

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

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Authors	Aditi Shinde
Title of the course	Master of Landscape Architecture / Design Thesis - APL 8012
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Teaching Staff	Robert Golden, Usue Ruiz Arana
Department / Section / Program of belonging	School of Architecture Planning and Landscape/ Landscape Architecture
University / School	Newcastle University



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

Sede ETSAB - Universitat Politècnica de Catalunya

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

COAC - Colegi oficial d'Arquitectes de Catalunya

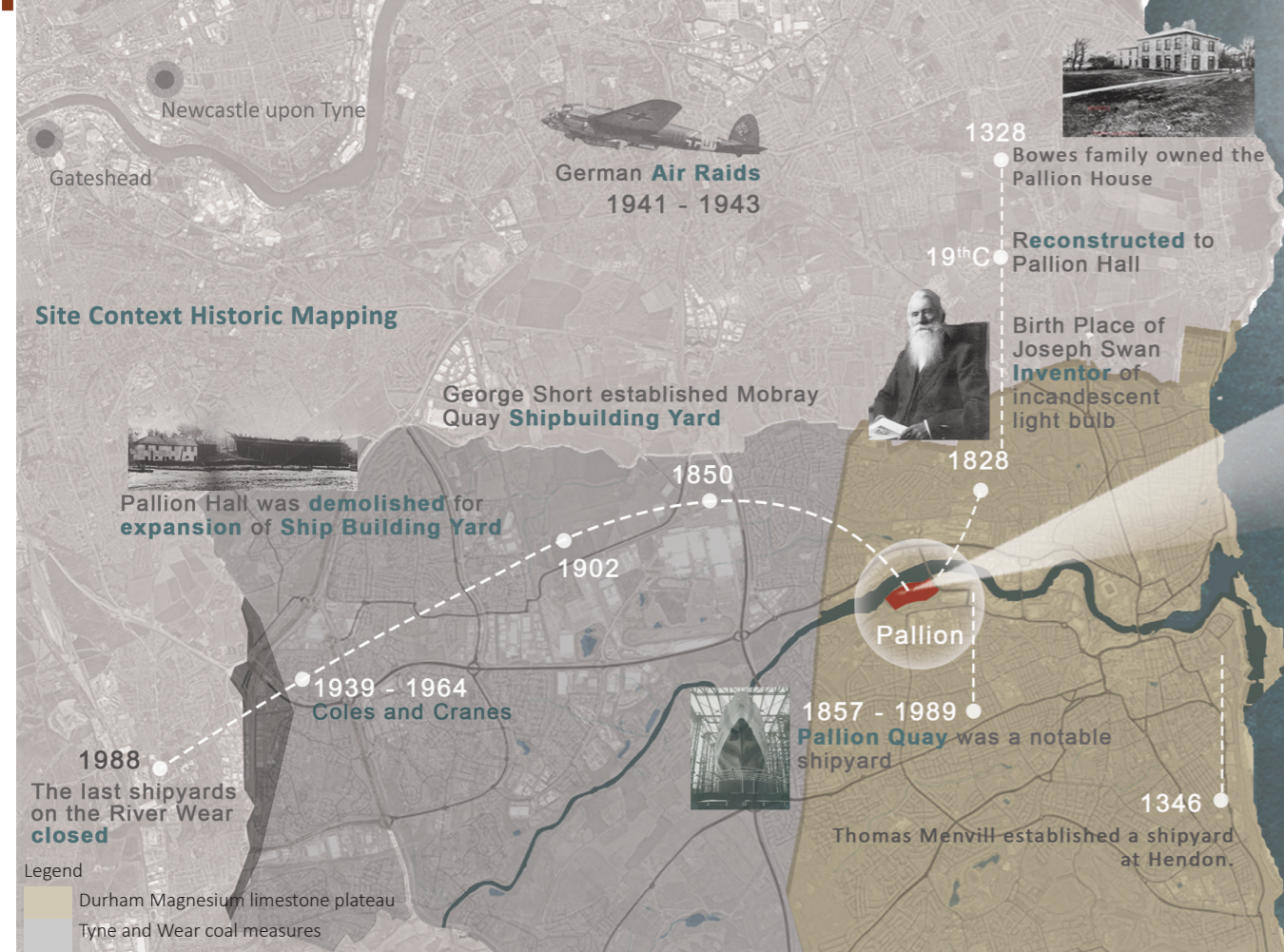
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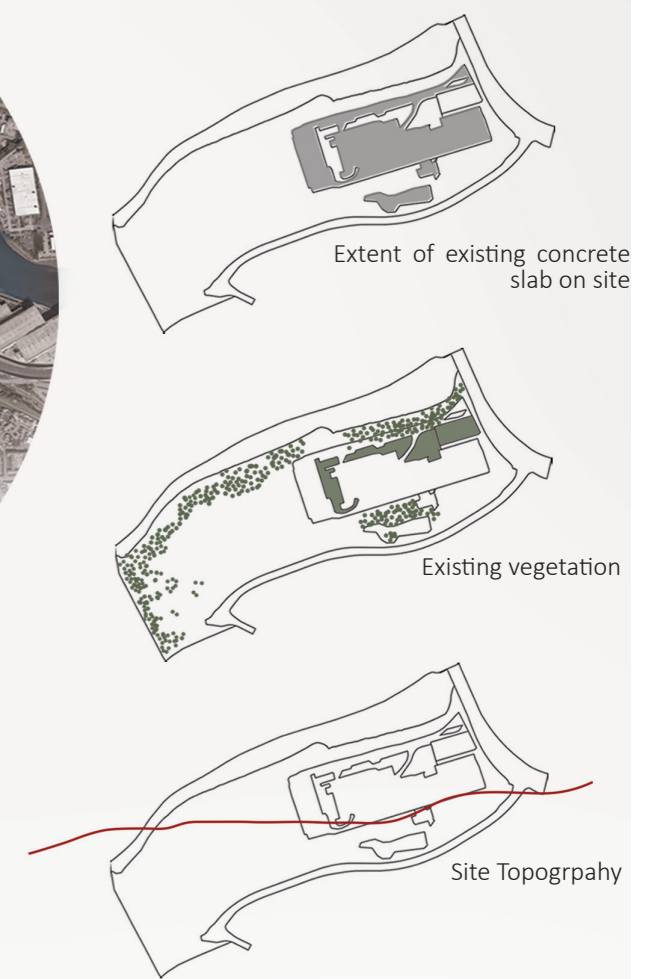
Barcelona November 2023

SCHOOL PRIZE

Evolution of Site context



Existing Site Conditions

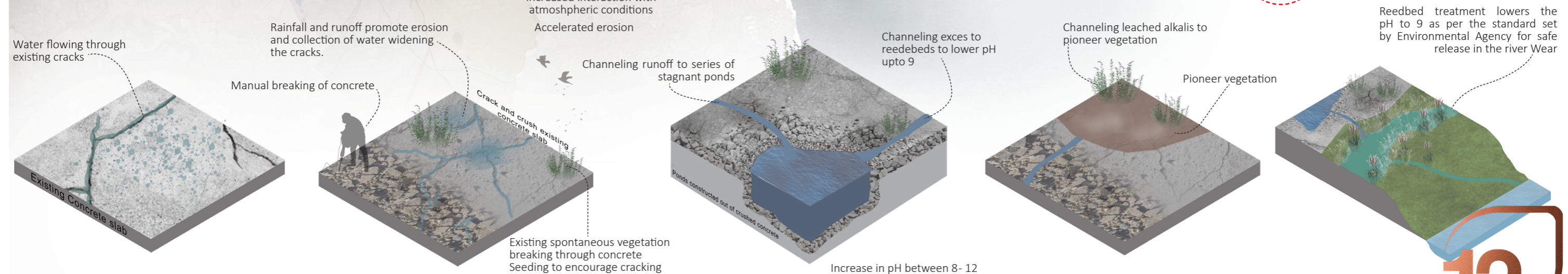


Drawing common points from the site history and linking it to the current site conditions a pattern of destruction, experimentation, recreation and a contrast can be highlighted.

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

The strategy identifies 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 experimentally proposes.

'Destruction of Concrete to Recreate Calcareous Grasslands'

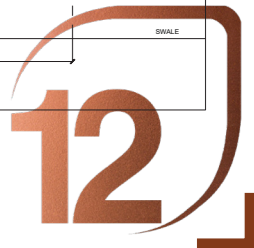
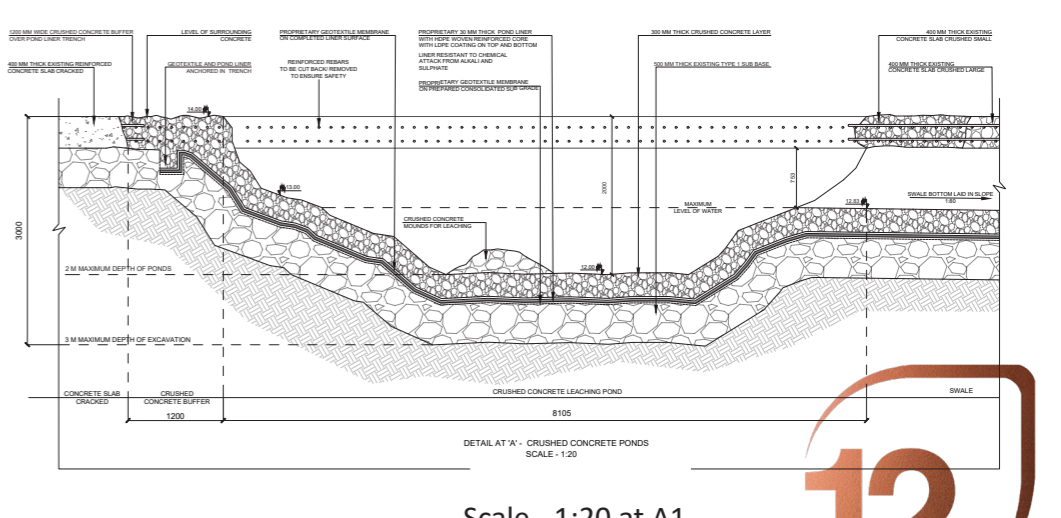
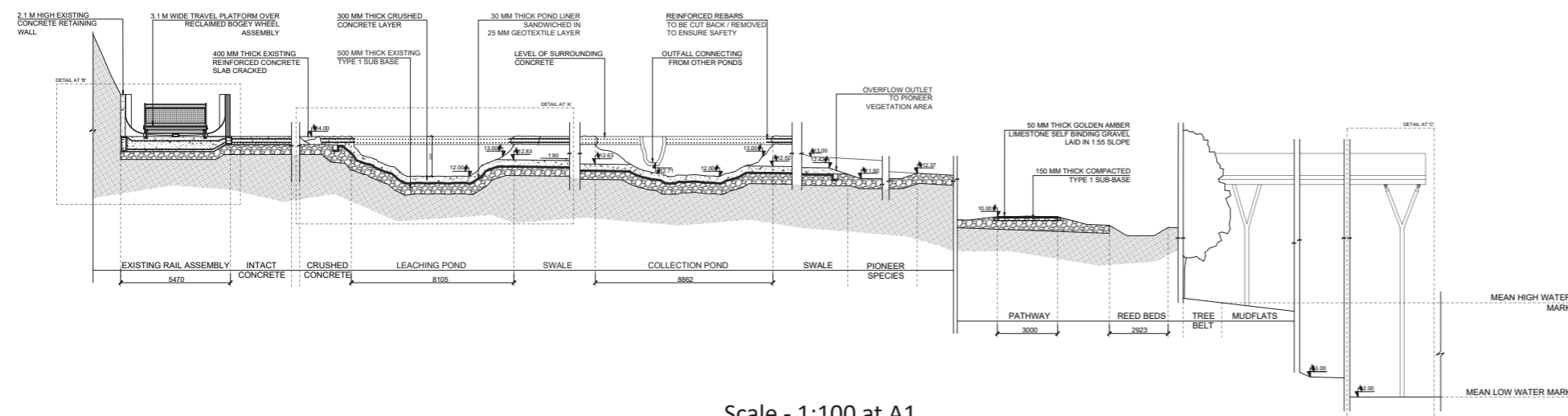


- Step 1 Existing Concrete slab
Set Concrete is non- reactive and is less subject to weathering.
- Step 2 Manual breaking of concrete
Crack and crush existing concrete slab
Existing spontaneous vegetation breaking through concrete
Seeding to encourage cracking
Set Concrete is non- reactive and is less subject to weathering.
- Step 3 Ponds constructed out of crushed concrete
Accumulation of water in crushed concrete ponds
Increase in pH between 8- 12
- 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.



Proposed shallow alkaline calcareous grassland

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



Supporting Species

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



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



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 salmactis

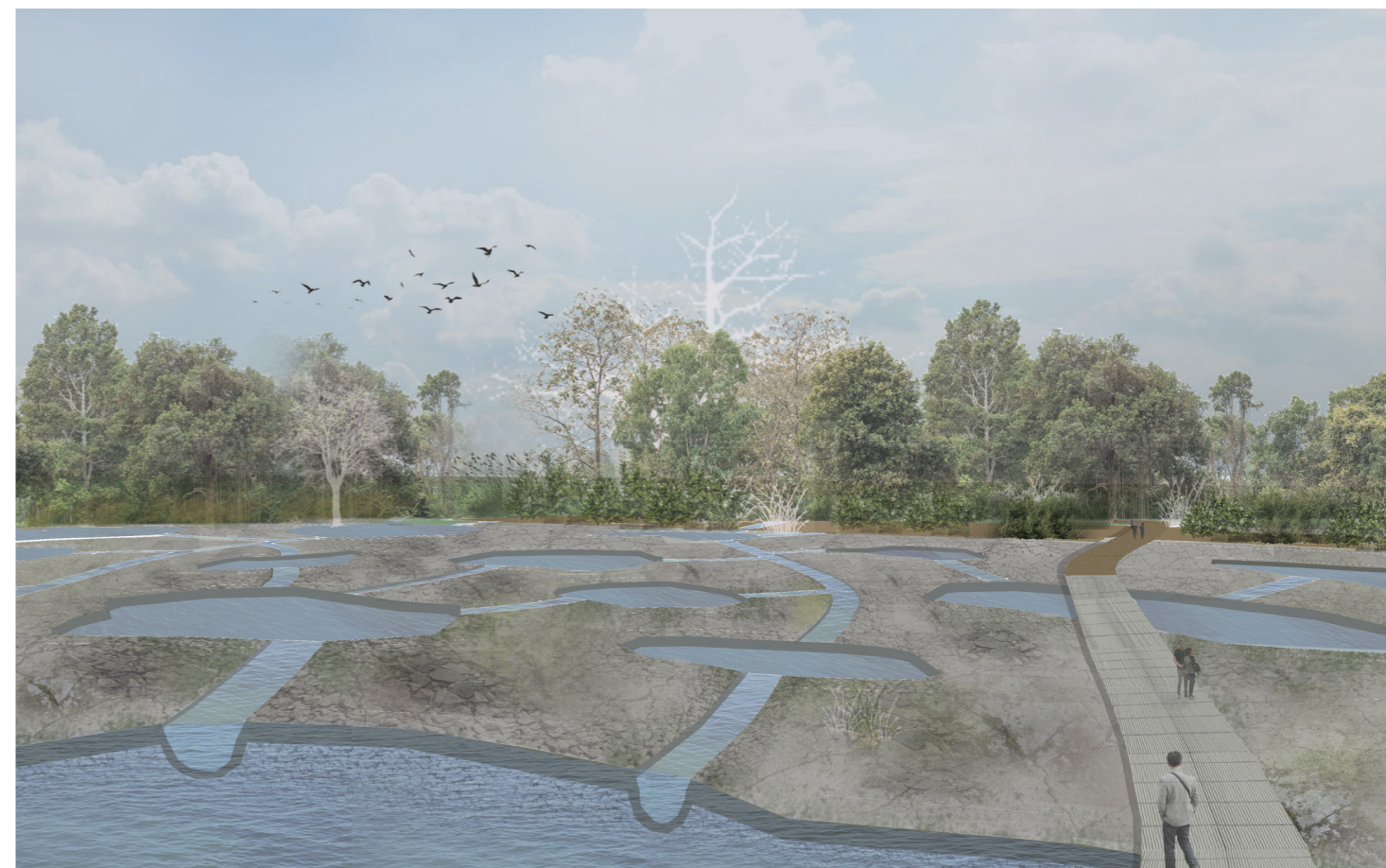


Peacock Butterfly
Aglais io

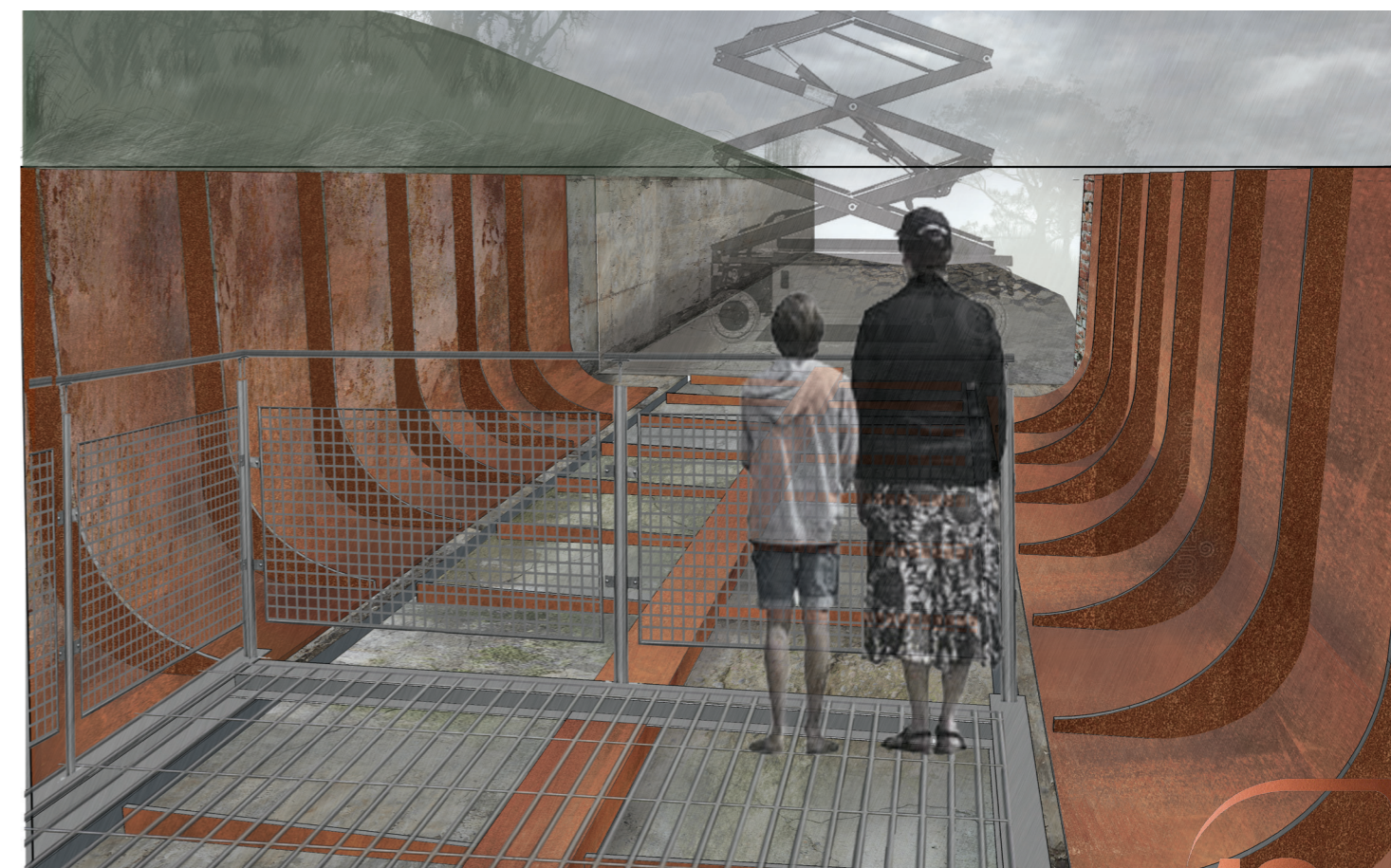


Dingy Skipper
Erynnis tages

Creative Visualisation of Concrete Ponds and Destruction Zone



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



Creative Visualisation of Travel Platform over Repurposed Rail Assembly