

05

programme & transformation applied

It is apparent from the heritage value survey that there is large intangible value in the historical functions of the study areas which directly relate to the notion of power on site. Therefore when it comes to the architectural intention of subverting power by using the site's most historically subservient spaces, transformation will occur mainly through functional changes. In this way, the transformation of functions becomes a guiding determinant for both architectural and programmatic informants for the design process going forward.



Figure 119: Chimneys on site signifying cooking (Author 2021)

TRANSFORMATION & PROGRAMMATIC INFORMANTS

Study Area 1: Thrifty Car Rental

Study area 1 will undergo a transformation of its historical function as a sawmill to redefine the power relationship between man and nature for the current and future needs of the city. In addition, transformation will occur formally in this study area to signify this space as a landmark and entrance into the precinct (figure 120-122).

Furthermore, the broader 1931 context (figure 123) depicts an export hub of raw materials. In contrast, South Africa currently imports 50% annual wheat consumption and 100% annual rice consumption (Sihlobo, 2020), which highlights a deficit in the local exchange of staple grains. The historical function and 1931 context of Study Area 1 therefore act as programmatic informants for the potential use of this area.

The power subversion will be demonstrated functionally from the historic use as a sawmill that is involved in the end part of nature's lifecycle, to one that promotes the continuation of its existence: the germination and preservation of staple grains and seeds in light of climate change induced food insecurity.



Figure 123: 1931 Context (Choromanski & eThekweni Municipality 2015)



Figure 120: Form of chimney re-signified through form of Seed Research centre (Author 2021)



Figure 121-122: Form exploration through maquettes (Author 2021)

TRANSFORMATION & PROGRAMMATIC INFORMANTS

Study Area 2: Out Buildings, Study Area 7: Canal

Study Area 2 and study area 7 will undergo a formal transformation which will redefine the spatial edge relationship between the site and the hidden canal. The power subversion will occur by allowing water to co-evolve with the place in line of an ecological worldview. Furthermore, as described by the urban vision, this formal transformation will allow the significance of urban infrastructure to be seen instead of hidden through the process of daylighting.

In this way, the programmatic informant derived study area 2 and 7 involves reconciling the city and particularly the site with its lost relationship to water and infrastructure.



Figure 124

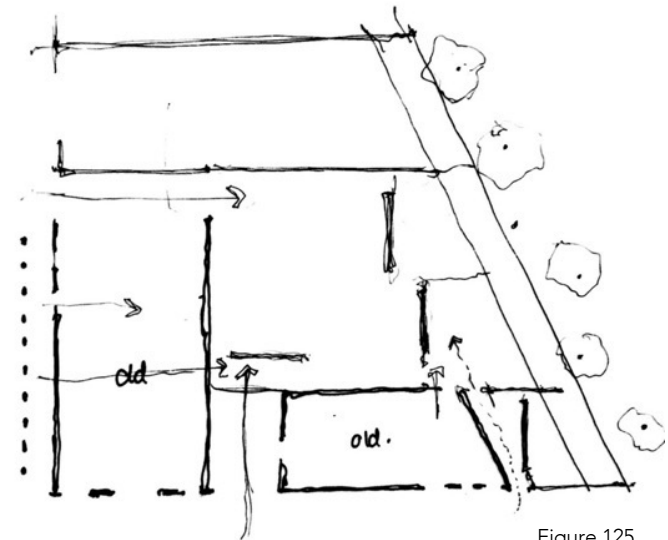


Figure 125

Study Area 3: Courtyard and plant room

Study Area 3 will undergo a formal, spatial and functional transformation in order for it to be used as a space to facilitate social exchange, devolve the historical hierarchy of the site, and act as a unifying element between the heritage fabric and any new intervention. Therefore, this courtyard acts as programmatic informant for encounter and social exchange.

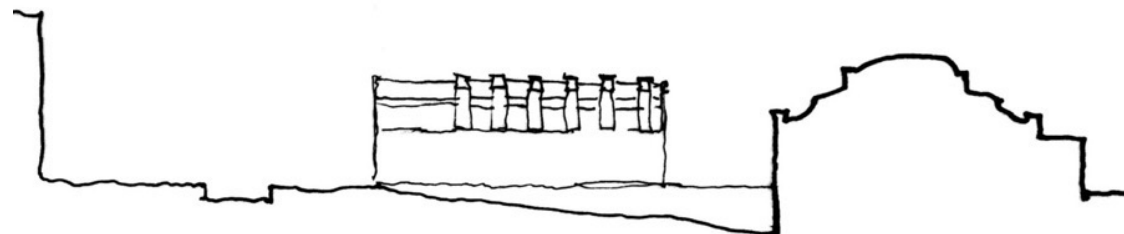


Figure 126

TRANSFORMATION & PROGRAMMATIC INFORMANTS

Rough spatial exploration of the transformation of canal (study area 7), out buildings' edge (study area 2) and courtyard area (study area 3.)

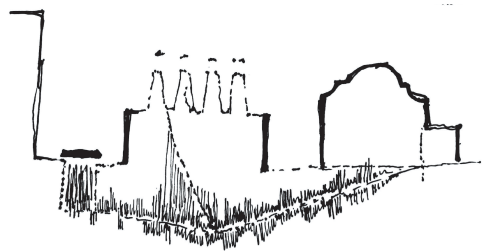


Figure 127: Conceptual diagrams of canal integrated into site (Author 2021)

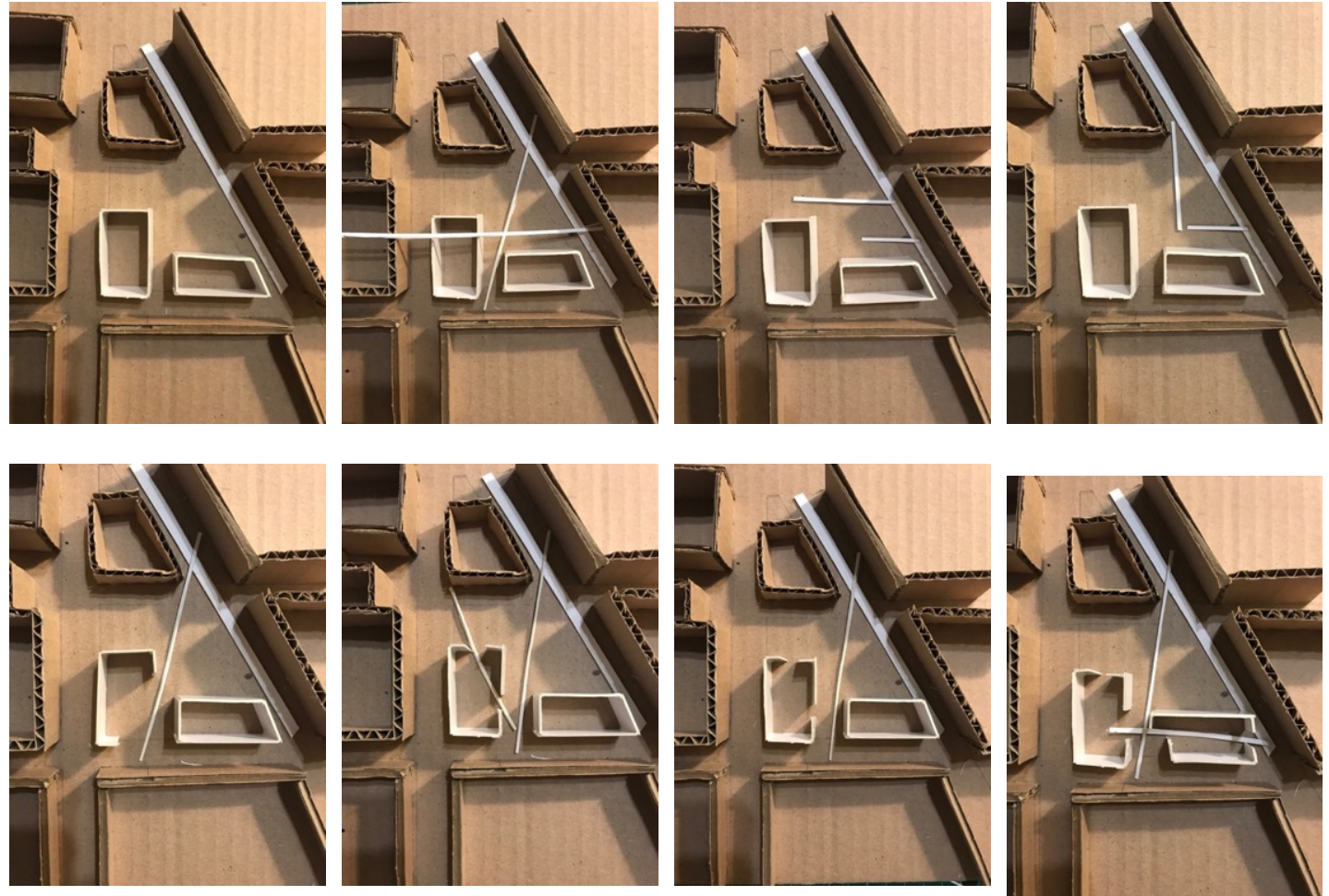


Figure 128: Maquettes of canal exploration (Author 2021)

TRANSFORMATION & PROGRAMMATIC INFORMANTS

Study Area 4: Hall 1

Hall 1 will undergo a functional transformation to redistribute power on site as a result of the historical and hierarchical spatial organization of the place. The power subversion and programmatic informant through this functional transformation is all about the celebration and transmission of intangible cultural traditions, particularly around traditional and indigenous grains such as sorghum (which played a large historical role in the functioning of the site, through the making of sorghum beer).

This programmatic informant involves the power subversion that will occur through a functional transformation that showcases and reveals the domestic processes of making.



Figure 129: Photograph, interior of Hall 1 (Author 2021)

Grow grain + harvest Deliver to site and store Malt Production Fermentation Filtering & Straining Sold & consumed

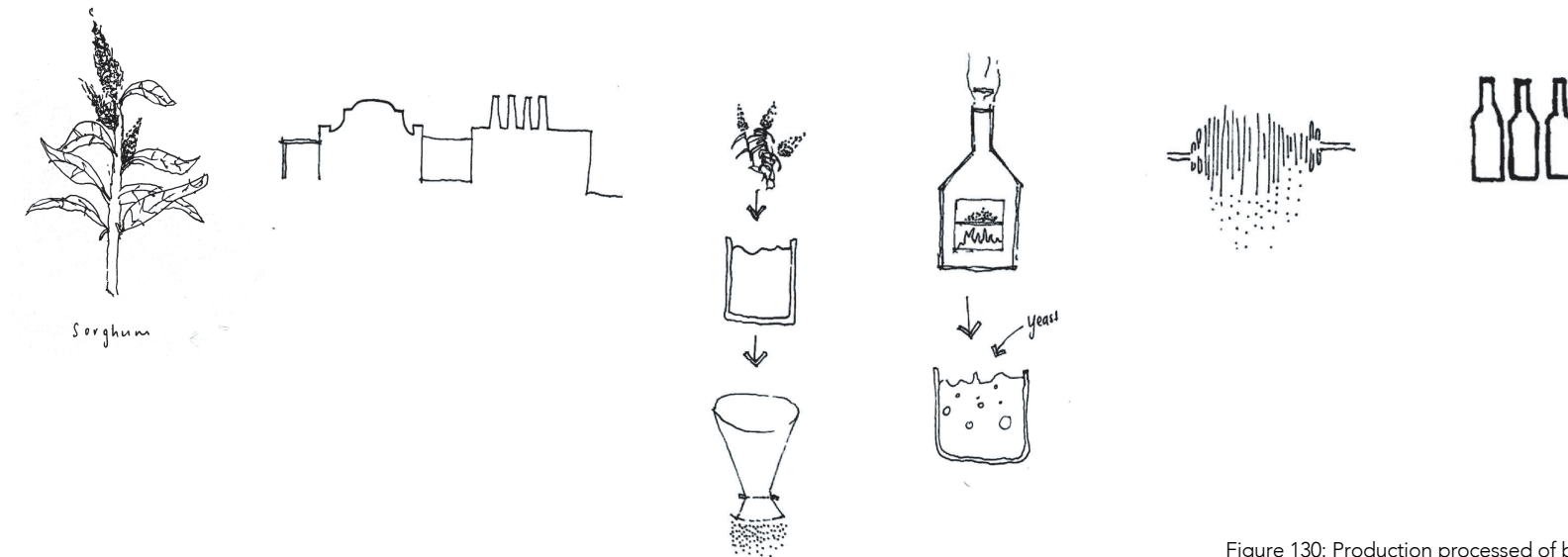


Figure 130: Production process of brewing beer (Author 2021)

TRANSFORMATION & PROGRAMMATIC INFORMANTS

Study Area 5: Link Area

The link area will undergo a formal and functional transformation in order to redefine the historical, spatial organization between the two halls. The power subversion will occur from the transformation as a back door entrance to the eating hall from the kitchen, into a new threshold that mediates between the two halls. Thus the programmatic informant through this area is one of mediation and threshold.

Study Area 6: Hall 2

Transformation will occur through hall 2 in a functional and spatial way to internally reorganize the space as a subversion of power so that it becomes subservient to the hall 1. Thus, the programmatic informant in this space is mainly one of service to the potential program of hall 1. Furthermore, transformation will occur formally and technologically through Hall 2 to improve the current daylighting and ventilation conditions of the space. Currently, the hall contains clerestory windows that have been painted over to block the sun in order to create adequate conditions for the conservation of artworks below. The figure below demonstrates the conceptual dismantling of power and hierarchy on site from a disregarded, covered canal and a former kitchen that served an eating hall, towards a celebrated canal and kitchen as the most important spaces of the new scheme.

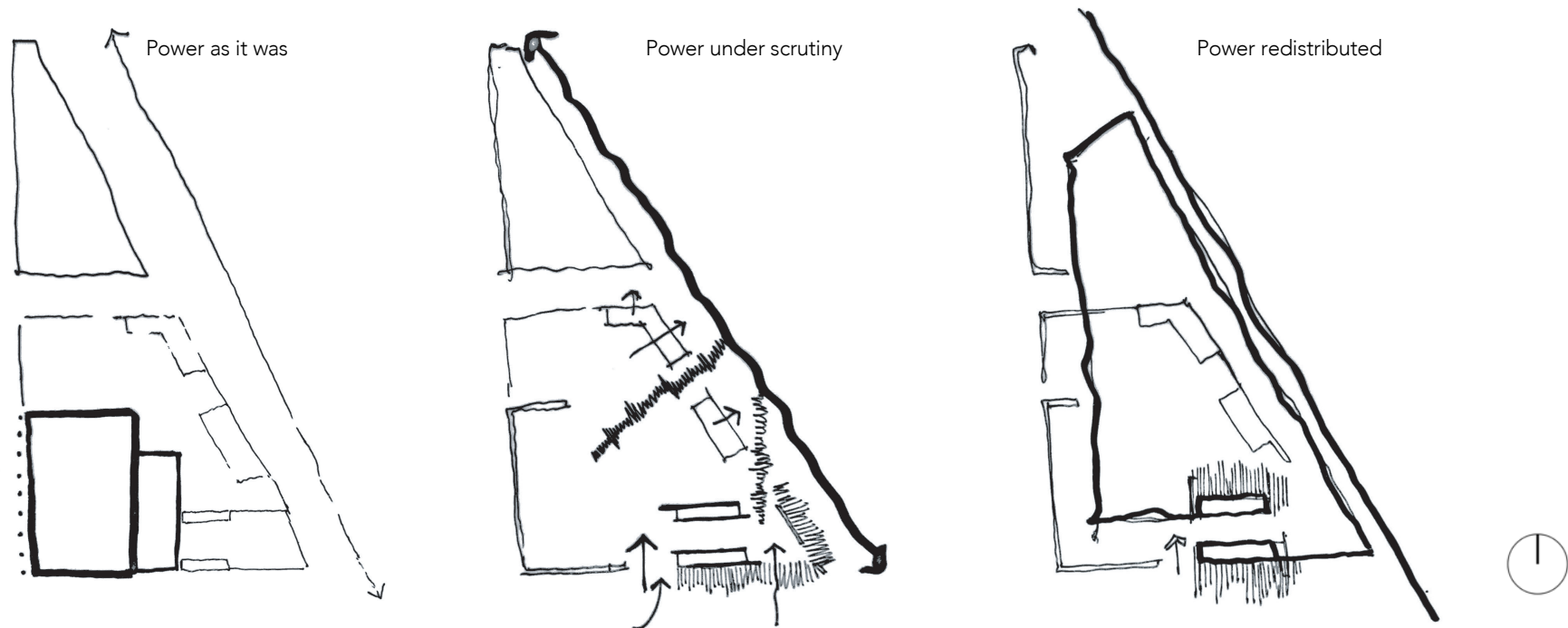


Figure 131: Hierarchy dismantled through subservient spaces (Author 2021)

REFINEMENT OF PROGRAMME

MAKING & INFRASTRUCTURE : Test bakery & grain silos

An open bakery is proposed for the testing of traditional and indigenous grains in the production of staple foods. This programme is all about celebrating domestic processes of making that are usually private and undervalued. Infrastructure references underground silo elements that are used for the storage of bulk grain and milled flour on site. This infrastructure acts to democratize and localize the grain industry so that a diversity of indigenous grains is more accessible to public.



Figure 132: Bread from indigenous grains (Author 2021)

GERMINATION : Seed library & research centre

A seed library and research centre is proposed under germination for the preservation of traditional and indigenous seeds.

Traditional crops and seeds are of vital significance to small-scale farmers owing to their resilience in drought and flood conditions, and their superior nutritional value and taste (Van Niekerk, J., & Wynberg, R. 2015: 1). Such grains and seeds are, however, under threat from mass-produced, genetically modified seeds systems and degraded ecosystems (Van Niekerk, & Wynberg 2015: 1). Preserving such indigenous systems will directly mitigate against potential climate change induced food insecurity.

Cultural involution as part of the urban intention is achieved through this program by exhibiting and celebrating indigenous grain and seed to attract tourists whilst making the local host community more aware about their own natural heritage.



Figure 133: Germination (Author 2021)

CHANGE : Water & Exhibition

Under the notion of change, which is a fundamental principle of regenerative design (Hes & Du Plessis 2014:111) , the canal is opened up as a public space to receive, drain and filter water on site. Drawing from its previous role as a vlei, it will depict seasonal changes, with fluctuating water levels throughout the year.

Furthermore, an exhibition space for local art or traditional seeds and grains is proposed between the the seed research centre edge and the canal. This exhibition will constantly change in content in contrast to the fixed heritage behind it as a way of continuously enabling this heritage to be relevant and therefore transmissible instead of static. This programme particularly aims to retain the current function of the gallery on site which has not come to fruition owing to the inaccessibility of the place.

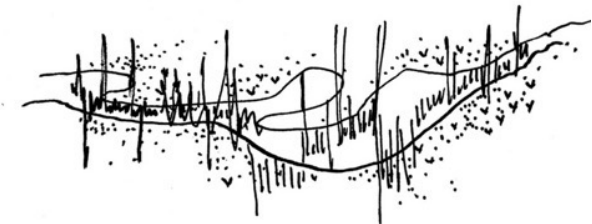


Figure 134: Fluctuating water levels of canal (Author 2021)

TRADITIONAL CROPS & SEEDS

The following list depicts some examples of traditional crops and seeds that are commonly grown, planted, and exchanged in KZN.



Maize
Zea mays (ummbila)



Cow Pea
Vigna unguiculata (imbumba)



Pumpkin
Cucurbita maxima (amathanga)



Peanut
Arachis hypogea (amakinati)



Calabash
Lagenaria spp. (amaswela)



Sweet Sorghum
Sorghum bicolor spp. (imfe)



Taro Potato
Colocasia esculenta (amadumbe)



Zulu Potato
Solenostemon
rotundifolius (amatabhane)



Cassava
Manihot esculenta (umdumbula)

INITIAL CONCEPT OF PROGRAMME ON SITE

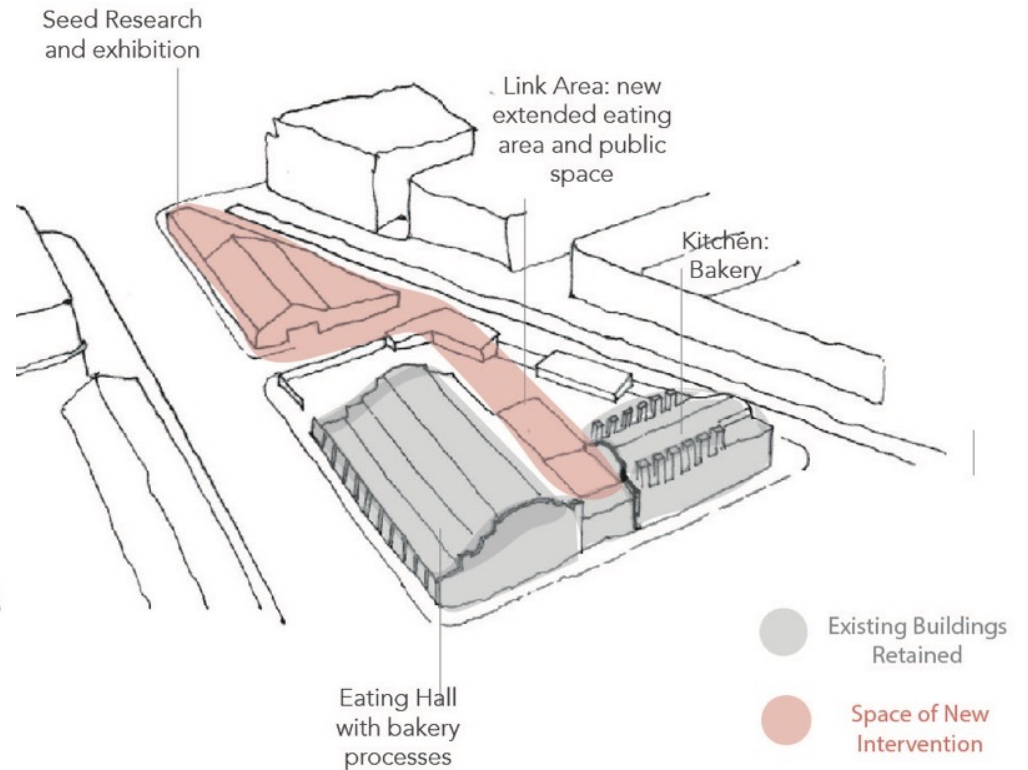
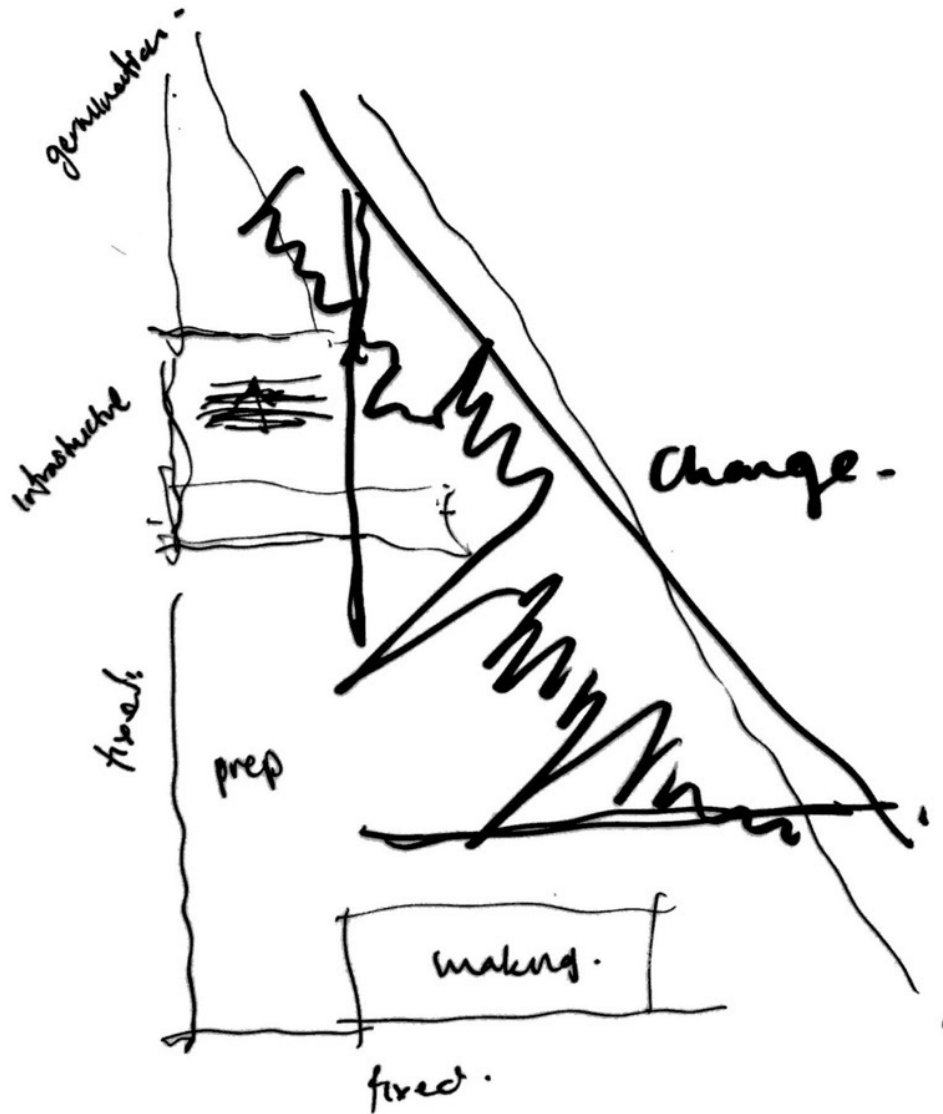


Figure 136: Initial concept (Author 2021)

Figure 137: Layout of programme on site (Author 2021)

CLIENT & STAKEHOLDERS

The client who will fund the scheme is the eThekweni municipality. When it comes to operations, conservation and management, however, this is more complex.

It is evident that the eThekweni municipality has recognized the social, environmental and economic potential of Rivertown and has had various plans and visions in the past of what this precinct could become (eThekweni 2016:177-179 & Interviews: Appendix A). Unfortunately, however, little of these plans have come to full fruition (Hlongwa 2021: Appendix A) and as a result, the heritage of the Rivertown beerhall is underutilized and not conserved in such a way that invites the public to share in this heritage. Consequently, sole public ownership, management and conservation of heritage is not successful.

As described earlier, part of the general problem this dissertation aims to address is the privatization of heritage landscapes as in the case of Arts On Main and 44 Stanley in Johannesburg. Such places are usually managed, funded or conserved by public-private partnerships which are beneficial for economic growth but do little for spatial justice in the city (Dirsuweit 2009:78-90).

As a result of both sole public and public-private ownership and conservation of heritage not always resulting in democratic, heterotopic spaces (Foucault 1986:24), an involvement and emphasis of the third sector (community or voluntary sector) is specifically needed.

The third sector generally involves the local community or non-profit organizations whose driving motivation is social interest and the conservation of heritage instead of profit gain or economic growth unlike that of public-private partnerships (Macdonald 2011:896).

The third sector can play a vital role in sustaining the place (Macdonald 2011:896) and if heritage is to be transmitted to future generations, the continuity of use that encourages social exchange, encounter and involvement of the general public must be sustained. Furthermore, the third sector can offer both public and private stakeholders very valuable insight into how the heritage building can be reused to address community needs (Macdonald 2011:896).

Consequently, an integrated approach is proposed called B/CLOT, "Build/ conserve, lease, operate, transfer" (Macdonald 2011:897). This entails that the third sector oversees the conservation and management of the heritage site through a long-term lease, but the government or public sector is still very involved in the design and reuse of the building to ensure legislation and requirements surrounding the necessary protection of the heritage is complied with (Macdonald 2011:897). Once the lease is completed, ownership of this heritage is transferred back to the public sector, which then prevents heritage landscapes from being "bought" by the private sector and reused in ways that may not be beneficial or may prove inaccessible for the surrounding local communities.

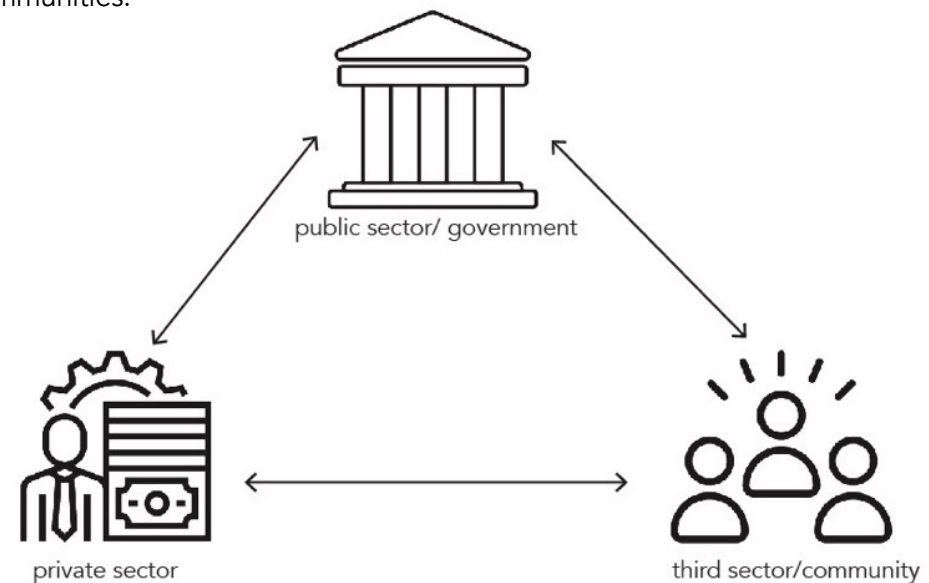


Figure 138: Integrated Management (Author 2021)

INTEGRATED MANAGEMENT

The Seed research centre will be managed by Seed and Knowledge Initiative (SKI) which is an offshoot of Biowatch South Africa.



Figure 139: (Seed and Knowledge Initiative 2021)



Figure 140: (Biowatch South Africa 2021)



Figure 141: (Durban Art Gallery 2021)



Figure 142: (The Glenwood Bakery 2021)

The exhibition space will be managed by the current DAG members on site as the public sector involvement and representative on site.

The bakery restaurant and flour refillery will be managed by Glenwood Bakery as a private sector representative on site.

As stated, the overall site is owned and overseen by the eThekweni municipality.

Consequently, the operations and management of this scheme will be integrated and all parties will need to work together in ensuring this heritage landscape is sustained and conserved appropriately and inclusively.

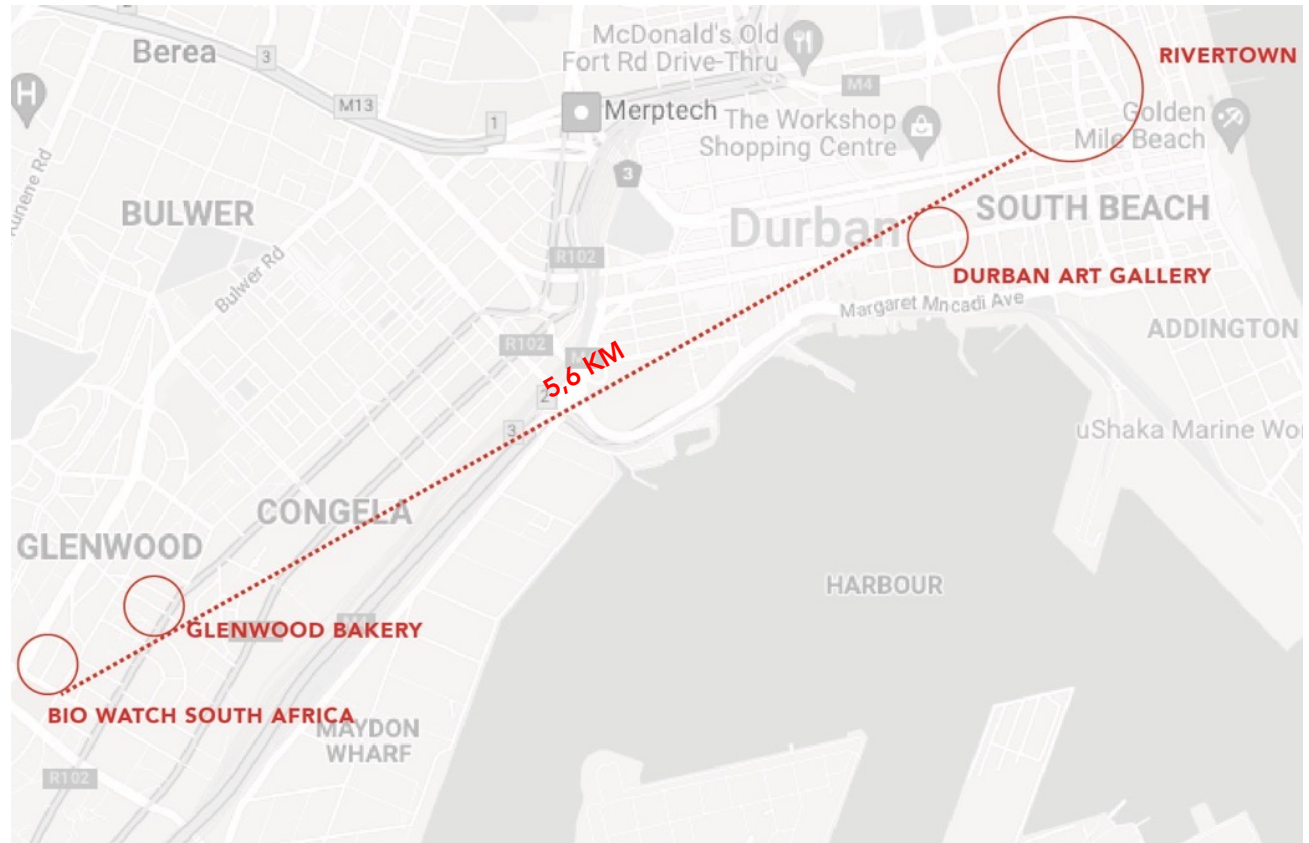

















Figure 143: Map of stakeholders and partnerships (Author 2021 and Google Earth 2021)

PROGRAMMATIC REQUIREMENTS







01 | Seed Research Centre

Space	User	Hours of use	Area (m ²)	Requirements
Reading Rooms		8am-5pm weekdays	84	Acoustics provision from busy road Sufficient lighting
Laboratories		8am-5pm weekdays	63	Acoustics provision Sufficient natural daylight and artificial lighting Visual access to exhibition space Air conditioning
Seed Processing Area		8am-5pm weekdays	77	Sufficient natural daylight and artificial lighting Visual access to exhibition space
Test Gardens	Public (by guided tour)  	8am-5pm weekdays & weekends	171	Natural daylighting Filtered rainwater for irrigation
Admin Facilities		8am-5pm weekdays	128	Sufficient natural daylight and artificial lighting Visual access to exhibition space
Seed Bank	Public (by guided tour)  	8am-5pm weekdays & weekends	192	Dark conditions with artificial lighting Accessibility
Bathrooms	unisex: open to all	8am-5pm weekdays & weekends	53	Sufficient ventilation x1 Disability/ wheel chair friendly unit


















User legend

-  Seed Research Staff
-  Public (Locals, students, tourists)
-  Manager & Caretaker
-  Exhibition Staff
-  Grain Refillery Staff
-  Bakery Staff
-  Groundsmen

02 | Exhibition Space

Space	User	Hours of use	Area (m ²)	Requirements
Entrance Foyer	  	8am-5pm weekdays & weekends with occasional night functions	218	Accessibility from the street
Exhibition space/ gallery	  	8am-5pm weekdays & weekends with occasional night functions	310	Sufficient artificial lighting Visual access to laboratory processes Accessibility from the street

PROGRAMMATIC REQUIREMENTS

03 Grain Refillery				
Space	User	Hours of use	Area (m ²)	Requirements
Weigh and pay retail point	  	8am-5pm weekdays & weekends	53	Weighing area and scales Retail pay point Grain silos for storage Accessibility from street
Grain silos	  	8am-5pm weekdays & weekends	126	Dry and ventilated conditions Accessibility for refilling and emptying
04 Outdoor Eating Area				
Space	User	Hours of use	Area (m ²)	Requirements
Link Area	 	8am-5pm weekdays & weekends	277	Natural daylighting and ventilation Shading Accessibility to street
Extended Courtyard	 	8am-5pm weekdays & weekends	269	Shading Accessibility to street
Amphitheatre	 	8am-5pm weekdays & weekends	178	Shading Accessibility to street
05 Indoor Eating Hall				
Space	User	Hours of use	Area (m ²)	Requirements
Service edge		8am-5pm weekdays & weekends	108	Cleaning room Refuse Cold Storage Dry Storage
Bakery production pods	Public on interactive seating edge  	8am-5pm weekdays & weekends	75	Sufficient natural and artificial lighting Storage for utensils Prep table
Eating Area	 	8am-5pm weekdays & weekends	355	Sufficient natural and artificial lighting Ventilation Seating and tables
Bathrooms	unisex: open to all	8am-5pm weekdays & weekends	87	Sufficient ventilation x1 Disability/ wheel chair friendly unit

User legend





















-  Seed Research Staff
-  Public (Locals, students, tourists)
-  Manager & Caretaker
-  Exhibition Staff
-  Grain Refillery Staff
-  Bakery Staff
-  Groundsmen

Figure 145: Programmatic requirements, 2 (Author 2021)

PROGRAMMATIC REQUIREMENTS

06 Kitchen				
Space	User	Hours of use	Area (m ²)	Requirements
Serving Areas		8am-5pm weekdays & weekends	24	Storage for ready made goods Accessibility to kitchen and eating areas
Kitchen	 	8am-5pm weekdays & weekends	267	Existing chimneys for baking Sufficient ventilation Accessibility
07 Water Processes				
Space	User	Hours of use	Area (m ²)	Requirements
Rainwater and Stormwater Treatment and storage processes		8am-5pm weekdays & weekends	1900	Accessibility Space for treatment processes Space for storage tanks
Canal and swales	 	All the time	757	Regular maintenance and planting

User legend

-  Seed Research Staff
-  Public (Locals, students, tourists)
-  Manager & Caretaker
-  Exhibition Staff
-  Grain Refillery Staff
-  Bakery Staff
-  Groundsmen