KEY AREAS

Community Gardens:

1. Main pedestrian entrance points
2. Coppice Garden
3. Woodland Garden
4. Upper Horizon Garden
5. Lower Horizon Garden
6. Sunken Pebble Play Garden
7. Walled Garden
8. Degradation Cover
9. South Garden
10. Wildflower Meadow
11. Sports Garden
12. Existing landform banks to be retained

School Gardens:

13. Pedestrian Entrances
14. Living Fence (School Perimeter)
15. Daily Mile Garden
16. Social Garden
17. Quiet Garden
18. Waiting Garden
19. Visitor Entrance
20. Swale
21. School Car Park

Learning bases:

Key destinations for school learning expeditions in community gardens

LEGEND

- Site boundary
- Existing contours
- Proposed contours
- Existing vegetation
- Tree to be removed
- Existing tree
- Proposed tree
- Proposed shrub
- Proposed coppice garden planting
- Proposed woodland garden planting
- Proposed wildflower mix A
- Proposed wildflower mix B
- Proposed ornamental planting
- Proposed degradation cover
- Proposed timber vertical post fence (removal to be reviewed after hedge establishment)
- Proposed hedge
- Proposed secondary pedestrian vegetated path: proprietary concrete paving system
- Proposed cycle path: low carbon exposed aggregate concrete with recycled aggregate
- Proposed school daily mile path: permeable rubber crumb with Type 3 sub base to match RAL 050 60 80
- Paint application to existing tarmacadum surface to match RAL 080 80 50
- Paint application to existing tarmacadum surface to match RAL 075 80 60
- Paint application to existing tarmacadum surface to match RAL 070 70 80
- Paint application to existing tarmacadum surface to match RAL 060 70 70
- Paint application to existing tarmacadum surface: permeable rubber crumb to match RAL 050 60 80
- Retained existing tarmacadum surface
- Proposed green roof to existing building (structural engineer to confirm capability of existing structure)
- Proposed softwood timber structure: viewing shelter
- Proposed softwood timber structure: canopy
- Proposed stainless steel cycle stands
- Proposed bin
- Proposed softwood timber bench
- Proposed play log
- Proposed softwood timber canopy for climbing
- Proposed sunken pebble pit in locations where existing tarmacadum is removed
- Proposed stainless steel and timber elevated walkway
- Proposed school flag pole for student work
- Proposed boulder seat
- Proposed school art board for student work
- Proposed swing
- Proposed timber podium seating
- Proposed timber picnic bench
- Proposed bespoke precast concrete seating dark grey with plant fossil pattern (3 sizes)
- Proposed brick wall
- Proposed brick path
- Proposed bark chipping path surface
- Proposed raised planting bed with seating
- Proposed raised planting bed
- Proposed viewing tower
- Proposed bespoke concrete table
- Proposed brick oven

Country /City	United Kingdom / Newcastle upon Tyne
University / School	Newcastle University / Master of Landscape Architecture
Academic year	2022/2023
Title of the project	Learning with Plants: creating a co-habitat for plants and people in a school and community context
Authors	Alison Unsworth

TECHNICAL DOSSIER

Title of the project Learning with Plants: creating a co-habitat for plants and people in a school and community context

Authors Alison Unsworth

Title of the course Design Thesis

Academic year 2022/2023

Teaching Staff Dr Usue Ruiz Arana

Department / Section / Program of belonging Master of Landscape Architecture

University / School Newcastle University

Written statement, short description of the project in English, no more than 250 words

The thesis proposes a landscape design at the site of an existing playing fields and secondary school which will create a rich and varied environment for students, staff and the local community to **learn with plants**. Planting and landscape design across **a series of school and community gardens** demonstrates (1) a positive and innovative approach to using landscape assets as a context for learning (2) how plants can help us maximise the ways in which the site can address the climate and biodiversity emergencies. The school gardens create a plant-rich environment which supports the everyday school experience for young people and staff. The wider community gardens provide a series of exploratory routes and destinations designed to facilitate opportunities to support the school's curriculum which is delivered through cross-disciplinary learning expeditions.The approach is led by a series of design principles, informed by research, to guide the development of proposals for the site. The principles focus on the co-habitation of plants and people across the school and community gardens. The site consists of made ground which is likely to include colliery shale from the former colliery which was located in the South East corner of the site. Accepting these environmental constraints, topographical changes have been minimised to avoid exposing contaminants and a walled garden has been incorporated to provide edible planting in raised beds. Elements of the existing school grounds have been repurposed where possible to reduce the carbon impact of the proposed design.

For further information

Máster d´Arquitectura del Paisatge - UPC

Contact via email at:
master.paisatge.comunicacio@gmail.com

biennal. paisatge@upc. edu

Máster d´Arquitectura del Paisatge - UPC

Sede ETSAB - Universitat Politècnica de Catalunya

Calle Jordi Girona, 15. Edifcio Omega 1-3
08034 Barcelona - Spain

COAC - Colegi oficial d´Arquitectes de Catalunya

Carrer Arcs, 1-3
08002 Barcelona - Spain

12th International Biennal Landscape Barcelona

Barcelona **November 2023**

SCHOOL PRIZE

LEARNING WITH PLANTS

design principles for Windy Nook school and community gardens

01 Use **MANY MORE PLANTS** to dramatically increase carbon sequestration.[1]

02 Allow for **DESIGN BY HUMANS and DESIGN BY PLANTS** in a mutualistic relationship of cooperation.[2]

03 ACCEPT ENVIRONMENTAL CONSTRAINTS, selecting plants that will tolerate and thrive in environmental conditions rather then seeking to change them.[3]

04 Design for genetic, functional and structural **DIVERSITY** in planting to increase biodiversity[4] and create a variety of spatial and sensory experiences for learners.

05 Make room to **EXPERIMENT** with new species combinations in plant communities, with new materials and to find new ways of doing things. Accept the possibility of failure.

06 Use plants to **CREATE AND SHAPE SPACES** rather than merely filling those which are already defined.

07 Embrace **AESTHETICS FOR PLEASURE** because we can bring joy to human experience for its own sake.

08 Encourage learners to be **CURIOUS** through invitations to take notice and explore.

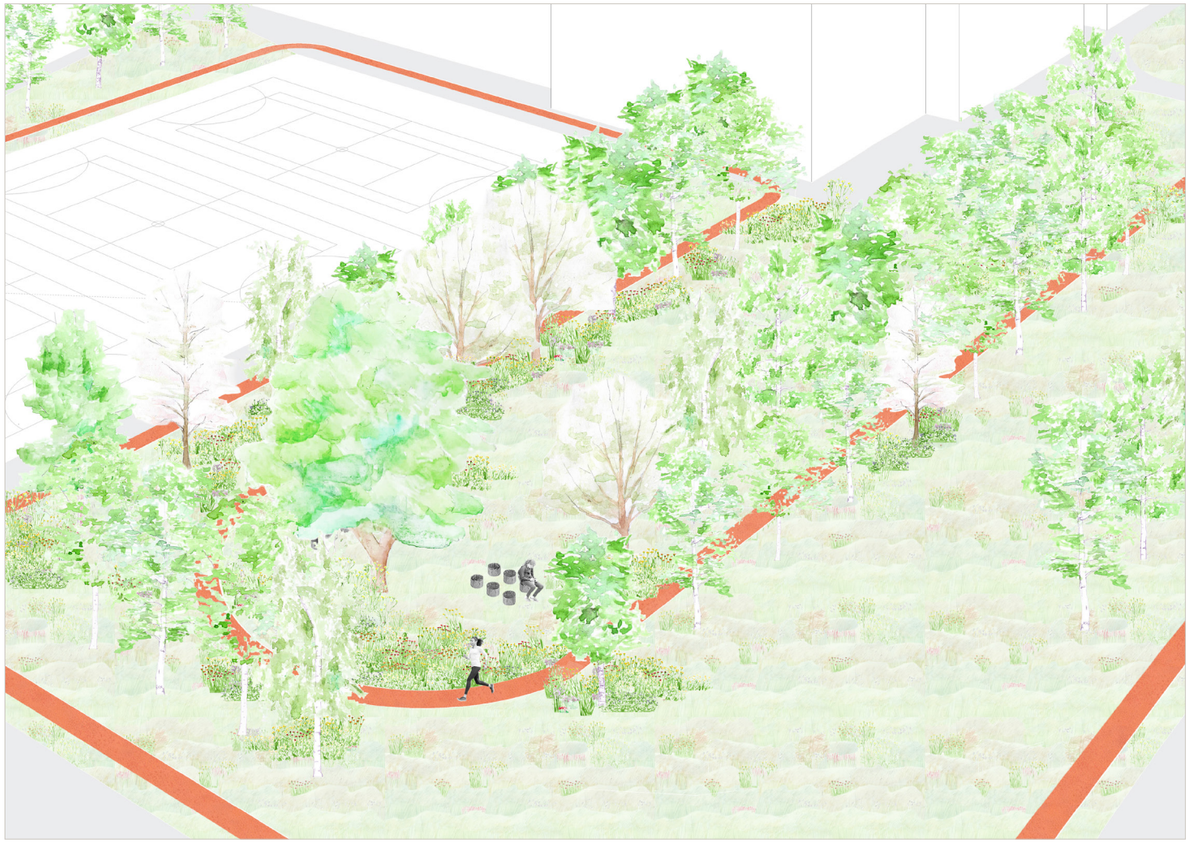
09 Provide varied opportunities for **INVOLVEMENT** of school and community learners to tend, grow, create, make, build and be active in ways that they choose.[5]

10 Design with an understanding that **CHANGE IS CONSTANT**. The composition and boundaries of most plant communities are fluid.[6] Learners have varied and changing behaviours and preferences.

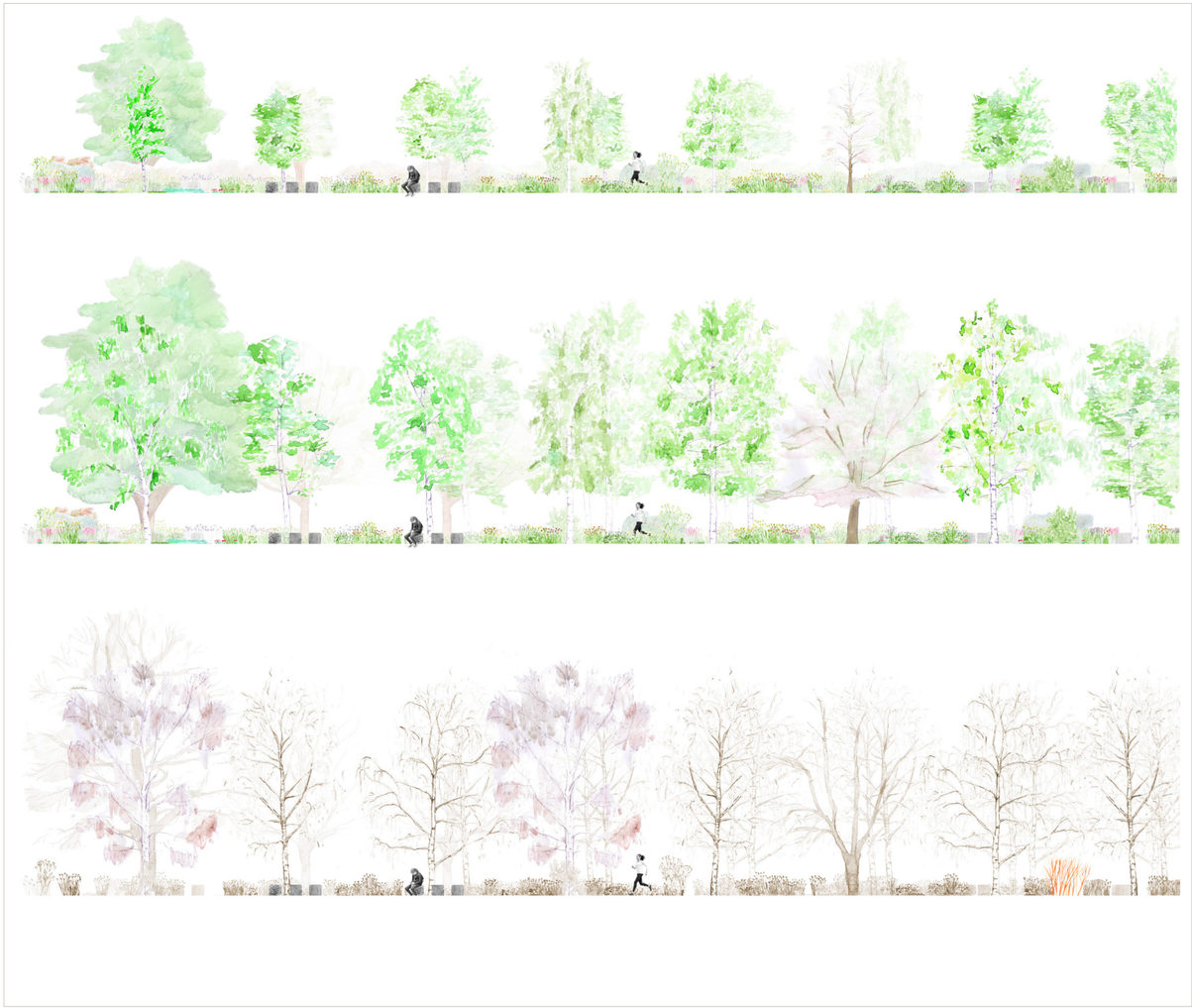
11 Let plants grow and plan for a process of **RESPONSIVE MANAGEMENT** which makes well-considered interventions only where necessary.[7]

Notes: 1."Plants can help us. Only they are able to bring the concentration of CO2 back to safe levels. […] There should just be one simple rule: wherever it is possible for a plant to live, there must be one." Mancuso, S. (2022) *The Nation of Plants*. Profile Books p. 93 **2.**"Plants are masters of cooperation and, through alliances and communities, they have succeeded in building mutualistic societies in any and all earthly environments." Mancuso, S. (2022) *The Nation of Plants*. Profile Books p. 138 **3**. Rainer, T. and West, C. (2015) *Planting in a post-wild world: Designing plant communities for resilient landscapes*. Timber Press. p. 47 **4.** Beck, T. (2013) *Principles of Ecological Landscape Design*. Island Press. **5.** "Studies indicate that a higher degree of involvement, or mental engagement, yields greater mental restoration." Mooney, P. (2019) *Planting Design: Connecting People and Place*. Routledge., p 35 **6.** Rainer, T. and West, C. (2015) *Planting in a post-wild world: Designing plant communities for resilient landscapes*. Timber Press. p. 30 **7.** Rainer, T. and West, C. (2015) *Planting in a post-wild world: Designing plant communities for resilient landscapes*. Timber Press. p. 61

The south west corner is the highest part of the site, and the lowest part of the site is in the north east corner. The level change of 45 metres between the highest and lowest points consists of a series of plateaus separated by steeply sloping banks. The elevated position provides panoramic views looking north from the southern boundary of the site towards the River Tyne, and looking east towards the North Sea.



School Gardens - daily mile route.



Proposed planting for School Gardens - daily mile route. Top to bottom: 5 years - summer, 10 years - summer, 10 years - winter
Species:

Tree Layer: *Acer pseudoplatanus*, Sycamore; *Sorbus aria*, Whitebeam; *Prunus avium*, Wild Cherry; *Prunus padus*, Bird Cherry; *Betula pendula*, Common Silver Birch; *Betula pubescens*, Downy Birch

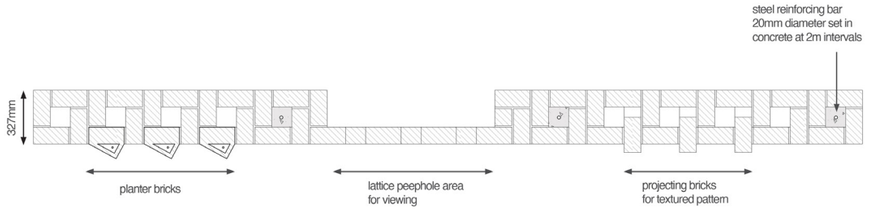
Herbaceous: *Deschampsia cespitosa*, Tufted Hair Grass; *Deschampsia flexuosa*, Wavy Hair Grass; *Deschampsia flexuosa* 'Tatra Gold', Wavy Hair Grass 'Tatra Gold'; *Holcus lanatus*, Yorkshire Fog; *Geranium pratense*, Meadow Cranesbill; *Leucanthemum vulgare*, Ox-eye Daisy; *Origanum vulgare*, Oregano; *Primula vulgaris*, Primrose; *Foeniculum vulgare*, Fennel; *Foeniculum vulgare 'Purpureum'*, Bronze Fennel; *Achillea filipendulina* 'Gold Plate', Fernleaf Yarrow 'Gold Plate'; *Achillea millefolium*, Yarrow; *Achillea millefolium* 'Summer Pastels', Milfoil 'Summer Pastels'; *Achillea* 'Summerwine', Yarrow 'Summerwine'; *Achillea* 'Terracotta', Yarrow 'Terracotta'; *Achillea* 'Walther Funcke', Yarrow 'Walther Funcke'; *Ajuga reptans*, Bugle; *Tanacetum vulgare*, Common Tansy; *Armeria maritima*, Sea Thrift.

Ground cover: *Campanula patula*, Spreading Bellflower; *Vinca minor*, Lesser Periwinkle

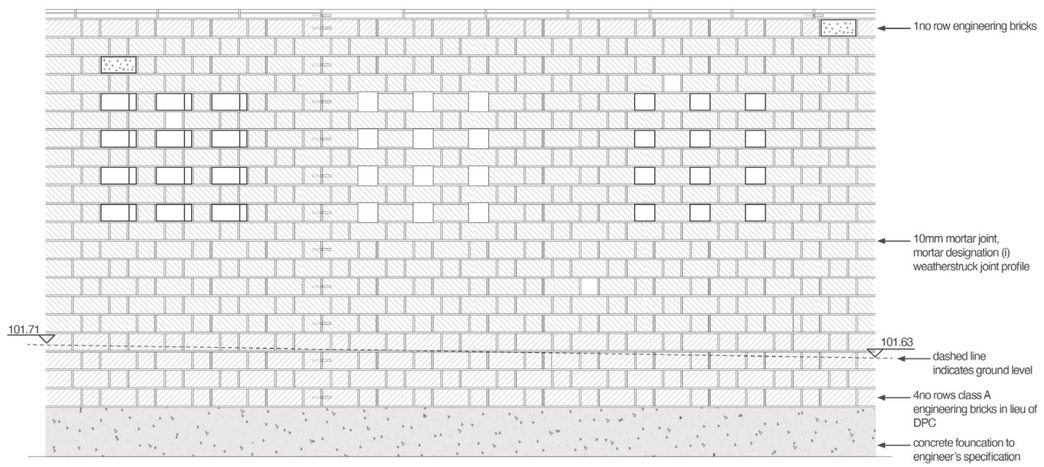
Bricks made from recycled waste aggregate
Colour: orange / red
Brick size: 215mm x 102.5mm x 65mm
Pattern: Double Flemish Bond

Bespoke planter brick with drainage hole to match

Bee brick
Dimensions: 215mm x 102.5mm x 65mm
Note: to be located minimum 1m above ground level
Area in front of brick to be free of vegetation



1 **Walled Garden south facing wall: Plan**
Scale: 1:20



2 **Walled Garden south facing wall: Elevation**
Scale: 1:20

Walled Garden

German **Air Raids**

Shipyards an Easy Target

Destruction

Shortage of Raw Material

Adaptation

Unconventional Materials

Concrete

Recreation through destruction

Pallion Hall **demolished** for **expansion** of **Shipyard**

New Shipyards

Innovation and Recreation

Recreation through wartime destruction

Economic Loss

Uncertainity

Water and Concrete as constructors

Last shipyard on the River Wear **closed**

S.S. Cretehawser shipwreck

Present River Wear

Birth Place of **Inventor** of incandescent light bulb

Reconstruction of Pallion Hall

Economic Boom

Recreation of habitats through destruction of concrete

First Shipbuilding yard at Hendon.

Past

Spontaneous vegetation breaking through concrete

Runoff and accumulation

Water logging

Vegetation adapted to lime conditions

Intact concrete

Destruction of ecology through recreation of industries

Mapping the Intangibles: Conceptual overlapping of the contextual history and existing site conditions

Country /City	United Kingdom, Newcastle upon Tyne
University / School	Newcastle University/ School of Architecture Planning and Landscape
Academic year	2022 - 2023
Title of the project	Experimental: Destruction - Recreation
Authors	Aditi Shinde

TECHNICAL DOSSIER

Title of the project Experimental: Destruction - Recreation

Authors Aditi Shinde

Title of the course Master of Landscape Architecture / Design Thesis - APL 8012

Academic year 2022 - 2023

Teaching Staff Robert Golden, Usue Ruiz Arana

Department / Section / Program of belonging School of Architecture Planning and Landscape/ Landscape Architecture

University / School Newcastle University

12

Written statement, short description of the project in English, no more than 250 words

Postindustrial sites are a legacy of the industrial age that has contributed to nation building in the past. However, such sites also leave behind industrial waste materials. The site chosen for the following project is in Pallion, a former ship building yard in Sunderland in the North East of England. Ship building yards come and go, leaving behind large amounts of inert industrial wastes like concrete, which are taken over and broken down by natural elements like water and vegetation with time. Water is visualized as a constructive and destructive element, and is a critical factor for the ship building industry.

Reflecting on site history and exploring the parallel relationship between natural factors present on site with concrete drives the design that reclaims this postindustrial site. Therefore, the project 'Experimental: Destruction - Recreation', explores the potential of erosion of concrete by existing elements on site: water and transgressive vegetation. The project seeks to identify and facilitate natural processes on site that follow a pattern of destruction and recreation, to encourage alternative methods of industrial land reclamation. Concrete is eroded by water, facilitating the release of alkalis and precipitation of calcium carbonate, leading to concrete's destruction. This is seen as an opportunity and experimentally explored to establish shallow alkaline calcareous grasslands.

For further information

Máster d´Arquitectura del Paisatge - UPC

Contact via email at:
master.paisatge.comunicacio@gmail.com

biennal. paisatge@upc. edu

Máster d´Arquitectura del Paisatge - UPC

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SCHOOL PRIZE

Evolution of Site context

Newcastle upon Tyne

Gateshead

German **Air Raids**
1941 - 1943

1328
Bowes family owned the Pallion House

19thC **Reconstructed** to Pallion Hall

Site Context Historic Mapping

Birth Place of Joseph Swan **Inventor** of incandescent light bulb

1828

George Short established Mobray Quay **Shipbuilding Yard**

Pallion Hall was **demolished** for **expansion** of **Ship Building Yard**

1850

1902

Pallion

1939 - 1964
Coles and Cranes

1857 - 1989
Pallion Quay was a notable shipyard

1988
The last shipyards on the River Wear **closed**

1346
Thomas Menvill established a shipyard at Hendon.

Legend
- Durham Magnesium limestone plateau
- Tyne and Wear coal measures

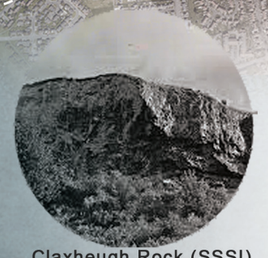
S.S. Cretehawser

River Wear

SITE

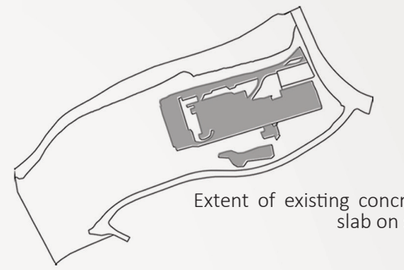
Pallion

Ford Limestone Quarry



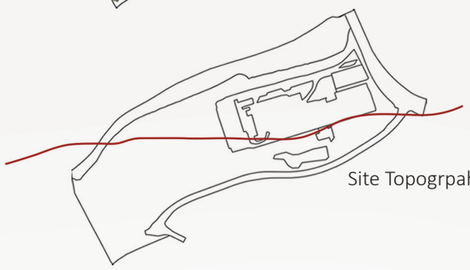
Claxheugh Rock (SSSI)
Limestone outcrop

Existing Site Conditions



Extent of existing concrete slab on site

Existing vegetation



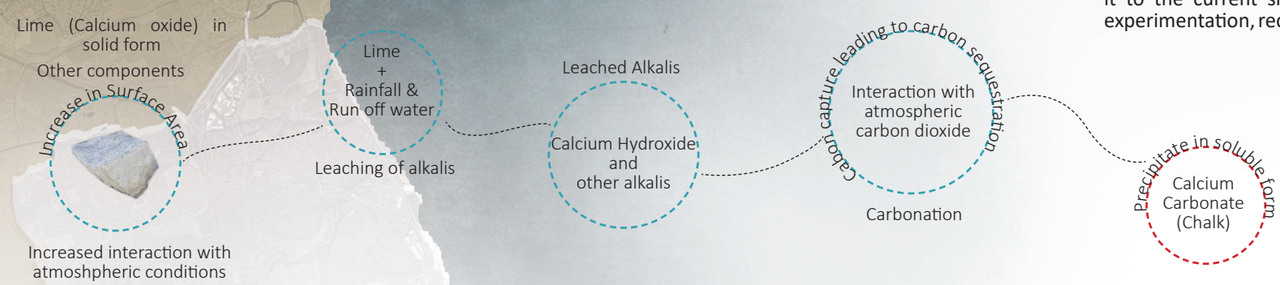
Site Topogrpahy

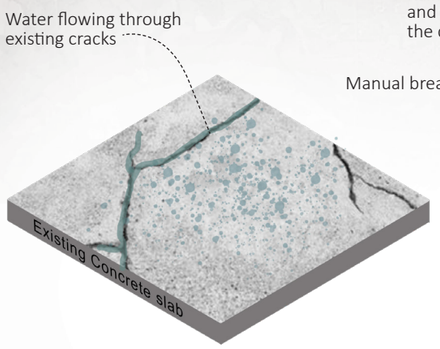
Drawing common points form the site history and linking it to the current site conditions a pattern of destruction, experimentation, recreation and a contrast can be highlighted.

Site Strategy: Erosion as an opportunity for reclamation and introduction of native grassland

The strategy identifyies natural elements and their ecological processes that have a potential to erode concrete.
Water and atmospheric carbon dioxide are elements responsible for weathering of concrete by two processes: Alkali Release which is Lime leaching of concrete and Carbonation
The combined chemical processes is further explored in the context of landscape as an alternative approach.
Therefore the design experimenally proposes.

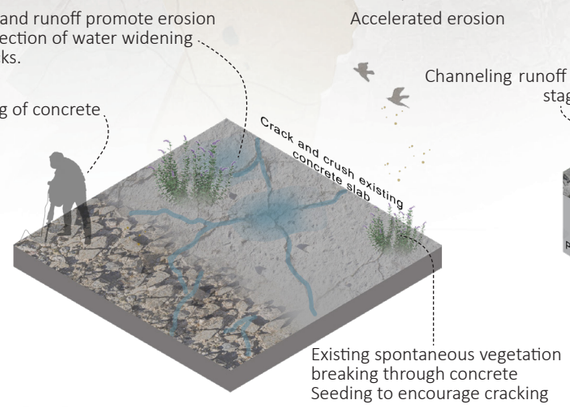
'Destruction of Concrete to Recreate Calcareous Grasslands'





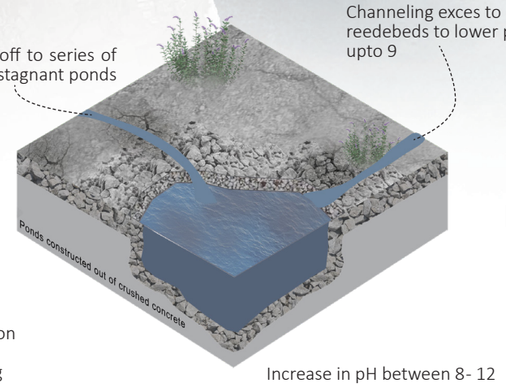
Step 1

Set Concrete is non- reactive and is less subject to weathering.



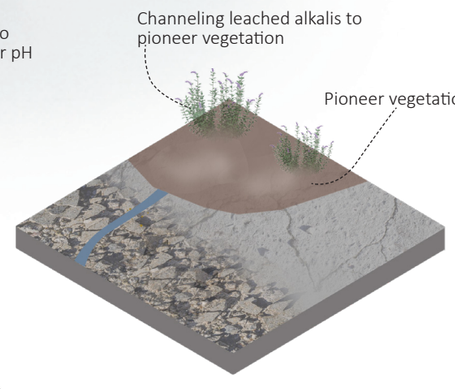
Step 2

Set Concrete is non- reactive and is less subject to weathering.



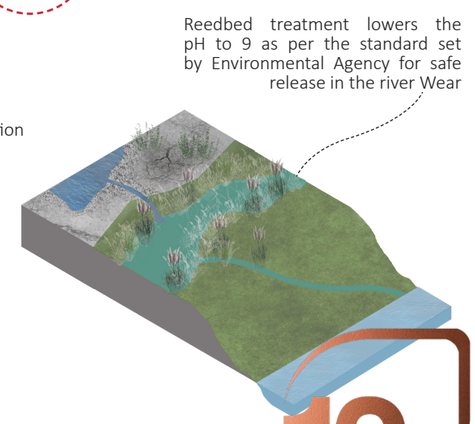
Step 3

Accumulationg of water in crushed concrete ponds



Step 4

Pioneer Vegetation



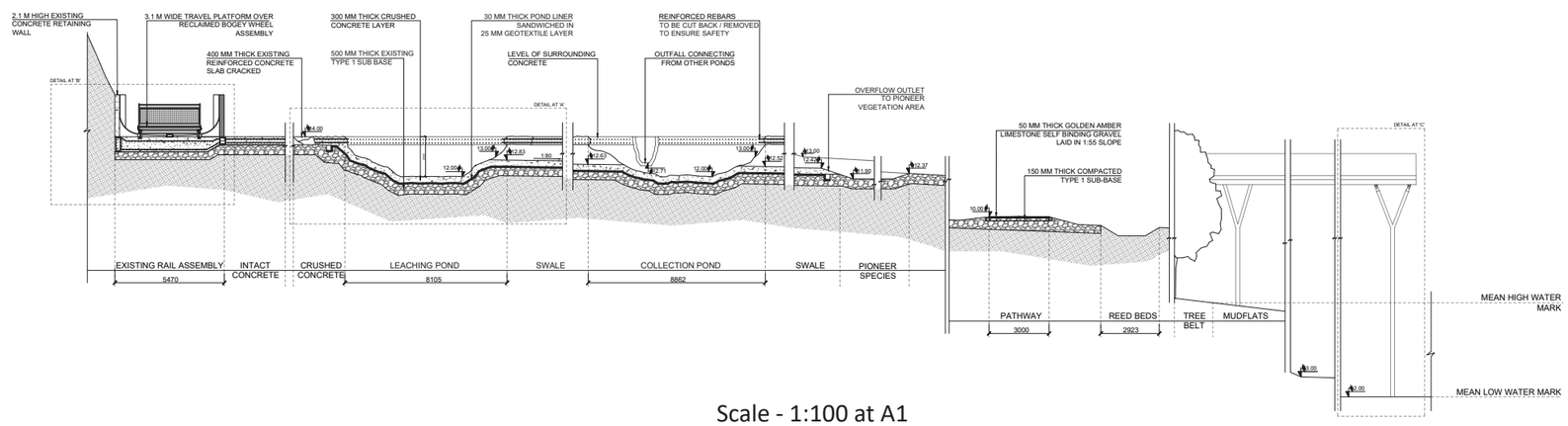
Step 5

Treatment of Water

Proposed Masterplan

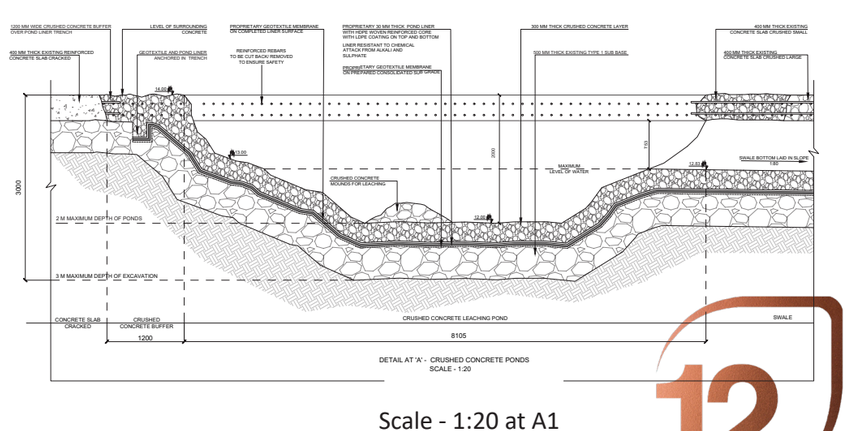
Reflecting on the site history and existing site conditions the plan proposes for destruction of concrete to recreate calcareous grasslands on the Eastern side and builds a contrast by proposing woodland on the water logged areas on site, critically highlighting the effects of industrialisation.

Aditi Shinde - 210344736



Scale - 1:100 at A1

Section showing series of ponds with relation to the River Wear



DETAIL AT 'A' - CRUSHED CONCRETE PONDS
SCALE - 1:20

Scale - 1:20 at A1

Construction detail of typical pond

Proposed shallow alkaline calcareous grassland

Calcerous Grasslands are one of the rare rare habitats of the U.K. growing on soils containing chalk and limestone rich in calcium carbonate.

Cowslip
Primula veris

Butterfly Bush
Buddleja Davidii

Yorkshire Fog Grass
Holcus lanatus

Greater Knapweed
Centaurea scabiosa

Cock Foot Grass
Dactylis glomerata

Common Rock Rose
Helianthemum nummularium

Supporting Species

Species rich grassland are most diverse in terms of wildflowers and grasses, which supports characteristic species of moths and butterflies.

Chalk Carpet Moth
Scotopteryx bipunctaria

Small Tortoise Shell Butterfly
Aglais urticae

Common Blue Butterfly
Polyommatus icarus

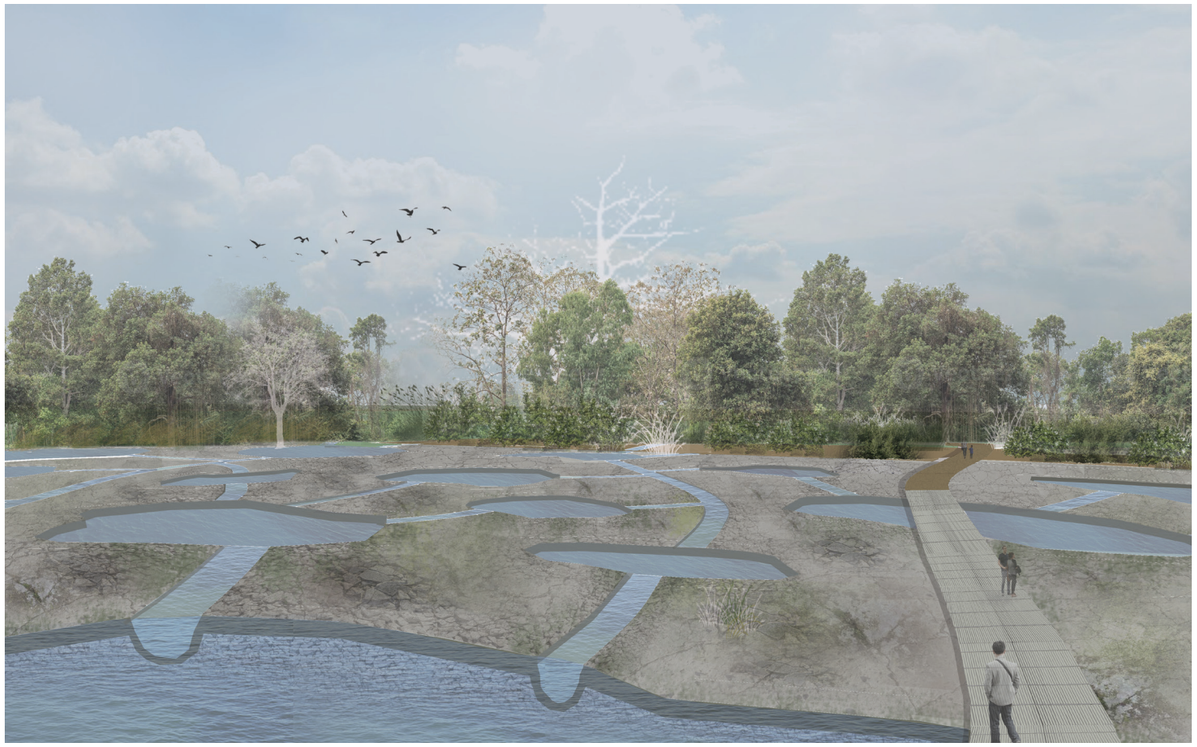
Least Minor Moth
Photedes captiuncula

Durham Argus Butterfly
Aricia artaxerxes salmacis

Peacock Butterfly
Aglais io

Dingy Skipper
Erynnis tages

Creative Visulisation of Concrete Ponds and Destruction Zone



Creative Visulisation of Elevated Walkway along the Wreck of S.S. Cretehawser

Creative Visulisation of Travel Platform over Repurposed Rail Assembly

Journey of Becoming

Soundscape
for
Hospice

MLA Design Thesis

Country /City England, Newcastle upon Tyne

University / School Newcastle University, School of Architecture, Planning and Landscape

Academic year Year 2 (2022-23)

Title of the project Journey of Becoming: Soundscape for Hospice

Authors Jahnabi Barua

TECHNICAL DOSSIER

Title of the project Journey of Landscape: Soundscape for Hopice

Authors Jahnabi Barua

Title of the course MLA Design Thesis

Academic year Year 2 (2022-23)

Teaching Staff Dr Usue Ruiz Arana, Stef Leach

Department / Section / Program of belonging Master of Landscape Architecture,

University / School Newcastle University, School of Architecture, Planning and Landscape

12

Written statement, short description of the project in English, no more than 250 words

The confluence of perception and spirituality, celebrating the journey of life. A design thesis on incorporating a walking trail and hospice at the Old Fulling Mill on the bank of river Wear, Durham, England.

My project is a celebration of Nature and the natural trajectory of human existence. It is built around the theme that Life begins, sustains and ends in water- Nature's most integral element. More practically, it attempts to change the conversation around Death- a subject intimately and unavoidably associated with grief, loss and suffering. Rather, I propose looking at it in a new light- one of growth, love and reconnection to Nature, celebration of the life one lived. The design style I used in the project is largely based around crafting experiences to stimulate the viewer, and going beyond the mere physical representation. I attempted to explicate the emotional aspects of the site design by incorporating artworks, poetry, storytelling, physical models and sonic illustrations. I consciously used a more informal style in the masterplan, sections and perspective drawings in accordance with this vision.

I was keen to used sound and dynamic elements such as water and wind in my design approach to push myself beyond what I previously considered to be my boundaries as a proponent and student of Landscape Architecture.

For further information

Máster d´Arquitectura del Paisatge - UPC

Contact via email at:
master.paisatge.comunicacio@gmail.com

biennal. paisatge@upc. edu

Máster d´Arquitectura del Paisatge - UPC

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Barcelona November 2023

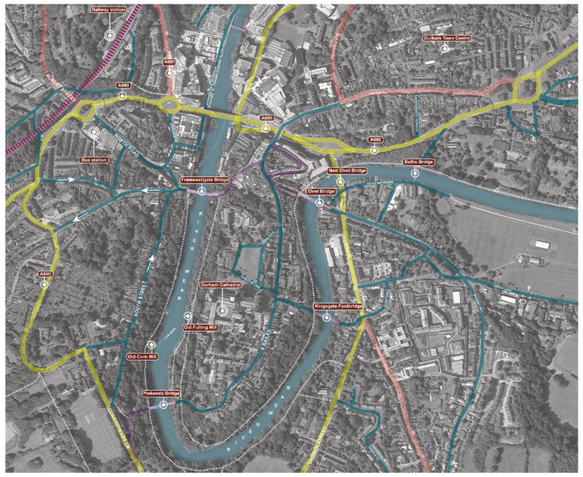
SCHOOL PRIZE

Survey and Analysis

Site location

Site Location: Durham Riverbanks, Near Durham Cathedral, England
Site Area: 9 ha
Land mass area: 5.3 ha

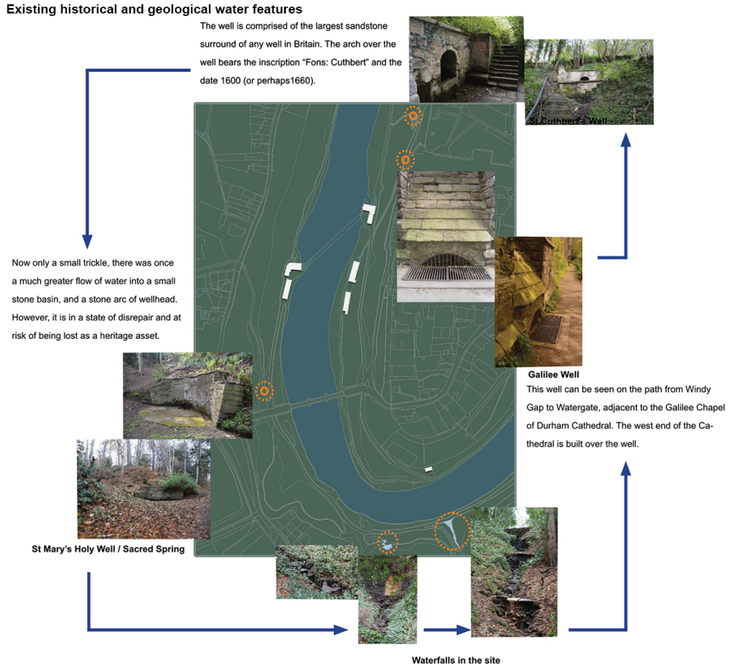
Connectivity



Framewellgate Bridge on Silver Street is the access point for the Historic Walking Trails along the site. South Street is the closest motorable road for accessing the site, and for emergency purposes. Presently, it is accessible via Framewellgate Bridge and Prebends Bridge.

The nearest Bus Stands are North Road (temporary) and Millburngate which are a 7-10 minute walk from the site.
The nearest railway station is the Durham station, which is approximately 1km away.

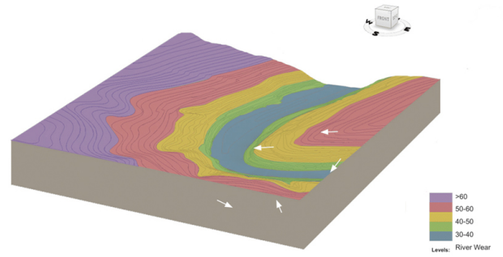
Existing historical and geological water features



Major medical organisations around

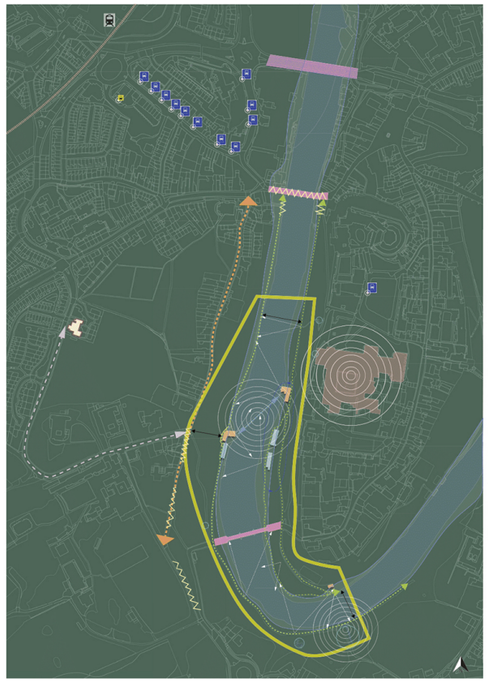
The closest health centers to the site are St. Margaret's Health Center, Claypath Medical Center, and the University Health Center; all of which are within walking distance to the site. The closest hospice is St. Cuthbert's Hospice, which is 1.5 miles from the site. The University Hospital of North Durham and the Lanchester Road hospital are the closest hospitals, approximately 1.5 and 2.7 miles away respectively.

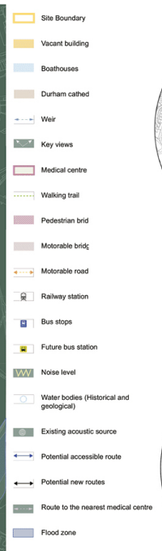
Existing contours



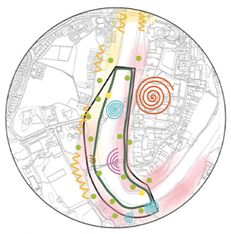
The topography is very steep and goes down towards the river ranging from 31 to 70.

SWOT Analysis

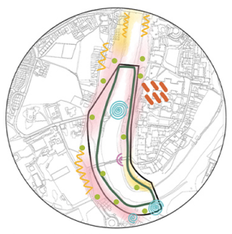




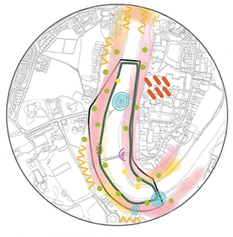
Sound survey



Date: **20/10/2022 Thursday**
Time: **12:45 PM**
Weather condition: **Light rain and fog 12 / 10 °C**
Wind: **8.7 mph**

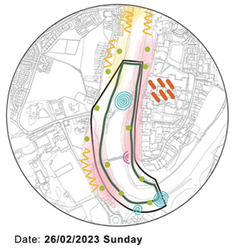


Date: **11/11/2022 Friday**
Time: **12:30 PM**
Weather condition: **Scattered clouds 17 / 16 °C**
Wind: **19.264 mph**



Date: **29/12/2022 Thursday**
Time: **12:45 PM**
Weather condition: **Scattered clouds 8 / 5 °C**
Wind: **21.128 mph**

Date: **11/01/2023 Wednesday**
Time: **01:20 PM**
Weather condition: **Light rain, Scattered clouds 12 / 10 °C**
Wind: **14.293 mph**



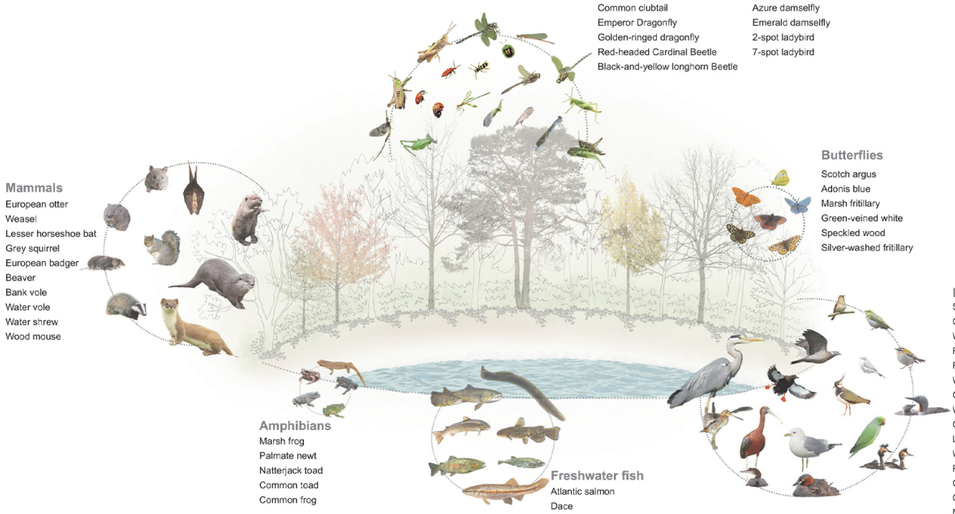
Date: **26/02/2023 Sunday**
Time: **10:00 AM**
Weather condition: **Partly sunny 7 / 5 °C**
Wind: **7.457 mph**

Date: **19/04/2023 Wednesday**
Time: **14:30 PM**
Weather condition: **Passing clouds 12 / 11 °C**
Wind: **11.807 mph**

- **Biophonic sounds** (Rustling leaves, birds chirpin
- **Amphibian sounds**
- **Church bell rings** (Discre
- **Church bell rings** (Continuous)
- **Noise** (Industrial, Urban)
- **Water gushing sound** (The Weir, waterfalls)
- **Echoing zone** (Walkway under the bridge)
- **Reflecting surface** (Concave surface of St. Mary's Healing Well)
- **Sound of wind**
- **Sound of people**

Existing wildlife

The site is a very rich habitat for wildlife.



Historic buildings on site

Proposed for restoration and hospice used


The Corn Mill

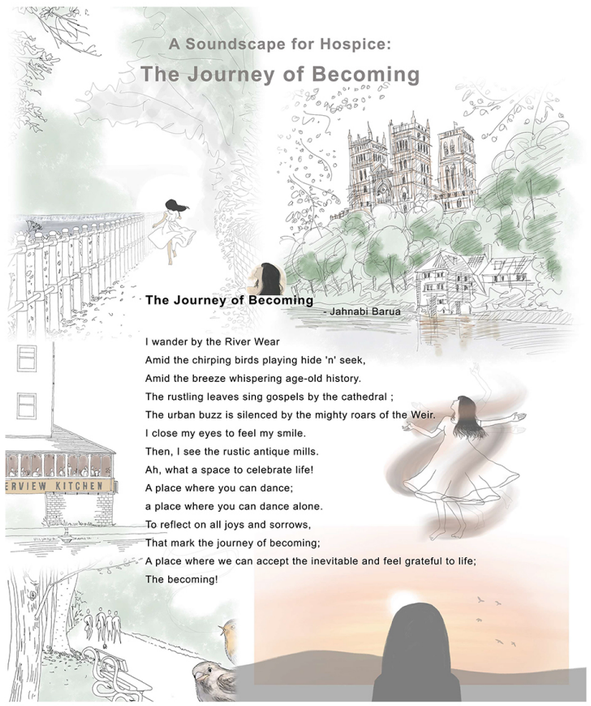

The Old Fulling Mill


The Count House

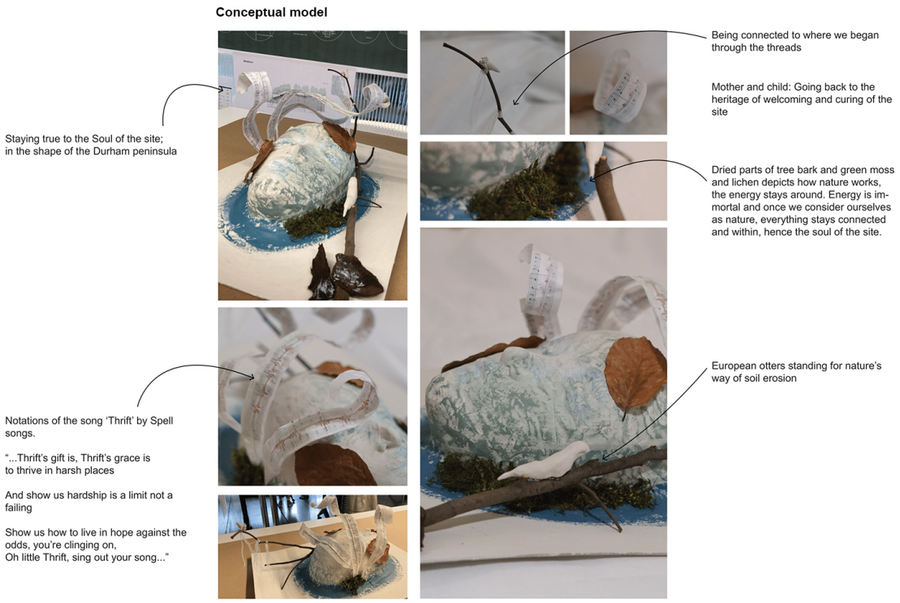
The riverbanks are home to many species of plants. Broadleaved ancient woodland of mostly oak and beech trees, some of which are around 350 years old. There are also yew, hornbeam and common lime trees. In winter, the line of lime trees are most noticeable on the lower riverbank path from Framwellgate Bridge to the Fulling Mill.
The riverbank brings together the Durham Cathedral, the Durham university and the historic core and connect the whole city.
Nevertheless, presently the riverbanks faec challenges including accessibility, connectivity and wayfinding, derelict heritage assets, and ownership and maintenance.

Design Philosophy

Poem self-written on the thesis concept

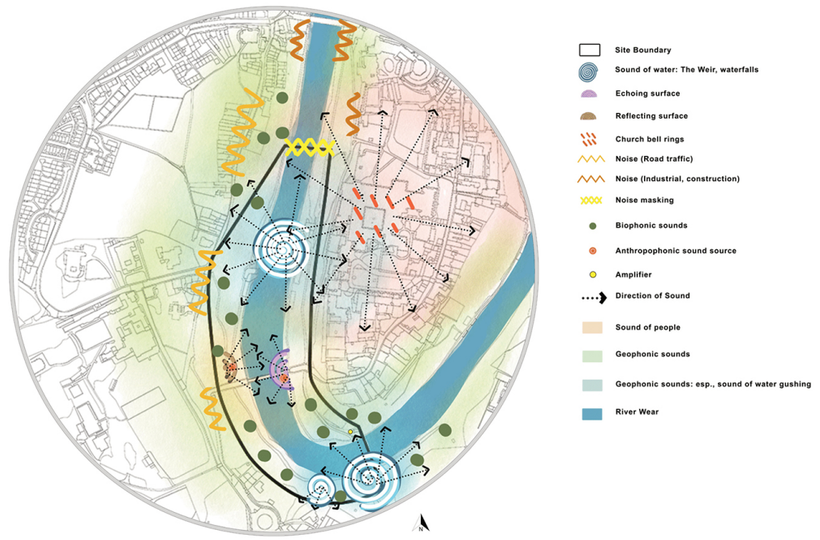


Conceptual model



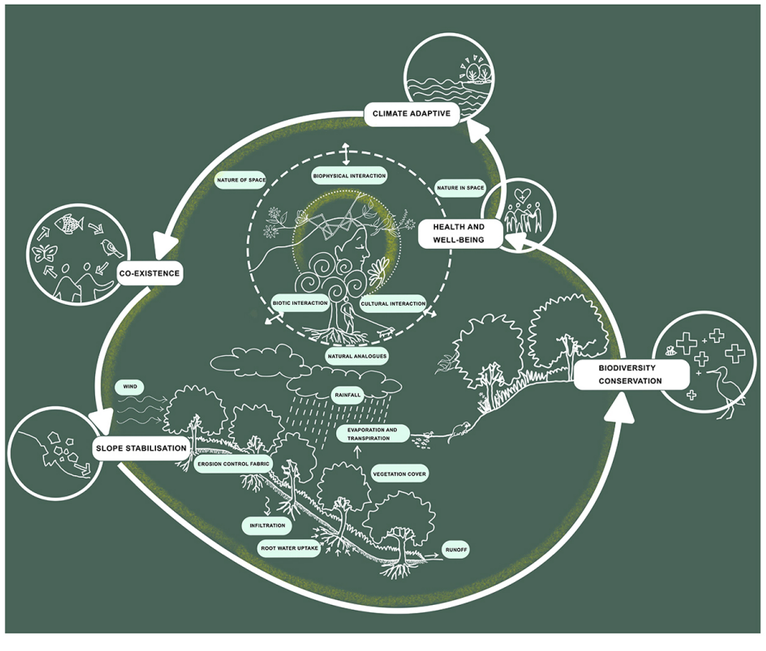
Concept diagram

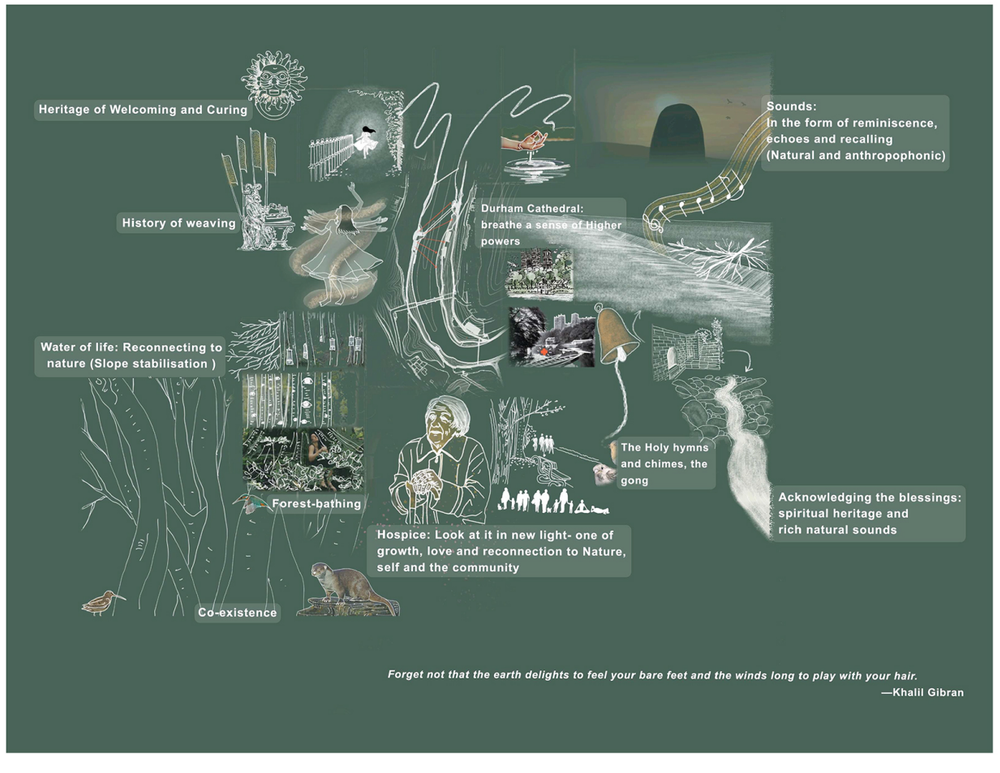
Sound conceptual diagram showing sonic connections

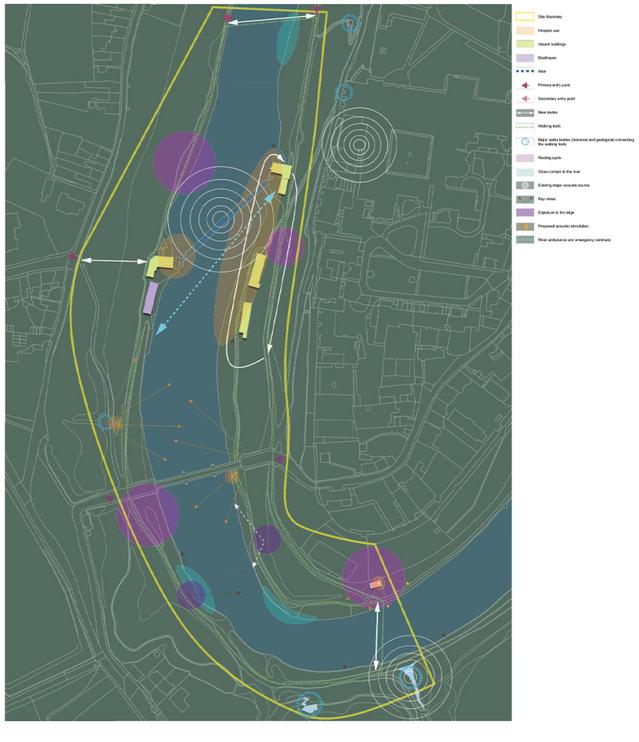


Bubble diagram of the concept on the site plan

NBS Strategies

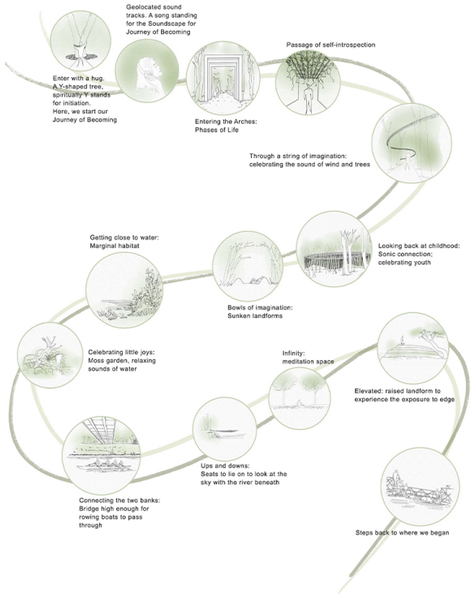


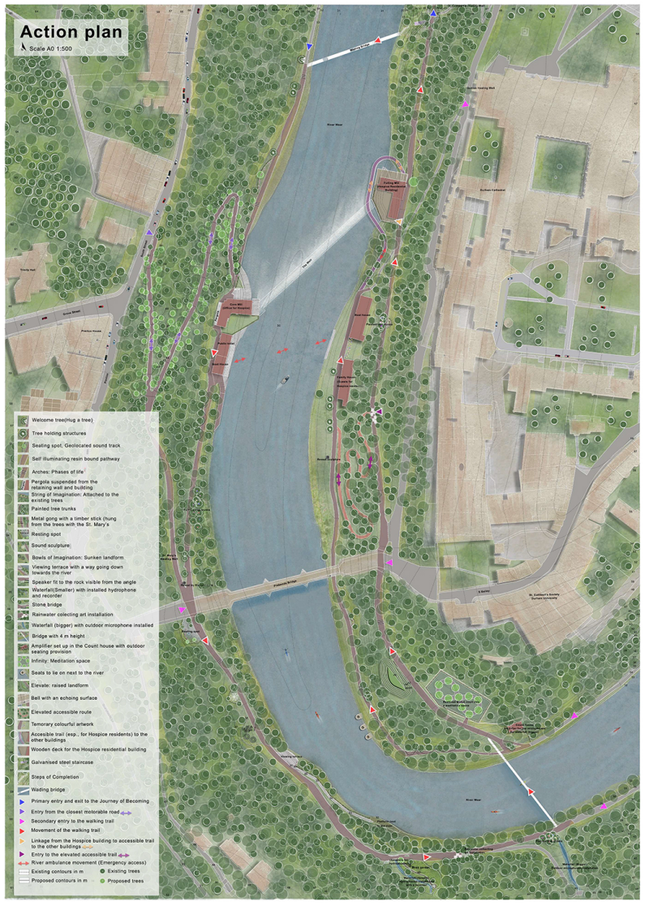




Design Proposal

Journey of Becoming





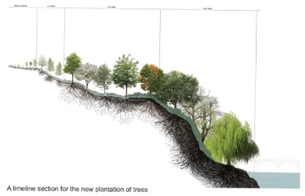
Planting Strategy

Typologies:

The planting strategy was created to embellish the existing woodlands, and reintroduce the meadows that were historically a part of the site. Furthermore, the promotion of marginal habitats was focused upon, with the incorporation of moss and lichen expansion.

Management Objectives:

1. To attain a long-term design concept realisation
2. To provide an aesthetically pleasing environment for the project site
3. To maintain the setting of the proposed landscape initiatives
4. To ensure the continued establishment of desired native and non-native species in the site and avoid invasive and dominating species.
5. To support long term maintenance of the site



A timeline section for the new plantation of trees

Movement Strategy

- Primary walking trail for soundscape (Public use)
- Proposed route for fastest way to the nearest motorable road
- Existing walking route
- Motorable route
- Proposed walkway down to the river from viewing terrace
- Proposed walkway to the waterfall (Smaller)
- Proposed bridge (4 m high)
- Walkway primarily for Hospice residents and family
- Elevated accessible trail
- Elevated trail from the Hospice residential building to the rest of the site
- Steps to the river
- Wading bridge
- Emergency access via river boats

Seating Strategy

- Seating spots with benches
- Seating spots for Hospice residents only
- Soft sunken landform to lie in to look at the sky
- Soft elevated landform
- Landing by the river
- Meditation space
- Seats to lie above the river with the view of sky

Light Strategy

- Self-illuminating resin bound pathway
- Existing light provisions
- Proposed light provisions attached to the Hospice residential building

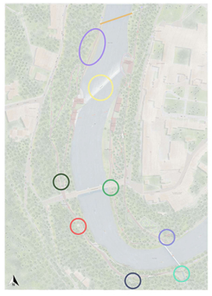
Not many changes incorporated with regard to lighting situation of the site. Artificial light at night can disorientate the habits of wildlife who may also abandon the site to avoid the light.

Hence, the minimal lighting additions the site are:

a. Layering the existing walkway (Primary) with self-illuminating glow stone aggregates of 6 - 8 mm diameter. They are capable of holding up to 8 hours of charge in as little as 30 minutes of exposure to sunlight.
The pigments will recharge and last indefinitely. The long-lasting and electricity-free lighting offers functional and decorative lighting that is eco-friendly and easy to maintain.

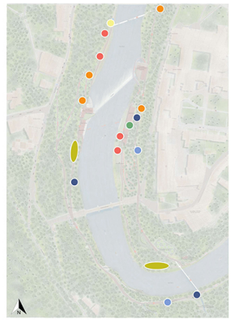
b. Lights attached to the Hospice building should follow spacing where the lighting units should be placed at around 2.5 times the height of the mounting.
Lighting to the dwelling frontages and nears will be controlled via a PIR and be internally switched to enable the lighting to be switched off when not in use. This approach has been taken to ensure that the lighting within the Application Site minimises the level of light spillage on the site boundaries during the hours of darkness.

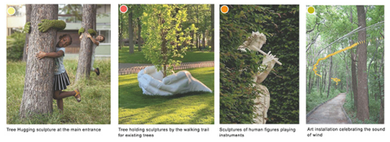
Sound strategy



- Natural sound of the weir
- Geolocated sound track
- Interactive metal gong with a timber stick (hung from the trees with the St. Mary's Healing Well behind as reflecting surface)
- Musical sculpture
- Interactive bell with the Prebends bridge acting as the echoing surface
- Installation of hydrophones and speakers to the sound of the waterfall(smaller)
- Natural sound of the waterfall(bigger) and microphones installed next to it
- Installation of an amplifier for waterfall(bigger) sounds
- Wading bridge acting as a masking agent for noise coming from the north

Art Strategy



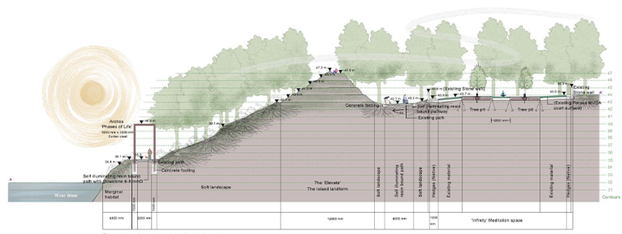


Tree Hugging sculpture at the main entrance | Tree holding sculptures by the walking trail for existing trees | Sculptures of human figures playing instruments | Art installation celebrating the sound of wind

Painted barks of existing trees to celebrate the sound of trees | Rainwater collecting art installations | Temporary colourful art installations next to the hospice buildings to keep the ambience cheerful and positive.

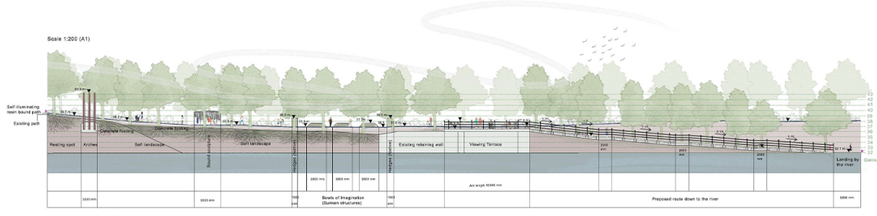
Sections

Scale 1:150 (A1)



This section shows the variety of spatial experiences.

Scale 1:200 (A1)



This section shows the variety of emotional experiences stimulated by biophonic sounds, anthrophonic sounds.

Visualisations

String of Imagination

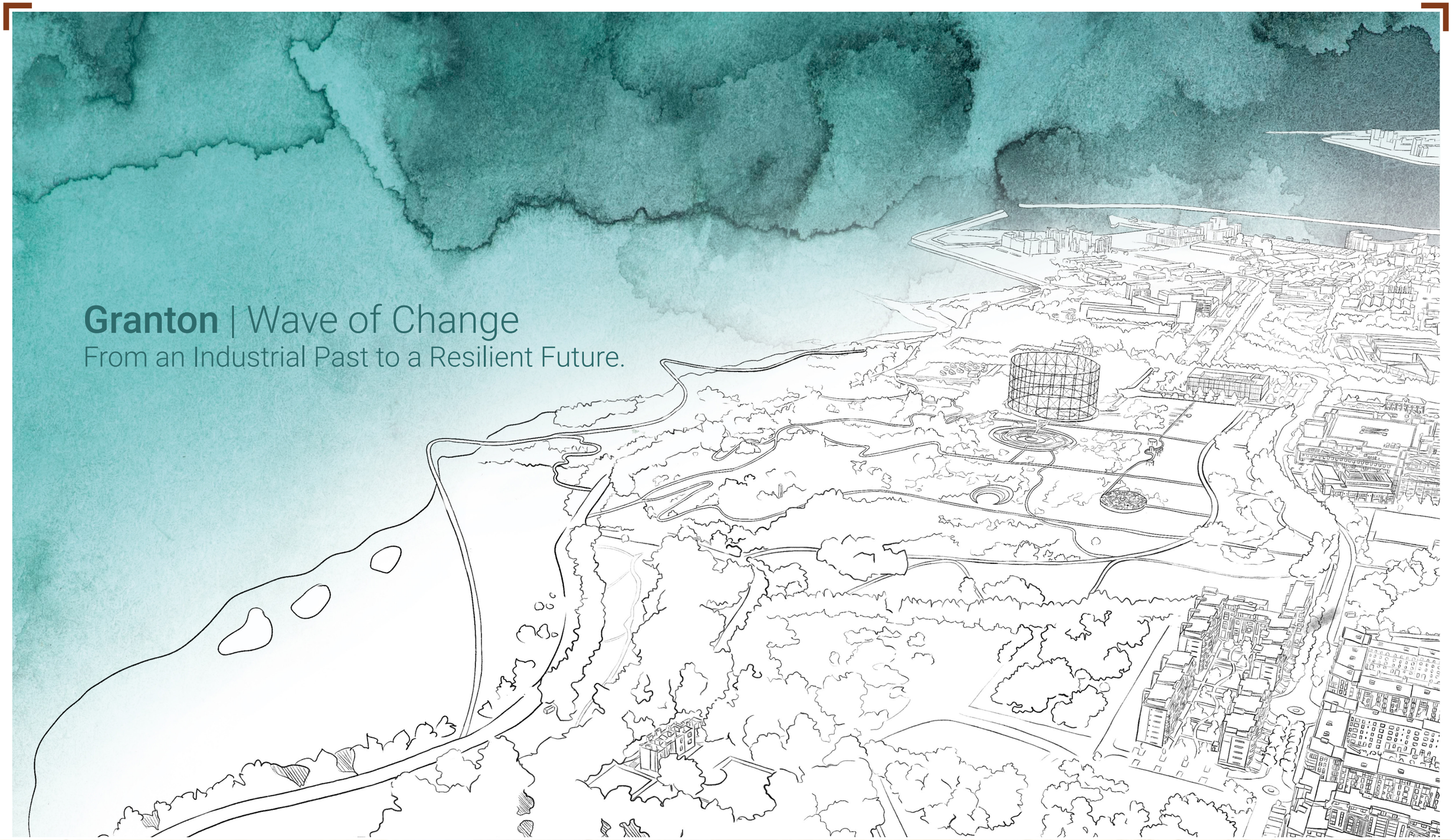
Arches: Phases of Life

Interactive bell sound to the other side of the river with Prebends bridge as an echoing surface

Sound Sculptura: Looking back to Childhood

Granton | Wave of Change

From an Industrial Past to a Resilient Future.



Country /City United Kingdom / Newcastle upon Tyne

University / School Newcastle University / School of Architecture, Planning & Landscape

Academic year 2022/2023

Title of the project Granton: Wave of Change. From an Industrial Past to a Resilient Future.

Authors Małgorzata Ewa Gudel

TECHNICAL DOSSIER

Title of the project Granton: Wave of Change. From an Industrial Past to a Resilient Future.

Authors Małgorzata Ewa Gudel

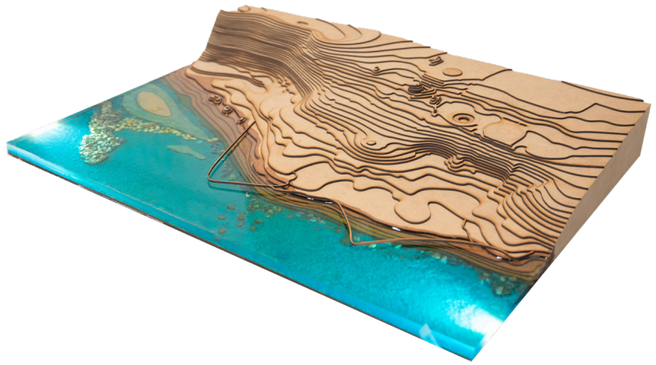
Title of the course MLA Design Thesis

Academic year 2022/2023

Teaching Staff Adriana Oliveros Blanco, David Barter, Usue Ruiz Arana

Department / Section / Program of belonging Master of Landscape Architecture (MLA)

University / School Newcastle University / School of Architecture, Planning & Landscape



12

Written statement, short description of the project in English, no more than 250 words

Wave of Change is a project focused on two important themes, climate change mitigation through nature based solutions and re-purposing of the industrial heritage of the site. The project is set in Granton, a coastal neighbourhood located in northern Edinburgh, which is particularly known for its industrial character. Although the area contains one of the largest brownfield sites in Scotland, it is also a rich intertidal zone inhabited by a number of invertebrates and endangered bird species. This dynamic ecosystem belongs to the Firth of Forth Site of Special Scientific Interest. According to predictions by Climate Central, by 2050 a large part of my site is going to be under annual flood level. For this reason, I took a water-centric approach to my design. My proposal aims to create a space where intertidal habitat connects seamlessly with former gasworks area, creating a variety of spaces for both human and non-human enjoyment. Instead of using hard engineering to contain the tides, the project focuses on managed retreat and creation of a saltmarsh in preparation for the future sea level rise. The remainders of industrial past are given a new life and purpose. No materials are wasted. Rubble, mounds of worked earth and old railway tracks are used to create a new sculpture park, where visitors can learn about the rich past of the site and reflect on its unfulfilled futures.

For further information

Máster d´Arquitectura del Paisatge - UPC

Contact via email at:
master.paisatge.comunicacio@gmail.com

biennal. paisatge@upc. edu

Máster d´Arquitectura del Paisatge - UPC

Sede ETSAB - Universitat Politècnica de Catalunya

Calle Jordi Girona, 15. Edifcio Omega 1-3
08034 Barcelona - Spain

COAC - Colegi oficial d´Arquitectes de Catalunya

Carrer Arcs, 1-3
08002 Barcelona - Spain

12th International Biennal Landscape Barcelona

Barcelona **November 2023**

SCHOOL PRIZE

Granton | Wave of Change
Masterplan

Promenade
Raised boardwalk
Car Park
Cyclone Bike Track
Viewing Platform
Glade
Birdwatchers' Hideout
Amphitheatre
Gas holder №1
Entrance Plaza and Visitor Centre
Road to Nowhere
Earth Landform
Railway Tracks
Ink installation
Timber pods
Stone Labyrinth
Green Tower

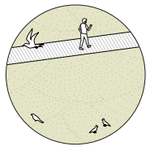
Existing contours
Proposed contours
Scale 1:1000 @A0
Firth of Forth
Rocks
Tidal mudflats
Low saltmarsh
High saltmarsh
Grassland
Existing trees
Proposed trees
Car park
Promenade
Resin bound pathways to tie in with Forthquarter Park
Raised boardwalk
Cyclone bicycle track
Rocky trail
Main entrances
Secondary entrances
Current mean low tide line
Estimated mean low tide line in 2050
Estimated mean high tide line in 2050

Nature-based solutions

Tidal zone and mudflats

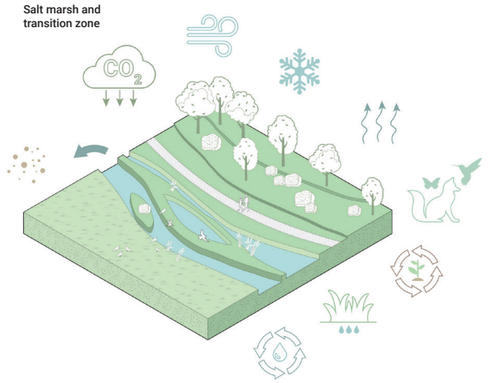
Habitat for a variety of bird species

Boardwalks to see the nature without interfering

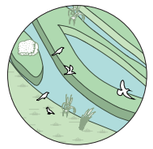


Constant movement of water

Salt marsh and transition zone



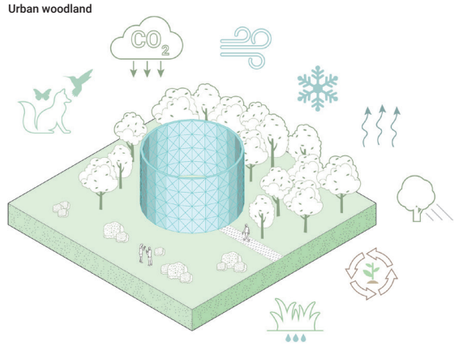
Habitat for waterfowl and wading birds



Network of wooden boardwalks

Trees in the transition zone

Urban woodland

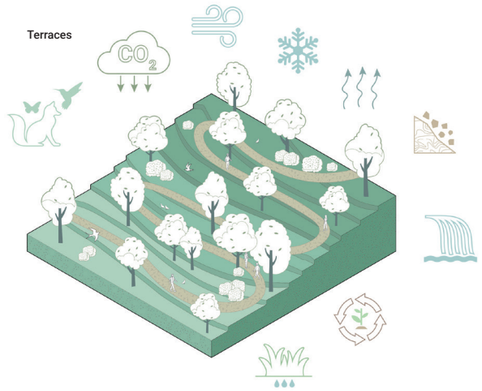


Woodland provides a range of ecosystem services

Industrial heritage incorporated into the green surroundings

Visitors can connect with nature and reflect on industrial past

Terraces

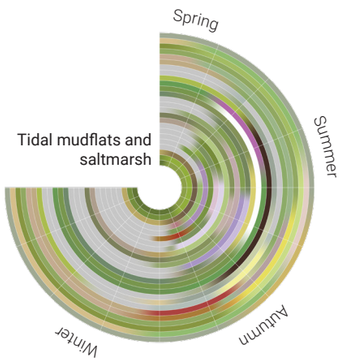


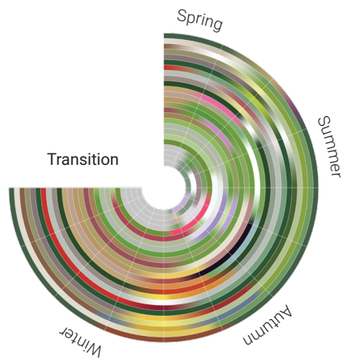
Habitat for birds, insects and mammals

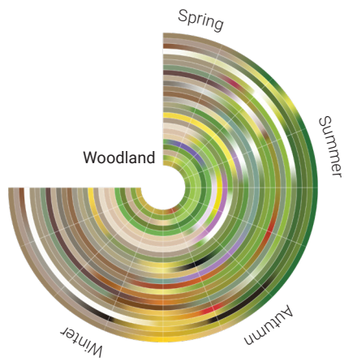
Green terraces stabilize the slope

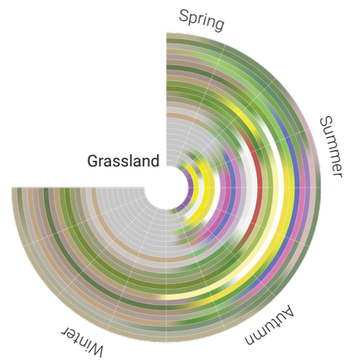
Pathways designed to be accessible

Planting palette through the seasons

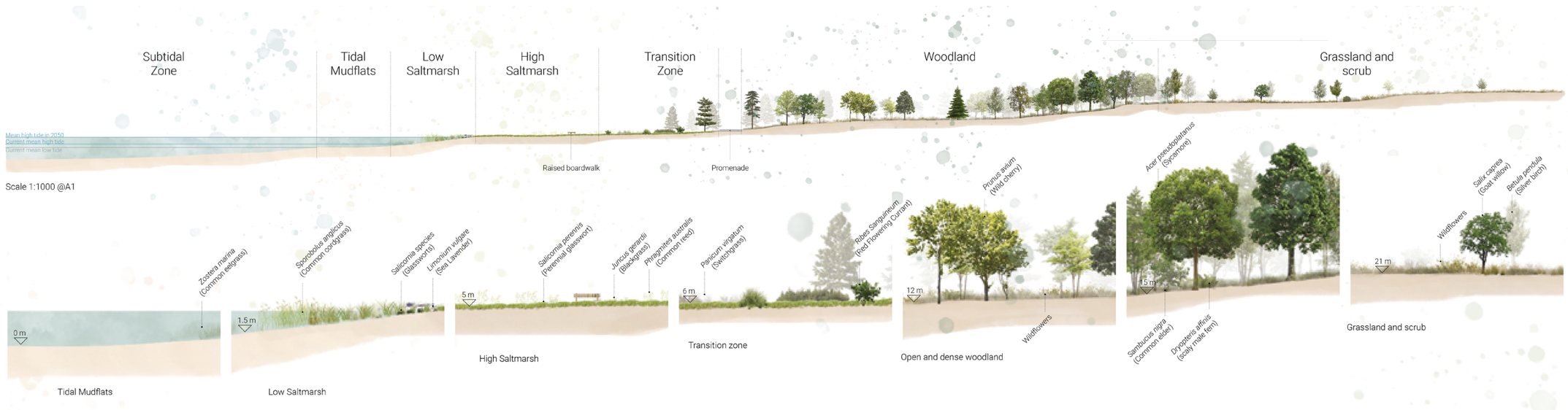








Planting Section



Granton | Wave of Change
Visualisations

Raised boardwalk going out to the sea. “Looking Forward” sculptures seen standing in water.

Amphitheatre and reflection pool with gas holder in the background.

Green terraces sloping down to the coastline.”Forest Chandelier” installation on trees.

Country /City Newcastle Upon Tyne

University / School Newcastle University

Academic year 2023

Title of the project Coria Avon - Water's Meeting Place

Authors Victoria Hole

TECHNICAL DOSSIER

Title of the project: Coria Avon - Water's Meeting Place

Authors: Victoria Hole

Title of the course: Landscape Architecture MLA

Academic year: 2023

Teaching Staff: Usue Ruiz Arana, Stef Leach, Robert Golden

Department / Section / Program of belonging: Newcastle University APL

University / School: Newcastle University APL

Written statement, short description of the project in English, no more than 250 words

Climate change mitigation is becoming increasingly more vital throughout practice in Landscape Architecture, wider professions and directly applies to the longevity and protection requirement of our historical assets. This thesis aims to provide a sustainable multi-functional solution to improve climate resilience across our landscapes, restore native habitats to reinvigorate our ecological diversity, and protect and enhance the interpretation of our heritage assets. By addressing the flooding issues at Corbridge, longevity and higher resilience can be promoted downstream towards Newcastle Upon Tyne and other urban settlements. The key factors influencing this thesis involve restoration and recreation of historic landscapes and flood plains to manage storm-water and periods of inundation to mitigate flooding both within the site and downstream. This must be balanced with interpreting historic landscapes and urban features through landscape interventions to promote engagement and understanding of cultural heritage. Yet a strong promotion towards enhancing Biodiversity through habitat creation and long-term re-wilding of lost landscapes is considered throughout. The existing site within Corbridge's Roman Town describes a narrow area which holds tremendous opportunity both within its environmental opportunities and its historical rejuvenation. This allows for intervention having been one of the most significant British sites within the Roman Empire.

For further information

Máster d´Arquitectura del Paisatge - UPC

Contact via email at:
master.paisatge.comunicacio@gmail.com

biennal. paisatge@upc. edu

Máster d´Arquitectura del Paisatge - UPC

Sede ETSAB - Universitat Politècnica de Catalunya

Calle Jordi Girona, 15. Edifcio Omega 1-3
08034 Barcelona - Spain

COAC - Colegi oficial d´Arquitectes de Catalunya

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Barcelona November 2023

SCHOOL PRIZE

Coria Avon - Water's Meeting Place

Bicycle parking
SUDS
Wetlands
Electric vehicle parking
Bus links
Retention pools
Leaky dams
Permeable surfacing
Reclaimed wood
SUDS
Natural colour scheme
Downstream flood mitigation
Fluid design
SUDS
Locally sourced materials
Multifunctionality
Orchard revival
Wildswimming
Natural water pollutant removal
Habitat creation
Increase biodiversity
Talks
Natural materials
Community engagement
Local economy enhancement
SUDS
Informative talks and boards
New water-ways
Water infiltration encouragement

Use design strategies that improve energy efficiency, such as water collection within green roof designs, using energy-efficient materials, and incorporating renewable energy sources.

Incorporate nature-based solutions that can help to adapt to climate change impacts such as flooding, drought, and sea level rise.

Incorporate green infrastructure elements such as rain gardens, green roofs, and bioswales to manage stormwater runoff and improve water quality.

Energy efficiency
Climate adaptation
Use natural systems and materials in the design, such as using locally sourced materials, organic shapes, and natural colour schemes.
Organic design
Green infrastructure
Design and incorporated to detain and treat stormwater runoff. This will reduce the quantity and velocity of stormwater runoff, allowing pollutants to be absorbed by vegetation.
Regenerative practices
Consider regenerative techniques such as water conservation and preservation, and carbon footprint reduction in the design.
Detention ponds
Biophilic design
Interactive elements
Incorporate educational and interpretive elements into the design to engage visitors and promote awareness of sustainability and nature-based solutions.
Restorative landscapes
Incorporate elements that connect people with nature, such as habitat creation, views of vegetation, and seasonal planting.
Design landscapes that help restore ecological functions and processes, such as using native plants, providing habitat for wildlife, and improving soil health.

C E O G R D B I R

Nature Based Solutions

Site Specific Targets

Climate change will result in multiple atmospheric alterations, including increased precipitation events.

Coria Avon will look to:

» Decrease the issue of flooding further downstream of Corbridge and mitigate flooding issues effecting Corbridge itself.
» Raise awareness of green infrastructure and the benefits of nature.
» Promote increased engagement with the site of Coria Avon within the local community and wider scale tourism.
» Increase carbon sequestration.
» Reconnect and increase awareness of the site's history and culture.
» Promote healthy living and recreation.
» Enhance and preserve water quality, the environment and air quality.
» Promote increased biodiversity.

Central Strategies

New **habitats** will be created to widen the biodiversity and ecology across the site including marsh and wetland sites. Existing ecology and vegetation will be **retained** where possible or replaced with a larger area in a more appropriate area of the site.

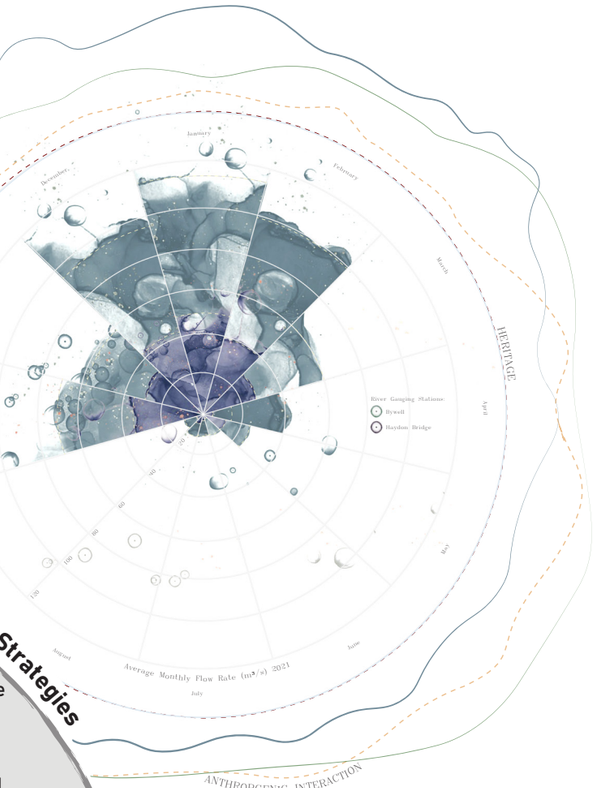
Natural flood mitigation strategies will be used including swales, retention ponds, leaky dams and additional planting to encourage increased infiltration of water into the ground below. High discharge precipitation events will be slowed down and controlled in order to decrease flooding. This will also provide a natural contaminant removal system within the soil, improving water quality.

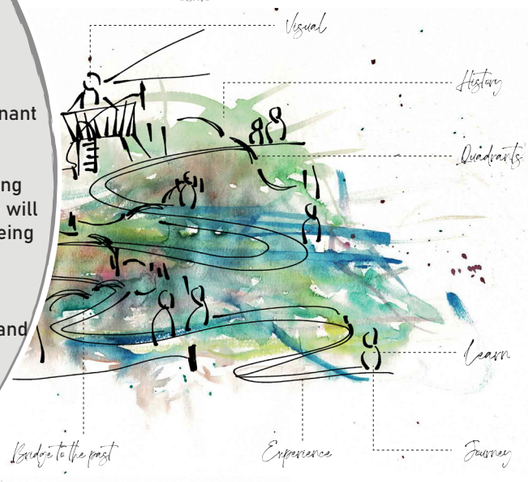
Community engagement will be provided through talks, planting groups, activites and recreational opportunities. Local produce will be offered within the site's cafe, including the apples from site being offered to local sellers.

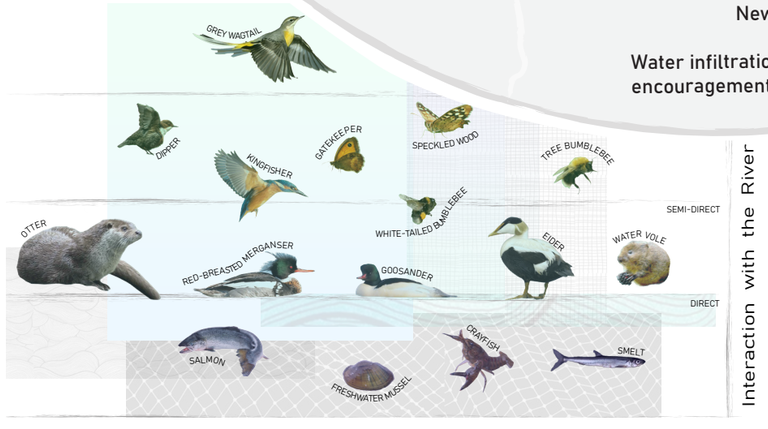
Recreation will be offered throughout the site to encourage all age groups to the site, including water sports, wild swimming, natural play and multiple trail routes.

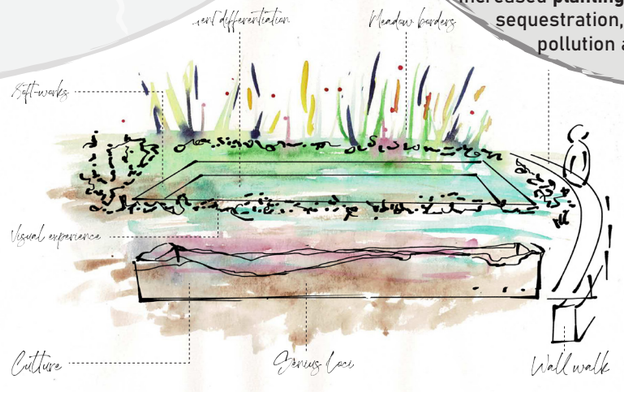
Informative talks, information boards and guided tours will be provided to increase **awareness** of the site's history and environment, including how to increase sustainability.

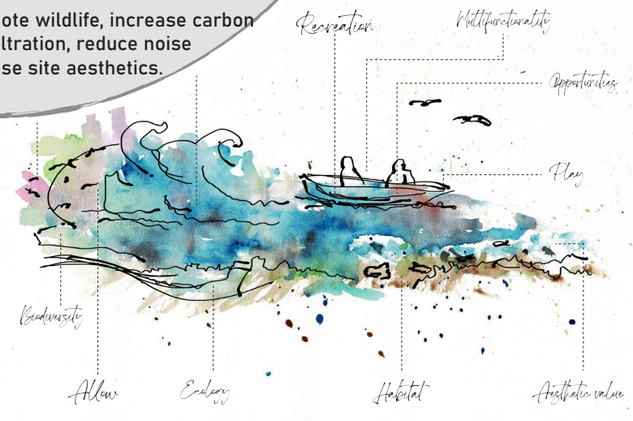
Increased **planting** will promote wildlife, increase carbon sequestration, water infiltration, reduce noise pollution and increase site aesthetics.











In Corbridge's fields and meadows fair,
The ancient gods and goddesses there,
Each with their own sacred domain,
Rule o'er the earth, the sky, and the plain.

Flora, with her blossoms bright,
Governs the fields with gentle might,
Where primroses and violets grow,
And spring's sweet fragrance does bestow.

Ceres, goddess of the fruitful land,
Nurtures the crops with a loving hand,
Wheat and barley, fruits of the earth,
Her bountiful blessings they bring to birth.

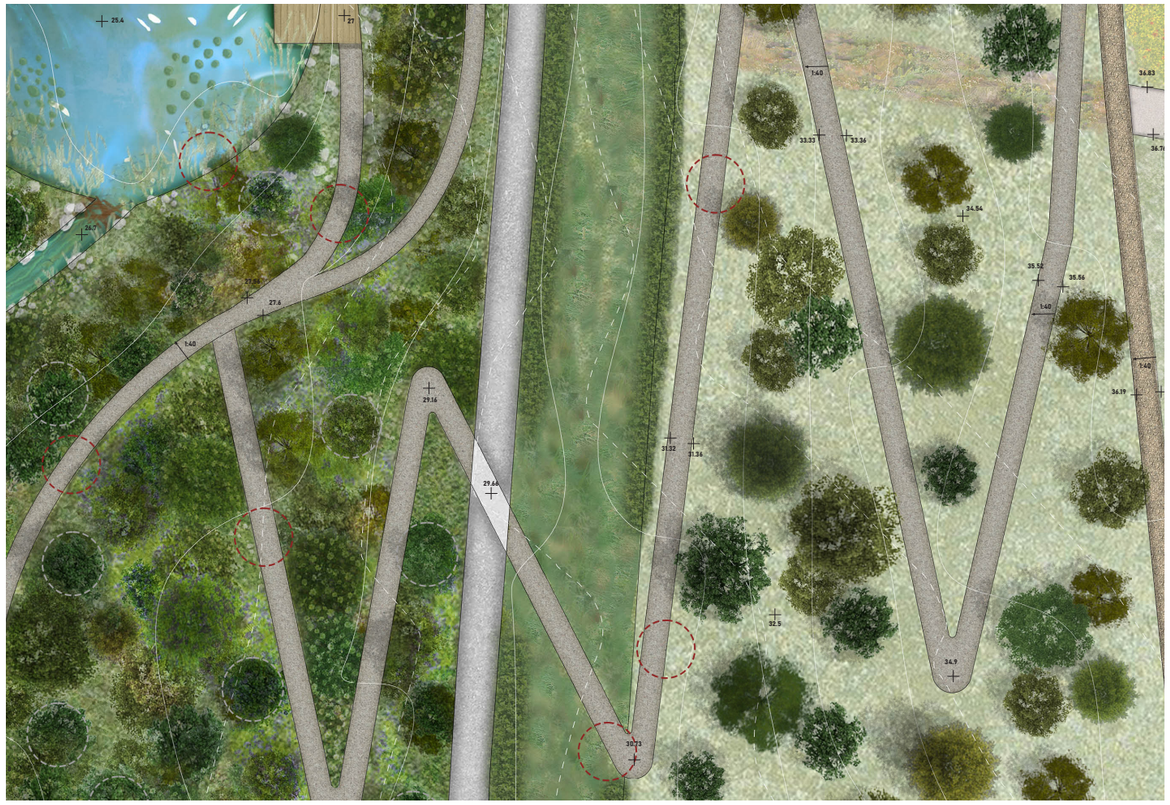
Faunus, the god of the forest and glade,
Watches over the meadows and their shade,
Where hawthorn, elder, and wild rose,
Their petals to the summer breeze disclose.

Pomona, goddess of the orchard and tree,
Ensures the fruit ripens for you and me,
Apples, cherries, and all manner of fruit,
Sweet and luscious, their taste astute.

With each meadow and field, the gods abide,
Their power felt with each passing tide,
Nature's bounty, a gift from above,
Reminding us of their eternal love.

Through the seasons, the meadows change,
The gods' gifts, in constant exchange,
From spring's bloom to winter's frost,
The gods' grace is never lost.

In Corbridge's fields and meadows fair,
The gods and goddesses still hold sway,
Their legacy, forever bound,
In the beauty of nature that does surround.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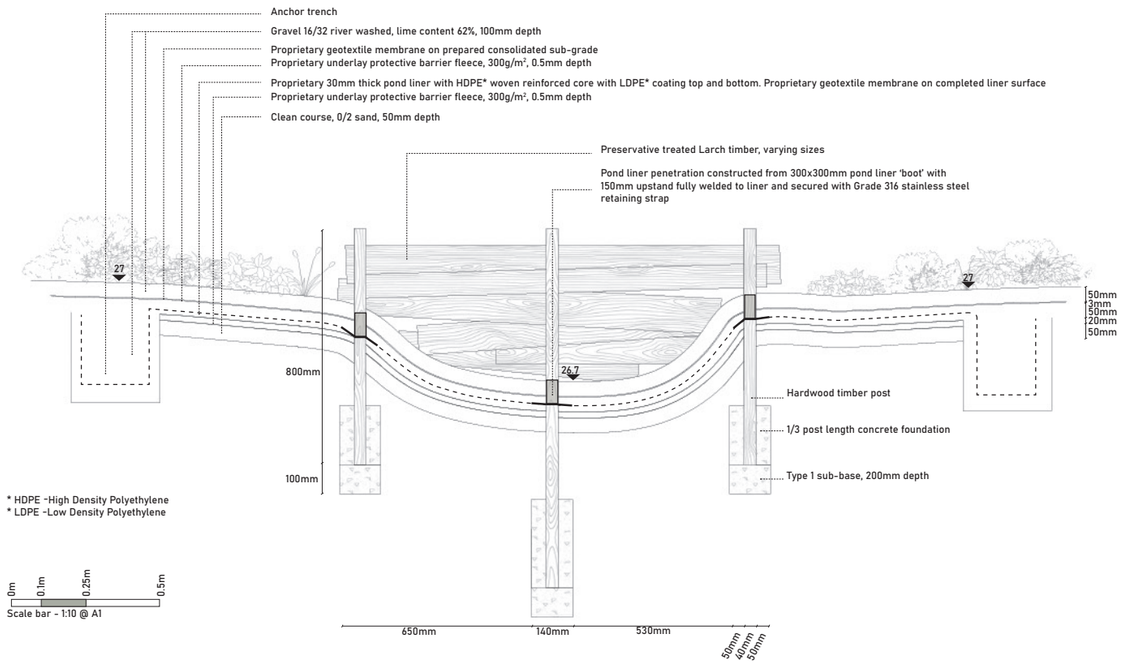
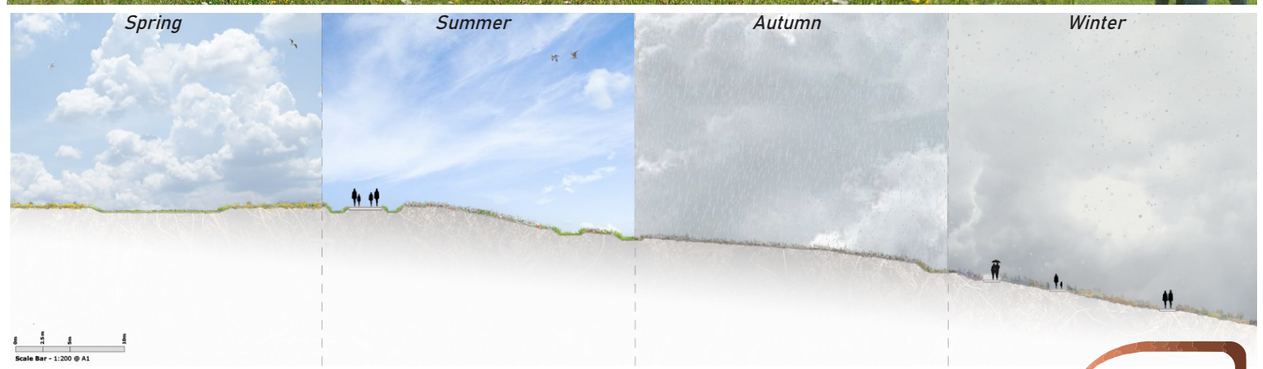

Anchor trench
Gravel 16/32 river washed, lime content 62%, 100mm depth
Proprietary geotextile membrane on prepared consolidated sub-grade
Proprietary underlay protective barrier fleece, 300g/m², 0.5mm depth
Proprietary 30mm thick pond liner with HDPE* woven reinforced core with LDPE* coating top and bottom. Proprietary geotextile membrane on completed liner surface
Proprietary underlay protective barrier fleece, 300g/m², 0.5mm depth
Clean course, 0/2 sand, 50mm depth
Preservative treated Larch timber, varying sizes
Pond liner penetration constructed from 300x300mm pond liner 'boot' with 150mm upstand fully welded to liner and secured with Grade 316 stainless steel retaining strap
27
27
26.7
800mm
100mm
Hardwood timber post
1/3 post length concrete foundation
Type 1 sub-base, 200mm depth
50mm
3mm
50mm
20mm
50mm
650mm
140mm
530mm
50mm
40mm
50mm
* HDPE -High Density Polyethylene
* LDPE -Low Density Polyethylene
0m
0.1m
0.25m
0.5m
Scale bar - 1:10 @ A1


Spring
Summer
Autumn
Winter
Scale Bar - 1:200 @ A1

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