



ANGLE PARK, CHIPPING NORTON CONCEPT ANALYSIS

Prepared by Moir Landscape Architecture for Liverpool City Council
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Introduction

Located within Liverpool City Council, Angle Park is approximately 6.16ha in size, and sits within the Georges River Parklands and Chipping Norton Lake which represents largest and most significant water body in South West Sydney. It is part of a series of parks which connect along the waterfront.



The park requires remediation of existing bonded asbestos present in the soils. The design is to incorporate capping and concealing of the contaminated areas (approximately 0.3 to 0.5m of capping would be required).

Through this process, drainage, site erosion and pedestrian access are all to be improved. Some tree plantings may be required due to removal of existing mature trees due to contaminated soils.

Angle Park is already a popular spot for family picnics, launching watercraft, fishing and use of the existing playground.

Angle Park is Crown land managed by Council and proudly funded by NSW Government through the Places to Swim Grant Program 22/23.

KEY

-  Angle Park site boundary
-  Angle Park Boat Ramp
-  Angle Park Carpark
-  Angle Park Jetty



Georges River & Chipping Norton Lake History

Chipping Norton Lake is a 49-hectare (120-acre) artificial lake and regional park located in the Sydney suburb of Chipping Norton, New South Wales, Australia. It is a part of the Georges River system. Managed by Liverpool City Council, the lake is an important recreational area for Liverpool, City of Canterbury-Bankstown and Fairfield City Council.

The Chipping Norton Lake area was inhabited by the Tharawal and Darug people before European settlement. The land surrounding Georges River (there was no lake at that time) was given to Thomas Moore, an early settler and carpenter for the colony. He established farmland around the river. In the late 1950-70's, sand was mined around the lake area. The mining caused irreversible environmental destruction, and the area remained lifeless after the sand was mined. In the late 1970s it was decided to flood the mine, leaving a large lake. Vegetation was planted around the lake to make a wildlife reserve.

NATURAL ENVIRONMENT

There are over fifty different kinds of birds around the lake including pelicans, purple swamphens, egrets, maned ducks, pacific black ducks, sacred ibis, and pardalote; making birdwatching quite popular. The surrounding forests are filled with sedgeland, reeds and mangroves and the other native trees include the swamp oak, forest red gum, blue box, grey box, bangalay and rough barked apple. The alluvial woodland vegetation is another striking feature of the lake as it is an endangered ecological community.

<https://livingstreamsliverpool.wordpress.com/2012/09/29/sand-mining-history-of-the-chipping-norton-la/>



Once, all the river flats around Chipping Norton would have been covered in forests like this one. The river banks would also have been protected by reeds and mangroves. (Georges River Environmental Education Centre)



Georges River at Chipping Norton 1951 before sand mining. (Georges River Environmental Education Centre)



Georges River at Chipping Norton being mined, 1970's. (Above & Below)















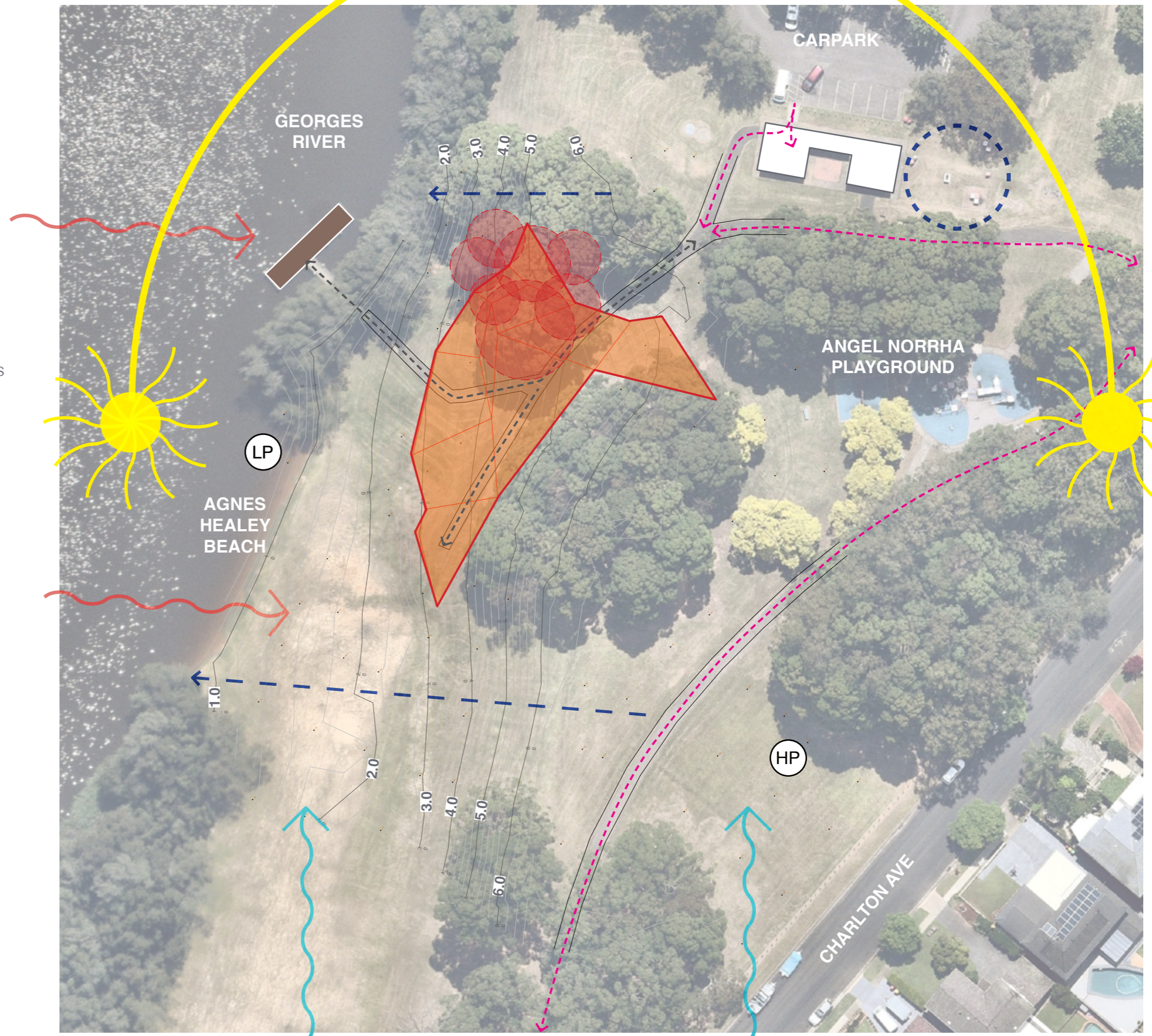
Sand Mining at Chipping Norton - January 1975

<https://livingstreamsliverpool.wordpress.com/2012/09/29/sand-mining-history-of-the-chipping-norton-la/>

Site Analysis

KEY

-  Slope direction/overland flow
-  Hot westerly winds
-  Cool southerly winds
-  Site high point
-  Site low point
-  Existing amenity building and picnic settings
-  Existing BBQ facilities
-  Asbestos affected areas
-  Existing pathway to be retained
-  Existing pathway to water to be removed and made accessible
-  Trees likely for removal
-  Existing jetty to be retained



0 5 10 15 20 25m

Aerial Source: Nearmaps



Site Images and Discussion

Overview:

- Angle Park Area: 6.16ha
- Planning Controls Zone: REQ Public Recreation & W1 Natural Waterways.
- Surrounding Land Uses: R2, Low Density Residential
- Soils: DTxx / Disturbed Terrain. Very high Salinity Hazard, Wianamatta Group shales
- Geology: Undifferentiated alluvial deposits; sand, silt, clay and gravel; some residual and colluvial deposits.
- Hydrogeology: UPSS Environmentally Sensitive Zones. Parramatta/Georges River Hydrogeological Landscape.



Site Images and Discussion



Site Images and Discussion



Opportunities and Constraints

KEY

-  Existing footpaths to be retained
-  Existing footpath to be removed and replaced with accessible pathway (min 1:14)
-  Proposed informal access
-  Existing vehicle access
-  Disabled parking
-  Existing playground to be retained
-  Existing amenities building to be retained
-  Jetty to be retained
-  Views to be maintained
-  Existing tree coverage providing ample shade
-  Asbestos affected areas
-  Proposed terracing & contamination capping
-  Trees likely for removal



0 5 10 15 20 25m

Aerial Source: Nearmaps



Preliminary Design Ideas

The design for Angle Park seeks to provide site remediation, new pathways and landscape terracing which will provide new recreational offerings, while maintaining the existing use of the park. The following highlights some key design ideas.

- Capping and containment of the asbestos contaminated soil behind a structural wall to prevent erosion and disbursement of the asbestos particles
- Consideration and design of paving and surfacing to minimise risks to the public from the asbestos
- Improved and compliant access provision in accordance with AS1428 (Design and Access and Mobility) for all abilities to Angle Park Wharf including hand rails, fall prevention, tactile surface indicators etc.
- Enhanced amenity and appearance for the Park including park furniture and facilities
- Usability of the space for events such as fireworks.

The key design elements that will be incorporated into the park include:

- Terraced seating
- A formalised circulation network
- New planting to increase shade and habitat



Design Principles

Site Remediation



A major issue of the current site is the existing asbestos contamination. The design will seek to remediate the site through a careful design which incorporates capping contaminated soils with terracing and raised platforms.

Something for Everyone



Considering the experience of a range of identities will assist in creating a design that caters for a broad spectrum of individuals. Existing pathways are to be improved throughout, with the addition of new pathways to ensure accessibility.

Provide Space for Community Events



Providing unobstructed views to the water and a terraced landscape will improve the function of Angle Park to allow for community events such as fireworks.

Diverse Group Gatherings



Providing a variety of spaces that cater for a diverse number of visitors will ensure the surrounding community will be drawn to the park for any occasion. Considering visitor comfort in hot and cold weather is also important.

A Critically Endangered Ecological Community



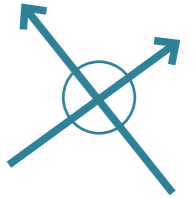
Cumberland Plain Woodland was once prevalent across Western Sydney. Remnant tree species of this community can be seen across Angle Park. Prioritising species from this community for new planting can assist efforts in conservation and showcasing the local ecological context of the site.

Consider Future Connections



Angle Park is part of a greater masterplan for Georges River Parklands and Chipping Norton Lakes by Liverpool City Council. Imaging future connections will be imperative to ensure Angle Park seamlessly connects with future change and development.

Avoid Conflict Between Active and Passive Areas



Providing separate spaces for active and passive recreation, with appropriate buffers, distribution and arrangement will allow a range of programs to co-exist in the park simultaneously.

Provide Habitat



Although the park has a number of existing trees, there is little to no diversity in terms of shrubs, groundcovers, grasses or strappy-leaved plants. Diversifying vegetation types will contribute to providing habitat for local fauna and flora.









Improve Drainage & Erosion

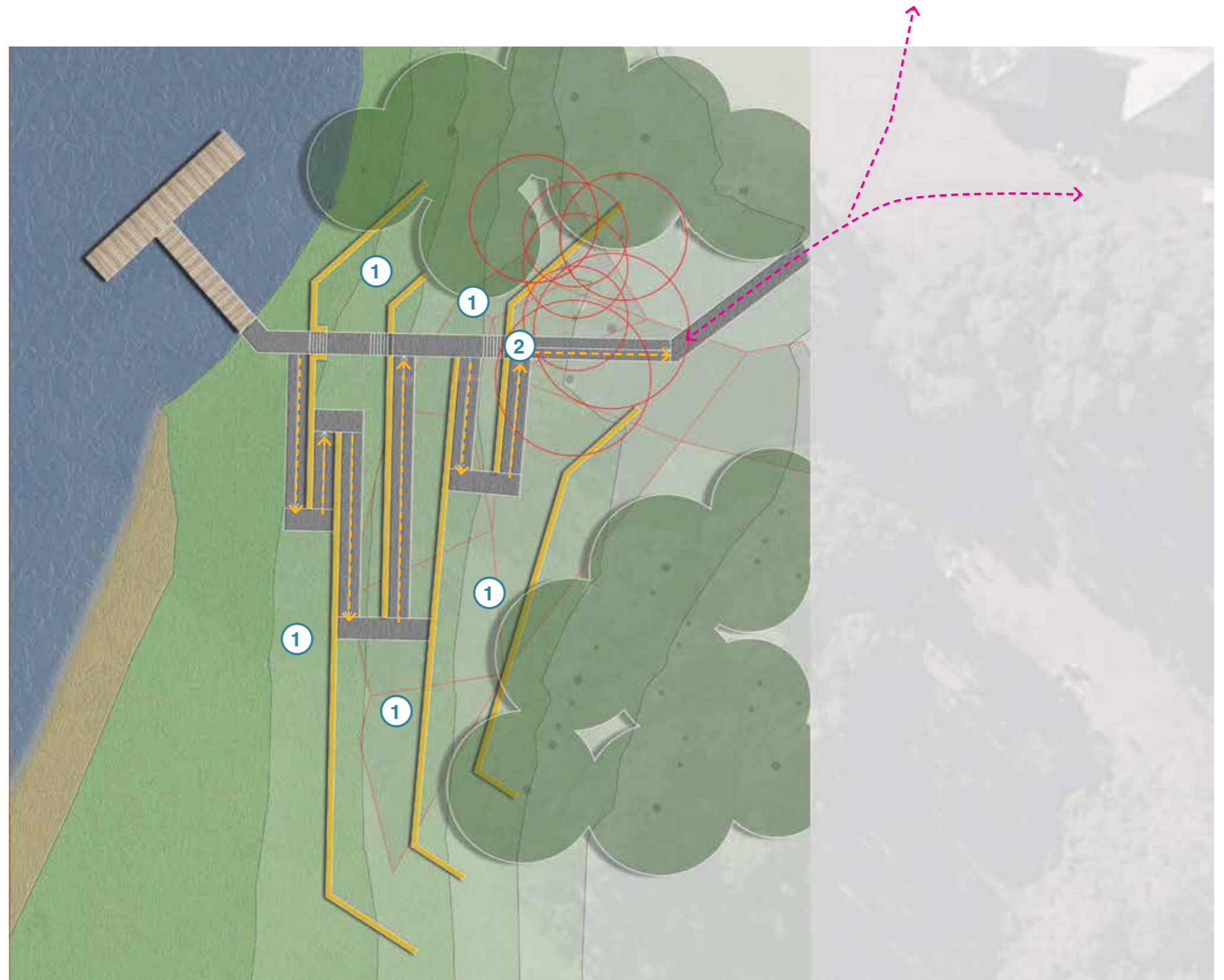


Currently the site is subject to flooding and erosion. Landform manipulation and planting will help reduce the effects of excess water.

Concept Design

KEY

-  Proposed accessible 1:20 ramps
-  Existing footpath to be retained
-  Landscape terracing (capping asbestos).
Sandstone or similar with turfed picnic / seating areas between
-  Stairs providing a direct route down to the water with exploration of incorporation of seating
-  Sandstone (or similar) retaining wall
-  Areas of asbestos
-  Timber jetty to be retained
-  Trees likely to need removal



Concept Design Visualisations



Sections

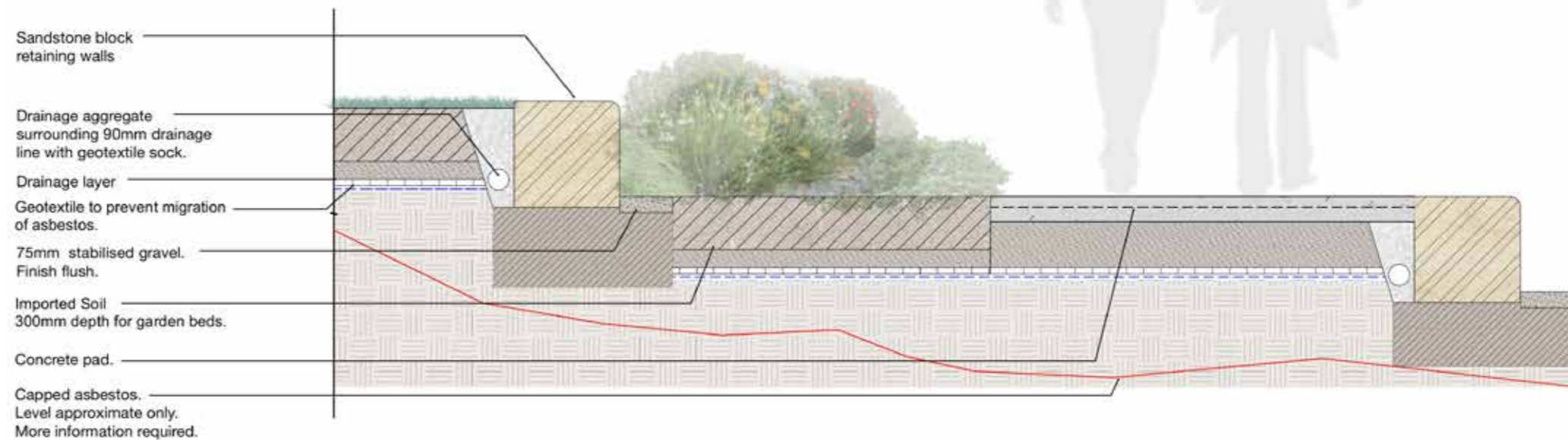
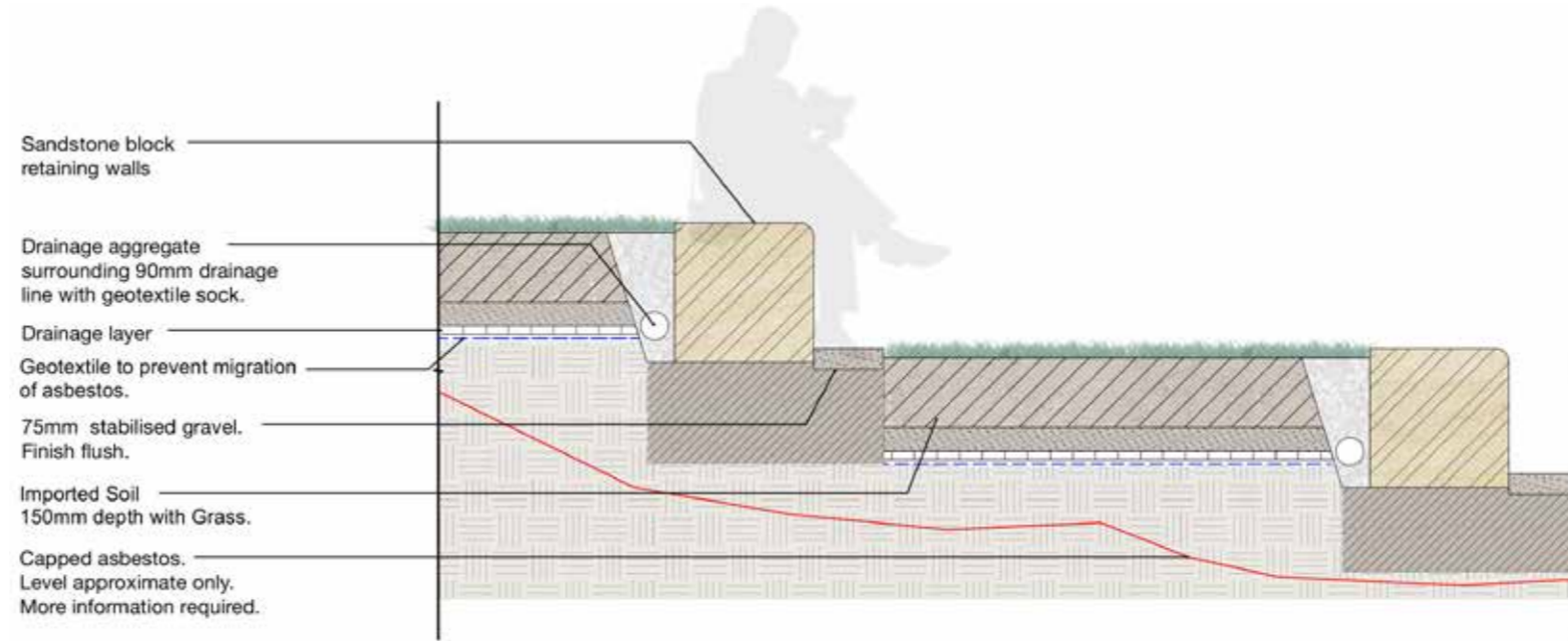
Asbestos Capping

Strategy: This strategy would see the application of a cap composed of a geofabric layer and a layer of validated imported soil, over the areas which are not currently sealed. Soil capping would be required to a minimum thickness of 0.3 m on top of the geofabric layer which would serve as a marker layer for any future excavations. The capped surface would then be restored to its current state of vegetation.

Benefits: This strategy would reduce the overall onsite risk posed by the impacted areas by placing a physical barrier between the contaminated soils and the site users /workers.

*Site Investigation at Angle Park, Chipping Norton, NSW
Targeted Site Investigation at Angle Park, Chipping Norton NSW.*

Environmental Earth Sciences. Aug 12 2021.



Materials

Material selection is to be in accordance with local supply and ensures low maintenance, while improving the overall site aesthetics and function.

Consideration of existing site materials and site-wide character will influence the material palette, improving overall aesthetics and sense of place.

