New roof proposed. Insulate outside of structure to maximise insulation depth. U-value target 0.10 to 0.12W/m²K ~200mm PIR / ~280mm EPS/mineral wool (improve over FCBS target of 1.0W/m²K).				
Wall insulation	Fully bonded Internal wall insulation covering or replacing existing finish. U-value greater than 0.35W/m ² K to reduce moisture risk. ~80mm wood fibre insulation. (improve over FCBS target of 1.26W/m ² K).An airtight layer is required on the warm side of the insulation. Ventilation on the cold side of insulation is not advised, ducts should be filled.				
Ventilation	Opening windows for summer. Central or local decentral mechanical ventilation with heat recovery for background ventilation. Likely to require new duct runs and plant space, could be in new building.				
Windows and doors	 Options to be considered: Refurbished steel frame windows with high performance double glazing Uw likely to be higher than estimated 2.2W/m²K. New thermally broken steel windows with Uw of 1.6W/m²K. Class 3 or better airtightness targeted. Second layer double glazed window inside existing. Uw of 1.4W/m²K or better. Class 4 airtightness. 				
Thermal bridges	Large areas of the thermal envelope remain uninsulated. Intermediate floors and wall to roof junction bridge insulation layer and will require insulation returns to reduce heat loss. Typically 20-50mm for 1m distance.				
Airtightness	An airtightness strategy needs to be developed outlining key materials and how they are connected Target tested airtightness of less than 3m³/m²/h @ 50Pa				

window enhancement

areas for IWI



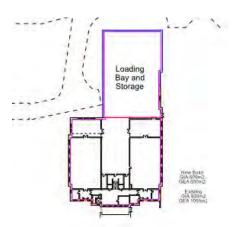
Elevations indicating potential locations for fabric upgrades © FCBS



Section indicating potential locations for fabric upgrades © FCBS

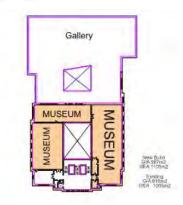
Fabric Specifications | Museum and Gallery Extension

Heating demand	15-20 kWh/m²/yr equivalent, modelled as one block with existing museum. To be determined at Stage 2 once PHPP modelling complete. Due to absence of South facing glazing it may be challenging to achieve performance below 20 kWh/m²/yr			
Floor insulation	Insulated concrete slab. Target 0.12W/m²K. Insulation depth will depend on perimeter to area ratio.			
Roof insulation	Externally insulated. Target U-value of 0.10 to 0.12W/m²K Nominal ~200mm PIR / ~280mm EPS or mineral wool			
Wall insulation	Target U-value of 0.14W/m²K. ~250mm mineral wool insulation external to structure			
Ventilation	Automated opening windows for summer. Centralised mechanical ventilation with heat recovery for background ventilation. Integrated with existing museum space.			
Windows and doors	Triple glazed windows with low-e coating, inert gas filling, and thermally broken frames. Target Uw of 0.9W/m²K. Class 4 airtightness.			
Thermal bridges	Design out thermal bridges. Joints between new and existing building may introduce a structural thermal bridge, and will require insulation returns to reduce heat loss. Typically 50mm for 1m distance.			
Airtightness	Target tested air permeabiliy of less than 1m³/m²/h @ 50Pa. Combined test with existing building to achieve less than 3m³/m²/h @ 50Pa.			

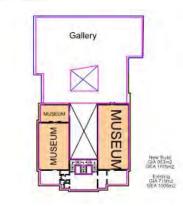




Lower Ground



Upper Ground



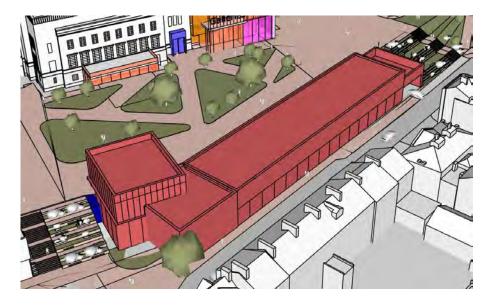
Level 01

Level 02

Proposed drawings for the museum and gallery extension © FCBS

Fabric Specifications | New Gallery

Heating demand 10-20 kWh/m²/yr Floor Insulated concrete slab. insulation Target 0.12W/m²K. Insulation depth will depend on perimet area ratio.
insulation Target 0.12W/m²K. Insulation depth will depend on perimet
Roof Externally insulated. insulation Target U-value of 0.10 to 0.12W/m²K Nominal ~200mm PIR / ~280mm EPS or mineral wool
WallTarget U-value of 0.12 to 0.14W/m²K.insulation300 to 250mm mineral wool insulation external to structure
Ventilation Automated opening windows for summer. Centralised mechanical ventilation with heat recovery for background ventilation. Ventilation strategy to be tested against environmental conditions.
Cooling and Recirculation cooling and air treatment where required. Typi conditioning separate to main AHU.
Windows and doorsTriple glazed windows with low-e coating, inert gas filling, ar thermally broken frames. Target Uw of 0.9W/m²K. Class 4 airtightness. Glass g-value 0.40
ThermalDesign out thermal bridges. Frame connections to groundbridgesacceptable where thermally broken.
Airtightness Target tested airtightness of less than 1m³/m²/h @ 50Pa



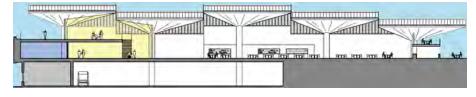
Indicative sketch showing the new build gallery massing © FCBS

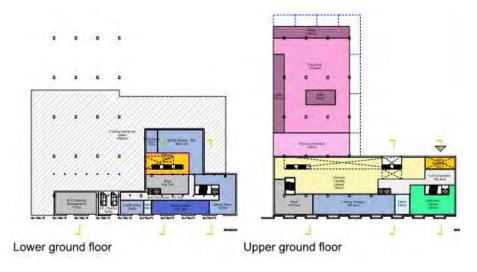
Fabric Specifications | New Library

Heating demand	10-20 kWh/m²/yr To be determined at Stage 2 once PHPP modelling complete.
Floor insulation	Insulated concrete slab. Target 0.12W/m²K. Insulation depth will depend on perimeter to area ratio.
Roof insulation	Externally insulated. Target U-value of 0.10 to 0.12W/m²K Nominal ~200mm PIR / ~280mm EPS or mineral wool
Wall insulation	Target U-value of 0.12 to 0.14W/m²K. 300 to 250mm mineral wool insulation external to structure
Ventilation	Automated opening windows for summer. Centralised mechanical ventilation with heat recovery for background ventilation.
Windows and doors	Triple glazed windows with low-e coating, inert gas filling, and thermally broken frames. Target Uw of 0.9W/m²K. Class 4 airtightness. Glass g-value 0.40
Thermal bridges	Design out thermal bridges. Concrete frame connections to ground acceptable.
Airtightness	Target tested airtightness of less than 1m³/m²/h @ 50Pa









Drawings showing the new library and food hall © FCBS

Fabric Specifications | Food Hall

Heating demand	Space heating demand to be reduced where possible. Active heating strategy to be confirmed and developed at RIBA Stage 3.
Floor insulation	Future proof building with insulation below any concrete slab replacement. Target 0.3W/m²K or ~50mm PIR.
Roof insulation	Reduce cold surface temperature of roof by insulating below any replacement waterproofing. Target 0.3 or ~ 100mm insulation.
Wall insulation	None
Ventilation	Open louvre vents to external. Critical that there is very good ventilation to hall to avoid condensation.
Windows and doors	Double glazed windows to avoid condensation Target Uw of 1.8W/m²K.
Thermal bridges	New structural or external components to be reviewed to design out thermal bridging.
Airtightness	n/a

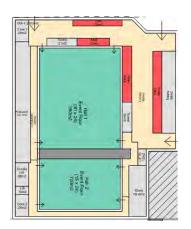


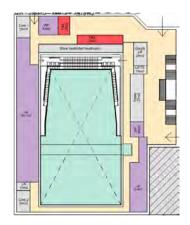


Images showing the food hall © FCBS

Fabric Specifications | Venue

Heating demand	10-20 kWh/m²/yr
Floor insulation	Insulated concrete slab. Target 0.12W/m²K. Insulation depth will depend on perimeter to area ratio.
Roof insulation	Externally insulated. Target U-value of 0.10 to 0.12W/m²K Nominal ~200mm PIR / ~280mm EPS or mineral wool
Wall insulation	Target U-value of ~0.14W/m²K. ~250mm mineral wool insulation external to structure
Ventilation	Centralised mechanical ventilation with heat recovery for background ventilation. Opportunities for natural ventilation in summer to be reviewed at Stage 3.
Windows and doors	Triple glazed windows with low-e coating, inert gas filling, and thermally broken frames. Target Uw of 0.9W/m ² K. Class 4 airtightness. Some main entrance areas could be double glazed where less occupancy.
Thermal bridges	Design out thermal bridges. Joints between new and existing building may introduce a structural thermal bridge, and will require insulation returns to reduce heat loss. Typically 50mm for 1m distance.
Airtightness	Target tested airtightness of less than 1m³/m²/h @ 50Pa



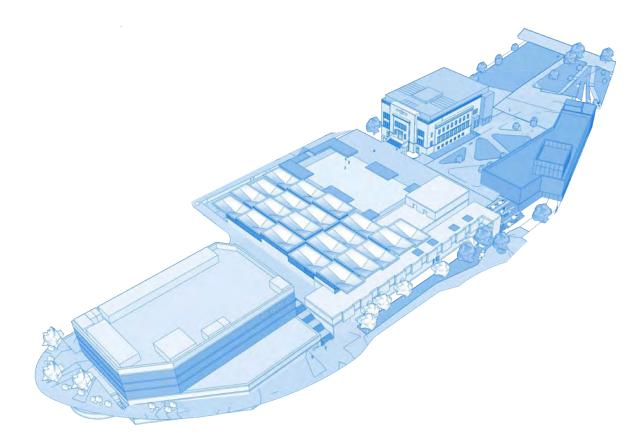




Three possible layouts are being considered. Ground floors shown. \circledcirc FCBS

Low Carbon Heating

KIRKLEES CULTURAL HEART HUDDERSFIELD



LOW CARBON HEATING OPTIONS APPRAISAL

May 2022 | Rev C



Introduction | Executive Summary

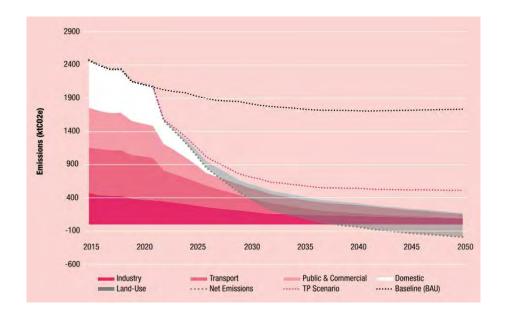
Purpose of this report

The variety of potential heating and cooling systems for a development such as the Kirklees Cultural Heart can be overwhelming. The purpose of this report is to simplify and inform decision-making around the choice of heating and cooling system, while also raising strategic considerations early in the design process.

Etude have considered the needs of each building and, within the context of Kirklees Councils' 2038 net zero emissions target, identified several types of low-carbon heating system, which we recommend are considered for the Cultural Heart.

Based on predicted energy use performance for each building, in part developed from our Passivhaus energy modelling for the existing library and new gallery, we have undertaken site-wide energy calculations for these systems to understand the operational costs and carbon performance, which are presented in this report.

Where incomplete information was available for any proposed system, we have used conservative assumptions. These are presented in sections 2 - 4, and can be updated at Stage 3 as further information becomes available.



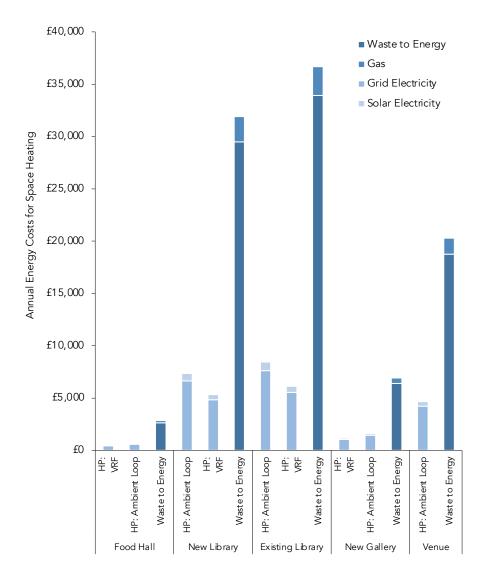
Sectoral carbon reduction pathways for Kirklees, which are aligned with a 1.5°C carbon budget. One of the main purposes of this report is to ensure the heating strategy for Kirklees Cultural Heart is aligned with the district's net zero strategy. © University of Leeds

Introduction | Executive Summary

Key Conclusions

The main conclusions arising from our energy, cost, and carbon calculations are:

- 1. A heat pump led ambient temperature heat network serving the Cultural Heart offers a flexible low-regrets option, with good cost and carbon performance. This approach retains the ability to connect to a wider heat network in the future (though this may offer little practical advantage).
- 2. Individual Variable Refrigerant Flow (VRF) type heat pumps could offer a simpler lower cost option for some buildings with particularly low heating and cooling loads, such as the new gallery.
- 3. Use of solar energy generated on-site can contribute significantly toward reductions in energy imports required from the electricity grid, reducing cost and carbon.
- 4. Our calculations indicate there is likely no financial or carbon case for using waste heat from the Huddersfield incinerator (Energy from Waste). The long-term operation of the incinerator (Energy from Waste) does not appear to be compatible with Kirklees' vision to work towards achieving net zero targets, unless carbon capture and storage, with a high capture rate, can be costeffectively be retrofitted. This is to be confirmed with Kirklees Council at RIBA Stage 3.



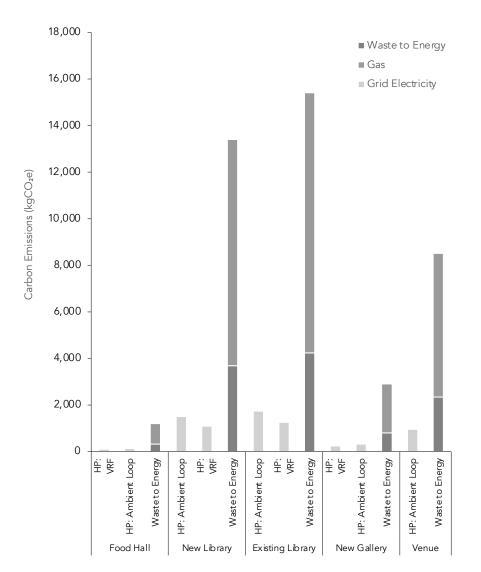
Costs for heat pump based solutions were consistently lower than for a district heating network using waste heat from the Huddersfield incinerator.

Introduction | Executive Summary

Recommendations

Recommendations arising as a result of this work are summarised below. These represent areas for further work and discussion, which we suggest are resolved before any final decision on the heating and cooling strategy is made:

- District heating –existing work around district heating could evolve away from high temperatures and use of waste incineration, toward modern ambient temperature networks based on use of heat pumps to ensure alignment with Kirklees climate emergency commitments. This approach may better suit use of a number of smaller heat networks between local clusters of buildings.
- 2. Heating and cooling load it would be helpful if a consensus could be reached on the building fabric performance, and likely space heating/cooling demand, and peak heating/cooling loads early in Stage 3. We recommend this is done based on the use of energy modelling software that is designed to predict operational energy performance, rather than Part L compliance calculations.
- 3. Domestic hot water the approach to providing domestic hot water affects the broader heating and cooling strategy. We recommend that a strategy for each building is developed early in Stage 3, which prioritises a decentralised approach to reduce distribution losses.
- 4. Food hall the energy demands of the food hall could be very high if the entire space is actively heated or cooled due to its large volume and poor fabric efficiency. We suggest use of more localised / focused heating within the existing structure (see Appendix B), with a decision made early in Stage 3 if possible.
- 5. Plant sizing should be reassessed once items 1-4 have been discussed. This may help to mitigate risk of oversizing, which could increase embodied carbon, cost, and area requirements, and potentially reduce system efficiency.



Operational carbon emissions for heat pump based solutions were consistently lower than for a district heating network using waste heat from the Huddersfield incinerator.

1.0 Context

This section considers the international, national and local context of climate change, as it relates to low carbon heating.

This helps to ensure our proposed strategies are climate-compliant, and in-step with the UK's national plan to reduce emissions, reducing the risk of blind-spots that could otherwise emerge.

Introduction | Intergovernmental Panel on Climate Change

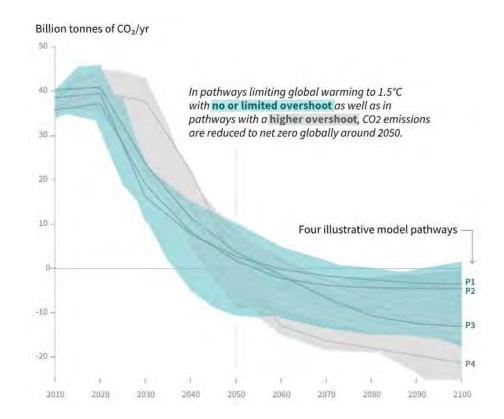
International Context

In 2018, the Intergovernmental Panel on Climate Change published a special report on the effects of global warming above 1.5°C. The report found that warming above this level brought unacceptable increases in the risk of:

- irreversible tipping points in ice sheet stability
- irreversible tipping points in permafrost thaw
- species loss
- ecosystem transformation, including near total loss of the world's coral reefs
- vector borne disease
- water stress
- extreme weather events

In its 2021 report on the Physical Science Basis of Climate Change, the Intergovernmental Panel on Climate Change indicated that the world's remaining carbon budget was 300-400 GtCO2 to remain within a 67%-83% chance of limiting warming to 1.5°C.

By 2022 this budget had reduced to 220-320 GtCO2. With annual global emissions of 40GtCO2, the entire 1.5°C carbon budget will be consumed in around 6 years without urgent action across all sectors.



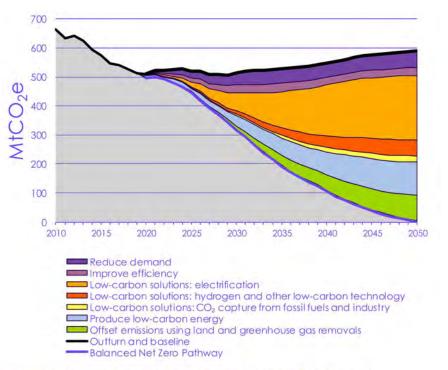
Global emissions pathways to limit global warming to 1.5°C. A 60% reduction in emissions is required by 2030. The later emissions reductions begin, the faster they must reduce, and the greater our reliance on technologies that are not yet commercially available at scale. These technologies may also be far more costly than avoiding emissions in the first place. © IPCC

Introduction | Climate Change Committee: The UK's National Plan

National Context

In their Sixth Progress Report to Parliament, the UK's Climate Change Committee outlined a 'Balanced Net Zero' emissions reduction pathway. It provides an emissions reduction plan for the UK that is aligned with the IPCC's 1.5°C carbon budget. Key actions for each sector of the economy are summarised below with the first two most applicable to the Kirklees Cultural Heart redevelopment.

- **Buildings** decarbonisation of heating systems through electrification. New buildings must use very small amounts of energy and existing buildings should be retrofitted to reduce energy demand. Potential role for limited use of hydrogen.
- Electricity Generation ongoing transition toward low carbon sources such as wind, solar, nuclear, and bioenergy with carbon capture and storage. Batteries and hydrogen expected play a role in balancing intermittent renewables.
- Manufacturing and Construction decarbonisation of low temperature heat through electrification, and high temperature processes via hydrogen. Carbon capture and demand reduction also expected to play a role.
- **Surface Transport** transition away from fossil fuels through widespread electrification and reduction in vehicle use.
- Aviation and Shipping demand management, efficiency improvements and possibly some use of low carbon aviation fuels.
- Waste increased rates of reuse, recycling, composting, and anaerobic digestion to divert waste away from incinerators, whose use must be scaled back and fitted with carbon capture.
- **F-gases** International agreements in place to transition to gases with lower global warming potential.
- Agriculture and Land Use use of low carbon farming practices, in combination with increased afforestation and peatland restoration using land created by dietary change and reduced food waste.



Source: BEIS (2020) Provisional UK greenhouse gas emissions national statistics 2019: CCC analysis. Notes: 'Other low-carbon technology' includes use of bioenergy and waste treatment measures. 'Producing low-carbon electricity' requires the use of CCS in electricity generation.

The Climate Change Committee have developed a pathway for the UK to achieve net zero carbon emissions based on a 1.5°C carbon budget. The bulk of emissions reductions are achieved by electrification of transport and heat, combined with deployment of renewable electricity generation. © Climate Change Committee, Sixth Progress Report to Parliament, 2020

Introduction | Kirklees Council

Local Context

In 2019, Kirklees Council declared a climate emergency, with the goal of making Kirklees completely carbon neutral by 2038. While an action plan is yet to be developed, a net zero carbon assessment has been produced by the University of Leeds. This considers the impact of four sectors: domestic, public/commercial, industry, and transport. It finds that emissions from these sectors in 2021 are 2,068 ktCO₂e.

Recommendations of the work that are relevant to the Kirklees Cultural Heart redevelopment include:

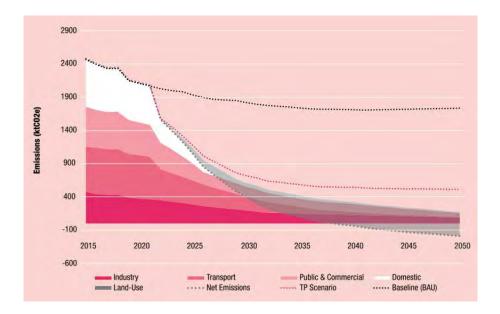
- Buildings Improved levels of fabric efficiency for new and existing buildings, and use of better controls for building systems to reduce energy demand. Decarbonisation of heat via heat pumps.
- Electricity Generation Deployment of solar and wind technology to decarbonise electricity generation.
- **Surface Transport** Electrification of transportation, and more trips by walking, cycling, and public transportation.
- Agriculture and Land Use Afforestation of 19,500 ha of land to offset residual emissions from the above sectors by 2050. This is equivalent to about half the land area of the district.

Additional considerations

The net zero carbon assessment does not appear to include allowance for emissions from several sectors: aviation, shipping, waste, F-gases, and some aspects of agriculture and land-use change.

Relevance to low carbon heating

Emissions from the Huddersfield waste to energy plant are estimated to range between 91-221 $ktCO_2e$, based on an annual waste volume of around 130,000 tonnes.



Sectoral carbon reduction pathways from a net zero assessment developed for Kirklees, which is aligned with a 1.5°C carbon budget. Residual emissions in this plan require afforestation of half the land area in Kirklees, even with the use of more ambitious 'stretch' options. © University of Leeds, A net-zero assessment for Kirklees, 2022

Based on the University of Leeds estimates of Kirklees emissions in 2021, inclusion of waste to energy would increase Kirklees total emissions in 2021 by 5-10%. By 2030 emissions from waste incineration could account for up to 70% of all emissions in the district. By 2038, emissions from waste incineration would render it impossible to meet Kirklee's net zero target, without carbon capture and storage, which is not yet commercially proven for use with waste to energy plants in the UK.

The need to scale down unabated waste incineration in Kirklees represents a key risk to any heating strategy that relies on use of waste heat from the Huddersfield Waste to Energy Plant. 2.0 Heating Requirements

This section considers the nature of heating demands for the main buildings across the Kirklees Cultural Heart, as this has been the main focus of Stage 2 energy modelling.

Cooling demands have not been considered at this stage, however high-level suitability of different heating and cooling systems are considered for each building.

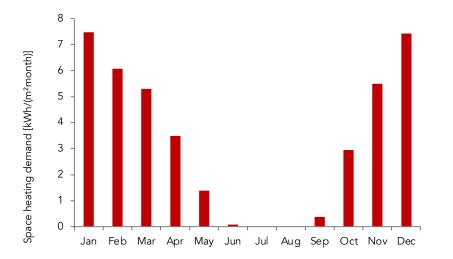
Heating Demand | Introduction

Summary

Etude have carried out PassivHaus Planning Package (PHPP) energy modelling for the existing library and the new gallery building, to calculate the space heating demand.

This provides a good indication of typical levels of performance that can be achieved for the other new and existing buildings at the Cultural Heart. Allowances for the space heating demand of the Venue, New Library and Food Hall have been based on the calculated performance for the two other buildings.

The space heat demand, and other requirements for these buildings that could affect the heating and cooling strategies, are considered on the following pages.



Monthly space heating demand for the existing library, after a moderate package of retrofit measures to improve the building fabric efficiency. Little heat is required for five months of the year.

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Postcode/City:	W1T 4RG	London			Postcode/City:	LS9 8EE	Leeds		
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PassivHaus Planning Package (PHPP) energy modelling has been carried out for the existing library, which is set to become a museum, and the new gallery building. Post occupancy studies have shown that PHPP calculations can provide a reasonable prediction of operational heating energy demand.

Heating Demand | Food Hall

Summary

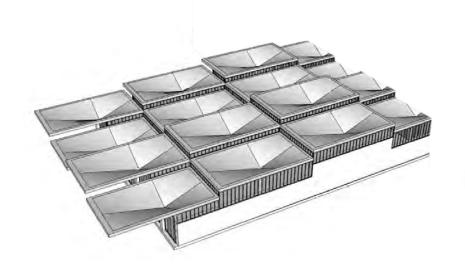
Areas:	360 m ² (conditioned internal space)
Space heat demand:	40 kWh/m²/year
Peak heat load:	20 W/m ²
Peak heat load:	10 kW

Requirements

It is expected to be uneconomical to insulate and heat the entire volume of the existing market hall. A mixed approach is assumed, as similar to Spitalfields Market in London, where the existing structure provides a weathertight envelope around a combination of market stalls, with some direct electric heating, alongside enclosed heated spaces, where a conditioned space or ventilation system is required, such as permanent food outlets.

HVAC Options

Potential heating/cooling system pairings for <u>conditioned spaces only</u> are summarised in the table below.



Proposed food hall, within the existing market hall. © FCBS

	Heating	Cooling*	Comments
1	VRF heat pump.	VRF heat pump.	Preferred option. Very high system efficiency with low distribution losses. Compact footprint due to low heating/cooling demand of individual conditioned spaces. Can make good use of on-site solar energy.
2	Air source heat pump or ambient loop water source heat pump with radiant heating (high level or underfloor).	Natural ventilation of conditioned spaces.	High overall system efficiency, with small distribution losses. Footprint required for air or water source heat pump is small. Can make good use of on-site solar energy.
3	90°C district heating network heating supply air via wet heater battery in ducts, fan coil units, underfloor heating or radiant panels.	District heating network with centralised chiller and fan coil units.	Losses from this system are expected to be high for both heating and cooling. Heating losses due to the relatively small heat demand of the building and high flow temperature. Cooling losses due to small cooling demand relative to energy use for pumping. Unable to use on-site solar energy.

* In all scenarios, the existing purge cooling system is assumed to be retained or upgraded, to provide cooling to the sheltered unconditioned space within the structure.

Heating Demand | New Library

Summary

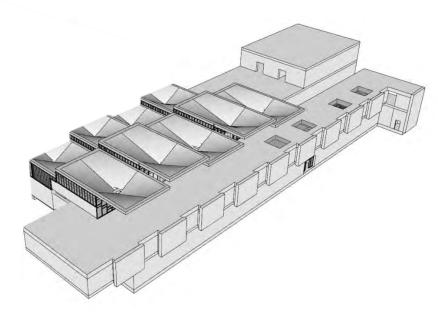
Areas:	4,400m ²
Space heat demand:	40 kWh/m²/year
Peak heat load:	20 W/m ²
Peak heat load:	85 kW

Requirements

The new library is expected to be a low occupancy space, with mild internal heat loads from small efficient computers and lighting. Good acoustics are critical, particularly within dedicated private study/meeting spaces. No humidity control is necessary

HVAC Options

Potential heating/cooling system pairings are summarised in the table below.



Proposed new library building © FCBS

	Heating	Cooling	Comments
1	Air source heat pump or ambient loop water source heat pump. Wet underfloor heating.	Air source heat pump or ambient loop water source heat pump with displacement ventilation.	Preferred option. High overall system efficiency, with small distribution losses. Footprint required for air or water source heat pump is small. Can make good use of on-site solar energy.
2	VRF heat pump.	VRF heat pump.	A VRF system may be suitable if the building achieves very low heating and cooling loads, which would allow very low flow rates, and quiet operation. Very high system efficiency due to energy recovery between rooms and low distribution losses. Can make good use of on-site solar energy.
3	90°C district heating network heating supply air via wet heater battery in duct, or underfloor heating.	District heating network with centralised chiller and displacement ventilation	Losses from this system are expected to be high for both heating and cooling. Heating losses due to the relatively small heat demand of the building and high flow temperature. Cooling losses due to small cooling demand relative to energy use for pumping. Unable to use on-site solar energy.

Heating Demand | Existing Library (to become museum)

Summary

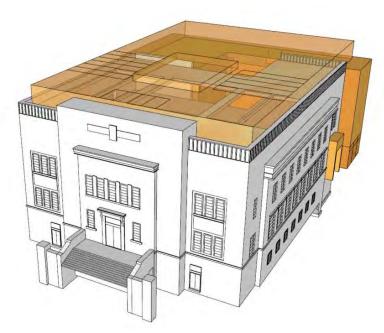
Areas:	3,395m ² existing, 1,770m ² new
Space heat demand:	40 kWh/m²/year
Peak heat load:	20 W/m ²
Peak heat load:	150 kW

Requirements

Humidity levels must remain within 40-65% +/- <10% over 24 hours, and temperatures must remain within 16-24°C +/- <4°C over 24h, where GIS conditions are required. Humidity control can be achieved either by conditioning the entire building, or individual exhibition cases. The existing heat distribution system uses a combination of underfloor trenches and ducts mounted within external walls. Cooling loads are expected to be low, depending on rooflight layout.

HVAC Options

Potential heating/cooling system pairings are summarised in the table below.



Existing library building, with proposed extension indicated in orange. NOTE – this sketch is indicative and to be reviewed in detail at Stage 3. © FCBS

	Heating	Cooling	Comments
1	Air source heat pump or ambient loop water source heat pump. Supply air heating with local reheat via wet heater battery in duct, or underfloor heating.	Small air conditioners for high risk areas.	Preferred option. High overall system efficiency, with small distribution losses. Footprint required for air or water source heat pump is small. Can make good use of on-site solar energy.
2	VRF heat pump.	VRF heat pump.	Well suited to serving lots of small rooms, less well-suited to large high-volume spaces. Very high system efficiency due to energy recovery between rooms and low distribution losses. Can make good use of on-site solar energy.
3	90°C district heating network heating supply air with local reheat via wet heater battery in duct or underfloor heating.	District heating network with centralised chiller.	Losses from this system are expected to be high for both heating and cooling. Heating losses due to the relatively small heat demand of the building and high flow temperature. Cooling losses due to small cooling demand relative to energy use for pumping. Unable to use on-site solar energy.

Heating Demand | New Gallery

Summary

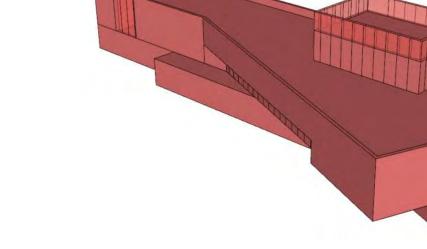
Areas:	2,311m ²
Space heat demand:	15 kWh/m²/year
Peak heat load:	10 W/m ²
Peak heat load:	20 kW

Requirements

The new gallery is expected to be a relatively low occupancy space with some intermittent peaks in occupancy, for example events. Humidity and heat requirements are the same as for the existing library: Humidity levels must remain within 40-65% +/- <10% over 24 hours, and temperatures must remain within 16-24°C +/- <4°C over 24h. Humidification will be required

HVAC Options

Potential heating/cooling system pairings are summarised in the table below.



Proposed new gallery building © FCBS

Deli	Jvv.		
	Heating	Cooling	Comments
1	VRF heat pump.	VRF heat pump.	Preferred option. Very high system efficiency due to energy recovery between rooms and low distribution losses. System is able to respond well to short term peaks in loads for exhibition events. Compact footprint due to low heating/cooling demand. Can make good use of on-site solar energy.
2	Air source heat pumps or ambient loop water source heat pump with fan coil units and humidification via central air supply	Air source heat pump or ambient loop water source heat pump with fan coil units.	High overall system efficiency, with small distribution losses. Footprint required for air or water source heat pump is small due to low heating/cooling loads. Can make good use of on-site solar energy.
3	90°C district heating network heating supply air and fan coil units. Humidification via central air supply	District heating network with centralised chiller and fan coil units.	Losses from this system are expected to be high for both heating and cooling. Heating losses due to the relatively small heat demand of the building and high flow temperature. Cooling losses due to small cooling demand relative to energy use for pumping. Unable to use on-site solar energy.

Heating Demand | Venue

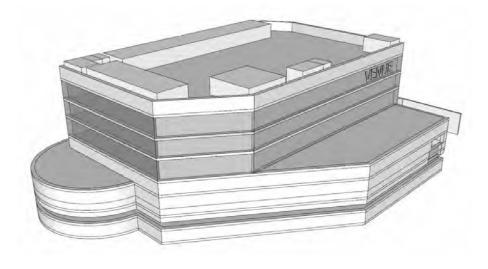
Summary

Areas: 6,790 m² * Space heat demand: 15 kWh/m²/year Peak heat load: 10 W/m² Peak heat load: 55 kW

*Note – the area has been revised to 9,110m² following a more recent issue

Requirements

Heating and cooling loads are expected to be highly intermittent. Typically characterised by high intensity short-duration demand during shows at close to full occupancy, and some longer periods of lower intensity use during rehearsals. Loads dominated by occupants and high level lighting. High humidity and odour levels due to occupants, requires high fresh air change rate. Good acoustics also required.



Proposed new venue © FCBS

HVAC Options

Potential heating/cooling system pairings are summarised in the table below.

	Heating	Cooling	Comments
1	Air source heat pump or ambient loop water source heat pump with displacement ventilation.	Air source heat pump or ambient loop water source heat pump with displacement ventilation.	Preferred option. Displacement ventilation can be quiet, supports stratification, and ventilation demand is in-phase with heat/cooling demand. Displacement ventilation with ceiling extraction is also effective at reducing lighting heat load close to source. High overall system efficiency, with small distribution losses. Footprint required for air or water source heat pump is small. Can make good use of on-site solar energy.
2	90°C district heating network with heater battery for displacement ventilation.	District heating network with centralised chiller with cooling coil for displacement ventilation.	This system offers many of the same advantages as the system above due to the use of displacement ventilation. Losses from this system are expected to be high for both heating and cooling. Heating losses due to the relatively small heat demand of the building and high flow temperature. Cooling losses due to small cooling demand relative to energy use for pumping. Unable to use on-site solar energy.

3.0 Technologies assessed

This section summarises the main technologies considered for the low carbon heating options assessment.

Technologies Assessed | Air-Air Heat Pumps

Summary

Variable Refrigerant Flow (VRF) type air to air heat pumps offer a mature and highly efficient solution that can provide heating and cooling.

Considerations

Systems with 'energy recovery' are able to provide heating and cooling to different rooms within the same building simultaneously. This can further improve energy efficiency by shuffling existing heat around within the building. For example, the system could move unwanted heat from a room on the sunny side of the building to another room that is cooler due to shading, with little electrical energy input required.

The ability of these systems to provide both heating and cooling can also simplify plant design, free up roof space for other uses such as solar generation, and reduce costs relative to systems that need separate heating and cooling systems.

These systems are often paired with fan coil units and are therefore well suited to certain types of building, for example those with a larger number of small rooms, which are not subject to strict acoustic restrictions. Fan speeds can however be expected to be very low for new buildings with very low space heat demand for much of the year.

The global warming impact of refrigerant in these systems can be a concern, however this issue can be mitigated by specification of refrigerants with low global warming potential, or the use of hybrid systems, which have reduced refrigerant volume. Hybrid systems can also reduce need for refrigerant leak detection systems.



Mitsubishi's City Multi R2 series offers high efficiency heat recovery. Global Warming Potential from refrigerant use is limited through use of R32 refrigerant and a wet heat distribution system, which limits refrigerant volume compared to systems that use refrigerant for heat distribution throughout the building. © Mitsubishi

Technologies Assessed | Air-Water Heat Pumps

Summary

Air to water heat pumps, and in particular, monobloc heat pumps, offer a mature and efficient solution that can provide heating, cooling, or both heating and cooling.

Considerations

These systems can be paired with underfloor heating, radiators, heated/chilled beams, or fan coil units, so offer good flexibility. They can also provide near silent operation within the building, so may be better suited than a VRF type system for buildings subject to strict acoustic restrictions such as libraries.

The ability of these systems to provide both heating and cooling can simplify plant design, free up roof space for other uses such as solar generation, and reduce costs relative to systems that need separate heating and cooling systems.

The global warming impact of refrigerant in these systems can be a concern, however this issue can be mitigated by specification of refrigerants with low global warming potential. Volumes of refrigerant are typically lower than for VRF type systems, and the refrigerant is often hermetically sealed within the heat pump.



Mitsubishi's Ecodan CAHV monobloc air source heat pumps can provide hot water from 25°C to 70°C and have a small footprint. © Mitsubishi

Technologies Assessed | Ground/Water Source Heat Pumps

Summary

Water to water heat pumps, which obtain heat from a ground source, or a water source such as an ambient temperature communal heating loop, offer a mature and efficient solution that can provide heating, cooling, or both heating and cooling.

Considerations

These systems can be paired with underfloor heating, radiators, heated/chilled beams, or fan coil units, so offer good flexibility. They can also provide near silent operation within the building, so may be better suited than a VRF type system for buildings subject to strict acoustic restrictions such as libraries.

As these units do not require an external air supply, they can be located inside the weathertight envelope of the building, potentially increasing system lifetime, reducing maintenance, and freeing up roof space for other uses, compared to air source heat pumps located outdoors.

The ability of these systems to provide both heating and cooling can simplify plant design and reduce costs relative to systems that need separate heating and cooling systems.

The global warming impact of refrigerant in these systems can be a concern, however this issue can be mitigated by specification of refrigerants with low global warming potential. Volumes of refrigerant are typically lower than for VRF type systems, and the refrigerant is often hermetically sealed within the heat pump.



Mitsubishi's Ecodan CRHV monobloc ground/water source heat pumps can provide hot water from 30°C to 65°C. Heat can be obtained from boreholes, ground arrays, or any suitable water source. © Mitsubishi

Technologies Assessed | Waste to Energy

Summary

The Huddersfield waste to energy plant currently burns around 130,000 tonnes of municipal solid waste each year. AECOM have advised that the plant is capable of exporting 10.25MW of electricity and up to 4MW of heat at a temperature of 90°C.

This heat could be brought to the Kirklees Cultural Heart site via 2.3km of district heating pipes, and used to heat the buildings.

Considerations

Emissions from the waste to energy plant are currently estimated to range from 91 to 221 ktCO₂ each year. This represents 5-10% of Kirklees' total emissions of 2,068 ktCO₂ in 2021, recently calculated by the University of Leeds.

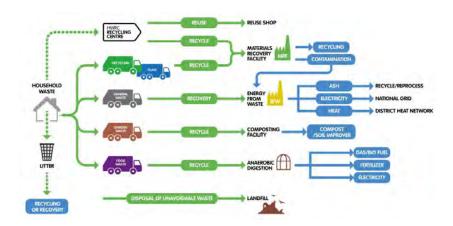
This introduces strategic risk for a heat supply from the waste to energy plant. The reasons for this are explored in more detail in Appendix A, however in summary:

- The Climate Change Committee have advised that emissions from waste to energy plants need to reduce around 90% by 2050 through reductions in the amount of waste incinerated and use of carbon capture and storage
- Reductions in waste volume will lead to reductions in available waste heat, possibly below economically viable levels
- Carbon capture and storage may not be economically viable at the existing site
- The proposed heat network will obtain 14% of its heat from mains gas, which is a high carbon heat source that would not be compliant with the Council's net zero ambitions.

Kirklees Council's recently published Resource and Waste Strategy mirrors the Climate Change Committee's recommendations and outlines plans to increase levels of reuse, recycling, composting, and also to introduce anaerobic digestion of food waste.



The Huddersfield Energy from Waste facility. © Yorkshirelive



Kirklees' future plans for waste disposal include greater reuse, recycling, composting of garden waste and anaerobic digestion of food waste. © Kirklees Council

Technologies Assessed | Waste to energy

Carbon Dioxide emissions

This page summarises the emissions from waste to energy combustion, and explains how they are assigned to the electricity and heat produced by a waste to energy plant.

For each tonne of waste burned, between 700 and 1,700 kg of CO_2 is produced (Environment Agency), 600 kWh of electricity is generated (typical industry average), and 230 kWh of waste heat is provided (AECOM data for Huddersfield waste to energy plant).

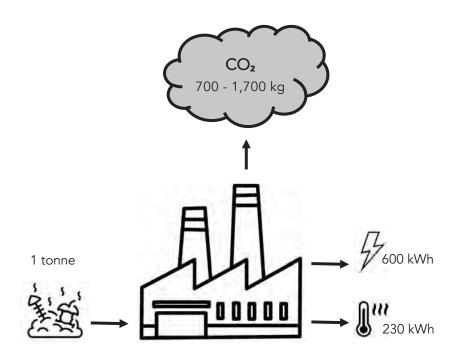
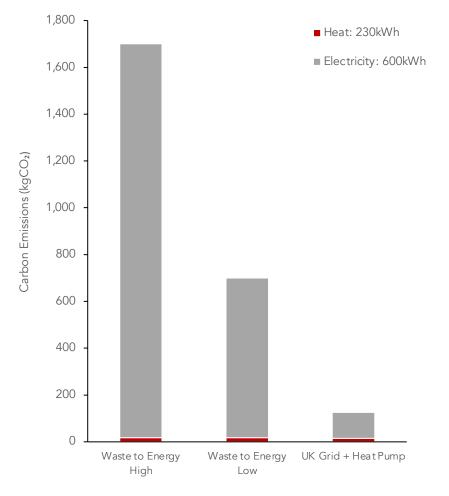


Diagram showing electricity, heat, and carbon dioxide produced through the combustion of 1 tonne of municipal solid waste in a typical waste to energy plant.



Graph shows emissions resulting from burning one tonne of waste. Emissions are split between electricity and heat based on the Part L 2021 Building Regulations assumption that 15g of CO_2 is emitted per kWh of heat generated. Assuming such a low figure for heat 'hides' over 99% of the total emissions, which must then be allocated to the electricity generated.

For comparison, current emissions associated with obtaining the same amount of electricity and heat from the UK's electricity grid and a heat pump are also shown. 4.0 Methodology and Assumptions

This section summarises our methodology and assumptions used to carry out the low carbon heating assessment.

Methodology & Assumptions | Methodology

Methodology

Etude have combined the predicted space heating demands and peak heat loads for each building in Section 2 with the different types of heating system from Section 3 into an excel based low carbon heating tool.

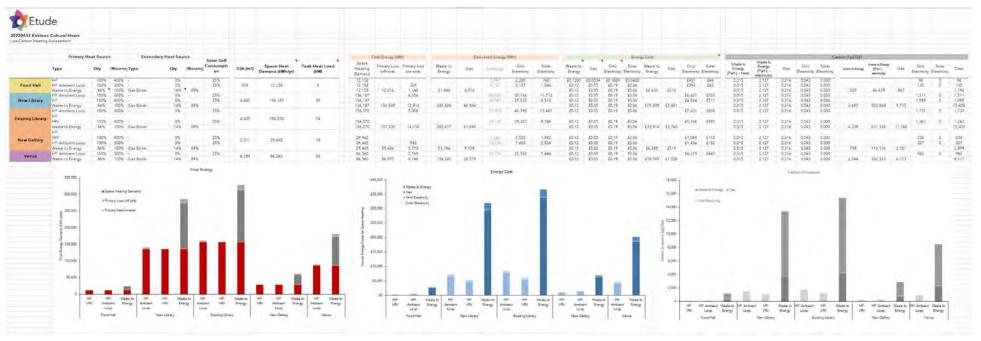
This tool provides a high-level comparison of different heating systems and strategies for the whole site, and allows key assumptions to be tested, at a level designed to inform Stage 2 decisions.

As the project progresses, these calculations can be updated. By late Stage 3 and beyond more information about the heating systems are likely to be captured in individual energy calculations for each building, providing a greater level of detail.

Assumptions

Key assumptions used in our low carbon heating calculations are summarised on the following page. These assumptions used actual project values, where available, or conservative assumptions where information was incomplete.

We anticipate that these assumptions will be updated at Stage 3, to refine the calculations and enable one or more additional passes to be made before a final decision is taken on how the buildings will be heated.



Etude have developed a bespoke low carbon heat calculator for Kirklees Cultural Heart to model the operational energy, cost and carbon emissions associated with different heating system options. This model allows us to test key inputs and explore different options at an early stage in the design.

Methodology & Assumptions | Assumptions

Venue 15 Based on CIBSE/LETI/CCC net zero guidance Peak heat load Peak steady state heat load based on PHPP heat demand calculations. Minimum heating system capacity expected to be twice this figure. Heating systems Peak steady state heat load based on PHPP heat demand calculations. Minimum heating system capacity expected to be twice this figure. WRF heat pump efficiency 400% Expected typical system efficiency for space heating only Air source heat pumps feeding ambient loop 300% combined efficiency for space heating only Expected typical system efficiency for space heating only Gas boiler 89% Based on AECOM assumption Carbon intensities Based on 2021 HM Treasury Green Book average carbon factors for 2022-2050. Cross-checked with National Grid Future Energy Scenarios. Mains gas 216 gCO ₂ /kWh Based on DEFRA and Part L figures	Assumption	Value	Notes
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Water source heat combined efficiency for space heating only pumps connected to ambient loop for space heating only Gas boiler 89% Based on AECOM assumption Carbon intensities Based on 2021 HM Treasury Green Book average carbon factors for 2022-2050. Cross-checked with National Grid Future Energy Scenarios. Mains gas 216 gCO2/kWh Based on DEFRA and Part L figures Waste to Energy heat 15 gCO2/kWh Based on table 32 in the NCM 2021		300%	Expected typical system efficiency
Carbon intensities Based on 2021 HM Treasury Green Book average carbon factors for 2022-2050. Cross-checked with National Grid Future Energy Scenarios. Mains gas 216 gCO2/kWh Based on DEFRA and Part L figures Waste to Energy heat 15 gCO2/kWh Based on table 32 in the NCM 2021	pumps connected to		
Grid electricity 43 gCO2/kWh Based on 2021 HM Treasury Green Book average carbon factors for 2022-2050. Cross-checked with National Grid Future Energy Scenarios. Mains gas 216 gCO2/kWh Based on DEFRA and Part L figures Waste to Energy heat 15 gCO2/kWh Based on table 32 in the NCM 2021	Gas boiler	89%	Based on AECOM assumption
Grid electricity 43 gCO2/kWh Book average carbon factors for 2022-2050. Cross-checked with National Grid Future Energy Scenarios. Mains gas 216 gCO2/kWh Based on DEFRA and Part L figures Waste to Energy heat 15 gCO2/kWh Based on table 32 in the NCM 2021	Carbon intensities		
Waste to Energy heat 15 gCO ₂ /kWh Based on table 32 in the NCM 2021	Grid electricity	43 gCO₂/kWh	Book average carbon factors for 2022-2050. Cross-checked with National Grid Future Energy
Waste to Energy heat $15 \mathrm{gCO}_2/\mathrm{kWh}$	Mains gas	216 gCO₂/kWh	Based on DEFRA and Part L figures
	Waste to Energy heat	15 gCO₂/kWh	Based on table 32 in the NCM 2021 Modelling Guide

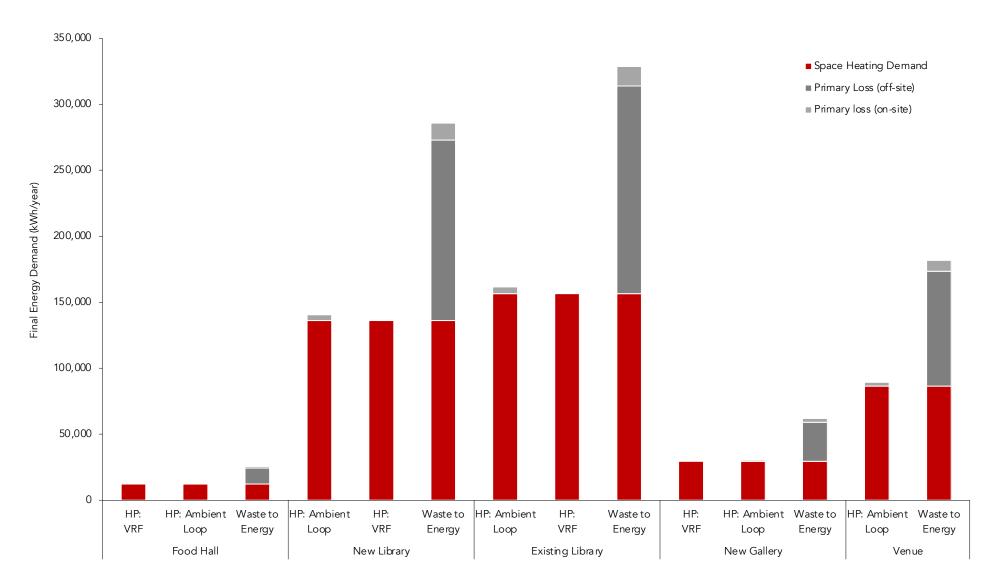
Assumption Value		Notes
Energy costs		
Grid electricity	18.89 p/kWh	BEIS non-domestic prices Q4 2021 for small user
Solar electricity	6.00 p/kWh	Typical levelised energy cost for system size. Electricity likely to be supplied for free in practice.
Mains gas	5.34 p/kWh	BEIS non-domestic prices Q4 2021 for very small user
Waste to Energy heat	12.00 p/kWh	Based on costs for Sutton heat network (14.83p/kWh) and Which? average reported cost of heat (13.04p/kWh, adjusted for inflation)
Energy sources		
Solar self-consumption for heat pumps	25%	Expected to be conservative
Proportion of heat from Waste to Energy plant in heat network	86%	Based on AECOM assumption
Proportion of heat from Gas in heat network	14%	
District heat network specifications		
Ambient loop temperature	20 - 25 °C	Best practice to minimise losses.
Ambient loop pipe diameter	200 mm	Based on calculated heat loads, assuming use of REHAU PP-R or similar. To be updated pending information from AECOM
Waste to Energy district heating flow/return temperature	90 / 70 °C	Based on AECOM assumption
Waste to Energy district heating pipe diameter	110 mm	Based on calculated heat loads, assuming use of REHAU Rautherme: or similar. To be updated pending information from AECOM
pipe diameter Length of district heating pipe from Energy from Waste plan to	110 mm 2,260 m	assuming use of REHAU Rautherme or similar. To be updated pending
•••		assuming use of REHAU Rautherme or similar. To be updated pending information from AECOM Based on AECOM map. Length of

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5.0 Results

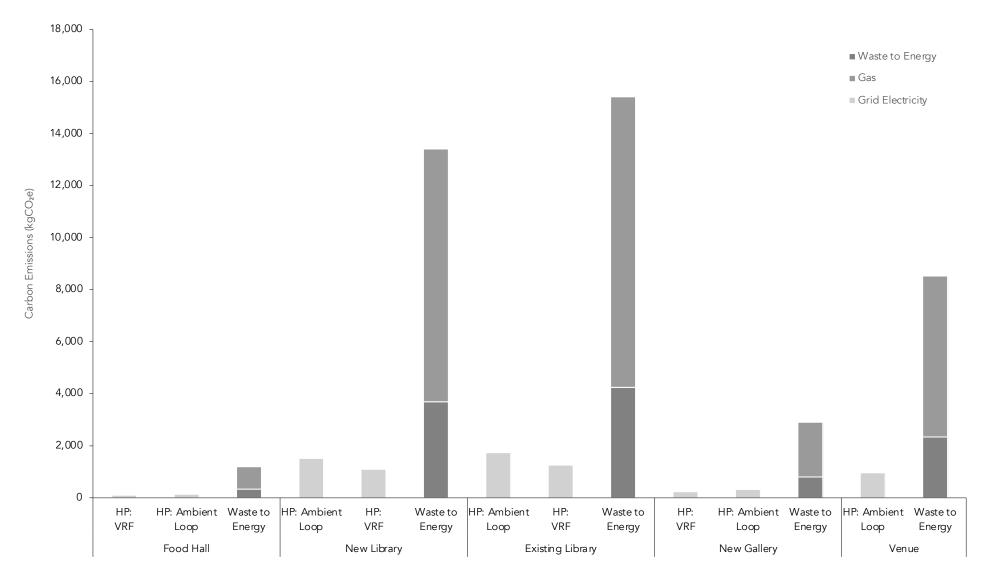
The results of our calculations are presented in this section.

Results | Heating Energy Demand and Distribution Losses



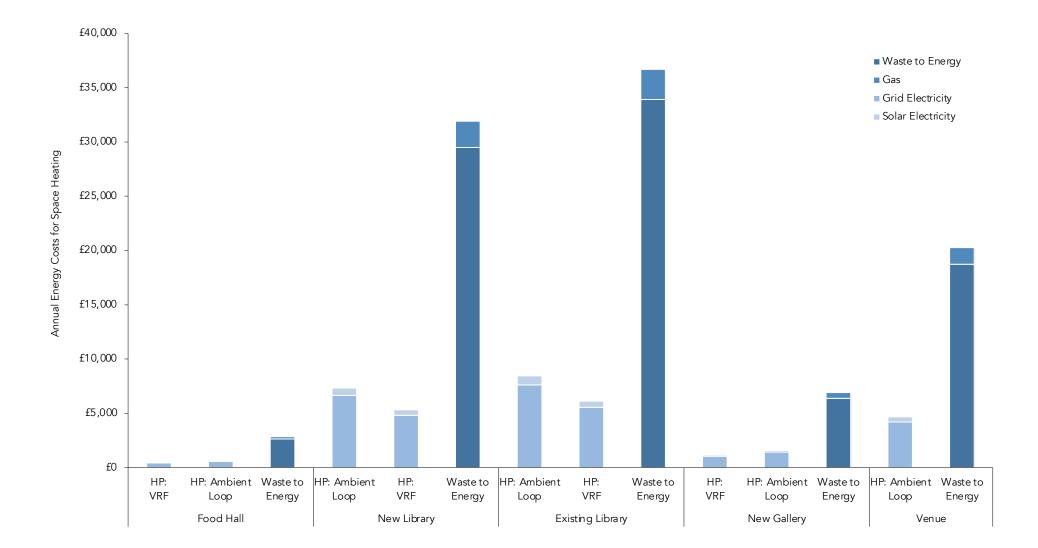
Space heating energy demand is shown for the five buildings, relative to predicted distribution losses associated with different heating options. Individual VRF heat pump systems on each building, and systems using ambient temperature heat pumps have the lowest losses. High temperature district heating at 90°C flow and 70°C return has the highest losses. Sizing and losses for the district heating network currently assume the Cultural Heart is the only load on the network as information on other loads was not available. This assumption can be updated at Stage 3 once further information is available.

Results | Carbon Emissions



Predicted annual carbon emissions are shown for the different heating system options proposed for each of the five buildings. Emissions for individual VRF heat pump systems on each building are the lowest. These are followed closely by water-water heat pumps in each building, which are supplied with ambient temperature water by a site-wide communal loop, which receives heat or cool via several air source heat pumps. Heat supplied by a district heating system supplied with heat from the energy from waste plant and gas boilers has significantly higher carbon emissions for all buildings.

Results | Operational Energy Costs



Predicted annual space heating energy costs are shown for the different heating system options proposed for each of the five buildings. Systems using individual VRF heat pumps achieve the lowest costs, followed by systems using water-water heat pumps in each building, which are supplied with ambient temperature water by a site-wide communal loop, which receives heat or cool via several air source heat pumps. Heat supplied by a district heating system supplied with heat from the energy from waste plant and gas boilers has significantly higher operational energy costs for all buildings.

Appendix A Net Zero Pathways for the Waste Sector

This appendix explains measures that are likely to be required to decarbonise the waste sector in Kirklees, and considers how these relate to the use of heat produced by Energy from Waste.

Figure 3.9.a Sources of abatement in the Appendix A | UK Climate Change Committee - Waste Bactor Figure 3.9.a Sources of abatement in the Figure 3.9.a Sources of abatement in the Appendix A | UK Climate Change Committee - Waste Bactor Figure 3.9.a Sources of abatement in the Figure 3.9.a Sources of abatement in the Appendix A | UK Climate Change Committee - Waste Bactor Figure 3.9.a Sources of abatement in the Bactor Figure 3.9.a Sources of abatement in the Bactor Bactor

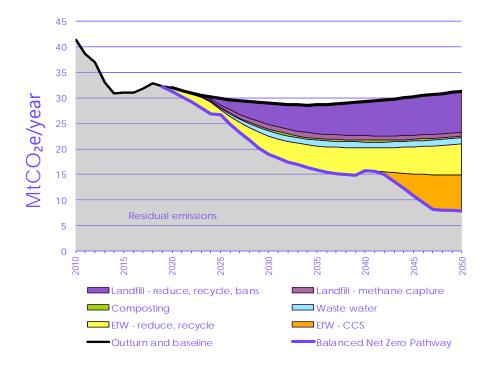
A National Plan to limit warming to 1.5°C

In their Sixth Progress Report to Parliament, the UK's Climate Change Committee outlined a 'Balanced Net Zero' emissions reduction pathway. It provides an emissions reduction plan for the UK that is aligned with the IPCC's 1.5°C carbon budget.

The Balanced Net Zero Pathway includes an emissions reduction pathway for the waste sector, which must reduce emissions at least 75% by 2050. Specific requirements of this pathway that relate to energy from waste facilities include:

- Energy from waste emissions must reduce over 90% from their present levels of 5-6 MtCO2e/yr to 0.4 MtCO2e/yr by 2050.
- Construction of any new energy from waste plants must be balanced by reductions in waste volumes being sent to existing ones.
- New waste to energy plants, and extensions to existing plants, should be built with CCS, or be CCS ready from 2020 onward.
- All waste to energy plants should be fitted with CCS by 2050.
- Re-use, recycling, anaerobic digestion and composting should be used to reduce emissions from energy from waste.
- Specifically, recycling rates should increase to 70% by 2030, significantly reducing volumes of waste sent for incineration.

If all energy from waste plants with planning approval, or currently under construction, are built then emissions will increase by 3-10 MtCO2e/yr above the current rate. This is not compatible with the UK's emission reduction pathway. To remain on track, either the majority of these plants will need to remain unbuilt, waste incineration rates must fall, or carbon capture and storage will need to be installed.



Sources of abatement for the waste sector in the Balanced Net Zero Pathway. Emission reductions of over 90% are required from energy from waste facilities and are expected to be delivered through reductions in the amount of waste being incinerated, and use of carbon capture and storage. © Climate Change Committee, Sixth Progress Report to Parliament, 2020

Appendix A | Kirklees – Energy from Waste

Emissions from the Huddersfield Waste to Energy Plant

The Huddersfield waste to energy plant currently burns around 130,000 tonnes of waste a year. Assuming $700 - 1,700 \text{ kgCO}_2$ is emitted per tonne of waste, annual emissions could range from 91 - 221 ktCO₂, or 5-10% of Kirklee's recently calculated emissions for 2021.

Energy from waste

The implications of aligning this goal with the Climate Change Committee's Balanced Net Zero Pathway for the Huddersfield Waste to Energy facility include:

- A decarbonisation plan for the Huddersfield Energy from Waste facility is required. This plan should aim for a ~90% reduction in emissions from the facility.
- The plan should quantify reductions in the amount of waste that will be incinerated between now and 2038.
- The plan should outline how measures required to deliver these reductions in the amount of waste incinerated will be implemented.
- The amount of waste heat available from the waste to energy facility should be quantified, accounting for reductions in the amount of waste incinerated.
- Technical and economical viability of carbon capture and storage at the existing facility should be assessed. If the current site is not found to be viable, alternative plans should be developed and implemented prior to 2038.
- The Climate Change Committee's approach of carbon accounting has been developed to deliver required emissions reductions at a national level and should generally take precedence. Existing approaches that are being used to justify ongoing use of Waste to Energy as a low carbon heat source should be stress-tested to ensure there is no carbon leakage or double counting of emissions.



The Huddersfield Energy from Waste facility. A decarbonisation plan is required to deliver emissions reductions of around 90%. © Yorkshirelive

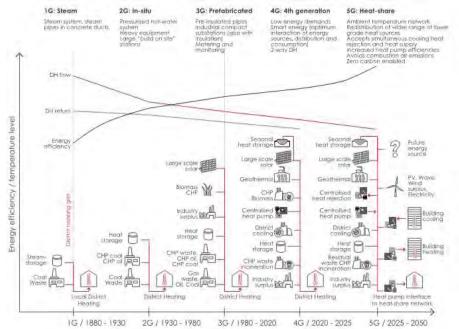
Appendix A | Kirklees – Anaerobic Digestion

Anaerobic digestion

Use of anaerobic digestion for electricity generation and/or to provide a district heat source has been proposed as an alternative to waste incineration for suitable waste types.

Considerations and implications for the proposed redevelopment arising from this include:

- Compatibility of this approach should be assessed against the Climate Change Committee's recommendations for the waste sector to ensure alignment with national policy.
- The amount of heat that can be provided by an anaerobic digestion facility should be quantified based on evaluation of available long-term feedstock.
- New buildings are expected to have very low heating requirements. Experience suggests that losses in district and communal heating systems are likely to be greater than the actual heat requirements of these buildings.
- Heat demands of existing buildings will be higher, even postretrofit, so losses will be a smaller percentage than for new build, but should still be quantified.
- Communal heating usually increases overheating risk unless using close to ambient temperature networks.
- Use of close to ambient temperature heat networks with booster heat pumps in each building could reduce losses and mitigate overheating risk, but may be more expensive to build and operate than just installing air source heat pumps on each building.



Evolution of the temperature of district heating systems over time. Close to ambient temperature heat sharing networks are generally best suited to highly efficient buildings with heat pumps as they reduce distribution losses and overheating risk. © LETI

Appendix B Spitalfields & St. Georges Markets

Spitalfields and St. Georges markets provide examples of how large existing historic structures can be efficiently modernised to provide a mixeduse sheltered space, which contain conditioned volumes without having to heat the entire structure.

This appendix presents design precedents for this project, which may be useful to consider for Huddersfield's Market Hall.

Appendix B | Spitalfields Market, London



Conditioned food and beverage spaces are provided © Foster & Partners



Spitalfields Market contains a combination of conditioned spaces and open market stalls inside a sheltered space © IQ Projects

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Appendix B | Spitalfields Market, London



Conditioned spaces were carefully designed to mirror the aesthetic of the existing market hall @ IQ Projects



The main space is open to the outside environment, avoiding the need for mechanical ventilation © IQ Projects

Appendix B | St. Georges Market, Belfast



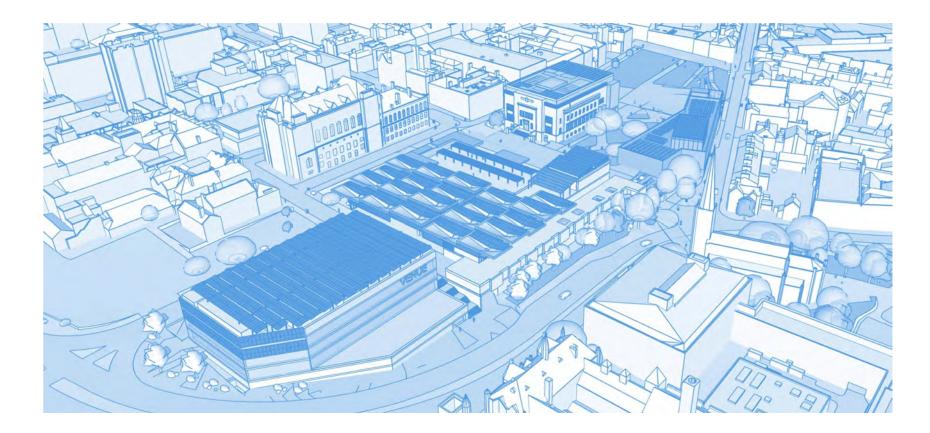
St. Georges Market in Belfast contains up to 250 market stalls in a large unheated, sheltered space $\ensuremath{\mathbb{C}}$ Expedia



The current market was built in the 19th century, though street markets have occupied the site since the 17th century © Expedia

Renewable Energy

KIRKLEES CULTURAL HEART HUDDERSFIELD



STAGE 2 – PRELIMINARY SOLAR STRATEGY

May 2022 | Rev C



Introduction | Principles of solar design

Introduction

This appraisal supports the Energy and Sustainability Stage 2 report. Etude have carried out a high level site-wide PV appraisal for the Kirklees Cultural Heart Masterplan to determine the solar generation for the development if panel installation is maximised.

Following the latest Stage 2 design updates, the appraisal has been also updated, taking into account the proposed rooflight and plant areas on the roofs; it has nevertheless intended to maximise energy generation using various strategies of solar panel integration despite the limitations to continue encouraging better practice that's aligned with the net zero goals.

Generally, the key principles of solar design are:

- Prioritising the use of monopitch canopies rather than flat roofs with parapets to house plant areas.
- Avoid dead space due to shading, access and plant.
- Exploring placing taller parts of buildings, and plant areas, to the North generally to avoid shading useful roof area.
- Considering facade mounted PV panels where appropriate.

The PV strategy will continue to develop iteratively in the following Stages in collaboration with the design team. A set of solar design precedents is appended to this report, to demonstrate the many ways solar generation can be integrated into design.

Why are solar panels important?

- The UK solar capacity needs to increase by around six times (based on the Climate Change Committee's Balanced Net Zero Pathway, and National Grid scenarios to limit warming to 1.5C).
- CIBSE and LETI recommend that net zero operational carbon buildings should generate enough renewable energy on-site to meet their demands, avoiding reliance on off-site renewables if possible.
- The site has got a great potential and could even aim to achieve a net zero operational energy balance (not including EV charging).
- There are no explicit Kirklees Council requirements, however this scheme is aiming to be exemplar and BREEAM excellent.
- It is a possibility that PV requirements for the new version of Part L may also increase the minimum amount of PV required.
- The levelised cost of solar electricity is significantly cheaper (6 to 8p per kWh) than grid electricity (28p for residential and 18p+ for non-residential users).
- Electricity is more valuable at the point of consumption, as it can displace use of grid electricity at retail prices.
- Solar panels that don't go on buildings will be deployed on greenfield sites, increasing the amount of offsite utilities required, and using land that could have been used for food production, carbon sequestration and/or habitat restoration.

Introduction | Renewable energy is the foundation of a net zero society

Summary

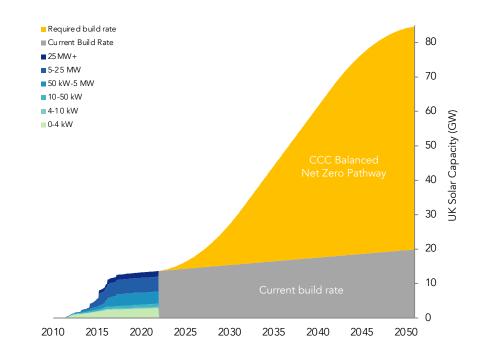
Roof space suitable for solar PV is an asset and a key part in meeting Net Zero and reducing the UK carbon emissions. Rooftop mounted solar PV is a major renewable energy source that can offer cheap low carbon electricity.

The use of solar technology in UK needs to accelerate significantly to achieve a zero emission electricity supply as shown on the graph. Installing panels on buildings and in urban areas can significantly reduce pressures on greenfield sites. This frees up land for other uses and avoids the unfavourable distance that's likely to occur between greenfield sites and where electricity is used.

Roof design, service layout and the type of solar technology used have a big impact on the amount of solar electricity that is generated on a building. We have explored an initial maximised PV layout to demonstrate the optimal generation potential of the current roof plan of the development. It is anticipated that some of the roof space will need to accommodate plants, services and lift over-runs thereby reducing the area available to the solar PV panels. Therefore it is important to engage in discussion within the design team aimed to find balance.

This appraisal shows the different strategies explored for the various buildings on site taking into account the roof form, shading, array arrangement and panel performance.

The number of panels that could be accommodated using all the available roof space is **2,971 solar panels** giving a site average 'specific energy generation' of **86 kWh/m²_{fp}**. Specific energy generation is the total amount of electricity generation divided by the footprint of the buildings and provides a good indication of how effective the development is in using its building footprint. to generate renewable electricity. **50-100kWh/m²_{fp}** is good practice for new buildings, **100-200kWh/m²_{fp}** is current best practice.



The graph above shows the current deployment of solar PV in the UK, and the increase in capacity necessary to meet the UK's projected Net Zero Carbon targets in line with the Climate Change Committee balanced pathway.

UK solar deployment must significantly accelerate to achieve a zero emission electricity supply. Placing solar panels on buildings and in urban areas relieves pressure on greenfield sites. This frees up land for food production, carbon sequestration and habitat restoration. Graph based on data from BEIS, current build rates are conservative relative to other industry data. 1.0 Solar Strategy

An indicative approach at a masterplan level to maximise renewable energy generation on-site.

Solar Strategy | Assessing performance

Quantifying solar performance

This report uses the energy generated per square meter of building footprint area as the metric to compare the performance of different approaches to uses solar PV. This metric allows a fair comparison between buildings, irrespective of their height.

The images below show how different layouts of solar panels typically affect how much energy can be generated per square meter of building footprint.

METRIC **kWh/m²_{FP}** Energy generated per m² of the building footprint



Standard practice – inefficient layout and panels proposed

Good practice – Reduced inter-row shading, better density but lower generation per panel

Best practice – maximises solar exposure and allows for a high panel density

Solar Strategy | Masterplan

Approach

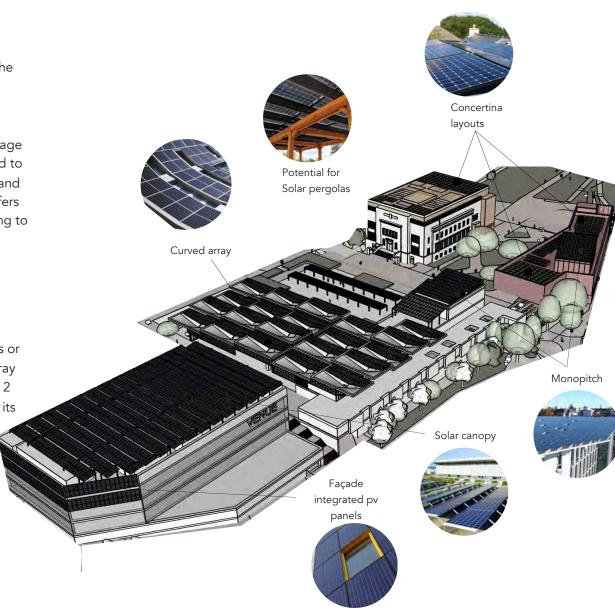
Considering the forms of the Kirklees masterplan proposals and the consequent shading, an effort has been made to maximise the potential energy generation on site by strategically locating solar panels on the roofs. The image on the right presents an absolute maximum solar PV layout on a masterplan extent based on the Stage 2 design of Kirklees Cultural Heart. Further consideration will need to be made for constraints such as listing protection, roof top plant and access and maintenance. The solar panel installation strategy differs between the buildings and is indicative at the current stage, aiming to present various methods of integrating solar panels in the early design.

What is possible

Following the current best practice solar technology, 410W high efficiency monocrystalline silicone solar panels with microinverters or DC optimisers have been assumed. Below is a summary of key array specification and site-wide generation based on the recent Stage 2 proposals. Currently, it is possible for the site to generate **82%** of its energy consumption.

90* kWh/m²_{fr}

Total number of panels	2,971	
Array power	1218 kWp	(
Annual energy generation	1,043,535 kWh	



*Based on the Ground Floor footprint areas from the designs provided at Stage 2

Indicative site-wide PV roof plan with various methods of PV installation (3d model source: FCBS)

Solar Strategy | Museum Retrofit & Extension

Approach

As a result of the roof form and shading areas, an East-West oriented concertina arrangement has been assumed with an allowance of at least 1000mm of access lanes around the panels for maintenance purposes.

The image on the right shows a potential solar PV layout based on the Stage 2 roof plans of the new museum. We recommend that further opportunities to increase the number of panels are explored at Stage 3.

What is possible

The table below summarises key performance information for the solar array on this building:

Number of panels	246
Array power	101 kWp
Annual energy generation	80,991 kWh
Orientation(s)	East/West - roof
Tilt angle(s)	15° - roof

Footprint area assumed – 1,490m²



Indicative PV roof plan of the museum and gallery retrofit and the specific energy generation.

Important to note: that the available roof area has taken into consideration the latest design proposals on the rooflight areas, however, the impact on overheating/fabric efficiency should also be considered. The indicated rooflight and lift shaft locations have been currently marked and excluded. It has also been assumed that the plant areas and building services are installed within the new extended roof height.

*Based on the Ground Floor footprint areas from the designs provided at Stage 2

Fabric Specifications | New Gallery

Approach

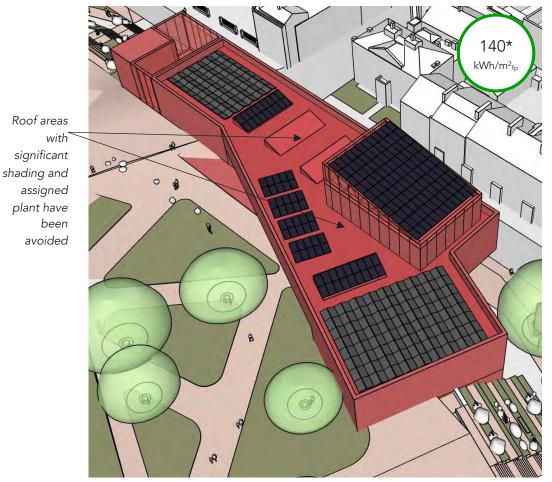
Following the latest design updates, the New Gallery roof follows a mixed solar panel strategy to make the most of the roof form. The approach for the core includes a monopitch lightweight roof at 10deg angle and south orientation covering the plant area, whilst the main flat roof of the new gallery follows an East-West concertina arrangement at the unshaded areas. This is to be tested at Stage 3 The north facing rooflights have also been dressed in solar panels facing south.

What is possible

The table below summarises key performance information for the solar array on this building:

Number of panels	439
Array power	180 kWp
Annual energy generation	151,363 kWh
Orientation(s)	South & East/West
Tilt angle(s)	10º – monopitch 15º - concertina

20° - rooflights



Indicative PV roof plan of the New Gallery at Stage 2 and its specific energy generation.

Important to note: Monopitch arrays should be prioritised where possible as they maximise solar exposure and generation. It is recommended to place taller parts of buildings, and plant areas, to the North generally to avoid shading useful roof area.

*Based on the Ground Floor footprint areas from the designs provided at Stage 2

Fabric Specifications | New Library

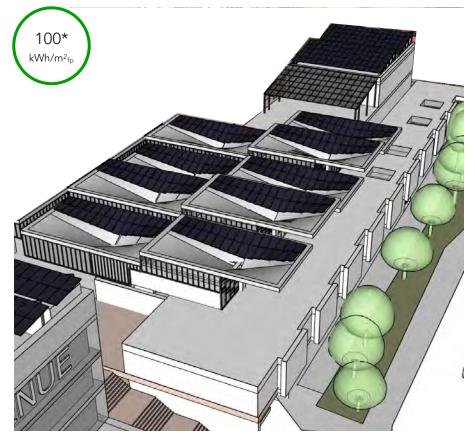
Approach

The flat roof of the new library including the plant area, would be best suited to a double South facing monopitch arrangement on lightweight structure. Assuming that the terrace is accessible from the building visitors/occupants, a solar pergola approach is suggested for at least part of the terrace to maximise energy generation. A transparent solar module pergola approach would allow sufficient diffused light penetration and protection from direct sunlight at the same time. It is recognised that while this roof area holds potential the protection afforded the listed roofscape may limit the option for roof top PVs in this location. This is to be confirmed at Stage 3.

What is possible

The table below summarises key performance information for the solar array on this building:

Number of panels	510
Array power	209 kWp
Annual energy	186,788 kWh
Orientation(s)	South
Tilt angle(s)	10° - monopitch & pergola 15° - average of curved pv panels to fit existing roof shape



Indicative PV roof plan of the new library and the specific energy generation.

Important to note: Monopitch arrays should be prioritised where possible as they maximise solar exposure and generation. Shallow angled monopitch arrays are possible, split into several smaller sub-arrays so as to keep overall height reasonable.

*Based on the Ground Floor footprint areas from the designs provided at Stage 2

Footprint area assumed – 1,886 m²

Fabric Specifications | Venue

Approach

The proposed venue has got the simplest form of all the buildings and quite a large one-level roof. As a result, a dense South oriented mono-pitch arrangement has been explored for maximal generation, together with façade mounted panels on the south-facing upper levels. Due to the plant and services required that could potentially cover the biggest part of the roof, the approach suggested is using a form of solar canopies over all the plant and services area (see precedence in the pages below).

What is possible

The table below summarises key performance information for the solar array on this building:

Number of panels	1190
Array power	488kWp
Annual energy	415,154 kWh
Orientation(s)	South – roof & façade SouthEast – façade
Tilt angle(s)	10° - roof 90° - facade



Indicative PV roof plan of the new venue and the specific energy generation.

Important to note: Alternative to façade mounted PV panels, façade integrated panels are also an option forming part of the elevation finishes (see precedence at end of the report). Further shading analysis at a later stage may permit façade mounted panels at the lower levels.

*Based on the Ground Floor footprint areas from the designs provided at Stage 2

Fabric Specifications | Food Hall

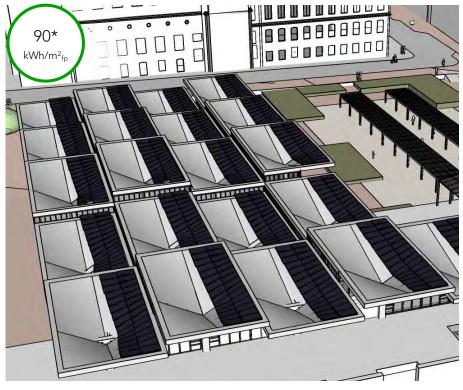
Approach

The roof of the foodhall and existing library has been identified as heritage protected. Nevertheless, as this remains one of the largest areas on the project a minimum and reversible design option of curved roof mounted panels has been explored, given existing precedents for PV panels on similar application. It is recognised that while this roof area holds potential the protection afforded the listed roofscape may limit the option for roof top PVs in this location. This is to be confirmed at Stage 3.

What is possible

Part of the current roof will cover the proposed the new library (see p.6), so the table below presents the results for the part of the roof covering the proposed Food Hall.

Number of panels	360
Array power	148 kWp
Annual energy	133,726 kWh
Orientation(s)	South
Tilt angle(s)	15° - average depending on curve angle



Indicative PV roof plan of the new venue and the specific energy generation.

2.0 Design Precedents

A selection of design precedents to demonstrate the many ways solar generation can be integrated into design.

Design Precedents | Monopitch roofs



Bullitt Centre, Seattle



Solar canopies at Hoffenheim Stadium, Germany © PRWeb



Residential apartments, Germany



Blackfriars Bridge, London

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Design Precedents | Facades



Hochschule Niederrhein, Germany © kadawittfeldarchitektur



Unknown Location © Greice Portal-Salvati



Freiburg Town Hall, Germany



Hotel with curved facade, Unknown Location

Appendix E

Consultation List



Kirklees Cultural Heart

Communications and Public Consultation

Consistent with the overall approach to the Kirklees Cultural Heart project, there is a requirement for the approach to communications and consultation to be ambitious and innovative. There is a clear need to proactively communicate the purpose and vision for the project as well as to provide positive opportunities for engagement and the ability for external stakeholders to help influence the design.

In parallel to the development of the planning strategy to support Kirklees Cultural Heart, a comprehensive consultation and engagement strategy was developed to support the project through the planning process and beyond. The consultation strategy for Kirklees Cultural Heart builds on the extensive consultation exercise which was undertaken on the wider Huddersfield Blueprint plans in 2019.

The objectives of the consultation and engagement strategy are as follows:

- Ensure local audiences and interested stakeholders are actively involved in the development of the proposals from an early stage, to help generate a sense of local ownership.
- Use the two key phases of consultation as opportunities to raise awareness and generate positivity about the project, through the use of engaging and easy-to-understand content.
- Support the planning programme by identifying potential areas of concern or challenge and address these ahead of planning submission.
- Seek out opportunities to deliver social value through the consultation programme itself.

To ensure external stakeholders and local communities can influence the development of the design at different stages, the consultation and engagement strategy includes two main phases of "set-piece" consultation ahead of the submission of the planning application, with ongoing engagement with key stakeholder groups taking place throughout:

- A first phase of consultation (May-June 2022) to introduce the feasibility stage design and seek feedback on these design fundamentals.
- A second phase of consultation (August-September 2022) to introduce the more developed design proposals, including explaining how consultation feedback from phase one has influenced the design.

A key ethos of the consultation strategy is a multi-channel approach that provides equal emphasis on in-person and virtual engagement methods. The consultation included a dedicated consultation website with virtual exhibition, as well as a series of public exhibition-style consultation events, site walk-arounds, stakeholder workshops and youth engagement sessions.

As part of the overall consultation strategy, in-depth sessions with defined stakeholder groups commenced during Stage 2 and will continue during Stage 3. There is a particular focus on groups representing those with protected characteristics / seldom heard groups.

The whole consultation process will be captured within a comprehensive Statement of Community Involvement (SCI). The SCI will provide a record of the consultation process, the consultation feedback received, and the influence of this feedback on the design proposals. The SCI will be submitted as part of the planning application.





Key Stakeholders

We directly engaged with the below list of stakeholders to ensure that they were aware of the consultation and had an opportunity to get involved in the evolving Cultural Heart proposals.

Kirklees Council Internal Officers
OFFICERS
Kirklees Council Executives
Kirklees Council Communications
West Yorkshire Archives
Public Rights of Way Forum
Moving More Often
BOARDS/PANELS
Kirklees Council Economy and Neighbourhoods Scrutiny Panel
Kirklees Council Urban Park Group
Kirklees Learning Disability Partnership Board
Wellness Service
Accessibility in the Public Realm
KC Adults and Health
Staff Networks
BAME Network
Young Employee Network
Working Carers Support Network
Green Employee Network
Disabled Employee Network
Inclusive Communities Framework
Kirklees Dementia Hub
Kirklees Council Diversity and Inclusion

Kirklees Council Car Park Stakeholders

Kirklees Political Stakeholders
Mayor
Mayor for West Yorkshire
MPs
Huddersfield
Dewsbury
Colne Valley
Batley and Spen
Local Councillors
Council Leader and Portfolio Holders
Kirklees Councillors
Wider District Borough and Parish Councils

Statutory Consultees

Statutory Boards

Planning Officers





Conservation Officer
Landscape Officers
Highway Officers
Ecology Officer
Environmental Health
Flood Risk/ Drainage Officer
Statutory Boards
Historic England
Highways England
Natural England
Environment Agency
Emergency Services
West Yorkshire Police Authority
West Yorkshire Police Estates
West Yorkshire Police Traffic Support
West Yorkshire Fire and Rescue Service
Yorkshire Ambulance Service
North East Counter Terrorism
Kirklees SCI Statutory Consultees
British Telecom
Calderdale and Huddersfield NHS Foundation Trust
Environment Agency
Highways Agency
Network Rail
Homes and Communities Agency / Homes England
Mid Yorkshire Hospitals NHS Trust
Mobile Operators Association
National Grid
Natural England
Network Rail
NHS Property Services
North Kirklees Primary Care Trust
Northern Gas Network
Northern Gas Network
Northern Gas Network Peak District National Park Authority
Northern Gas Network Peak District National Park Authority South West Yorkshire Foundation Trust
Northern Gas Network Peak District National Park Authority South West Yorkshire Foundation Trust The Coal Authority
Northern Gas Network Peak District National Park Authority South West Yorkshire Foundation Trust The Coal Authority West Yorkshire Strategic Health Authority

Kirklees Transport Stakeholders
Northern Rail
Penistone Line Partnership
Network Rail
Cycle Yorkshire





Yorkshire Sport Foundation
Transpennine Express
Bus Operators
First Bus
Arriva Yorkshire
Yorkshire Tiger
A Lyles
Station Coaches
TLC Travel
South Pennine Community Trust
CT Plus
Access Bus
Metro (West Yorkshire) Bus and Train Information

Civic and Cultural Stakeholders
Music Stakeholders
Greenhead College
Huddersfield Contemporary Music Festival
Musica Kirklees
Hoot Creative Arts
The Parish (Music Venue and Promoter)
The Parish (Music Venue and Promoter)
Grand Northern Ukulele
Lawrence Batley Theatre
Marsden Jazz Festival
Radio Sangam
Yorkshire Sound Women's Network
Huddersfield Literature Festival Steering Group
Chol Theatre and Arts Company
Parley community art spaces
Cultural Stakeholders
Cultural Stakeholders
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Cultural Stakeholders National Lottery Heritage Fund Museums Association
Cultural Stakeholders National Lottery Heritage Fund Museums Association National Museums Directors Council
Cultural Stakeholders National Lottery Heritage Fund Museums Association National Museums Directors Council Huddersfield Civic Society
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Kirklees Tree Planting Group
Huddersfield Litter Bandits
Friends of Spen Beck/Mann Dam
Grange Moor Community Association
Holmepride Community in Action
Kirkheaton Environment Trust
Little Gomersal Community Association
Street Angels Huddersfield
Kirklees Filmmakers
KCAN Kirklees Community Action Network
Almondbury Business & Community Association
Canal and River Trust
Children's Organisations
Satelite Arts
Skate it Yourself
Evoke
Manasamitra
Seaglass Collective
West Yorkshire Print Workshop
The Childrens Art School
Yorkshire Children's Centre
Our Voice/ Kirklees Safeguarding Children Partnership

Kirklees Economic Stakeholders
West Yorkshire Combined Authority
Thematic WYCA Boards
Consultation (Transport Subcommittees)
Scrutiny Committees
Key Economic Stakeholders
Huddersfield BID
Huddersfield Unlimited
Mid Yorkshire Chamber of Commerce
Leeds City Region Enterprise Partnership
Federation of Small Businesses
Main Employers in Huddersfield and Dewsbury
Wesco Aircraft
Simply Biz
Buy It Direct Group
PPG Architectural Coatings
FMG Group
Thornton and Ross
MRC Global
Cummins
Syngenta
Kirklees Markets
Misc.





The John Smiths Stadium
Huddersfield Town Football Club
Huddersfield Giants, The John Smiths Stadium
Globe Mills
Buckley Innovation Centre
Kingsgate shopping centre
Education Providers in Huddersfield and Dewsbury Centres
University of Huddersfield
Kirklees College
Upper Batley High School
Kip McGrath Huddersfield Central
Huddersfield Careers Centre
Yorkshire English School
Eastborough Junior, Infant and Nursery School
Greenhead College
Woodley School and College

Special Interest and Accessibility Groups
Walking Groups
Huddersfield Ramblers
Huddersfield Rucksack Club
Kirklees Countryside Volunteers
Marsden Walkers are Welcome
Meltham Walkers are Welcome
National Trust Marsden Moor Estate
Parent Sanctuary CIC
Public rights of way forum
Shape up Together
Shepley Naturalists
The off outs (Thornhill)
Walking information and opportunities (Kirklees Council web page)
Cycling Groups
City Composite Advisory Crown
City Connects Advisory Group
Kirklees Cycling Campaign
Kirklees Cycling Campaign
Kirklees Cycling Campaign Sustrans
Kirklees Cycling Campaign Sustrans Living Streets
Kirklees Cycling Campaign Sustrans Living Streets Batley Cycling Club
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isability Access Groups
irklees Visual Impairment Network (Batley)
irklees Visual Impairment Network (Huddersfield)
Imondbury Disabled Leisure Group 97
ccessBus
Imondbury Disabled Leisure Group 97
ssociation for All Speech-Impaired Children (AFASIC)
atley Sports and Tennis Centre - activities for disabled people
rackenhall Disabled People's Project
arers Trust Mid Yorkshire
leckheaton Central Day Centre
liffe House Outdoor Study and Conference Centre
loverleaf Advocacy
olne Valley Yoga for Health Self Help Group
connect to Support
ark Horse Theatre
EMAND (Design and Manufacture for Disability) Brockholes
isability Sport Yorkshire
lectronic Village
riend to Friend
irace's Place
lome Service Library
lowlands
uddersfield Deaf Centre
uddersfield Down Syndrome Support Group (HDSSG)
luddersfield Society for the Blind
uddersfield Support Group for Autism
irklees Disabled Sports Club
irklees Information Advice and Support Service (KIAS) (Special Educational leeds and Disability)
irklees Learning Disability Partnership Board
irklees Local Offer - for young people with special educational needs and isabilities
lencap in Kirklees
lental Health and Learning Disability Services - National Health Service (NHS)
lilen Care, Batley
Iuslim Elderly and Disabled Organisation (Batley)
lo Limits project (for adults with autism)
iding for the Disabled - Emley Moor
afe Anchor Trust Ltd
ense Deaf-Blind and Rubella Association
habang! Inclusive Learning
pecial Needs North Kirklees Gym Club





Specialist Autism Services	
Square Peg Activities (Holmfirth)	
Support to Recovery (S2R) - Create Space	
The Bridgewood Trust	
The Hub, Kirkburton	
United Response, Huddersfield	
Woodley School and College	
Young Peoples Activity Team (YPAT)	
Huddersfield Guide Dogs for the Blind	
Carers Count	
Community Plus (Kirklees Council)	
Conscious Youth	
Experience Community	
Huddersfield Guide Dog Volunteers Branch	
Huddersfield Student's Union Disability	
Huddersfield Support Group for Autism	
Everybody Active	
Kirklees and Calderdale Independent ME Support Group	
Kirklees Deaf Children's Society	
Kirklees Disabled Sports Club	
Outlookers	
PCAN	
Touchstone Autism Speaks	
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Appendix I

Extension to Key Contractors Contracts

Workstream 2 – Lead Designer

Fees for RIBA Stage 3 Onwards

Current Position

Feilden Clegg Bradley Studios (FCBS) has been appointed to provide Lead Designer services for RIBA Stages 1 & 2 under the SBS Framework via a mini competition from a shortlist of six consultants. This competition proved a fixed cost for the RIBA 1 & 2 services together with indicative percentage fees for RIBA Stages 3 onwards in a number of different scenarios for procurement and a number of ranges of values. This was to provide flexibility for competition for the preferred masterplan, which was not known at the time of the original tender process. The indicative percentage fees were also scored as part of the tender process to add an element of competition to these fees.

However, FCBS has confirmed that they are unable to adhere to the previously submitted percentages due to the complexities and scope of the programme of works as it has developed. FCBS has submitted a revised proposal, comprising a resource schedule adhering to the SCAPE rates but increasing the amount of time they require to undertake all of the services required to complete the design.

From an initial assessment of FCBS's proposed fees there is an addition of approximately £1.5m on a total fee if the original percentages were applied of £5.267m, or a percentage of 29%.

When looking at the percentage increases for the relevant RIBA Stages this equates to:

- RIBA Stage 3 52%
- RIBA Stage 4 94%
- RIBA Stage 4 to 7 19%

When these additional percentages are applied to all of the RIBA Stages in the original evaluation and the different construction values (£100m, £125m, £150m & £175m), this amends FCBS' original commercial score from 27.23 to 25.62. When added to the Quality and Social Value scores this gives an amended Total Score of 80.62. The second placed score remains at 73.55, so FCB would still be in first place by 7.07 points if the increased fee costs were applied at original tender stage.

The current position is that we are now completing RIBA Stage 2 and consideration needs to be given to obtaining professional fees for RIBA Stages 3 onwards. As part of the accelerated programme it is proposed that RIBA Stage 3 commences in advance of Gateway 2 (Outline Business Case (OBC) approval). This cost can be accommodated within the budget of £6.551m approved at Strategic Outline Case (SOC). It is anticipated that these advanced RIBA Stage 3 services will be undertaken in June and July of 2022, with the remainder of fees being procured following OBC approval, which is anticipated to be 2 August 2022.

As the exact procurement route has not been agreed and confirmed with regard to novation of consultants to the successful contractor, the below focuses on RIBA Stage 3 which will continued to be maintained and employed direct with Kirklees Council.

The below states the extent of discussions to date with FCBS regarding their proposed fees going forward.

FCBS's Fee Submission for Advanced RIBA Stage 3 through June and July 2022 and Fees to Completion

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25 April 2022

making the **difference** 01

C:\USERS\JONESTAM\APPDATA\LOCAL\MICROSOFT\WINDOWS\INETCACHE\CONTENT.OUTLOOK\OESA2000\RECOMMENDATION FOR RIBA 3 ONWARDS - FCBS.DOCX

Michael Grace of Turner & Townsend issued a "working assumptions" email to FCBS on 31 January 2022 (attached) upon which to base fees going forward. Following a number of clarification meetings and iterations, a final proposal was received from FCBS on 12 May 2022 (attached), in the sum of £5,569,257.40 for RIBA Stages 3 to 7.

RIBA Stage 3 Early Works June & July 2022:

As part of the above fee, FCBS has advised that the early RIBA 3 fee for June & July 2022 would be £144,537 under cover of their email dated 31 May 2022 (attached).

Recommendation

The recommendation is that FCBS's proposed fee for the early RIBA Stage 3 works of £144,537 is accepted and instructed, funded from the existing budget for works up to OBC, and, following approval of the OBC, the RIBA Stage 3 fee of £1,188,509.55 is also accepted and instructed, less the early RIBA 3 works as identified above.

It is anticipated that these fees will be awarded direct with Kirklees Council as an extension to their original fee under the SBS Framework.

However, consideration could be given as to how this increase could be mitigated by perhaps asking the tendering contractors from RIBA Stage 4 onwards to provide an alternative price for the construction contract by employing the services of an alternative architect, with the relevant expertise for this programme, of their own choice rather than FCBS being novated to them.

Next Steps

Turner & Townsend will raise a Change Control Form for the early RIBA Stage 3 fees of £144,537 with substantiation that this can be accommodated within the currently approved OBC budget and forward the form to David Glover for consideration.

Attachments:

- M. Grace (Turner & Townsend) email dated 31 January 2022 outlining working assumptions
- M. Webster (FCBS) email dated 12 May 2022 detailing FCBS's fee proposal
- M. Webster (FCBS) email dated 31 May 2022 detailing FCBS's fee proposal for the early RIBA Stage 3 works

Workstream 3 – Multidisciplinary Engineer

Fees for RIBA Stage 3 Onwards

Current Position

Arup has been appointed to provide multidisciplinary engineering services for RIBA Stages 1 & 2 under the SBS Framework via a mini competition from a shortlist of three consultants. This competition proved a fixed cost for the RIBA 1 & 2 services together with indicative percentage fees for RIBA Stages 3 onwards in a number of different scenarios for procurement and a number of ranges of values. This was to provide flexibility for competition for the preferred masterplan, which was not know at the time of the original tender process. The indicative percentage fees were also scored as part of the tender process to add an element of competition to these fees.

The current position is that we are now proceeding in RIBA Stage 2 and consideration needs to be given to obtain professional fees for RIBA Stages 3 onwards. As part of the accelerated programme it is proposed that RIBA Stage 3 commences in advance of Gateway 2 (Outline Business Case (OBC) approval). This cost can be accommodated within the budget of £6.551m approved at Strategic Outline Case (SOC). It is anticipated that these advanced RIBA Stage 3 services will be undertaken in May, June and July of 2022, with the remainder of fees being procured following OBC approval, which is anticipated to be the end of July 2022.

As the exact procurement route has not been agreed and confirmed with regard to novation of consultants to the successful contractor, the below focuses on RIBA Stage 3 which will continued to be maintained and employed direct with Kirklees Council.

The below states the extent of discussions to date with Arup regarding their proposed fees going forward.

Arup Fee Submission for RIBA Stage 3, Advanced RIBA Stage 3 and Fees to Completion

Michael Grace of Turner & Townsend issued a "working assumptions" email to Arup on 31 January 2022 (attached) upon which to base fees going forward. Arup initially responded on 11 February 2022 and following a number of clarification meetings and iterations, a final proposal was received from Arup on 19 April 2022 (attached).

Arup has used the construction value ranges in the original tender to pro rata to the value of the "working assumption" value of £165,230,669.00. Arup has then applied the original tender percentages to this value to calculate their proposed fee.

Original % in	Original % in	Proposed % based	Cost based upon
Tender Bid for	Tender Bid for	upon	£165,230,669
£150m	£175m	£165,230,669	(rounded)
1.450%	1.407%	1.424%	£2,352,335.80

RIBA Stage 3 (up to December 2022) Proposed % and Cost Fee:

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25 April 2022 C:\USERS\JONESTAM\APPDATA\LOCAL\MICROSOFT\WINDOWS\INETCACHE\CONTENT.OUTLOOK\OESA2000\RECOMMENDATION FOR RIBA 3 ONWARDS - ARUP.DOCX RIBA Stage 3 Early Works May, June & July 2022:

As part of the above fee, Arup has advised that the early RIBA 3 fee for May, June & July 2022 would be £470,476.16. In order to assist with the fee for early RIBA 3 Arup has deferred £235,233.58, which would be payable after approval of the OBC. Arup has confirmed that they are aware that the approval of the OBC is not guaranteed and that this is at their risk.

Recommendation

The recommendation is that Arup's proposed fee for the early RIBA Stage 3 works of £470,476.16 is accepted and instructed, funded from the existing budget for works up to OBC, and, following approval of the OBC, the remainder of the RIBA Stage 3 fee of £1,881,859.64 is also accepted and instructed.

Next Steps

Turner & Townsend will raise a Change Control Form for the early RIBA Stage 3 fees of £470,476.16 with substantiation that this can be accommodated within the OBC fee and forward the form to David Glover for consideration.

Attachments:

- M. Grace (Turner & Townsend) email dated 31 January 2022 outlining working assumptions
- J. Versi (Arup) email dated 19 April 2022 detailing Arup's fee proposal

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Workstream 1 – Strategic Development Partner (SDP)

Fees for RIBA Stage 3 Onwards

Current Position

Turner & Townsend was appointed to procure and lead a strategic team of consultants to manage the development of the Cultural Heart programme up to and including the submission of the Outline Business Case (OBC). This appointment was direct with Kirklees Council under the SCAPE Framework.

The appointment comprised a scope of services for the team together with a detailed resource schedule and fee drawdown for each of the consultants for the duration of the appointment.

Also included in the appointment was a list of cost allowances for services, surveys and investigations that were not known in detail or could be quantified at the time of appointment. These cost allowances have been expended under a Change Control Process with detail and substantiation once it was known.

The current position is that we are now proceeding in RIBA Stage 2 and consideration needs to be given to obtain professional fees for RIBA Stages 3 onwards. As the SDP fees are predominantly time resourced, only a few of the consultant would require additional fees for early RIBA Stage 3 works. As part of the accelerated programme it is proposed that RIBA Stage 3 commences in advance of Gateway 2 (Outline Business Case (OBC) approval). This cost can be accommodated within the budget of £6.551m approved at Strategic Outline Case (SOC). It is anticipated that these advanced RIBA Stage 3 services will be undertaken in May, June and July of 2022, with the remainder of fees being procured following OBC approval, which is anticipated to be 2 August 2022.

SDP Fee Submission for RIBA Stage 3 to Completion

Michael Grace of Turner & Townsend issued a "working assumptions" email to the SDP Team on 31 January 2022 (attached) upon which to base fees going forward. Based upon these "working assumptions" a SDP fee spreadsheet is being finalised in a similar format and content as the spreadsheet produced and accepted for RIBA Stages 0 to 2 up to OBC, with a detailed resource schedule and fee drawdown for each of the consultants together with a list of cost allowances which will be expended under the same Change Control Process as RIBA Stages 0 to 2.

The SCAPE Framework day rates will be utilised and applied to the calculated resources consistent with the resources included up to OBC where the scope and content are the same. It is anticipated that the above appointment will be an extension of the original SCAPE Framework direct with Kirklees Council.

RIBA Stage 3 Early Works May, June & July 2022:

As part of the above fee, most of the early RIBA 3 works required have been instructed other than IPW for Venue Consultant and Turner & Townsend's Building Information Management (BIM) Team.

Recommendation

The recommendation is that, once finalised, the fee spreadsheet for SDP fees and allowances (complete with an updated scope of service) is checked, approved and instructed. Due to ongoing discussions with IPW regarding the Venue Consultant role, it may be appropriate to make an allowance for this fee which can then be subsequently instructed under the Change Control process with substantiation.

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Kirklees Council Cultural Heart

The SDP team will then provide continuity of service for the programme of works as to not delay them in any way.

It is also recommended that the BIM fees be approved and instructed to provide the design team with the necessary Document Controller and a BIM review of the RIBA stage 2 design.

Next Steps

Turner & Townsend to complete the RIBA Stage 3 onwards fee spreadsheet and associated scope of services and issue to David Glover for consideration.

Appendix J

Procurement Strategy



Report

Main Contractor Procurement Strategy

Kirklees Council Cultural Heart

making the difference

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Rev	Status	Originator	Approved	Date
16	00	M Grace	D Hodgson	11 May 2022

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permission and we accept no liability of whatsoever nature for any use by any other party.C:\USERS\JONESTAM\DESKTOP\KIRKLEES TEMP\PROCUREMENT STRATEGY REPORT V7.DOCX

1 Introduction

It is the procurement strategy which forms the fundamental implementation of the Cultural Heart Programme and defines the interfaces and relationships between the parties, a key ingredient in successful delivery. The strategy also incorporates the key recommendations of <u>The Construction</u> <u>Playbook – December 2020 (publishing.service.gov.uk)</u>.

This report follows a number of workshops the objectives of which were to develop and establish the working assumptions on the key risks, constraints and priorities addressing a procurement solution. These assumptions were tested through a buyers day for main contractors. The workshop and buyers day details are set out below:

- A preliminary procurement workshop held on 26th August 2021 and chaired by Turner & Townsend.
- A second procurement workshop held on 30th September 2021 and chaired by Turner & Townsend.
- A third procurement workshop held on 15th February 2022 and chaired by Turner & Townsend. This report captures the discussions and recommendations of the workshops.
- A main contractors buyers day was held 22nd April 2022 following which as survey was completed to test a number of working assumptions.

The report is structured in the following main sections:

Market Context

Overview of the market

Workshop Number 2

- Part 1, Cost, Quality, Time Establish working assumptions for the procurement drivers for the main contractor procurement which will be developed through the next workshop and once agreed used to assess the procurement options against to reach a final strategy
- Part 2, Summary Set out the current thoughts on the strategy
- Part 3, Procurement drivers setting out proposed criteria for assessment
- Part 4, Next Steps Next steps and actions.

Workshop Number 3

- Part 1, Procurement drivers' weightings Agreed weightings for the procurement drivers
- Part 2, OJEU Procurement options Agreed procurement options with recommendations
- Part 3, Single or two stage tender Agreed option
- Part 4, In tender options including novation, design review and OHP levels

Section 5 – Summary and recommendations

• Summary and recommendations – this section includes feedback from the buyers day with key points of the recommendations

2 Market Context

In **Turner & Townsend's** Winter 2022 UK Market Intelligence Report (UKMI) soaring price inflation is more than a mere side-**effect of the construction industry's recovery, it also poses a significant** threat to it. It is forecast that the worst of this may have passed. At 4.5 percent for 2022, our forecast rate of UK real estate tender price inflation is a notch down on the 5.5 percent seen in 2021. But things are finely balanced.

The supply chain continues to face significant cost pressures with both materials and labour, and the end of the furlough scheme has contributed to the unwelcome return of the spectre of contractor insolvency.

The construction sector is not alone in facing inflationary pressure, but its leaders are uniquely well-placed to navigate it if they tackle the industry's perennial Achilles' heel poor productivity.

Growth in Gross Domestic Product (GDP) has returned swiftly and strongly following the initial effects of the COVID-19 pandemic. However, growth has begun to cool, shifting down a gear from **5.4 percent in Q2 2021** to **1.1 percent in Q3 2021**.

This leaves the UK economy nestled **1.5 percent below** its pre-pandemic level of output, though the Office for Budgetary Responsibility estimates that by early 2022 economic activity will surpass where it was before the pandemic. Nevertheless, headwinds are in place and there are several risks that could yet derail that forecast.

With strong inflationary pressures and increased market uncertainty, the UK economy's burgeoning prospects may begin to frost over. The same concerns are apparent in construction which is experiencing fluctuations in output, and this may continue moving forward.

The pandemic is not over yet and investment appetites and confidence levels will be stretched in the face of continued uncertainty. There will be a need to do more with less and to boost industry productivity. Not just to attain good value, but also to stabilise fluctuating output growth and keep rising inflationary pressures in check. The CBI report that Russia's invasion of Ukraine on February 24th has materially altered the near-term outlook for the UK and global economies and increased uncertainty over the path ahead.

The construction industry continues to be operating within **a 'hot'** environment with a number of significant investments across health and infrastructure taking out any capacity within the market. There continues to be significant pressure on the availability of skilled resource across the supply chain. materials shortage is easing, but long lead times and further price increases are expected.

The various standard forms of contract are reviewed in more detail in the appendix, however the **current market trends remain focused on forms of two stage tendering. Due to the 'hot'** environment The Glenigan UK Construction Industry Forecast 2022-2023 paints a positive picture for construction over the next two years. **Despite disruptions, the sector's rebound is still on track** with the value of underlying project starts set to rise 7% in 2022 and by a further 5% in 2023). Many main contractors are remaining reluctant to undertake single stage tenders and the market continuing to favour two stage or negotiated forms of procurement. The working assumptions in this report have been tested via premarket engagement through a buyers day.

3 Workshop Number 2

The second workshop (30th September 2021) was chaired by Turner & Townsend and attended by the following parties:

Role	Name	Company
Senior Responsible Officer		Kirklees Council
SDP Programme Manager		Turner & Townsend
SDP Project Manager		Turner & Townsend
SDP Development Manager		Queensberry
Cost Manager		Turner & Townsend
Cost Manager		Turner & Townsend
Graduate		Turner & Townsend

3.1 Workshop number 2 Methodology

The main considerations in developing the procurement strategy are:

- The chosen procurement strategy should result from an objective assessment of the Programmes needs and its characteristics
- A mismatched / inappropriate strategy could result in failure to achieve the programme objectives or could result in contractual dispute
- It is essential to have a clear definition and prioritisation of programme objectives as well as full comprehension of the constraints and risks
- The correct route will be to apportion risk to the party who is most capable of managing it
- It is always imperative to consider the market temperature at the time of the procurement and respond appropriately to it
- The selection process should provide a best fit solution based upon good judgement which is acceptable in terms of the identified criteria and acceptable distribution of risk
- Achieving the best social value outputs for Kirklees during the delivery period.

3.2 Cost Quality Time, Procurement Drivers

The working assumptions and principles for the procurement strategy were developed through a facilitated discussion. The comments received have been distilled into key objectives and working assumptions for the procurement approach. These guiding principles are set out in the following sections:

3.2.1 Cost, working assumptions:

- Early certainty of out-turn cost When the Cultural Heart programme budget was discussed, it was understood that the capital budget was £175 £200m (revised later to (£210m). Given that cost certainty is important, it is critical to define as much as possible of the final out-turn cost prior to awarding the contract, thus de-risking the programme and mitigating against potential surprises and increased costs arising from late design co-ordination on site during the construction stage. This approach is markedly different to merely securing the lowest price through single stage competitive tendering, where build-ability issues, risks and design co-ordination can remain at large until well after the Contractor's appointment
- Ability to optimise best value The proposed procurement solution should not focus purely on the lowest initial capital cost. The long-term durability and operational performance of the assets are important

Competition/competitive tension – It was recognised that the current market is overheating due to supply chain, resource and material supply issues. In addition, main contractors consider risk transfer closely in their initial bid review at which point they will decide whether to progress the bid or not. Competitive tension drives innovation and value however this intention must be balanced against maintaining contractor interest in the process and also preventing contractors from pulling out of the process or choosing not to bid thereby limiting the number of tenderer submission to uncompetitive levels (i.e. below 3).

3.2.2 Time, working assumptions:

- Accelerated programme The Cabinet and the Programme Board approved an accelerated timescale for the programme with an ambition to deliver the programme by Q1 2026. It is important to develop a procurement strategy that aligns with this objective
- Certainty of programme handover dates Elements of the Cultural Heart are sensitive to providing certainty of the handover dates including the Venue and the food hall which both will be subject to tenancy negotiations and 3rd party operators
- Agility for earliest possible start on site The SDP see a strong advantage to attaining construction commencement on site as soon as possible as a means of de-risking the programme in terms of achieving earliest handover date(s) and mitigating the impact of inflation
- **Early works** The SDP are keen to consider ways of taking advantage of any opportunities for advancing a start on site in order to safeguard the programme and reducing key areas of risk. Enabling works may include asbestos removal, soft strip, demolition, site clearance, utility diversions, tunnel adaptions etc.

3.2.3 Quality, working assumptions:

- High level of quality The Cultural Heart is adjacent the conservation area of Huddersfield town centre and at the centre of the programme is the refurbishment of Queensgate Market and the library buildings both of which are grade two listed. The quality of the development is important, and both the design and construction should be of a high standard.
- **Diversity of development** The development has a number of building types that may require different approaches and capabilities from a main contractor i.e., venue experience to listed building refurbishment. The procurement strategy should ensure these differing requirements can be accommodated.

- Use of contractor involvement for buildability and innovation To allow the best possible mechanisms for successful collaboration between designers, constructors, and subcontractors to ensure the best technical details and specifications
- Control of whole life/maintenance requirements There is a need to ensure that maintenance and whole life cycle considerations are developed and included for within the procurement process to ensure that quality and long-life products are secured.

3.2.4 Integral Considerations within the Procurement Drivers

Attitude to risk, working assumptions the views on this subject can be grouped as follows:

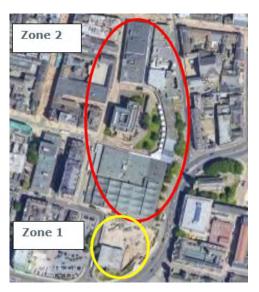
- **Preference to transfer delivery risks** The working assumption is that identified delivery risks should lay with those parties best placed to manage those risks, but providing that this is not at any price or at the expense of quality or future durability
- Risk premium It is recognised that a premium is to be paid for risk transfer but must represent good value for money in the current market and be capable of being controlled. In addition to risk transfer, there is a desire that the chosen procurement route maintains healthy competitive tension as the main commercial incentive for contractors attracted to the development
- Minimise Procurement Compliance Risk Challenge under UK procurement rules was identified as risk, any procurement route needs to mitigate this risk as far as reasonable whilst ensuring that objectives of cost and programme are considered
- Interfaces The programme has a number of interfaces which will require close coordination. The works are complex with significant civil and structural works within a live town centre environment. The current preferred masterplan sets out development across the Cultural Heart within 2 key site areas or zones:

a: **Zone 1 (value circa £60m)** - South site (former MSCP) - currently proposed for the new MSCP and Venue

b: **Zone 2a (Zone 2 value circa £100m)** - North site (Queensgate Market to the Boots Boundary encompassing the existing library)- currently proposed for the refurbishment and extension of Queensgate Market and the Library, new Urban Park and new Gallery.

c: **Zone 2b** - North West site (Boots) - proposed as part of the Urban Park

It is currently preferred to have single point of responsibility for the coordination of the works and H&S within the site demises.



3.3 Summary of the workshop and recommendations

It was agreed that the following would form the working assumptions as desirable objectives for future Cultural Heart programme workshops:

- Enabling works such as intrusive investigation, demolition and utility service adaptation should be completed early in order to reduce risk and accelerate the programme
- A single main contractor would be preferred for each site area/zone in order to effectively
 manage the various interfaces and overall H&S. Having two contractors for the South and
 North sites would enable more focus on specific capability requirements in the procurement
 ie venue experience for the South site and refurbishment/heritage and landscaping
 experience for the North site.
- Phasing of the overall works to be reviewed and planned in order to minimise risk, the delivery period, potential disturbance and to assure the health and safety of persons within and adjacent to the site
- Fit out may be considered as a separate contract to the main works where it is clearly divisible from the main contract and does not pose a risk to the main contract
- Early contactor involvement would be beneficial if it can be secured without compromising value for money, competition or public tendering regulations
- The procurement route should recognise and respond to known market conditions. It was considered that a single stage approach would not be appropriate as main contractors would not see this as attractive in the current market and may result in significantly reduced competition
- The procurement route should achieve security of cost against key elements of the programme and equally key areas of risk
- The procurement route should incentivise innovation and excellence in delivery, a potential for fixing OH&P was discussed to give greater focus on quality
- The procurement route should give due consideration to the mix of skills, capacity and capability required to deliver the mix of assets within the Cultural Heart
- Early market engagement would be seen as an advantage
- The procurement route should be accelerated whilst still ensuring value for money and appropriate risk transfer to the main contractor to achieve an early start on site and therefore handover.

3.4 Section 3 Proposed Weighting & Prioritising the Procurement Drivers

The selection of the criteria that would be used to evaluate Kirklees Council's selection of a procurement route for the Cultural Heart reflect the objectives set out in section 2 of this paper.

Procurement driver
Certainty of handover date
High level design quality
Ability to control the design
Control of whole life/maintenance requirements
Ability to optimise value for money
Cost certainty
ECI Buildability and innovation
Ability to overlap design and construction
Transfer of risk
Ability to maximise social value and local supply chain integration
Ability to manage/control change

4 Workshop number 3

The third workshop (15th February 2022) was chaired by Turner & Townsend and attended by the following parties:

Role	Name	Company
Senior Responsible Officer		Kirklees Council
SDP Programme Manager		Turner & Townsend
SDP Project Manager		Turner & Townsend
SDP Development Manager		Queensberry
Cost Manager		Turner & Townsend
Cost Manager		Turner & Townsend
Graduate		Turner & Townsend
Legal (Procurement)		Addleshaw Goddard
Procurement		Kirklees Council

4.1 Overview of Procurement Options

There are a number of different procurement routes available to deliver a scheme such as the Cultural Heart. This paper aims to highlight the main routes available and the advantages and disadvantages of each. The biggest single factor that differentiates between routes is the amount of risk share between client and contractor. It is important to recognise that risk is inherent in the delivery of all construction projects, irrespective of the procurement route chosen. The risks involved in procuring and delivering the scheme needs to be identified, evaluated and managed throughout the scheme.

4.1.1 Design and build

Design & Build (D&B) procurement involves the procurement of a main contractor to undertake the design for the building and then to carry out the necessary works to construct and complete the facility. Traditional D&B build involves the development of design information, specifications and **requirements (known as Employers' Requirements) to define the required works** which are then issued to prospective contractors as tender documents. The contractors then price these requirements and submit their lump sum tender price and Contractor's Proposals.

The level of design information and specification detail included for within the **Employers'** Requirements that are prepared as part of the tender documents can vary from as little as performance specifications and room data sheets at the equivalent of RIBA stage 2 to full and detailed design information that would go beyond the equivalent of RIBA Stage 4. One of the key advantages for the Cultural Heart is that D&B procurement enables the Contractor to be selected at an earlier stage in the project which facilitates an earlier start on site. D&B is a tried, tested and well recognised form of procurement and various standard contract forms exist for use with this route. This process can also be undertaken in a single or two stage process. An overview of this is set out in the following section.

4.1.2 Cost

D&B provides for lump sum contracting which gives a high degree of cost certainty providing the Employer's Requirements are fully defined. Undefined Employer's Requirements will open the risk of a subsequent claim. Moreover, if through a D&B route large elements of risk are transferred, uncompetitive tenders could be gained as the contractor will charge a premium for uncertainty and risk which they must carry. As such, D&B is to a degree market sensitive, this sensitivity will be tested via market engagement for the Cultural Heart.

4.1.3 Quality

Because the **design responsibility is transferred to the Contractor's team** the Client can lose direct control of the design and hence quality can be compromised as **the Contractor's onus may be** on the commercial issues rather than the design quality. Options available to help protect design quality include:

- Roles and responsibilities of the design team post contract
- Largely completing the design to the end of RIBA Stage 3 prior to handing over to the Contractor
- Employing a Clerk of Works/Technical Advisor.

4.1.4 Programme

The D&B route will achieve a faster programme and start on site due to the overlapping of the design and construction processes. However, the programme must reflect sufficient time for **defining the Employer's** Requirements. With respect to the Cultural Heart this is already accounted for in the programme as the design team are required to take the scheme to design RIBA Stage 3 for the planning application.

4.1.5 Flexibility

The D&B procurement route is considered to be inflexible in terms of change. The Contractor, through their control of both design and sub-contractors, has a strong negotiating position and may look to maximise this effect for his financial gain. This is therefore a key issue to be considered during the tender selection process for the Cultural Heart.

4.1.6 Advantages

- Cost certainty is gained once tenders have been returned, assessed and approved
- The design team, and therefore Kirklees Council, remain in control of the design up to the point of tender
- Value engineering can be undertaken after receipt of tenders
- It provides for cost and programme certainty prior to commitment to build
- It provides a single point of responsibility for both design and construction
- It can provide a high degree of cost certainty, provided the Employer's Requirements are fully defined
- The contractor should be able to finalise the more standard elements of design more efficiently

 Ability for the contractor to bring their skills and knowledge into the scheme at an earlier stage

4.1.7 Disadvantages

- Less opportunity for the Kirklees Council to influence the design during the implementation phase
- Control for ultimate quality being passed over to the Contractor who may then dictate an overtly cost driven approach leading to potential quality and specification compromise
- The risk that poorly defined Employers' Requirements will expose Kirklees Council to risk of subsequent claims for extra costs. This key mitigation for this is to develop the design to stage 3 prior to the stage 1 procurement and to develop the stage 4 through the PCSA stage.

4.2 Traditional Procurement with Contractor Design Elements

4.2.1 Introduction

Single-stage traditional tendering is whereby the full design is completed prior to tendering to the Main Contractor for a lump sum price. Early involvement of the Contractor is not obtained, and the Project Team has less of an influence over the choice of subcontractor, unless specifically named in the documentation. Given the complexity and uniqueness of a scheme, the designers may wish to specify certain elements of the design which are to be completed by the contractor who would also carry the design liability for these elements.

4.2.2 Cost

Traditional lump sum contracting provides a high degree of cost certainty providing that full design is achieved prior to tendering. Without the latter Kirklees Council is exposed to potential claims for changes post contract however this is common in most procurement routes.

4.2.3 Quality

Because the design is retained by **Kirklees Council's** appointed designers design quality is maintained throughout and as such the build should reflect the design intent. **Quality can't be** compromised by alternative specifications been sought without prior approval. Notwithstanding this the route does limit the opportunity for designers to communicate directly with specialist suppliers and to effectively involve them at an early point in the project design process. It is however common that elements of the design through specified contractor design portions are undertaken by the contractor. Typically MEP and structural elements would be finalised by the contractor.

4.2.4 Programme

In order to obtain full design prior to tendering, lump sum contracting requires a significant lead-in and consequently a longer programme as usually no overlap occurs between design and construction.

4.2.5 Flexibility

Whilst change can be incorporated under this route the tendency is for contractor to attempt to **maximise rather than mitigate its effect. The Main Contractor's ability to** do this is heightened by the fact that Kirklees Council and their advisors have no direct access to his subcontractors during the contract works. Hence innovation and flexibility through alterative design options is often gained at a cost for time or budget.

The full design is completed by the Kirklees Council design team and this is provided to bidders who then submit a lump sum price for the works. Changes can be incorporated post contract but

this requires the design team to fully design the required change. Changes post-contract award also need to be designed and constructed in a timely manner to avoid contractor delays.

4.2.6 Advantages

- Cost certainty is gained once tenders have been returned, assessed and approved
- The design team, and therefore Kirklees Council, remain in full control of the design and the specification throughout.
- The Project team has the ability to transfer specialist elements of the design to the contractor for their specialist input where required through contractor design portions (CDP)

4.2.7 Disadvantages

- Cost/programme compromises associated with post contract changes
- Existing buildings present a significant risk due to design assumptions based on surveys and investigations which have limitations to the extent of the intrusions
- Managing the interface between the elements to be designed by the project team and the contractor
- Element of risk exposure to Kirklees Council which is particularly important when working with existing structures and significant below ground works
- Issues arising from lack of design coordination could result in additional costs and programme delays
- Design team required to produce a full detailed design. Below we have identified some potential responses to mitigate these issues:

4.3 Management Forms

These forms essentially overlap the design and construction processes to enable the building works to commence sooner and are used where early start/completion is considered to be a key priority.

Rather than tendering the whole building works as a single contract a Management Contractor or Construction Manager is appointed based on a fee against the cost plan for the construction works. Thereafter as the design of different sections or elements are finalised, tenders are sought for each Package by the Management Contractor or Construction Manager. In the purest form, these procurement routes give little in the way of financial certainty until very late on in the construction process and, indeed, can prove to be more expensive than either of the two proceeding options. They are useful, though, in large projects where time is of the essence and design is complex or evolving.

Cost certainty will not be achieved as the packages i.e., substructure, superstructure, cladding, MEP etc are procured on an ongoing basis throughout the construction programme. In addition a number of the packages are expected to be over EU threshold limits and will require a compliant procurement process protracting the programme.t Due to these constraints and risks it is not considered that the management forms of contract are suitable and have been discounted at this stage.

4.4 Option assessments

The following table sets out the assessment of D&B and traditional procurement against the agreed criteria:

Procurement driver	Design and Build Comments	Traditional Comments
Certainty of handover date	Due to the transfer of design responsibility to the main contractor this effectively transfer the responsibility for delivery to the main contractor affording greater certainty of delivery	Split responsibility between design and construction provides
High level design quality	Design quality is not impacted by either procurement route however control of the design is more limited under D&B (see later section)	
Ability to control the design	Control of the design pre PCSA is as the traditional route, however, ability to control the design is not as stringent during the PCSA stage and post contract as design responsibility moves to the main contractor	Design responsibility fundamentally is maintained by the client via the design team. However, CPDs are often used for specialists' areas of design and by their nature transfer elements of design responsibility to the main contractor via the CPDs
Control of whole life/maintenance requirements	The main contractor will respond to the employer's requirements by developing contractor's proposals. The CPs will be the most economic response to the ERs.	As the specification is fully controlled by Kirklees Council there is more control over this.
Ability to optimise value for money	Early contractor involvement in the design process through the PCSA brings in supply chain	More limited than D&B as the supply chain integration is restricted due to the separation of design and construction
Cost certainty	D&B provides greater cost certainty as design and construction is under a single provider	Less cost certainty as design risk is retained by Kirklees Council
ECI Buildability and innovation	Early contractor involvement and supply chain integration	Limited supply chain input at the design stage reduces focus on buildability and innovation.

Procurement driver	Design and Build Comments	Traditional Comments
	facilitates greater focus on buildability and innovation.	
Ability to overlap design and construction	D&B overlaps the production design and construction phase	Traditional procurement is based on a sequential process of design development followed by the construction period. This means that a traditional procurement route is a longer process
Transfer of risk	D&B enables more risk transfer through the transfer of design responsibility to the man contractor	Limited transfer of risk as design and construction are separated
Ability to maximise social value and local supply chain integration	This is the same for both forms of procurement	
Ability to manage/control change	Although a change control process will be implemented on both procurement routes. Due to the less transparent pricing associated with D&B change control and the cost/control of it is less exact	The more specific pricing associated with a traditional route enables greater control of cost and change

4.4.1 Recommendations

Based on an assessment of the core objectives the current recommendation is a Design and Build form of procurement.

4.5 UK Procurement Options; Choice of procedure

The procurement of the contracts for the Cultural Heart Project will be subject to the Public Regulations 2015 (PCR). The PCR provide four main procedures for the procurement of contracts of the nature, size and complexity which will be procured for the [Project]. These are:

4.5.1 Open procedure

A single stage procurement process. Tenders are invited from all interested parties in the market and all tenders are evaluated. There is no separate selection stage / shortlist of bidders but there is a requirement to confirm that mandatory or discretionary exclusion grounds do not apply and Kirklees Council can ensure that minimum criteria around, e.g., financial stability and professional/technical capability are met. All tenders must be evaluated in line with the methodology and evaluation criteria set out in the procurement documents. No negotiation/dialogue is permitted. This procedure is recommended for simple requirements. It is not deemed appropriate for these contracts due to the complexity of the development and the need to ensure tendering parties have relevant experience.

4.5.2 Restricted procedure

A two-stage process pre tender procurement process:

- Stage One (Selection) Suppliers respond to the contract notice by expressing their interest to participate in the procurement process for the contract opportunity and submit a response to the Selection Questionnaire (SQ) published by Kirklees Council. The SQ confirms that bidders meet minimum criteria to participate (e.g., mandatory/discretionary exclusion grounds; financial stability; required professional qualifications; etc.) and tests their capability, experience in providing this type of contract. A minimum of 5 suppliers are shortlisted and invited to submit a tender
- Stage Two (Tender) Shortlisted suppliers are invited to submit a tender. All tenders are
 evaluated in line with the methodology and evaluation criteria set out in the tender
 documentation. No negotiation/dialogue is permitted. This procedure can be used for more
 complex requirements where it is necessary to control the number of tenders
 submitted/evaluated; it is appropriate for requirements where negotiation/dialogue is not
 needed, and it is possible to set out the requirements (including contract terms) in advance
 (i.e. in the procurement documents when the contract notice is published)

4.5.3 Competitive Dialogue procedure

Similar to the restricted procedure. However, the process is usually be conducted in successive stages, with the option of reducing the number of bidders at each stage. Following closure of dialogue, final tenders will be invited and a preferred bidder identified. During the process, Kirklees Council will be able to dialogue with bidders about their tenders and seek to improve them through this dialogue.

4.5.4 Negotiated procedure (with prior publication)

Similar to the restricted procedure (and competitive dialogue). Kirklees Council is able to engage in negotiation with bidders regarding their tenders and seek to improve them through this negotiation. The "minimum requirements" for the procurement are set out in advance and cannot change. Generally, this procedure is more flexible than competitive dialogue, but in reality there is not much practical difference.

4.5.5 Time

The following diagram sets out indicative timescales for the core procurement options:

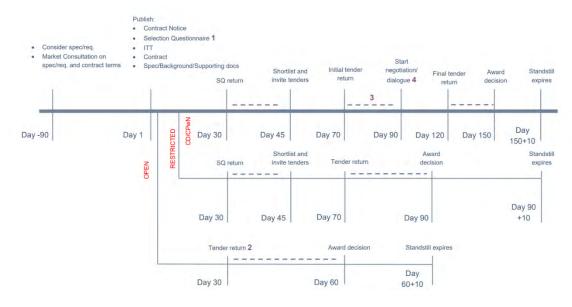


Diagram Key

Evaluation period -----

1 - Full SQ/Selection Stage not used for Open Procedure. This can however be undertaken outside the critical path

- 2 All tenders must be evaluated. Anyone can submit a tender
- 3 Optional evaluations (internal or with feedback)

4 - Negotiation/dialogue can be done in stages to reduce number of bidders as it progresses. Should be focussed on a limited number of areas where there is value to be gained

4.5.6 Timescales Summary

The competitive dialogue and negotiated procedures are the longest of the processes. The restricted process is circa 100 days however the SQ process can be undertaken outside the critical path pulling the critical path timeline in line with the open procedure. (Addleshaw Goddard noted that - It is recognised that the PCR require all procurement documents to be ready when the Contract Notice is published. Running the SQ before the ITT is published is, on its face, challengeable. However, it is recognised that we do not tend to see challenges to this approach).

The SQ and Stage 1 documentation is set out in the appendix with the level of development. The key advantage to running the SQ before the ITT is fully published is that it is a quicker process. If the ITT had to be fully developed it would increase the programme by circa 4 to 5 months.

The risk of challenge has been identified and recorded in the risk register and was raised at the April 22 Project Board and approval was given to process on this basis.

The open procedure does have the risk that a potentially lengthy tender evaluation (due to a high volume of responses) may be incurred and there is an increased risk of challenge. The open procedure is also viewed as been more time intensive as there are likely to be a higher volume of responses.

Value for money and quality

Value for money will be achieved through a competitive process balanced with the need to achieve the specified quality criteria.

4.5.7 Open Procedure

Advantages

Increased competition due to the potentially high volume of responses

Disadvantages

- Resource implications of a potentially lengthy tender evaluation (due to a high volume of responses)
- Poor quality bids (due to the fact there is an increased chance of being unsuccessful and a limited timescale)

• No opportunity to discuss / refine bids

4.5.8 Restricted Procedure

Advantages

- Restricts the number of organisations invited to tender (making the tender evaluation more manageable) and improves certainty that suitable tenders will be received.
- Enables a detailed Selection assessment (i.e., Stage one of the procedure)
- Helps improve the quality of bids (due to the fact there is an increased chance of a bidder being successful)

Disadvantages

- Not fully defined **SQ's being submitted due to the fact that the full tender documentation** may be unavailable at the Selection stage
- No opportunity to discuss / refine bids

4.5.9 Competitive Dialogue / Negotiated procedure

Advantages

- Restricts the number of organisations invited to tender (making the tender evaluation more manageable)
- Allows for more market innovation which enables a best fit solution to be developed through detailed dialogue / negotiation

Disadvantages

Increased timescales increase resource cost and potentially high burden for both suppliers (making the contract opportunity appear unattractive to some) and Kirklees Council

- Significant cost to manage the process
- Less beneficial where the client has a 'developed solution'

4.5.10 Frameworks

UK compliant frameworks provide an option for local authorities and public sector bodies to procure works, products and services. Frameworks are umbrella agreements that set out the terms, that include specification, quality, price, quantity, under which individual contracts can be made during the lifetime of the framework. Legislation governs the way frameworks are run. Suppliers compete through open competition to be appointed to a framework. Once the framework is appointed Kirklees Council have the option to appoint directly or to undertake a competition under the framework. Frameworks available to the public sector include:

- Crown Commercial Services
- PAGABO
- SBS
- ESPO

YourBuild

Included within the appendix is a review of the frameworks available to Kirklees Council for main contractor appointment.

The use of a framework has been discounted at this stage as previous advice has identified that amendment to the scope, terms & conditions and pricing mechanisms would make the framework liable for challenge and potentially invalid. At this stage it is not recommended that a framework approach is used.

4.5.11 Recommendation

Following the third workshop it was agreed that a restricted process would be adopted. This was felt to strike the right balance between ensuring contractors with the right competency and capacity were shortlisted. This should provide confidence in the market and provide greater certainty of attracting **Contractors with the ability to deliver the Project to the Council's aspirations.** Refer to the appendix for the stage 1 tender documentation.

5 Tendering - Single or Two stage process

This section of the report looks at the tender process for the programme and whether a single stage or two stage approach should be adopted.

Th CBI suggests "intelligent procurement" is imperative, with multiple stage procurement routes, such as two stage tendering, being advocated as a means of managing cost risks in construction projects and putting contractors back on a stable footing. The report recommends that the use of single stage procurement should be discouraged in projects valued at £10m and more.

5.1.1 Single stage tendering

Single-stage tendering is when a client issues a tender for the whole project, with all the relevant information provided at the point of issue. The process seeks to ensure that the client is able to secure a competitive price. This route can often be subject to aggressive pricing in order to secure the project.

It can be an efficient route to obtaining a contractor. However, if elements from the project specification are missing or are unclear, it can lead to adjustments being made later in the contract, and the final account may be very different as unforeseen costs mount up. The added pressure may mean contractors look for ways to cut costs by identifying the most economical solution (potentially at a cost to quality) and identify scope gaps where claims made.

There are a number of key risks associated with single stage tendering that should be considered:

- Kirklees Council would be unable to benefit from early contractor engagement
- As this is an intensive process there is increasing reluctant from contractors to engage in single stage tenders due to the bidding risks.
- In the current market there is a reluctance from contractors to procure under a single stage
 process as this is perceived as high risk in comparison to two stage and therefore can cause
 complications and extensive clarifications requiring extended final negotiations or the
 inclusion of caveats within the construction contract.

5.1.2 Two Stage tendering

Two-stage tendering involves an initial information stage, facilitating early collaboration between client and contractor. For complex projects such as the Cultural Heart it is useful to obtain contractor engagement prior to sufficient information been available for the main contract. This enables early input between the main contractor and client, helping to provide certainty around buildability, design and cost.

This initial phase allows the contractor to submit details under a pre-construction agreement and includes aspects regarding project preliminaries, method statements, design, overheads, and profit.

The second stage of the process is based on the agreed criteria in the first stage. There will however be items not previously considered, around which negotiations will ensue. These typically include where sub-contractors are used. The second stage construction contract is negotiated with the main contractor, and subject to the approval of the design team.

There are a number of key risks associated with two stage tendering that should be considered:

• Competitive tension in limited at the second stage which becomes a quasi-negotiation

• This process can be subject to significant cost increase in the later stages of the commercial agreement as the contractor seeks to take advantage of their preferred supplier status.

Recommendation

Following the third workshop the team's recommendations are to undertake a two stage process. This decision was made primarily on the need to ensure that the project was attractive to the market. It was felt a single stage approach would not attract suitable contractors and would limit competition.

6 Design development

Maintaining the high quality of design throughout the project is an essential factor and this will include the development of the design through construction phases. There are three principal routes for development of design of construction information that – RIBA Stages 4 & 5 – that influence the form of procurement used:

- Traditional Client maintains full control, management and responsibility for design and issues information for the main contractor to build
- Design and Build Client develops design to an agreed RIBA Stage typically RIBA 3 or 4 and then the Contractor takes the design forward

A third method is a hybrid form of design and procurement whereby the client retains control of certain packages, and the contractor progresses others as Contractor Design Portions.

Each form of design development carries advantages and risk. By using a traditional form of design and procurement, the client remains in full control of the design process and therefore can control all elements of the design. This however limits contractor input into the design process and so reduces ability for potential improvements and innovations on buildability and also puts the contractor into a position of low or no risk on design.

A design and build design and procurement route offers the ability for the Contractor to influence the design and often help to develop design solutions that are more affordable and have sufficient input into construction method and buildability. Contractors are also able to input marketplace solutions and innovative thinking with direct contact with supply chain. Design and build also allows the client to pass risk to the contractor and makes the contractor responsible for items such as final coordination for design and development of detailing. This does, however, give the contractor an element of design control that can be perceived as a client risk if the contractor does not have the correct approach to the project.

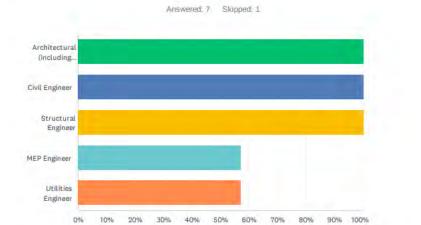
The hybrid form of design procurement presents a blended method between traditional and design and build and thus retains some advantages and risks of the above forms. It allows the client to retain control of key design elements, such as exterior cladding and facades, whilst the contractor develops packages that may be more suited to contractor and supply chain such as ground works. There are a number of risk however to this hybrid form, mainly that the client must have the ability **to meet the contractor's design programme and ensure that design packages are in the format the** contractor requires. The client effectively takes all risk on the design programme matching the **contractor's** requirements.

7 Novation

It would be proposed that the current design team are novated to the selected contractor to provide a continuity of design and maintain quality of product and guardianship of the design. The contractor will become lead designer and take responsibility for design coordination and definition of the design programme. However Kirklees Councils designers will become part of the contractor's team. Novation also provides a continuation of design liability, however it does not dilute the **contractor's design responsibilities.**

As part of the **buyer's** day feedback was sought on novation of the existing consultants. Feedback received identifies the preference:

Q15 Can you please state your preferences regarding the potential novation of the following consultant services and offer any comments regarding this?



ANSWER CHOICES	RESPONSES	
Architectural (including landscape architect)	100.00%	
Civil Engineer	100.00%	7
Structural Engineer	100.00%	7
MEP Engineer	57.14%	4
Utilities Engineer	57.14%	4
Total Respondents: 7		

ŧ	FURTHER COMMENTS?	DATE
1	We would expect to interrogate the architect to ensure that the resource and capability to deliver on a D&B contract of this value and complexity is available and capable.	
2	Given that the high calibre of the design team, and the extensive knowledge of the project we would see no reason for the team not to be novated. We understand that the team consists of Fielden Clegg & Bradley (Arch) and Arup (multi-disc). We would like to ensure that the scope of the novated appointments are sufficient and align with contactors expectations of limited elements of specialist designed, we would seek to agree DRM, and any amends to this ahead of any proposed novation to ensure that any gaps in scope of service are identified and priced appropriately by the designers. We would also expect novation or visibility on Fire engineer (assume within Arup appointment) We may seek to review novation of the utilities engineer, once the scope and procurement methodology for these works is further progressed.	4/29/2022 4:48 PM
3	We would be happy with novation of any consultants on the basis that the Local Authority are happy with their input to date. Equally, we would be happy to engage our own team. Typically,	4/29/2022 10:37 AM
	15/20	
1	Kirklees Cultural Heart Buyer's Day Feedback	SurveyMonkey
	the MEP Engineer may be best placed to maintain a TA role alongside the Local Authority.	
4	Whilst we would be happy to work with the current team our preference would be to appoint our own design partners to complete the design beyond RIBA 3.	4/28/2022 5:31 PM
5	The incumbent design team has all the knowledge and understanding of the issues associated with the project and will have taken it to stage 3. To appoint an all new design team could lead to issues around design warranty and 'going back' before you can go forward in terms of validation etc. This will lead to programme pressures. The other option would be a direct appointment scenario of with the existing design team but this again may lead to issues around retrospective design warranties. Hence we are happy with the proposed novation	4/28/2022 10:26 AM

For the Cultural Heart programme novation of the Architect and Engineer are an important element of the overall strategy and achieving the right balance between continuity of the design development against freedom of the contracts to develop the design. The proposed novation strategy is included within Appendix A, this will continue to be monitored. The preferred option is request fees for novating with an alternative for a contractor appointed team.

8 OHP and PCSA Fees and Costs

The construction market remains buoyant with significant major projects and opportunities for Main Contractors. As such, volatility exists in contractor pricing and there remains a tendency for bidders **to "buy work" by potential low pricing of items such a**s Overhead and Profit with the expectation that money can be recovered through Contractor design development and client change. Typical market intelligence suggests a range of 3%-5% of OHP is the level at which main contractor should be operating at and would likely to develop a collaborative relationship.

The following sets out average OHPs for frameworks as a guide (within the North and identified as major projects)

- PAGABO 3.45%
- Scape 3.08%
- Procure Partnerships 3.97%
- CCS 4.53%

Following the buyer's day, the contractor's feedback is a follows:

#	RESPONSES	DATE
1	Typically, 4%-5%	5/10/2022 9:43 AM
2	3% to 5%	5/3/2022 11:00 AM
3	5% - 6%, this is expected to be out-turn OHP for the project we view this as out-turn - same as entry point, and allows a totally transparent and open book partnering process, which sets the project up for success from the start. demonstrates a commitment from the client and client team that they recognise that this is not a race to the bottom, but a technically challenging project which will benefit from the input from a construction partner to achieve the desired long lasting legacy for the area.	4/29/2022 4:48 PM
4	5%	4/29/2022 2:41 PM
5	4.00 to 5.00%	4/29/2022 10:37 AM
6	4.5% to 6.0%	4/28/2022 5:31 PM
7	Main contractors overhead is between 4.5% and 5% overhead. Profit level is between 2 & 3%. We anticipate a requirement of 7.5% for this project	4/28/2022 10:26 AM
8	5.5 - 7.5%	4/25/2022 5:28 PM

Other considerations to consider are the current market which as previously noted is under significant pressure through labour and material shortages. The relative values of the two contracts also need to be considered with Zone 1 being the smaller of the two in terms of value our proposed minimum OHP would be:

- Zone 1 Venue and MSCP 4.5 5.5% (suggest 5%)
- Zone 2 3.5 4.5% (suggest 4.5%)

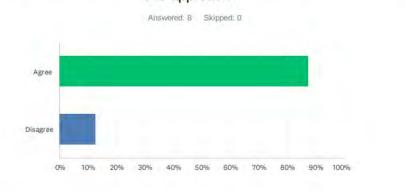
In order to prevent issues surrounding unrepresentative OHP, it would be recommended that a minimum OHP level is insisted on within the tender documentation. Bidders will be allowed to increase the level of OHP from the minimum level if they so wish but a minimum level should be insisted on. A maximum OHP is not proposed at this moment as the competitive process and cost evaluation will support commercial control.

9 Independent RIBA sign off at Stages 3 and 4

The incumbent design team will be developing for each RIBA design stage to the deliverables agreed within their appointments supported by industry body guidance as well BIM models are coordinated at each design stage. To ensure that each stage of design information is fully completed and coordinated for both tender (RIBA Stage 3) and contract design (RIBA Stage 4), a design review is undertaken by a specialist (independent) consultant who will verify the completeness and coordination of the design. Both the incumbent design team and contractor will be expected to sign up to the review and the findings of the specialist and on completion of stage 4 and signing of construction contract the contractor will take full liability for the design of the basis of the signed off verification report.

Feedback from the Buyer's Day is as follows:

Q4 Independent design reviews are proposed to mitigate the concerns of the level of design development and de-risk the project. Do you agree with this approach?

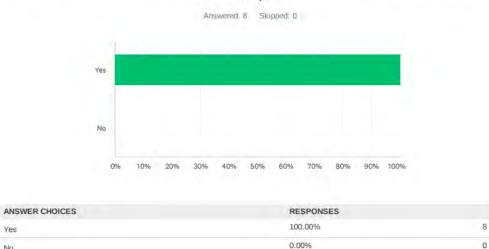


ANSWER CHOICES	RESPONSES	
Agree	87.50%	7
Disagree	12.50%	1
TOTAL		В

10 Form of Contract/Contracting Strategy

The contracting strategy is aimed at the successful delivery of contract scope and what is required to facilitate the contract. Included within the appendix is a paper that review the forms of contract and sets out the recommendation for the Cultural Heart. The current recommendation is JCT D&B. Feedback from the Buyers Day is a follows:

Q14 The proposed form of contract is JCT design & build. Do you agree with this option?



11 **Cost Quality Evaluation Criteria**

Yes

No TOTAL

A cost/guality % allocation has been agreed as 35% Cost, 65% guality (the guality element will include 10% for Social Value).

8

Market Testing Assumptions 12

Within this report there are a number of assumptions these are set out in the table below. These assumptions will be tested via a survey at a main contractor engagement session.

Assumptions to test	Results of Buyer's Day
2 stage tender process is the most attractive to the market	Contractors agreed with this
Fixing OHP at a minimum level will reduce the risk of underbidding to secure the 2nd stage preferred contractor and improve the attractiveness of the project within the market	Contractors agreed with this (see OHP section)
Independent design review will be seen as a mitigation to concerns over the level of design development and will in turn de-risk the project	Contractors agreed with this
A 6 month 2nd stage PCSA is adequate	Contractors agreed with this

Preferred form of contract JCT/NEC	Contractor feedback was that JCT was preferred

13 Summary

The following table sets out the working assumption for the procurement strategy:

Element	Working assumption following Buyer's Day	Comments
Procurement	Restricted two stage process	
Tender	 2 stage tenders with PSCA. First stage to be on OHP and quality. OHP and PCSA to be fixed with lower limits 	
Design team novation	 Architect to be novated Engineer to be retained for client- side services 	
Design development stages	 RIBA 3 for PCSA stage tender RIBA 4 -5 developed under PCSA 	
Form of Contract	 JCT D&B 	

Cultural Heart Kirklees Council

Appendix A

Novation

This section of the report sets out the proposed arrangement post RIBA 3 of the design team. The following table defines the associated definitions.

Arrangement	Notes
Novated	Under this arrangement the designer will be novated to the main contractor to complete the designated design stage.
Retained	Under this arrangement the designer will be retained by the client to complete the designated design stage.
Client-side monitoring (CSM)	Under this arrangement the designer will be retained by the client to undertake monitoring and design review services only. The main Contractor will employ a designer to complete the design stage(s) to the conclusion of the contract.

It is important to note that on appointment to commence the PCSA, it is intended that the main contractor will become the lead designer. The retained consultants will remain appointed by Kirklees Council but will work alongside the contractor. Client side monitoring will be required subject to the agreed route.

Zone 1

The following table sets out the proposed novation of the Architect (FCB) for Zone 1, note the Main Contractor will be lead designer from the completion of RIBA Stage 3:

Zone 1	RIBA 3	RIBA 4 (PCSA)	Post RIBA 4
MSCP	Retained	Option A – Retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer
Venue	Retained	Option A – retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer

The following table sets out the proposed novation of the Engineer (Arup) for Zone 1:

Zone 1	RIBA 3	RIBA 4 (PCSA)	Post RIBA 4
MSCP MEP	Retained	Client-side monitoring	Client-side monitoring
MSCP C&S	Retained	Client-side monitoring	Client-side monitoring
Venue MEP	Retained	Option A – retained	Option A – Novated

		Option B – Contractor appointed designer	Option B – Contractor appointed designer
Venue C&S	Retained	Option A – retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer
Venue Specialist acoustics	Retained	Option A – retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer

Zone 2

The following table sets out the proposed novation of the Architect (FCB) for Zone 2, note the Main Contractor will be lead designer from stage 3:

Queensgate market and library extension (inc food hall)	RIBA 3	RIBA 4 (PCSA)	Post RIBA 4
Existing library refurbishment and extension (museum)	Retained	Option A – retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer
Urban Park	Retained	Option A – retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer
New gallery	Retained	Option A – Retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer

The following table sets out the proposed novation of the Engineer (Arup) for Zone 2:

Zone 2	RIBA 3	RIBA 4 (PCSA)	Post RIBA 4
Queensgate market and	Retained	Option A – Retained	Option A – Novated
library extension (inc food		Option B – Contractor	Option B – Contractor
hall) MEP		appointed designer	appointed designer
Queensgate market and	Retained	Option A – Retained	Option A – Novated
library extension (inc food		Option B – Contractor	Option B – Contractor
hall) C&S		appointed designer	appointed designer

Existing library refurbishment and extension (museum) MEP	Retained	Option A – Retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer
Existing library refurbishment and extension (museum) C&S	Retained	Option A – Retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer
Urban Park MEP	Retained	Option A – Retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer
Urban Park C&S	Retained	Option A – Retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer
New gallery MEP	Retained	Option A – Retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer
New gallery C&C	Retained	Option A – Retained Option B – Contractor appointed designer	Option A – Novated Option B – Contractor appointed designer

Appendix B

Framework report

Appendix C

Contract report

To be issued under separate cover.

Appendix D

Buyer's Day Survey

The following sets out the anticipated stage 1 tender information:

Proposed Deliverables	SQ stage	Stage 1	Comments
Tender Front End - including evaluation criteria	Evaluation criteria 100%	No amends to evaluation criteria	
Design Pack (Planning Pack + Surveys)	RIBA 2	RIBA 2+/Planning pack	Design development not scope change
Proposed Construction + Amendments (FoC)	Yes - comments would be requested on the contract clauses	With amends from the comments if accepted	
Proposed PCSA Contract + Amendments	Main elements Scope, process etc	Developed on the basis of the proposed document	
Form of CSA	Standard	No amendments expected	
Prelim Book	Standard	No amendments expected	
Demolition Scope (possibly)	80%	100%	
Summary of requirements for PCSA	100%	No amendments	
Designers scope & appointments (for who we are retaining)	100%	No amendments	
Forms of warranty required (i.e. assignable design and build warranties)	Yes, comments would be requested	With amendments	
Specific policies – Social Value, Modern Slavery etc	100%	No amendments	
Quality assessment – what can / cannot be repeated between the PPQ and 1st stage tender	100%	No amendments	
Statutory timings – how long we can reasonably ask for items to be fixed	100%	No amendments	

Appendix L

Programme Execution Plan



31st May 2022

Report Programme Execution Plan

Cultural Heart Kirklees Council

making the difference

Programme Manager

Turner & Townsend Project Management Limited Low Hall Calverley Lane Horsforth Leeds LS18 4GH

t: +44 (0) 113 258 4400 e: Insert email w: turnerandtownsend.com



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Appendix O – Committee Members



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Controlled document distribution

The PEP is a controlled document and shall be reviewed, approved and distributed under controlled conditions. Turner & Townsend as the programme manager are the holders of the PEP and shall be responsible for updating the document during the programme lifecycle.

The PEP is to be formally issued to:

Nr	Recipient	Organisation
001	Senior Responsible Officer	Kirklees Council
002	Strategic Director Growth and Regeneration & Chair	Kirklees Council
003	Strategic Director Environment & Climate Change	Kirklees Council
004	Service Director Legal, Governance and Monitoring	Kirklees Council
005	Service Director Finance	Kirklees Council
006	Head of Corporate Landlord and Capital	Kirklees Council
007	Head of Development & Master Planning	Kirklees Council
008	Service Director for Culture and Visitor Economy	Kirklees Council
009		Queensberry Real Estate
010		Queensberry Real Estate
011		IPW
012		IPW
013		IPW
014		Pegasus Group
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023		Turner & Townsend
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025		Turner & Townsend
026		Turner & Townsend
028		Feilden Clegg Bradley Studios
029		Feilden Clegg Bradley Studios
030		Reform Landscapes
031		Arup
032		Arup

1 Introduction

1.1 Period covered by the programme execution plan

This programme execution plan (PEP) covers the period from 5th July 2021 to the Outline Business Case (OBC) 2nd August 2022. At the time of writing some activities are already underway.

1.2 Scope of the programme execution plan

The PEP is a core approved document that defines the strategy for the management of the Cultural Heart programme and the procedures for its successful completion and implementation. By using a comprehensive methodology, that defines how the programme will be executed, monitored and controlled, the aim is to ensure successful delivery of the programme scope in line with the objectives of Kirklees Council.

The PEP describes the following:

Why	The business context
What	The scope of the programme
When	The schedule drivers
Who	The programme organisation structure, roles and responsibilities, governance arrangements, relationship with key stakeholders and how these are managed.
How - Overview	The delivery methodology which will be used to implement the programme and arrangements to ensure that co-ordination and integration occur across the entire scope of works.
How - Detail	The supporting processes, procedures and check lists which will be used to ensure that the scope is managed, work is progressed to schedule and that costs and risks are controlled

1.3 Issue status

The programme manager has prepared the PEP and will ensure the proper administration of the document through revision and controlled re-issue. Recipients of documents will be required to confirm that current issues are held and that relevant people are holding applicable information. The status of the PEP and appendices will be identified within each revision.

2 Glossary

For clarity the following are definitions of terms used within the PEP:

"As-Built Drawings or Information" Drawings and specifications in a form agreed by the SDP produced or procured by the contractor showing the works as completed

"Asset Information Requirements" (AIR) Defines the graphical and non-graphical data, information and documentation needed for the lifetime operation and management of a built asset

"BIM" A process for creating and managing information on a construction project or programme across the project or programme lifecycle

"BIM Execution Plan" (BEP) The pre-contract BIM execution plan is designed to address the employer's information requirements (EIR)

"BREEAM" Means building research establishment environmental assessment method

"Brief" Kirklees Councils and any users' requirements for the programme including the technical, quantitative and qualitative requirements

"Common Information System" A formally organised electronic system designed to collect, store and distribute information. Also known as common data environment (CDE) or electronic data management system (EDMS). All programme related documents should be retained by the multi-disciplinary engineering designer in electronic format for a minimum of 12 years and upon completion of the programme, or an individual element within the programme, 2 full sets of record documents should be issued to the SDP and Kirklees Council on 2 suitably sized portable hard drives

"Contractor Designed Portions" (CDPs) Is an agreement for the contractor to design specific parts of the works. The contractor may in turn sub-contract this design work to specialist sub-contractors

"Cost Plan" A document, prepared by the cost manager or the contractor (as appropriate) and approved by the SDP, showing the estimated cost of all or any parts of the programme and how such costs are to be attributed

"Cultural Heart Programme" (Programme) The area of Huddersfield Town Centre containing the multi-storey car park, Queensgate market, the Piazza shopping centre, the existing library and gallery and also includes the series of tunnels and service roads located under the market, shopping centre and library/gallery

"Defects Liability Period" The period or periods specified in the construction contract during which the contractor may be required to remedy defects in the works

"Design Team" Collectively the consultants engaged in connection with the design of the Cultural Heart programme

"Exchange Information Requirements" (EIR) Defines the information that will be required by the employer, from both their own internal team and from suppliers, for the development of the project or programme and for the operation of the completed built asset

"Gateways" The management approval interventions in the programme lifecycle in order to maintain control over key decisions as the programme develops

"Kirklees Council" The client and deemed end user for the Cultural Heart programme

"Lead Designer" The designer responsible for managing and coordinating the whole of the programme design team including but not limited to architectural services, master planning, landscape architecture, heritage and conservation as well as the separately appointed multi-disciplinary engineering designer

"Master Information Delivery Plan" (MIDP) The primary plan which used to manage the delivery of information during the programme or project lifecycle. It is typically developed by the BIM lead and information manager in collaboration with the design team

"Multi-disciplinary engineering designer" The engineering biased designer responsible for managing and coordinating the multi-disciplinary engineering design team including but not limited to mechanical, electrical, utilities, plumbing, drainage, structural, civils, environmental and highways. This team are appointed separately but managed by the lead designer

"Outline Business Case" (OBC) Identifies and validates the preferred option for meeting the programme objectives. Demonstrates that this preferred option is likely to represent value for money, be affordable and is achievable. Informs the procurement process

"Outline Delivery Strategy" The document agreed between the SDP and Kirklees Council covering the processes and procedures for delivery of the Cultural Heart programme

"Packages 1, 2 and 3" The main procurement packages for the precontract professional services team assembly:

- **Package 1** SDP This is in essence the programme and PMO function with subject matter experts providing wider programme support.
- Package 2 Master planning team the master planning and design team to deliver the master plan for the Cultural Heart and achieve two key objectives, outline planning permission and full plans approval.
- **Package 3** A multi-disciplinary engineering designer providing civils, structural, MEP, sustainability and specialist engineering services.

"Programme" The structure designed to lead multiple interrelated projects and other works to progressively achieve the defined benefits

"Programme Board" The decision-making body responsible for delivering the benefits from the programme

"Programme Execution Plan" (PEP) The primary document that defines how the programme will be undertaken. It details the specific activities in the programme, the resources applied to the programme, and the organization of the programme

"Programme Information Requirements" (PIR) Is the set of high-level programme/project information requirements that focus on information that the appointing party requires at key decision points during design and construction delivery stages

"Programme Management Office" (PMO) Defines and maintains standards for programme management within the organisation

"Programme Quality Management" Encompasses the processes and activities that are used to figure out and achieve the required quality of a programme/project deliverable

"Project" means delivery of one or more outputs according to a specified business case i.e. the new library is a project within the programme

"Quality Management" Assures the quality of the programme deliverables and the quality of the processes used to manage and create the agreed deliverables. Quality management processes and procedures for the Cultural Heart programme will be developed and agreed between the SDP and the lead designer.

"Schedule" A plan for carrying out a process or procedure, giving lists of intended tasks and timeline

"SDP" Kirklees Councils Strategic Development Partner who are Turner and Townsend via SCAPE (MACE) from time to time delivering core consultant services including but not limited to programme manager, project manager, cost manager, planning consultant, development manager, BIM lead and information manager and sustainability.

"Senior Responsible Officer" (SRO) The single individual with overall responsibility for ensuring that the programme meets its objectives and delivers the projected benefits

"Social Value Themes, Outcomes and Measures" (TOMs) A method of reporting and measuring social value to a consistent standard. It provides the golden thread between an organisation's overarching strategy and vision to the delivery of that vision

"Soft Landing" The process of easing the Users into the Premises to ensure that they obtain the best performance from it in support of their occupation

"Stakeholder Groups" Organisations or individuals who can affect, get affected, or perceive themselves to be affected by a programme

"Strategic Outline Case" (SOC) The necessary information in a format that will enable the programme board and cabinet to assess the viability of the programme and instruct accordingly

"Sustainability Strategy" A prioritised set of actions or options relative to sustainability objectives in order to focus investment and drive performance. The strategy needs to provide sufficient information for the programme board and cabinet to assess the viability of the proposed actions or options.

"Workstream" A collection of projects that are interrelated within the overall programme. The Cultural Heart programme has 4 workstreams:

- a Leases
- b Demolition and enabling
- c Developments
- d Events

3 Programme overview

3.1 Programme name and approach

The programme is named Cultural Heart. Kirklees Council have established a blueprint for Huddersfield Town Centre and Cultural Heart forms part of that blueprint.

The Cultural Heart programme comprises four workstreams:

- Leases
- Demolition and enabling
- Developments
- Events

By using a programme approach these related workstreams, which are comprised of projects, can be managed in a coordinated fashion, under a structure that allows the delivery of the outcomes and benefits to meet Kirklees **Council's objectives**.

A full diagram showing the breakdown of the programme workstreams is included in section 5.

3.2 Programme reference

PM32129

3.3 The employer

Kirklees Council

Key Contact: (Senior Responsible Officer)

3.4 The site address

Queensgate, Huddersfield Town Centre

3.5 Key milestones

The key milestones for the accelerated overall programme, including beyond the scope of this document, are set out as follows:

Activities	Programme schedule
	TARGET DATES
Cabinet approval	22/06/2021
Programme initiation	05/07/2021
Tender packages 2 (Architectural Services) & 3 (Multi-Disciplinary Engineering Services)	22/10/2021

Activities	Programme schedule
	TARGET DATES
Gateway 1 – Strategic Outline Case (SOC)	16/11/2021
SQ Issue – Zones 1 and 2	20/06/2022
RIBA Stage 2 complete	02/08/2022
Gateway 2 – Outline Business Case (OBC)	02/08/2022
Planning application submission	30/09/2022
RIBA Stage 3 complete (PB date TBC)	18/01/2023
Gateway 3 (Cabinet TBC)	30/01/2023
Planning Approval (excluding 12 week Judicial Review)	30/01/2023
Soft Strip (pre-planning approval)	31/01/2023
PCSA Zone 1 (commence)	07/03/2023
Judicial Review complete	24/04/2023
PCSA Zone 2 (commence)	25/04/2023
Soft Strip (Zone 2 post planning approval)	25/04/2023
Gateway 4 – Main Contract Award Zones 1 and 2 (Cabinet TBC)	06/11/2023
Construction Commencement – Zone 1	07/11/2023
Construction Commencement – Zone 2	02/01/2024
Handover – Zone 1	10/10/2025
Handover – Zone 2	27/11/2025
New Facility Fit Out and Service Set Up	Q4 2025
Formal Opening Ceremony	Q1 2026

The programme master schedule can be found in Appendix E of this document.

3.6 Site description and history

Large parts of Huddersfield Town Centre are designated conservation areas, but this does not include the site for Cultural Heart. The town centre is also on the National Heritage at risk register due to its declining condition. Driven by the Huddersfield Blueprint the town centre is preserving and enhancing its heritage.

The Cultural Heart programme is part of a wider blueprint for Huddersfield Town Centre to create a vibrant culture, art, leisure and nightlife offer, thriving businesses, a great place to live, improved access and enhanced public spaces.

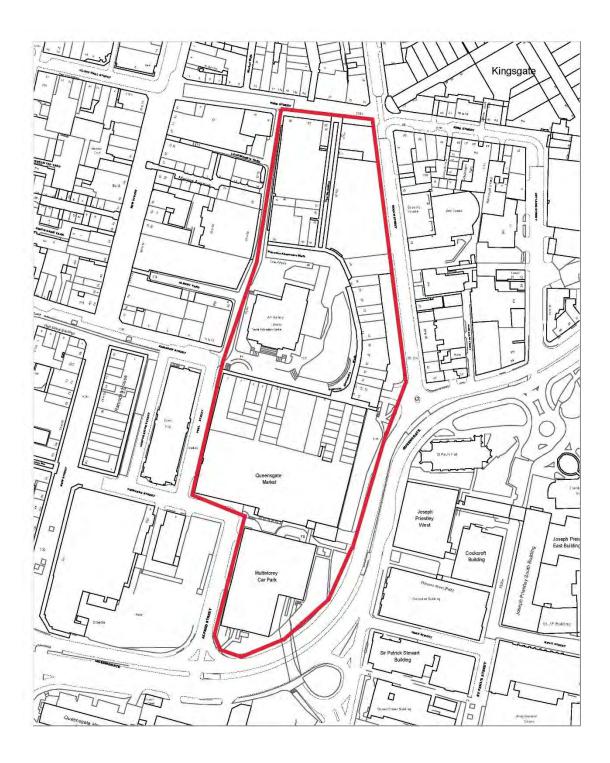
The Cultural Heart programme is a key council led regeneration scheme in Huddersfield Town Centre. The overall site area is approximately 7.8 acres and currently consists of a multi-storey carpark (recently demolished), the Queensgate Market (Grade II listed), the library and art gallery (Grade II listed) and the Piazza shopping centre. In addition to the buildings there is an extensive network of service tunnels servicing the Piazza shopping centre and the market.

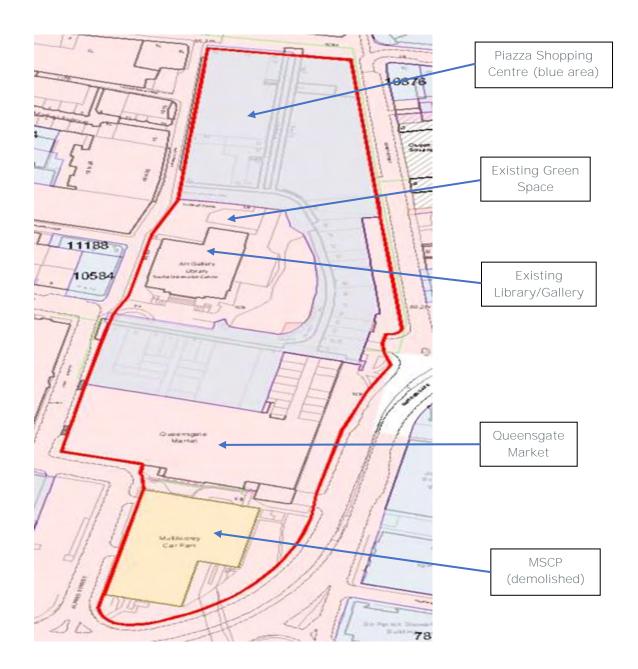
The conservation area excludes the library, Piazza and Queensgate Market which all occupy areas close to the conservation area boundary, and thereby are considered to be within its setting for the purposes of determining applications for planning permission.

In terms of individual buildings, Queensgate Market was built 1968-70 and is a Grade II listed building. The listing includes the entire building, including its interior.

The Piazza was built 1970-74 and part of it is listed as an integral part of Queensgate Market. The list description states that the "attached shops, mostly built 1970-4, are not of special interest", nonetheless they form part of the listing and listed building consent would be required for adaptation or demolition.

The library and art gallery was built in 1937 and is a Grade II listed building. The listing includes the entire building, including its interior. The approximate extent of the site is shown on the two drawings below, with the site boundary marked up in red:





3.7 Programme constraints

3.7.1 Financial

The historic construction budget for the programme, that is under review and will be updated in line with the SOC, was previously defined as follows:

Programme	Budget
Event space and food court	
Museum and art gallery (library refurbishment)	
Demolish the Piazza	

Programme	Budget
New library	
Urban park	
New MSCP approx. 370 spaces	
New link(s) to the University	
New retail restaurants/bars	
Budget total	£170-210m

3.7.2 Time

We are working to an accelerated schedule in order to achieve the benefits of the programme at the earliest possible date. The key milestones from the overall programme schedule are listed below:

Milestone	Completion Date
	TARGET DATES
Gateway 1 – Strategic Outline Case (SOC)	16/11/2021
Gateway 2 - Outline Business Case (OBC)	02/08/2022
Gateway 3	
Gateway 4 - Main contract award	
Construction – Zone 1	
Construction - Zone 2 (Phase 1)	
Construction – Zone 2 (Phase 2)	
Gateway 5 - Readiness for service	

The key time constraints have been identified as:



• Service tunnels – The existing access rights for the service tunnels running under the Piazza and Queensgate Market need to be fully established. There are also third party rights over

the subterranean service tunnels and corridors that serve the crescent parade of shops along Princess Alexandra Walk and Victoria Lane, the market hall and up to the former MSCP. A strategy is being developed to mitigate the impact of these access rights and mitigate disruption to the programme schedule.

- Gateway 1 Strategic outline case (SOC) Preparation of the programmes Strategic Outline Case is dependent on the timely completion of the consultations with key stakeholders and conclusion of market demand appraisals leading to initial development options for Kirklees Councils consideration.
- Gateway 2 Concept design, master plan and Outline Business Case At the end of the concept design phase [RIBA 2] to review the high-level concept design options. The desired output will be the selection of the preferred concept option to then progress through detailed design. Preferred design options will be produced, and approval sought to proceed to full planning submission stage.
- Gateway 3 Cabinet approval will be sought in January 2023 to enter into contract with Venue Operator; approval of design and consultant fees for stage 3 & 4 design works including costs of tendering works; and approval of site enabling budget to include demolition works, asbestos removal, unit strip out works and intrusive surveys
- Planning and listed building consent achieving planning permission and listed building consent will be a major milestone for the programme. Any delays in the process, including during the judicial review could have an impact on the programme schedule. A hybrid planning application is proposed to mitigate the risk.
- Gateway 4 Procurement Prior to awarding the construction contract to review the tender appraisal outputs. Output is Kirklees Council approval to award the construction contract.
- Gateway 5 Readiness for service Prior to handover to confirm that commissioning is complete and the documentation and operational procedures are in place. Output will be handover and new facilities will become operational and in-use.
- Gateway 6 programme review After a period of operation review the programme against its defined success criteria. Lessons learned will be produced by this review.

The programme master schedule is included in appendix E.

3.7.3 Physical

Location - The programme is to be located in Huddersfield Town Centre and carried out within the boundaries of the site as approximately defined in the location plan *Outline Boundary of the Site.*

An overall programme site plan is included in Appendix D.

Adjoining owners – The site contains a number of directly adjoining owners as shown on the Site Plan. The proximity of these owners presents a physical constraint, which will require consideration at all times.

Note – An extensive network of service tunnels currently exist beneath the market, Piazza and library/gallery. These tunnels provide access to commercial properties outside of the Kirklees Council current ownership.

3.7.4 Quality

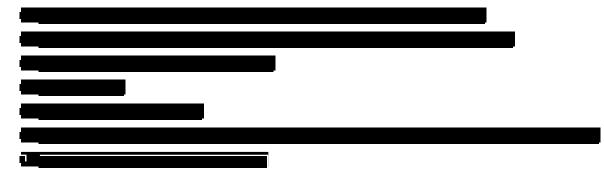
The programme must meet the requirements of the quality criteria that will be further defined by the SDP and Kirklees Council as the design develops.

3.7.5 Sustainability

The programme must meet the requirements of the Kirklees Council climate emergency declaration and carbon neutral vision. The details of these requirements, including the Kirklees Council 2038 Carbon Neutral Action Plan Report (Phase 2) (expected to be published in late 2022), will serve to inform the programme's sustainability strategy and net zero carbon criteria that will be developed between the SDP and Kirklees Council.

3.7.6 Legal

Legal constraints to include but not limited to:



3.7.7 Statutory

3.7.7.1 Planning & listed building consents and approvals:

Statutory approvals could have a significant impact on the programme delivery. Achieving outline planning consents will be a critical milestone to obtaining CPOs.

A number of the buildings that form part of programme are listed. These include: The library and art gallery, built in 1937, grade II listed; Queensgate Market, constructed 1968-70, grade II listed; and part of The Piazza, built in 1970-74, listed as part of the Queensgate Market envelope.

The library and art Gallery, and Queensgate Market listings include both exteriors and interiors. Whilst many of the shops on the Piazza are described as "not of special interest" in the listing status, they still currently form part of the overall listing and listed building consent would be required prior to any potential demolition works.

Listed building consent will also be required for all alterations that affect the special architectural or historic interest of these buildings and applications for planning permission for any works of extension or material alterations. All potential applications will require a statement of heritage significance to comply with national planning policy and local validation requirements.

The statements of significance would be then upgraded to heritage statements to support any subsequent individual listed building consents and planning applications.

The primary statutory consultee for the listed building consent will be Historic England and it is therefore advised that they are engaged and consulted at an early stage. The national amenity societies have also been consulted and, within these, the Twentieth Century Society might take interest in both the library and Queensgate Market. At a local level the Huddersfield Civic Society might take interest in any proposals.

3.7.7.2 Tree preservation orders:

There are a number of established trees on the site, both on the roadside and within the boundary of Piazza. Detailed tree surveys will need to be carried out as part of the planning process. It is expected that a number of the trees will be subject to tree preservation orders, if these do not already exist. These requirements will need to be considered in any developing design or planning application.

3.7.7.3 Building Control:

Building control submissions will be required for each construction element contained within the overall programme. These requirements will be further developed, defined and submitted as necessary as the proposals and designs are developed.

The required building control applications could either be submitted via Kirklees Councils building control department or via an independent commercial building control provider.

3.7.7.4 Environment Agency:

The environment agency will require consulting, the details of which will be further defined as the programme design is developed.

An environmental impact assessment will be completed as part of the initial design development stages.

3.7.7.5 Health & Safety Executive (HSE):

Notice will be provided to the HSE in sufficient time, prior to the construction work being **undertaken in accordance with the HSE's definition of a notifiable construction project. Where** there is written agreement by the client, that the contractor (or principal contractor if there is more than one contractor) or principal designer will carry out the client's duties then all notifiable construction work will be notified to the HSE in accordance with the written agreement.

3.7.7.6 Utilities

There will be a number of businesses and services still operating on the site during some stages of the programme. It will therefore be important to maintain utilities to those buildings.

The route of the proposed district heat network also runs along the site boundary. While this presents opportunities for the programme to take advantage of, it also could result in constraints to the site depending on the final route agreed for the network.

There are also a number of substations in the service tunnels. Four have been identified so far, but more may exist. Further surveys and investigations will be required to ascertain the full number and the adaptations required to service any new development.

Other utilities including gas, water, electric and drainage will also run through the site. These will need to be identified prior to work commencing on site. Any clashes with proposed buildings will need to resolved or mitigated.

4 **Programme brief and objectives**

4.1 Programme objectives

The key identified aims of this programme are currently defined in the following section. It is expected that these objectives will evolve through the SOC and OBC.

The Programme Board is required to drive forward and co-ordinate delivery of the programme in a way that shall:

- Re-develop the Queensgate area to compliment a modern-day town centre that will be busy, inclusive, family-friendly and stay open longer creating a tangible sense of community
- Create a vibrant and dynamic destination where visitors and residents of all communities and ages can gather and enjoy leisure, arts and music throughout the day, evening and into the night
- Be full of diverse and rich experiences that, not only bring people together, but are familiar, celebratory, and innovative and places Huddersfield's cultural heritage at the centre of the programme
- Be accessible, providing open opportunities to participate, learn new skills, explore and discover.
- Increase town centre footfall, supporting local businesses and venues, employees and creating new commercial opportunities making the proposition attractive to stakeholders.
- Adapt and respond positively from the lessons learned and the impact of the pandemic, particularly the changing needs and aspirations of the town centre's catchment population
- Have a master plan that provides flexible spaces, high quality design and a variety of architecture bringing out the unique characteristics of the setting of the Cultural Heart and the listed buildings within it.
- Enhance the use of the retained buildings and structures as destinations, increasing public access, while enabling them to perform an increased number of municipal and commercial functions more effectively
- Encompasses the Councils 2038 Carbon Neutral Vision and policies encouraging sustainability and minimising the carbon footprint of the development
- Provide for the creation of high-quality digital and physical infrastructure
- Have a design where activities in the buildings spill out into a high-quality urban park that is welcoming, safe and with facilities for outside events of scale
- Maintain and enhance connectivity to the rest of the town centre and its neighbourhoods, including essential links to the University
- Create social value benefits
- Produce a master plan and completed assets that are financially viable and can be managed within affordable operational budgets.
- Be deliverable within agreed timescales and budget

A Gateway model will be used to insert management and Kirklees Cabinet approval interventions into the programme lifecycle in order to maintain control over key decisions as the programme and any individual projects within the master plan develop. The Gateways will be employed at the following key programme stages:

Gateway	Output	
TARGET DATES		
Gateway 1 (GW1) - 16 th Nov 2021	Approval of Strategic Outline Case (SOC)	
Gateway 2 (GW2) - 2 nd Aug 2022	 Approval of Outline Business Case, budget, & associated masterplan (RIBA Stage 2) Approval to proceed to project completion and the delegated powers to implement in line with the budget including RIBA Stage 3 (commenced May 22, due to complete Dec 22) RIBA Stage 4 Delegated powers will be requested to allow expenditure within and against the OBC programme budget to completion Approval to proceed with planning application in Sept/Oct 2022 Approval to proceed/continue the procurement strategies (and mitigations) and work done so far for, Main contractors, zones 1 & 2 Venue operator Foodhall operator Car park operator Proposal to return and update Cabinet at GW3 and GW4 for check and balance and any necessary further approvals as outlined below 	
Gateway 3 (GW3) - target date Jan/Feb 2023	 Approval to enter into contract / agreement for lease with Venue Operator (Q1 2023) Approval/update to a review of the OBC budget and RIBA Stage 3 completion (target date 18th Jan 2023) Approval to appoint contractors under Pre Construction Services Agreements (PCSA which will run from Feb 2023 to Oct 2023). This period is when the Design & Build contractor takes over the design from RIBA 3 and develops with either their own or our design team (novated) for RIBA Stage 4. The contract price is also developed through the PCSA period to a point where the proposed contract price is agreeable to both parties. During the PCSA it is also anticipated that site enabling works (Dorothy Perkins block), asbestos removal, retail unit and market strip out works and remaining intrusive surveys that could not be completed safely until the buildings were vacant. 	
Gateway 4 (GW4) – target date Dec 2023	 Approval to enter into construction contracts, zones 1 & 2 Approval/update to a review of the OBC budget and RIBA Stage 4 completion Confirmation of delegated powers to appoint Food Hall operator (target Q1 2025) and MSCP operator (target Q1 2025) 	

Gateway 5 (GW5) - target date Q1/Q2 2026	Readiness for service - Handover
Gateway 6 (GW6) - target date TBC	Programme review – Review programme against success criteria

4.2 Programme scope

The scope of the overall programme is to entirely redevelop a 7.8 acre (approx.) site in Huddersfield Town Centre. The site includes the Queensgate Market (Grade II listed), the library and art gallery (Grade II listed), a multi-storey car park, and the Piazza shopping centre.

The scope of the regeneration is to redevelop the area in its entirety to provide the following core facilities:

- Event space and food court
- Museum and Art gallery
- Demolish the Piazza
- New library
- Urban park
- New MSCP 500 600 spaces
- New link(s) to the University
- New retail restaurants/bars

The deliverables for GW1 and GW2 are listed in the table below:

Deliverable	GW 1 SOC	GW2 OBC
SOC	\checkmark	
RIBA stage 0/Strategic brief	\checkmark	
Outline feasibility/viability At the SOC stage we will: "Produce an initial commentary on financials/ funding options based on industry best practice and example programmes or projects elsewhere" for the events space and other cultural- type components, we assume pulling in some bits from Queensberry on the F&B/ commercial elements.	\checkmark	
Development appraisal (outline) - commercial elements only (refer to viability)	\checkmark	
Master development programme	\checkmark	
Market review	\checkmark	

Deliverable	GW 1 SOC	GW2 OBC
Cost plan	\checkmark	\checkmark
Constraints & risk register	\checkmark	\checkmark
Sustainability strategy (targets, KPIs, delivery plan)	\checkmark	
Team procurement packages 2 & 3	\checkmark	
BIM Ex Plan (org info requirements, asset info requirements, contract review)	\checkmark	
Vison and mandate	\checkmark	
Outline planning strategy	\checkmark	
Heritage assessment	\checkmark	
Programme execution plan (PEP)	\checkmark	\checkmark
Master plan RIBA 2/Outline Business Case		\checkmark
Development appraisal - commercial elements only. At the Outline Business Case stage we will: Prepare P&L projections for the shortlisted options under consideration, including a selection of scenarios and sensitivities producing projections for income and expenditure items based on local, regional and international benchmarks sensitivity/ scenario switches (high case and low case) incorporated across a series of line items to enable understanding of a range of potential outcomes		\checkmark
Funding review		\checkmark
Market review		\checkmark
PMO set up		\checkmark
Review KPIs & SV and develop targets that align with programme objectives		\checkmark

4.3 Critical success factors

CSF will be further defined as the programme progresses. For now the programme objectives will be used (see section 4.1)

5 Programme governance and organisation

The governance structure determines how Kirklees Council via the SDP decides upon its requirements, approves funding and controls progress of the programmes that it promotes. A robust governance structure is essential to ensure that delegated authority and accountability are clear, unambiguous and therefore encourages progression within defined parameters.

Client Kirklees Council Cultural Heart Programme Board Technical and Quality Committee Master Plar Steering Committee Project Stakehold orking gro Programme Manager & PMO Workstream 1 Existing and new assets -easing, CPO and legals Workstream 2 Demolition and enabling works Workstream 3 Development Workstream 4 Events programme Project 1 Piazza demolition Project 1 Project 1 2021 Plazza – legal, leasing and CPO Masterplan Phase 1 Phase 2 Phase 3 Project 2 Queensgate event space and food court Project 2 2022 Relocations Project 2 MSCP demolition (in progress) Project 3 New build library Project 3 New 2023 assets – leases and legals Project 3 Temporary structures/ facilities Project 4 2024 New urban park Project 5 New links to University 2025 Project 6 New 2026 MSCP Project 7 New restaurant/bar Project 8 Museum and Gallery (Library Refurbishment)

The governance structure is shown in the chart below:

5.1 Programme Board

The Programme Board's prime purpose is to drive the programme forward and deliver the outcomes and benefits. Members will provide resource and specific commitment to support the Senior Responsible Officer who is accountable for the successful delivery of the programme. The members of the Kirklees Council Cultural Heart programme board are listed in appendix A and the programme board meeting dates are listed in appendix F.

5.2 Cabinet

The cabinet is the executive decision-making body of Kirklees Council. The council has appointed a leader who is responsible for cabinet, the executive decision-making body of the council. The leader has appointed cabinet members, who have responsibility for work on a particular portfolio area and lead on policy development. The cabinet takes decisions collectively in public and cabinet members are jointly accountable for its decisions.

The cabinet members and their Portfolios are listed in appendix A and the meeting dates and reporting deadlines are listed in appendix F.

5.3 Committees

The main committees associated with the programme are

- Master plan steering committee
- Technical and quality steering committee

5.3.1 Master plan steering committee

The master plan steering committee are responsible at this stage for the review and approval of the functional elements for SOC:

- Viability of commerciality of the programme to SOC
- Reviewing the SOC
- Assessing the programme objectives
- Agreeing the functional requirements are met
- Agreeing operational requirements are met.

This will be reviewed and updated at each Gateway.

The titles of the members of the master plan steering committee are listed appendix O.

The master plan steering committee is consulted with on an ad hoc basis as needed during the schedule of the programme. While the consultations will be held on an as needed basis it is expected that they will occur regularly throughout the development of the SOC and the OBC.

5.3.2 Technical and quality steering committee

The technical and quality steering committee are responsible for confirming technical and quality standards and completing the technical review and approval of the masterplan as it develops at the Gateways.

The members of the technical and quality steering committee are listed appendix O.

The technical and quality committee is consulted with on an ad hoc basis as needed during the schedule of the programme. While the consultations will be held on an as needed basis it is expected that they will occur regularly throughout the development of the SOC and the OBC.

5.4 Required approvals and approving authorities

Approving authority	Required approvals	
Cabinet	Gateway 1 - Strategic Definition - SOC	
Cabinet	Gateway 2 - Concept Design and Master plan - OBC	
Cabinet	Gateway 3 - Venue operator and Main Contractor PCSA	
Cabinet	Gateway 4 - Contract award	
Cabinet	Gateway 5 - Readiness for Service	
Cabinet	Gateway 6 – Programme Review	
Planning Authority (including Historic England)	Hybrid Planning Application (including Listed Consent)	
Home Office	Judicial Review – Planning Application	
Planning Authority	Reserved Matters	
Home Office	Judicial Review – Reserved Matters	
Kirklees/Private (TBC)	Building Control	

5.5 Gateways

5.5.1 Gateway 1 – Strategic Outline Case (SOC)

Approval to progress the programme is initiated with the sign off from the programme board upon review and approval of the SOC. The deliverables at Gateway 1 are:

- SOC
- RIBA stage 0/Strategic brief
- Outline feasibility/viability
- Development appraisal (outline) commercial elements only (refer to viability)
- Master development programme
- Market review
- Cost plan
- Constraints and risk register
- Sustainability strategy (targets, KPIs, delivery plan)
- Team procurement packages 2 and 3
- BIM Execution Plan (organisation information requirements, asset information requirements, contract review)
- Vision and mandate
- Outline planning strategy

- Heritage assessment
- Programme Execution Plan (PEP)

5.5.2 Gateway 2 – Concept design & master plan – Outline Business Case

Approval for the preferred development option at the end of the concept design phase [RIBA 1-2] following review and appraisal of the high-level options. The deliverables at Gateway 2 are:

- Cost plan
- Constraints & risk register
- Programme Execution Plan (PEP)
- Master plan RIBA 2/Outline Business Case
- Development appraisal commercial elements only
- Funding review
- Market review
- PMO set up
- Review KPIs & SV and develop targets that align with programme objectives

5.5.3 Gateway 3 – Budget following planning permission award

At Gateway 3 Cabinet approval will be sought for the following:

- Approval to enter into contract / agreement for lease with Venue Operator (Q1 2023)
- Approval/update to a review of the OBC budget and RIBA Stage 3 completion (target date 18th Jan 2023)
- Approval to appoint contractors under Pre Construction Services Agreements (PCSA which will run from Feb 2023 to Oct 2023). This period is when the Design & Build contractor takes over the design from RIBA 3 and develops with either their own or our design team (novated) for RIBA Stage 4. The contract price is also developed through the PCSA period to a point where the proposed contract price is agreeable to both parties.

During the PCSA it is also anticipated that site enabling works will take place, potentially including some demolition works (Dorothy Perkins block), asbestos removal, retail unit and market strip out works and remaining intrusive surveys that could not be completed safely until the buildings were vacant.

5.5.4 Gateway 4 – Procurement and contract award

This will be prior to construction contract award and be based around reviewing the tender appraisal outputs and to gain Kirklees Council Cabinet approval to award the construction contract and commence works on site.

- Approval to enter into construction contracts, zones 1 & 2
- Approval/update to a review of the OBC budget and RIBA Stage 4 completion
- Confirmation of delegated powers to appoint Food Hall operator (target Q1 2025) and MSCP operator (target Q1 2025)

5.5.5 Gateway 5 – Readiness for service

Prior to handover to confirm that commissioning is complete and the documentation relative to operational, maintenance and health and safety procedures in place. Upon confirmed completion the programme can proceed to handover.

5.5.6 Gateway 6 – Programme review

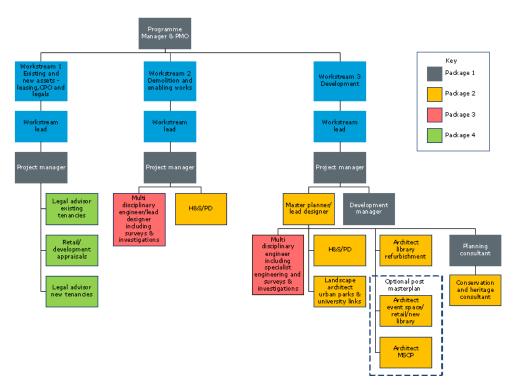
After a period of operation, the programme will be reviewed against success criteria. Lessons learned sessions will be held and will be reviewable documentation generated from this exercise.

6 Programme Team

6.1 Overview

The main purpose of this section is to clarify who does what and ensure no duplication or gaps exist. All parties should make a concerted effort to ensure that continuity of personnel is maintained for the full duration of the programme. Every organisation appointed as part of this programme shall designate a specific Director, who is to take overall responsibility for the **proper discharge of their own organisation's services**.

The Cultural Heart programme team is made up of the strategic development partner (SDP), design teams (packages 2 and 3) and legal advisors as outlined in the chart below. A comprehensive governance structure is also included in Appendix A:



Package 1 - Strategic development partner (SDP) – This is in essence the programme and PMO function with subject matter experts providing wider programme support.

Package 2 – Master planning team – the architect responsible for master planning and the design team to deliver the master plan for the Cultural Heart and achieve two key objectives, outline planning permission and full plans approval.

Package 3 – A multidisciplinary engineer providing civils, structural, MEP, sustainability and specialist engineering services.



This has been structured this way to offer the following benefits:

- Speed of team assembly through the ability to procure through existing frameworks
- Packages that are market facing and enable Kirklees Council to buy 'best in class teams' for the programme
- Minimising conflicts of interest with separation of assurance functions from design
- An ability to line each package with concise deliverables and performance requirements through KPIs.

6.2 Strategic Delivery Partner (SDP)

The strategic development partner (SDP) is the programme and PMO function with subject matter experts providing wider programme support.

The various parties to the strategic delivery partner (SDP), their roles, responsibilities, and relationships are described below. The overall responsibility matrix is set out in Appendix B:

Role	Name	Responsibility
Programme Management Office (PMO)	Turner & Townsend	Provides a central core of services and management for all projects carried out under the programme
Programme Manager	Turner & Townsend	Overall responsibility for programme management of the Cultural Heart programme
Cost Manager	Turner & Townsend	Overall responsibility for cost management of the programme
Procurement	Turner & Townsend	Responsible for framework selection and procurement of design packages 2 and 3
BIM	Turner & Townsend	BIM execution plan (organisation information requirements, asset information requirements, contract review)
Sustainability	Turner & Townsend	Responsible for sustainability strategy (targets, KPIs, delivery plan)
Health and Safety	Turner & Townsend	Appointed as Principal Designer for the programme and will take on client's duties under CDM regulations 2015
Business Case and Cultural Specialists	IPW	Responsible for production of the SOC

Role	Name	Responsibility
Development Manager	Queensberry Real Estate (QRE)	Responsible for production of the SOC
Planning Consultant	Pegasus Group	Responsible for outline planning strategy and heritage assessment

6.3 Lead Designer (Feilden Clegg Bradley Studios)

The Lead Designer's roles and responsibilities include, but are not limited to the following:

- Ensuring the timely production of the design to meet KC's brief
- Preparation of design programmes to meet the requirements of the master programme
- Full Co-ordination of the design and design team to meet the requirements of the master programme
- Regular reporting of progress of the design to the Progamme Manager
- Attendance at all meetings as appropriate
- Advising on the required statutory and third-party consultations
- Liaising with the utility service providers to enable the timely provision of the required services to the site. Advise of any onerous requirements together with time/cost impacts
- Design and/or output specification information (as appropriate) for all elements
- Assistance in the tender prequalification process (by means of technical reviews)
- Preparation, submission, and securing of necessary planning permissions
- Technical assessment of contractors tender responses
- Assistance to the Programme Manager and Cost Manager in enabling them to discharge their responsibilities
- Design for all elements

6.4 Multi-Disciplinary Engineer (Arup)

The multi-**disciplinary engineer's** roles and responsibilities include, but are not limited to the following:

- Ensuring the timely production of design information to meet KC's brief,
- Preparation of production information programmes to meet the requirements of the master programme
- Reporting progress of the design information to the Project Manager
- Share all information to allow the lead designer to fully coordinate the design to meet the requirements of the master programme
- Attendance at all meetings as appropriate
- Advising on the required statutory and third-party consultations
- Output of specialist information (as appropriate) for all elements

- Preparation, submission, and securing of necessary statutory approvals
- Assistance to the Lead Designer, Programme Manager and Cost Manager in enabling them to discharge their responsibilities
- Production of further information for all elements (as appropriate)

6.5 Client (Kirklees Council)

Kirklees Council are the client for the programme and will provide the following:

- Initiating and approving the developed Strategic Outline Case (SOC) and Outline Business Case (OBC)
- Leading and management of Kirklees Council interests
- Agreeing a policy for the programme by approval of the programme execution plan,
- Approving the programme budget cost plan and ensuring effective ongoing cost control via the SDP
- Approving the master schedule and key milestone dates
- Approving changes to the master schedule, budget cost and design via a managed change control process
- To understand and comply with the Client's (Kirklees Councils) responsibilities under the CDM 2015 regulations

6.6 Key programme stakeholders

The stakeholder management process described in section 15 has identified the following Kirklees Council key core stakeholders to be consulted with and the groups that they represent:

Stakeholder Title	Stakeholder Group(s)
Library Development Manager	New Library
Museums and Galleries Manager - Culture & Tourism	Museum and Gallery
Strategic Lead for Cultural Development Growth & Housing - Lead Facilitator	Events Space
Communications Business Partner for Growth and Regeneration	Communications
Head of Highways	MSCP and University Links
Head of Major Projects (Car Parking / Transportation)	MSCP and University Links
Team Leader- Growth & Regeneration (Town Centre Conservation & Design)	Town Centre

Stakeholder Title	Stakeholder Group(s)
Head of Operational Services	Town Park

6.7 Programme directory

A full programme directory is included in Appendix C.

7 Programme delivery

The Cultural Heart programme management approach will adopt the best practice of the Managing Successful Programmes (MSP) principles and themes to give a clear set of actions to set up, assure and deliver the programme to Kirklees Council's required objectives.

The Outline Delivery Strategy, Rev 29, sets out the approach for the programme which is based on MSP and details how the programme should be mobilised, set up and delivered.

8 Communication

8.1 General communication

The programme manager shall be the focus of all communication for the programme. It is recognised that direct contact between the SDP will take place and suitable records should be kept as necessary by the relevant SDP parties. The programme manager shall be copied on all correspondence relating to key aspects of the programme, which shall include correspondence to and from Kirklees Council and parties outside of the SDP.

8.2 Written communication

All items of written communication such as reports, e-mail and letters must initially include the reference Cultural Heart followed by the subject of the communication, ie:

Cultural Heart – [subject of communication]

All programme related documents should be retained by the SDP in electronic format for a minimum of 12 years from completion. Upon completion of the programme, or an individual element within the programme, 1 full set of record documents should be issued to Kirklees Council on a suitably sized portable hard drive.

8.3 Confidentiality

All parties will understand that the programme is confidential and will not release information without prior approval from SDP and Kirklees Council.

8.4 Contact with the press

Any contact with the press must be referred via Kirklees Council.

8.5 Published material

Any published information must not be released without prior consultation and approval of the SDP and Kirklees Council.

8.6 Verbal communication

Generally verbal communication is promoted as it is the quickest, most efficient method of communication. However where necessary, verbal communication should then be recorded via written communication and copied to the whole team in order to be effective.

8.7 Common Information System (CDE/EDMS)

Autodesk Docs is being used as the common information system for the programme and access is restricted by usernames and passwords. This allows members of the SDP and design teams to share information and documents with each other and members of Kirklees Council in a secure manner.

8.8 Meetings

8.8.1 Cabinet meetings

Details of the purpose of Kirklees Council Cabinet and its members are included in section 5.2. The cabinet sets its own agendas. The cabinet meetings will be held as per the schedule included in appendix F.

8.8.2 Programme board meetings

The members and purpose of the Cultural Heart programme board are detailed in section 5.1. Programme board meetings are held on a monthly basis. The meetings agreed so far are listed in appendix F and an example agenda is included in appendix K.

8.8.3 SDP team meetings

The SDP meetings are held weekly and offer an opportunity for each SDP discipline to update the other teams on progress to date. The meetings promote discussion between the separate disciplines and encourage co-operation. The overall aim is to create a transparent process and provide an audit trail for the development of the programme.

Representatives from Kirklees Council also at**tend the meeting to be updated on the SDP's** progress and offer input where required.

The attendees for the SDP team meetings are listed appendix N and a typical agenda for the meetings included in appendix K.

8.8.4 Principal meetings

Principal meetings take place weekly, these run through any areas of clarification or issues that require resolution. A bullet point agenda is circulated to all attendees before each meeting. The attendees at the principal meetings are listed in appendix N.

8.9 Reporting

A structured reporting process is essential and will be used as a key formal communication tool on the programme. In order to facilitate the process, regular progress reports will be required from all consultants and contractors engaged on the programme and the information they provide will be used to provide the data required within the programme manager's monthly report. The list of reports submitted to the programme manager each month is listed below:

- Development management
- Architecture
- Engineering
- Cost management
- Procurement
- Sustainability
- BIM
- Health and safety

These reports are summarised in the main body of the programme manager's report to give a detailed review of progress made and proposed future activities on the programme. An executive summary of the report is also issued in a dashboard format to provide the programme board members with the key information.

A slide deck is then prepared based on the information contained in the report and this is then presented to the programme board at their monthly meeting. A question and answer session is held with the programme board following the presentation.

The monthly reports are to be issued at least 3 working days before the programme board meeting. The schedule for the programme manager reports and those of the wider SDP teams is listed appendix F.

Reporting deadlines for the cabinet are also included in appendix F.

8.10 Workshops

In project management, a workshop is a technique that uses focused sessions to bring crossfunctional stakeholders together in order to share knowledge and experience. The workshop is used to solve a problem, build a plan, gather requirements or make decisions.

The core workshops held to date for the Cultural Heart programme are defined below.

8.10.1 Stakeholder consultation workshops

Consultation workshops are being held with internal and external core stakeholders defined by Kirklees Council to ascertain the service provider's needs and requirements from the programme.

The output from the workshops will be used to develop a long list of options for the projects that make up Cultural Heart.

The workshops are led by the SDP and are chaired by IPW. They are arranged depending on the availability of the stakeholders. A list of the defined core stakeholders is included in appendix J.



8.10.3 Health, safety, and fire workshop

Health, safety, and fire workshop will be held with the SDP and key duty holders at Kirklees Council. The purpose of the workshop is to identify key industry constraints, changes and how this can be fed into ensuring the project meets delivery expectations and legal requirements which are future proofed.

The date of the initial and ongoing workshops are still to be confirmed. The SDP will lead and chair the workshops.

8.10.4 Sustainability workshops

The purpose of the sustainability workshops are to allow the SDP to consult with key Kirklees Council representatives on their current sustainability provisions and their future requirements and needs.

The outputs from the workshops will be developed into a sustainability strategy document, which will include targets, KPIs and a delivery plan. This will form one of the deliverables for Gateway 1.

There is no fixed schedule for the workshops and they are held on an arranged basis dependent on the information required by the SDP sustainability team and the availability of the core stakeholders.

The workshops are led and chaired by the SDP. A list of participants for the workshop is included in appendix L.

8.10.5 Planning workshops

The purpose of the planning workshops is to work with core stakeholders in Kirklees Council in order to begin the development of a planning strategy relative to the programme and the listed buildings contained within the overall site boundary. A workshop will also be held with Historic England when preparing the planning strategy and heritage assessment have been sufficiently developed.

The outputs from the workshops will be developed into an outline planning strategy and heritage assessment that will form the planning deliverables for Gateway 1.

The workshops were not held on a schedule and were instead dictated by the availability of the stakeholders, with further one-to-one sessions used when stakeholders or other referred parities were not able to attend the group sessions.

The workshops were led by the SDP and chaired by Pegasus Group. The participants in the workshops are listed in appendix L.

8.10.6 Procurement

A series of procurement meetings/workshops were held between Turner Townsend, Kirklees Council and Addleshaw Goddard in order to develop and agree a procurement approach for the competitive tender of consultant packages 2 and 3 (Lead Designer - Architectural and Multi-Disciplinary Engineering Services).

The workshops were led and chaired by the SDP and were not held on fixed schedule. The attendees of the workshops are listed in appendix M.

The output from the workshops was a capability assessment issued via the NHS SBS framework to Lot 1 (Architectural services) and Lot 12 (Multi-disciplinary services).

Further workshops were also held for:

- the capability assessment scoring panel
- the evaluation panel
- the social value evaluation panel
- the price evaluation panel
- the procurement route for the main contractor appointment

The participants for these workshops are listed in appendix M.

8.10.7 Risk Workshops

The purpose of the risk workshops is to allow the SDP and core stakeholders from Kirklees Council to assess the primary risks to the programme. The output from the workshops will be the development of a risk register for the programme.

The workshops will be held on an arranged basis as required by the demands of the programme. They will be led and chaired by the SDP.

The attendees of the workshops are listed in appendix L.

9 Common Information System

9.1 Introduction

The SDP will act as the information manager for the programme through Gateways 1 and 2. Following that a BIM information manager will require appointing to work in collaboration with Kirklees Council.

9.2 Document control

9.2.1 Documentation format

The documentation format and naming convention will be established following the appointment of the lead designer and consultation between the SDP and Kirklees Council.

9.2.2 Checking

All documentation for contract or construction purposes are to be checked by a senior person of the appropriate discipline and shall be signed as checked and stamped with the relevant approval stamp. No document shall be issued without checking signatures and approval stamps.

It is incumbent upon each discipline to check documents received from others against their own requirements.

9.2.3 Issue of documents (hard and electronic copies)

Protocol for issuing documents will be established following the appointment of the lead designer. Post OBC a document control manager will be appointed to the programme.

9.2.4 Records of documents issued

Protocol for recording the issue of documentation will be established between the SDP and Kirklees Council and this will align with the naming and numbering convention to the BIM principles that will be implemented post Gateway 1 and 2.

9.2.5 Document register

Each Consultant must maintain its own document register containing the following details of all documentation produced:

- Document number
- Document title
- Drawing scale
- Drawing size
- Status of issue
- Current revision
- Date of issue
- Distribution

9.3 Common information system (CDE/EDMS)

The programme uses Autodesk Docs to provide a secure online platform for collaboration and document management. **Permission for access will be granted based on each user's needs.** The protocols for communicating through Autodesk Docs were established and communicated to all users before it commenced operation.

9.4 Building information modelling (BIM)

The development of Building Information Modelling (BIM) standards is set out in the table below. These include the development of the Organisational Information Requirements (OIR), Asset Information Requirements (AIR) and Exchange information Requirements (EIR) aligned to industry best practice ISO19650:

Activity	Description
Organisational information requirements (OIR)	Translate Kirklees C ouncil's organisational vision and any existing estate strategy into a format that supports BIM from the outset.
Asset information requirements (AIR)	Develop and document the asset information that is required, developed directly from the OIR.
Exchange information requirements (EIR)	Create an EIR template for the Cultural Heart to support the digital delivery of Kirklees Council requirements, across all programmes.
BIM execution plan (BEP) template	Provide a BEP template aligned to the Cultural Heart EIR.
Contract review	Review standard appointment contracts for Kirklees Council to make sure they align with the BIM requirement.

10 Schedule management

10.1 Master schedule

The master schedule Rev M 30.05.22 attached in Appendix E has been compiled from a list of the main activities' milestones and constraints applicable to the programme in order to meet **Kirklees Council's** objectives.

The main elements of the master schedule include design, procurement, planning application, construction, commissioning practical completion and handover.

The SDP is required to adhere to this schedule and commit resource as necessary to achieve the required dates.

Any revisions to the master schedule need to be formally agreed with Kirklees Council.

10.2 Design schedule

Development of the design will be managed to enable compliance with the detailed programme requirements. Each designer will be required to develop a detailed schedule for the execution of their respective works. The schedule should be updated every month and show planned against actual progress. The programme manager will co-ordinate these schedules in conjunction with the Lead Designer and obtain agreement and commitment to the master schedule.

10.3 Procurement schedule

There are four main procurement packages for the precontract professional services team assembly. These packages and the appointment dates for them are set out in the table below:

Procurement package	Date
Package 1 - Strategic development partner (SDP)	5th July 2021
Package 2 – Architectural, master planning, landscape, heritage and conservation designers	22 nd October 2021
Package 3 – Multidisciplinary design engineer	22 nd October 2021
Package 4 – Legal and leases	June 2021

All procurements were managed under the Kirklees Council YORtender electronic tendering system.

10.4 Key milestone dates

All schedules shall reflect the key milestone dates, which affect the sequence and timing of activities.

Key milestones to OBC	Date
Cabinet approval	22nd June 2021
Programme initiation	5th July 2021
Gateway 1 SOC cabinet approval	16th November 2021
Gateway 2 OBC cabinet approval	2 nd August 2022 TARGET

10.5 Schedule changes

Schedule changes will be adopted or rejected through the programme change management process described in Section 12 of this document. Any schedule change shall be analysed for wider impacts to the programme delivery in terms of safety, risk, schedule, cost and quality.

Programme changes will be added to the schedule once approved by the SDP team and Kirklees Council.

10.6 Progress updates

The master delivery schedule will be reviewed on a monthly basis and actual progress will be updated and reviewed against the planned (baseline) progress.

The results of this review will be reported within the PM monthly report.

11 Financial management

11.1 Responsibility for cost control

Cost control is the responsibility of the SDP. The SDP has specific responsibilities to manage, monitor and report on cost status throughout the programme cycle.

The SDP is responsible for maintaining a forecast of the total cost of the programme out turn including, but not limited to the following:

- Agreeing the cost plan with Kirklees Council
- Implementing cost management, reporting and approval procedures
- Monitoring and reporting changes in the cost plan to the Kirklees Council and recommending control measures to be implemented in order to secure cost objectives.
- Ensuring that appropriate cost estimates are prepared and delivered at each reporting stage.
- Maintaining an up-to-date forecast of the projected total final cost
- Advising of financial commitments and financial liabilities
- Supporting the change control procedure.

11.2 The programme cost plan

A cost plan was derived during the development of the Strategic Outline Case and schedule of key requirements will be prepared by the SDP after initial design and then updated as the design is further defined.

If the value of this cost plan exceeds the baseline budget (listed as a financial constraint in section 2.7.1) then the SDP will list the planned activities to bring the programme back within budget (value engineering).

11.3 SOC and OBC

The SOC provides the necessary information in a format that will enable the programme board and cabinet to assess the viability of the programme and instruct accordingly. The SOC was presented for approval by Kirklees Council on 16th November 2021.

The OBC identifies and validates the preferred option for meeting the programme objectives. Demonstrates that this preferred option is likely to represent value for money, be affordable and is achievable. The OBC informs the procurement process. The OBC is targeted to be put forward for approval by Kirklees Council on 2nd August 2022.

The deliverables for the SOC and OBC are listed in section 4.2.

11.4 Delegated authority

Responsibility for control of change will be defined in a change control procedure, but it is equally important to define who can authorise change and the limits of their authority.

Levels of delegated authority to vary cost, quality or programme commitment will need to be agreed with Kirklees Council.

Criteria	Procedure
1) Variation required quickly in order to mitigate additional financial commitment and / or delay to programme	SDP issues instruction and raises retrospective change control for Kirklees Council approval SDP report fully lists change impacts
2) Value of variation below [Value TBC] No effect on programme No significant effect on quality or scope	SDP issues instruction and raises retrospective change control for Kirklees Council approval SDP report fully lists change impacts
3) Value of variation above [Value TBC]	SDP raises change control for Kirklees Councils approval SDP report fully lists change impacts
4) Variation for safety reasons	SDP issues instruction and raises retrospective change control for Kirklees Councils approval SDP report fully lists change impacts

11.5 Budget management

The SDP will be responsible for budget management for the duration of the programme. Fluctuations will be notified to the programme board for their approval.

11.6 Risk and contingency management

The SDP will work to identify the process for setting and managing contingency funds on the programme. Programme risks will be identified as set out in section 11 of this report and a contingency sum agreed with respect to the potential additional costs should such risks occur.

11.7 Cost checking

Cost checking is to be performed throughout the programme by the SDP. Estimates for elements are to be reviewed and if necessary, adjusted as soon as a reasonable amount of new information can be obtained. Emphasis is to be placed on providing the programme manager with the earliest possible warning of likely cost variations to facilitate decision making.

11.8 Cost reporting

The SDP will prepare the cost report on a monthly basis, and this will be issued to Kirklees Council alongside the programme m**anager's** report.

11.9 Invoicing and payment

Invoicing will take place on a monthly basis as per the agreement with Kirklees Council.

12 Quality management

12.1 Overview

Quality management assures the quality of the programme deliverables and the quality of the processes used to manage and create the deliverables. Quality management commences during the programme design development process, it is intrinsic to the design process, underpins the procurement and implementation processes, and is confirmed during the completion processes. Quality is a broad term, but in the context of this programme, it applies to the performance of the works and all its elements and means that:

- Everything that is designed conforms with the Strategic Outline Case within the constraints of the budget
- Everything that is procured conforms with the developed design
- All construction and installation works are competently executed using appropriate methodologies by competent operatives and under appropriate supervision
- All completed works perform for their intended lifespan in the manner in which they were procured
- The required quality standards are clearly established, understood and comply with Kirklees Council's objectives.

12.2 Quality management standards and procedures

The following quality standards, processes and procedures are in place:

- Governance processes such as Gateway approvals, KPIs etc
- Design management including the design approvals process
- Change control procedures
- Document management
- Contractor's/ consultant's quality system requirements.

The Gateway approvals are the conclusion to the quality management process, when cabinet provides final approval to the submissions that have been reviewed and approved by the technical and quality and master plan committees. The Gateways are outlined in detail in section 4.3. The key quality checks in the initial stages of the programme are Gateway 1 (SOC) and Gateway 2 (OBC).

The programme board will also implement quality management procedures at their monthly meetings.

The programme manager will manage and report against the programme KPIs. They will report on a monthly basis on the following:

- Social value targets met
- Net zero service met
- Deliverables against programme including monthly reporting achieved
- % Outturn programme cost within approved budget
- 360° review scores exceeding target in the period

Robust change control procedures will also form part of the quality management strategy. The procedures that will be followed for the programme are outlined in section 13.

12.3 Quality control

Quality control procedures will be agreed with Kirklees Council to establish how quality will be monitored during design, procurement and construction. Persons responsible for implementing these procedures will also be agreed.

The quality control procedures will include but not be limited to:

- Provision/approval of mock-ups and samples
- Testing and commissioning regime
- Inspections and snagging
- Consultant's internal quality control

12.4 Quality management plan

A quality management plan will be developed and agreed between the SDP and Kirklees Council.

12.5 Technical and quality committee

Kirklees Council technical and quality committee have an overarching role to periodically review the design as it is developed, in order to ensure that it complies with their policies and any specific requirements.

13 Risk management

13.1 Overview

Risk management is a process whereby the threats and opportunities associated with the programme are identified, assessed and managed in order to reduce the potential impact on either schedule, cost or performance goals. Effective risk management is a programme wide discipline, which will require the input of Kirklees Council, the SDP, and the whole team. By integrating risk management into the day-to-day management of a programme, threats and opportunities will be more effectively identified and managed. The SDP will be the risk manager for the programme.

13.2 Definition of risk

Risk management is a process that allows individual risk events and overall risk to be understood and managed proactively, optimising success by minimising threats and maximising opportunities.

With a risk event being "an uncertain event or set of circumstances that, should it occur, will have an effect on achievement of one or more objectives"

13.3 Identification of risks and opportunities

The early identification of potential threats and opportunities is critical in providing for their effective management. Risk review workshops are regularly scheduled in order that all SDP parties and the wider team may provide input. Once a threat or opportunity has been identified it will be recorded on the risk register which acts as the tool to record and control the risk management process.

13.4 Risk categories

Risks will be categorised as to whether they are programme risks or project risks.

Programme risks are defined as those that will have an effect on the achievement of the **programme's objectives. These risks will require the consideration of the programme board** when developing mitigation strategies.

Project risks, in contrast, are concerned with managing the individual risk events of (individual) projects within the overall programme. Management of these risks will be the responsibility of the SDP and wider team, with programme board input or approvals when necessary.

13.5 Assessment of risk

Further to identification, each threat and opportunity will be scored by assessing its probability of occurrence and impact on the programme objectives. The scoring is based on the following:

Probability categories	Score	Risk categories	Score
Unlikely	[1]	Very Low	[1]
Possible	[2]	Low	[2]
Average	[3]	Medium	[3]

Probably	[4]	High	[4]
Certain	[5]	Very High	[5]

To calculate a risk rating the probability score is multiplied by the risk score. The probability and impact will be assessed by the SDP at the risk workshop or subsequent meetings.

13.6 Risk register

The SDP maintain the live risk register for the programme, formally updating it on a monthly **basis and issuing it as part of the programme manager's monthly status report. This register is** created through the risk workshops to highlight the potential threats and opportunities throughout the programme. Mitigation measures are identified and assigned against the associated risks.

The SDP progressively monitor the implementation and success of these mitigation measures and include changes to these measures in the risk register updates.

13.7 Risk contingency management

On completion of the project risk register, a contingency sum will be agreed that should reflect the potential additional costs should such risks occur, and equally the benefit if an opportunity can be realised.

Programme risks cannot be costed in the same way as they require a longer-term view for the realisation of anticipated benefits or associated costs.

14 Change management

14.1 Overview

Change control is the process through which all requests to change the baseline scope of a programme are captured, evaluated and then approved, rejected or deferred.

Change control on a programme or project is a structured and methodical process implemented for managing variations from a controlled baseline and updating this to a required future state. The process follows the cycle 'identify-initiate-assess-approve-implement' with change variations occurring at different programme stages and levels e.g. design changes, supply chain (contractual) changes, sponsors' requirements changes.

Change control ensures the programme baseline is adequately maintained, providing Kirklees Council with full visibility of adjustments and allows Kirklees Council to manage stakeholder expectations, to ensure that changes are acceptable for the programme's long-term goals and identifies where intervention and corrective action is required.

Benefits of implementing a change control procedure include:

- Any movements to the agreed baseline (time, cost, product, quality) are properly understood, controlled, recorded and reported,
- The review and approval of changes are carried out by the correct people,
- The process allows a single, consistent and auditable mechanism for managing programme baselines.

14.2 Principles of change control

- The SDP is responsible for delivering the change control procedure and all parties are responsible for engaging properly in the process.
- The approval of change is subject to limits on delegated financial authority as detailed in section 11.4,
- The impact of all changes should be considered in terms of scope, cost, time, quality, safety, environment, risk and opportunity.

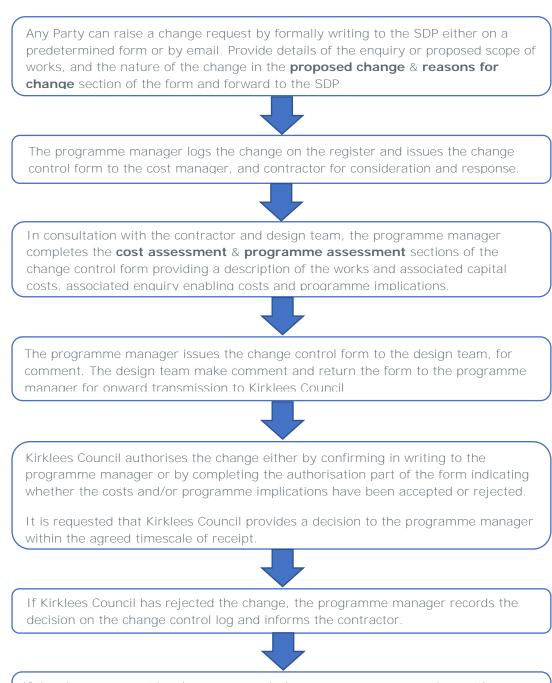
The key points of reference when considering change are:

- The baseline cost/schedule plan (and subsequent cost plan revisions)
- The Strategic Outline Case and developing design
- The latest approved designs and specification.

14.3 Change control procedure

The flow chart below illustrates the proposed procedure for the processing of change requests outside of the delegated authority. This procedure will be agreed with Kirklees Council before it is implemented.

NOTE: Timescales to be amended in line with specific contract conditions:



If the change request has been approved, the programme manager issues the change control form to the contract administrator (if different), and requests that a formal contract instruction is raised.

14.4 Authority levels

Authority levels will be agreed with Kirklees Council. These will be included in section 11.4 Delegated Authority.

14.5 Programme manager/ contract administrator

The value of contract instructions/compensation events that the programme manager will have authority to raise on a day-to-day basis, and the maximum value per month, will be agreed with Kirklees Council.

On a day-to-day basis, the programme manager will have authority to request the raising of contract instructions/compensation events up to the value of $\pounds[VALUE\ TBC]$, to a maximum of $\pounds[VALUE\ TBC]$ per month.

14.6 Client (Kirklees Council)

Change control forms which require a Kirklees Council decision will be directed to Senior Responsible Officer, for consultation with the programme board.

Cultural Heart programme manager – E[VALUE TBC], up to a maximum of £[VALUE TBC] per month.

14.7 Change control and contract administration

This change control procedure sits separately to contract administration processes but still plays an important role during design development and construction stages. The change control procedure sets the process for identifying, defining, assessing and authorising changes that can then be progressed to implementation through the relevant contract procedures.

15 Health and safety

15.1 Health and safety management overview

This section provides an overview as to how health and safety will be managed during the Cultural Heart programme.

It will detail Kirklees Council's health and safety policy and management strategy for the programme. Their health and safety requirements for the programme will be listed along with the methodology that will be followed. Roles and responsibilities for key duty holders under the CDM Regulations 2015 will also be listed and explained, along with the requirements of the Pre-Construction Information; Construction Phase Plan; and the Health and Safety File.

This segment of the document will be added to as the programme progresses and moves into the construction phase.

The senior off-site person responsible for the programme in the SDP is

15.2 Programme health and safety strategy, vision, targets and objectives

It is the intention of the Kirklees Council and the SDP as the principal designer to ensure that health and safety is given due regard on this contract. Once a principal contractor is appointed, they will take over this responsibility. Below are the H&S objectives:

- To have 0 reportable accidents / dangerous occurrences within the programme
- To ensure that safe systems of work are adopted, implemented, operated and reviewed to the benefit of all
- Ensure that best practice is followed by all employees' & contractors
- To provide all employees with the information, instruction, training and supervision to enable them to carry out their tasks safely. Including the provision for all employees' adequate and suitable facilities for their health, safety and welfare
- Not to endanger employees or other persons as a result of our work activities. This develops
 a culture which encourages staff and operatives to work in a manner that will prevent
 accident
- To provide contractors, and others, who may be affected by the work activity, with the necessary information, instruction and supervision and, to check their training / suitability for the works to be carried out
- To provide adequate time, resource and funding to ensure the health safety and welfare of employees and those who may be affected
- To utilise "safety in design" and "modern methods of construction" to reduce risk during construction, maintenance, life cycle replacement and decommissioning of the building.

To achieve this, co-operation of all contractors is essential together with good planning and adopting a risk assessment approach identifying hazards and so eliminate risks. Co-ordination will be conducted by the principal contractor, with contractors expected to comply with current legal requirements, good working practice and site rules.

15.3 Health and safety methodology

The following techniques will be used for monitoring compliance with:

- Legal requirements
- The health and safety site rules contained within this plan

- The procedures for contractor selection and management of trades
- Special requirements for public interfaces.

These methods are:

Routine inspections:

- Conducted by the site manager/supervisor with arising issues being dealt with informally via verbal communication.
- A formal weekly inspection.
- A weekly report sheet will record the observations made and any remedial action taken.

• Further inspections:

- When the individual programme or project manager is on site, they will carry out informal inspections and report findings to the site manager/supervisor. Minimum one per month.
- The H&S manager will make regular unannounced site visits to conduct inspections and formally recording them communicating adverse findings to all involved including up to director level within the principal contractors and management level within subcontractors.

Compliance monitoring:

• Conducted by the site manager/supervisor and visiting personnel (programme/project manager, safety manager & construction director) to verify that agreed procedures and methods are being implemented and are producing the required results.

15.4 Communication

Agree the communication protocols with Kirklees Council at the initial H&S meeting confirming as the appointed principal designer who will also perform H&S site audits, once a contract is awarded, on a regular basis throughout the programme or project. H&S matters are **addressed as an agenda item within the main contractor's progress meeting and** reporting. The report from the contractor will outline any reported incidents during the period and general H&S breaches or issues which require attention.

15.5 Cooperation and coordination

Principal designer to determine with Kirklees Council at the initial H&S meeting, what measures are in place to make sure the duty holders cooperate with each other, coordinating their work wherever required.

15.6 Competence

As the programme develops the PEP should show how the designers, principal designer, principal contractor, and all duty holders have demonstrated they have the skills, knowledge, and experience to carry out the work in a way that serves health and safety.

Note that it is a requirement for the SDP to maintain competence levels in the event of changes in personnel.

Kirklees Council is responsible for ensuring that standards and rules are in place so as to manage the health and safety implications effectively and efficiently for all involved or will be affected by the programme or project. This includes responsibility for:

- Delegation and assignment of responsibility for the management of the programme to appropriately skilled and resourced organisations / persons including safety specialists
- Appointing only competent organisations / persons for the effective management of the programme who have adequate resources, both financial and physical
- Monitoring the performance of all first-tier appointments to ensure that they are effectively and efficiently discharging all statutory and assigned responsibilities
- Ensure provision of information, including that from stakeholders, which will be required by appointments to effectively discharge their own responsibilities
- Ensure that the programme has in place appropriate systems / processes for overall governance
- Cooperate with all appointments that is conducive to a positive safety culture and overall efficient and effective management of the programme
- Coordinate its activities in accordance with all statute including the Health and Safety at Work Act 1974 (as may be amended or replaced during the programme life cycle).

15.7 Roles and responsibilities

Key duty holders have roles and responsibilities under the CDM regulations 2015. The following sections list those required for Kirklees Council, programme manager, principal designer, principal contractor and all other designers.

15.7.1 Client (Kirklees Council)

For the programme, and all projects under the programme, Kirklees Council must:

- Appoint the contractors and designers to the programme (including the principal designer and principal contractor on the programme) while making sure they have the skills, knowledge, experience and organisational capability
- Allow sufficient time and resources for each stage of the programme
- Make sure that any principal designer and principal contractor appointed carry out their duties in managing the programme
- Ensure that suitable welfare facilities are provided for the duration of the construction work
- Maintain and review the management arrangements for the duration of the programme
- Provide pre-construction information to every designer and contractor either bidding for the work or already appointed to the programme
- Ensure that the principal contractor prepares a construction phase plan before that phase begins
- Ensure that the principal designer prepares a health and safety file for the programme and that it is revised as necessary and made available to anyone who needs it for subsequent work at the site.
- For notifiable projects within the programme (where planned construction work will last longer than 30 working days and involves more than 20 workers at any one time; or where the work exceeds 500 individual worker days), commercial clients must:
 - Notify HSE in writing with details of the individual programme or project
 - Ensure a copy of the notification is displayed in the construction site office.

A principal designer has been appointed to discharge H&S responsibilities on behalf of Kirklees Council.

15.7.2 SDP

The SDP duties relating to health and safety will be agreed at the initial H&S meeting with Kirklees Council.

15.7.3 Principal designer (as defined by CDM regulations 2015)

The principal designer contact is a member of the SDP.

The principal designer's roles and responsibilities include, but are not limited to the following:

- Meet and discuss with Kirklees Council their duties under CDM 2015
- Aid Kirklees Council in the identification and preparation of the pre-construction information required by regulation 4(4); and, together with the other consultants identify any additional surveys or investigations which may be required
- Receive, review, compile and issue the pre-construction information and check where reasonably practicable that it has the features required by the CDM Regulations 2015. Compile and issue addenda as appropriate during design development, or in the case of design changes
- Confirm with Kirklees Council and other duty holders the arrangements for managing the programme or project (including the allocation of sufficient time and other resources) including programme communication, roles and responsibilities
- Propose, for approval by Kirklees Council, a contents list and format for the health and safety file, appropriate to the nature of programme or project and compliant with the requirements of the CDM Regulations. Initiate collation of the H&S file
- With respect to health & safety, plan, manage, monitor and coordinate the pre-construction phase of the programme, considering the general principles of prevention to check that so far as is reasonably practicable, the programme is carried out without risks to health or safety
- Together with the designers, implement procedures for the identification, elimination, or control, so far as is reasonably practicable, of foreseeable risks to the health or safety of any person - carrying out or liable to be affected by construction work, maintaining or cleaning a structure or using a structure designed as a workplace; (including the designs, the selection of materials and equipment, and future use, repair, maintenance and life cycle replacement or demolition)
- With regards to the design, check where reasonably practicable that the designers comply with their duties under regulation 9 of the CDM Regulations
- Liaise with the principal contractor as appropriate, in particular with respect to information which the principal contractor may need to prepare the construction phase plan or which may affect the planning and management of the construction work
- Liaise with and direct the design consultants and the principal contractor as necessary to procure that the health and safety file contains the requirements of the CDM Regulations
- Review and check delivery of the health and safety file by the principal contractor to Kirklees Council in conformity with the requirements of the CDM Regulations.

15.7.4 Lead Designer and Multi-Disciplinary Engineering Designer

Designers must:

- Make sure Kirklees Council is aware of the client duties under CDM 2015 before starting any design work
- When preparing or modifying designs:
 - Take account of any pre-construction information provided by the SDP and Kirklees Council (and principal designer, if one is involved)
 - Eliminate foreseeable health and safety risks to anyone affected by the programme (if possible)
 - Take steps to reduce or control any risks that cannot be eliminated.
- Provide design information to:
 - The principal designer, for inclusion in the pre-construction information and the health and safety file
 - The SDP and Kirklees Council and principal contractor to help them comply with their duties, such as ensuring a construction phase plan is prepared.
- Communicate, cooperate and coordinate with:
 - Any other designers (including the principal designer) so that all designs are compatible and ensure health and safety, both during the programme/project and beyond
 - All contractors (including the principal contractor), to take account of their knowledge and experience of building designs.

15.8 Preconstruction information

Pre-construction information provides the health and safety information needed by:

- Designers and contractors who are bidding for work on the programme/project, or who have already been appointed to enable them to carry out their duties
- Principal designers and principal contractors in planning, managing, monitoring and coordinating the work of the programme.

Pre-construction information is defined as information about the programme that is already in Kirklees Council's **possession**, or which is reasonably obtainable by or on behalf of Kirklees Council. The information must:

- Be relevant to the particular programme
- Have an appropriate level of detail
- Be proportionate to the risks involved.

Pre-construction information should be gathered and added to as the design process progresses and reflect new information about the health and safety risks and how they should be managed. Preliminary information gathered at the start of the programme is unlikely to be sufficient.

When pre-construction information is complete, it must include proportionate information about:

• The Cultural Heart programme and key dates of the construction phase

- The planning and management of the programme/project such as the resources and time being allocated to each stage of the programme and the arrangements to ensure there is cooperation between duty holders and the work is coordinated
- The health and safety hazards of the site, including design and construction hazards and how they will be addressed
- Any relevant information in an existing health and safety file.

The information should be in a convenient form and be clear, concise and easily understandable to help other duty holders involved in the programme to carry out their duties.

The pre-construction information gathered by the client to date is included in Appendix I.

16 Design management

16.1 Overview

Design management is the application of programme management skills to the design phases of a programme to assure that the design is optimised, fully meets the Strategic Outline Case and is advanced to support the achievement of the overall programme schedule.

16.2 Key documents

There are a number of key documents addressing design management procedures for the programme. The documents are listed below and further detail is provided in the subsequent sections:

- Design responsibility matrix
- Design programme
- Design risk register input by the designers and specialist contractors/designers
- Kirklees Council design standards/requirements
- Design change form and procedure
- Electronic design management system plan
- BIM execution plan and the "golden thread" of information.

16.3 Design management responsibilities

The following organisations have key involvement in the design management process:

Organisation	Role	Key design management responsibility
Kirklees Council	Senior Responsible Officer (SRO)	Overall responsibility for design management during the programme
Kirklees Council	Programme Board (PB)	Review and approve conceptual design information prepared by the professional team. Provide comment and feedback on design presentations
Kirklees Council	Master plan and steering committee	Review the design development in line with Kirklees Council's wider policies and standards.
Kirklees Council	Technical and quality committee	Review and assess design to confirm that the technical design and quality standards and assets are aligned with Kirklees Councils requirements.
SDP	Programme Manager (PM)	Verify and incorporate the professional team's schedule for production of detailed design information and other information into the master schedule. Monitor progress.
ТВС	Lead Designer	Coordination and production of all design information (including multi-disciplinary

	engineering design) for the programme. Responsible for the design team's schedule and meeting Gateway deadlines.
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16.4 Design responsibility matrix

The purpose of the design responsibility matrix is to provide an agreed position to Kirklees Council and SDP on which parties are responsible for each element of design.

The design responsibility matrix will be prepared following the appointment of the lead designer and will be included in Appendix I. The initial proposal, as issued with the ITB, is included for information.

16.5 Design stage deliverables

The programme is using Gateways to manage progress during the design stage. The key Gateway for the design stage and the outline deliverables for this appointment is:

Gateway 2 – Concept design and master plan

Detailed deliverables for the design stage are as described in the Outline Delivery Strategy. These deliverables will be further defined in the PEP following the appointment of the lead designer.

16.6 Design schedule

The design schedule is updated and re-issued as a baseline at the beginning of each RIBA stage, initially 1-2/3.

Thereafter the design programme is regularly agreed with the SDP and Kirklees Council and then updated and communicated by the lead designer on a monthly or needs be basis.

16.7 Design standards

Following appointment of the lead designer, Kirklees Councils specific design requirements and standards will be established and recorded here.

16.8 BIM execution plan

is the SDP BIM lead for the programme and will be responsible for production of the BIM execution plan template.

It is expected the lead designer will complete the BIM execution plan, for approval by the SDP, using the template with the support of the design team and will manage the updates throughout the design phase.

16.9 Common information system plan

Currently SharePoint is being used. Section 9 provides more detail on the proposed development of the common information system.

16.10 Design change management

The effective management of change is critical to the successful delivery of the programme.

Design change is inevitable which is why we have in place robust systems and processes such that all design changes are fully evaluated and properly authorised before being approved and implemented.

The design consultants must use early warnings to flag up potential changes early and indicative impact assessments to determine whether or not it is worthwhile undertaking detailed evaluation.

Details of the change control procedure are provided in Section 14.

16.11 Design risk management

Design risk management will be an integral component of the programme and commercial management process. Design risk will be developed by the design team once appointed and managed via the risk management process set out in section 13.

16.12 Monitoring design progress:

The main mechanism for monitoring design progress is via the weekly design team meetings.

Periodic design review workshops will be held with Kirklees Councils Cultural Heart technical and quality steering committee.

16.13 Design document control

The agreed protocol for issuing drawings and documents on the programme is set out in Section 8.

16.14 Requests for information (RFI)

During the design stages, all requests for information by the design team will be issued to the SDP. The requests for information will be assigned a number and recorded on a tracking register, named Cultural Heart – Combined RFI Form Register Rev A located on SharePoint. The SDP will be responsible for obtaining responses, logging these on the register and distributing the responses to the team.

RFIs and responses will be tracked at the progress meetings and estimated response dates for all outstanding RFIs will be presented and tracked at each meeting.

17 Stakeholder management

17.1 Overview

Stakeholder management is the systematic identification, analysis, planning and implementation of actions designed to engage with stakeholders. It harnesses the positive influences and minimises the effect of the negative influences.

The main activities associated with stakeholder management include:

- Identification of stakeholder organisations and key stakeholders and decision makers through the process of stakeholder mapping
- Analysis of the stakeholders to understand their influence and position in relation to the programme
- Development of a stakeholder management & communication plan which sets out the approach, form and timing of communications with each stakeholder or group of stakeholders
- Engagement of stakeholders including the production of stakeholder specific communications materials or presentations.

17.2 Stakeholder identification and analysis

A schedule of Cultural Heart stakeholders was provided by Kirklees Council, this schedule was then further reviewed in order to define leads for each main element within the Cultural Heart programme. The Kirklees Council and the SDP then defined a core group of stakeholders to be consulted for the development of the SOC.

The internal and external stakeholder lists will be further reviewed and redefined as required as the programme design develops.

The SDP have therefore progressed with core consultation stakeholders in order to establish parameters for the SOC.

17.3 Stakeholder communication and engagement

IPW have been engaged as part of the SDP to consult with defined stakeholders throughout the development of the Strategic Outline Case and then Outline Business Case.

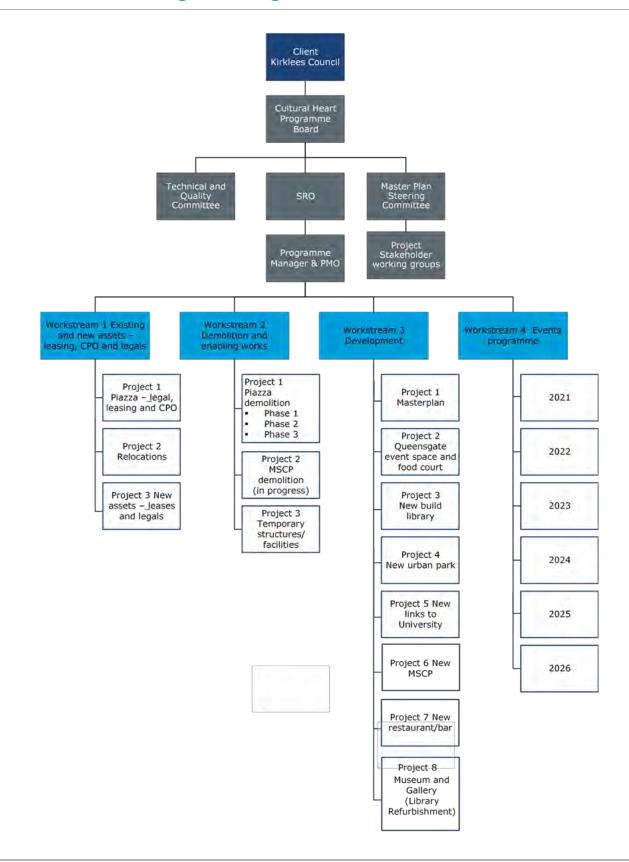
A core group of stakeholders were defined by Kirklees Council for consultation in relation to the development of the Strategic Outline Case. IPW have commenced this initial phase of consultations, have prepared notes which they are sharing with the SDP via SharePoint.

A wider group of stakeholders have also been defined who will be consulted during the Strategic Outline Case and Outline Business Case development.

17.4 Core Stakeholders and wider stakeholders

For the consultations relative to the preparation of the SOC persons have been identified as the core stakeholders by Kirklees Council. The list of these stakeholders and the wider stakeholders is included in appendix J.

APPENDIX A - Programme governance structure



Programme governance

Role	Role Description	Resource
Programme Board	A Programme Board should comprise members of the both the Built Environment, Estates & Property Management Team as leaders of the most directly affected teams by the change implied in the programme, and potentially representatives of staff. Wider expertise should be provided by other departments such as Legal, Finance and HR. The Programme Board should be led by alongside the SRO who is responsible for the decision making and ensuring the ongoing overall alignment of the programme to the strategic direction of the council.	 Members: Strategic Director Growth and Regeneration (Chair) Senior Responsible Officer Strategic Director Environment & Climate Change Service Director Legal, Governance and Monitoring Service Director Finance Service Director for Development Head of Development & Master Planning Head of Corporate Landlord and Capital Service Director for Culture and Visitor Economy Programme Manager
Senior Responsible Officer (SRO)	The SRO is ultimately accountable for the Programme ensuring that it meets its objectives and realises expected benefits. The individual who fulfils this role should be able to lead the programme with energy and drive and must be empowered to direct the programme and take decisions. They must have enough seniority and authority to provide leadership to the programme team and take on accountability for delivery. Report to the Programme Board	 SRO With support from: Town Centres Programme Manager (Town Centre Strategy) Capital Delivery - Huddersfield Blueprint Capital Programme Manager/ Lead Facilitator
Workstream Leads	The Workstream Leads would be responsible for shaping the direction of each workstream, reporting progress to the Programme Board, and sharing information back into their respective workstream. Specifically, they will need to coordinate project activities to deliver the 'future way of working' and 'long term benefits' as described in the Business Plan. Report to the SRO	Lead – (SDP) Workstream 1 - 2 day per week • Town Centres Programme Manager (Town Centre Strategy)/ • / Disposal and Acquisition Surveyor – Regeneration and Strategic Assets & (SDP) Workstream 2 – 2/3 day per week

Role	Role Description	Resource
Technical and Quality Steering Committee	 Responsible for confirming technical and quality standards and completing the technical review and approval of the masterplan as it develops at the Gateways. Key approval points are Gateway 1 SOC and Gateway 2 OBC . This review is to assess and confirm the technical design and quality standards and assets are aligned with Kirklees Councils requirements and that the asset. Typical questions: Does it meet relevant policy standards? Does it meet the sustainability requirements? Report to Programme Board via SRO 	 SDP Workstream 3 - 3 days per week SDP Workstream 4 - TBC TBC Typically resource 2 days per month per person SoC 10 days per person OBC 10 days per person OBC 10 days per person Members: Strategic Manager Technical Services - Chair Head of Corporate Landlord and Capital Capital Delivery - Client Design Advisor - Brief Development / Lead Facilitator Technical Lead - Electrical Strategic Manager for Capital Development and Delivery Technical Lead Structural Engineering Capital Delivery - Huddersfield Blueprint Capital Programme Manager/ Lead Facilitator Senior Maintenance Condition Surveyor Technical Lead - Fire/Asbestos/Legionella Capital Delivery Technical Services - Architecture
Procurement Evaluation team	Responsible for agreeing the evaluation criteria and the evaluation of the competitive tenders against the criteria. Responsible for the approval of the tender report prior to issue to the Programme Board. Report to Programme Board via SRO	Lead – (SDP) Members Lot 1: SRO Capital Delivery – Client Design Advisor - Brief Development / Lead Facilitator

Role	Role Description	Resource
		 Lead - Growth & Regeneration Town Centre Conservation & Design (SDP) (SDP) Members Lot 12: SRO Strategic Manager Technical Services (SDP) (SDP) (SDP) Social Value: Strategic Category Manager - Construction Senior Procurement Specialist Head of Procurement Price (SDP) Quantity Surveyor Legal: Jack Doukov-Eustice (Associate) Haley Cochrane (Snr Construction Contracts Mgr) Katie Milner (Managing Associate)
Members liaison	Responsible for liaison with the Council Members, including Town Centre Regeneration & Corporate	 resource typically, 4 days per month Via SRO Head of Development & Master Planning
Communications & PR	Responsible for internal and external media and PR	 resource typically, 8 days per month Communications Business Partner for Growth and Regeneration

Role	Role Description	Resource
Finance Master Plan Steering Committee	Responsible for management of PO's, internal/direct costs, payments and financial scrutiny Responsible at this stage for the review and approval of the functional elements for OBC:	 resource typically, 10 days per month Finance Manager Head of Finance and Accountancy (Chief Accountant) Each resource typically 3 days per month
	 Viability of commerciality of the programme to OBC Approving the OBC Setting critical success factors Agreeing the functional requirements are met Agreeing operational requirements are met Report to Programme Board via SRO 	 Lead - Head of Development & Master Planning Members (Current range of potential names that have been discussed or noted to date: SRO Head of Corporate Landlord and Capital Town Centres Programme Manager (Town Centre Strategy) Capital Delivery Technical Services Architecture/Design Advisor Head of Planning and Development Development Management Masterplanner - Investment and Regeneration ? Programme Manager - Major Projects Economy & Skills? Senior Landscape Architect Capital Delivery - Huddersfield Blueprint Capital Programme Manager/ Lead Facilitator Head of Development & Master Planning Kirklees Town Centre Strategy
Project Stakeholder working groups	Responsible for providing functional input into the SOC briefing process for each project and identifying operational needs.	Typically, 3 days per month Group Coordinator – Town Centres Programme Manager (Town Centre Strategy)

Role	Role Description	Resource
	Report to Master Plan Steering Committee	 Consultees to date: Library Development Manager – Library Museums and Galleries Manager – Culture & Tourism – MAG Strategic Lead for Cultural Development Growth & Housing – Lead Facilitor – Events Interim Head of Communications/Communicatio n Lead/ Communications Business Partner for Growth and Regeneration – Comm's Head of Highways – Highways Head of Major Projects (Car Parking / Transportation) – Major Projects/MSCP Team Leader- Growth & Regeneration (Town Centre Conservation & Design) – Town Centre/Conservation Head of Operational Services - Parks

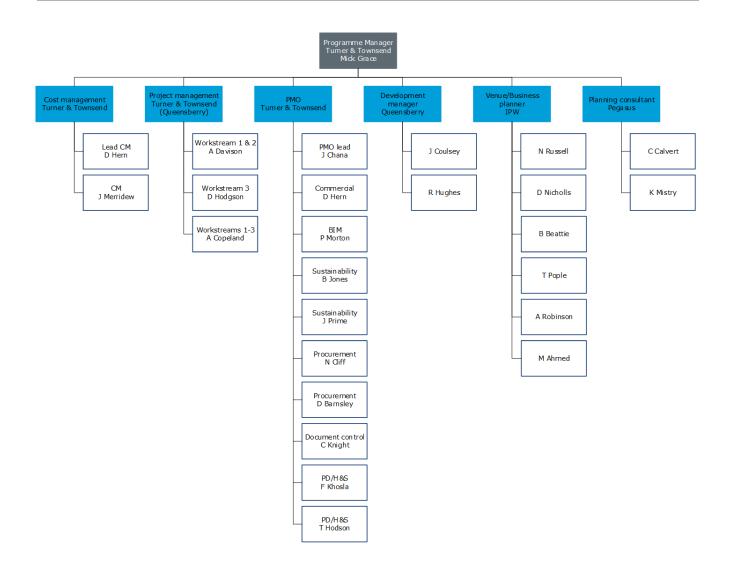
Programme Board Members

Position
Senior Responsible Officer
Strategic Director Growth and Regeneration & Chair
Strategic Director Environment & Climate Change
Service Director Legal, Governance and Monitoring
Service Director Finance
Head of Corporate Landlord and Capital
Head of Development & Master Planning
Service Director for Culture and Visitor Economy
Programme Manager

Cabinet Members

Cabinet member	Portfolio
Shabir Pandor	Leader of the Council and holder of the Leaders Cabinet Portfolio
Cathy Scott	Deputy Leader and Cabinet member for Housing and Democracy
Carole Pattison	Learning, Aspiration and Communities
Graham Turner	Regeneration
Viv Kendrick	Children (Statutory responsibility for Children)
Naheed Mather	Environment
Will Simpson	Culture and Greener Kirklees
Musarrat Khan	Health and Social Care
Paul Davies	Corporate with member responsibility for the Cultural Heart
Eric Firth	Transport

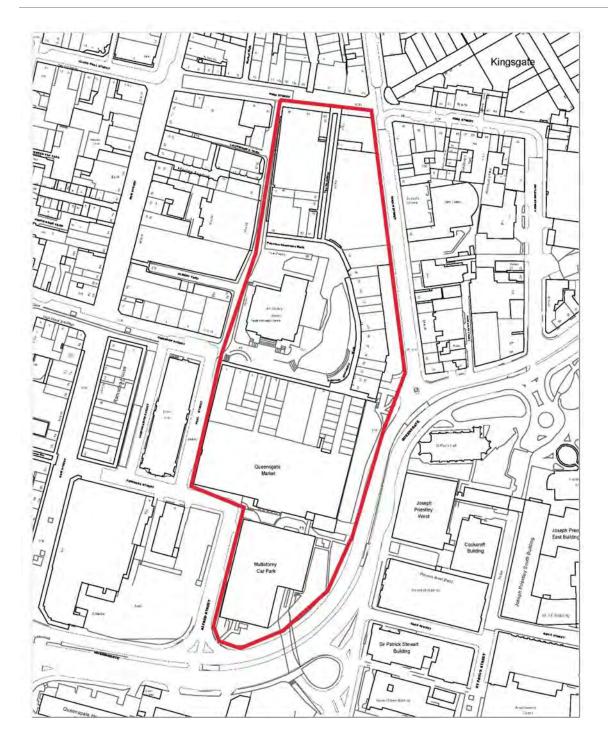
APPENDIX B - Programme roles and responsibility matrix

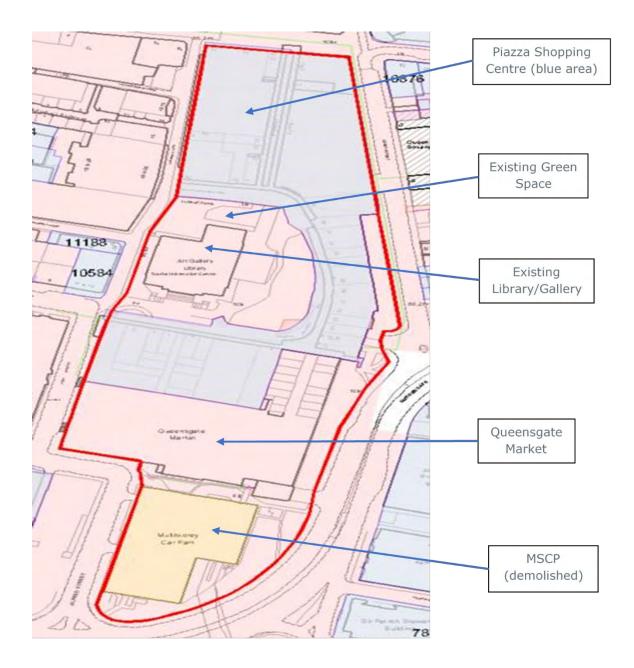


APPENDIX C – Programme directory

Kirklees - Cultural Heart Project Directory 251021 (Autodesk)

APPENDIX D – Site plan and drawings





APPENDIX E – Programme master schedule

Cultural Heart - Master Delivery Schedule - Rev M

APPENDIX F – Meeting and reporting schedules

Programme Board (June to August 2022)

SDP team reports due	PM report due	Meeting date
10th June 2022	17th June 2022	22nd June 2022
8th July 2022	15th July 2022	20th July 2022
11th August 2022	16th August 2022	19th August 2022

Post SOC Meetings -November 2021 to August 2022

Meeting	Date
Core Team Meeting	Weekly - Tuesdays at 9.30am
Principals Meeting	Biweekly - Tuesdays at 10.30 am
Programme Progress Meeting	Monthly - Wednesdays at 10.30am
Cost Review	Monthly - Wednesdays at 9.30am
Design Meeting: Refurbishment/ New Build Project	Weekly – Wednesdays at 2pm
Building Operations Workshop	Monthly – Wednesdays at 10.30am
Existing Leases Meeting	Biweekly – Wednesdays at 3pm
Contractor Procurement Workshop	ТВС
New Operators and Procurement	10 th November and 7 th December at 3.30pm
Comms Meeting	Monthly – Thursdays at 9.30am
Master Plan Committee Briefing	TBC
Cabinet Briefing	ТВС
ET/ LMT/ LM/ Briefing	TBC
Surveys and Investigations Workshop	3 rd November at 10.30am
Stakeholders Workshop	9 th November at 2pm
Schedule Review Workshop	ТВС
Technology BIM/ CDE Platform Meeting	8 th November at 10.30am
Financial Review Workshop	8 th November at 9.30am

Communications and PR Workshop	4 th November at 10.30am
Urban Park Workshop	16 th November at 2pm
Tolson Museum Workshop	TBC

Cabinet (August 2022)

KDN deadline	Final reports to governance	Cabinet meeting
30 th June 2022	21 st July 2022	2 nd August 2022 TARGET

Next Stage Meeting Schedule Key

Meeting Schedule to be confirmed following start of RIBA Stage 3.

APPENDIX H – Change control form

	chung	e Order No:	Design Stage	B	uilding / Pha
Type of Change:	Origin	ator of Change		D	ecision Requ
Proposed Change	•			L	
Reasons for chang	je :				
Cost assessment:			fees, OH, profit & VAT)		
	Agreed v	with contractor			
	Fees				
	Total				
Programme assess	sment Pro	aramme Activity			
riogramme usses.			man		
		pact agreed with C	Unitractor	1	
Design Team Com					
Other Team Comm	ments (RI	E: performance /	y quality / health & Sa Sig am) (RE: performance	fety) gned:	ality / health
	ments (RI	E: performance /	y quality / health & Sa Sig am) (RE: performance	fety) gned: / qua	ality / health
Other Team Comm	ments (RI	E: performance /	y quality / health & Sa Sig am) (RE: performance	fety) gned: / qua	ality / health
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APPENDIX I – Design management

To be completed by Lead Designer

Preconstruction Information:

To be collated by (T&T)

Appendix J – Core Stakeholders

Name	Title	Stakeholder Group(s)
Representative of Kirklees Council	Library Development Manager	New Library
Representative of Kirklees Council	Museums and Galleries Manager - Culture & Tourism	Museum and Gallery
Representative of Kirklees Council	Strategic Lead for Cultural Development Growth & Housing - Lead Facilitator	Events Space
Representative of Kirklees Council	Head of Strategic Communications	Communications/Events
Representative of Kirklees Council	Head of Highways	MSCP and University Links
Representative of Kirklees Council	Head of Major Projects (Car Parking / Transportation)	MSCP and University Links
Representative of Kirklees Council	Team Leader- Growth & Regeneration (Town Centre Conservation & Design)	Town Centre
Representative of Kirklees Council		

Further stakeholders to be agreed following completion of OBC.

Appendix K – Agendas

Programme Board – Typical Agenda

1.0	Apologies
2.0	Actions Log Sheet
3.0	Programme report
3.1 3.2	Overview Headline Achievements
3.3	Key Issues
3.4	Client Approvals
3.5	Risk
3.6	Forward Look
3.7	KPI's
3.8	Social Value
3.9	Timeline to SOC
4.0	Questions & Answers
5.0	Focus Area
6.0	Any other business
7.0	Next meeting

SDP Team Meeting – Typical Agenda

1.	0	Apologies
2.	0	Actions Log Sheet
3.	0	Planning Update
4.	0	Development Update
4.	1	QB update
4.2	2	IPW update
5.	0	Wider Team Updates
5.	1	Cost management
5.2	2	Procurement
5.3	3	Sustainability
5.4	4	BIM
5.!	5	Health and Safety
6.	0	Countdown to SOC
6.	1	Update on timeline to SOC
7.	0	AOB
Со	re Te	eam Meeting - Typical Agenda
1.	0	Apologies
2.	0	Actions Log Sheet
2	~	Kirkless Coursil Undets

- 3.0 Kirklees Council Update
- 3.1 Library and Market Decant
- 4.0 Queensbury Update
- 4.1 Existing Lease and Development Update
- 5.0 IPW Update
- 5.1 SOC and OBC Development
- 6.0 AOB

Communication Update Meeting – Typical Agenda

1.0	Apologies
2.0	Overview
3.0	Communications Update Run Through
3.1	Development Appraisal
3.2	Procurement
3.3	Social Values
3.4	Cost Management
3.5	Planning
3.6	Sustainability
3.7	Health and Safety
3.8	BIM
3.9	Initial Enabling
4.0	Future Communications
5.0	AOB

Appendix L – Workshop Participants

Sustainability Workshop Participants

	Title	Company
Representative of Kirklees Council	Project Manager – Transport Strategy and Policy	Kirklees Council
Representative of Kirklees Council	Project Officer - Transport Strategy and Policy	Kirklees Council
Representative of Kirklees Council	Operational Manager – Air Quality, Energy & Climate Change	Kirklees Council
Representative of Kirklees Council	Principal Technical Officer (P&NC) Public Protection - Pollution and Noise (EV Charging Strategy)	Kirklees Council
Representative of Kirklees Council	Project Manager Energy & Climate Change Environment Services & Public Protection	Kirklees Council
Representative of Kirklees Council	Strategic Manager Technical Services	Kirklees Council
Representative of Kirklees Council	Technical Services Manager	Kirklees Council
Representative of Kirklees Council	Capital Delivery – Client Design Advisor - Brief Development / Lead Facilitator	Kirklees Council
Representative of Kirklees Council	Senior Responsible Officer	Kirklees Council
	Senior Project Manager	SDP
	Associate Director (Sust)	SDP
	Principal Consultant (Sust)	SDP

Planning Workshop Participants

Name	Title	Company
Representative of Kirklees Council	Lead Local Flood Officer	Kirklees Council
Representative of Kirklees Council	Landscape Architect	Kirklees Council

Biodiversity Officer	Kirklees Council
Head of Planning and Development (Planning)	Kirklees Council
Principal Engineer – Highways	Kirklees Council
Planning Policy and Strategy Group Leader	Kirklees Council
Head of Highways	Kirklees Council
Planning Policy Officer	Kirklees Council
Planning Policy Team Leader	Kirklees Council
Conservation Officer	Kirklees Council
Head of Service Climate Change and Environmental Strategy	Kirklees Council
Executive Director (PC)	SDP
Senior Project Manager	SDP
	Head of Planning and Development (Planning) Principal Engineer – Highways Planning Policy and Strategy Group Leader Head of Highways Planning Policy Officer Planning Policy Officer Planning Policy Team Leader Conservation Officer Head of Service Climate Change and Environmental Strategy Executive Director (PC)

Risk Workshop Participants

Name	Title	Company
Representative of Kirklees Council	Senior Responsible Officer	Kirklees Council
Representative of Kirklees Council	Capital Delivery – Huddersfield Blueprint Capital Programme Manager/ Lead Facilitator	Kirklees Council
Representative of Kirklees Council	Head of Development & Master Planning (Kirklees Town Centre Strategy)	Kirklees Council
Representative of Kirklees Council	Strategic Manager for Capital Development and Delivery	Kirklees Council
Representative of Kirklees Council	Head of Corporate Landlord and Capital	Kirklees Council

Development Manager	SDP
Director (BC)	SDP
Associate (BC)	SDP
Head of Culture (BC)	SDP
Director (H&S)	SDP
Senior SHEQ Consultant	SDP
Associate Director (CS)	SDP
Director (CM)	SDP
Associate Director(CM)	SDP
Programme Manager	SDP
Senior Project Manager	SDP
Senior Project Manager	SDP

Appendix M – Procurement workshop participants

Name	Title	Company
Representative of Kirklees Council	Strategic Category Manager – Construction and Infrastructure	Kirklees Council
Representative of Kirklees Council	Head of Procurement & Commissioning Support	Kirklees Council
Representative of Kirklees Council	Senior Responsible Officer	Kirklees Council
	Managing Associate	Addleshaw Goddard
	Associate	Addleshaw Goddard
	Associate Director (CS)	SDP
	Programme Manager	SDP
	Senior Project Manager	SDP

Procurement approach workshop (design consultants)

Procurement - social value evaluation panel (design consultants)

	Title	Company
Representative of Kirklees Council	Strategic Category Manager - Construction and Infrastructure	Kirklees Council
Representative of Kirklees Council	Senior Procurement Specialist	Kirklees Council
Representative of Kirklees Council	Head of Procurement & Commissioning Support	Kirklees Council
	Associate Director (CS)	SDP
	Programme Manager	SDP

Procurement – price evaluation panel (design consultants)

Name	Title	Company
	Director (CM)	SDP
	Associate Director (CM)	SDP
	Quantity Surveyor	Kirklees Council

Procurement - capability assessment scoring panel (design consultants)

Name	Title	Company	Lot 1	Lot 12
Representative of Kirklees Council	Senior Responsible Officer	Kirklees Council	Х	Х
Representative of Kirklees Council	Capital Delivery – Client Design Advisor - Brief Development / Lead Facilitator	Kirklees Council	X	
	Development Manager	SDP	Х	Х
	Director	SDP	Х	
	Senior Project Manager	SDP	Х	
Representative of Kirklees Council	Strategic Manager Technical Services	Kirklees Council		Х
	Director	SDP		X
	Head of Culture	SDP		×

Procurement – evaluation panels (design consultants)

Name	Title	Company	Lot 1	Lot 12
Representative of Kirklees Council	Senior Responsible Officer	Kirklees Council	×	Х
	Senior Project Manager	Kirklees Council		Х
Representative of Kirklees Council	Capital Delivery – Client Design Advisor - Brief Development / Lead Facilitator	Kirklees Council	X	
Representative of Kirklees Council	Strategic Manager Technical Services	Kirklees Council		Х
Representative of Kirklees Council	Team Leader- Growth & Regeneration (Town Centre Conservation & Design)	Kirklees Council	×	
	Development Manager	SDP	Х	Х
	Director	SDP	Х	
	Head of Culture	SDP		Х

Procurement - main contractor route workshop

Name	Title	Company
Representative of Kirklees Council	Head of Procurement & Commissioning Support	Kirklees Council
Representative of Kirklees Council	Strategic Category Manager - Construction and Infrastructure	Kirklees Council
Representative of Kirklees Council	Head of Corporate Landlord and Capital	Kirklees Council
Representative of Kirklees Council	Strategic Manager for Capital Development and Delivery	Kirklees Council
Representative of Kirklees Council	Senior Responsible Officer	Kirklees Council
Representative of Kirklees Council	Senior Legal Officer	Kirklees Council
	Associate	Addleshaw Goddard
	Managing Associate	Addleshaw Goddard

Managing Associate	Addleshaw Goddard
Director	SDP
Associate	SDP
Development Manager	SDP
Associate Director	SDP
Director	SDP
 Programme Manager	SDP
Senior Project Manager	SDP
Senior Project Manager	SDP

Appendix N – Meeting attendees

SDP Meeting Attendees

Name	Title	Company
Representative of Kirklees Council	Senior Responsible Officer	Kirklees Council
Representative of Kirklees Council	Capital Delivery – Huddersfield Blueprint Capital Programme Manager/ Lead Facilitator	Kirklees Council
Representative of Kirklees Council	Town Centres Programme Manager (Town Centre Strategy)	Kirklees Council
	Programme Manager	SDP
	Senior Project Manager	SDP
	Senior Project Manager	SDP
	Assistant Project Manager	SDP
	Director (CM)	SDP
	Associate Director (CM)	SDP
	Director (H&S)	SDP
	Senior SHEQ Consultant	SDP
	Associate Director (CS)	SDP
	Associate Director (Sust)	SDP
	Director (CS)	SDP
	Principal Consultant (Sust)	SDP
	Associate Director (BIM)	SDP
	Development Manager (DM)	SDP
	Project Director (DM)	SDP
	Director (BC)	SDP
	Head of Cultural Services (BC)	SDP
	Associate (BC)	SDP
	Executive Director (PC)	SDP

Principal meetings attendees

Name	Title	Company
Representative of Kirklees Council	Senior Responsible Officer	Kirklees Council
Representative of Kirklees Council	Head of Corporate Landlord and Capital	Kirklees Council
Representative of Kirklees Council	Head of Development & Master Planning (Town Centre Strategy)	Kirklees Council
Representative of Kirklees Council	Capital Delivery – Huddersfield Blueprint Capital Programme Manager/ Lead Facilitator	Kirklees Council
Representative of Kirklees Council	Town Centres Programme Manager (Town Centre Strategy)	Kirklees Council
	Programme Manager	SDP
	Senior Project Manager	SDP

Appendix O – Committee Members

Master plan and Steering Committee

Title	Company
Senior Responsible Officer	Kirklees Council
Town Centres Programme Manager (Town Centre Strategy)	Kirklees Council
Capital Delivery – Huddersfield Blueprint Capital Programme Manager/ Lead Facilitator	Kirklees Council
Capital Delivery – Client Design Advisor - Brief Development / Lead Facilitator	Kirklees Council
Senior Landscape Architect	Kirklees Council
Head of Corporate Landlord and Capital (Asset Strategy, FM and Capital Development and Delivery input)	Kirklees Council
Development Management Master planner – Investment and Regeneration	Kirklees Council
Programme Manager - Major Projects Economy & Skills	Kirklees Council
Head of Planning and Development (Planning)	Kirklees Council
Head of Development & Master Planning (Kirklees Town Centre Strategy)	Kirklees Council

Technical and Quality Committee

Title	Company
Head of Corporate Landlord and Capital (Asset Strategy, FM and Capital Development and Delivery input)	Kirklees Council
Strategic Manager Technical Services	Kirklees Council
Strategic Manager for Capital Development and Delivery	Kirklees Council
Capital Delivery – Huddersfield Blueprint Capital Programme Manager/ Lead Facilitator	Kirklees Council
Capital Delivery – Client Design Advisor - Brief Development / Lead Facilitator	Kirklees Council
Technical Services Manager	Kirklees Council
Technical Services Officer	Kirklees Council
Senior Structural Engineer	Kirklees Council

Senior Maintenance Condition Surveyor	Kirklees Council
Technical Lead - Fire/Asbestos/Legionella	Kirklees Council
Capital Delivery Technical Services - Architecture	Kirklees Council