Ecological Art - Avant-gardening

Tillandsia SWARM

LLOYD GODMAN

Published by Photo-syn-thesis - 2018


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Art and the built environment cannot be viewed in isolation from each other. The functionality of our finest public and private spaces has always rested on solid aesthetic and spiritual principles; our greatest buildings either showcase challenging artworks or incorporate artistic designs into their very fabric, reminding us that buildings without art are mere shelters.

Artist Lloyd Godman is at the forefront of a modern trend to bring an appreciation of the natural world into our structural domains. Buildings do not rest 'above' or 'outside' a landscape, separated from the surrounding environment. On the contrary, structures interact with the natural world as objects that cast shadows, consume resources and provide rich habitats for life.

Godman's living, plant-based artworks reinforce the necessary connectedness of buildings and the wider environment. Not only do these artworks convey powerful messages and philosophies of sustainable and ethical physical interaction, but they also reach out beyond ideas to become part of the actual structure – as physical objects, Godman's artworks are purifiers of the air as well as the soul, suppliers of colour as well as calmness, and filters of water as well as the human spirit.

..... it is highly unusual for an artist to forge new aesthetic, philosophical and architectural directions through his work; Godman, however, has managed to use his diminutive plants to convey global concepts, and in the process participate in a new wave of appreciation for plants in the built environment.

John Power - October 2011

John Power - Editor of Facility Management Magazine Aug 2011

Tillandsia SWARM

Locations

Helpful hint: you can use the search function via the magnifying icon to carry out a word search in any document but not across documents.

Eureka Tower, Melbourne, Vic
CH2 (City of Melbourne Council house 2) Melbourne, Vic
Essendon Fields (Essendon Air Port), Melbourne, Vic
Montsalvat, Eltham, Vic
The Friends' School, Hobart, Tas
Hollywood 22, St Andrews, Vic
MGA (Monash Gallery of Art), Monash Vic
Bunji, Hurstbridge Hub, Vic
Edendale Community Farm, Eltham, Vic
Victorian Friends Centre, Melbourne, Vic
Federation Square, Melbourne, Vic
Pantin un, Paris
Pantin deux, Paris
Lyon, France
NGV (National Gallery of Victoria), Melbourne, Vic
St Andrews Primary School, St Andrews Vic
TarraWarra Museum of Art, Vic
Australian Print Workshop, Melbourne, Vic
Foons Photographics, Wonthaggi, Vic
Leichhardt, Sydney, NSW
#URBNSURF, Tullamarine, Melbourne
VORTEX - Surf Skate Snow, Wonthaggi, Victoria

The green fabric that clothes the earth is fraying!

Sadly, through overuse, and mismanaged abuse, the living green garment we depend upon is wearing out. The construction of buildings and urban infrastructure like roads and car parks become “dead pixels” in the living image of the planet. Repairing the old garment by stitching plants into the structures of our cities is a vital option. Incorporating plants into tall building design is an important aspect of this restoration project. But how can this be achieved in a fully sustainable manner?

Tillandsia Swarm Introduction

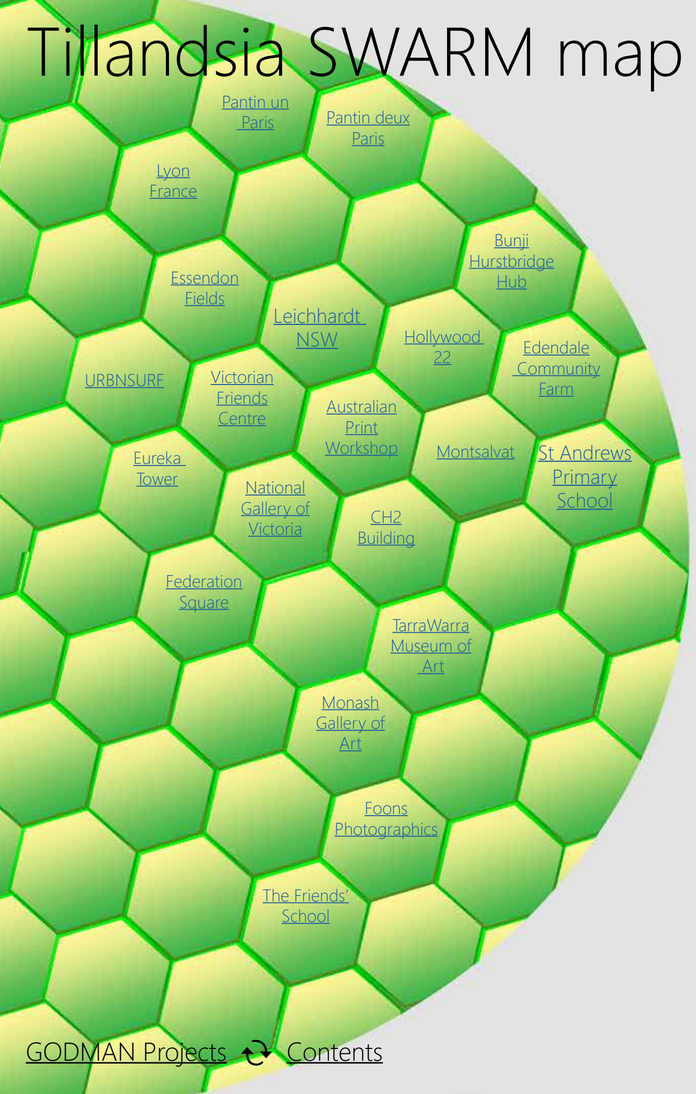
Tillandsia Swarm is an experimental art/science project by ecological artist Lloyd Godman, where selected species of Tillandsias (air plants) are installed without soil or axillary watering at a range of extreme and exposed urban locations and monitored to gauge their success through extreme seasonal conditions.

The premise of the project is to offer models of how these amazing plants can be integrated in to architecture in a fully sustainable manner, with minimal maintenance, infrastructure and risk. T

o engage in an art project where the purpose is not necessarily that the work is seen, but that it remains active in the environment. To offer a means

To date over 100 plants are installed at 48 sites at 20 locations, including Eureka Tower, NGV (National Gallery of Victoria), TarraWarra Museum of Art, MGA (Monash Gallery of Art), CH2 building, Essendon Fields, URBNSURF, Montsalvat and The Friend's School (Hobart). The plants on Eureka have been installed at level 92 for more than 7 years, which is the tallest building in the world with plants atop and is a testimony to the resilience of these amazing plants. They are installed across a wide rage of sites, some extremely demanding where they receive little rain, extreme winds and face the possibility of perishing. Over time the plants are monitored to note how they preform in these extreme conditions.

Tillandsia SWARM map



As the number of exquisite landscape, paintings, prints, photographs - (images) - expands by acres each day, the acres of real landscape shrinks proportionally. With diminishing of biodiversity, the medium for artists to embrace in the 21st century is nature itself. Not to strive for reproductions, expressions and interpretations of nature, but to work with a living medium, to work in the REAL!

Urban Experiments

Tillandsia SWARM

In 2014, after the successful *Airborne* project, we decided to experiment with Tillandsias on a range of demanding locations within the urban environment around Melbourne.

The first was at various locations on Eureka Tower. The plants installed at level 92 is the tallest building with plants on top. Selected species were placed in a mesh cage and mounted to a hand-rail at the top. There was no soil medium and no watering system. The plants were exposed to extreme weather, heat, long dry periods and salt winds that regularly reach over 200 kph. Over years, the plants have proved resilient, they have adapted to the harsh environment growing in a more compact form and producing a great number of pups than they would in a kinder environment. (compact growth and a higher pupping rate is the plants protection because of the higher stress levels)

The project continues to expand.

The mesh cages (cells) were developed as a means of securing the plants to the building infrastructure in a way that guaranteed they would not fall off. The cylindrical cages, now termed as cells, became emblematic of the project and reference the cells bees store honey and lay their eggs in.

A project evolved titled Tillandsia SWARM and in the past few years other plant cells have been included in the experiment which now includes a wider range of plant species.

Funding and sanctions

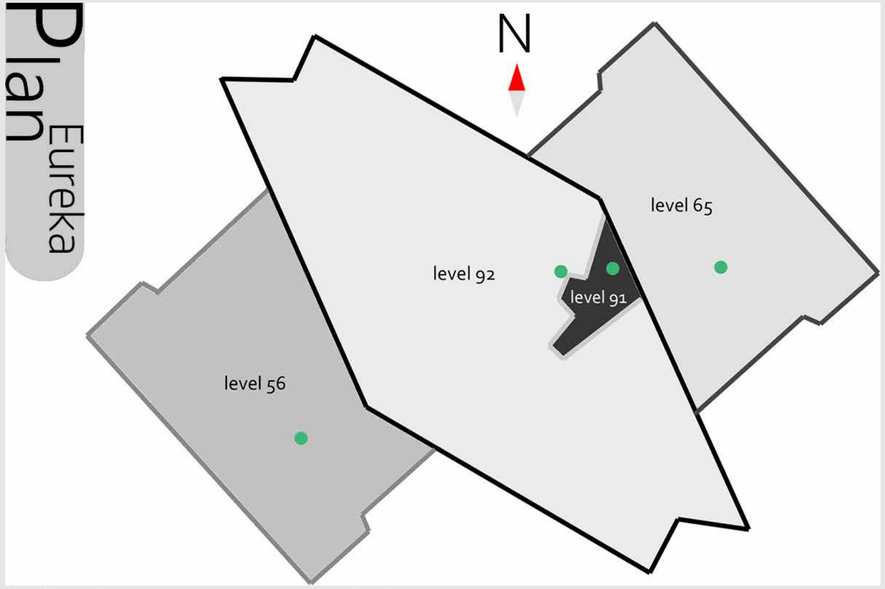
While the installtion of experimental Tillandsia plants have all been sanctioned by the authority at the specific location, all installations have been installed without charge. No installations have occured as a green guerrilla action. The project has been undertaken with No external funding and has been fully supported by the artist.

Tillandsia SWARM

- A ground breaking art/science experiment with Tillandsia plants that need no soil or watering system
- After a period of time the plants can be used as biomonitors to log comparative urban pollution levels
- The plants use a CAM cycle and actually grow in darkness cleaning the atmosphere at night
- They uptake all water and nutrients though trichome cells on their leaves, so do not need reticulated watering or nutrients
- Like bee swarms, the plant cells grow in number. Currently there are - over 51 sites on 21 locations, across 3 states - within 2 countries – at 1, 2, 3, 11, 56, 65, 91 and 92 (295 m above base level)

Although many of the plant cells are in obscure and inaccessible locations, and appear to sit covertly, all plant cells are installations have been sanctioned with approval by the building owners. However all plant sites can be viewed via the web where they are linked from a map of locations.

Eureka Tower - the initial installation



Plan of Eureka Tower - the green dots show the location of the Tillandsia plants on level 56, 65, 91, 92. Level 91 is an access way to the higher level 92.

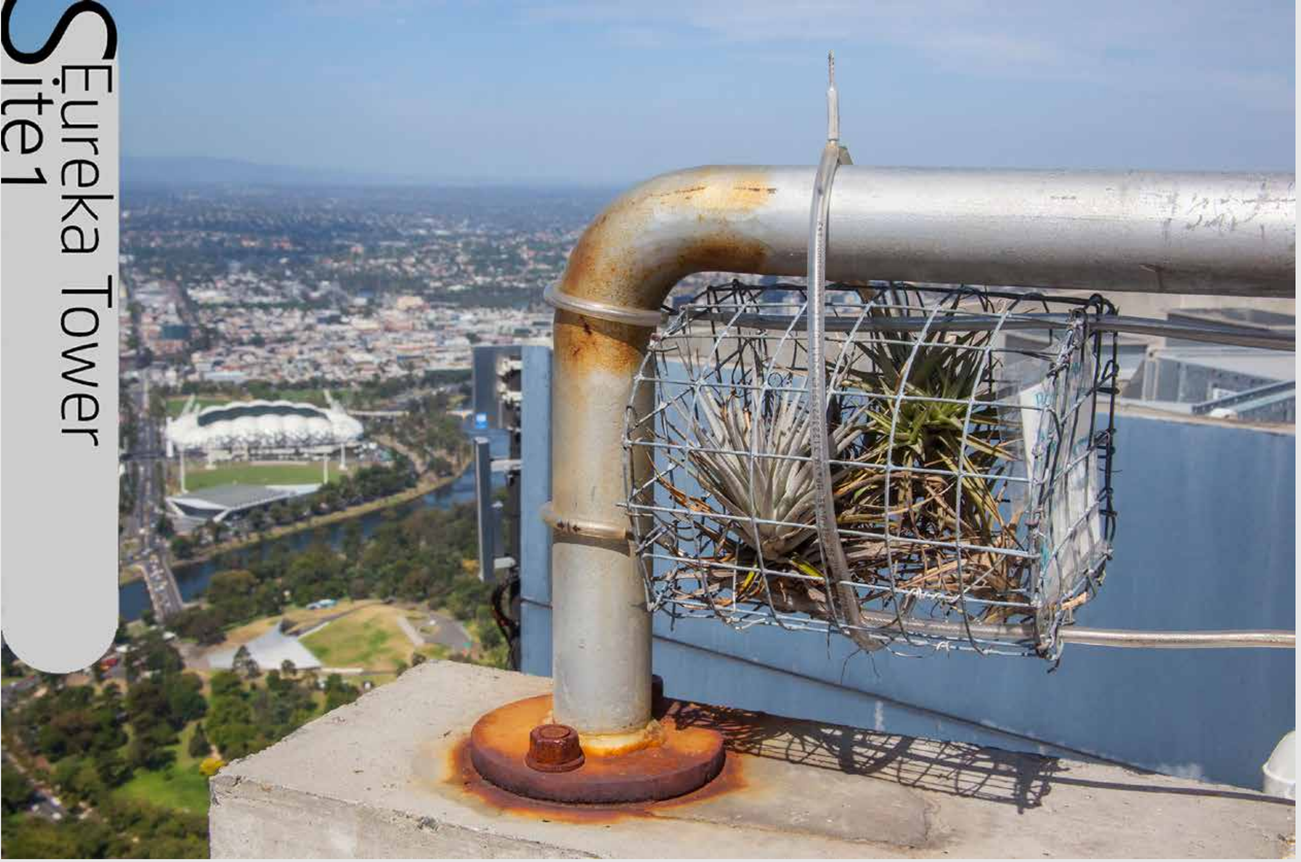
On 16 Oct 2014 we checked the plant experiments on Eureka Tower. It was wild weather with fine saturating rain driving in on a strong wind and not the most pleasant place to be at that height. The plants had survived the past four months of winters cool, wild salt winds and apart from some old leaf die back (these are the leaves farthest from the growing tip) which is probably attributed to the acclimatization to the plants to the new environment, they are fine. The Tillandsia at all four locations are growing well. Everything is secure, nothing has blown away and one plant at level 91 is even flowering. The next phase is to see how the selected species of Tillandsia perform in the dryer and hotter months ahead. On 25 February 2015, Stuart and myself visited the plants on all four locations with Angela Fedele, a writer for Sourceable, from which she published a piece in titled "Air Plant Experiment Happening Atop Melbourne's Eureka Tower."

Grant Harris works on fixing a Tillandsia plant cage while Stuart Jones and Lloyd Godman look on.

Grant Harris environmental scientist, Lloyd Godman ecological artist and Stu Jones structural engineer, on Eureka Tower level 92 about 300m at the top - 200km plus winds. Now we wait to see how they grow! (the air plant cage is above Stu's head).

The tower is named after the Eureka Stockade, a rebellion during the Victorian gold rush in 1854. This has been incorporated into the design, with the building's gold crown representing the gold rush and a red stripe representing the blood spilt during the revolt. The blue glass cladding that covers most of the building represents the blue background of the stockade's flag and the white lines also represent the eureka stockade flag.

While the plant cages are designed to protect the Tillandsia plants from being blown away, they are also a reference the only person imprisoned as a result of the Eureka Stockade, Henry Seekamp Editor of the Ballarat Times, who was found guilty of seditious libel.



Eureka Tower

Location: Eureka Tower, Melbourne CBD
Site: 1
Latitude: 37.821545 S
Longitude: 144.964477 E
Aspect: Open, exposed to all elements, direct sun all day
Level: 92 (295m) This is the tallest building in the world with plants growing at this height.
Install date: 17 June 2014
Public Visibility: No - restricted private access only

Eureka Tower

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Aspect: Open, exposed to all elements, direct sun all day
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Install date: 17 June 2014
Public Visibility: No - restricted private access only

Site visit 20 May 2015 with architect Toby Reed, Lloyd Godman, Stu Jones, and State MP Cindy McLeish.

Site visit - 11 May 2017 - Lloyd Godman, plants have put on good growth. Species one has 12 pups

Site visit 7 June 2019 - Lloyd Godman and Geoff Beech despite the driest 2 years recorded the plants are alive and have expanded to a point where they are growing outside the cage. T. *bereri* has now expanded to 14 plants and are growing outside the cell mesh.

Site visit 29 Jan 2020 - Lloyd Godman, Geoff Beech and Jane Clark Senior Research Curator MONA. The plants were removed form the galvanized mesh cell and placed in a much larger plastic mesh cage. The reason for the plastic cage is that the metal can give a false heavy metal contamination reading.

Eureka Tower

Site visit 6 Dec 2021 - Lloyd Godman, Geoff Beech and three architects from the Buchan group including Mike Curtus. The plants have grown considerably and T. bergeri has four flowers.

Eureka Tower

Location: Eureka Tower, Melbourne CBD
Site: 2
Latitude: 37.821549 S
Longitude: 144.964429 E
Aspect: Facing east, in an alcove sheltered from winds and in a rain shadow
Level: 91
Install date: 17 June 2014
Public Visibility: No - restricted private access only

The site proved to be in a rain shadow and over a period of years the plants declined and died. The cell was removed 2019.

Eureka Tower

Location: Eureka Tower, Melbourne CBD
Site: 5
Latitude: 37.821549 S
Longitude: 144.964429 E
Aspect: Open deck east side
Level: 56
Install date: 7 June 2019
Public Visibility: No - restricted private access only

Site visit 7 June 2019 - Lloyd Godman and Geoff Beech. The plants mounted on this landing in 2014 perished. The mesh cell with the plants was mounted to a drain on the roof and it was suspected that the window cleaners has poured water down the drain on a hot summers day and inadvertently drenched the plants burning the tichomes off.

The 2019 installation was a replacement for these plants and the cell was mounted on the sewer vent. It is uncertain how the gas from the plants will affect the Tillandsia plants.

Note: The green grass is plastic and it was noticeable that the fine fibres had broken off over time and were collecting around the drain on the roof.

Site visit 29 Jan 2020 - Lloyd Godman, Geoff Beech and Jane Clark Senior Research Curator MONA. The plants were removed form the galvanized mesh cell and placed in a much larger plastic mesh cage. The reason for the plastic cage is that the metal can give a false heavy metal contamination reading.

Site visit 6 Dec 2021 - Lloyd Godman, Geoff Beech and three architects from the Buchan group including Mike Curtus. Photo right bottom - The artificial grass had been ripped up by recent high winds and was being replaced.

Eureka Tower

Location: Eureka Tower, Melbourne CBD
Site: 6
Latitude: 37.821549 S
Longitude: 144.964429 E
Aspect: Open deck
Level: 65
Install date: 7 June 2019
Public Visibility: No - restricted private access only

Site visit 7 June 2019 - Lloyd Godman and Geoff Beech. Unlike the plants mounted on the roof drain at level 56, the plants on the drain on level 65 are still alive and growing. However to augment these plants a new plant cell was mounted on the sewer vent. It is uncertain how the gas from the plants will affect the Tillandsia plants.

Note: The green grass is plastic and it was noticeable that the fine fibres had broken off over time and were collecting around the drain on the roof.

Site visit 29 Jan 2020 - Lloyd Godman, Geoff Beech and Jane Clark Senior Research Curator MONA. The plants were removed form the galvanized mesh cell and placed in a much larger plastic mesh cage. The reason for the plastic cage is that the metal can give a false heavy metal contamination reading.

Site visit 6 Dec 2021 - Lloyd Godman, Geoff Beech and three architects from the Buchan group including Mike Curtus. Photo - Right top

Eureka Tower

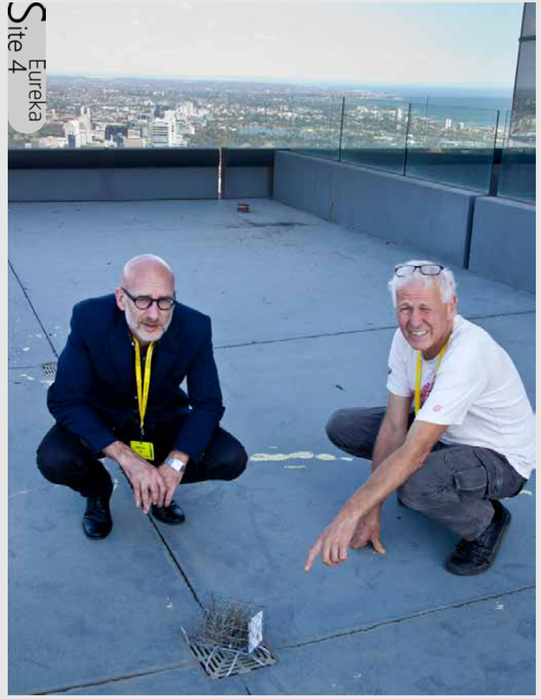
Location: Eureka Tower, Melbourne CBD
Site: 4
Latitude: -37.821594 S
Longitude: 144.964312 E
Aspect: Open deck west facing landing open to west winds and direct afternoon sun, shaded in morning
Level: 65
Install date: 17 June 2014
Public Visibility: No - restricted private access only

Note: Photograph right top shows the landing before the synthetic grass was installed.

Site visit 20 May 2015 The photograph bottom right shows Stu Jones and State MP Cindy Mcleish examining the Tillandsias after the synthetic grass was installed. Note the wind on Cindy's hair.

During a Site visit 7 June 2019, it was noticeable that the fine fibres had broken off over time and were collecting around the drain on the roof.

Eureka Tower



Location: Eureka Tower, Melbourne CBD
Site: 4
Latitude: 37.821549 S
Longitude: 144.964429 E
Aspect: Open deck east side
Level: 56
Install date: 7 June 2019
Public Visibility: No - restricted private access only

Site visit 7 June 2019 - Lloyd Godman and Geoff Beech. The plants mounted on this landing in 2014 perished. The mesh cell with the plants was mounted to a drain on the roof and it was suspected that the window cleaners has poured water down the drain on a hot summers day and inadvertently drenched the plants burning the tichomes off.

The 2019 installation was a replacement for these plants and the cell was mounted on the sewer vent. It is uncertain how the gas from the plants will affect the Tillandsia plants.

Note: The green grass is plastic and it was noticeable that the fine fibres had broken off over time and were collecting around the drain on the roof.

CH2,Council House 2

Council House 2 (CH2) was Australia's first building to be awarded a six star green star design rating. Since its completion in 2006, CH2 has changed the landscape of its local area and inspired developers and designers across Australia and the world. Principal design architect, Mick Pearce. principal design architect, Mick Pearce.- CH2 is meant to be a 'lighthouse project' for new building developments, aiming to influence future design to be more sustainable and efficient. Some objectives when designing the building were to be greenhouse neutral and improve the overall employee wellbeing.

GODMAN Projects ↻ Contents

Location: CH2 Building, Melbourne CBD
Site:1
Latitude: 37.814325 S
Longitude: 144.966536 E
Aspect: Open, on top of the building and exposed to all elements
Level: 11
Install date: 4 Dec 2015
Public Visibility: Yes - from Little Collins St foot path with a telephoto lens or binoculars

The Tillandsia SWARM experiment instigated a larger pilot project at this siter in 2022.

CH2 - Council House 2

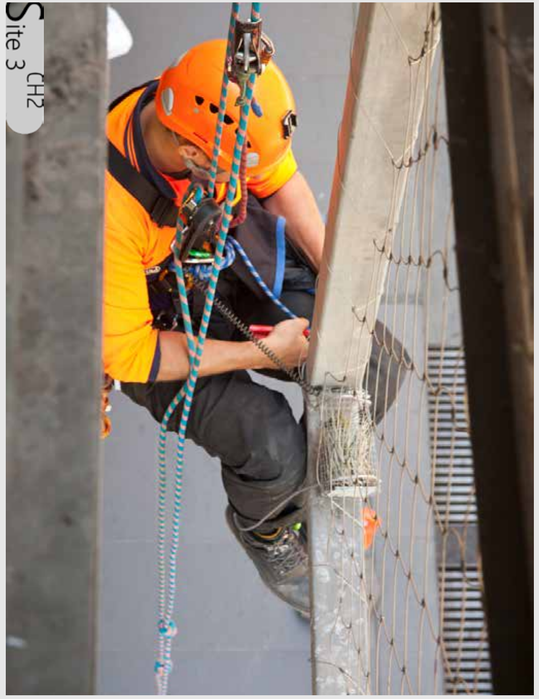
Location: CH2 Building
Site:1
Latitude: 37.814325 S
Longitude: 144.966536 E
Aspect: Open, on top of the building and exposed to all elements
Level: 11
Install date: 4 Dec 2015
Public Visibility: Yes - from Rainbow Alley with a telephoto lens or binoculars

As part of this experiment, four mesh cages containing two species of Tillandsias (air plants) have been installed at challenging locations on the CH2 building. One of these locations includes the automated rotating, wooden sun screens across the front facade.

Melbourne City Council building CH2 - the red circles point to the location of three Tillandsia plant cages. 4 Dec 2015. Council House 2 (also known as CH2), is an office building located at 240 Little Collins Street in the CBD of Melbourne, Australia. It is occupied by the City of Melbourne council, and in April 2005, became the first purpose-built office building in Australia to achieve a maximum Six Green Star rating, certified by the Green Building Council of Australia.

CH2 officially opened in August 2006. and included roof and wall plantings. However at some sites where planned plantings have failed to establish, and the experimental Tillandsia have been located at these difficult sites.

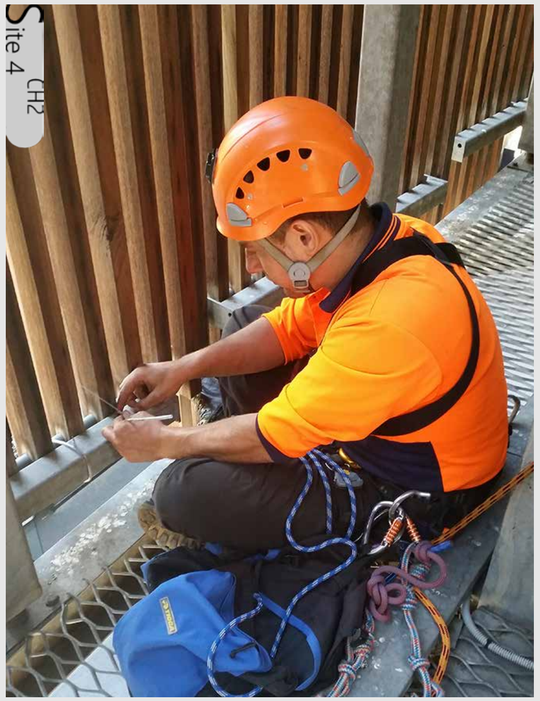
Right: CH2 - Site 2 Grant Harris installs a Tillandsia plant cage at the top of CH2 building - level 11. This site is at the very top of the building south west corner and is exposed to all elements.



CH2,Council House 2

Location: CH2 Building
Site:1
Latitude: 37.814325 S
Longitude: 144.966536 E
Aspect: Open, on top of the building and exposed to all elements
Level: 11
Install date: 4 Dec 2015
Public Visibility: Yes - from Rainbow Alley with a telephoto lens or binoculars

CH2,Council House 2



Location: CH2 Building
Site:1
Latitude: 37.814325 S
Longitude: 144.966536 E
Aspect: Open, on top of the building and exposed to all elements
Level: 11
Install date: 4 Dec 2015
Public Visibility: Yes - from Rainbow Alley with a telephoto lens or binoculars

Essendon Fields

Location: Essendon Fields
Site:1
Latitude: 37.725190 S
Longitude: 144.894102 E
Aspect: Mounted on air conditioner plant screen steel structure, one plant is mounted the east side the other on the south side
Level: 4
Install date: 14 Feb 2016
Public Visibility: No Private access only

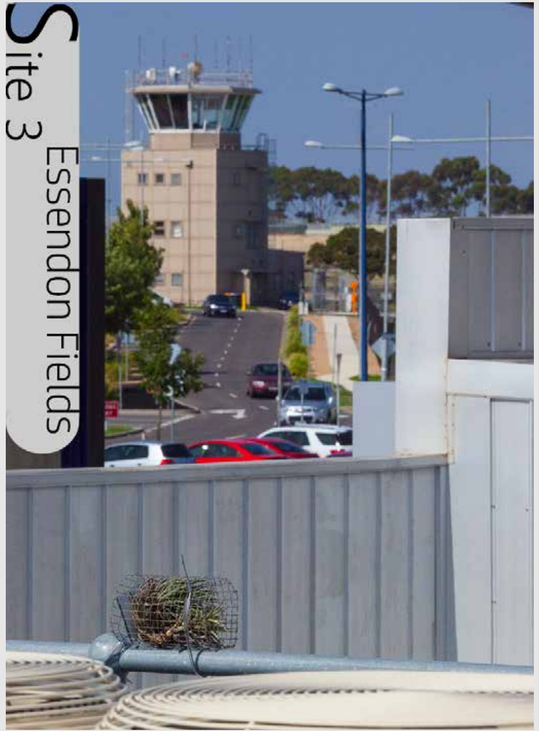
Essendon Airport is a general aviation aerodrome that is situated on 305 hectares, 11 kilometres northwest of Melbourne's CBD and 7 kilometres southeast of Melbourne Airport.

Essendon Airport remains a vital aviation resource for Melbourne and regional Victoria. It continues to provide excellent facilities to the aviation industry, with a special emphasis on Police and Emergency Services, flight support and the corporate aviation market. In addition, landside development at the airport offers the opportunity to create an integrated business environment unlike anything else in Melbourne.

Since privatization of the airport in 2001, EAPL has demonstrated its commitment to establishing a commercially viable, safe and functional general aviation facility which meets the needs of projected aviation requirements whilst utilising the property's strategic land holdings for high quality commercial development.

Right: Essendon Fields, Site 3 The plants at this site are secured on the roof of Coles Supermarket near the air conditioning plant.

Essendon Fields



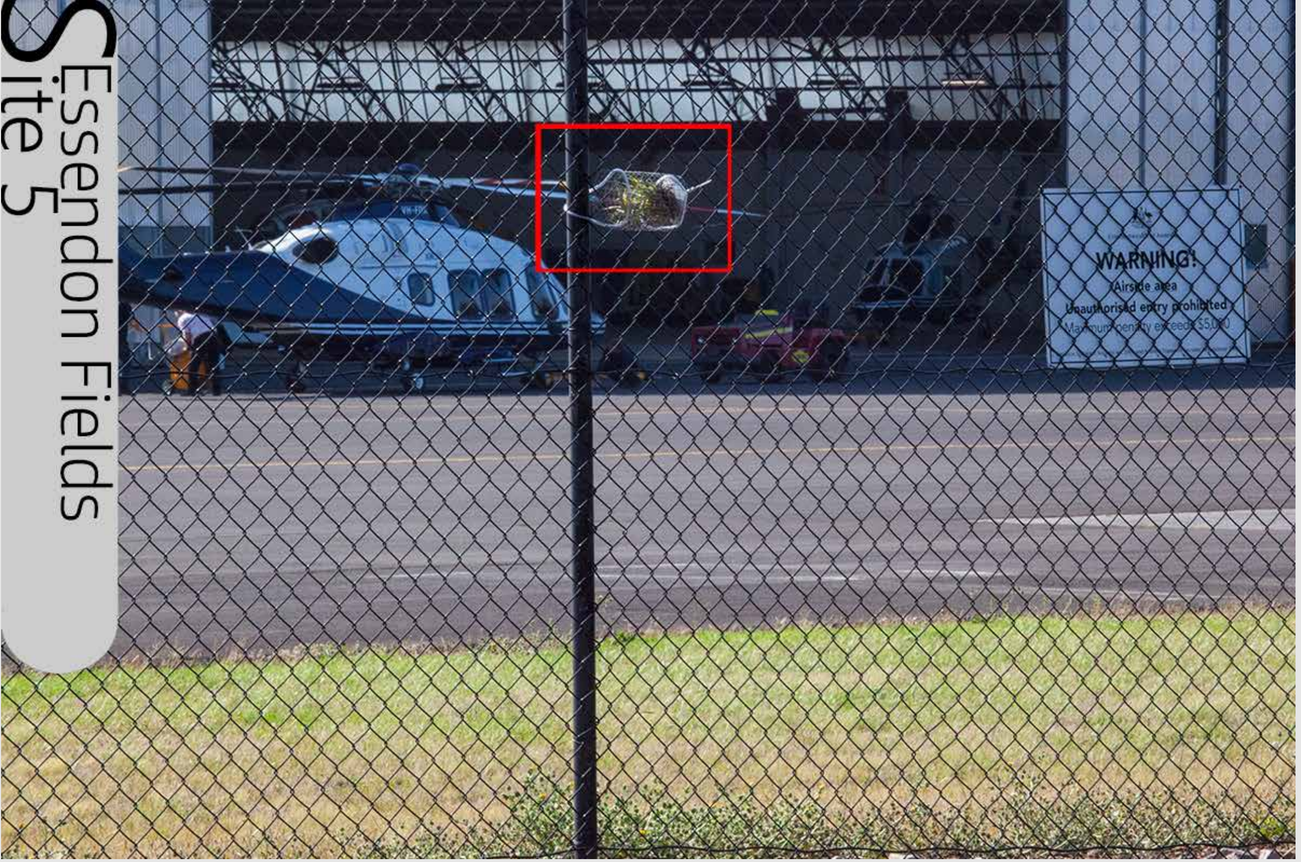
Location: Essendon Fields
Site:3
Latitude: *37.726989 S*
Longitude: 144.895081 E
Aspect: Mounted on hand rail roof of Coles Supermarket
Level: 2
Install date: 14 Feb 2016
Public Visibility: No Private access only

Essendon Fields

Location: Essendon Fields
Site:4
Latitude: 37.726989 S
Longitude: 144.895081 E
Aspect: Mounted on air field fence
Level: 1
Install date: 14 Feb 2016
Public Visibility: Yes - from north west side of car park

Plant Check: The plants were checked 30 June 2021, they were alive and had grown into colonies of 5 or 6 plants

30 July 2021



Essendon Fields

Location: Essendon Fields
Site:4
Latitude: 37.719946 S
Longitude: 144.894419 E
Aspect: Mounted on air field fence
Level: 1
Install date: 14 Feb 2016
Public Visibility: Yes
Plant Check: The plants were checked 30 June 2021, they were alive and had grown into colonies of 5 or 6 plants

30 July 2021

Montsalvat, Eltham

Location: Montsalvat Art Centre
Site:1
Latitude: 37.727562 S
Longitude: 145.153307 E
Aspect: On ornamental gate, main car-park - exposed to all elements
Level: 1
Install date 29 June 2016
Public Visibility: Yes - easily visible from car park - standard entrance fee applies to the grounds

Montsalvat is an artist colony in Eltham, Victoria, Australia, established by Justus Jorgensen in 1934. It is home to over a dozen buildings, houses and halls set amongst richly established gardens on 48,562 m2 (12 acres) of land. The colony of Montsalvat has a detailed history that reflects the life of Jörgensen and his friends and family; there is also a legend behind its name, while its buildings and gardens are steeped in the art and culture of Melbourne and its surroundings.

Site check: November 2021. After a wet period during the extended Covid lock down the plants have grown considerably and are beginning to form a colony and grow through the mesh cell Left bottom photo

Montsalvat, Eltham

Location: Montsalvat Art Centre
Site: 2
Latitude: 37.727579 S
Longitude: 145.152854 E
Aspect: On gate to courtyard of Barn Gallery - exposed to all elements
Level: 1
Install date 29 June 2016
Public Visibility: Yes - standard entrance fee applies to the grounds

Site check: November 2021. After a wet period during the extended Covid lock down the plants have grown considerably and are beginning to form a colony and grow through the mesh cell Left bottom photo

Montsalvat, Eltham

Location: Montsalvat Art Centre
Site: 3
Latitude: 37.727704 S
Longitude: 145.152860 E
Aspect: On light fixture above entrance to toilets in courtyard of Barn Gallery - exposed to all elements
Level: 1
Install date 29 June 2016
Public Visibility: Yes - standard entrance fee applies to the grounds

Site check: November 2021. After a wet period during the extended Covid lock down the plants have grown considerably and are beginning to form a colony and grow through the mesh cell Left bottom photo

Montsalvat, Eltham

Location: Montsalvat Art Centre
Site: 4
Latitude: 37.727821 S
Longitude: 145.152200 E
Aspect: On spouting, the pool near the Long Gallery - exposed to all elements
Level: 1
Install date 29 June 2016
Public Visibility: Yes - standard entrance fee applies to the grounds

Site check: November 2021. After a wet period during the extended Covid lock down the plants have grown considerably and are beginning to form a colony and grow through the mesh cell Left bottom photo

Montsalvat, Eltham

Location: Montsalvat Art Centre
Site: 5
Latitude: 37.727835 S
Longitude: 145.153155 E
Aspect: on aerial wire - restaurant - exposed to all elements
Level: 1
Install date 29 June 2016
Public Visibility: Yes -easily visible from the THE BOULEVARD restaurant courtyard

Site check: November 2021. After a wet period during the extended Covid lock down the plants have grown considerably and are beginning to form a colony and grow through the mesh cell Left bottom photo

The Friends' School, Hobart

Location: The Friends' School Hobart
Site: 1
Latitude: 42.865853S
Longitude: 147.314086 E
Aspect: At this site the Tillandsia cage cell is mounted at the top of a drainage vent pipe where the plants can absorb the vapours, exposed to all elements
Level: 1
Install date 7 July 2016
Public Visibility: Yes - easily visible from the school grounds - permission needs to be granted

The Friends' School, Hobart is an independent, co-educational, Quaker, day and boarding school, located in North Hobart, a suburb of Hobart, Tasmania, Australia. Founded in 1887 by Quakers, the school currently caters for approximately 1330 students from Pre-Kindergarten to Year 12, including 47 boarders from Years 7 to 12. It is the largest Quaker school in the world.

Left; The Friends' School, Hobart Tasmania - Site 1, Wells Building, with The Farrall Centre in background

The Tillandsia cells were installed along side SPICEE - the Tillandsia sculpture at the school

The Friends' School, Hobart

Location: The Friends' School Hobart
Site: 2
Latitude: 42.865385 S
Longitude: 147.314919 E
Aspect: At this site the Tillandsia cage cell is mounted on a disused TV aerial pole which make a link to the work Aerial, which plays on the term often used for Tillandsias as aerial plants - exposed to all elements
Level: 1
Install date 7 July 2016
Public Visibility: Yes - easily visible from the school grounds - permission needs to be granted

Hollywood 22, St Andrews

Location: Hollywood 22, St Andrews
Site: 1
Latitude:
Longitude:
Aspect: At this site the Tillandsia cage cell is mounted on a veranda post Exposed to all elements particularly the west sun
Level: 1
Install date Sept 2016
Public Visibility: No private residence

Site visit May 2017 :Photo Top right

Site Visit: December 2021 - Photo Bottom right

Monash Gallery of Art, Melbourne

Location: MGA - Monash Gallery of Art
Site: 1
Latitude: 37.907745 S
Longitude: 145.190464 E
Aspect: West facing wall - Chumanchu Cafe courtyard - MGA
Level: 1
Install date 3 May 2017
Public Visibility: Yes - easily visible from Chumanchu Cafe courtyard

Location: MGA - Monash Gallery of Art
Site: 2
Latitude: 37.907745 S
Longitude: 145.190464 E
Aspect: West facing wall - Chumanchu Cafe courtyard - MGA
Level: 1
Install date 3 May 2017
Public Visibility: Yes - easily visible from Chumanchu Cafe courtyard

Monash Gallery of Art, Melbourne

Monash Gallery of Art, Melbourne

Location: MGA - Monash Gallery of Art
Site: 3
Latitude: 37.907881 S
Longitude: 145.190135 E
Aspect: south facing wall - MGA
Level: 1
Install date 3 May 2017
Public Visibility: Yes -easily visible from Monash Gallery reserve

Monash Gallery of Art, Melbourne

Location: MGA - Monash Gallery of Art
Site: 4
Latitude: 37.907881 S
Longitude: 145.190135 E
Aspect: On mesh cage of Air Conditioning plant enclosure - open exposure to rain and sun
Level: 1
Install date 3 May 2017
Public Visibility: Yes -easily visible from Monash Gallery reserve

Bunji, Hurstbridge Hub, Melbourne

Location: Bunjil Hurstbridge Community Hub
Site: 1
Latitude 37°38276S
Longitude: 145°1124 E
Aspect: Mounted on up stand supports of solar panels
Level: 1
Install date: 22 May 2017
Public Visibility: Yes - can be viewed from ground level

Location: Bunjil Hurstbridge Community Hub
Site: 2
Latitude: 37°38276S
Longitude: 145°1124 E
Aspect: Mounted on up stand supports of solar panels
Level: 1
Install date: 22 May 2017
Public Visibility: Yes - can be viewed from ground level

Hurstbridge hub, Melbourne

Edendale Community Farm, Melbourne

Location: Edendale Community Environment Farm
Sites: 1
Latitude: 37.700853 S
Longitude: 145.154793 E
Aspect: Mounted on the bottom of a water pipe from solar water heater
Level: 1
Install date: 22 May 2017
Public Visibility: Yes - can be viewed from ground level

Site check June 2019: The plants have adapted and grown well. The success of the installation led to a larger Tillandsia work of a moving window screen at the farm.

Site check: November 2021. After a wet period during the extended Covid lock down the plants have grown considerably and are beginning to form a colony Left centre and bottom photos.

The Tillandsia SWARM experiment instigated a larger pilot project at Edendale Farm in 2019.

Bunji, Hurstbridge Hub, Melbourne

Location: Edendale Community Environment Farm
Sites: 2
Latitude: 37.700853 S
Longitude: 145.154793 E
Aspect: Mounted at the top of a water pipe from solar water heater
Level: 1
Install date: 22 May 2017
Public Visibility: Yes - can be viewed from ground level

Site check June 2019. The plants The plants were checked in June 2019 and have adapted and grown well. The success of the installation led to a larger Tillandsia work of a moving window screen at the farm.

Site check: November 2021. After a wet period during the extended Covid lock down the plants have grown considerably and are beginning to form a colony. Left centre and bottom photos. Note that an air con system has been mounted near the plant site since the last observation.

Victorian Friends Centre, Melbourne

Location: Victorian Friends Centre, Williams St, Melbourne
Sites: 1 & 2
Latitude: 37.806006 S
Longitude: 144.954234 E
Aspect: mounted on a crossbeam from a truss to the VFC building - exposed to rain but sheltered from direct sun for most of the day
Level: 1
Install date: 11 May 2017
Public Visibility: Yes - arrangement can be made when the Centre is open

The plants have adapted and grown well, however due to renovations the plants were removed in early 2019. Once the renovations are complete the plants will be reinstalled.

Victorian Friends Centre, Melbourne

Location: Victorian Friends Centre, Williams St, Melbourne
Site: 3
Latitude: 37.806006 S
Longitude: 144.954234 E
Aspect: mounted on a crossbeam from a truss to the VFC building - exposed to rain but sheltered from direct sun for most of the day
Level: 1
Install date: 11 May 2017
Public Visibility: Yes - arrangement can be made when the Centre is open

The plants have adapted and grown well, however due to renovations the plants were removed in early 2019. Once the renovations are complete the plants will be reinstalled.

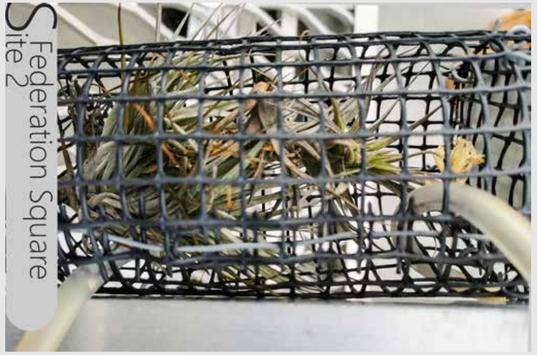
Federation Square, Melbourne

Location: Federation Square, Melbourne
Site: 1
Latitude: 37.817339 S
Longitude: 144.968765 E
Aspect: On pole near bee hives on roof of ACMI building and exposed to all elements
Level: 1
Install date: 15 May 2017
Public Visibility: No public access or view

Despite the open location close to the reflective surface of the roof and also enduring the driest 2 years recorded in Melbourne that plants have survived and are slowly growing through the mesh cell. The plant cell is constructed from recycled galvanised mesh, while the cell beside it is from plastic mesh. The reason for this is to allow comparative testing of the heavy metal particulate absorption to see if these is contamination from the cage.

Photo bottom right shows Prof. Peter Fisher and Geoff Beech checking the plants May 2019

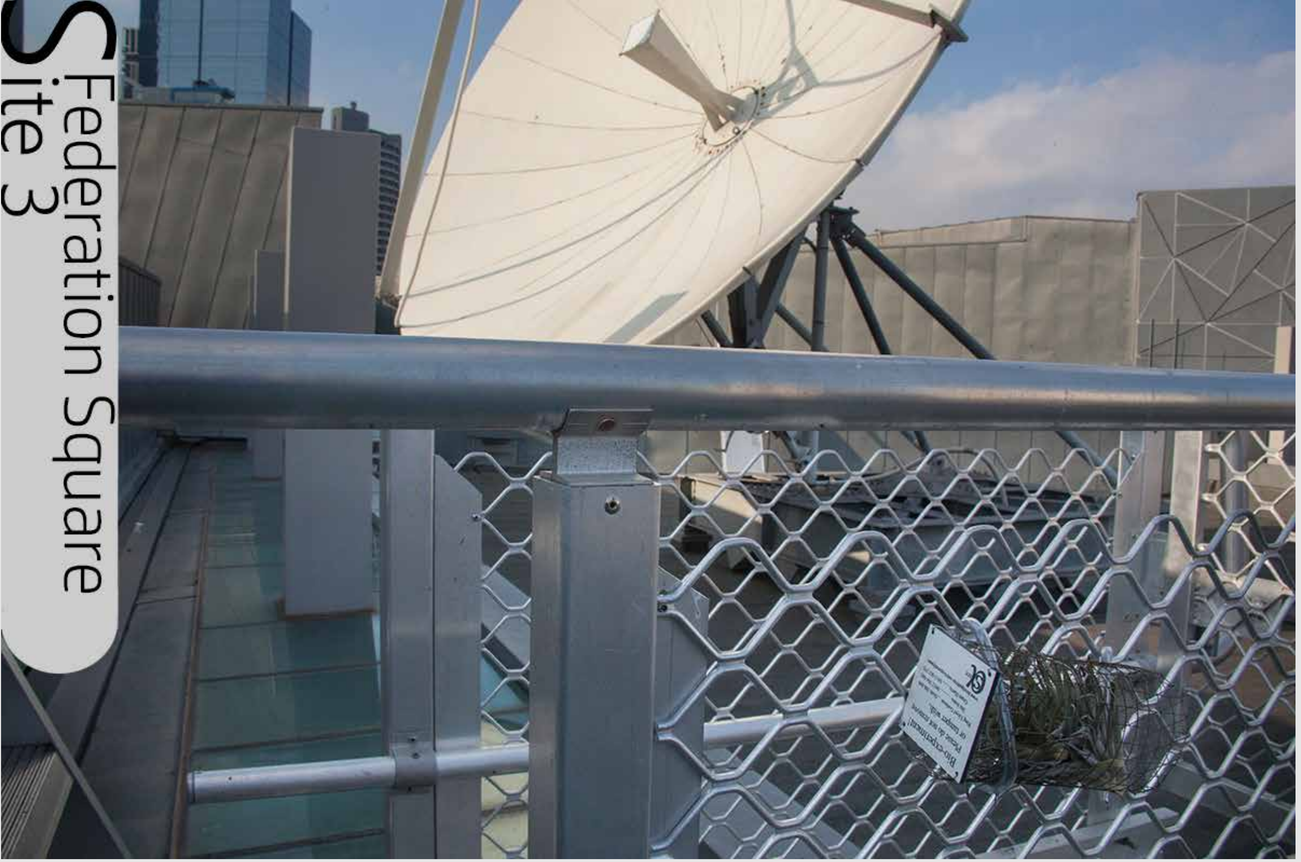
Federation Square, Melbourne



Location: Federation Square
Site: 2
Latitude: 37.817339 S
Longitude: 144.968765 E
Aspect: On pole near bee hives on roof of ACMI building and exposed to all elements
Level: 1
Install date: 15 May 2017
Public Visibility: No public access or view

Despite the open location close to the reflective surface of the roof and also enduring the driest 2 years recorded in Melbourne that plants have survived and are slowly growing through the mesh cell. The plant cell is constructed from plastic mesh, while the cell beside it is from galvanised mesh. The reason for this is to allow comparative testing of the heavy metal particulate absorption to see if these is contamination from the cage.

Site visit 6 Dec 2021 - Lloyd Godman, Geoff Beech and three architects from the Buchan group including Mike Curtus. Photo right bottom.



Federation Square, Melbourne

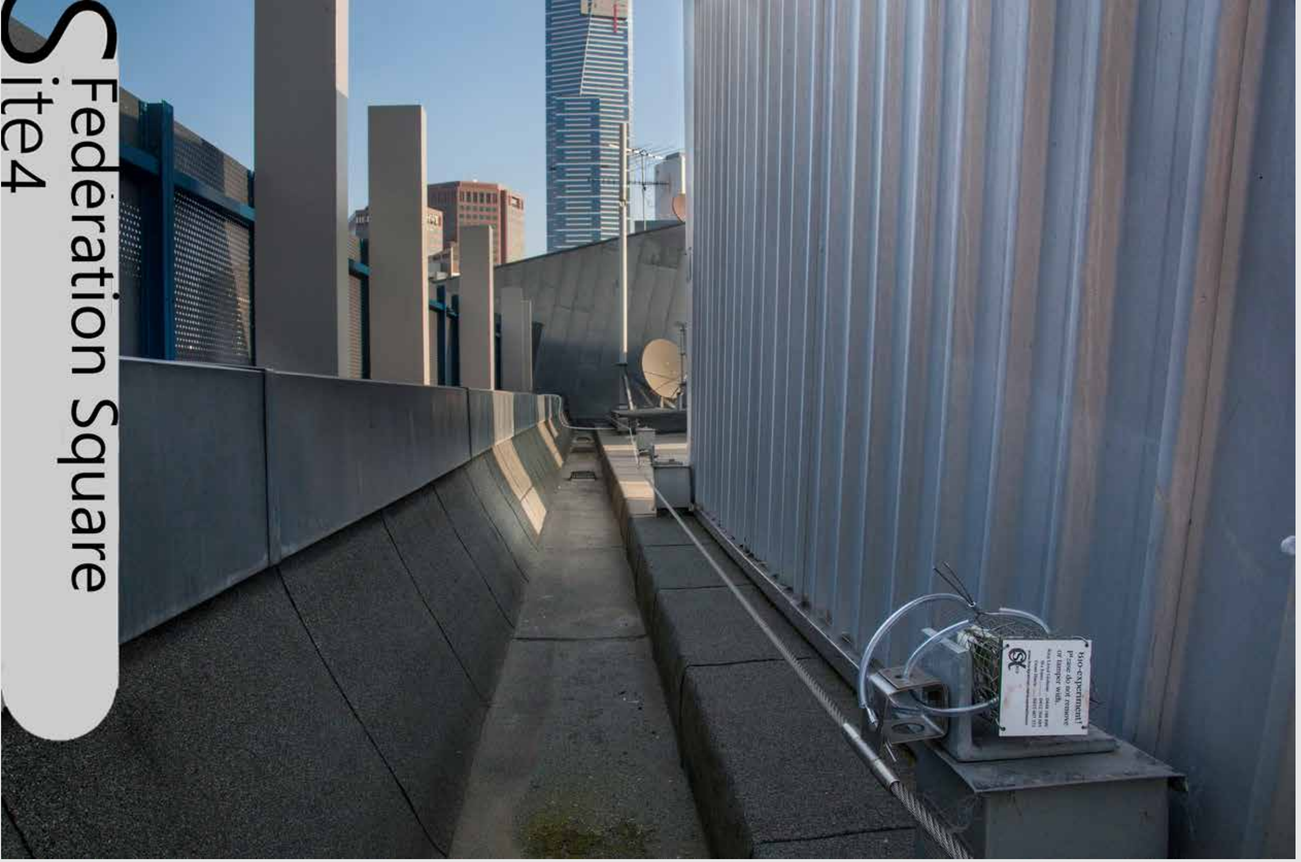
Location: Cross Bar Building, Federation Square
Site: 3
Latitude: 37.817712 S
Longitude: 144.969652 E
Aspect: On mesh screen gangway
Level: 5
Install date: 15 May 2017
Public Visibility: No public access. A very distant view can be seen through the glass in the atrium.

Despite enduring the driest 2 years recorded in Melbourne that plants have survived and are slowly growing through the mesh cell.

Photo Bottom Right Geoff Beech checks the plants May 2019

Federation Square, Melbourne

Site visit 6 Dec 2021 - Lloyd Godman, Geoff Beech and three architects from the Buchan group including Mike Curtus. Photo right bottom.



Federation Square, Melbourne

Location: Cross Bar Building, Federation Square
Site: 4
Latitude: 37.817841 S
Longitude: 144.969692 E
Aspect: On the back wall of roof shed
Level: 5
Install date: 15 May 2017
Public Visibility: No public access or public view.

These plants are in a shaded aspect. Despite enduring the driest 2 years recorded in Melbourne that plants have survived and are slowly growing through the mesh cell.

Federation Square, Melbourne

Site visit 6 Dec 2021 - Lloyd Godman, Geoff Beech and three architects from the Buchan group including Mike Curtus. Photo right bottom.

Federation Square, Melbourne

GODMAN Projects ↻ Contents

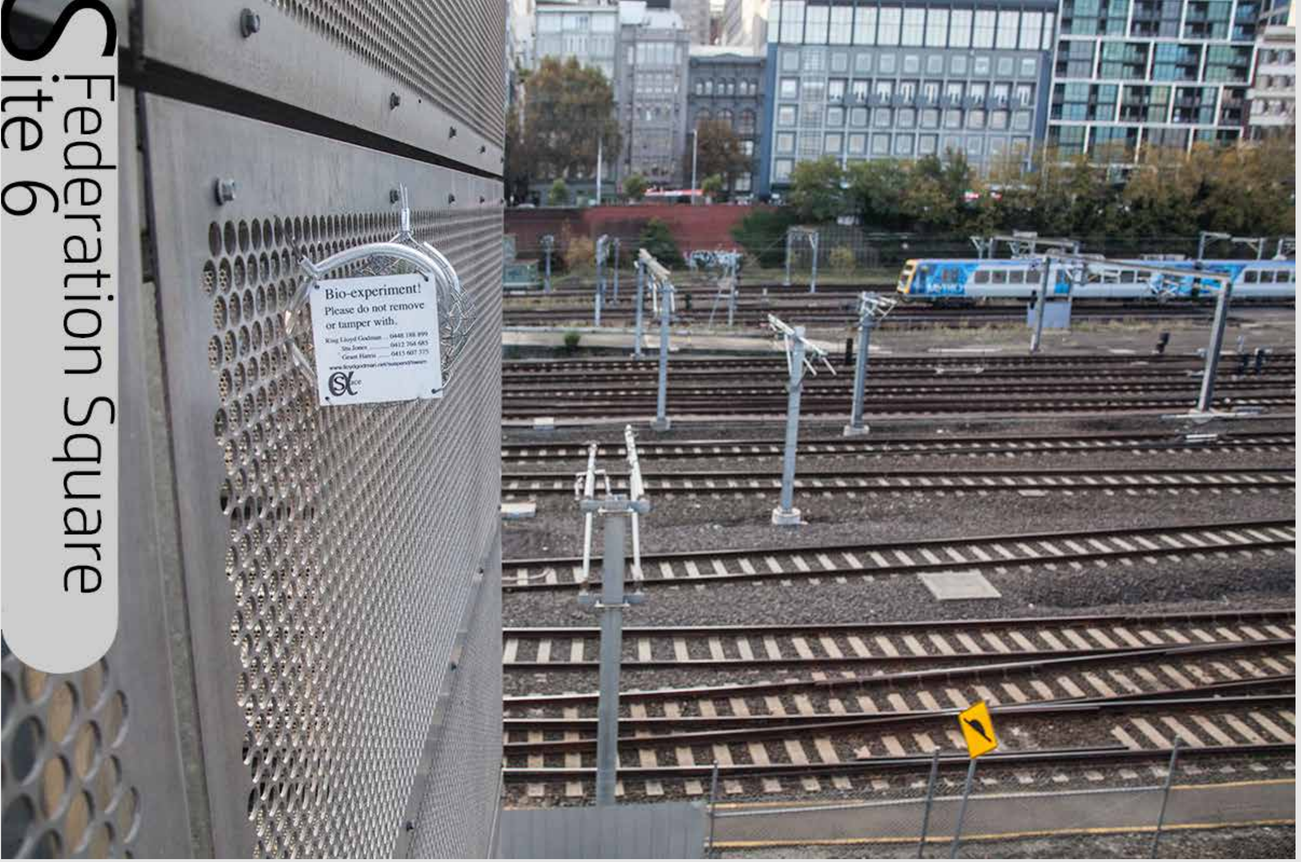
Location: Federation Square
Site: 3
Latitude: 37.817981 S
Longitude: 144.969316 E
Aspect: South west
Level: 3
Install date: 15 May 2017
No access. Public view from the corner of the Cross Bar Building looking up between weather shield and facade.

Despite the location between the weather shield of the building and the facade and also enduring the driest 2 years recorded in Melbourne that plants have survived and are slowly growing.

Photo bottom right Prof. Peter Fisher and Geoff Beech inspect the plants May 2019

Federation Square, Melbourne

Site visit 6 Dec 2021 - Lloyd Godman, Geoff Beech and three architects from the Buchan group including Mike Curtus. Photo right bottom.



Federation Square, Melbourne

Location: Federation Square
Site: 6
Latitude: 37.817685 S
Longitude: 144.970991 E
Aspect: On plant room screen, carpark
Level: 3
Install date: 15 May 2017
Public Visibility: Yes - from top level of carpark

The location proved to be in a rain shadow and over 18 months the plants de-hydrated and were removed from the site.

Pantin un, Paris

Location: Rue Cartier- Bresson, Pantin, France
Site: 1
Latitude: 48.903305 N
Longitude: 2.396036
Aspect: Open, on wall of adjacent building and exposed to all elements
Level: 1
Install date: 28 Aug 2017
Public Visibility: No Private

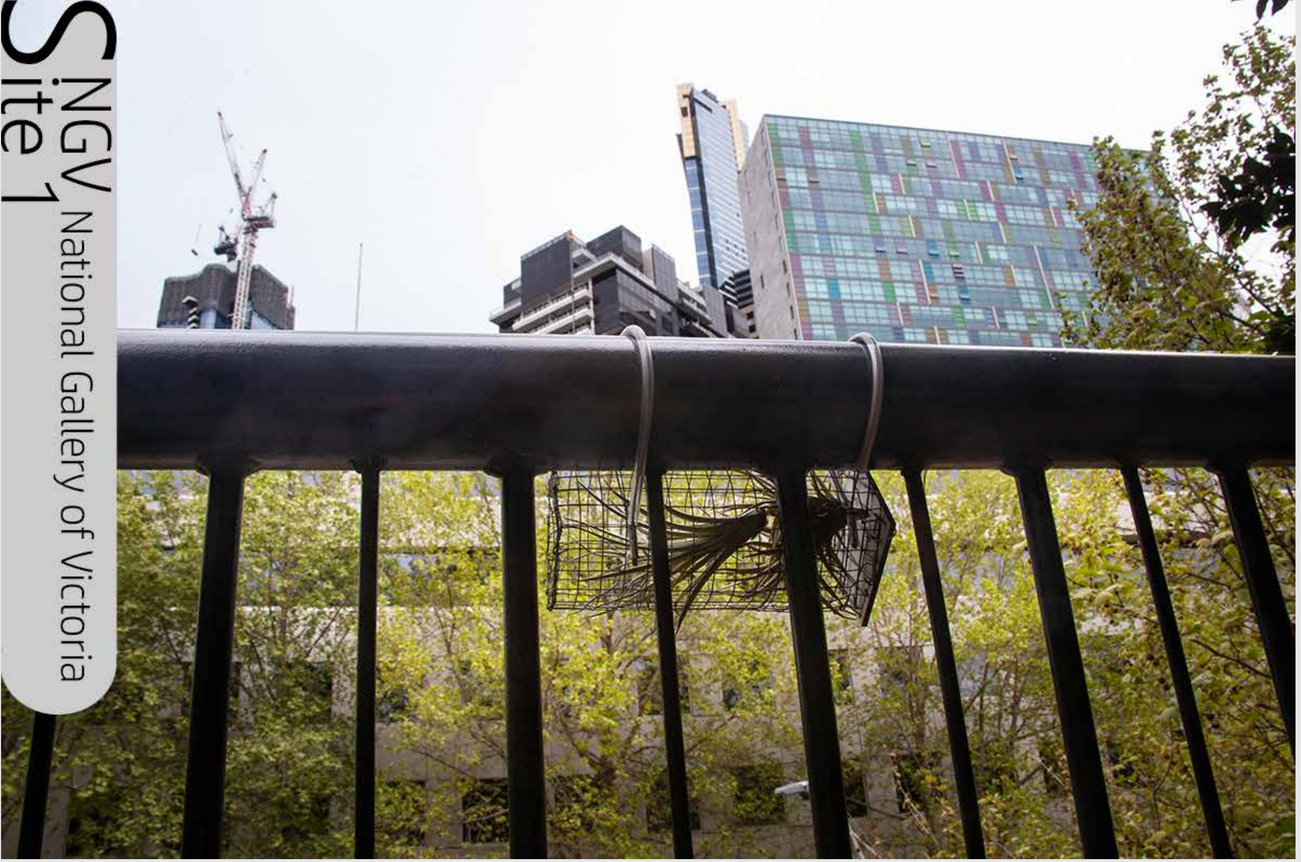
As major renovations were ongoing for years on the site, the plants were moved. The plant cells were finally installed on a steel column in the garden courtyard.

Pantin deux, Paris

Location: Corner of Rue Floian & Rue Victor Hugo, Pantin, France
In association with: architect Mathilde Jauvin
Site: 1
Latitude 48.894654 N
Longitude: 2.403366
Aspect: Open, on rail of apartment next to the roof of Hermes head office and exposed to all elements
Level: 3
Install date: 1 Sept 2017
Public Visibility: No Private

Lyon, France

Location: Bas des Pentes, Rue Hippolyte Flandrin, Lyon, France
Site: 1
Latitude: 45.768618 N
Longitude: 4.830392
Aspect: Open, on window box rail of adjacent building and exposed to all elements
Level: 3
Install date: 11 Sept 2017
Public Visibility: No Private



National Gallery of Victoria, Melbourne

Location: NGV - National Gallery of Victoria
Site: 1
Latitude: 37.823116 S
Longitude: 144.967638 E
Aspect: Fence rail at back of out door garden
Level: 1
Install date: Oct 3 2018
Public Visibility: Yes - but you will have to search for this site and ask for assistance from NGV.

While, the mode of operandi for most artist is to get their work into the NGV, for me it is getting living work onto the NGV.

National Gallery of Victoria, Melbourne

Location: NGV - National Gallery of Victoria
Site: 2
Latitude 37.823158 S
Longitude: 144.967665 E
Aspect: On mesh weather shield of building
Level: 1
Install date: Oct 3 2018
Public Visibility: Yes - but you will have to search for this site and ask for assistance from NGV

St Andrews Primary School

Location: St Andrews Primary School
Site: 1
Latitude: 37°36'08.3"S
Longitude: 145°16'10.5"E
Aspect: Open to all elements, on the support of the sun screen sail over playground near main entrance to school building. Open to frost.
Level: 1
Install date: 8 Feb 2018
Public Visibility: Yes but permission must be given by school

In association with St Andrews School

On the 30th Aug 2018 there was a sever frost in the area, Locals suggested was the hardest in 30 years. The plants were adversely affected and as there was no apparent living tissue, it was suspected they had died but the cells were left in place. However a site check on 7th April 2021 revealed the plants had survived and were beginning to grow back again. (photo top right)

St Andrews Primary School

Location: St Andrews Primary School
Site: 2
Latitude: 37°36'08.3"S
Longitude: 145°16'10.5"E
Aspect: Open to all elements, on the support of the sun screen sail over playground near main entrance to school building. Open to frost.
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Site check 7 May 2022
While one species had been killed by the frost the other, T. bergeri has recovered and is growing again.

TarraWarra Museum of Art

Location: TarraWarra Museum of Art
Site: 1
Latitude: 37.659258 S
Longitude: 145.469313 E
Aspect: On mesh screen surrounding the plant room faces north east
Level: Basement entrance
Install date: Oct 4, 2018
Public Visibility: Yes - but ask for assistance from Gallery staff

Site visit August 14 2019

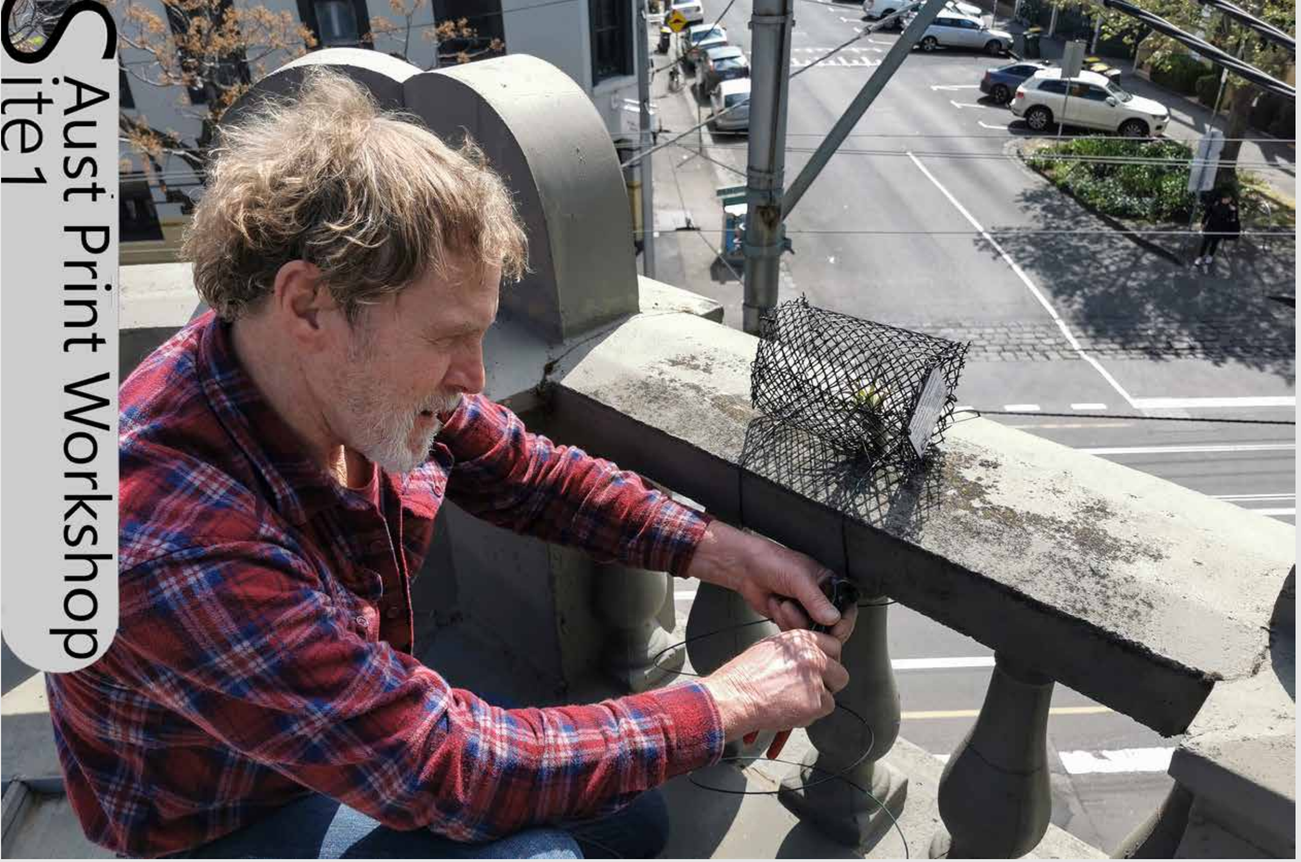
Site visit 26 March 2021 - Plants are alive and growing, bottom photograph.

TarraWarra Museum of Art

Location: Bottom Car Park TarraWarra Museum of Art
Install Date:
Site: 2
Latitude: 37.658891 S
Longitude: 145.467095 E
Aspect: On lighting post
Level: 1
Install date: Oct 4, 2018
Public Visibility: Yes - but ask for assistance from Gallery staff

Site visit August 14 2019

Site visit 26 March 2021 - Plants are alive and growing, bottom photograph.



Australian Print Workshop

Location: balustrade roof of APW - Australian Print Workshop
Site: 1
Level: 3
Latitude: - 37.806290 S
Longitude: 144.981547 E
Aspect: Mounted on the balustrade facing Gertrude St
Install date: 26 Sept 2019
Public Visibility: Yes - from opposite foot path of Gertrude St

Site Check by Martin King Feb 2021 bottom photograph

Site visit March 10 2021 Center photograph

Location: balustrade roof of APW
Site: 2
Level: 3
Latitude: - 37.806290 S
Longitude: 144.981547 E
Aspect: Mounted on the balustrade facing Gore St
Install date: 26 Sept 2019
Public Visibility: Yes - from opposite foot path of Gertrude St

Site Check by Martin King Feb 2021 centre photograph

Site visit March 10 2021 bottom photograph

Australian Print Workshop

Location: balustrade roof of APW
Site: 3
Level: 3
Latitude: - 37.806290 S
Longitude: 144.981547 E
Aspect: Mounted on sewer exhaust pipe
Install date: 26 Sept 2019
Public Visibility: No

Australian Print Workshop

Location: balustrade roof of APW
Site: 4
Level: 3
Latitude: - 37.806290 S
Longitude: 144.981547 E
Aspect: Mounted on fume vent pipe.
Install date: 26 Sept 2019
Public Visibility: No

Australian Print Workshop

Foons Photographics, Wonthaggi, Victoria

Location: Mounted on aerial
Site: 1
Level: 3
Latitude: 38°36'25.5"S
Longitude: 145°35'28.0"E
Aspect: Open to all elements
Install date: 5 Oct 2019
Public Visibility: Yes from McBride Ave, Wonthaggi, Victoria

Leichhardt, Sydney, NSW

Location: Leichhardt, Sydney, NSW
Site: 1
Level: 3
Lat: - 33.880907 S
Long: 151.154527 E
Aspect: Mounted on television aerial on the roof
Install date: 29 June 2020
Public Visibility: No -

The Tillandsia cell was installed on TV aerial remotely. Due to the Covid19 restrictions, the plant was posted to a resident of the building who installed the plant. Photographs thanks to Julia Phillips

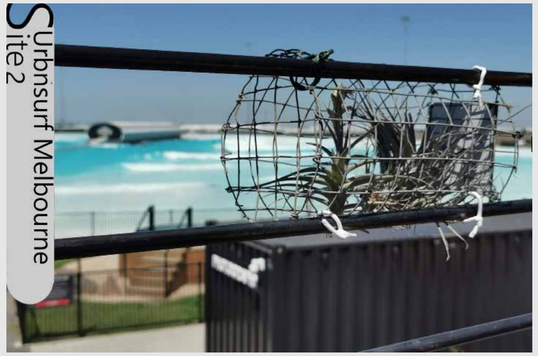
URBNSURF, Tullamarine, Melbourne

Location: URBNSURF, Tullamarine, Melbourne
Site: 1
Level: 1
Lat: - 37.686984 S
Long: 144.966863 E
Aspect: Mounted on west facing wall
Install date: 30 June 2021
Public Visibility: Yes -

The Tillandsia cell is mounted on wood slats, over doorway to men's change room of the URBNSURF wave park..

Plant check 7 February 2022: The plants are alive and growing. The plants are gaining attention from the public.

URBNSURF, Tullamarine, Melbourne



Location: URBNSURF, Tullamarine, Melbourne
Site: 2
Level: 1
Lat: - 37.686842 S
Long: 144.867019 E
Aspect: Mounted on south facing stairway
Install date: 30 June 2021
Public Visibility: Yes -

The Tillandsia cell is mounted on the stair railing of the *Look Out* URBNSURF wave park..

Plant check 7 February 2022: The plants are alive and growing. The cell was moved to the top deck rail so it affords a better view of the surf park in any photograph.

URBNSURF, Tullamarine, Melbourne

Location: URBNSURF, Tullamarine, Melbourne
Site: 3
Level: 1
Lat: - 37.687428 S
Long: 144.868148 E
Aspect: Mounted on south west facing steel container viewing pod
Install date: 30 June 2021
Public Visibility: Yes -

The Tillandsia cell is mounted on the wall of a re-purposed steel shipping container, which is used as a viewing pod at URBNSURF wave park.

Plant check 7 February 2022: The plants have survived summer and T. Houston is flowering

VORTEX - Surf Skate Snow, Wonthaggi, Victoria

Location: VORTEX - Surf Skate Snow, Wonthaggi, Victoria
Site: 1
Level: 1
Lat: -38.60663385138524,S
Long: 145.59095749293854E
Aspect: open aspect on verandah
Install date: 28 December 2022
Public Visibility: Yes

After a conversation with Luke Apthorpe at Vortex it was decided to mount some Tillandsias on the verandah which are clearly visible from across the road.

A few weeks before the install, I met top gun surfer Owen Wright at the first WSL surf contest at URBNSURF and we had a brief conversation about the experimental Tillandsia I have sited at the park as part of the Tillandsia SWARM project. After the installation, and I was processing the photographs I realized who the dude was in the tube of the giant poster - Owen Wright!

AIR

AIR, is a gallery-based work that compliments Tillandsia SWARM.

Tillandsias in cells are combined to form the word AIR. However, here, each plant and cage corresponds to a plant and cell outside the gallery walls on a building. The letters AIR are replicated with a series of images and a QR code.

By linking from the QR code viewers are directed to a web page with details about the installation at that particular site.

The work allows an audience to discover the diverse locations of the Tillandsia sites in the built environment.

Where most art works need to be stored in "climate controlled storage", the living Tillandsia sculptures are stored outside in and continue to remain environmentally active - they "control the climate while in storage".

Photograph - The living part of ***Air*** in "storage at home -

The installation of ***AIR*** in the Barn Gallery at Montsalvat for the 2017 Nillumbik prize utilized the fire place at the end wall.

GODMAN Projects Contents

CH2 Building (council house 2)
Melbourne
Level 11
Install date: 4 Dec 2015
Web: goo.gl/N046Jy

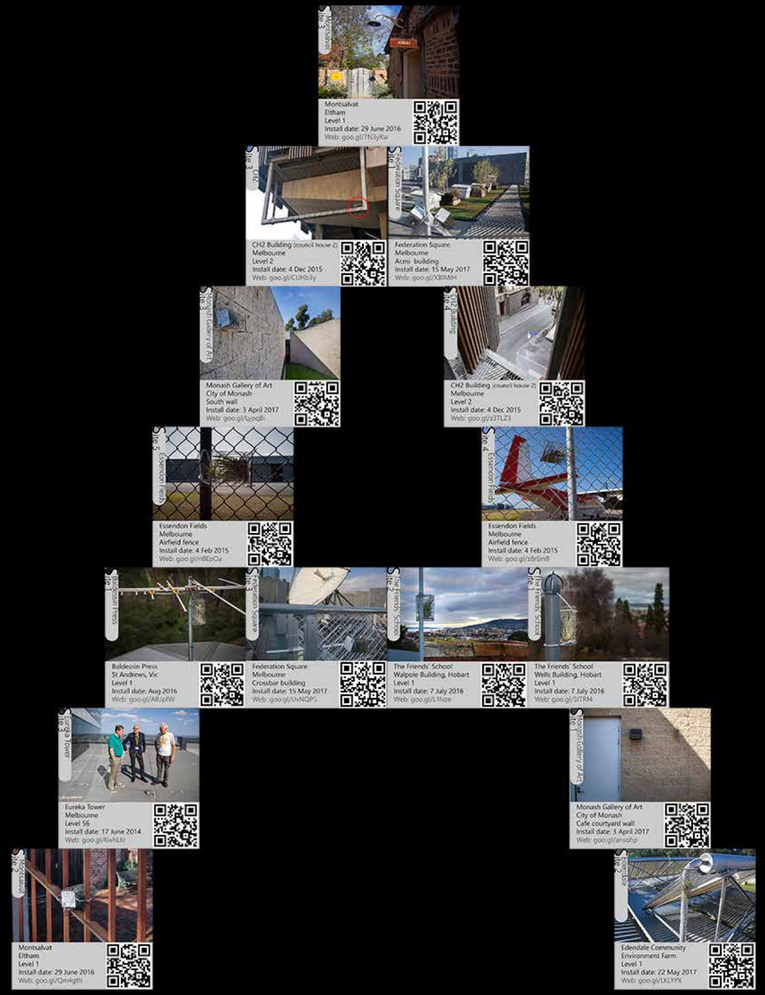
Edendale Community
Environment Farm
Level 1
Install date: 22 May 2017
Web: goo.gl/koFlwc

Essendon Fields
Melbourne
Airfield fence
Install date: 4 Feb 2015
Web: goo.gl/z8rEmB

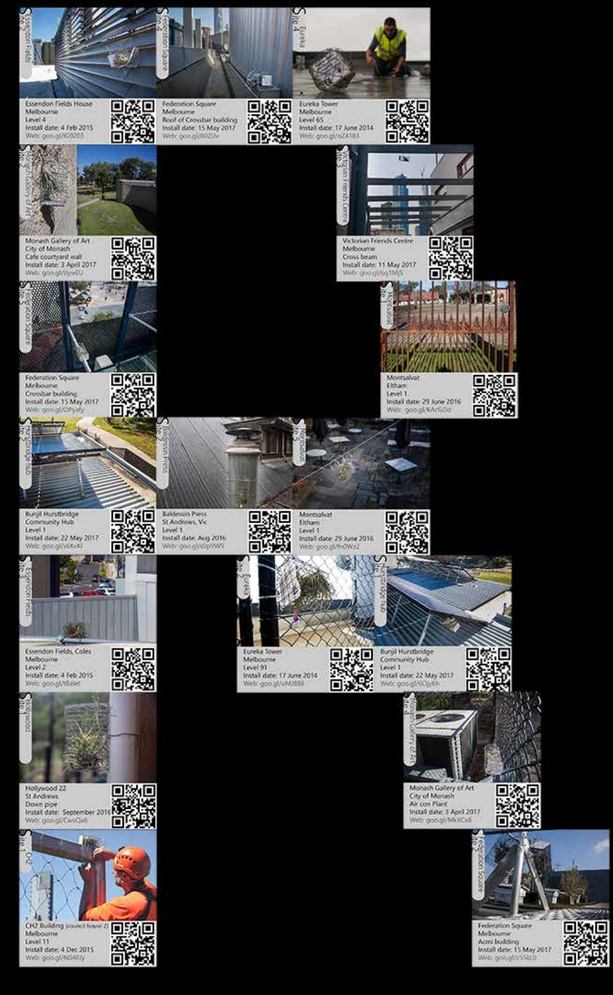
Federation Square
Melbourne
Airfield fence
Install date: 15 May 2017
Web: goo.gl/UvNQP5

Monash Gallery of Art
Melbourne
Cafe courtyard wall
Install date: 3 April 2017
Web: goo.gl/IJywEU

The Friends' School
Walpole Building, Hobart
Level 1
Install date: 7 July 2016
Web: goo.gl/L1lvze


Montsalvat
Eltham
Level 1
Install date: 29 June 2016
Web: goo.gl/TN3yXw
CH2 Building (council house 2)
Melbourne
Level 2
Install date: 4 Dec 2015
Web: goo.gl/CUHb3y
Federation Square
Melbourne
Acmi building
Install date: 15 May 2017
Web: goo.gl/XBtMH
Monash Gallery of Art
City of Monash
South wall
Install date: 3 April 2017
Web: goo.gl/UqxdJi
CH2 Building (council house 2)
Melbourne
Level 2
Install date: 4 Dec 2015
Web: goo.gl/z2TLZ3
Essendon Fields
Melbourne
Airfield fence
Install date: 4 Feb 2015
Web: goo.gl/dtEpCw
Essendon Fields
Melbourne
Airfield fence
Install date: 4 Feb 2015
Web: goo.gl/z6rEm8
Baldessin Press
St Andrews, Vic
Level 1
Install date: Aug 2016
Web: goo.gl/ARJpfW
Federation Square
Melbourne
Cronsbar building
Install date: 15 May 2017
Web: goo.gl/AAnNQP5
The Friends' School
Walpole Building, Hobart
Level 1
Install date: 7 July 2016
Web: goo.gl/LYIxze
The Friends' School
Wells Building, Hobart
Level 1
Install date: 7 July 2016
Web: goo.gl/SITR84
Eureka Tower
Melbourne
Level 56
Install date: 17 June 2014
Web: goo.gl/KwhLdJ
Monash Gallery of Art
City of Monash
Cafe courtyard wall
Install date: 3 April 2017
Web: goo.gl/ansohp
Montsalvat
Eltham
Level 1
Install date: 29 June 2016
Web: goo.gl/QmAqth
Edendale Community
Environment Farm
Level 1
Install date: 22 May 2017
Web: goo.gl/LKLYPX


Federation Square
Melbourne
Plant room carpark
Install date: 15 May 2017
Web: goo.gl/sjYouz
Montsalvat
Eltham
Level 1
Install date: 29 June 2016
Web: goo.gl/1aeuaW
Edendale Community
Environment Farm
Level 1
Install date: 22 May 2017
Web: goo.gl/AxaFwc
Eureka Tower
Melbourne
Level 92
Install date: 17 June 2014
Web: goo.gl/Gk1eSq
CH2 Building (council house 2)
Melbourne
Level 2
Install date: 4 Dec 2015
Web: goo.gl/k6iAzm
Victorian Friends Centre
Melbourne
Metal truss
Install date: 11 May 2017
Web: goo.gl/L8rYEi
Essendon Fields House
Melbourne
Level 4
Install date: 4 Feb 2015
Web: goo.gl/p5p6yJ


Essendon Fields House
Melbourne
Level 4
Install date: 4 Feb 2015
Web: goo.gl/Gl3203
Federation Square
Melbourne
Roof of Crossbar building
Install date: 15 May 2017
Web: goo.gl/B0ZiZv
Eureka Tower
Melbourne
Level 65
Install date: 17 June 2014
Web: goo.gl/cx2418
Monash Gallery of Art
City of Monash
Cafe courtyard wall
Install date: 3 April 2017
Web: goo.gl/JywEtJ
Victorian Friends Centre
Melbourne
Cross beam
Install date: 11 May 2017
Web: goo.gl/6qYAQ5
Federation Square
Melbourne
Crossbar building
Install date: 15 May 2017
Web: goo.gl/cPhyKy
Montsalvat
Eltham
Level 1
Install date: 29 June 2016
Web: goo.gl/KAcEUd
Bunjil Hurstbridge
Community Hub
Level 1
Install date: 22 May 2017
Web: goo.gl/vbKvKJ
Baldessin Press
St Andrews, Vic
Level 1
Install date: Aug 2016
Web: goo.gl/qrYWYj
Montsalvat
Eltham
Level 1
Install date: 29 June 2016
Web: goo.gl/hnDWv2
Essendon Fields, Coles
Melbourne
Level 2
Install date: 4 Feb 2015
Web: goo.gl/tbiiet
Eureka Tower
Melbourne
Level 91
Install date: 17 June 2014
Web: goo.gl/vMJBB8
Bunjil Hurstbridge
Community Hub
Level 1
Install date: 22 May 2017
Web: goo.gl/3CSyXh
Hollywood 22
St Andrews
Down pipe
Install date: September 2016
Web: goo.gl/CsvQeL
Monash Gallery of Art
City of Monash
Air con Plant
Install date: 3 April 2017
Web: goo.gl/MJCsiE
CH2 Building (council house 2)
Melbourne
Level 11
Install date: 4 Dec 2015
Web: goo.gl/NvMiVy
Federation Square
Melbourne
Acmi building
Install date: 15 May 2017
Web: goo.gl/cYJaU5

Tillandsia Sculptures

SPICEE - the first permanent suspended rotating living air plant sculpture, The Friends' School, Hobart, Australia - July 2019. The work was created on a residency to the school

Expanding dimension - An installation for FM magazine photo-shoot Camberwell Grammar School, Melbourne - 2011 (the image was used as a double spread in the magazine)

Installation Process

Installing the cages with the Tillandsia's inside is a simple process with no risk, no cost, and only involves a few hours to install. Below is the typical process:

1. The artist meets with the appropriate building staff to identify the selected locations. This usually takes about 20 -30 minutes.

2. The cages with Tillandsia plants and appropriate fastening systems are fabricated off-site. A double redundancy is incorporated with the cages secured via three separate cables, which guarantees the security of the plant cells.

3. An install date and time is set - the install takes about 1 hour.

4. The plants and cages are periodically checked security and to monitor the growth of the plants.

Remote installs
For some installations the process has been carried out remotely. The cells with the plants are posted to the host, and then the installation is carried out via a video call, where the artist and host agree on the installation site. Then the host is instructed on how to install the cells. The plant installation at Leichhardt was installed remotely, and with Covid 19 others are planned..

The meanings of SWARM

Plant intelligence
The ability of plants to communicate via roots and other systems relates to Swarm intelligence - similar to the combined intelligence of a bee colony.

Rooting for Swarm Intelligence in Plants - from Science News - They're underfoot and underappreciated. But the roots of a plant may demonstrate the remarkable wisdom of crowds just as swarms of honeybees or humans can. Three plant scientists now propose that roots growing this way and that in their dark and dangerous soil world may fit a definition for what's called swarm intelligence. Each tip in a root system acquires information at least partly independently, says plant cell biologist František Baluška of the University of Bonn in Germany. This also connects with Florianne Koechlin's ideas about plant communication.

An interesting concept - So if many plants communicate via root structures because Tillandsia do so much through the hair like trichome cell on the leaf, perhaps Tillandsia communicate via air waves?

Natural hybrids
When a naturally occurring or introgressive hybrid becomes fully established in the environment and is deemed a new species - it is said to have swarmed.

New colonies
By installing the plant cells on a wide range of buildings, over a period of years they will establish a new colony in the same way a bee swarm divides the hive and creates a new colony.

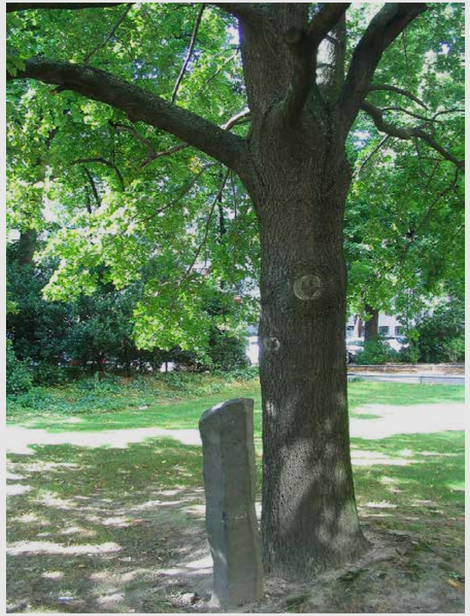
water and nutrient absorbing trichome cells

Tillandsia SWARM is inspired by Joseph Beuys 7,000 Oaks project at Documenta 7

With the help of volunteers, Beuys planted 7,000 oak trees over several years in Kassel, Germany, each with an accompanying basalt stone. In response to the extensive urbanization of the setting the work was a long-term and large-scale artistic and ecological intervention with the goal of enduringly altering the living space of the city. The project, though at first controversial, has become an important part of Kassel's cityscape.

The project was of enormous scope, and met with some controversy. While the biggest difficulty of the project was raising the money, the project had its share of opponents. Much of it was political, from the conservative state government dominated by the Christian Democrats. (The mayor of Kassel was a social democrat who stood by Beuys). Some people thought the black stone markers were ugly, even piling pink stones on the sites in 1982 as a prank. Also, a motorcyclist had died as a result of one of the stone markers. However, as more trees were planted people's perception of the project as a parking lot destroyer had met with increasing tolerance.

"I think the tree is an element of regeneration which in itself is a concept of time. The oak is especially so because it is a slowly growing tree with a kind of really solid heart wood. It has always been a form of sculpture, a symbol for this planet ever since the Druids, who are called after the oak. Druid means oak. They used their oaks to define their holy places. I can see such a use for the future .... The tree planting enterprise provides a very simple but radical possibility for this when we start with the seven thousand oaks." (Joseph Beuys in conversation with Richard Demarco, 1982)



By Kürschner (talk) 08:26, 13 August 2012 (UTC) - Own work, Public Domain, https://commons.wikimedia.org/w/index.php?curid=20645369

As Tillandsias grow even more slowly than oak trees, they are also a symbol of time. In an era a rapidly changing climate and accelerated denigration of the natural world, these plants are also emblematic of our disconnect from nature but as epiphytes offer a offer a positive pattern of sustainability.

They have evolved in extreme environments by abandoning roots and the need for moisture and nutrients from soil. Their sophisticated biology allows them to absorb moisture and nutrients via trichome cells on their leaf, which means they can grow in locations that defy other plants.

They have evolved a means of growing at night. By storing energy from the sun during the day and releasing it at night when the plant takes in CO_2 it means they can close the stomata cell during the day to conserve moisture. Essentially the process is what we endeavour to do with solar capture and storage.

Team Tillandsia

Lloyd Godman MFA : Ecological artist

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Lloyd Godman was head of the photography section at the Dunedin Art School of 20 years. He began using plants as a medium in 1996. He has produced a 1500 page e book on Tillandsias.

"Lloyd Godman is one of a new breed of environmental artists whose work is directly influencing 'green' building design.....Godman's installations are the result of a unique blend of botanical science, environmental awareness and artistic expression. All three elements are intrinsic to the practical realisation of his polymathic vision".
John Power - Editor of Facility Management Magazine Aug 2011

Stuart Jones:
Structural Engineer BE(Civil & Computing), FIEAust, CPEng, NPER

Stuart Jones is Technical Director for Arcadis in Melbourne. Previous to this he was the Owner/Director of Point 5 Consulting in Melbourne for 14 years. Stuart has over 25 years professional experience in all phases of project delivery and specialises in creative structural design with extensive experience in Australia and throughout Asia. He was instrumental in the structural design of Federation Square and Eureka Tower. Stuart interested in innovative ecological systems aimed at lowering the carbon footprint of building, of which the use of Tillandsias is a perfect example.

Grant Harris:
Environmental Scientist & Arboricultural Consultant

Grant Harris is the principle of Ironbark Environmental Arboriculture, with over 12 years experience in the arboricultural sector he also holds a degree in Environmental Science (Wildlife and Conservation Biology). His particular areas of interest are the use of green infrastructure to mitigate urban heat island effects and urban ecology.

Geoff Beech
Tillandsia specialist and retired construction supervisor

Geoff has been a specialist Tillandsia grower for over 10 years and has had over 30 years in the construction industry working on medium and large scale projects. His roles have ranged from safety officer to construction supervisor.

Lloyd GODMAN projects

More than 30 of Lloyd Godman's art projects are now available as free PDFs

Two complimentary projects to Tillandsia SWARM are:

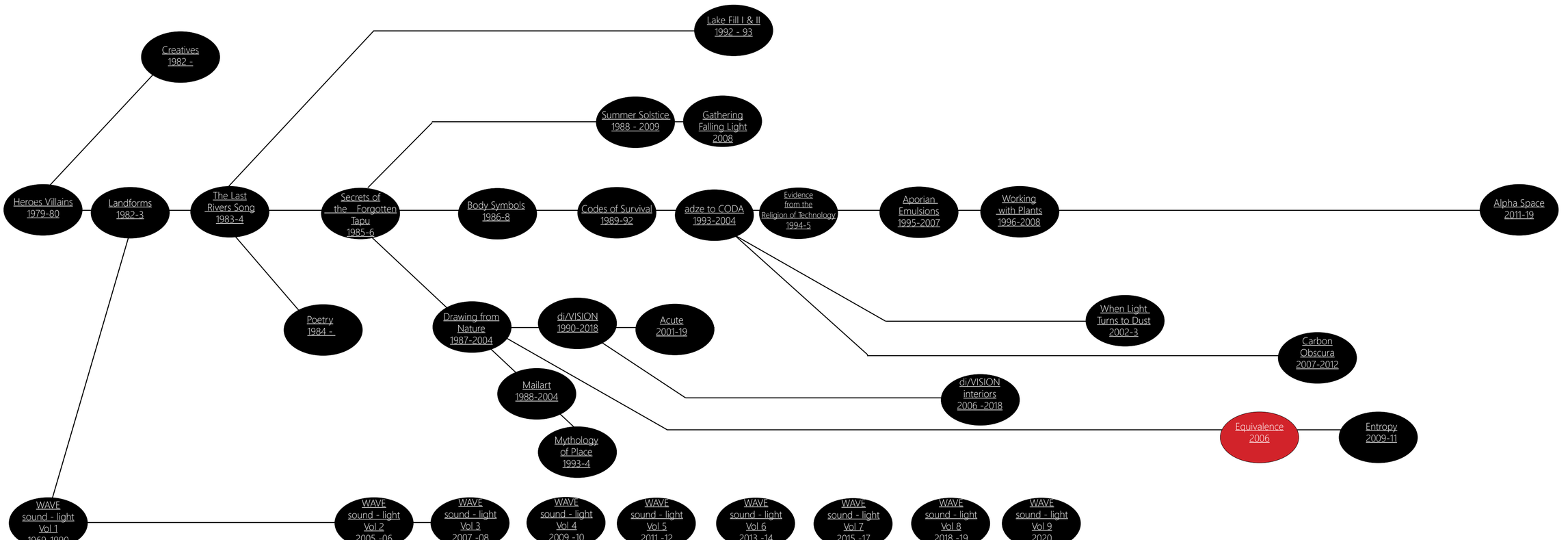
Alpha Space

Working with Plants

interACTIVE PDF

Lloyd Godman Project EPublications

gives free access to the large body of creative work by this artist. The schematic outlines the various projects and pinpoints where *Equivalence* sits within the oeuvre.



E publications

Tillandsimania $30 Aust

This is a series of interactive PDFs and a work in progress which is updated annually. This means key words are linked to relevant information on other pages, so the document is easy to navigate and find information.

The 2020 version offers extensive information on Tillandsias or air plants and includes:

6 documents

Contents includes: Over 1500 pages Over 390 plant entries Over 1600 photographs Over 140 illustrations and renders Over 50 maps Over 100 sound files And 35- charts

It is rich in photographs and illustrations. The resolution of the images is high which allows enlargements to 300-400%, while the text can be enlarged even higher.

Email for more information. lloydgodman@gmail.com.

Lloyd GODMAN projects

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