





WATER







HOT WATER



ELECTRICITY + ENERGY

PV onsite

lighting

hvac

cooking

HEATING & COOLING

WASTE





Situated in a transitioning industrial zone, surrounded by contaminated sites, our proposal envisions the existing building and site as a filter, a provision of respite from the toxic remnant industry and a hopeful vision of the future.

The concept of filtering manifests through the design in 3 ways.

# Building and site as environmental filter:

Provision of water cleaner than the neighbouring Stoney Creek, nutrient rich soil produced onsite for the production of food, the power of the sun harvested onsite as clean energy that powers the wider community, and native vegetation that populates the local area and encourages the return of rich biodiversity.

# Filtered spatial experience through blurred interior boundaries and intermingled programme:

A heritage building transformed, refitted to serve the community through a range of services & uses, providing healthy interiors and outputting clean resources.

## Building as filter for the regenerative re-use of the building:

Offering a great opportunity to curb emissions by prolonging the useful life of materials already in place, especially those with long-life durability and high embodied energy, such as steel, aluminum and concrete.



A key element of the proposal is the incorporation of not only the 7 living building challenge petals, but also the addition of 4 site-specific petals that seek to tackle environmental issues pertaining to the immediate context and local community. These are:

- Air purification
- Soil remediation
- Noise pollution
- Rewilding and biodiversity

The addition of these extra petals assist in the design's ability to act as a filter not only for the environment, but also for the local community and future longevity of developments within the LUMA site.

The proposed design creates journeys to stimulate the senses and invites the local community, staff, and visitors to explore and experience the centre via the surrounding landscape. The varied textures and patterns in the materials and planting encourage visitors to not just look, but also touch and feel. Provision of allotments for productive fruit and vegetable gardens provide ways for the local community to not only work towards self-sufficiency, but also share meals and skills.

The surrounding landscape seeks to restore the remnant Indigenous landscapes and species, prioritising caring for Country through giving back to the land. Gardens unless otherwise stated become restorative lots for rewilding, with a focus on respecting the natural harmonies of the remnant Indigenous grasslands, flowers and their fauna counterparts. Native species are prioritised, with a broader aim of creating a restorative future.

As a solution to density in urban living environments, the filter pods address both issues of suburban biodiversity, whilst promoting a circular economy and self-sufficiency. The

pods consist of a modular timber frame system, with bracket adjustable shelving. The external facade can be made of ready

THE LANDFILL INDUSTRY Contaminated soil, Toxic gas, Endangered species, Endangered people Plastics, reinfor + textiles factories Ground pollution, Air pollution, Waterway pollution

THE HIGHWAY Western Ring Rd, Toxic furmes, Noise (24/7), Air pollutants + particles Overeliance on + prioritisi or transportetion car transportation

THE RAILWAY

Connection + acces

THE ROAD Noise, Furnes + particles Obstruction to foot connectivity + pedestrian routes Obstruction to cycling connectivity Soil contamination from road runoff Metropolitan train line (Sunbury) V-Line train line (Bendigo) Noise (periodical) Fumes (periodical) munal + sustainable

L CLEANER SOIL Contaminants from the soil begin to be absorbed and filtered through the bordering patches of fungi beds As time moves forward the soil becomes cleaner, bugs begin to *return, plants begin to grow A thriving future germinates* 

CLEANER AIR

Hot, congested, toxin heavy air sweeps through the site Trees weaving and dipping capture the breeze on their leaves as the air cools and filters ownwards The backs of ferns and reeds further capture and filter out the orchoodicing and thrists. carbon dioxide and toxins This air is passively directed towards the interior, through a thermal labyrinth network

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### MENTAL + PHYSICAL HEALTH

Cracks begin to appear in the building as the dense facade is Status begin to appear in the bounding as the bense radate is penetrated by greenery. Sunlight flows through the skylights, bathing the cold walls in warmth Cool, clean air flows through the building The community + the building begin to form a rhythm The building begins to physically reflect its role as mediator of community connection + health

### A VISION OF THE FUTURE L BIODIVERSITY + ABUNDANCE

WAR WAR

Connected, healthy living Native trees + vegetation are establishe Nature acts as the final and permanent Strong communit A clean + healthy environment supp Biodiverse + rejuvenate landscapes hriving community Vative species return roductive gardens flourish, self

HEALTHY SOILS

Healthy soils Healthy plants Healthy animals Healthy humans

BUBBLING CREEK The filtering of runoff and sto restoration of the creek A restored creek sees the re

Clean + clear waters Natural + beautiful

made timber plywood, available recycled materials at hand such as plastic sheeting or recycled timber, or be left open to the elements as a form of vertical garden. The flexibility of the system allows for users to configure the shelving as desired, widening or condensing shelves to suit their needs as garden beds, worm farms, water tanks or simple workshops and storage.