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The Art of the Eco-City

Working with artists to further urban sustainability

REPORT FOR THE CITY OF MELBOURNE DRAFT FOR CONSULTATION

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Introduction

Cultural programming, arts production, sustainability and climate change

Background

Melbourne is a city that has a reputation for being a leader in both the arts and sustainability. It is therefore fitting that in recent years, the City has been home to a growing group of individuals and organisations¹ that join an international community in recognising the value of a cultural response to climate change; and the need for environmental leadership within the cultural sector.

"More recently, the role of the artists and cultural workers, as catalysts of change in society, has come to be widely discussed in the context of climate change."

- Olaf Gerlach-Hansen, Culture | Futures, Danish Cultural Institute

In terms of sustainability, the City has set out five primary goals to become an eco-city under the banner of Future Melbourne, including achieving zero net emissions, managing climate change risks and leading the way in sustainable water management. It is a member of C40, a global network of cities implementing meaningful and sustainable climaterelated actions. Pioneering initiatives, such as the 1200 Buildings program, work towards meeting these goals.

Culturally speaking, the City is renowned for its high caliber of programming and the vibrancy of the artistic community that is supported. Under Future Melbourne the City aims to be bolder and more inspirational, fostering uniqueness and invention, and demonstrating leadership. The arts sector has been particularly proactive in retrofitting its own building stock to achieve high standards of energy efficiency through its work with Sustainability Victoria, in particular.

A key aspect in the City of Melbourne's Public Art Program's immediate and mid term planning, is the intention to address and investigate issues relating to sustainability and climate change in relation to cultural programs and production. The Program has already begun to innovate in this regard, for example, with a public art commission responding to green buildings (the 1200 Buildings Commission) and in its call to all public art submissions in 2011 to address sustainability requirements in their proposals.

There is significant opportunity to further leverage the arts, particularly in the public sphere, to further the eco-city vision of the City of Melbourne.

About this report

This report seeks to provide recommendations based on:

- Innovative examples from around the world where artists have been supported to engage with environmental issues
- Experience with the 1200 Buildings Public Art Commission
- Opportunities for cooperation and collaboration with ongoing initiatives within City of Melbourne and Australia.

These three areas of inquiry form the first three sections of this report and are followed by conclusions and recommendations.

The report does not pretend to be an exhaustive review of all relevant projects and initiatives in the areas covered, as this was beyond the scope and resources agreed for the report. Instead, it provides recommendations for future initiatives, based on illustrative case studies and some recent and relevant experience.

While there is an explicit focus on the built environment and cities, many of the models and outcomes could equally be applied in another context. Focus is also on the role of the artist and what makes an artist's contribution unique. At a time when we need to rethink many of our modes of operation which have led us down an unsustainable path, the role of creativity, and in particular, the value of interdisciplinary collaboration is worth detailed examination.

An extensive set of Annexes accompanies this report, in digital form. Those relating to the implementation of the 1200 Buildings Public Art Commission are intended to support anyone new to the project with all the materials related to its implementation.

Endotes:

1. Melbourne-based organizations focused on arts and climate change, include Tipping Point Australia, Climarte, Seven Thousand Oaks and Carbon Arts.



International Case Studies

Artists as planners, barometers and disruptive innovators

Overview

Globally, a number of public art and design projects have demonstrated the capacity of art and artists to effect positive environmental change in the urban context. Such projects have mobilised communities around contaminated soil, food production, air pollution and clean energy; contributed to urban renewal and master planning for sustainable neighbourhoods; and brought greater awareness to green infrastructure and environmental health issues. In doing so they have challenged conventional patterns of consumption and behaviour, promotingand actively realising-forms of sustainable urban living. A small but growing number of projects have been able to affect larger-scale urban transformation, revealing art's capacity to innovate where planning or existing administrative arrangements have failed.

These projects have been initiated in a variety of traditional and non-traditional ways, through for example a percent for the arts policy, a festival or competition, pilot grant funding initiatives, private philanthropy or through direct commissions and feefor-service. They often involve the environment and public arts and culture branches of city councils, with partnership from urban developers, water, energy or waste utilities and building owners and managers. Most aim to improve the public's awareness and understanding of the environment to encourage greater stewardship or provoke debate and engagement on key issues. A number are pilot schemes that are pioneering new modes of artmaking and new interpretations of the role of the artist.

The case studies presented in this report have been selected to highlight a diversity of artistic response,

origination and project delivery mechanism, as well as a range of natural resource management themes from water, air, waste and energy. Case studies are divided into two sections. Artists as Planners focuses on the engagement of artists in master planning and urban development, where for the most part projects were less intent on the delivery of specific projects than on the artist's contribution to a creative and collaborative process. Artists as Barometers examines a number of public art projects that act as instruments for measuring and making legible our urban environment.

"...public art, in collaboration with other disciplines, can create remarkable places that encourage sustainability and stewardship of the environment." – Calgary City's Public Art Plan for the Expressive Potential of Utility Infrastructure

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By no means a comprehensive review of the discipline, the intention with these case studies is simply to illustrate a range of possibilities for engaging artists in the project of making an Eco-City. The emphasis is intentionally on examples from overseas, with the expectation that these will be less known to the Australian audience of this report. However, there are no doubt some equally relevant examples exist closer to home, and some of these are referenced in the analysis. Interviews have been conducted with artists, collaborators and project managers to inform case study content. Websites, and in some cases, evaluation reports and other documentation were available to provide further insight. All of these sources and references are listed at the end of each case study.



Artists as Planners: working with public utilities and master planning

The engagement of artists in sustainable urban planning and design has a number of precedents in North America and the UK. Artists like Buster Simpson, Lorna Jordan and Frances Whitehead have been working, sometimes since the early 1980s, at the intersect of nature have been working, sometimes since the early 1980s, at the intersect of nature, art and infrastructure, developing art master plans for waterworks, brown-field redevelopments or forming part of a team of engineers and designers on environmental remediation projects or green infrastructure delivery.

In Sydney, artists Jennifer Turpin and Michaelie Crawford, have been developing environmentally driven public art for urban development, and are engaged with the new Central Park development as artists in residence, guiding the arts master plan. In Melbourne, Broadmeadows 2032 showcased a series of design projects from Melbourne University, RMIT, Monash University and Swinburne University to be further developed by Hume City Council in new and emerging strategic planning.

Public art and infrastructure projects realise benefits both in terms of cultural value, but also in terms of education and engagement as artworks seek to make legible the hidden aspects of infrastructure, or, for example creating poetic interpretations of storm water drains. As part of a multi-disciplinary team, artists on infrastructure projects are valued for the unique skills, processes and methodologies they bring. Artists are also sought for their creative and alternative visions for the future design and use of cities, as counterpoints for traditional master planning approaches.

The four case studies selected present a range of approaches for engaging artists in planning:

Case study 1: A Public Art Plan for the Expressive Potential of Utility Infrastructure is the City of Calgary's innovative approach to strategic arts planning in relation to a major natural asset, the Bow River. By pooling percent for arts funding, this plan sought to provide a visual and aesthetic legacy highlighting the Council's management of the watershed and encouraging stewardship of the environment by the public. Through a coordinated series of temporary and permanent public art commissions and specific roles for artists in design teams, the plan will deliver a new level of understanding and engagement with the city's water infrastructure.

Case Study 2: *Civic Action: A Vision for Long Island City* is an exhibition and project of the Noguchi Museum and Socrates Sculpture Park in Long Island City, which invited four established artists to form teams and don the hat of urban planners to provide alternative, non-competing visions for the booming Long Island City neighbourhood. From repurposing smoke stacks as monitors of the city's move to green energy to the introduction of zip lines for alternative, clean forms of transportation, the proposals are strong on sustainability, community and industrial ecology.

Case Study 3: *The Embedded Artist project* is a partnership of The School of the Art Institute and the City of Chicago. The goal of the pilot program is to "embed" practicing artists into city government in order to bring new perspectives, mindsets, and processes to planning projects that revolve around the city's future. A key project delivered through this program is Slow Clean Up, which is pioneering new models for the remediation of contaminated petrol stations using phyto-remediation. Slow Cleanup is a strategic part of a new planning initiative, focused on urban agriculture for sustainable economic development, Green Healthy Neighborhood, linking these new remediation planning efforts



Case Study 4: *PROJECT* was an extensive two-year pilot scheme across the UK in four countries that financed the participation of artists in a variety of urban design, renewal and planning settings. Subject to a thorough evaluation, the scheme results pointed to many positive experiences and validation of the value of artists operating in multi-disciplinary teams, in terms of changing mindsets and working methods, brokering conversations, breaking down traditional barriers and adding value through community engagement, public art, innovation and integrity. Bringing artists early into the planning process was seen as the way to get the best results.

Art as a Barometer: public art revealing hidden ecologies

The arts have long been considered a barometer for civilization, but only quite recently, with the advent of pervasive data and new sensing technologies, have artists also literally become barometers, seizing upon these new materials to create instruments that measure and translate the natural environment.

"The arts are an even better barometer of what is happening in our world than the stock market or the debates in congress." -Hendrik Willem Van Loon (historian)

There is a new breed of environmental artist working closely with technology and with the collaboration of scientists, who seeks to reconnect us to the natural world with a new language that goes beyond the communication of science. Using the power of realtime feedback loops that sensor technology and data visualization and representation enable, the case studies presented here ask 'can artists contribute to a progressive shift in how we relate to and envision nature and be instrumental in remedying our environmental damage?' Case Study 5: Particle Falls, the work of Andrea Polli and Chuck Varga, displays particulate matter pollution in downtown San Jose as a waterfall of light on the prominent wall of a building. With the number of people that airborne particulate pollution kills each year tripling in California in 2009, the work communicated an important environmental health issue. An important aspect of the work was breaking down the barriers to access to information regarding air quality. Through collaboration with Air Now, an open data platform for air quality, Polli and Varga were able to contribute to improving the quality of data released to the public by the US EPA. As a platform for the city's sustainability vision, if kept as a permanent installation, Falls would be capable of registering the impact of significant public works such as a planned light rail system.

Case Study 6: Amphibious Architecture, artist Natalie Jeremijenko's work, provides a portal to understanding the health of the acquatic environment in the urban context of New York City. Consisting of a floating matrix of buoys, each with two sets of LED lights, on the surface of the Brooklyn river, the installation uses sensors to collect dissolved oxygen data as well as sonar sensors to detect fish. The top set of LEDs receive water quality data and change from blue to red. The second set of white LEDs flash when fish have just passed underneath. As an added feature of the work, the public was invited to text the local fish, with business cards provided on the banks of the river, a conversation that can further educate and connect residents to a hidden ecology.

Case Study 7: Green Cloud or *Nuage Vert* is an award-winning public art work that featured in the Pixelache festival in Helsinki in 2008. Artists HeHe used real-time data to engage a whole district of the city in an effective week-long campaign to reduce energy use. By employing the ambiguous, and spectacular, image of a green cloud projected on the vapour emissions from a district heating plant smokestack, the work provided a direct reward to residents and businesses for unplugging their appliances. It also provided a direct visual and



conceptual connection between the use and production of energy, made possible by the proximity of the district heating plant to customers' homes.

Case Study 8: *Live Forever*, the work of artists Oliver Hess and Jenna Didier, covers the façade of an LA County fire station with a metallic vine that mimics the local desert flora. Hidden within the mesh of flower-like nodes hides another network of electronic sensors that pick up on ambient humidity and temperature. At moments of high fire risk the installation comes to life and signals this risk to the community with a new, visual poetry, all its own. Hess hopes the language of the installation will be learned over time, a little like the skill of reading clouds to gauge the weather. In addition to promoting safer behaviour at times of fire risk, the work is intended to warm people to the benefits of public services and infrastructure.

Case Study 9: *The Climate Clock* is an initiative of the City of San Jose, California to build an iconic artwork, lasting 100 years with a budget of \$20 million, that measures climate change and engages the public in action. Based on the belief that artists are gifted communicators, able to translate the abstract into realities that people can understand, fueled by the smarts of Silicon Valley. Almost six years in development, the process of reaching a winning proposal, the *Organograph*, has been rich in learning for all the shortlisted artists and project participants involved. Constructive outcomes generated by inviting artists to explore this monumental issue over a period of two-years have already resulted.

The power of these works lies in their ability to create a new language, one that acts as a counterpoint to the often disempowering and disengaging stream of numbers and statistics that are presented to us about climate change, pollution, species and habitat loss. By responding to the local environment, these projects seek engagement at the community level and spurn grassroots activism and management efforts. It's this ability of the artist to make visible the invisible and hold up a mirror to society that makes her such a useful barometer in times of ecological crisis.

Most of these works have also pushed the envelope in terms of access to data on environmental quality and related human health issues. Particle Falls generated data for the first time by an individual that could be used in conjunction with official, aggregated air quality data, and the collaborations of the artist, Andrea Polli and collaborator Tim Dye put pressure on the EPA to provide better access to their air quality data. Nuage Vert forged new relationships for a Helsinki power company, demonstrating the commercial value of real-time data release and engagement with the public. This in turn changed the practices of the company, making it one of the first in the world to open up significant energy use data through the web. Live Forever and Amphibious Architecture both provide alternative portals to official data through real-time sensing that offer a more intuitive interaction with the environment.

The nature of these projects, being collaborative and inter-displinary, has often forged relationships between stakeholders that are as valuable as the public art outcome itself, evident in *Particle Falls* and Nuage Vert. Such was also the case with *Wild Wilderness*, a *Climate Clock* finalist, where the artists were able to act, as unexpected interlocutors, to forge alliances between institutions working on different aspects of climate modeling and data collection. Acting much like a Trojan horse, artists and art projects can seem a safe place to have difficult conversations relating to natural resource management, sometimes bringing diplomat to the set of skills that artists can offer.



Calgary: A Public Art Plan for the Expressive Potential of Utility Infrastructure





Calgary: A Public Art Plan for the Expressive Potential of Utility Infrastructure

Overview

The City of Calgary Council and the Department of Utilities and Environmental Protection (UEP) manage the Bow River watershed for the sustainable supply of water to Calgary. In 2004 the Council and UEP decided to pool the percent for public arts1 money for the 2006-2010 capital infrastructure cycle, which gave rise to \$6.9 million fund available for public art, design, and related educational programming.

A coordinated series of public art projects and initiatives were identified in a long-range, strategic Public Arts Plan in order to "create a visual and aesthetic legacy that will highlight UEP services and infrastructure, bring a community wide understanding of the watershed as well as Calgarians' impact upon the Bow River watershed". A key focus of the Plan is to employ artists and public art to raise awareness of water as a critical and finite resource, as well as encourage public interest, involvement, and education around the 'invisible services' of water management and stewardship.

The Plan goes beyond aesthetics, encompassing a broad spectrum of activities and approaches aimed at shaping public places, advocating for change, and engaging the community. It sets out the artist's role as one of a civic and environmentally minded provocateur, offering Calgarians a different window into their rapidly changing urban landscape. Its intention is to draw on the talents of internationally and nationally recognized artists to create innovative public art infrastructure projects at the same time nurturing the capabilities of Calgary's artistic community through an artists' mentorship program.

Nine permanent public art works or artist-led landscaping and design projects are identified in the Plan at specific sites where waste-water facilities, wetlands, parks and outfalls exist. These sites were identified using an agreed set of criteria to determine catalytic opportunities for public art. Temporary festivals, projects and symposia are also identified. In relation to these activities, the Public Art Program solicits proposals internationally from curators/ curatorial teams for a biennale Watermarks festival, which launched in 2010.

"The public arts projects envisioned in this plan will position Calgary as a visionary city with regard to public art and infrastructure and environmental stewardship."

Keystone project:

Visual Language for UEP: Understanding Our Place within the Watershed + The Outfall Project (now known as WATERSHED+)

Summary

Seen as a cornerstone to the Plan, this project called for experienced artist-led interdisciplinary teams to create a unified, iconographic or symbolic language that will map and identify infrastructure and services (water, waste and recycling services, land and information mapping, environmental management) with the purpose of educating users to the larger context of the natural watershed and the systems managed by UEP. Through the creative use of literal and cognitive mapping, this graphic language will become part of the everyday vernacular and promote user recognition of UEP infrastructure and an awareness of the natural and man-made watershed e.g. "From the glacier to the tap" and "from the roof to the river". The Visual Language project will

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Calgary: A Public Art Plan for the Expressive Potential of Utility Infrastructure

provide a conceptual framework for all public art projects to follow.

A separate Outfalls project was later subsumed into Watershed+. UEP manages 300 outfalls, which are points where stormwater enters the river. The commission requests an artist to consider the treatment of these stormwater outfalls to provide points of education on sustainability throughout the city. Five outfalls are selected to be designed by the artist team. The aim is to foster stewardship of the natural watershed, by creating opportunities to understand how individual actions impact UEP systems and watershed quality on a daily basis

Budget: CND\$200,000+

Artist team: Artist Team: Sans façon (artist Tristan Surtees and architect Charles Blanc), Eric Laurier (social geographer), Yan Olivares (Yes Architect practice), Matt Baker (artist), Emlyn Firth (graphic designer), Bert Van Duin (engineer)

Links, references, sources:

www.cliffgartenstudio.com/uep_public_art_plan.pdf, http://www.publicartonline.org.uk/, Interview with Patricia Watts, ecoartspace, San Francisco.

Endnotes:

1. Established in January 2004, the Public Art Program ensures the allocation of 1% of all capital Upgrade and Growth projects over \$1Million to public art (excluding land purchase, capital maintenance programs, movable equipment and rolling stock). Scope of public art opportunities, as outlined in the Policy, includes discrete, semi-integrated, integrated and temporary works, and allows for artists on design teams, community based public art and special projects such as artist residencies.

2. Image on previous page is taken from the UEP Public Art Plan.



New York: Civic Action - A Vision for Long Island City





New York: Civic Action: A Vision for Long Island City

Summary

Four artists known for their work in the public sphere were invited to form individual teams to conceive new approaches to development of Long Island City an area of New York City, currently undergoing significant change. The area, also known as Queens, is mix of residences, light industry, open and public spaces, waterfront property, artist studios and museum spaces. Each team was to include a landscape architect, urban planner, architect, and writer as well as additional staff.

The aim of the project was to allow artists to shape a portion of the city in a meaningful and specific way and to present alternative visions that could be considered by city planners as viable. In recent years, the area has seen the construction of large-scale buildings that appear to have been designed without regard for infrastructure capacity, traffic, parking, or the resulting loss of affordable housing, thereby threatening the character of the neighborhood. This project, called Civic Action: A Vision for Long Island City, is intended to initiate dialogue about the changing landscape of the area among community stakeholders, public agencies, and others, and to ensure that the voice and vision of artists have a substantive role in the planning process.

The artists were free to play the role of observers, critics and visionaries, in a non-competitive planning process. Each proposal by the artist teams is presented as a prototype; a way to better understand what things could look like. The artist plans have sought to engineer creative solutions to city planning issues, in accordance to the needs of the population, rather than purely for profit. **Lead artists:** Natalie Jeremijenko, Mary Miss, Rirkrit Tiravanija and George Trakas **Commissioning context:** The Noguchi Musuem and Socrates Sculpture Park

Funding body(ies): The two arts institutions (above) collaborated to develop the initiative, in response to new development, rezoning, and an increased residential population.

Location: Exhibition at the Noguchi Museum from October 13, 2011 to April 22, 2012, with Large-scale prototypes for aspects of the proposals exhibited at Socrates Sculpture Park in May 2012.

Budget: For the first phase each team was given \$10K

Individual proposals

Mary Miss's "City as a Living Laboratory" imagines Long Island City as a district of innovation and experimentation that supports collaborative projects among artists, scientists, and other experts that address issues of social, economic, and environmental sustainability. She proposes four parts of a plan: 1-Using the Big Allis stacks as beacons to display the city's energy usage; 2-Repurposing utility poles and other vertical infrastructure to let visitors know about the new "Research Zone" in the city; 3-Re-purposing everyday elements in the area, such as scaffolding, blank walls of industrial buildings, and trailer-truck containers for, respectively, green walls, park slices, and incubator studios for developing ideas and projects about the city.

George Trakas's "Shoreline Walk" proposes a publicly accessible promenade for the water's edge, improving both environmental quality and recreational access. His plan is a mix of mapping, history, and music that offers suggestions for knitting the various plots along the waterfront, and revitalising the area.



Natalie Jeremijenko's "UP_2_U" looks at ways to improve environmental health by using an urban farming system for railings, double-hung windows; greening "no parking zones"; building bridges for butterflies and superhighways for salamanders; and implementing flylines for transporting goods and people.

Rirkrit Tiravanija's "GreenWay and Community Kitchen" proposes repaving Broadway from the N/Q subway station to Socrates Sculpture Park with drivable grass. Parts of the GreenWay could be closed to traffic for markets, film screenings and other happenings, and a community kitchen would be set up in Socrates Sculpture Park.

George Trakas' River Shoreline Walk proposes a publicly accessible promenade for the water's edge that makes visible the bulkheads and other remnants of past industry. It would also revitalize the Ravenswood neighborhood in Long Island City.

Links, references, sources: <u>http://www.noguchi.org</u>, <u>http://vimeo.com/29857946</u>, interview with Natalie Jeremiijenko



Chicago: The Embedded Artist Project





Chicago: The Embedded Artist Project

Summary

The Embedded Artist Project began as an experimental civic collaboration between the City of Chicago and the School of the Art Institute that aims to increase local government's ability to creatively address major systems issues by embedding practicing artists in City departments at the management level. The first artist placements began in September 2008 and were piloted for two years. The Embedded Artist Project, led by artist Frances Whitehead, has now also being studied for implementation in Galway Ireland, while Whitehead is working in a less informal engagement with Metropolitan Lima, Peru. Whitehead is looking for more opportunities to spread the model that has been developed to further understand its potentials.

Aims and Outcomes

Leveraging the innovation capacity of artists as "change agents", the project creates a platform for engagement of artists with other professionals on matters relating to sustainability and/or city governance. The project aims to understand the cultural dimension of sustainability and asks the question 'What do artists know... that can be useful to climate change mitigation and adaptation?'.

The key tenants of the project are that:

- sustainability is largely a cultural problem and thus requires a cultural framework that deals with intangible cultural values to succeed.
- artists' particular expertise can be of great value to trans-disciplinary teams addressing major societal challenges due to largely unexamined tacit knowledge that contemporary artists deploy.
- artists create new knowledge and this is imperative for the simple reason that no discipline holds the expertise, vision, understanding, or procedure that will deliver a sustainable future.

The first lead artist, Frances Whitehead worked with the Planning Department on the 2040 Regional Food Plan, before developing SLOW Cleanup (see below). The second Lead artist, Adelheid Mers, was placed in the Dept of Innovation and Technology to create visual feedback and analyses on a city-wide broadband scheme, the Digital Excellence Action Agenda. She also created a data visualizations for the Mayor's Office, tracking Federal Stimulus spending.

'The planning community is interested in artists because they are trying to disrupt the methodological habits that perpetuate wicked problems; what artists offer is "disruptive innovation".' – Frances Whitehead, professor of sculpture based at the School of the Art Institute of Chicago

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Keystone project: SLOW Cleanup

Part of the Embedded Artist project SLOW Cleanup began as a question to Frances Whitehead, one of the lead artists, by the Chicago Commissioner of the Environment: 'What is a whole-system, sustainable, brownfield cleanup?' The environmental problem being referred to was the clean up of abandoned gas stations in the City, a problem that until then had been approached by expensive and unsustainable soil removal. SLOW Cleanup employs plant-based "phytoremediation" processes, exploring the use of ornamental, flowering, and fruiting plants, along with the typical plants most associated with phytoremediation. Working with CDOE Geologist Dave Graham, and soil scientist Dr. A.P. Schwab, Whitehead, is testing new plant species that may be used on Chicago's 400+ abandoned gas stations.

The plantings will contribute to the aesthetics and passive economic revitalisation of the site areas, while



Chicago: The Embedded Artist Project

simultaneously adding environmental value. These phyto-scapes will be interpreted for the public, increasing awareness of the interconnectivity of natural and cultural systems in the urban ecology. One of the key outcomes of the project is that the team pioneered the concept of leveraging time as an under-utilized asset in brownfield properties; a concept which the US EPA is now considering applying at the national level.

Slow Cleanup is a strategic part of a new planning initiative, focused on urban agriculture for sustainable economic development, Green Healthy Neighborhood, linking these new remediation techniques to soil and neighborhood revitalization planning efforts

Links, references, sources: Interview with artist Frances Whitehead and documents supplied by the artist, http://www.makeartwithpurpose.net/projects.php?id=15



UK: PROJECT - Engaging artists in the built environment





UK: PROJECT - Engaging artists in the built environment

Summary

PROJECT was an innovative, two-year pilot scheme across the UK that aimed to test the benefits of engaging artists as collaborators in urban design and development. Over the period between April 2004 to March 2006, 30 awards were given to artists, selected from over 141 applications received. These ranged in value from $\pounds 2,000 - \pounds 15,000$ and were for engagements that included artists working with communities and multi-disciplinary teams responsible for master-planning, design and construction, and regeneration and planning.

PROJECT was supported by the Commission for Architecture and the Built Environment (CABE) and Arts & Business (A&B). Public Art South West (PASW) worked in partnership with CABE and A&B to develop the scheme and was responsible for its management and delivery.

Aims and Outcomes

An evaluation of the pilot was conducted by Comedia consulting, using an evaluation toolkit that involved interviews with project participants at project commencement and conclusion. The key questions posed by the evaluation were:

- a. Did the people involved change their mindsets and/or working practices?
- b. Has there been any impact on long term practice of the project players?
- c. Has the involvement of artists made any demonstrable difference to projects?
- d. Under what conditions does artist input have a positive effect and when does it not?

Overall, there was wide appreciation among the nonartist professionals interviewed that the engagement of artists had raised the quality and value of the urban design projects and in the built environment that ultimately ensued. The response of local government planners who were drawn in to the involvement of an artist was without exception positive. Artists were seen to bring a wide range of skills, knowledge and techniques to the field of development, opening up fresh areas of discourse and breaking down traditional barriers.

It is interesting to note the motivations for developers for engaging artists in their schemes. Not surprisingly some developers see artists as adding commercial value through provision of elements of distinctiveness, character and identity. Other motivations included increasing the approval rating among those responsible for planning control and permissions, influencing the choice of materials and finishes, and assisting in making good relations with the local community affected by a development.

Other professionals noted that the artist could challenge the closed way of working and conservative mindset of the world of architecture and planning, bringing lateral thinking and innovation. Artists were also seen to be good brokers of relationships, both within teams and between the project and the public. Some saw the artist's approach as radicalising, aligned with community action, a low-capital, nonhierarchical alternative to conventional structures. Overall, they were seen to add value and humanity to a project, and to make it more fun.

In the context of sustainability, it was felt that artists' involvement in development schemes contributes to balancing the conflicting demands of commercial development and environmental improvement. In a number of instances, the artist was instrumental in advocating for greener design of homes and communities.

UK: PROJECT - Engaging artists in the built environment

The findings of the evaluation were summarised at its close in two observations:

- Engagement of an artist from an early stage in a development project, in good circumstances, brings about a positive change in mindset and working practice among the other professionals involved.
- When artists are working in a development milieu and expected to contribute their professional expertise and creativity, they should be engaged on the same terms as the other professionals involved.

Links, references, sources: <u>http://</u> www.publicartonline.org.uk/pasw/project/ evaluation/reports.php



Particle Falls: Communicating air quality





Particle Falls: Communicating air quality

Artists: Andrea Polli and Chuck Varga

Collaborators: Tim Dye, Sr. VP and Meteorologist at meteorologist with Air NowSonoma Technology

Location: AT&T Building façade, downtown San Jose, CA, USA

Budget: USD\$65,000

Commissioning context: Produced as part of the San Jose Department of Public Art's San Fernando Corridor Project and ZERO1's 2010-01SJ Biennale 'Build Your Own World'

Funding body(ies): San Jose City Public Art Program

Duration: 6 months in 2010

Materials: Nephalometer (donated by MetOne) that uses a laser to measure particulate matter pollution in real time, light projection for visualisation of the data; panel with information regarding the work and the issue of local air pollution.

Summary

Particle Falls is a temporary installation visualising real-time small particulate matter air pollution (PM 2.5) in downtown San Jose via the changing scale of a laser light cascade on the side of a city building. The work was developed in partnership Sonoma Technology and EPA's AirNow program which shares live air pollution data throughout the US. The work aims to raise awareness amongst the public of air pollution and thereby encourage behavioural change. The piece is also accompanied by a real time web visualisation.

Aims and outcomes

Education/ Social activation/ debate: Raising awareness about environmental pollution in San Jose was a key aim of the work. Santa Clara County received a failing grade for air quality in the American Lung Association's 2009 State of the Air Report and currently surpasses unhealthy short-term pollution particles a yearly average of 11 days, the 24th highest level in the US. The number of people that airborne particulate pollution kills each year has tripled in California.

The work grew out of efforts to make air quality and environmental health data more public in real-realtime –like every second. Gaining access to the EPA's data on air quality was difficult and was available only every hour, was not localized. By collaborating with Air Now, a project of Tim Dye helps operate for the EPA, all the US based air quality information, standardise it and open it to the public, Polli was able to advance her work. The project contributed to efforts to generate a standard format or API for releasing the data.

The project involved installing a particulate monitor and contributing the data to the AirNOW data aggregator. Since this was the first time an independent citizen had contributed data to this national system; Particle Falls helped serve as a model for future projects by Polli and others.

Environment: Consistent with the city's sustainability aims, the work shows how humans impact the environment, by measuring PM2.5 in the air in real time using a Nephalometer. The work was positioned in a transport corridor and was sensitive enough to respond to the pollution of a passing truck or even a pedestrian smoking a cigarette. If installed over a longer period of time the work could be capable of demonstrating how a public works project like a light rail project might improve the quality of life for the people living in San Jose.

Future instalments: Future possible installation at the Chemical Heritage Museum in Pittsburg **Links, references, sources:** Particle Falls , http:// vimeo.com/16336508, real time web visualisation. AirNow, interview with Andrea Polli and Tim Dye.



CASE STUDY 6

Amphibious Architecture: An interface to the aquatic ecosystem of New York City





Amphibious Architecture: An interface to the aquatic ecosystem of New York City

Artists: Natalie Jeremijenko from the Environmental Health Clinic at New York University

Collaborators: David Benjamin and Soo-In Yang Living Architecture Lab at Columbia University Graduate School of Architecture, Planning and Preservation

Location: East River and Bronx River, New York City Budget: TBC

Commissioning context: Commissioned as part of the exhibition Toward the Sentient City is curated by Mark Shepard and organized by the Architectural League of New York.

Funding body(ies): The exhibition was made possible with support from the J. Clawson Mills Fund of the Architectural League and the Graham Foundation for Advanced Studies in the Fine Arts. Additional support is provided by the University at Buffalo and public funds from the New York City Department of Cultural Affairs, in partnership with the City Council.

Duration: 8 weeks in 2009

Materials: A coarse array of controllable multicolour LEDs on buoys: each buoy had a ring of red, green and blue LEDs and each colour was independently controllable. East River: 16 buoys in a 10m x 10m square. Bronx: eight buoys. Dissolved oxygen sensors, utrasonic fish finders, hydrophone, SMS interface, a database for remote monitoring and a project communication website; open source Arduino platform; a shore-side Mac computer.

Summary

Amphibious Architecture is a public artwork that creates a dynamic and captivating layer of light above the surface of the water that makes visible the invisible through real-time sensing of the environmental health New York's urban rivers. Two networks of floating interactive tubes, installed at sites in the East River and the Bronx River, house a range of sensors below water and an array of lights above water. The sensors monitor water quality, presence of fish, and human interest in the river ecosystem. The lights respond to the sensors and create feedback loops between humans, fish, and their shared environment. An SMS interface allows citizens to text-message the fish, to receive real-time information about the river, and to contribute to a display of collective interest in the environment.

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"Amphibious Architecture as an idea engages people with the river as a body of water, rather than simply a reflective surface valued for its aesthetics." – Natalie Jeremijenko

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Aims and Outcomes

Education/ Social activation/ debate: The goals of the project were educational or conversation-starting and it was successful in this regard generating enormous amounts of conversation. Broadly speaking it aimed to transform the urban/aquatic interface to create productive, ecologically remediative interaction. With 54 species of fish present in the river, and few people aware of the fact, the installation sought to lead people to discover the presence of fish and associate their presence with dissolved oxygen and to understand this important relationship.

While data on water quality is publically available in NYC from public agencies, the installation aimed to display the data as a public spectacle and rescript the interaction of the public with the health of the river through the use of real-time data, in situ.

The project also aimed to explore new forms of architecture, using the installation as a prototype, creating a new urban public space for the people and



Amphibious Architecture: An interface to the aquatic ecosystem of New York City

assisting in the reimagining of our relationship to natural systems through design.

Future instalments: Amphibious architecture has been commissioned as a larger and more permanent installation in a new waterfront development in New York City.

Links, references, sources:

http://www.youtube.com/watch?v=tE8gsMUguLY, interview with Natalie Jeremijenko, Shepard, M. (2009) Sentient City: Ubiguitous Computing, Architecture, and the Future of Urban Space, The Architectural League of New York, MIT Press, Cambridge, MASS.



Green Cloud (Nuage Vert): An emblem for the collective effort of a community





Green Cloud (Nuage Vert): An emblem for the collective effort of a community

Artists: HeHe (Helen Evans & Heiko Hansen)

Collaborators: Nuage Vert was developed in collaboration with experts in laser technology, computer science, electrical engineering, energy generation and air quality monitoring. Martti Hyvönen, the environmental director of Helsingin Energia and company engineers; Jussi Palola, researcher at Helsinki Energy's Electricity Network Company; Esa Räikkönen (a researcher specialized in lasers at the Helsinki University of Technology). The project also involved the collaboration of Dodo, an Finnish environmental activist group.

Location: Projected on smoke stack of the Salmisaari combined heat and power plant Helsinki, Finland Budget:

Commissioning context: Commissioned for the 2008 Pixelache Festival in Helsinki

Funding body(ies): TBC

Duration: Development commenced in 2002 and concluded in February 2008, the public spectacle active from 22-29 February 2008.

Materials: A powerful laser that can go up to 8.6 watts

Summary

Nuage Vert, or Green Cloud, is a public art installation performed in Helsinki in 2008 in collaboration with Helsinki Energy. By projecting green light onto the vapour cloud emitted from a city power station the changing output of the station is visible. This provided a means for communicating the results of efforts to reduce energy use in the Ruoholahti district, during an UNPLUG campaign for local residents and businesses. The people of Ruoholahti area were asked to unplug their electrical devices between 7-8 pm and go outside to admire the *Nuage Vert* laser projection, which grew bigger as residents consumed less electricity. Helsinki Energy initiated a release of real-time energy information as a result. A clever and simple way to provide a feedback loop to the public.

Aims and Outcomes

Social: To realise a project on such a scale, it was necessary to collaborate with a wide range of organisations from sectors that wouldn't normally work together: from culture, science, industry, communication and ecology. Engaging the cooperation of the power plant for delivery of the project took a long time, and meant that the project was more than a one-night spectacle, it was a social process that created new stakeholder partnerships. The actions and involvement of local residents living close to the active power plant were similarly essential to the social outcomes of the project.

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"A city scale light installation onto the ultimate icon of industrial pollution, alerts the public, generates discussion and can persuade people to change patterns of consumption." - HeHe

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Environmental: Altogether 4,000 residents and 5 large scale companies participated in the Unplug event. As a result the load of Salmisaari substation decreased 2 MVA on 29 February 2008 between 7-8 pm. The normal value for decrease during this time is 1,2 MVA, so the effect of the UNPLUG event is approximately 800 kVA. This is equivalent of the power generated by one windmill running for one hour.

Inspired by the success of the *Nuage Vert* project, Helsingin Energia released more real-time data about energy consumption in Helsinki area with hourly updated information about electricity consumption, heating and cooling online. Indeed, Helsingin Energia was the first energy company in Finland to release this amount of detailed real-time information; a level

Green Cloud (Nuage Vert): An emblem for the collective effort of a community

of information transparency about energy consumption that is rare amongst energy companies in all corners of the world. Helsingin Energia sees this as a way to spread awareness about the need to decrease energy and a means for reaching the goal of providing a larger share of the total energy use by using renevable energy sources. This will help the City of Helsinki to reach its goals of increasing the share of renewable energy to 20% by 2020. See: http:// www.helen.fi/slj/energiahankinta/

Links, references, sources: http://hehe.org2.free.fr



CASE STUDY 8

Live Forever: Sensing environmental risk





Live Forever: Sensing environmental risk

Artists: Oliver Hess and Jenna Didier Collaborators:

Location: Fire station 94, Los Angeles, California **Budget:** USD\$100,000

Commissioning context: Funded from California's percent for arts program, in conjunction with the retrofit of the Fire station

Funding body(ies): Los Angeles Cultural Affairs Department (through percent for arts)

Duration: permanent public art work completed in 2011

Materials: LED lights, sensors for humidity and temperature, metallic mesh structure

Summary

Live Forever is the work of artists Jenna Didier and Oliver Hess whose practice Infranatural seeks to tie the built environment to the natural pulse of a living city. A Los Angeles fire station is host to the public art work, which acts as a barometer of the county's fire risk through a web of humidity & temperature sensors stretched across the facade like a a growing vine. LED lights at each node flash across the building in shades of blue to red, making people aware of their environment, frequently warning them to take care with sparks and cigarettes.

Aims and outcomes

Social activation/debate:

- To speak to the community about the role of the fire station in the community as a resource for prevention from harm.
- To create a relationship between people and the building at an emotional, intuitive level.
- To garner and reward curiosity.
- To rebuild the relationship between individuals in society and the survival of our infrastructure, addressing an ideological debate about investment in public infrastructure and works.

Environmental: To monitor air quality, provide habitat for native flora and fauna and create passive cooling for south and west-facing walls.

Links, references, sources: Interview with Oliver Hess, <u>www.infranatural.com</u>,



CASE STUDY 9

San Jose: the Climate Clock Initiative





San Jose: the Climate Clock Initiative

Artists: various

Location: Diridon Station, San Jose (currently undergoing development to become largest ground transportation hub in Northern California)

Budget: up to \$20million (with \$150,000+ spent on proposal development)

Commissioning context: Proposal developed out of idea from a member of the community, Seth Feary for a clock to catalyse behaviour change in the community in response to climate change.

Funding body(ies): San Jose State University supported the Climate Clock residencies awards through grants from The David and Lucile Packard Foundation, Bank of America Foundation, and Adobe Foundation. The development of the proposals was funded through the San Jose Redevelopment Agency's public art funds. Montalvo Arts Center, 1stACT Silicon Valley and ZERO1 provided additional support for the project. The funds for realizing the winning proposal will be raised through private donations.

Duration: permanent public artwork to remain active for 100 years

Materials: various

Summary

The Climate Clock Initiative is an ambitious project of the City of San Jose to design and deliver an iconic public artwork that would measure the effects of climate change over a period of 100 years and inspire the community to take action. Situated in Silicon Valley, the intention is to incorporate the significant prowess of local businesses in measurement, data management, and communications technologies. The first phase of the project was the development of three short-listed proposals selected from a pool of 50 submissions in 2008. Each of the finalist teams spent two years developing up their ideas gifted with \$50,000 and a three-month residency at the Lucas Artist Residency at Montalvo Arts Center. Four years later, a winning proposal has been awarded, the Organograph, and the process of fundraising up to \$20 million to realize the design begins.

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"Climate change data is very difficult to read and understand. By bringing artists to the task, we bring an ability to interpret content with a focus on values and intangibles that allows the data to be communicated." – Mary Rubin, Public Art Department, City of San Jose

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Proposals

Organograph, the winning proposal, is an eight-story solar-powered kinetic sculpture consisting of five floors that invite the public to discover the process of climate change and respond. Over 100 years the sculpture gradually draws a path and builds a garden - the Time Trail Garden - that together illustrate the concentration of CO2 in the atmosphere and the average global temperature over the period. The mechanisms inside resemble a clock with a system of interconnecting exhibit orbs, liquid flows, and mechanical movements that illustrate the dynamic equilibrium of energy and mass flow in the biosphere. The Organograph is capable of running multiple simulations to illustrate possible outcomes for the planet under different climate change scenarios. Engagement of school children in particular is key to the educational aspect of the project, with climate change education and discovery programs linked to the installation's development.

The *Organograph* team is Geo Homsy, Chico MacMurtrie and Bill Washabaugh.



San Jose: the Climate Clock Initiative

Wired Wilderness, one of the three finalists, while not a winner, will still go on to see some of their ideas realised. A very different proposition to the Organograph, Wired Wilderness employs the Blue Oaks Ranch Reserve outside of San Jose as the remote monitoring station that over time provides a picture of climate change's impacts on a fragile ecosytem through sensing technology. The project sees the Climate Clock budget distributed over generations of artists with a biennial artist residency at the reserve. An Endowment administered by a Wired Wilderness trust would select artists to work in conjunction with scientists and exploit everadvancing visualization technologies and climate science. This is designed to shield the project from obsolescence and guarantee a diversity of outcomes that can be shown at various sites around the City. Artists in effect become ambassadors between climate change data and the public.

The reserve already boasts a wealth of time lapse cameras, lasers, mesh networks and sound recording devices that measure the 'pulse of nature'. Using the funds of the Climate Clock initiative the Greenmeme team invested in the refurbishment of a hut as the location for future arts-science residencies on climate change. The team focused a lot of their development time connecting with various bodies charged with collecting and interpreting locally and globally significant data to inform climate modeling and adaptation. They discovered that they were able to provide a unique contribution in connecting different institutions, academic and governmental, connecting the dots where others had failed. Partnerships developed through this period were highly valued by San Jose city council, which has led them to seek support for the residency program.

The *Wired Wilderness* Team is Freya Bardell, Brian Howe, Brent Bucknum





1200 Buildings Public Art Commission

Showcasing environmental leadership through public art

Background

The 1200 Buildings Public Art Commission is a pioneering pilot project of the City of Melbourne, one of the first in Australia to commission an artwork that responds to the environmental sustainability of a building. Initiated in 2011, the project is now joined by similar efforts that are emerging locally and globally, offering the City an opportunity to position itself at the forefront of a movement that ties together art, architecture, sustainability and community activation.

The commission is named after the 1200 Buildings program of the City of Melbourne which aims to retrofit 1200 buildings by 2020 to a high energy performance standard thereby reducing the city's carbon footprint by up to 40 per cent. The City has 40 signatory buildings to date and has assisted them with provision of information and access to finance. One of these signatories, David Collins of Green Spaces was the imitator of the arts commission.

Green Spaces, at 490 Spencer St, is one of the smallest buildings in the portfolio but is a high achiever, already able to claim carbon neutrality and even feed energy back to the grid from its solar panel array on the rooftop. The building is occupied by a number of 'green' businesses from the Energy Efficiency Council to Synergetics Environmental Engineering. Proud of these achievements, building manager, David Collins was keen to do more, and suggested an artwork that communicated the performance of the building to the public.

Through negotiation with the Public Arts branch of the City of Melbourne a pilot project was designed, whereby Green Spaces and neighboring business Fort Knox storage committed half the commission value with City of Melbourne matching these funds to a total of \$30,000. Later, when an artist team was selected this amount rose to \$50,000 to enable a bigger vision to be achieved. The City of Melbourne hired Carbon Arts to run the pilot project, with funds coming from the Sustainability branch, also key stakeholders in the project.

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'What if buildings could talk to us? Imagine if they were able to somehow express their pleasure at being made green? What if the capture of wind and solar energy was turned into a spectacle, a thing of beauty? What if a building's façade became a translation device for our relationship with the environment?'– from the Curatorial Statement for the 1200 Buildings Public Art Commission exhibition

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Process

The process agreed by the project stakeholders for the commissioning of a public artwork for Green Spaces was executed as follows:

Public Expression of Interest

A request for an Expression of Interest (EOI) was released to the general public through various channels including ArtsHub and the City of Melbourne and Carbon Arts' mailing list. The EOI requested a 500 word submission along with evidence of previous work from artists or teams of artists, architects, designers and so forth. It was recognized



that an interdisciplinary approach could be desirable given the nature of the brief. The brief stated that up to 12 artists would be selected to attend a detailed briefing session and workshop in June 2011 to explore the potential scope for a permanent public artwork. [See Annex 1: EOI]

Workshop for Shortlisted Artists

From the 25 submissions received, eleven were judged by the project managers to be of a high standard, and were invited to a Workshop to learn more about the project and contribute to the design brief. The Workshop consisted of two parts:

- a. A series of presentations and roundtable to familiarize artists with the body of work internationally dealing with sustainability, to describe the context and opportunity at hand and to share the work of each artist with the group, by way of introduction and to allow teams to form, if desired;
- b. A site visit of Green Spaces followed by a freeflowing discussion and Q&A regarding the possibilities and limitations of the site. [See Annex 2: Workshop materials]

Call for Proposals

Following the Workshop a detailed brief was prepared and sent to the participating artists, who were given 6 weeks to respond with proposals. Artists were requested to submit proposals in the form of an A0 poster in the expectation that an exhibition would be possible to showcase and reward their efforts. This was considered important, given that funding was not available to compensate them for their efforts. A number of evaluation questions were also posed to assist in the selection of works, including attention to the sustainability of the work itself. [See Annex 3: Call for Proposals]

Panel Selection Process

A Panel, consisting of the project partners, project managers and a member of the Public Arts Panel for the City, met to evaluate the proposals:

- David Collins, Green Spaces
- Guy Wilson, Fort Knox Self Storage
- Tammy Stokie, Acting Public Art Program Manager, Arts and Culture, City of Melbourne
- Matthew Wilcox, Sustainability Projects Officer, City Planning and Infrastructure, City of Melbourne
- Timothy Mathieson, artist
- Jodi Newcombe, Carbon Arts

A second meeting was required for the two shortlisted proposals, dotBlush by Pierre Proske and The Green Transfer by ARUP, which were requested to respond to additional questions to allow a decision to be made. The winner, The Green Transfer, was selected after careful consideration, based, amongst its other merits, on its ability to be realized relatively free of risk. [See Annex 4: Panel Selection Criteria]

Exhibition and Networking Function

An exhibition of all of the submissions was mounted in Fed Square with the support of the Sustainability Branch, in particular the 1200 Buildings Program. A web presence was also provided for the exhibition on the 1200 Buildings website. The event marked an important moment in the calendar for the program, whereby signatories were rewarded for their efforts. The exhibition also intended to highlight new opportunities for building owners to engage new audiences and showcase their progress through the arts. A number of building managers expressed interest following the event, but greater outreach is still possible given that a number of the bigger building managers were unable to attend. [See Annex 5: Exhibition Materials]

Commissioning Phase

The winning proposal 'Green Transfer' was prepared by a multi-disciplinary team at Arup engineering and consulting. Familiar with implementing large-scale infrastructure projects, the team has been negotiating a contract with City of Melbourne, which is still in progress, as this report is written. The expected completion and launch date is still in negotiation. [See Annex 6: The Green Transfer]



Evaluation

As a pilot project, the intent was always to evaluate the 1200 Buildings Public Art Commission with a view to potentially expanding the project. There are two aspects to such an evaluation exercise: 1) the evaluation of the winning artwork itself, and 2) the evaluation of the process of delivery. The former, and to some extent the latter, are difficult to evaluate until the commission is complete and has had some time to reverberate in the community.

Both aspects of evaluation are explored further below, with recommendations following in the next section. What is presented here is not a methodical evaluation, such as an assessment of performance relative to a baseline. Instead, the stated aims of the project are raised for discussion and recommendations made regarding both a more detailed evaluation (for the artwork) and opportunities arising through the commission process.

Evaluating the Artwork

Criteria for evaluating the winning artwork were specified in the Artists Brief; which required each proposal to address one or more of the following:

- Making visible the building's unique functions and achievements to the local community and passersby;
- Engaging the community in the broader conversation around sustainability;
- Rewarding those in the building by enhancing the experience of working there;
- Potentially contributing to or influencing environmental factors in the vicinity, such as noise, local landscape and air quality; and
- Making a significant contribution to the visual and cultural environment of West Melbourne.

The commission also requested the artists to come up with any additional evaluation criteria that they would like the project to be held up to and to suggest ways in which this might be assessed. Examining the success of the winning Green Spaces artwork will require some effort to collect data from passersby, local businesses, employees within Green Spaces amongst other stakeholders, as well as taking a measure of the response in the broader sphere of the City of Melbourne (press clippings, blogs, etc).

This could be a request to the Arup team to establish a self-monitoring and evaluation framework to allow ongoing feedback to the pilot project. There are tools available, such as that prepared by IXIA public art consulting in the UK: 'A Guide to Public Art Evaluation' is recommended as a framework. Additional frameworks could be explored including the that used by Comedia consulting in the evaluation of PROJECT (see Case Study 9) and that developed for the Curating Cities project (see Box 2).

Recommendation: implement an evaluation framework prior to project launch so that data can be collected throughout the lifespan of the project and inform future commissions of this new art form.

Evaluating Process

The stated aims of the project, as outlined in the Artist brief, were to:

- Demonstrate the success of one iteration of the 1200 Buildings Commission, by installing an appropriate and innovative work for the Green Spaces site that meets stakeholder expectations and shows ability to deliver;
- Showcase a range of possible works for 1200 Buildings signatories, inspire new commissions to be funded and forge new private funding sources for public art.
- Inspire and engage the public with the future vision for sustainable, zero carbon Melbourne; and
- Build a unique, networked cultural asset for Melbourne: one that attracts people to the city, that's world-leading, that innovates and pioneers public art and green infrastructure/ sustainability and engagement of the public.

These aims outline an ambitious vision that sees a number of similar commissions repeated in the



future. Some reflections on progress against these aims:

Demonstrate the success of one iteration of the 1200 Buildings Commission: With the winning commission yet to be installed the first aim cannot be evaluated at this stage. However, the panel selected the work based in part on its innovative design and appropriate response to site. The proposal was considered of a high calibre and to that extent the process was successful in delivering a satisfactory proposal.

Showcase a range of possible works for 1200 Buildings signatories: The panel considered the set of submissions to be of a sufficiently high calibre to enable an exhibition of all the entries in Federation Square. Reflecting the range of different disciplines involved, from computer gaming to landscape architecture and sound art, the diversity of interpretations was strong. This outcome is a positive reflection, in part, on the ability of Australian (and mostly Victorian artists) to respond to the unique aims of the commission.

Inspire new commissions to be funded and forge new private funding sources for public art: Two 1200 Building Signatories, FMSA Architecture and Melbourne University expressed a desire to become engaged in future commissions. Following up on this interest, FMSA and City of Melbourne were approached to support a bid through the Australia Council Creative Australia grants for Carbon Arts and shortlisted artist Pierre Proske to see his proposal dotBlush developed to a pilot stage. The bid was successful and the project is currently working through its research and development phase. The 1200 Buildings Commission was instrumental in bringing about this new funding which will lead to a new commission.

However, in order to capture other opportunities, such as the University of Melbourne's interest in the Current Circus proposal, a clear proposition will need to be made to interested businesses, and further interest actively elicited from other 1200 Buildings signatories, particularly those who weren't present at the exhibition.

Inspire and engage the public with the future vision for sustainable, zero carbon Melbourne: The exhibition launch event was well attended and received a positive response, as indicated by the many comments and conversations relayed over the opening evening and similarly at a smaller event held by Carbon Arts at the exhibition close. The ability of the winning and future art works of this nature to inspire and engage the broader public will need to be tested, e.g. through an evaluation process as recommended above.

Build a unique, networked cultural asset: This vision would be the driver behind efforts to replicate the 1200 Buildings pilot commission. With a number of signatories (building owners and managers) commissioning public artworks that communicate building performance, a network of sites can steer visitors on a new trajectory through the city, where they discover not only innovative new artworks, but learn of the environmental goals and achievements of the city's environmental leaders. Recommendations towards achieving this vision are outlined in the next section.



The Green Transfer: ARUP



The Green Transfer: ARUP

The Green Transfer is about environmental performance, about transfer of information, yet it does not exalt data over emotion or experience. The Green Transfer revels in the challenge of making the invisible patterns of human activity visible, apparent. It asks us to consider what the patterns mean. Do my actions influence these? Do I have an impact on the quality of my environment? Why does this building pulse with movement? Why does it behave this way, is our behaviour on display?

The Green Transfer is a real action, the moment when a recipient forgets their immediate concerns and instead focuses on the needs of their environment. The Green transfer takes inspiration from the behaviour design effects of Victor Gruen and the advertising industry that followed. Victor Gruen was an Austrian-born architect best known as the design pioneer of the american style shopping mall, and more importantly, the Gruen Transfer. This transfer describes a scripted disorientation, where a combination of spatial layout, music and environmental cues, confused visitors into losing track of their original intentions, becoming impulse shoppers under the influence of advertising.

The Green Transfer is the very antithesis of this. Rather than persuading you to consider less and consume more, it asks you to consider more and consume less.

It is an environmental billboard, a platform, a form of positive advertising, celebrating the deliberate control of our actions, the choice to conserve the environment and our best efforts to reign in wayward behaviour. The Green Transfer is a reflection of the renewed community effort in Melbourne, uniting the green champions of the community.

It is an innovative art canvas and operable facade that delivers real-time information about the

envrionmental quality of Melbourne. Moving away from the appeal of digital screens and dashboards, this installation crosses real time information with analog technology for an engaging dynamic experience of the built environment.

Beyond its architectural function, The Green Transfer is a platform for community excitement. By displaying information about the environmental and social performance of this place, it makes visible to the community what is otherwise invisible. Socialising environmental patterns, it brings to light that which is otherwise silent. The Green Transfer is an experience.

Team led by Jason McDermott ARUP

Future directions

Ideas for partnerships and new initiatives

This section has been removed from the public version of this report - commercial in confidence.



Carbon Arts facilitates an increased role for the creative sector in generating awareness and action on climate change and the environment through public arts commissions, events, exhibitions and research. As well as its work with artists, Carbon Arts works across economics, science, and technology to encourage diverse and open dialogue as one way of meeting the environmental challenges facing contemporary society.

We seek to generate and evaluate positive models for engaging the public in imagining and shaping a more sustainable future. At the heart of our practice is the belief that creativity in essential in making this transition, and that the journey should be playful, fun and rewarding.

carbonarts.org

