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1	Credits
5	The future of Cardiff's Coal Exchange: an Exploration of Urban and Architectural Resilience <b>Juliet Davis</b>
9	Adapt to Conserve: The Compromising Process of Heritage-focused Regeneration <b>Keith Chan</b>
17	Creating a Resilient Framework for Development <b>Gareth Cotter</b>
23	Building Resilience by Curating the City <b>Theo Ellis</b>
27	Re-humanising and Democratising the Industrial Legacy of Cardiff <b>Priit Jürimäe</b>
33	Community Resilience: The Coal Exchange as an Interface between the Butetown Community and Cardiff <b>Terry Lai Chuck Choo</b>
39	From Coal Exchange to Renewables Exchange <b>Dan Liu</b>
45	Common Ground: Creating a Place of Exchange between Different Cultures, Communities and Economies <b>Aoife Rath-Cullimore</b>
53	Acknowledgements



# Juliet Davis

## The future of Cardiff's Coal Exchange: an exploration of urban and architectural resilience

This year's MArch 2 'Economy' unit set out to engage with the notion of 'resilience' which has become an increasingly important matter for public policy and a focus for research across a number of disciplines in recent times.

Resilience was originally theorised within the field of Ecology where it was used to explain how natural systems become able to withstand change<sup>1</sup>. In urban studies, it has come to denote the capacities of regions and cities to recover from shocks, which may be of a number of kinds. These include natural disasters such as major floods, earthquakes or hurricanes, and human actions ranging from terrorist attack and war to economic crisis<sup>2</sup>. Some such events may lead to the instant devastation and collapse of the built fabric of cities, whereas others may have less direct and immediate impacts on their physical structure. Through redundancy, decay and dereliction, buildings can reflect cities' declining fortunes, their changing economies and cultures, as examples from Detroit in the United States to Germany's Rhur region, to Barcelona's Poblenou to London's Lea Valley to our own context of the South Wales Valleys highlight. Resilience may also be (though it is less commonly) evaluated in relation to more minor, gradual, less traumatic and also cyclical events – the ordinary changes, progressions and (incomplete) repetitions that cities undergo over time. Cities are said to show resilience typically by either bouncing back to how they were before a given event or by adapting in

a more lasting sense to altered circumstances – be it to the unfolding realities of climate change, developing technologies, transforming economies and policies, or gradual social change. An important emphasis of urban resilience research is on understanding how they do so in order to address current contexts of risk and uncertainty<sup>3</sup>.

Resilience in architecture is when buildings are able not only to survive change but to help create the possibility for new use and activity, new relationships between people and place. Resilience implies the adaptability of built form, but depends on numerous other factors including site and location, politics and governance, local economy and the real estate market, the availability of finance, development pressures and trends, perceived cultural value and appreciation. Looking particularly at one building in an historical part of Cardiff Bay, our interest was in exploring how architecture which has seemed to fail can become resilient – beginning by understanding the specific factors which shape its life and condition.

Students in their fifth year at the Welsh School of Architecture are asked to develop a design thesis. A design thesis is not only a proposal that translates an envisaged programme of uses into a spatial context but involves the formulation of an intellectual proposition. Our unit's opening proposition with respect to architectural resilience is that it is only by developing an understanding of the forms of



Back in the day: busy streets around the Coal

uncertainty, risk and shock that have shaped and continue to shape buildings in their broader urban contexts that we can begin to design for future resilience. Students were asked to test and develop this proposition through their own design-based research into the site.

### The site context:

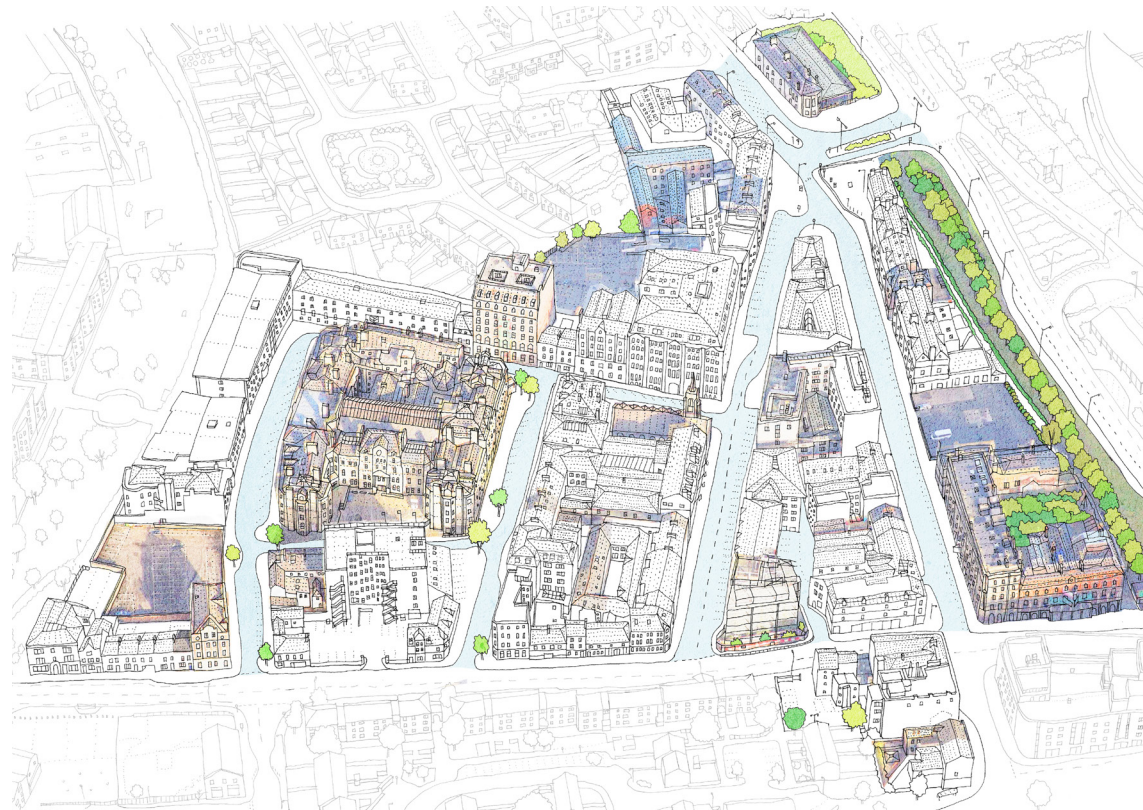
The unit's focus for the year was on Mount Stuart Square, which is reflective both of the decline of the South Wales coal industry and of mixed legacies of renewal since the late 1970s. Between the early nineteenth century and the First World War, Cardiff was a 'coal metropolis'<sup>4</sup>. The area now encompassed within the Mount Stuart Conservation Area was developed at the height of the coal trade in the late nineteenth century. The Coal Exchange, designed and built by architect Edwin Seward between 1883 and 1886, lies at the heart of this development. However, only seventy two years after its construction, in 1958, it had closed and coal exports from Cardiff shortly ceased in 1964. This demise has had lasting impacts on the city's economic directions and prosperity. Sixty years on from this, the area does still not have a secure base of use or future, in spite of its adjacency to parts of Cardiff Bay which have been a focus for regeneration for twenty-five years.

Though a Conservation Area, Mount Stuart Square has not especially benefitted from recent cycles of investment in Cardiff Bay and is experiencing renewed economic difficulties in the aftermath of the 2008 financial crisis. The future of the area is uncertain as buildings degrade and fall out of use, and contested as authorities and interest groups debate what should be done to either preserve or redevelop them. The Coal Exchange's future has been thrown into particular uncertainty in recent times as its condition has reached a critical point and it is no longer deemed habitable. Currently, the goals of conservationists are viewed as unfeasible by other public and private groups with major stakes in the building as the costs associated with bringing it back into use, let alone fully restoring it, cannot be met in an economically sustainable way.



Butetown now: in search of common ground





Each student in the unit was tasked with considering the potential adaptability or future resilience of Mount Stuart Square, focusing on the Coal Exchange which lies at the heart of it. Given the building's potent symbolism of both the city's coal-fuelled prosperity and its subsequent decline, they were encouraged to think about its future in a broad urban context asking where is Cardiff's economy today, where does it seem to be going and what does and might this mean for under-used architectural legacies of the coal-trading past? They were required to use a range of research methods, approaches to design and representation to look closely at the building and immediate site context as it is as well as to carefully assess various claims and perspectives on its future. We saw our role as designers as being to mediate varied claims and perspectives whilst also intervening creatively in the building's historical, partly ruined fabric.

Our precedents included a number of industrial buildings and historical areas that we visited in Barcelona in January – including the former textile factories of Can Batlló and Can Ricart and the areas of the Ciutat Vella and Vallcarca – and we also looked at precedents in the Lea Valley in London.

### The design theses:

The range of projects developed by the eight students in the unit is diverse. In the pages that follow, a closely edited selection of the work from the unit is shown. Overall, the unit suggests the rich value of shifting emphasis from the seductions of new build to the potentials of recycling and reinterpreting, of critical engagement with the past.

<sup>1</sup> C.S. Holling, Resilience and Stability of Ecological Systems. *Annual Review of Ecology and Systematics*, 4, (1973). pp. 1-23.

<sup>2</sup> Lawrence Vale and Thomas Campanella, *The Resilient City: How Modern Cities Recover from Disaster* (New York: Oxford University Press, 2005).

<sup>3</sup> Mark Pelling, *The Vulnerability of Cities: Natural Disasters and Social Resilience* (London, Sterling: Earthscan Publications, 2003).

<sup>4</sup> Alan Hooper and John Punter, eds., *Capital Cardiff 1975-2020: regeneration, competitiveness and the urban environment* (Cardiff: University of Wales Press, 2006).

### Key References:

Daskalakis, Georgia, Charles Waldheim and Jason Young, eds., *Stalking Detroit* (Barcelona: Actar, 2001).

Holling, C. S. Resilience and Stability of Ecological Systems. *Annual Review of Ecology and Systematics*, 4, (1973). pp. 1-23.

Hooper, Alan and John Punter, eds., *Capital Cardiff 1975-2020: regeneration, competitiveness and the urban environment* (Cardiff: University of Wales Press, 2006).

Oswalt Philipp, ed., *Shrinking Cities, Vol. 1 International Research* (Berlin: Kulturstiftung des Bundes, Hatje Cantz, 2005).

Pelling, Mark, *The Vulnerability of Cities: Natural Disasters and Social Resilience* (London, Sterling: Earthscan Publications, 2003).

Pickett, S.T.A., M.L. Cadenasso and Brian McGrath, eds., *Resilience in Ecology and Urban Design: Linking Theory and Practice for Sustainable Cities*, Future City Series, 3 (New York: Springer, 2013).

Power, Anne, Jörg Plöger and Astrid Winkler, *Phoenix Cities: The Fall and Rise of Great Industrial Cities* (Bristol: Policy Press, 2010).

Vale, Lawrence and Thomas Campanella, *The Resilient City: How Modern Cities Recover from Disaster* (New York: Oxford University Press, 2005).

Weir, Margaret M., Nancy Pindus, Howard Wial and Harold Wolman, *Urban and Regional Policy and Its Effects: Building Resilient Regions* (Washington, Brookings Institution, 2012).





# Keith Chan

## Adapt to Conserve: The Compromising Process of Heritage-focused Regeneration

This design thesis is based on the proposition that whilst the adaptability of historical fabric is crucial for the ability to sustainably conserve it, conservation can play an important role in regenerating places. My study of the historical and transforming fabric of Cardiff Bay suggests that the Coal Exchange is one of just a few remaining pieces of evidence of its industrial and commercial history, and a vivid, tangible reminder of the affluence generated by the Welsh coal trade in its heyday. Research in local archives uncovered letters, photographs and press cuttings which document long-standing heated exchanges between authorities and local voices. It suggests that to redevelop the Coal Exchange would signify not only the further erasure of the past but the side-lining of local people for whom its architectural remnants continue to matter. Research into the building's historical development since its closure in turn suggests that a conservation process predicated on restoring the building to a constructed notion of its former glory would miss the opportunity to respond to the evidence of its gradual development and decline.

My urban scale strategy is to reconnect urban remnants of the past in order to be able to address their current dislocation and uncover their regenerative potentials. My approach to the Coal Exchange, building on this, began with the aim of minimising losses to the historical fabric by recognising its multiple values<sup>1</sup>. As my project developed, I became critical of certain aspects of it which formed a basis for intervention. The project involves a mixed use

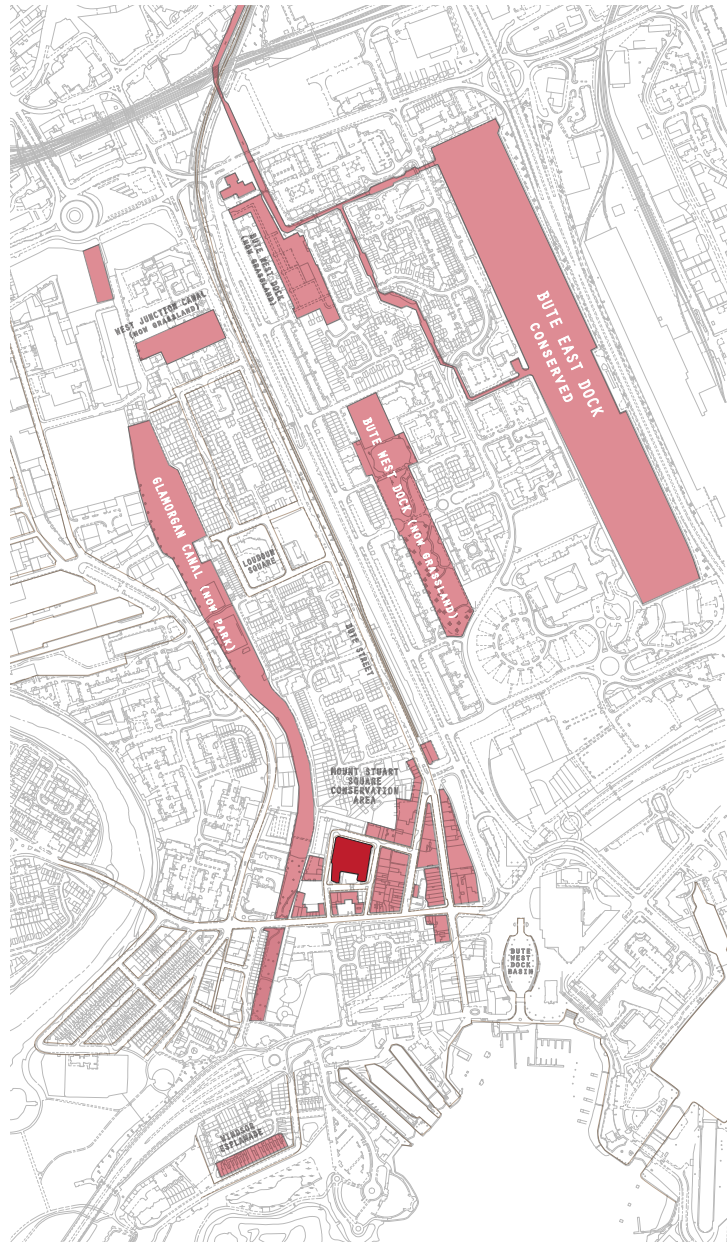
programme focusing on the arts, cultural institutions and creative industries that reflect Cardiff's changing economy. It also involves a mix of temporary and longer-term uses, which recognise the currently challenging economic context and the potential to secure investment through initially light-touch reactivation strategies. Precedents include the Custard Factory in Birmingham, and Palais de Tokyo in Paris, and I also looked at the work of Carlo Scarpa and Witherford Watson Mann. My design work seeks to amplify the building's existing character, respect and express its evolution and add a further layer. It challenges the practices of 'Façadism' (where only the façade is preserved for a new interior)<sup>2</sup>, or 'Victorian Restoration' (where buildings are rebuilt in the same style to its original design) and argues for a more rigorous, complex approach to repair and reuse.

<sup>1</sup> Cadw, *Conservation principles for the sustainable management of the historic environment in Wales* (Cardiff: Welsh Assembly Government, 2004).

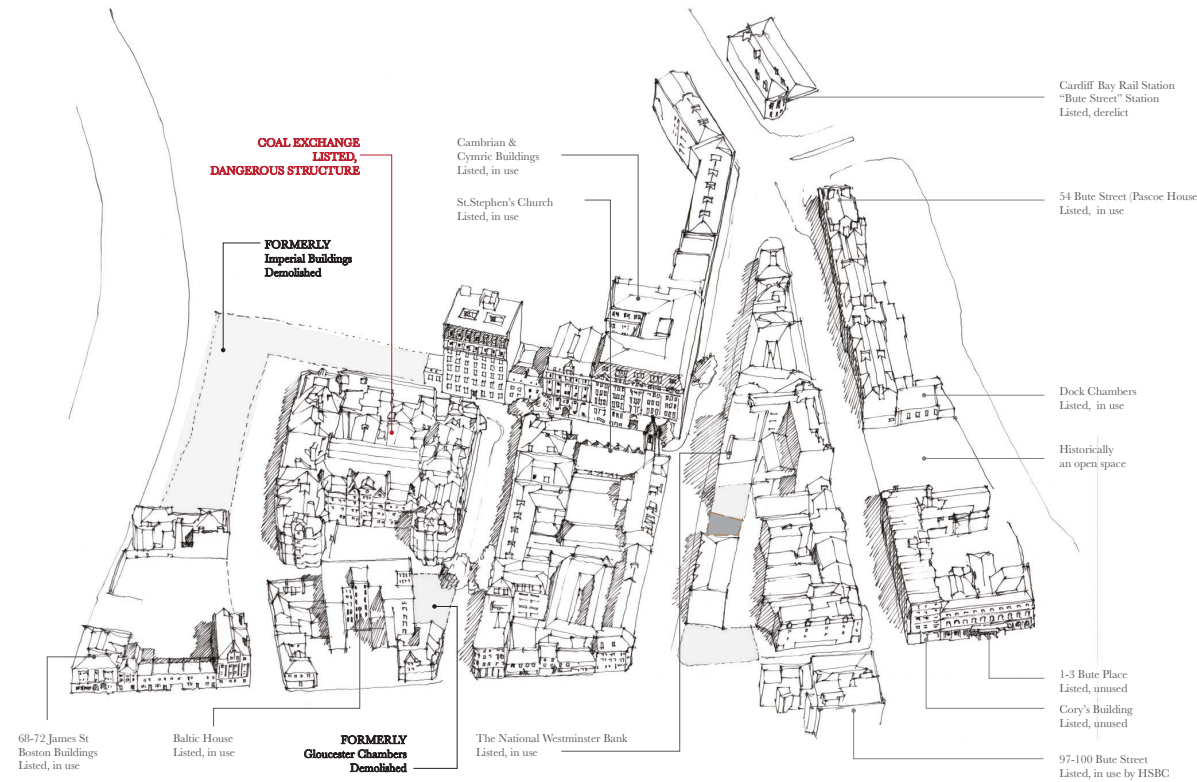
<sup>2</sup> Kerensa Sanford Wood, *Architecture of Compromise: A History and Evaluation of Façadism in Washington, DC* <<http://hdl.handle.net/10022/AC:P:13349>>







Softening the Threshold

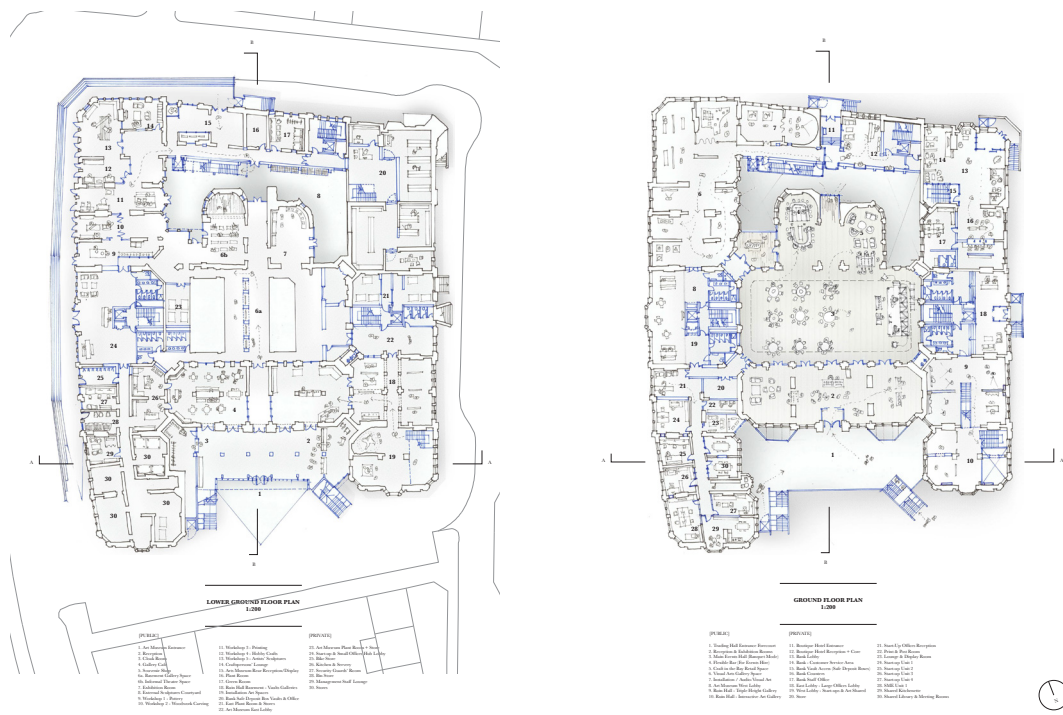
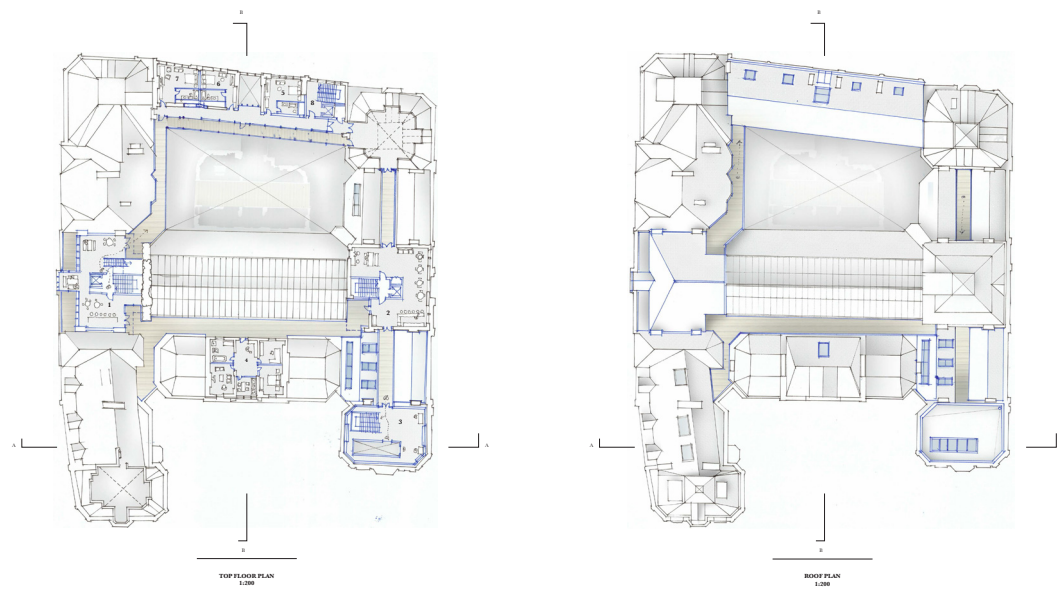


Historical Remnants



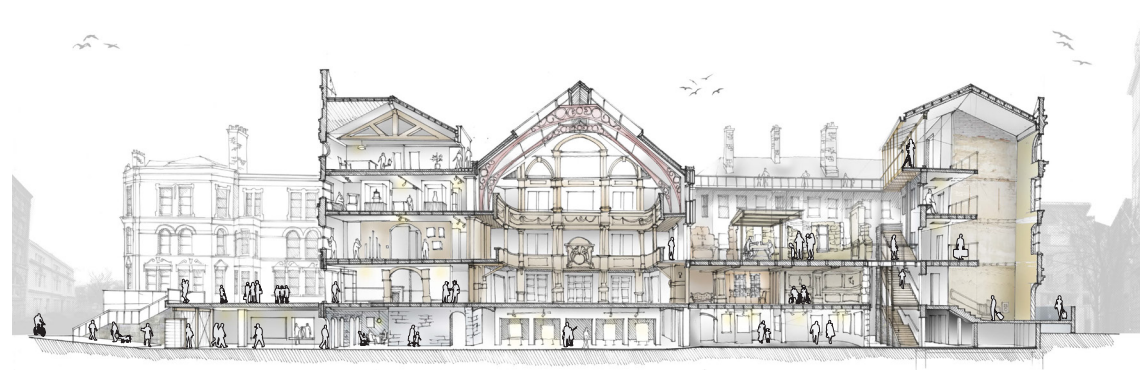
Improving the Threshold between Inside and Outside 12





## Ruin Hall: Atmospheres





[ADDITION]  
Reconnect the Museum Front  
to Public Open Spaces

[REPAIR]  
Reconnect into Main Hall  
Gallery Café at Entrance  
Restroom Exhibition Space

[MAIN HALL]  
Main Hall  
Gallery Space at Entrance

[COURTYARD]  
Small Public Courtyard Terrace  
Reconnect Access Route  
Reconnect Gallery Space

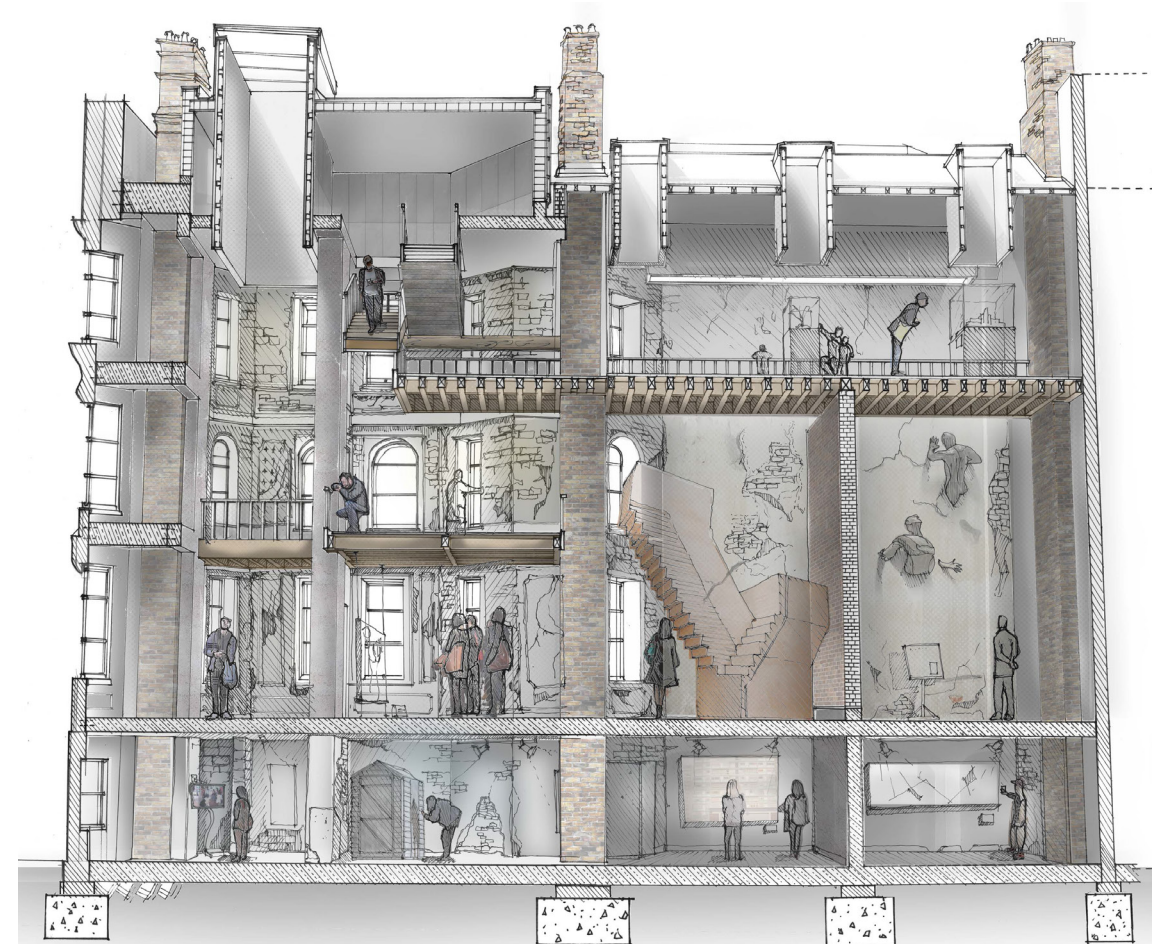
[NORTH WING]  
Intentionally designed for new activities  
Circulation and Comfort for Hotel Guests



[LIGHT TOUCH INTERVENTIONS]  
New Wing  
(Shedding a New Coat)

[ADDITION]  
Reconnect Art Museum Front

[READY INTERVENTION]  
Ruin Hall Gallery



Section through the Ruin Hall



# Gareth Cotter

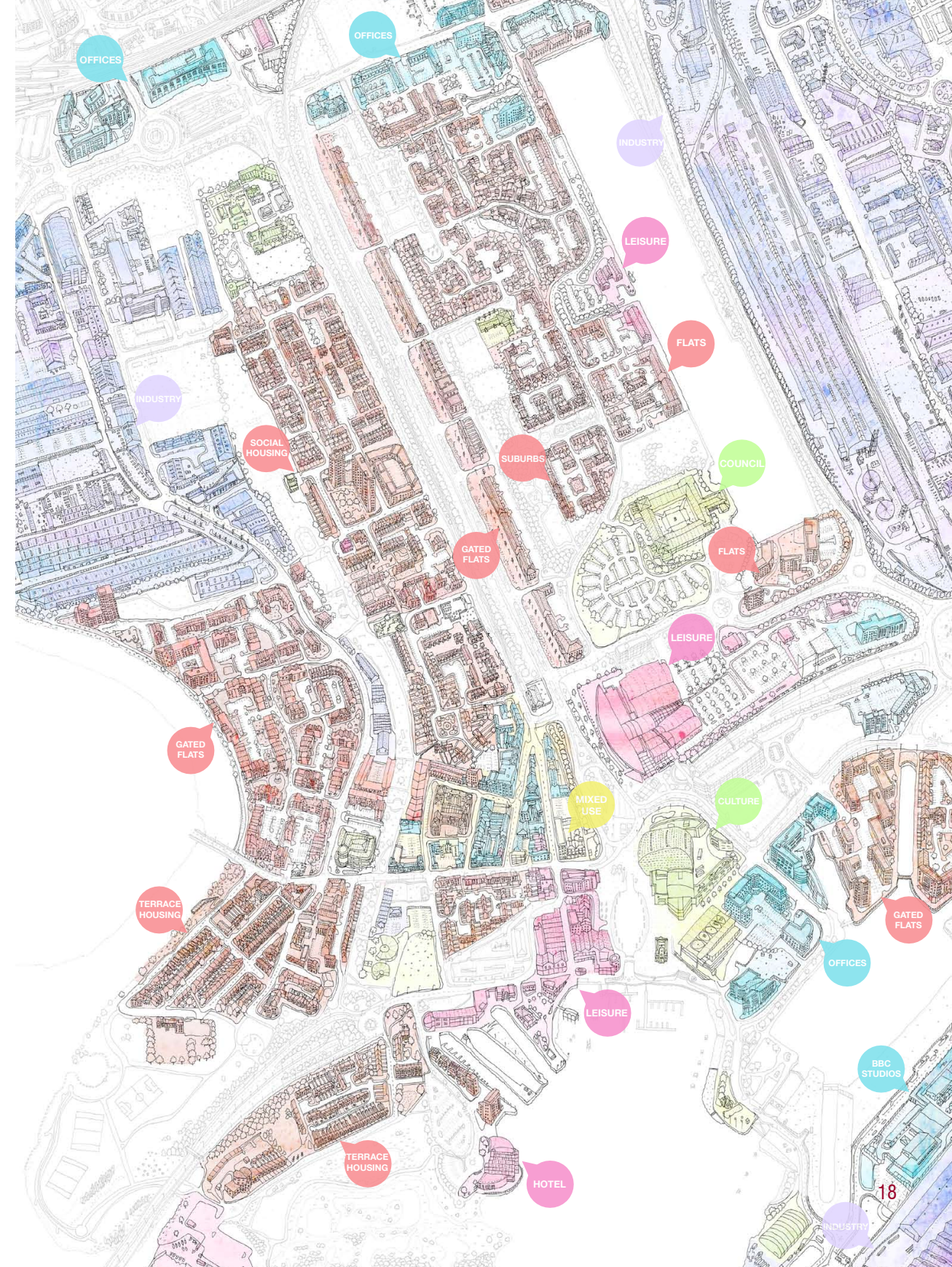
## Creating a Resilient Framework for Development

This thesis is based on two interlinked propositions. First, the historical ownerships and management of the building has been instrumental in producing its current state of decay and this must be addressed if it is to survive and adapt. Second, the adaptability of the building depends on a sound analysis of the reuse potentials of its form and layout. The Coal Exchange employs a common spatial topology of 19th century institutions – the corridor and cell. These typologies define, segregate and isolate the various functions that are housed within it. Initially the Coal Exchange was a mixed-use building containing a hotchpotch of different programmes: coffee taverns, restaurants, games rooms, smoking rooms, banks and a variety of different offices.

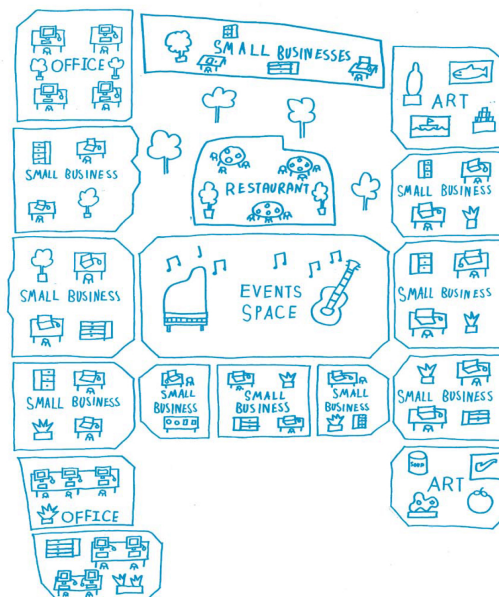
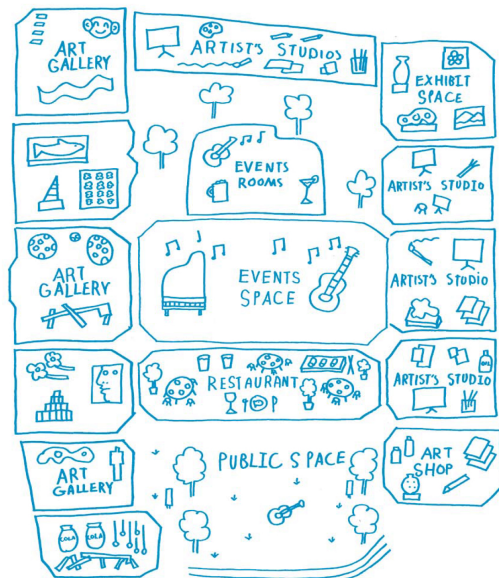
The Coal Exchange's 'corridor and cell' typologies are seen as major barriers to its reuse, but its historical usage suggests scope for a mixed-use programme. Though historically all activities in the building were linked to the bureaucratic side of the coal industry, today they could be more diverse and, in these terms, potentially more resilient. I contend that resilience can be created through two main ways — first, by creating an adaptable spatial framework and, second, by installing uses and functions that allow for the continued evolution of the building. Drawing on the emphasis on creative industry in contemporary regeneration in Cardiff, the building is envisaged as a creative centre containing a range of uses and institutions that add to existing cultural facilities and

spaces in the city — including a modern art gallery, a heritage museum, work and exhibition spaces for local artists, offices for creative start-ups, conference spaces, offices for larger companies and a variety of restaurants and recreation areas that are open to the public.

The architectural strategy involves excavating the building in order to create new connections between isolated cells, as between the building and its urban context. New vistas, enfilades and public spaces provide new routes and possibilities for connection. The benefits of the cell are kept but its isolating characteristics are removed, allowing the Coal Exchange to become a multifaceted urban building. The strategy is one that can allow the building to continue to adapt and evolve over time.







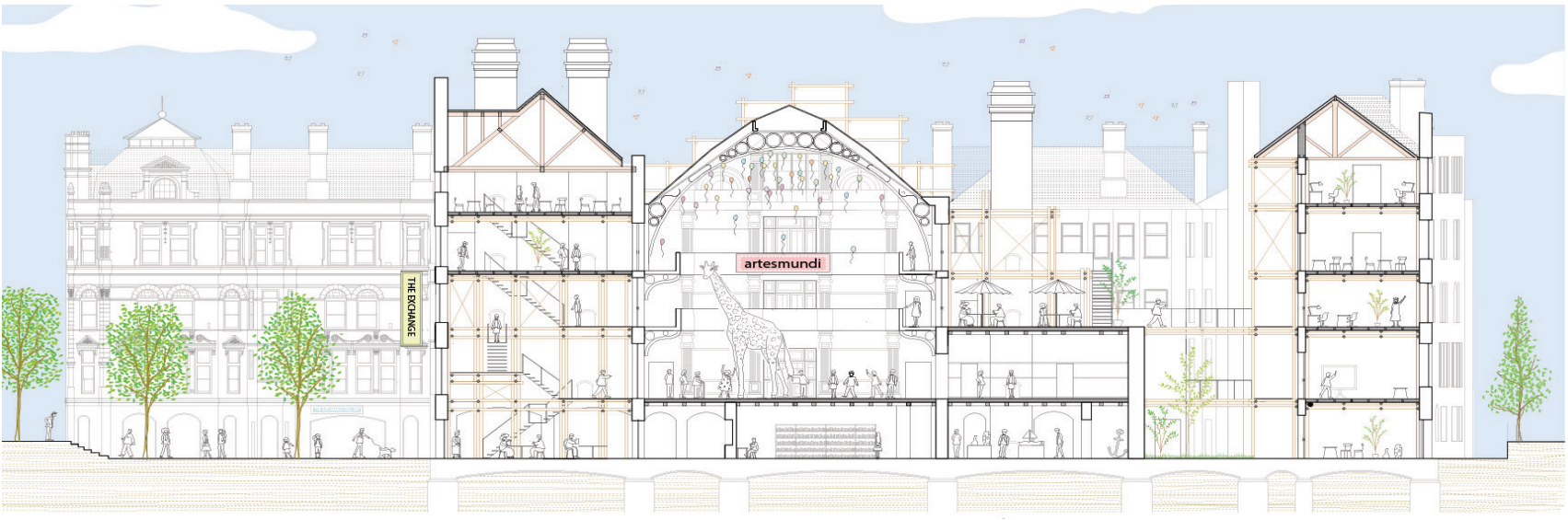
Lower Ground and Ground Floor Plans

New Spatial Configuration





Public Realm



Section Showing Public Life



# Theo Ellis

## Building Resilience by Curating the City

Current development in Cardiff Bay is being spearheaded by the growth and promotion of creative industries in Cardiff initiated by the relocation of the BBC to the Bay. It is recognised at city authority level that the shift in Cardiff's economy towards creative industries relies on its capacity to attract, incubate and cultivate a creative milieu to compete with other cities<sup>1</sup>. However, according to the Welsh Deprivation Index, Butetown, which is situated immediately to the north of the site, is one of the most deprived wards in Wales (and indeed the UK). Butetown was one of the first multi-cultural communities in the UK with the arrival of immigrants from around the world settling next to the docks. In my project, I explore possibilities of linking the cultural distinctiveness of Butetown with the current strategic emphasis on creativity and culture. According to Punter, only 2.5% of the Cardiff Bay Development Corporation's budget was spent on community projects in the 1980s less than half of what was spent on marketing<sup>2</sup>.

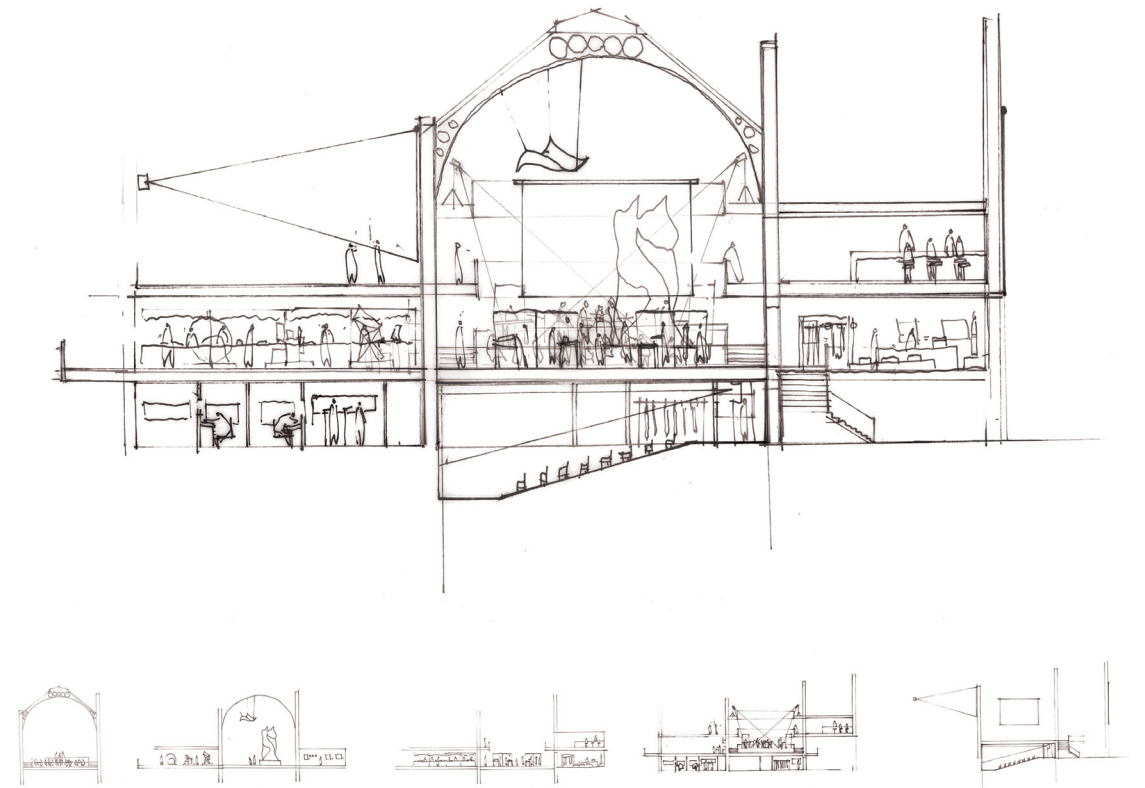
I argue that there needs to be a distinctive local character that sets Cardiff apart from other cities, and that this can be achieved by curating cultural events that engage with local people and the history of Cardiff's port and which help attract new businesses to the area. A creative industries hub inhabiting the Coal Exchange is proposed which would accommodate representatives from various funding institutions, from across all sectors, including the Arts Council for Wales and the Film agency for Wales. These would sit alongside a new Butetown Carnival Arts Centre which is proposed to establish a connection with local communities by reinstating the historic Butetown Carnival.

It takes precedent from the Luton Carnival Arts Centre in providing a home for community-based cultural events. These institutions would support a number of creative industry start-up units for small and medium sized enterprises by providing seed funding, business advice, and access to subsidised shared facilities. A cultural 'resource centre' would create a space of interaction through providing a series of shared facilities including workshops, studios and meeting spaces. This would allow a transfer of skills and knowledge between different users and help support innovation. The building's former Trading Hall forms the central focus point for hosting events. It would be a constantly curated space that could include festivals, markets, installations and performances, operated by an in-house events management company, in a similar, if smaller scale, fashion to the Business Design Centre in Islington. Approaching the city as a collection of spaces to be curated has the potential to '[open] up new possibilities for exploring and enriching the urban fabric and the urban condition as a whole.'<sup>3</sup> A curatorial approach to the Coal Exchange and Butetown is seen as a way of mediating the large scale forces of development in the Bay with the everyday cultures of local communities.

<sup>1</sup> Cardiff County Council, *Cardiff's Creative Industries Sector, Policy and Economic Development* (Cardiff Council, 2006).

<sup>2</sup> John Punter, 'Design-led Regeneration? Evaluating the design outcomes of Cardiff Bay and their implications for future regeneration and design', *Journal of Urban Design*, 12:3 (2007), 375-405.

<sup>3</sup> Alexandra Stara, *Curating Architecture and the City* (Oxford: Routledge, 2009).



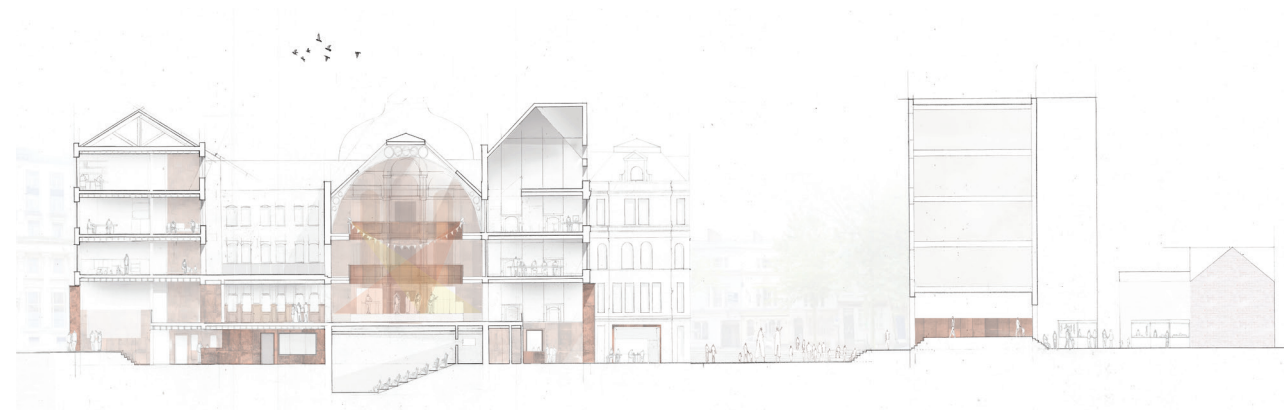
A Curatable Space



Anticipated Development of Butetown



Butetown Carnival in the 1980s



Courtyard Section

Re-humanising and Democratising the Industrial Legacy of Cardiff

My thesis addresses the shortcomings of the typically mono-functional urban form around the Coal Exchange which serves to exacerbate social and spatial divisions. In the effort to redefine Cardiff's economy and rebrand it as a 'world-class European capital city'<sup>1</sup>, corporate and commercial needs and interests have taken precedence over the needs and interests of established communities in Butetown. This is reflected in the ways in which the redevelopment of Cardiff Bay has progressed over the last decades, with emphasis being placed on lucrative developments around the waterfront, discounting the originally dock-working communities of Tiger Bay and the former commercial area of Mount Stuart Square.<sup>2</sup>

Several pieces of evidence have helped me frame my agenda. First, my research into property values suggests that the short-sighted emphasis on exclusively residential development is reflected by declining house prices in Cardiff Bay. However, a recent 'High Street Ahead' study compiled by Conluminio claims that proximity of thriving independent traders can significantly contribute to the value of nearby homes.<sup>3</sup> Second, my research on demographics highlights that Butetown ward has the unenviable position of being the fourteenth most deprived electoral division in Wales. However, a detailed statistical analysis reveals that population characteristics are not evenly spread across the ward. Older neighbourhoods are significantly marginalised in the job market and lack qualifications, whilst the newer developments are far less so.<sup>4</sup> Third, our group analysis of the land usage of Mount Stuart Square demonstrates that the apparent 'no-man's-land' is in fact one of the more mixed use areas in Butetown, thus suggesting scope for reinforcing this.

My programme has developed to provide space for a range of uses in a way that addresses the findings of my research. Sport facilities are seen as valuable amenities for residential communities of different kinds as well as ones which have the potential to impact on issues of health deprivation, inequality and division.<sup>5</sup> A mix of learning,

training and business uses are seen to have the potential to link Butetown and its residents back to the strong existing educational hubs of the city – in the form of its universities and colleges.

Architecturally, my intention is to challenge the monolithic and authoritative quality of the Coal Exchange by making it more permeable and less intimidating. My programme makes use of the existing spatial qualities of the building, whilst adapting its cellular structure to new functions. The interventions are informed by the original drawings by Edwin Seward (architect of the Coal Exchange) but with a flexible understanding of the future.

<sup>1</sup> Cardiff County Council, 'What Matters' 2010:2020 – The 10 Year Strategy for Cardiff (Cardiff: Cardiff Council, 2011), p. 4.

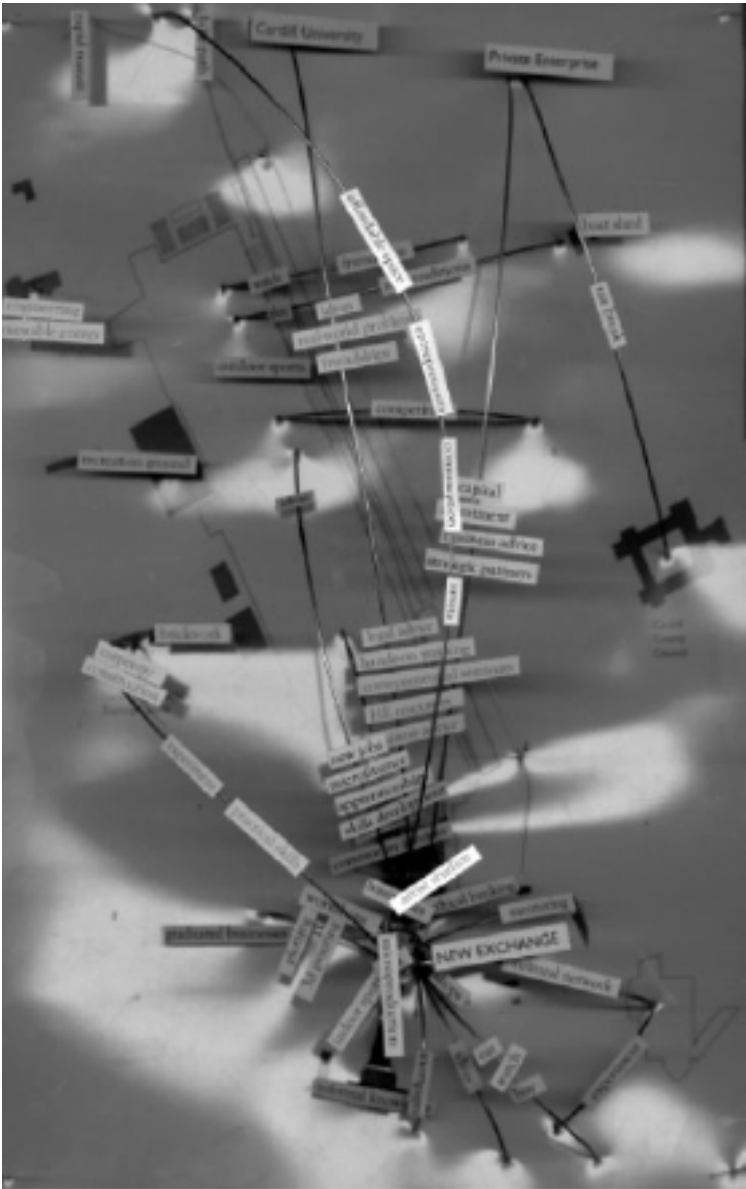
<sup>2</sup> John Punter, 'Cardiff Bay: an exemplar of design-led regeneration?' in *Capital Cardiff 1975-2020: Regeneration, Competitiveness and the Urban Environment*, ed. by Alan Hooper and John Punter (Cardiff: University of Wales Press, 2006), 149-178 (p.164).

<sup>3</sup> The Guardian <<http://www.theguardian.com/money/2013/nov/22/house-prices-boosted-thriving-local-trade-small-businesses>> [Accessed 14 May 2013]

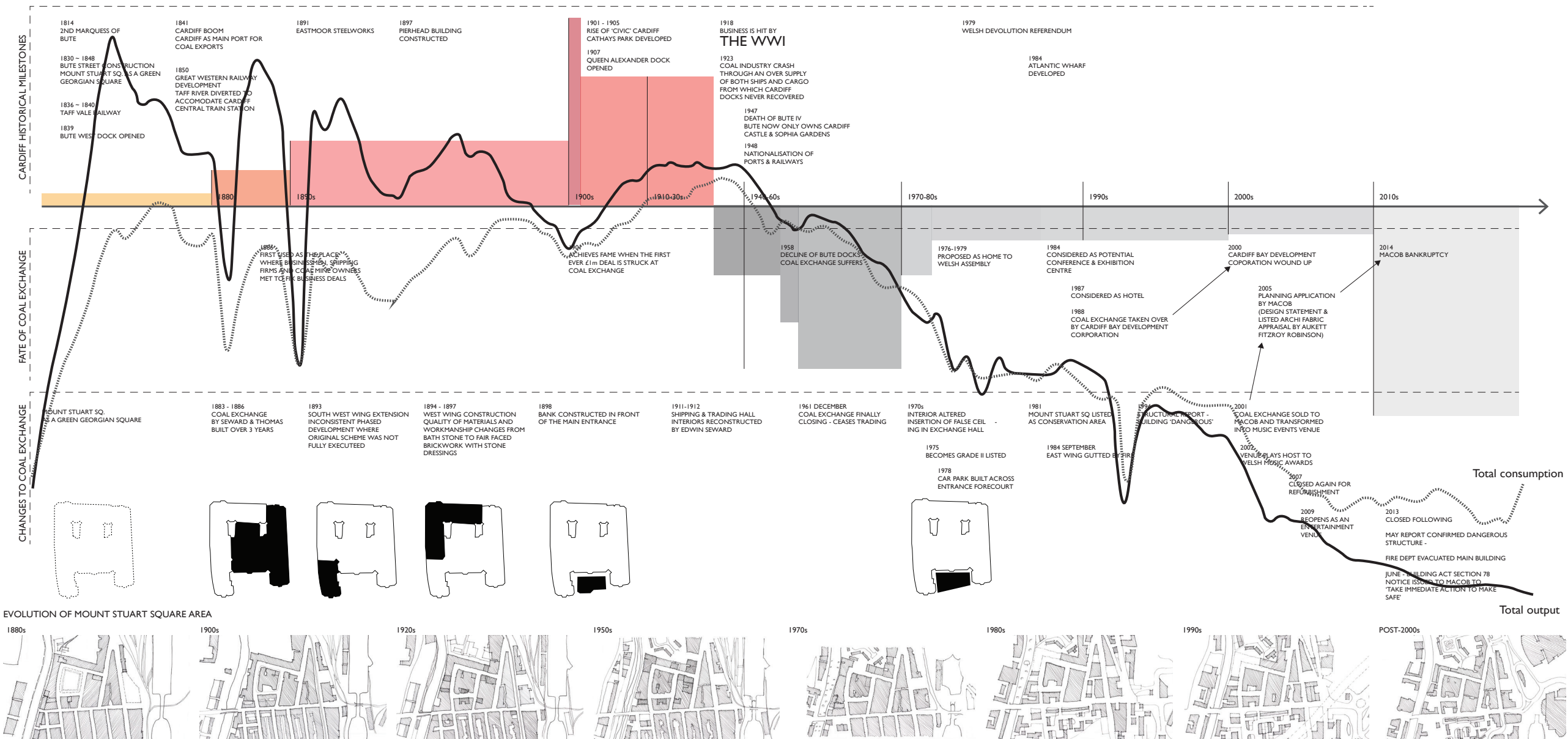
<sup>4</sup> Ana Cláudia dos Santos Gonçalves, *Cardiff, A Worldly City: The Cultural and Social Reinvention of a European Capital* (unpublished doctoral thesis, University of Lisbon, 2012), pp. 124-165.

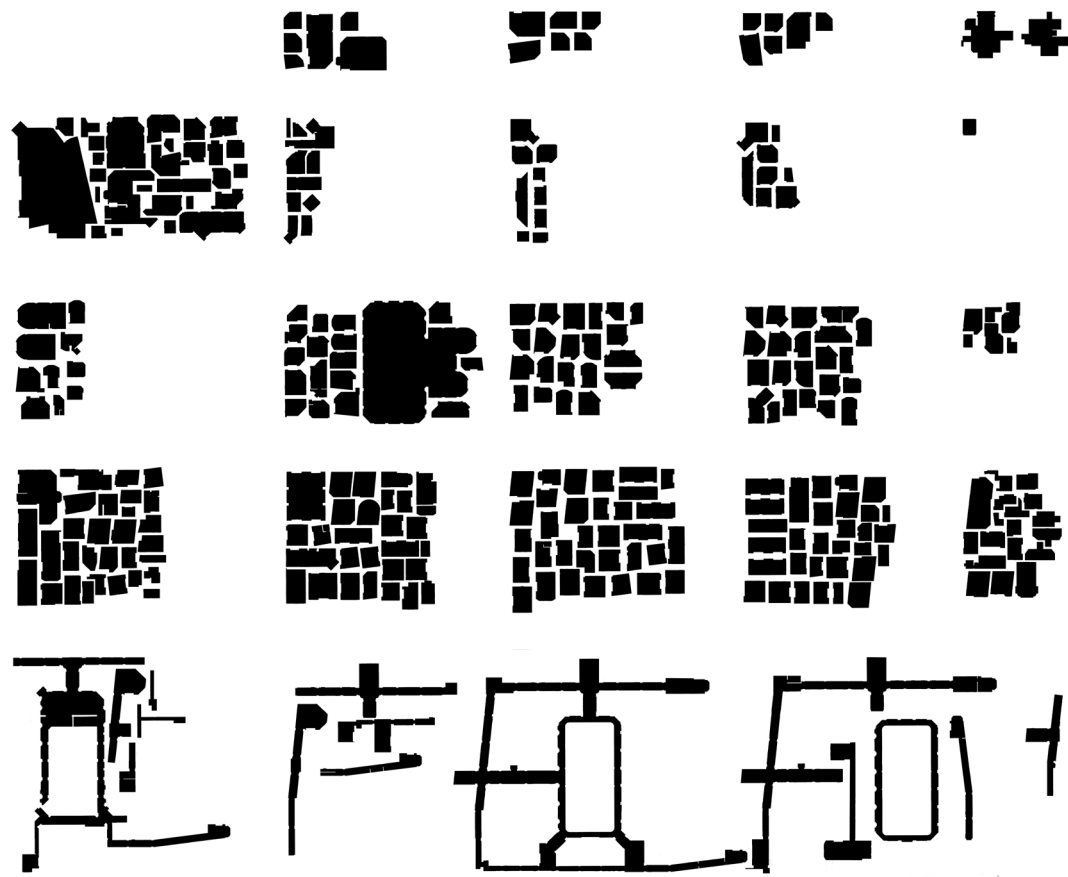
<sup>5</sup> Jeroen Vermeulen and Paul Verweel, 'Participation in sport: bonding and bridging as identity work', *Sport in Society*, 12 (9) (2009), 1206-1219.

Kristin Walseth, 'Bridging and bonding social capital in sport: experiences of young women with an immigrant background', *Sport, Education and Society*, 13(1) (2008), 1-17.

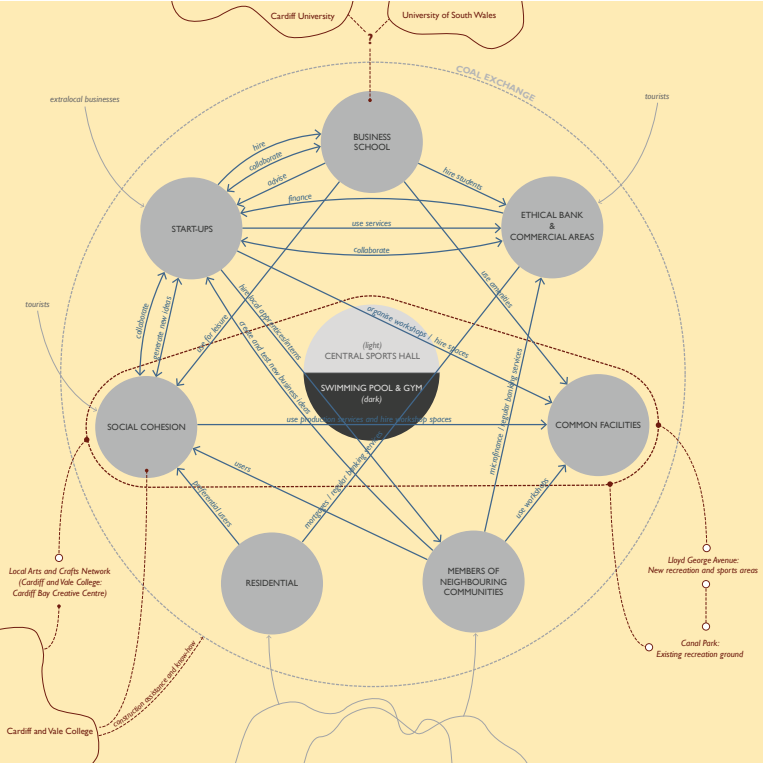








Taxonomy of Existing Spaces



Programmatic Connections within the Building



Lower Ground Floor Plan



# Terry Lai Chuck Choo

## Community Resilience: The Coal Exchange as an Interface between the Butetown Community and Cardiff

In my research work, I became interested in the nearby community of Butetown. Previously known as Tiger Bay, Butetown is a neighbourhood that has been closely related to the Coal Exchange and Mount Stuart Square throughout the history of the coal industry. While the Coal Exchange was a commercial centre visited by businessman trading coal, Tiger Bay was home to thousands of people from various parts of the world which converged towards the growing coal industry in Cardiff to work in the docks. According to one former resident whom I interviewed:

*There wasn't only a variety of religion, but also nationalities. We were kids playing in the streets and we were all of different nationalities, the parents were of different nationalities. There was among us total acceptance.*<sup>1</sup>

(Phyllis, 86 years old, previous resident of Tiger Bay)

Together with the Coal Exchange, Tiger Bay represents an important fragment of the physical memory of the coal industry and the crucial place it had in the growth of Cardiff as a city. Unfortunately, in the past decades, this rich history and culture has been neglected in the redevelopment of Cardiff Bay. Today, Tiger Bay and the Coal Exchange display characteristics of islands, separated physically and socially from the rest of the city. Meanwhile, Cardiff fails to recognise its legacy as an industrial city.

My design thesis concentrates on recognising the importance of the Coal Exchange and its relationship with Tiger Bay, to reintegrate both places within greater Cardiff and its future development. Focussing on the current emergence of creative industries, the Coal Exchange is adapted to house a training centre facility, which will revolve around the exchange of information and collaboration, occurring at different levels of

interaction. It will be a centre for people at different stages in the development of their business -from individual to more established and economically viable companies. Led by a social enterprise comprised partly of members of the Butetown community and Mount Stuart Square artist community, the Coal Exchange provides the neighbourhood with an opportunity to reintegrate with the city, adapt to its future development, and still preserve its identity. The managing director of the Wales Millennium Centre underlined in an interview the increasing contribution of the creative industries to the regional economy and describes Cardiff as 'a creative cluster with key players in the media and the performing arts'.<sup>2</sup> The Coal Exchange could have a role in supporting this major drive for creative industries by forming a strong basis for the development of a creative environment

Due to the nature of the programme and the focus on social interaction and exchange points, the Coal Exchange has been interpreted as a city. Corridors were considered as arcades, common facilities as public buildings, break out spaces as small squares, individual offices as private buildings and the main Exchange Hall as the market square provide various spaces where both formal and informal interaction could occur.

<sup>1</sup> Phyllis, interviewed by author, 28th October 2013.

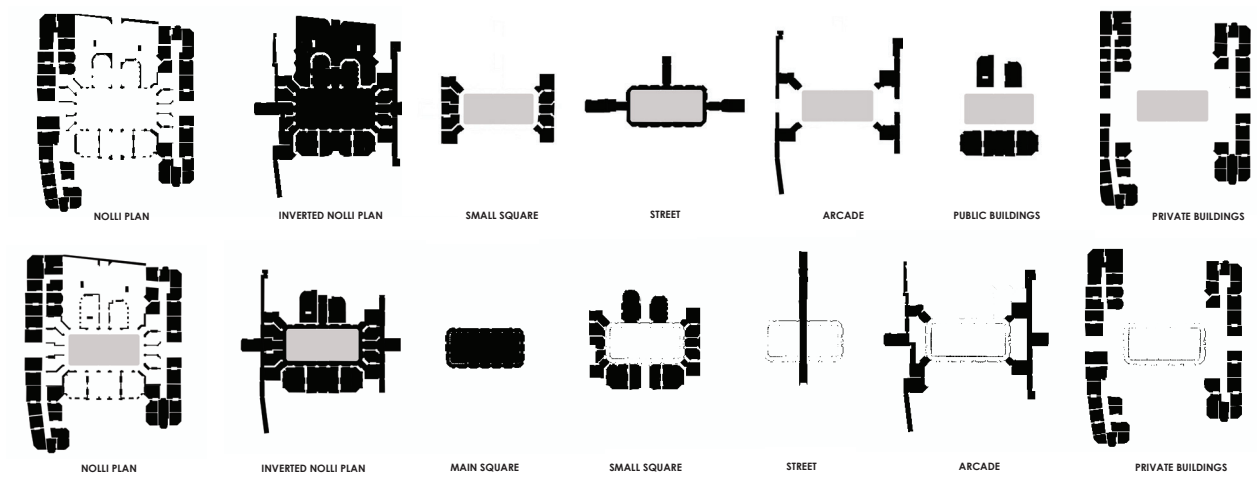
<sup>2</sup> Rupert Hall, 'Wales Millennium Centre Boss addresses Cardiff breakfast Club', Wales Online, 28th February 2014 <<http://www.walesonline.co.uk/business/business-news/wales-millennium-centre-boss-addresses-6755084>>[accessed 1 March 2014].







Market: Redefining the Meaning of Exchange

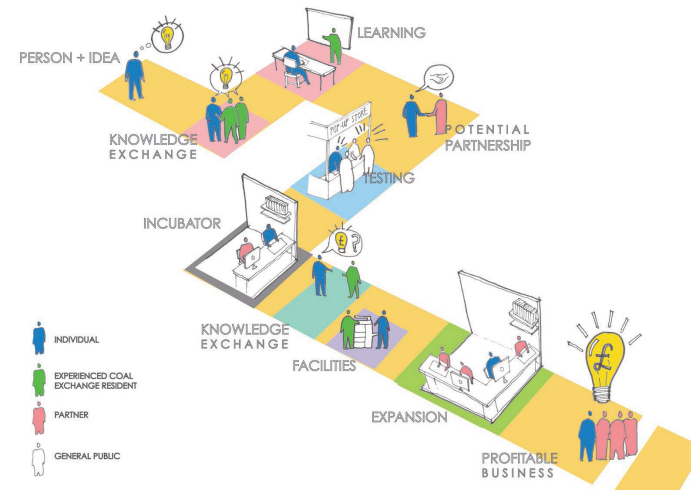


Coal Exchange as a City



Activation of the Surrounding Urban Voids



[illegible]

37



# Dan Liu

## From Coal Exchange to Renewables Exchange

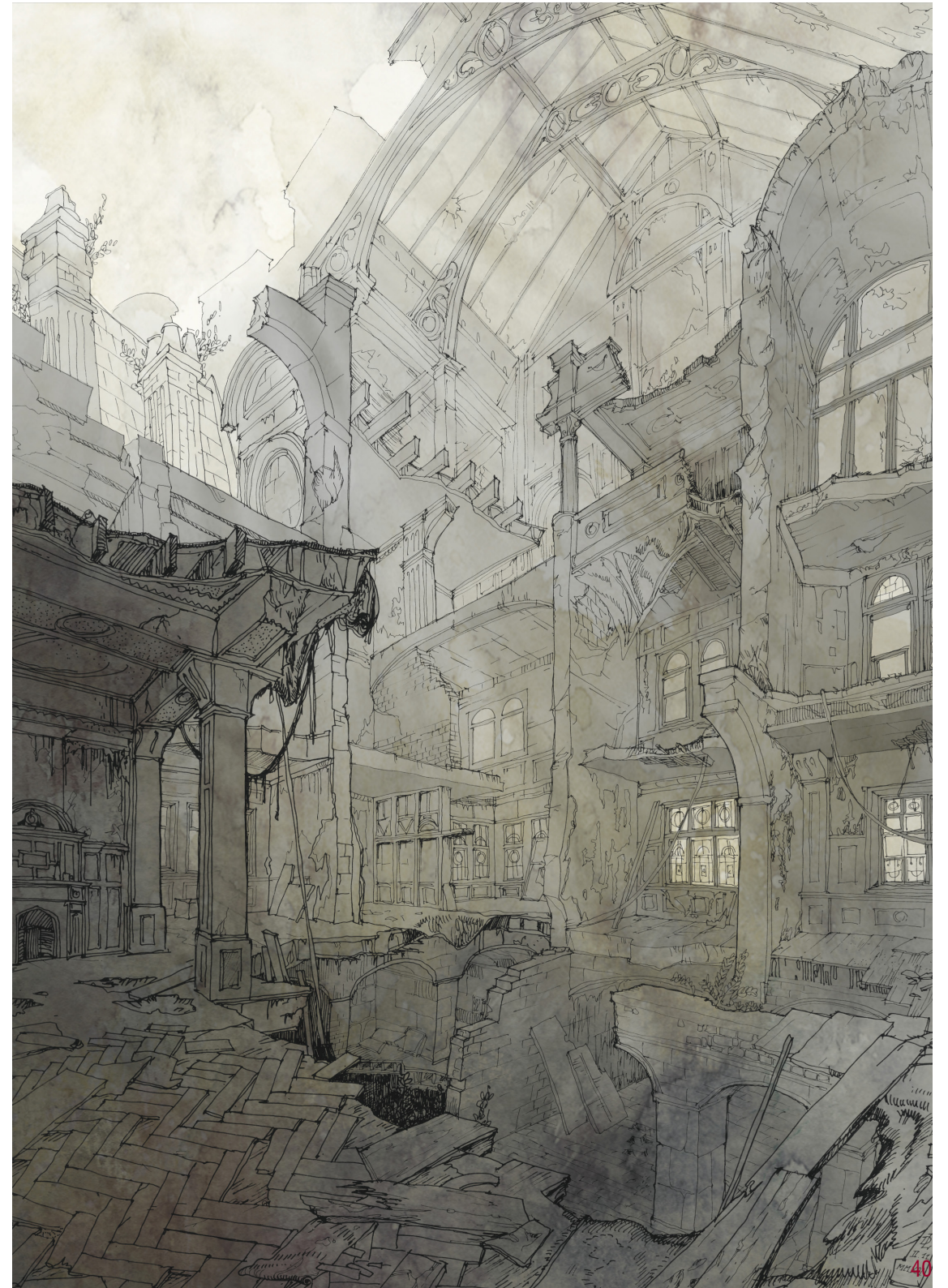
The thesis project is primarily interested in the roles singular buildings play in the economic narrative of the history of a city. By understanding the reasons they are created, who are they built for and what purposes they serve, the research aims to identify the relevant socio-economic circumstances that could link the particularities of a place to our present realities. Recreating potential economic links and reconnecting with a strong social ecosystem that is capable of remedying the existing spatial uncertainties is key in providing urban resilience.

The Cardiff Coal and Shipping Exchange is a response to a specific need coming from a particular resource that fuelled the economy of Cardiff for more than a hundred years. By investigating the nature of the economic shock that placed Butetown in its current situation, I consider whether the area is capable of returning to a similar purpose and power the future of the Welsh economy, despite the considerable differences in economic and technological circumstances since the Industrial Revolution.

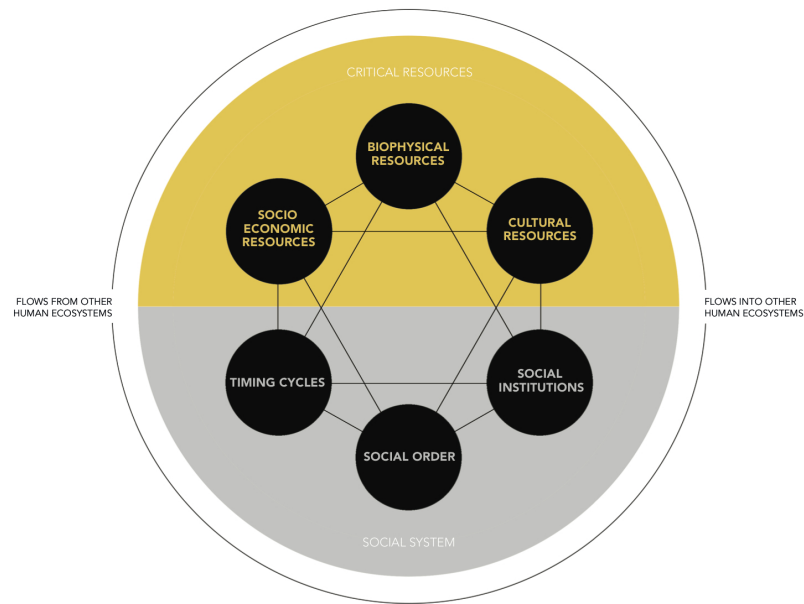
The primary programme involves a two-pronged approach: the purpose of the project is not only to cater for the needs of potential producers and investors of renewable energy, but also aims to raise public awareness of the imminence of climate change. For families, school groups and the general public visiting the National Energy Science Museum, the exhibitions offer insight into the cultural and historical significance of the building together with the legacy of coal mining in South Wales.

The remaining parts of the Coal Exchange building accommodate the Renewable Energy Collaboration Centre which offers a meeting place between the start-up entrepreneurs and the venture capitalists who are interested in investing in the emerging renewables sector. Essentially, the Renewables Exchange is not so different from the Coal and Shipping Exchange in the sense that it serves the purpose of selling and investing. The new institution offers 'incubation' spaces for start-up companies and assists university research spin-off research projects to become viable business ventures. The services include professional and legal help, marketing assistance and exposure to angel investment and seed funding opportunities.

The architectural interaction with the original building fabric is inspired by the subtle approach of the Astley Castle renovation project by Witherford Watson Mann. The spatial transformation is sensitive to the original spatial logic of the building whilst catering for the new functions. The architectonic approach emphasises the distinction between the new and old by clearly contrasting heaviness with lightness. The two new materials introduced include light timber structure, resting on top of the old parts and heavy in-situ concrete reinforcing and — only where it is necessary — complementing the gaps within the old masonry walls.





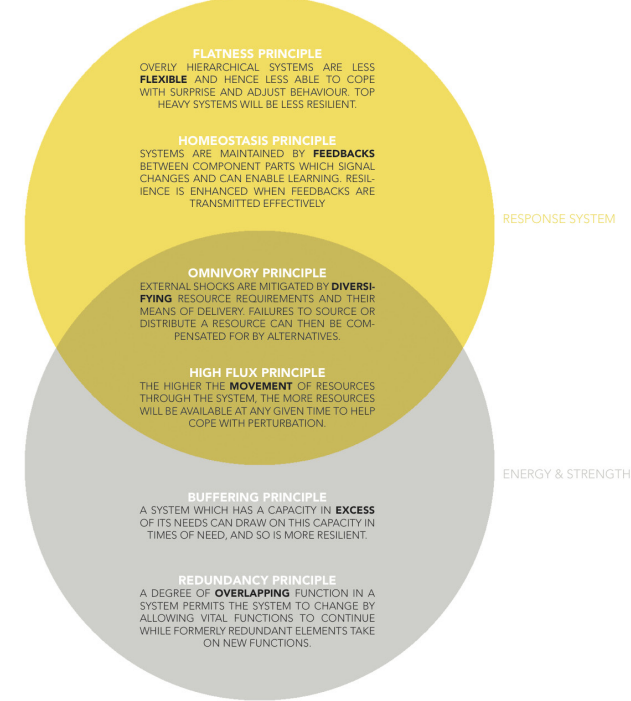


- SOCIOECONOMIC RESOURCES**  
INFORMATION  
POPULATION  
LABOUR  
CAPITAL  
TECHNOLOGY
- BIOPHYSICAL RESOURCES**  
ENERGY  
AIR & WATER  
LAND  
FLORA & FAUNA  
NUTRIENTS  
MATERIALS
- CULTURAL RESOURCES**  
ORGANIZATION  
BELIEFS  
ARTS & CRAFTS  
MYTHS
- TIMING CYCLES**  
PHYSIOLOGICAL  
INDIVIDUAL  
INSTITUTIONAL  
ENVIRONMENTAL
- SOCIAL ORDER**  
IDENTITY  
(AGE, GENDER, RACE, CLASS)  
SOCIAL NORMS  
HIERARCHY  
(POWER, WEALTH, STATUS)
- SOCIAL INSTITUTIONS**  
REPRODUCTION (FAMILY)  
HEALTHCARE  
SHELTER (HOUSING)  
JUSTICE (LAW)  
FAITH (RELIGION)  
COMMERCE  
EDUCATION  
DEFENCE

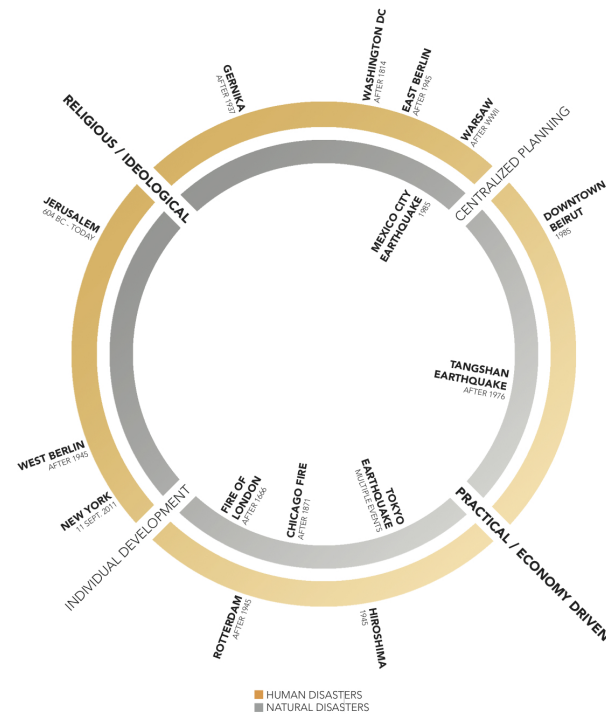
RESOURCES OF HUMAN ECOSYSTEMS

ORGANIZAI  
MANAGE

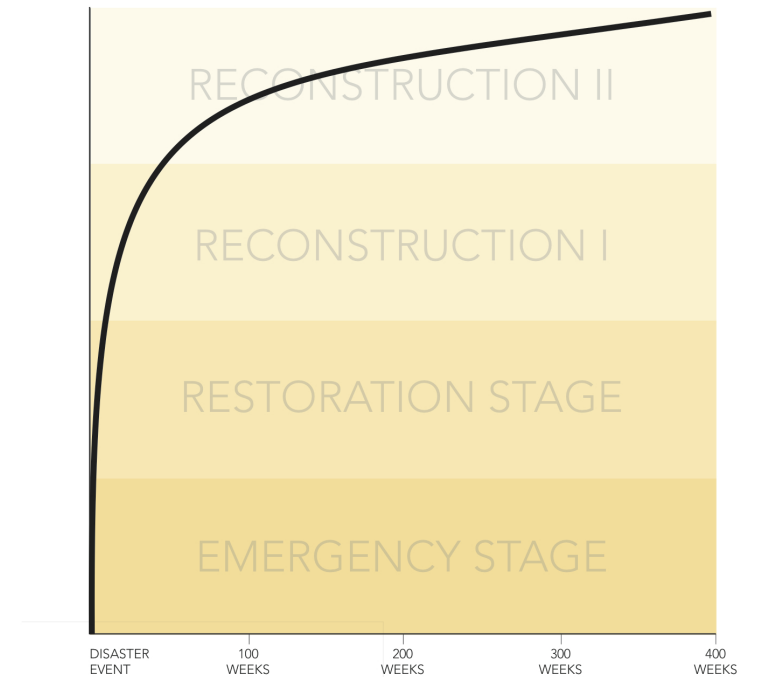
RESO



WILDOWSKY'S PRINCIPLES OF RESILIENT SYSTEMS



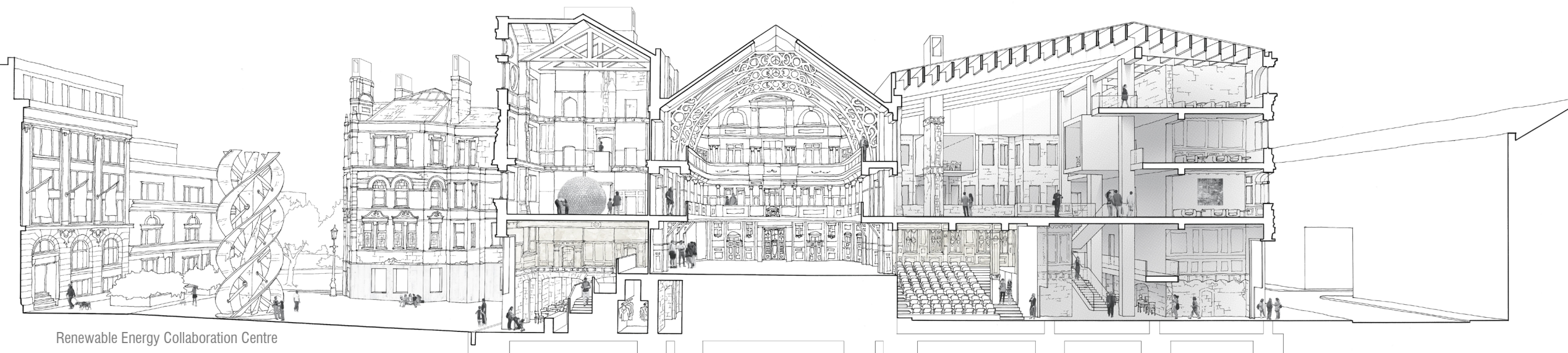
TYPOLOGY OF RECOVERIES FROM SHOCK



RECOVERY CURVE



Perspectival Studies



Renewable Energy Collaboration Centre



# Aoife Rath-Cullimore

## Common Ground: Creating a Place of Exchange between Different Cultures, Communities and Economies

*Living with people who differ- racially, ethnically, religiously or economically — is one of the most difficult challenges facing civil society today [...] Traditionally, rituals have encouraged human beings to bond with others; in modern society, however, traditional forms of rituals are waning. We need to develop new forms of secular, civic rituals that make us more skillful in dealing and communicating with others.*<sup>1</sup>

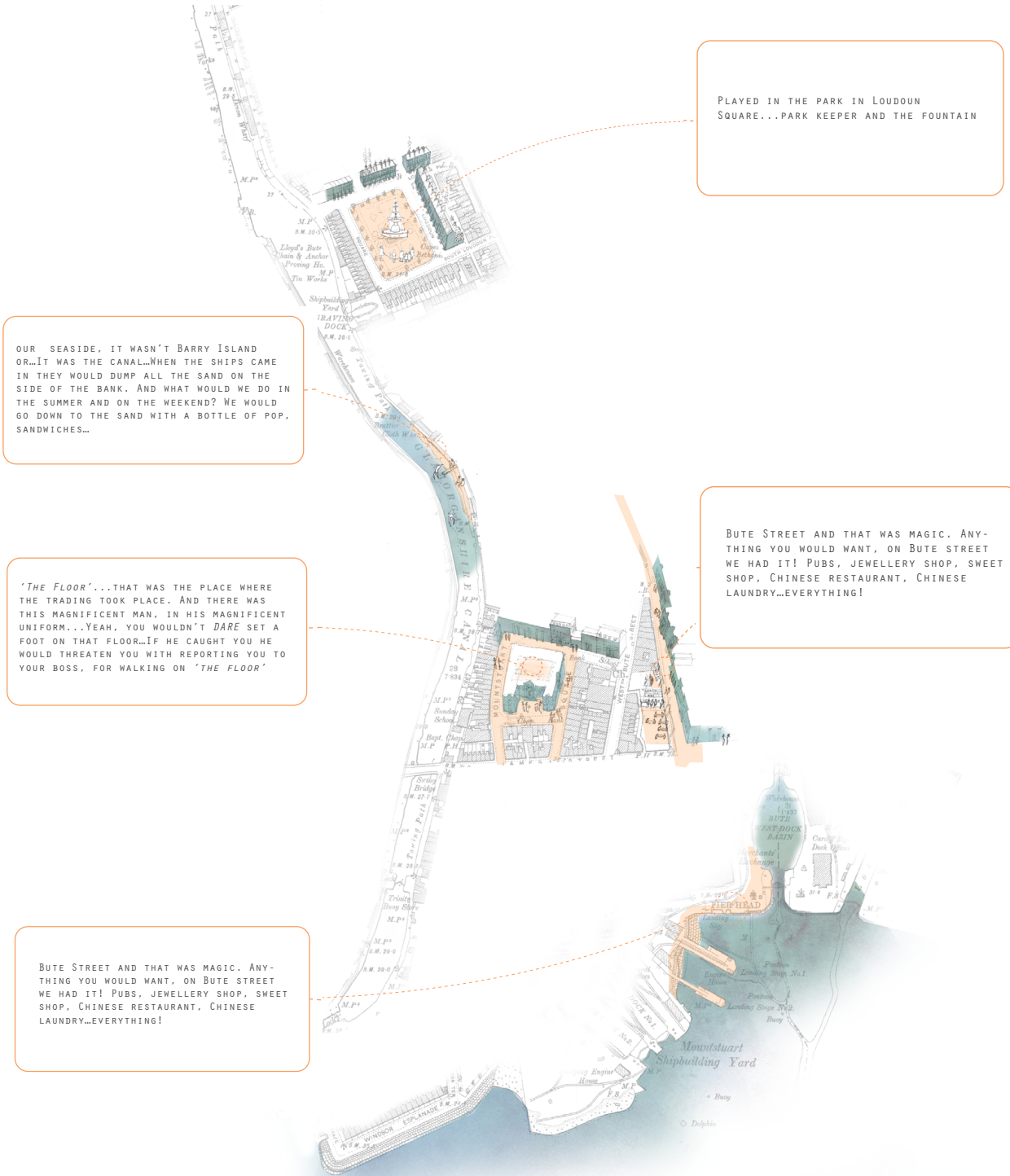
In Butetown, a tradition of cooperation and communication between people of different backgrounds, races and religions is connected to the history of Tiger Bay. In the 1800s, with the boom of the coal industry and the Coal Exchange, Butetown became the most ethnically diverse place in Wales, reflecting Cardiff's international links through trade. The people of Butetown celebrated difference through cultural rituals and events, such as the Eid Procession and Butetown Carnival. Evidence suggests that the rituals and celebrations that marked these differences brought the community together and helped to forge a sense of common ground.

The marginalisation of Butetown through the urban organisation and development of the Bay suggests that there has been little communication between politicians, planners and the people on the ground. This lack of communication has resulted in a loss of appreciation of the legacy and potential richness of multiculturalism in the Bay. The redevelopment of Tiger Bay has created physical boundaries between different communities, but has also created

psychological and cultural boundaries through exclusion, separation and discrimination.

The Coal Exchange is linked to an industry that is now obsolete, however the legacy that it has left behind is rich and multicultural. I argue that it is the diversity and cooperation of this community that has made it resilient over time. However, an outlet is needed to share this knowledge and give the excluded a voice. Physically, the existing building is an almost impenetrable mass. It was built with hierarchy and grandeur in mind but is not particularly accessible. The challenge of this project is to connect this building with its surrounding context and find ways to make this building a communicator and a mediator between different communities and place. Key to reintegration within the community and the connection to place is the galvanising of rituals of exchange between people of different cultures. The Coal Exchange becomes a place of Social Exchange.

The new 'Social Exchange' houses a mix of university faculty of media, communication and culture, incubator units and media and cultural businesses, working in collaboration with each other. The aim of the programme is to redefine the image of the area through community engagement events by re-establishing the rituals of cooperation.



## IMMIGRATION BASED ON COAL IMPORT/EXPORT TO TIGER BAY

UK PORTS

'TIGER BAY'

IMMIGRATION BASED ON TRADE COAL TRADE LINKS-MOST DIVERSE COMMUNITY IN THE UK 1900'S



## RESILIENT CULTURAL INSTITUTIONS; FACING DESTRUCTION THROUGH MARGINALIZATION?

"THE RELIGIOUS BUILDINGS THAT HAVE SURVIVED THE MASS DEMOLITION OF TIGER BAY BEAR WITNESS TO THE DIVERSE POPULATION OF THE PAST AND STAND AS A SHRINE TO THE LIVING AND WORKING TOGETHER OF PEOPLE OF DIFFERENT CULTURES" - BETTY CAMPBELL, BUTETOWN, 2013

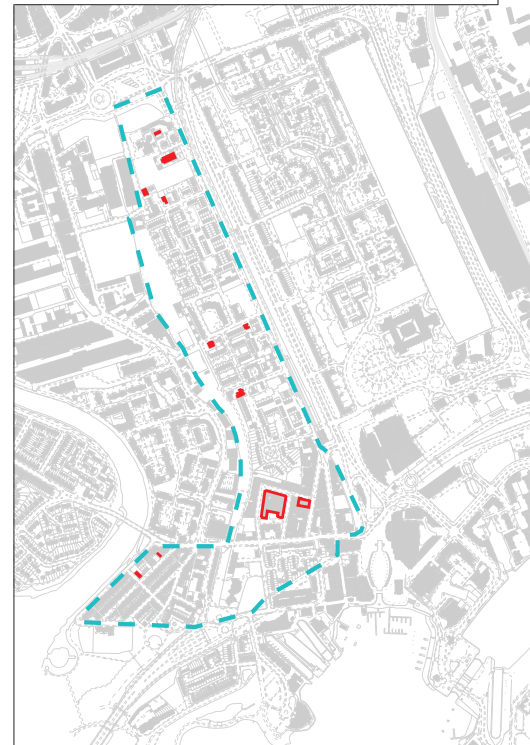
A COHESIVE INCLUSIVE COMMUNITY WITH IDENTITY

1900s



A COMMUNITY LOOSING IDENTITY THROUGH MARGINALIZATION

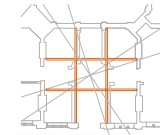
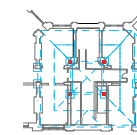
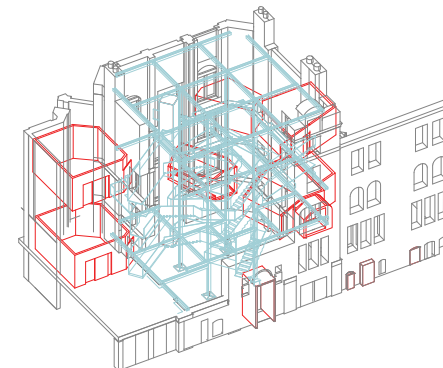
2013



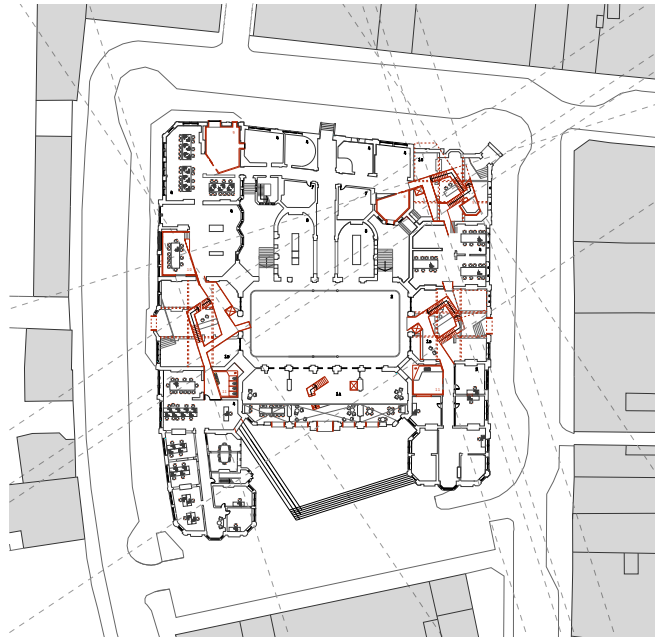
The interventions in the fabric of the Coal Exchange are conceived as 'Exchange Structures'. Just as cooperation between different communities and cultures requires understanding, respect and dialogue, Exchange Structures cohabit with the existing building, use the building as a host but also pump new life and energy into it. The structures act in mutual understanding with the building, but their appearance is strikingly different. They do not 'belong' to it but rather their architecture is free for interpretation by the user and connects to the wider urban realm. These spaces act as coexisting elements that open up the building, making it accessible, legible and communicative with the user. They are on the boundary between different uses, acting as 'membrane conditions', creating a shared, porous and engaging space. The Exchange Structures create a network within the building of mediating spaces that connect different uses and users. These spaces allow for the informal or formal exchange between differing people to create social collaborations and networks. The Exchange Structures create a mediating point within the Coal Exchange that allows for a common ground for cooperation and engagement.

<sup>1</sup> Richard Sennett, *Together: The Rituals, Pleasures and Politics of Cooperation* (London: Penguin, 2013).

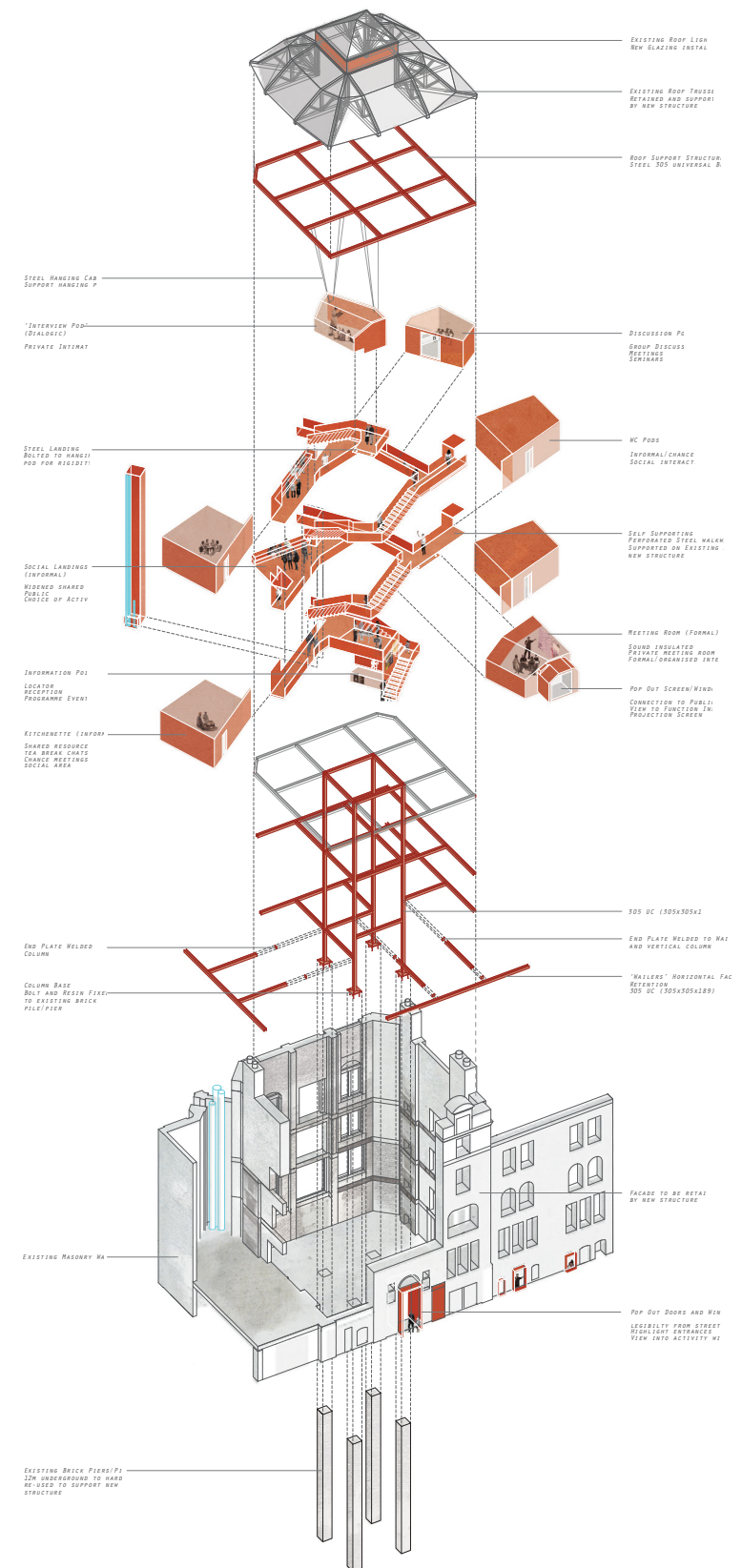
ASSEMBLED STRUCTURE

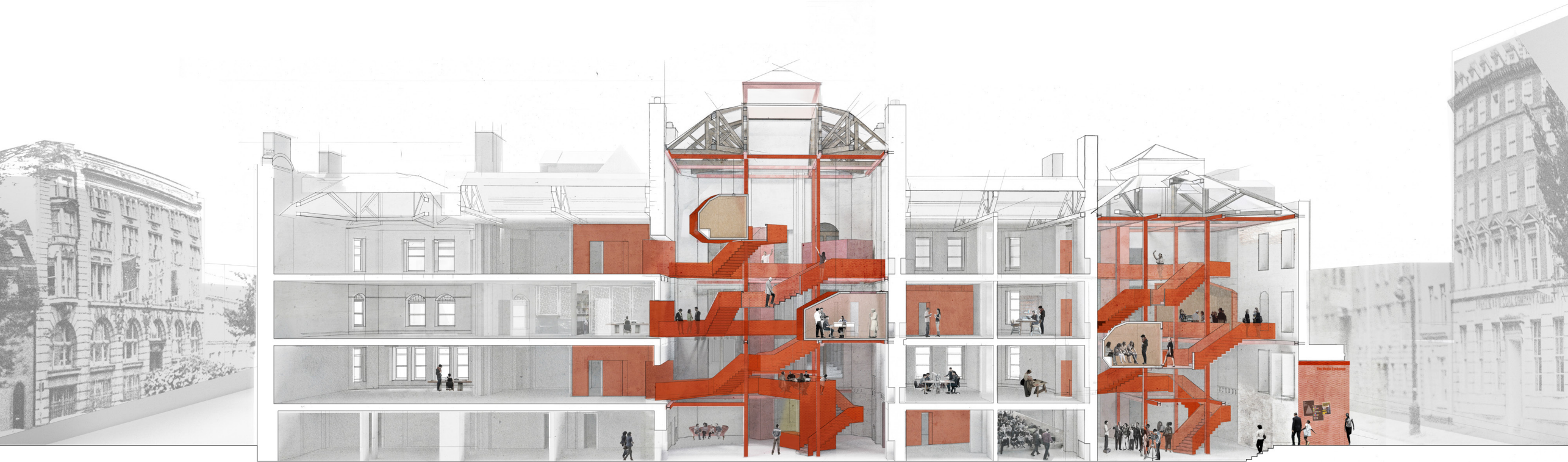






Ground and First Floor Plans





Section through Exchange structures



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