From the city of gaps to the city of wellness: The case study of DOT TO DOT[©] community garden in Maryhill, Glasgow

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Abstract

The new urban guestion has been convoyed by the abrupt inequity of income distribution, environmental disasters, demographic shrinkage, social asymmetries and city voids (Brenner, Peck & Theodore, 2012). Brownfields, abandoned buildings and vacant lands are unresolved environmental and social problems in many European postindustrial cities. These ruins constitute the physical manifestation of our urban landscape heritage, which coincide with the location of deprived areas with vulnerable people that demand effective strategies with adaptive solutions. How should these gap sites become instruments of wellness whilst open to regenerative/restorative social innovations? This study reflects on theoretical and applied viewpoints of DOT TO DOT© [www.dots.scot], a multidisciplinary grass-root project that enables the participation of intergenerational groups -social entrepreneurs, researchers, architects, artists, educators and youth - in the codevelopment of a creative local community to refill and reuse empty sites on a temporary basis and to improve life of disadvantaged communities by applying participative design tools and establishing distinctive spaces: [a] the Community Garden (phase one, implemented); [b] the Remake Station and [c] the Woodland of the Senses. DOT TO DOT[©] project (phase one) addresses up-to-date urban regeneration and health issues from local agendas providing a vivid community-led and multicultural development. It proposes both a conceptual framework and applied experiment in situ by interconnecting key factors -so-called dots- in order to tackle health and wellbeing issues in selected deprived areas along the Forth and Clyde Canal in Maryhill North Kelvinside, Glasgow. Furthermore, it aims to transform polluted vacant lands into healthy and wellbeing outdoor environments based on integrated decision making and bottom-up governance by providing live demonstrations that are relevant to the empowerment of our local community and future replications in similar urban contexts. The DOT TO DOT[©] methodology employs community-based participatory research and somatic learning tools; community-led research by doing; and experimentation by reusing waste integrating spatial, visual, quantitative and qualitative data. It includes sensory learning activities, physical work and communication engagements with urban communities in the process of transferable creative knowledge.

Keywords: Urban reactivation; social innovation; regenerative public space; creative waste reuse; community-based participatory research; participative and somatic learning; experimental community garden

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Reanimating a Gap Site into Public Space

Glasgow as post- industrial city has the greatest amount of vacant sites than the rest Scotland put together. In Glasgow's urban area, 98.1% of people live within 500m of vacant land or derelict buildings. The Forth and Clyde Canal flows through Maryhill North Kelvinside, forming a vital infrastructure of the local economy. It is for many years polluted and largely unused after the decline of heavy industry. Therefore, it is a post-industrial area with high social deprivation and historical heritage in risk.

Environmentally, people see vacant lands as valueless spaces, so lacking of visions and synergies to offset, reuse and repurpose urban waste creatively at local level and to build ecologically sound communities. Local residents in in Maryhill North Kelvinside still perceive abandoned buildings and gap sites as valueless assets, which lack of identity and have none or little utility. These spaces cause unpleasant discontinuity in the existing urban fabric. Derelict land intersecting residential urban areas dictates poor urban quality. Economically, the public budget for remediating brownfields (Beard, 1996) and gap sites is limited and especially tiny when applies to poor and disadvantaged areas. Industry is still far from being able to reuse or repurpose them creatively, and hence to build resilient and inclusive places for communities.



Figure 1. Map indicates derelict land proximity to residential areas in Glasgow city (highlighted in yellow). It also shows the position of two experimental community gardens: MOBILELAND© (2016) and DOT TO DOT© (2019). Source: Studio Pop archive, 2019.

People have the right to live in better and healthier public spaces by sharing capacities and contributing with the implementation of place-making and place-learning collaboratively. However, public space today is missing sense of appropriation becoming more as a space in transit rather than an "architecture of enjoyment" (Lefevre, 1973). On the other hand, the vitality of public space is dependent on personal choices and decisions to act publicly even if there is no obligation to do that. Essentially, the character and meaning of public spaces are formed and defined by how people occupy and use them throughout the empowerment of community to take control over their environment (Andersson, 2016).

Nowadays there is an ethical need to rethink the notion of the "commons" in public spaces. To support this, Mitchell (2003) writes that "struggle is the only way that the right to public space can be maintained (...)" Public space is for people to be together, to interact, to exchange, to create, to learn, to trade and to collaborate. A sense of community always arises when people get involved in something. There is a naive way of perceiving the occupancy of public spaces in European culture, which assumes it is free and open to all by default. Nonetheless, public space is above all a social agreement. In other words, without a social agreement there is no public space. According to recent statistics, UK citizens' behaviour in public spaces are recorded in nearly six million security cameras, which means one for every ten people. Such an invasive control over individual rights in public spaces shows the current impediments towards the implementation of a democratic self-management of it. Being militarised, it provokes a culture of fear due to its intrusive nature, in which the celebration of urbanity seems exceptionally fragile, limited and ultimately sequestered.



Figure 2. Photography illustrates the first on-site community event, a clean-up day where school volunteers and community developers gathered to remove junk from plot in order to land-mark the future DOT TO DOT[©] garden (May, 2017). Source: Studio Pop archive, 2019.

DOT TO DOT[©] Case Study: Place-making with Creative Waste Reuse

DOT TO DOT[©] is a combination of social form (Maki, 1964) and loose space (Franck & Stevens, 2007). It proves to be successful because it is community-based participatory research initiative that is reinventing the way of what publicness actually is. How? Simply by reusing and repurposing waste as local resources creatively. The DOT TO DOT[©] project follows the principles of the New Urban Agenda Habitat III (Quito, 2016) and the Stalled Spaces Scotland (Toolkit, 2017) locally, offering a social framework to implement transformative actions to resolve urban challenges locally with temporary, portable and sensory structures. Its research objectives are:

[a] Connect waste, design and local communities to reactivate urban gaps through experimental sites.

[b] Boost social inclusion of vulnerable groups, mainly youth and children, locally.

[c] Enable social innovation between social enterprises, academia, eco-schools and local

communities through a community consortium.

[d] Test/pilot craft and social technologies through live projects, open demos and eco-fairs in the garden site.

The DOT TO DOT© consortium believes that communities are active designers rather than mere consumers. DOT TO DOT© is aligned with the socioeconomic sectors prioritised by the EU/Scotland's Economic Strategy connecting Creative Industries (ecodesign), Environment (waste reuse) and ITC (Information Technology and Communication). It was awarded and funded by the European Social Fund (ESF); Lottery; Creative Scotland; Stalled Spaces Glasgow; and the European Youth Award (EYA), category Sustainable Economics. Its aim is to reactivate cities connecting waste to design for society through social innovation, ecological design, waste reuse and outdoor learning by assisting communities to co-develop and deliver long-term local solutions that address local priorities and needs; increasing active inclusion; and building on the assets of local communities to reduce poverty, to give start-up resources and to enable inclusive participation in poor neighbourhoods.



Figure 3. DOT TO DOT© outdoor activities on remake with waste (2017-19). Source: Studio Pop archive, 2019.

DOT TO DOT[©] is an urban reactivator and predecessor of MOBILELAND[©] garden (Suau, 2016; Suau & Petruskeviciute, 2017). It takes place in an experimental site fully designed with temporary structures made entirely from reclaimed materials to create a distinctive place powered by gardening, art workshops, citizen science events and eco-design fairs. It is a process-based rather than outcome-driven research project. Every open and available space -such as the 636 Maryhill plot in Glasgow- should be treated as a living organism, both regenerative and restorative process. It is not something that simply culminates once we plant one or more trees. Instead it acts as a live innovator that adapts to the needs of our everyday life by caring about the place and building up trust and sense of placeness.

Indeed it is not a fast or homogeneous timeline process. It is a diverse community built upon different backgrounds, which work actively to share capacities and enjoy common interests. Weekly, community runs a series of onsite and offline activities, including practical place-based experiments, nature-based solutions (NBS), sensory learning, local policy making and grass-root research to support public decision-makers and other stakeholders to work more creatively with social and environmental innovators. As community developers, Studio Pop team co-leads and assists technically DOT TO DOT© community to initiate civic-responsive and locallyled projects in a bottom-up manner. For instance, the Maryhill experimental site is equipped with a portable remake station and community garden, which performs as "living remake lab" to enrich environmental perceptions and build somatic design capacities among experimenters throughout the implementation of agile greenery, polyvalent architectures and adaptive uses.

This project offers the opportunity to unite ethnic minorities, various professionals, children, families and older generation not only offsetting social exclusion but increasing mental and environmental health and wellbeing. The balance between production and consumption through local sustainable sourcing cannot occur without changes in the living and working lifestyles of citizens who must be involved in these transformations through collaborative creative practices through local networks. Hence It also allows access to new community services where new relational flows, societal networks and circuits of production-consumption are formed.

The Radical (Re)Make Process of Ecopolis and its Circular Economy

Our habitats are being rapidly urbanised, renovated and restructured and, in this process, our cultural landscape is being radically altered. 60% of the urban areas that will exist in 2050 have not yet been built. Environmentally, about 75% of the consumption of natural resources occurs in cities. They produce around 50% of global waste and between 60 and 80% of CO2 emissions. Urban settlements are placed where most materials are used and wasted, and where buildings, land, and other infrastructure are constantly underutilised.

There are interlinks between local and global sustainability. Scalability rules. According to Bucky Fuller (1968), the Earth is a spaceship, with the sun as our

energy supplier. "We are all astronauts", says Fuller. The idea of the earth is as a vehicle that requires maintenance, and that if you do not keep it in good order it will cease to function. Cities play also like spaceships. They are living laboratories. Tjallingii's thesis (1995) also deals with cities and sustainability bridges, linking general strategies to concrete practical tools and planning proposals, drawing lessons from years of pilot projects. His book introduces the Ecopolis strategy framework in the urban ecosystem and offers concrete guiding models with flows of energy, water, waste and traffic in the urban fringe and core areas and for organisation and participation (the market, co-operation, the learning organisation).

The challenge of managing and reducing urban waste is a growing sustainability problem for governments and local authorities. Recycling rates are increasing, but this is not enough to address the environmental challenges faced by our throwaway material culture. How? DOT TO DOTC investigates the scope, impact and potential of community-based waste-reduction initiatives, to address this problem firstly at local level (phase one) and then regional and global ones (phase two). It explores urban challenges and transformations through grassroots experiments and didactic research methods using waste creatively. Adaptability, Sensory and Temporariness are the key design components. Radical here means base, fundamental, taken the from fundaments. Etymologically, this term comes from late-Latin radicalis, "of or having roots"; from Latin radix, "root, going to the origin". The act of remake is restorative and regenerative, offering something to make again or anew with a special urban value.

At local level, DOT TO DOT[©] is a civic community in development that improves the perception of citizens about vacant lands through experimental gardens along the biological corridor of Forth and Clyde Canal. It represents an innovative socio-environmental model that enables creative people to connect gaps, design and local communities through real societal challenges like food and waste within the C2C framework (McDonough & Braungart, 2002). This regenerative model is not limited to recycling and the elimination of residual and toxic waste, but also focuses on the design of the cycles for biological and technical materials, the nutrients.

This case study is also part of a practice-led research forum "Remaking the City", a social channel that connects practices with academic and research groups about eco-design, social technology and urban sustainability. In addition, the motto "WASTE2DESIGN4SOCIETY" enables the exchange of terminologies, frameworks, methods and experiments. However, how are perceptual experiences involved in the remaking of stalled spaces? Local communities, civic enablers and community developers contribute to coproduce live projects through experiential learning and active involvement of experimenters as remakers. All perceptual experiences connect systemically waste and society through user-centred and participatory design design (Papanek, 1971) within the remake culture.



Figure 4. DOT TO DOT©, den building workshop (2018). Source: Studio Pop archive, 2019.

DOT TO DOT[©] runs a series of onsite and offline activities, including practical place-based experiments, sensory learning, local policy making and grass-root research to support public decision-makers and other stakeholders to work more creatively with social and environmental innovators. It can make a major contribution to understanding the potential of community-led grassroots innovations to offset waste locally and thus reconceptualise waste activities in order to help circular design and collaboratively implement more successful waste reduction and management schemes in other cities. Its outcomes drew on conceptual frameworks such as socio-technical systems, social practice theory and grassroots innovations (Seyfang & Halextine, 2012; Seyfang and Smith, 2007; Shove & Surling, 2013).

By scaling up, DOT TO DOT[©] might contribute not only to the wellbeing of poor suburbs but also to the global sustainability by reducing waste, offsetting CO2 emissions and mitigating climate change in cities through community urban gardening, upcycling projects, free exchange networks, collaborative consumption, foodsharing apps, tool libraries (open source) and the sharing economy (time-banking), etc. These grassroots innovations implies social and technical arrangements, either by reducing material consumption and/or dealing with waste more creatively, in order to deliver lowerwaste lifestyles. Community waste projects can potentially offer new radical solutions for more sustainable waste systems and practices worldwide.

Research methods and tools

DOT TO DOT© employs a combination of research by design and didactic learning methods. It covers the fields of circular design (pop up architecture and eco-design), appropriate technologies (remake technologies and selfbuild); adaptive urban reactivation (open public space); and transformative landscape (sensory gardens and bioremediation of brownfield).

[a] Community-based participatory research: Ecodesign methods based on remaking, place-making and place-learning; climatic and urban data collection, including clinics, design charrettes, group discussion and interviews on-site, and community consultations with members and volunteers from local communities, wards, municipality planners, housing associations, art collectives, social enterprises, students, researchers, remakers and local stakeholders. During the concept design phase, DOT TO DOT© Glasgow is driven by usercentred and participatory agenda. For instance, during phase one (6-month period), we have had weekly discussion groups (20 times), monthly interviews (six times) and three clinics. The total of participants consists of six leads, 19 regular members and between 8-12 volunteers on weekly basis. Members and volunteers are usually recruited via social media, promotional activities and festivals. All participants participate in the co-design process via design charretes, clinics and public consultations. The experiments are also validated with national and international awards, art engagement activities and site-specific experiments -such as proof of concepts and live projects- in situ during eco-fairs. Participatory design includes legal lease agreements; feasibility study, preliminary and advanced design; urban mapping; satellite imagery analysis; geo-mapping; pictorial inventory of historical maps; photographic inventory; and factsheets made by Studio Pop team and research assistants. Design development covers from ideograms and sketches to CAD design modelling and visualisations. Regarding analogical trials, sensory gardens were tested in array of reclaimed tyres planters, with one-meter spacing between pots to allow users accessibility in all directions.

[b] Literature review: In order to develop a circular model, design took inspiration from significant books: Spaceship Earth by Fuller, B. (1968); Ecopolis by Tjallingii, Sybrand P. (1995); and C2C by McDonough, W. & Braungart, M. (2002). It also implies the implementation of the New Urban Agenda Habitat III (Quito, 2016) and the study of international precedents of structures made of reused waste ruled by the design principles of temporariness, portability and sensory.

[c] Learning methods and tools: The THINK2PLAY4MAKE© (TPM) framework is a pedagogic circular model developed by Studio Pop to be applied in community development and urban reactivation projects drawn on models of spatial perceptions (Bloomer & Moore, 1977). It activates the experimental site in a playplace, an evolutionary outdoor learning environment

that inspires our creative community to experience themselves as transformative agents of the built environment. TPM amalgams both senses and placelearning. Community leads employ both research-led teaching and experiential learning methods with activities coming from students, academics, artists, designers, urban activists and residents to experiment new concepts of perceived spaces and stimulate perception arguing for a return of the body to its proper place in the architectural equation. During live experiments, participants mainly learn from hands-on activities using conversations, games and self-build methods to interplay at personal and group levels. Learning activities offer a base structure with these components: [a] Attachment (perceptive learning tasks); [b] unfolding (activating pre-existing knowledge); [c] making (bodily-kinaesthetic experience); [d] sharing (sensory knowledge transfer); and [e] self-evaluation. TPM questions the professional reliance on visual or computational two-dimensional representational drawings in conventional education, which often understands design as a highly specialised model made with a set of prescribed technical tools and media rather than a multi-sensorial manifestation of the human body's perception (O'Neill, 2001).

[d] Experimental site: Plot is situated at 636 Maryhill Road in Glasgow, a former vacant land. The site is wellconnected with a busy street, the Canal and close proximity to two primary schools. It obtained site permissions for trials from Glasgow City Council and Scottish Canals (Petruskeviciute & Suau, 2017). As part of the community-led regeneration programme led by the Scottish Government, DOT TO DOT© has been granted with the European Social Fund (ESF), Aspiring Communities Fund (ACF), stage one (six month) for piloting/testing a community garden with creative workshops and design charrettes. Stage two will implement a remake station, a workshop space fully focused on creative plastic reuse, including a eco-design shop and community hub. How is this experiment contributing to local sustainable development? During stage one, this trial contributed to: [a] define and map waste systems and practices in Maryhill; [b] study the scope, scale and character of the community waste sector; [c] evaluate the impacts of community-led waste reuse projects in gaps sites; [d] investigate the potential, and challenges faced by this sector at urban and regional scale; [e] design a remake station in future chosen sites; and [d] help design local community versus authority-led initiatives in order to improve waste reduction and tackle climate change locally.

Co-design of DOT TO DOT[©] Community Station

The community consortium is led by two social enterprises and one eco-school community. In terms of participants, DOT TO DOT consortium is both community of interest and geographic community. People from different backgrounds and professions is generously contributing to the enhancement of this project removing all inequalities and social boundaries whilst working for common good.

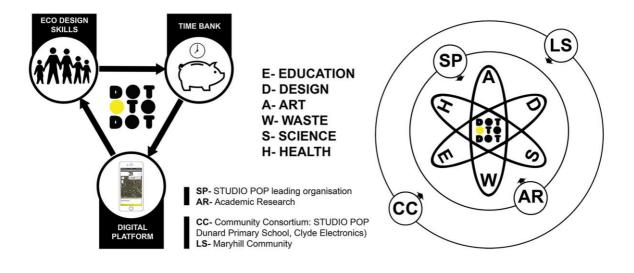


Figure 5. DOT TO DOT© Trash-to-Cash, social business model (right) and organisational structure (left). Source: Studio Pop archive, 2019.

DOT TO DOT© offers an agile spatial solution- on a temporary basis- to reanimate empty sites along the Canal through remaking with waste, public artistry and time-banking exchange. In order to change the negative perception of vacant lands and to plan a sustainable community-led regeneration, the community has approved a pragmatic proposal made in chunks. The community expects that all experiments inform new ways of developing DIY gardening and promoting environmental art locally and also in other brownfield sites. In doing so, the overall design is structured in four distinctive spaces: [a] The Community Garden, including a heritage food dome and sensory garden; [b] the Remake Station, a portable eco-design hub; and (c) the Woodland of the Senses, upwards the Canal side. After two consultations in 2018, design charrettes and sitespecific activities, community partners and members agreed to co-develop the following spaces for learning:

[a] The Community Garden consists of two gardens, Heritage Food and Wild Green ones. During hot seasons, it is used to plant heritage vegetables and teach horticultural skills, primarily to School children and residents of Maryhill. They grow heritage vegetables and other varieties rarely found in supermarkets or groceries. Food is exchanged during community events. The Wild Green Garden is an outdoor sensory garden that grows diverse native flora in planters made by tyres. It will be focused only on growing medicinal and aromatic local plants within a selection of shrubs, small fruits and herbs. To avoid any potential toxicity from contaminated ground, portable planters are detached and elevated from ground and filled in with high-quality soil, which allow growing, picking and eating any native plants without getting toxics. This experiment demonstrates how certain plants prefer rich soils whilst others thrive off poor soil. The reuse of organic nutrients such as domestic compost, tea bags or natural fertilizers could help specific plants like nuts and fruit shrubs to grow. Volunteers participate in all phases: soil preparation; planting; caring; picking; and eating.

[b] The Remake Station (phase two) will be the portable eco-design hub that provides remake and craft skills. It consists of modular units made of shipping containers (20-feet cabin hire type) to accommodate our community café, social club and remake workshops, including a tool storage. The central outdoor space is called Àite A Dhèanamh, Place for Making in Scot Gaelic. It is a communal place for gathering, sharing and exchanging ideas.

[c] The Woodland of the Senses (phase three), it is a slope situated close to the Canal side. It is a land concession given by the Scottish Canals to co-develop outdoor educational activities. The forest has the potential to become a natural laboratory for kids. Environmentally, it can be connected with the curricula of two primary eco-schools. This site is planned as experiential place-learning environment, where children, educators, researchers and wider community can get multi-sensorial experiences and test nature-based solutions as well. The community came with the concept of changing the perception of this man-made forest into a naturalised interactive touchpoint. Trees will be adopted and tagged, so everyone can identify and track them during excursions. For instance, kids can sample the mean temperature, amount of daylight, soil moisture, relative humidity with camera traps, insect and motion sensors. Due to the slope condition, this sensory forest will be connected through a zig-zag trail, starting from the Canal pathway.

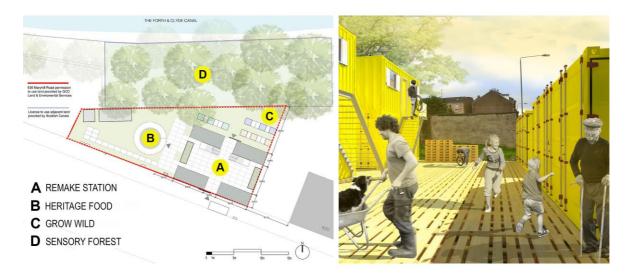


Figure 6. DOT TO DOT© Community Garden. Maryhill Remake Station. Source: Studio Pop archive, 2019

DOT TO DOT[©] is also a digital community, which is basically a social technology [mobile-friendly website: www.dots.scot] that maps and connects people and waste through design. The app is in Alpha development serving to retrieve relevant data and identify new functionalities and features for our community. This tool helps the implementation of temporarily land uses, live projects, clinics and site events. In phase two, we hope it will assist community with service design, remake workshops, online tutorials and a DIY library. As social technology, DOT TO DOT[©] will be self-financed with membership fees, crowdfunding and donations. Remakers are members, backers and volunteers that will contribute with materials in-kind or time to get free materials, services and reskills as rewards.

Finale

Cities require a widening focus from the city-products to material flows, production processes and conditions, as well as aspects of land use and waste reuse. It needs an extended systemic view as well as profound understanding of ecological principles. Pop up Architecture is the sensory, temporary and portable manifestation of the remake urban culture. It is an architecture of peripety, which uses the land without owning it. Pop up Architecture is the expression of a heterotopic space (Foucault, 1984), the "other space". It is made from scratch. Paraphrasing Bernard Rudofsky (1964), these social forms are self-build structures of occupancy in transit. Self-build means animal architecture (Frisch, 1983), an instinctive way of making an habitat. Main design features are (a) people are natural self builders, (b) build with waste as reusable material, (c) make temporary structures, and (d) produce building with low-calories. Like any organism, coarchitecture is highly resilient. DOT TO DOT $\hfill {\mbox{\scriptsize O}}$ is an architecture with the people, by the people and for the people.

DOT TO DOT[©] also means open source architecture using somatic learning experiences to co-create ecologically a place. This experiment has positively increased the number of local supporting organisations, including Scottish and European academic and research consultants. organisations, researchers and Experimenters are strengthening the sense of community cohesion, civic empowerment and urban reactivation. DOT TO DOT[©] is a unique combination of ecological design, social technology and community-led initiatives to transform waste into social value. Being an innovative urban management model, it offer the potential to be replicable as social licensing in other similar European cities (Suau; Petruskeviciute & Til, 2018). It is grass-root innovation that contributes to a lower-waste future locally and re-conceptualise waste reuse activities in public realms to help circular economy initiatives and collaboratively implement more successful waste reduction and management. The more senses people use, the richer the perceptual experience. Community gardens are dynamic learning spaces that represents the organic expression of evolutionary urban forms. They are often perceived as picturesque structures and rarely perceived as social forms. Sensory gardens are both and regenerative spaces, restorative mainly characterised by polyvalent, flexible and adaptive patterns, geometries and forms. They concentrate a wide range of sensory experiences and sensibilities, which many of them are unselfconsciously experienced. In DOT TO DOT©, learners live an multi-sensorial learning experience gaining perception-in-action, somatic, kinesthetic and constructional skills. By implementing sensory structures in cities, we reconnect design with

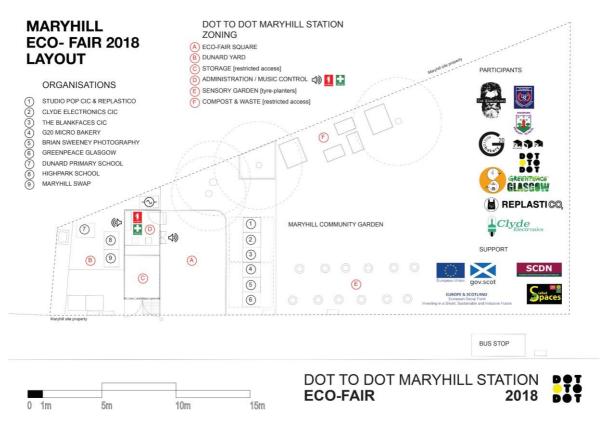


Figure 7. DOT TO DOT[©] pop up architecture validated by community consultations during eco-fair 2018. Source: Studio Pop archive, 2019

people and change their perceptions of everyday life in a transformative manner (Suau, 2017).

Within our material culture, what would happen if we creatively designed the reuse of waste, products and materials, promoting a long-term cyclical use and maintaining or improving its urban value within the neighbourhood? DOT TO DOT© translates the perceptions of vacant lands and waste into regenerative

landscapes transformed by creative experimenters. This chosen case orients young designers, architects, planners and environmentalists as local innovators to acquire a better understanding of what are the community needs; to perceive better connections with the immediate surrounding; and to build site-specific sensibilities. There is no more resource squandering, depletion and exploitation in cities, but resource use in cycles.



Figure 8. DOT TO DOT© Remake Station (phase 2), street view. Source Source: Studio Pop archive, 2019

Acknowledgments

DOT TO DOT© IP/copyright is owned by partners of Studio Pop C.I.C. It is a social licensing that enables smart communities, stakeholders, housing associations, local planners and governments to design and implement projects that transform vacant lands and rundown buildings in deprived areas throughout self-build, DIY, gardening, workshops and events. I would like to extend my gratitude to the DOT TO DOT© community consortium leads and Studio Pop C.I.C. team for their inspirations, artistic creativity and visionary ideas. Specially I do express thanks to distinguished personalities and groups, specially Dr Cristian Suau from Studio Pop and Dave Ball from Clyde Electronics; Viviana Checchia, engagement lead at the Centre for Contemporary Arts (CCA), Glasgow; Tanja Obradovic and the Urban Planning Cluster in Niš, Serbia; EU COST Action CA16229 European Network for Environmental Citizenship (ENEC), EU COST Action CA16114 RESTORE and EU COST Action TU1201 European Network Urban Allotment Gardens; ISAGS UNASUR Institute and HABITAT III (New Urban Agenda); and the Architecture Fringe Festival in Scotland. Finally, our gratitude to Zeba Aziz, DRS planning officer of Stalled Spaces Glasgow; Jim MacDonald, chief executive of Architecture & Design Scotland (ADS); and the European Social Fund (ESF), Aspiring Community Fund led by the Scottish Government.

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