

precedent

analysis of existing works as influence to the design proposal



precedent

A wise person once said that you're only as creative as the obscurity of your sources.

Albert Einstein (Think Exist, 2011)

5.1 Introduction

This chapter is an evaluation of existing projects that have a similar programme, context and intent. This chapter also investigates projects that have similar form, typology and design influences than the proposed Burger's Park Opportunity Platform. Each project study has a focus area, but the programme, construction and accessibility will continuously be assessed when applicable.

5.2 Mount Angel Abbey Library, St. Benedict, Oregon

5.2.1 Project info

Architect: Alvar Aalto
Project Title: Mount Angel Abbey Library
Building Type: Library
Location: Mount Abbey, Oregon
Completion Date: 1970
Climate: moist & temperate

Awards: none

5.2.2 Project relevance

Programmatic

Daylighting

- Structural expression

Brick work

5.2.3 Project description

This library was commissioned by the Benedictine Monk's campus in 1967 (Mount Angel Abbey Library, 2011). Even though the library forms part of the campus, it is a community library to the remote regions surrounding the hilled areas in the region of St. Benedict, 65 kilometers north of Portland in Oregon, North-west United States of America.

The building is located on the sloped side of a hill top, with views of the area all around. The main entrance is low scale and it gives the illusion that it is a small building; however upon further investigation one realises it is a large volume of yellowish brick.

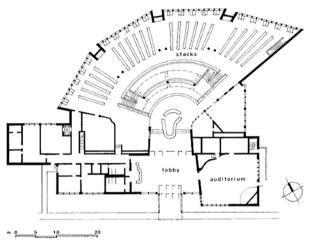
The concept Aalto used was a direct result of the clients ideals; "...to build a library where the pleasure of reading would be combined with efficiency and functionalism of a competent and specialised learning centre." (Asensio, 2002:64)



5.2.4 Project Analysis

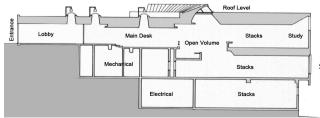
1) Library design

The plan is 3 wedged shapes placed around a central point with an atrium-like central space. See illus. 5.1.



illus. 5.1 Ground floor plan of Mt. Angel Abbey Library

The design of the library (Illus. 5.1) has provided seating throughout the stacks and other library spaces, allowing for pause, reading and resting. The location of the info desk enables viewing of various sections of the library from the main central desk. Chairs, seating, desks, light fixtures, lighting quality, spatial experience were purposely designed. Alto also ensured visual links between different levels (Illus. 5.2). Aalto also managed to capture specific views and circulation routes and spaces were designed around these views, which contribute to the interior.

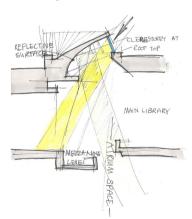


illus. 5.2 Section of Mt. Angel Abbey Library

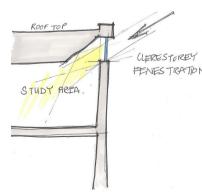
2) Daylighting

From the onset of the architectural approach, the lighting (focussing on daylighting) was key in the entire building's organisation and space planning. Aalto has managed to create different light qualities for different spaces; light qualities that compliment the different intentions of the spaces. Based upon research conducted in 1997 by Nathan Good (Architect) from the California State Polytechnic University, the users, visitors and employees are of the opinion that the quality of the lighting in the spaces are the reason for the success of the library (Good, 1997: 9).

Various ways of letting in natural light is utilised in the Mount Abbey Angel Library building and they will be investigated below: Refer to illus. 5.3, 5.4 and 5.5.



illus. 5.3a Section of Natural lighting 1



illus. 5.4a Section of Natural lighting 2



illus. 5.3b Interior of Natural lighting 1



illus. 5.3c Exterior of Natural lighting 1

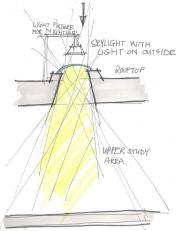


illus. 5.4b Interior of Natural lighting 2



illus. 5.4c Exterior of Natural lighting 2













illus. 5.5b Interior of Natural lighting 3 illus. 5.5c Exterior of Natural lighting 3

3) Facade design

The exterior walls of the mount Angel Abbey Library is in direct contrast with the smooth off-white plastered interior finish. The vellowish brown brick exterior is complimented by the timber slats that cover the sun facing windows. Carefully selected colour palette and brick joints (in particular at corner junctions) ensure that the library sits unobtrusively in its environment. See illus. 5.6a.



illus. 5.6a Brick exterior





illus. 5.6b Exterior of aisle window illus. 5.6c Exterior of aisle window

4) General

The library has been critiqued for having certain areas that have dark passages, but for the most part it is well lit with natural lighting for most of the year (Good, 1997: 9). It can however be said that the occupants, the workforce in particular, do not have a complete understanding of the buildings lighting intent. During the investigation Good, found that when the janitor opens up in the morning, he turns on all the lights, which continue to burn for most of the day.

5.2.5 Lessons learnt

- The Mount Angel Abbey Library makes use of natural lighting in various ways, resulting in a lively and conducive environment with designed lighting quality.
- The architectural language and material palette have stood the test of time and the library has undergone very little changes over the past 40 years, a testament of the quality of the design.
- Certain parts of the library are designed to use natural lighting, but it is visible even in photographs that some of these areas are underlit.

5.3 Peckham Library and Media Centre, Peckham, **South-east London**

5.3.1 Project Info

Architect: Will Alsop

Project Title: Peckham Library and Computer centre Building Type: Library & Computer resource centre

Location: Peckham, South-east London

Completion Date: 2000 Climate: temperate marine

Awards: Stirling Prize for Architecture, 2000

Civic Trust Award, 2002.



5.3.2 Project relevance

- Programmatic and collection size
- Computer resource centre
- Public interface
- Volumetric & form
- Urban regeneration & safety issues

5.3.3 Project description

The Peckham Library and Media Centre were designed for the London Borough of Southwark to revitalise this middle to lower income suburb of London. The centre houses a range of facilities including a library, study areas, computer and other media centre, children and topic specific areas, multi use spaces and a conference space (Public Architecture UK: 12).

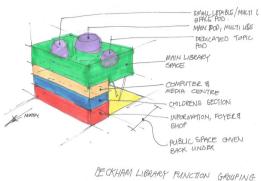
The library is located opposite a small public space and responds to it by extending this space by raising the structure above it. Spatial organising is done in levels; with auxiliary functions, the bookshop and information desk on the ground level. As one moves up, the children's section and the bulk of the computer section is located on the levels overlooking the public space. The library, study and conference spaces are located on the top level, optimising on view and natural lighting. The building facade is operable to the north (shaded side) to allow natural ventilation and lighting. The 'pods' in the library space have skylights that are manually controlled to allow natural light to enter as desired (London Open House, 2011: 3).

The brief by the clients to the architects included the following: the library should be light, must have flexible spaces which could change as library needs changed, a safe and welcoming environment (given high crime & community fears) , and it had to be energy efficient.

5.3.4 Project Analysis

1) Public interface & function distribution

The public interface of the library building is towards a square that has been created by the elevation of the top floors and the cutting back of the lower, to create a pause and shelter space; an outside room. See illus 5.8a and 5.8b.





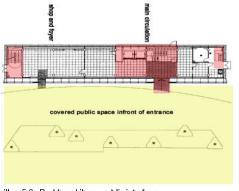
illus. 5.7a Peckham Library function grouping

illus. 5.7b Exterior of Peckham Library

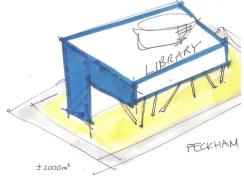
2) Urban regeneration & safety

The iconic volume and presence of the architectural language within the adjacent suburbs has made it impossible to ignore that this new structure had been erected. The library's use since opening in 2000 has been overwhelming and judging by the response on the library's official website the library has fulfilled a much needed community function.

The result of the development of the library had led to many other developments in the immediate area. An article written by Sui-Ti Wu, the Design Director at NPS Property Services, in 2008, entitled 'Peckham Revisited' (Public Architecture UK: 11) states that the effect this urban regeneration has had on the area is evident. The building also won the Civic Trust award in 2002, an accolade that speaks of the achievements in empowering citizens.



illus. 5.8a Peckham Library public interface



illus. 5.8b Volumetric of Peckham Library



3) Programmatic, volume size

Function	area	alternative
Total area	2500sqm	5 storeys
Library area on top floor	1200sqm	80 000 volumes & 60 carrels
Learning & computer centre	250sqm	50 media stations
Shop on ground floor	90sqm	1 tenant
Pod Meeting Room	60sqm	50 people seated

Table 5.1 Peckham Library accommodation schedule

5.3.5 Lessons Learnt

- The introduction of the Peckham library in the run-down suburb has
 revitalised the area and exceeded its expectations. This is especially
 is clear if one reads what the residents of the area have to say about the
 library and what it has meant for the community.
- The importance of an outside foyer or public square as an outside room to the library.
- The iconic structure that is the Peckham Library is recognisable in the
 precinct as a public building, and due to the colour use and form it has a
 certain playfulness that is expected.
- The condensed envelope of the library proves that a mixed-use library can be fitted into the size of an equivalent conventional library. Table 5.1.

5.4 Idea Store, Whitechapel, London

5.4.1 Project info

Architect: David Adjaye

Project Title: Idea Store Whitechapel

Building Type: Library, computer centre & multipurpose hall

Location: Whitechapel, Tower Hamlets, London

Completion Date: 2005 Climate: temperate marine

Awards: none

5.4.2 Project relevance

- Programmatic, not just a library
- Accessible approach
- Multipurpose hall, Computer centre, class rooms
- Urban regeneration
- Facade and context response

5.4.3 Project description

The Idea Stores of David Adjaye were introduced in 2000 as a new way of bringing books and computers to the suburbs in which they were introduced. The Idea Stores are a contemporary interpretation of a library (Allison, 2006; 184-186). It does away with the conventional library building with dusty books and few users. The concept behind the Idea Store is an urban resource centre which houses community spaces that are linked to the library and facilitate the use of these spaces. The Idea Stores are urban renewal projects with the intent to uplift both the people and the place in which it is inserted (Tower Hamlets Borough Council, 2011).

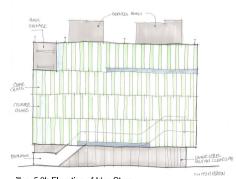
5.4.4 Project Analysis

1) Facade design

The facade treatment is a result of two considerations; firstly the inspiration from the roof structure of the nearby market stalls; secondly a direct result of the interior design; the study carrels and book stack configuration (Allison, 2006; 186). Certain views have also been framed within this regulating grid of the facade and fenestration design. Illus. 5.9a&b and 5.10a&b.



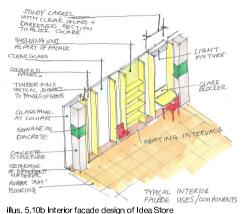
illus. 5.9a Comer approach of Idea Store



illus. 5.9b Elevation of Idea Store

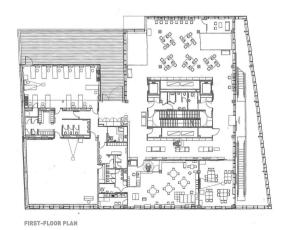






2) **Library Design**

The Idea Store, Whitechapel, can be seen as multiple buildings or as one multi functional building (Allison, 2006; 184-186). The layout functions per level and different community spaces are provided on the lower levels. The upper level is dedicated to the library space and a café. Whitechapel also has a multi functional hall, but it is designated as a dance studio (Tower Hamlets Borough Council, 2011). See illus, 5.11a and 5.11b.



illus. 5.11a First floor plan of Idea Store

FOURTH-FLOOR PLAN

illus. 5.11b Fourth floor plan of Idea Store

3) Programmatic, volume size

Function	area	alternative
Total area	2340sqm	4 storeys
Main library	1010sqm	100 000 volumes & 60 carrels
Children's library	330sqm	18 000 volumes & seating
Classrooms	340sqm	80-140 persons
Cafe	165sqm	50 patrons
It/surfing	150sqm	25 fixed, 12 open
Dance studio	140sqm	40 - 60 dancers
crèche	95sqm	
a/v library	110sqm	12 000 volume

Table 5.2 Idea Store accommodation schedule

4) Urban regeneration, response to context

The response to the existing buildings, on what used to be an open erf - both on a volumetric and scale level- are done in a very sensitive manner, but still allows the Idea Store Whitechapel to be visible from the street because of the way in which the facade protrudes the adjacent building envelope (Tower Hamlets Borough Council, 2011).

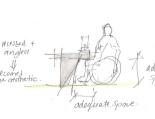
5) Accessibility

The Idea Store Whitechapel has been designed from the start with accessibility in mind. Adjaye has even included on the floor plans a wheelchair bound person to indicate adequate space and orientation (Allison, 2006; 191). See illus. 5.11a & 5.11b. The counter design in the Idea Store makes provision for a wheelchair by means of a recessed counter, that also drops down for easy use. This drop down also enables children to use the counter easily. See illus. 5.12a & b.









illus. 5.12a Counter design of Idea Store

illus. 5.12b Sketch of recessed counter of Idea Store



Signage has also been included with high contrast, easy reading and appropriate positioning. There is additional orientation signage provided for easier navigation to the different components inside the building. The development of the signage by Adjaye is a way to simplify the complex programme and wayfinding in the Idea Store. See illus, 5.13a and 5.13b.





illus. 5.13a Main signage

illus. 5.13b Lobby signage of Idea Store

5.4.5 Lessons Learnt

- The Idea Stores have reintroduced the library in a way that has enticed the residents to explore it. It is a mixed-use library, which introduces additional programmes into the building that allow for flexibility and adaptation.
- In a complex programme with multiple spaces (like the Idea Store, Whitechapel), navigation, wayfinding and signage are crucial to the optimal performance of the building.
- The Idea Store has managed this by colour coding zones and through easy to read protruding typeface making wayfinding clear and accessible. Tactility of signage and colour use enables the visual impaired to engage with the signage.

5.5 Brandhorst Museum, Munich, Germany

5.5.1 Project Info

Architect: Sauerbruch Hutton Project Title: Brandhorst museum Building Type: Art Museum Location: Munich, Germany Completion Date: 2009 Climate: continental

Awards: Intl. Prize for sustainable architecture, silver medal Designs of the year 2010, design Museum London. Shortlist Lubetkin Prize 2009. Shortlist Mies van der Rohe Award 2009. Selected work.

5.5.2 Project relevance

- Facade treatment
- Interior light quality due to solar shading
- Corner treatment
- Passive cooling and heating

5.5.3 Project description

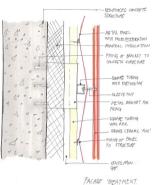
The Brandhorst Museum houses a private collection of art from the late 20th century as well as contemporary works (SauerbruchHutton, 2011).

The result of a competition, the area has been livened up by the bold colour use as an expression of the "art district" it announces. The colourful facade announces the start of the art district. The facade is entirely covered with the ceramic blocks, with the exception of strategic fenestration and entrances. The interior is finished completely in white with continuous floor, ceiling and balustrade surfaces. The floors are fitted Danish Oak timber contrasting with the white surfaces elsewhere. The Brandhorst Museum is also designed to keep temperatures under control without the use of electricity or mechanical systems.



5.5.4 Project Analysis

1) Facade detail and interior light quality

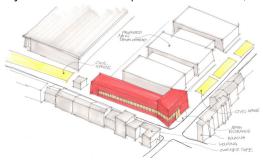




illus, 5,14a Fixing method of ceramic tubes

The facade treatment consists of 40mm by 40mm ceramic tubes in 23 varying colours (50 Years Detail, 2011). The facade colours are divided into two groupings with darker and lighter variations. The facade is continuous and covers certain strategic fenestration to provide shaded interior light with patterns. Some fenestration elements on the exterior do not sit behind the ceramic facade to place emphasis on these openings (SauerbruchHutton, 2011). See illus 5.14a and 5.14b.

The exterior contrast with the white interior were intentional, because the interior is meant to be a blank canvas on which the artworks can be exhibited. The exterior identity was intended to be bold and iconic within the precinct. The facade is a product of NBK, TerrArt Baquette Glazed (illus. 5.14b). The colours were specifically chosen, custom made and fitted to the detail shown in illus. 5.14a, as recommended by the manufacturer (SauerbruchHutton, 2011).



illus. 5.15a Comer and urban fabric response of Brandhorst Museum

illus. 5.15b Photo of comer with entrance away from comer

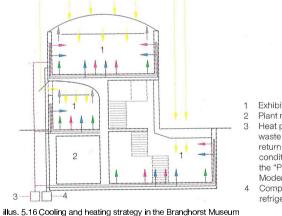
2) Corner treatment

The corner treatment was dealt with in a nontraditional manner, by not placing the entrance on the corner and instead having a recessed courtyard that provides entry into the building. See illus. 5.15a and 5.15b.

3) Cooling and heating

The Brandhorst museum makes use of a system that uses heat (captured with a heat pump) from surrounding ground water to heat up the interior. The distribution of air is done through the floor (see illus. 5.16) for both heating and cooling strategies, and requires an overall decrease in air-conditioning needs (Hausladen & Tichelmn, 2010: 98), See illus, 5.16,

Cooling is achieved through a compression type cooling unit and strict pollutant and moisture content monitoring is applied (Hausladen & Tichelmn, 2010: 99).



- Exhibition room
- return flow of the air conditioning plant in the "Pinakothek der Moderne" Museum Compression-type refrigeration unit

5.5.5 Lessons Learnt

- From the onset the corner had been the main generator in the form and urban edge response.
- Offsetting of the entrance from the corner
- Colour use on the exterior to reflect vibrancy of interior objects and activity.
- Ceramic tubes provide an engaging facade, which has proven to be low maintenance.



5.6 Harare Mixed-use Library, Khayelitsha

5.6.1 Project info

Architect: Chamberlain & Irving Architects (in association with Mark Thomas)

Project Title: Harare Mixed-use Library Building Type: Library & community centre Location: Khayelitsha, Western Cape Completion Date: 2010

Climate: sub-tropical Mediterranean

Awards: none

5.6.2 Project relevance

- Programme

Colour use and artwork

Project intent

- Materials

Natural lighting

5.6.3 Project description

The Harare Library is more than just a conventional library where one can take out books and other media. It also houses an Internet cafe, a training centre, a children's centre, a community space, study spaces, lounge areas, and a few NGO office spaces (illus. 5.17). It also forms the edge to the adjacent Harare Square from which the Library gets its name (Cooke, 2011).

The building design was kept simple to keep cost low, and many robust material choices have been made in order to ensure maintenance and durability is optimised (illus. 5.17).

5.6.4 Project Analysis

1) Programme

The diverse programme has been welcomed by the community and has become more of an attraction than a standard library. For the management and owners this has also been a good start, as the long-term feasibility and sustainability had been considered and directly resulted in this diverse programme (Cooke, 2011).



illus. 5.17 Main circulation space with brick paving, and natural lighting from saw-tooth roof clere storey windows

2) Colour use and Artwork

The colour palette of the Harare Mixed-use Library was limited and colour is introduced by community executed artworks and furnishings. The artwork are strategically placed and contributes to the identity of the architecture. The furnishings introduce splashes of colour in the otherwise white and red brick interior. See illus. 5.18a & 5.18b.



illus. 5.18a Community mosaic artwork at Harare Library

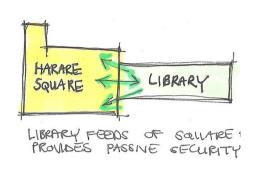


illus. 5.18b Children's library and play area

3) Project intent

The Harare Mixed-use Library is intended to function as a library and a community centre to the residents of Khayelitsha. It is also intended for the building to provide the adjacent Harare Square (and the neighbourhood) with passive surveillance. This has been successful and petty crime has decreased noticeably since the opening of the library. A crucial element in the design of the building is the interaction on the entrance level, as the public interface, directed towards the square (Cooke, 2011). See illus, 5,19a & 5,19b.







illus. 5.19a Interaction between square and library

illus. 5.19b Photo of Harare Library main entrance

4) Materials

Material choices were based upon cost and the robustness of the materials. The floor of the main entrance lobby and circulation is red brick clay pavers that is extended from the outside forming a seamless threshold between the inside and the outside. See illus. 5.20a & 5.20b.







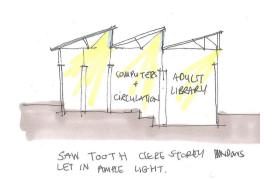
illus. 5.20b Main counter with dropped down section and artwork

5) Natural lighting

The main spaces of the library and community spaces make use of natural lighting by means of clerestory windows located in the saw-tooth truss system used. The lighting provides adequate soft lighting for the reception area, main circulation and stacks on the higher level. The south facade, facing Harare Street also provides ample lighting. The library makes use of task lighting that is individually controlled to further meet the lighting requirements. See illus. 5.21a & 5.21b.







illus. 5.21b Sketch showing natural lighting from above

5.6.5 Lessons Learnt

- Mixed-use approach to library has made sense in this context and is proving to be well utilised by the community.
- Community involvement played a role in the community's ownership of the
- The direct link and relationship between the library and gathering spaces have allowed resource use from the library to facilitate the programmes that have been implemented since the inception of the building.
- Robust materials can be used in unconventional applications.

5.7 Seattle Central Library

5.7.1 Project info

Architect: Rem Koolhaas

Project Title: Seattle Central Library Building Type: Library & community centre

Location: Seattle, Washington, United States of America

Completion Date: 2004 Climate: Humid sub-tropical

Awards: Leadership in Energy & Environmental Design (LEED) Silver certification, 2005 Honor Award for Outstanding Architecture American Institute of Architects, 2005 Outstanding Library Building Award

American Institute of Architects and American Library Association, 2005 Platinum Award for Innovation

and Engineering, American Council of Engineering Companies (ACEC)



5.7.2 Project relevance

- Programme
- Ramp
- Signage
- Urban response
- Gathering spaces

5.7.3 Project description

The Seattle Central Library (SCL) is part of the larger group of libraries that form the Seattle Public Library system which has been in existence since 1891. (Seattle Library, 2011). A library that's main aim "is to bring people, information and ideas together to enrich lives and build community" (Seattle Library, 2011). The SCL was funded by the "Libraries for All Building Program which was established in 1998 and aimed to provide access to libraries, upgrading of existing libraries to the greater Washington, D.C. district (ibid.).

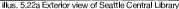
The building is a glass and steel structure with a continuous ramp that houses the collection of books, computers and gathering spaces. The idea behind the ramp was to provide a uninterrupted presentation of the Dewey decimal system used in numbering books according to their category. The ramp also allows for easy movement between these levels. The ramp's gradient is very gentle and makes for easy transition between the book stacks (OMA, 2011).

5.7.4 Project Analysis

a) Urban response

The SCL is one of several projects that were introduced to serve the immediate community (Seattle Library, 2011). The Seattle area was lacking in public services and deteriorating. The library injected new energy, resources and money into this area. The library has been described by Koolhaas as a "community hub" but it has been criticised in the architectural realm and by its community as not being that. Architecture critic, Lawrence Cheek, criticism was that "if it were a community hub then the doors would have opened" onto street along the whole facade. The public have described it as being too inward and not inviting (Seattle Times, 2011; Project for Public Spaces, 2011). See illus. 5.22a & 5.22b.







illus. 5.22b Seattle Central Librar

b) Signage

Signage in the SCL is incorporated with the floor or with the surface that it is placed on. The book stack numbering system is integrated on the floor surface in the flooring material as indicated in illustration 5.23a (OMA, 2011). Signage for counter identification is integrated on the vertical surface in a contrasting colour and legible typeface (illus, 5.23b).

The SCL is a large building with many components and wayfinding in it was initially criticised. The signage was revised and navigation is very clear in the library now. Clarity and visibility of signage is the success, together with the incorporation of the signage into building components.



illus. 5.23a Floor signage part of floor materia



illus. 5.23b Counter signage on the main desk



c) Gathering spaces

The SCL has a large number of gathering spaces (Seattle Library, 2011). Some gathering spaces are formal and suited for lectures and meetings. Other spaces are smaller and are used as instruction rooms for small groups (OMA, 2011). Many informal spaces also allow for spontaneous grouping of people. Illustrations 5.24a and 5.24b.





illus. 5.24a Gathering space with formal seating arrangement

illus. 5.24b Reading and small gather spaces

d) Ramp design

The ramp approach that Koolhaas has taken in designing the SCL originated in two components; the uninterrupted Dewey decimal system and the ease of movement between levels (OMA, 2011). See illus. 5.25a & 5.25b.

The ramp applied in the SCL is continuous and extend up multiple floors to form main component of the building (illus. 5.27 & 5.28). The ramp has function on it and not merely a circulation method as it is usually applied in architecture. The ramp house the book stacks and numbering of these stacks are implemented on the floor material on the ramp, making it very clear to the user where he is in the Dewey sequence. (Ilus. 5.26). A staircase in the centre of the building can be a shortcut between the different levels in spiral ramps. Books, desk spaces, computers and seating is located on the ramps (Seattle Times, 2011).

The ramp as been used to visually and physically connect different levels and components in the library (illus. 5.27 & 5.28). Though there are escalators, lifts and stairs in the library, many users prefer the ramp as main means of vertical circulation (Seattle Library, 2011).

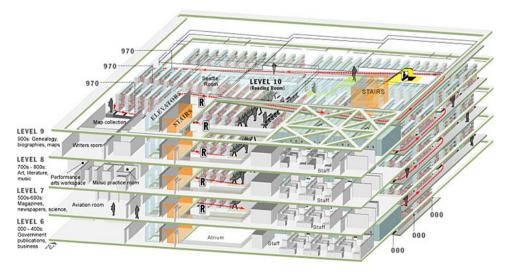
The ramps extend the equivalent of four floors and have a slope of 1:25 which is very gentle and make movement with wheelchairs and prams easy. The problem with the ramp is the circulation widths as "...the ramp aisles are too narrow to allow wheelchairs or baby strollers to pass each other" says Steve Johnston of the Seattle Times (Seattle Times, 2011).





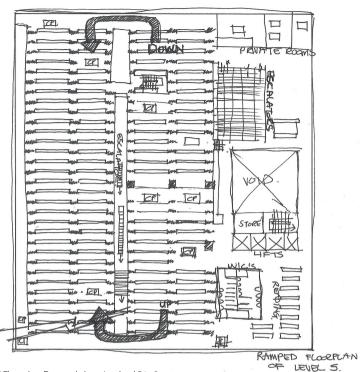
illus, 5,25a Gentle ramp spiral with book stack arrangement

illus, 5,25b Gentle ramp slope easily navigated to level surfaces

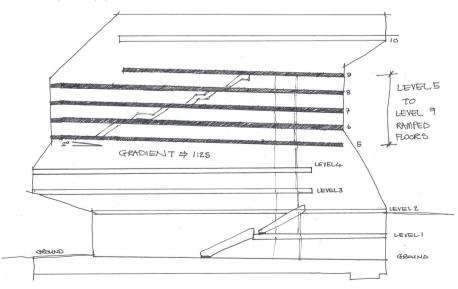


illus. 5.26 Ramp spiral used for Dewey numbering system, housing book stacks and other functions





illus. 5.27 Floor plan. Ramp spiral used on level 5 to 9.



illus. 5.28 Section. Ramp spiral used on level 5 to 9 indicated.

5.7.5 Lessons Learnt

- Mixed approach to library spaces with diverse programme that encompasses books, digital media, gathering of people, educational programmes and access to the Internet.
- Signage incorporation into furniture, floor and walls allows for less complicated approach and makes signage part of the aesthetic. Also makes signage more inclusive as contrast and position is critically decided.
- Urban edge needs to connect with street and building must interact with the people on the street and invite them in.
- Varying types of gathering spaces allow many different types of programmes to be run.
- The ramp as means of vertical circulation makes going form one level to the next an experience and surfaces changes from a gentle gradient can be easily navigated as transition point is not obtrusive. The ramp also allows for connection to levels below.