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Mauri-Centred Care Methodologies and Tools for Regenerative Urbanism

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ABSTRACT

How can we practice urbanism care-fully, with an attention to the wellbeing and vitality of the more-than-human? Such a question is fundamental now if we are to counter current Anthropocenic processes and actively transition to urban cultures of care. In this text I review recent work on a tool designed to support a care-based ethical attention to urban and wider living systems wellbeing. With diverse communities future-focused 'compasses' were co-created which acted as collaborative direction finders and activation tools for mauri ora or living systems wellbeing. I explore here whether such re-orienting methods can provide a meaningful way to assist communities to activate transitions from extractive to care-based urban practices.

1 | Introduction

We live in a time of converging and overlapping emergencies including climate chaos, extinction events, ocean heat-waves, global pandemics and loneliness epidemics, housing shortages and cost of living crises (IPBES 2018; IPCC 2022). It can be difficult to perceive and articulate proximate and foundational causes and counter-responses in the midst of an active polycrisis. The current state of affairs has been produced by a care-less capitalist culture. The absence of care for living systems wellbeing has enacted the Anthropocene, a new epoch of existential risk. How might we now practise urbanism care-fully as an ethical counter to the contemporary Anthropocenic crisis?

To be careful, in the context of this paper, is to be ethical and attentive to the relational attunement between living systems, nonhumans and humans, and our everyday human ways of living and being in our homes, neighbourhoods and cities. In a context of indigeneity in Aotearoa, this is what it is to act for mauri ora, as social, cultural and ecological wellbeing (Smith 2012). Mauri is an indissoluble network of relations (Durie 2001). It is the life-field, the sublimely extensive, relational assemblage that *is* livingness, the living world, the wider cosmos. Mauri *ora* is the vitality of that life-as-field, the inseparable connectivity of more-than-human communities including environmental entities, of us and the living world, and also the thriving that comes from that relational holism.

When words like "systems" and "ecologies" are used in this paper, they are situated within this vitalist mauri ontology, rather than within positivist and separating Cartesian and settler-colonial frameworks (A. Yates 2010; A. M. Yates 2021; Borhnert 2018; Parsons et al. 2021). Living systems or ecologies here are care-based relational networks with more-than-human kin, the living world: they are "systematic arrangements of humans, nonhuman beings (animals, plants, etc.) and entities (spiritual, inanimate, etc.), and landscapes (climate regions, boreal zones, etc.) that are conceptualized and operate purposefully to facilitate a society's capacity to survive and flourish in a particular landscape and watershed" (Whyte et al. 2018, 159). And in this urban context I would add those eco-technologies and materials that, like animals or plants, are able to harvest or meaningfully contribute to regenerative and recycling environmental flows. To ecologise then in this context is to engage in a regenerative and care-full manner with the relational arrangements of human, nonhuman, landscape entity, and eco-technologies that together compose this living world (du Plessis 2011; Mang and Reed 2011; A. Yates 2016).

1.1 | The Compass—Visualising Care-Full Living Environments

In this text I reflect on a recent body of work testing out a transitional tool for care-based urban system change. Ngā tohu mauri ora, the urban regeneration compass, is a transition tool developed within the regenerative research lab, He Puna ORA. The compass visualises a wellbeing-led orientation and defines urban strategies and actions for care-full change (Yates et al. 2024; Yates et al. 2022; A. M. Yates 2021). It, along with other urban transition resources, was developed with two tranches of National Science Challenge research funding from the Aotearoa New Zealand government. Developed as a catalyst for communicating and activating change, the tool has three key modes. In the first, a baseline compass kitset visualises just urban transitions in ecology, energy, economy, community systems and buildings and communicates associated actions to support those changes. In this setting, the tool communicates the diversity and breadth of necessary urban system change, helping users to think systemically and holistically across a complex, multi-variant field. In the second mode, specific place and community-based compasses are created from the compass kit of parts to communicate and activate their own aims for regenerating local wellbeing, human and nonhuman. In a third setting, the compass can be used as a means of analysing and communicating the change that is already happening in our cities, coded according to key compass transitions in local ecology, energy, economy, community and built environments.

The compass visualises concepts, strategies, and actions for regenerative urban transitions across five key urban systems in ecology, energy, economy, community, and built environments. It signals approaches to support transitions from ecological degeneration to regeneration; from climate-changing carbon-based energy to zero-carbon energy systems; from linear take-make-waste to circular and regenerative economies; from disconnected and inequitable neighbourhoods to socially and ecologically connected communities; and from ecologically unsustainable buildings to regenerative built environments. In so doing, it links together a transformative ethos for mauri ora with a conceptual framework for regenerative urban systems and a series of strategic principles and pragmatic place-based actions for transformative change. It has a range of manifestations, including as an online tool, a large format workshop poster, and is also articulated through a series of films that cinematically visualise best practice regenerative approaches.

The compass visualisation is composed of a series of circles and text blocks on a mesh field (see Figure 1). The mesh background visualises mauri and links global wellbeing, visualised in the outermost circle, with local wellbeing, depicted in the central five nested circles. Mauri ora thriving is depicted at the centre of these circles, defining this state as the primary care-centred orientation of the compass.

The five local wellbeing nested circles at the centre of the compass visualise the five key urban system transitions. To the side, in a coloured strip, is a summary of key urban regenerative principles and actions associated with each of the five urban domain circles. The outermost circle emphasises a principle of ecological regeneration; wellbeing-led actions listed here include reforestation and the development of blue and green ecologies like wetlands for increased biodiversity and human wellbeing and improved resilience to weather events. The next circle focuses on a zero-carbon energy system; transitional actions noted here include locally generated zero-carbon energy for both transport and buildings. The following circle describes a circular regenerative economy; actions for change here include the shift to low-carbon materials and para kore or zero-waste initiatives. The subsequent circle visualises highly connected and resource-filled communities and neighbourhoods while the innermost circle depicts regenerative and living buildings and built environments. This compass tool maps out directions—ontological, strategic, pragmatic—for care-based urban system change. The following section addresses the city as a complex socio-ecological condition and a powerful potential site for systemic change.

1.2 | Cities and Care-Full Change

Why focus on cities as sites for complex cultural care-based change? Our carbon-based cities are currently driving climate change, land-use change and biodiversity loss, and widespread pollution and are sites of extreme social inequity as they house the ultra-wealthy and a fast-growing precariat (IPBES 2018; IPCC 2018, 2021, 2022). These cities are driven by extractive ecologically destructive energy and economic systems. Cities are intensities of culture and cultural practice, and as such can be important acupuncture points from which care-based change modalities can be tested and scaled outwards.

And cities are already ecologising in a process—emergent and too slow—of transition. These emergent ecologies are occurring in response to a wildly diverse set of forces or conditions—as local urban farm initiatives that create nurturing environments for plants and for youth workers (Dombroski et al. 2023); as pragmatic planning responses to urban flooding and the need for the resilience that comes from more green and blue urban landscapes (Jayawardena 2024); as central government-led initiatives that enable the reduction of food waste going to landfill or plastic waste to the sea (Diprose et al. 2023).

As these changes embed, cities are reverting to more ancient socially and ecologically connected models as they become, in

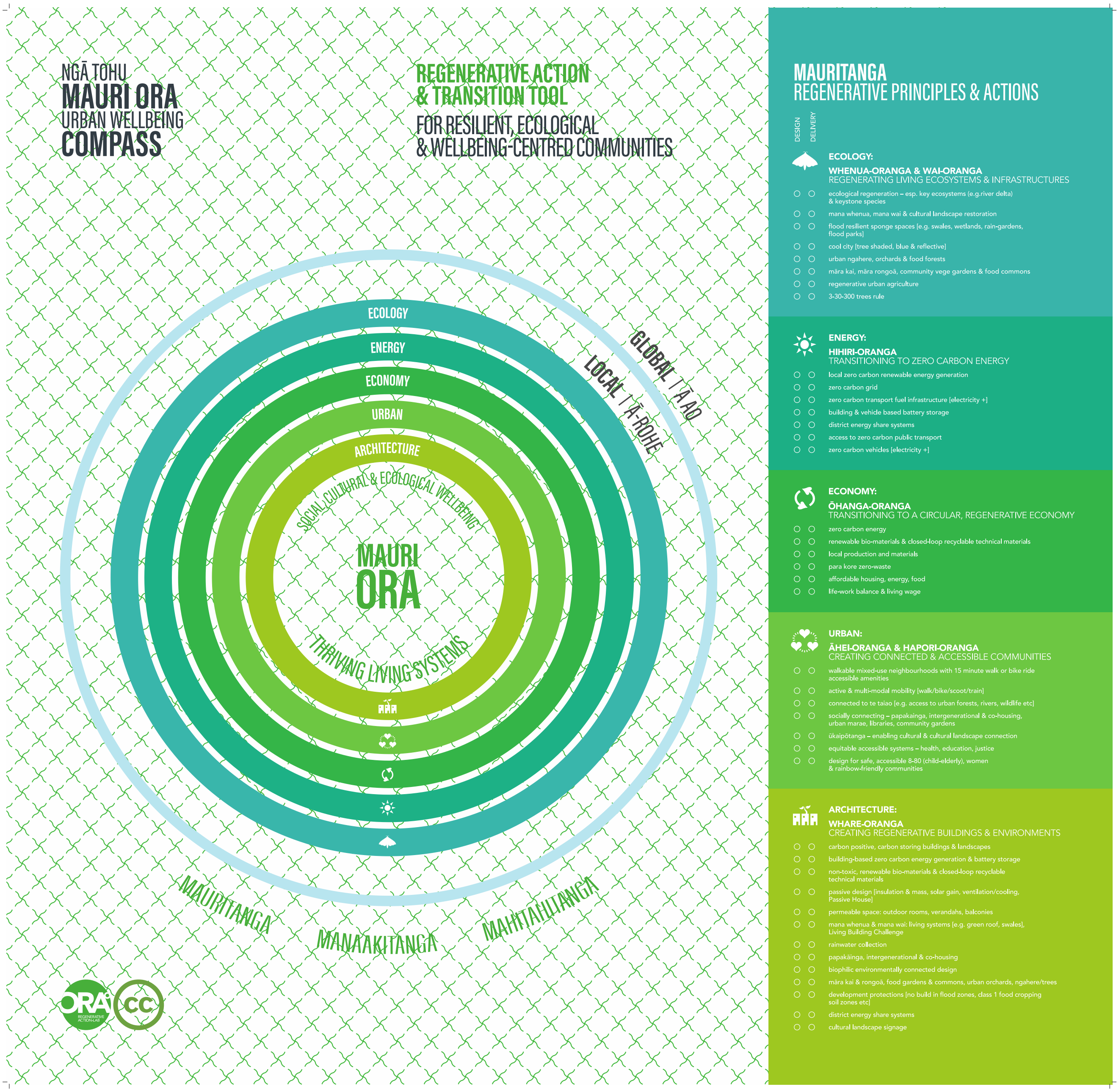

FIGURE 1 | Ngā Tohu Mauri Ora, Urban Regeneration Compass. [Amanda Yates, Kyra Clarke, Fiona Grieve, Caroline Powley]. [Colour figure can be viewed at wileyonlinelibrary.com]

certain regions and precincts at least, more walkable or more generative of local food, or are adopting energy systems that source environmental energy and resources in renewable and low carbon care-based ways. Biophilic ecological infrastructures—like functional wetlands and swales—that sequester carbon, increase biodiversity and flood resilience are becoming more common (Blaschke et al. 2024). The everyday materials of our economy are ecologising. Our supermarket bags are now made from compostable paper or plant-based plastic. Some of our buildings, eschewing high carbon steel, are now structured from mass timber and harvest their own power and water (Yates et al. 2024). All of these changes together enact a set of tactics for a more care-full, ecologically attuned urban model. Even as our culture slowly wakes to the scale of the global socio-ecological challenge and opportunity, cities are beginning to test out or enact, at small scale still, necessary transformative practices.

1.3 | Activating Change

We are in a brave new world now as the climate starts to move beyond what humans evolved within and can live in unmediated (Raymond et al. 2020). Meeting the extremity of the moment requires radical change. So how might a process of necessary culture change coordinate, scale and accelerate? How might such change can be catalysed? Is this even now possible? We've known of the need to move towards a zero-carbon energy system for generations. But cultural movement is inertial and vested interests work to maintain the conditions for vast wealth even at the risk of socio-ecological collapse. Design scholar John Thackara suggests that cultural system change is "a condition that emerges through incremental as well as abrupt change at many different scales" Thackara (2015, 9). This research reflects on agentic, democratic and care-full change processes for incremental urban culture change in place. What theories, frameworks or tools for care-based practices and urban change might have value here?

Maria Puig de la Bellacasa's work on an ecological ethics of care is instructive. Here existence is ontologically a 'matter of care' and ethics is interventional, an active doing Puig de la Bellacasa (2010); de la Puig Bellacasa (2017). Bellacasa argues for "thinking with care" as a sensitive acknowledgment of human and non-human agency and an active attention to the wellbeing of those whose voices are silenced. Addressing ecological ethics from a specifically design context, Joanna Boehnert writes of how design must be rethought as an eco-ethical praxis that acknowledges our embeddedness within wider ecological systems (2018). Here the act of design requires a speculative political intelligence and ethical intention to deliver more viable Ecocenic futures. Kothari et al. (2019) link eco-ethical doing with development studies in a 'pluriversal' model which celebrates a diversity of ways of living ethically in thriving human and non-human communities (2019). This pluriversal approach is activating in a transformation context as it affirms and documents on-the-ground examples of place-based change led by diverse agents. Such change can occur prior to those larger structural transitions defined at intergovernmental or governmental levels which tend to be slowed and limited by the complex politics of self-interest versus ecocide. Indeed, as testing grounds, such small change can seed wider or more structural changes in planning approaches, legislations and built environments for example (Lydon and Garcia 2012). Here the pluriversal is not some naive local politics of place but is rather enabling of distributed agency for change as it reveals the impossibility of western/modernist claims to universalised knowledge, systems and 'solutions'.

In terms of Aotearoa, and care-ethics, Meg Parsons, Karen Fisher and Roa Petra Crease view freshwater systems with a decolonising lens, placing indigenous relational care politics and practices at the core of environmental management (Parsons et al. 2021). Indigenous environmental justice is a foundation for the analysis that recognises the systemic injustices brought about by settler-colonial frameworks and practices. Examples of care-full indigenous freshwater management and governance are presented that signpost directions for wider change. Ellen Tapsell's Political Ethic of Care Toolbox, generated within her Master's thesis, aims to effect systemic change as it brings care ethics and tikanga Māori to an environmental governance context (Tapsell 2022). Arguing that current care-less environmental governance models are both colonising and not fit for purpose for this time Tapsell describes a range of Tikanga Māori environmental governance arrangements that are care-based. Her toolbox, aims to increase the user's sensitivity to their own positionality, and to how care is manifested in political, social, cultural and ecological contexts. Leading academic Maria Bargh's Tika Transition policy guide and toolbox brings tikanga Māori into decision making for just, low carbon and sustainable transitions that meet Māori needs and intentions (Bargh 2019, 2023). The toolbox measures outcomes for Māori and environmental sustainability against key points of tikanga: whanaungatanga or the relationship-building, kaitiakitanga or environmental guardianship, utu as balance or reciprocity, mana as authority, tapu or spiritual conditions, and partnership, of Māori and Crown within the framework of Te Tiriti, Aotearoa New Zealand's founding constitutional document.

In terms of urban change practices specifically, academic Nabeel Hamdi's small scale, local and place-based approach to urban development, or emergence as he terms it, is relevant (Hamdi 2004). His theory for developmental change focuses on an ecological process of emergence, emphasising the power of the creative and exploratory. Additionally, Hamdi reflects on the community forming processes inherent to emergence in natural systems, thereby accentuating participatory and community-led practices. Thinking with the local is valued here. The approach aims to leverage the intelligence of human and nonhuman communities that comes from being, acting, and interacting on the ground. Utilising these approaches enables locally tested, tightly networked urban systems to emerge and scale.

Tactical urbanism similarly employs a local, small-scaled transitional testing approach with an emphasis on speedy, affordable, *temporary actions* performed either by citizens or by the City (Lydon and Garcia 2012). The theory of change relies on the scalability of tactical testing responses to the unknown to activate longer-term, more wide-ranging change. As Jaime Lerner, former mayor of Curitiba Brazil and noted urban regeneration leader, notes there "is no longer an excuse not to act. The idea that action should only be taken after all the answers and resources have been found is a sure recipe for paralysis" (Lydon and Garcia 2012, iv).

Action for a just transition is central to leading researcher Kate Raworth's doughnut economics model, which reorients economics within a bounding social foundation and ecological ceiling visualised as a doughnut for easy consumption. Raworth in collaboration with other transition leaders from the Doughnut Economics Action lab, Biomimicry 3.8, Circle Economy and C40 Cities, subsequently resized the doughnut to the scale of a city, as first seen in the Amsterdam City Doughnut, visualising a holistic 'portrait' of the city's complexity and its future direction (https://doughnuteconomics.org/amsterdam-portrait.pdf). Raworth describes the city doughnut as a tool for transformative urban action as it promotes reflection and strategic decision-making around how cities can enable the local thriving of people and place while respecting global wellbeing, supporting this envisioning process with a clearly articulated conceptual framework for change. A recent Regenerative Development Manual extends upon the doughnut's potential to frame urban transition processes (Hill-Hansen and Jensen 2023).

Many of the examples discussed above share the contention that we must act now, even in the face of the unknown. The act of acting with care is itself transformative as we decide to engage, exploring potentials on the ground with real communities, human and nonhuman. Acting and enacting care-full change in this way involves a sensing, adaptive, emergent, questioning approach with capacity to robustly engage in a wickedly complex environment. This is a kind of emergent design process in itself, an iterative enquiry guided by defining parameters, whether to do with process, intention or care-full intention. The following section explores how such care-based exploratory approaches might manifest in place, with communities, with "care" focused through the lens of the compass.

1.4 | Communities, Compasses and Care-Full Change

In terms of the second setting of the compass, concerned with co-creating shared conversations, agreements and visions for change with specific communities, the tool offers an opportunity to cohere urban communities of change around a holistic gestalt of mauri ora and living systems thriving. Mauri ora is both the existential condition most at threat and the ethic and direction most needed at this time. The compass theory of change is navigational, concerned with working with diverse communities to co-create, define, and communicate a primary orientation towards regenerative transitions—ontological, cultural, social, ecological, energetic, economic, infrastructural—in a complex already changing environment. In this mode, the community-created compass visualisation acts as a shared holistic vision and strategic action tool.

Co-creation workshops have been run with an Iwi governance group Te Tatau o Te Arawa, with Ministries, with neighbourhood communities in New Caledonia, AUT's architecture programme, a primary school, and architecture firms. Workshops have been built on existing relationships or developed due to shared objectives for more care-full urban practices. For example, Te Tatau o Te Arawa sought to extend its mauri-centered 2030 vision plan into a holistic housing strategy. A specific housing compass was developed within compass workshops co-facilitated by Te Tatau and Professor Angus Macfarlane and I as researchers who also whakapapa or are kin to Te Arawa iwi (Mihinui 2021).

In New Caledonia indigenous communities were voicing what matters to them in their homes, communities and the wider island environments in the context of workshops that brought them together with New Caledonian officials holding public housing and urban design portfolios (Yates et al. 2025). A powerful finding from compass workshops in Rotorua and New Caledonia was that some cultures and communities are already fundamentally relational and care-based. (A. M. Yates 2021; Yates et al. 2025). The workshops with Rotorua-based Iwi governance group Te Tatau o Te Arawa, and with New Caledonian indigenous communities affirmed the reflexive understanding of kin-ship with the more-than-human. Interestingly, many of the island-born French descendants also affirmed their perception that the sea, sky, earth and forest is alive—in deep opposition to Cartesian binaries that drive much of western/modernist thinking and render 'nature' as inert and in contrast to their Continental kin. They also reported heart-felt care for these environmental entities. Workshop attendees saw how this shared relational thinking created bridges across communities in meaningful ways that could support more effective care-centered collaborations for change. Funded by the New Caledonian government, these workshops occurred in the shadow of ongoing colonial presence but before the most recent violence linked with French colonisation of the islands. The real difficulty and civility of these interactions disclose the wider complexities of acting care-fully within colonising frameworks, including those of capitalism. Puig de la Bellacasa's offer here, to dissent-within enmeshed complexities as a productive act, is relevant.

AUT's regenerative architecture programme was seeking a way to support new staff and students into holistic care-full and place-based design approaches. In ongoing workshops with architecture academics, and with input from students, a Hoahoanga compass was co-created from the compass kit-set. The compass has been used as an orientation tool for the programme's community of academics and students (Yates et al. 2023). Students also refine their own compasses to more specifically communicate the regenerative focus and agency of their design projects. In this context, the compass is already supporting change as it shapes the thinking, skills, and aims of the new generation of built environment designers.

A neighbourhood and school-specific compass and action plan developed with Fruitvale Primary School is also now in use (see Figures 2 and 3). The compass contextualises and communicates the wide-ranging regenerative activities being practised within the school, and along with an associated action plan, scaffolds further care-full activities such as working bees to regenerate the mauri of their local awa, or to work on their communal vegetable gardens. As a neighbourhood-level urban change resource, the compass emphasises the need for sponge city approaches to reduce frequent flooding within this river neighbourhood, and better walking and biking connections to allow children to travel the neighbourhood safely. A film, shown recently at a national architecture film festival, further helps to communicate the community's regenerative vision.

The third setting of the compass, where it is used to code and communicate live initiatives and projects that are achieving transformation on the ground, is documented in two urban transitions books. An Otautahi Christchurch-based text overviews a selection of transitional actions, architectures and enterprises associated with Life In Vacant Spaces (LiVS) (Dombroski et al. 2023). LiVS was established and funded by the Christchurch Council in the aftermath of the devastating earthquakes of 2010 and 2011 to act as a broker connecting people and projects with underutilised land. A programme of transitional activities, some 700 to date, tests out systemic shifts in, for example, urban ecologies, circular economies or social systems. Projects include urban composting, bike recycling, local food initiatives, co-working spaces and transitional architectures.

A Transitions in Action guide, focused on Te Whanganui-a-Tara, the Wellington region, reviews a wide range of care-full projects or initiatives by diverse community members including not-for-profit groups, Iwi, social entrepreneur businesses, and universities (Yates et al. 2024). Projects like Capital Kiwi aim to regenerate the local kiwi population, achieved with a model that builds community activation and connection. Others, like Dwell, pioneer community housing approaches that build social connection as they address housing inequity and insecurity. Ngā Mokopuna, Te Herenga Waka Victoria University's latest building, has been designed to meet stringent and care-full Living Building certification and achieves all five of the compass' key urban transitions for regenerative ecologies, energy, economy, community systems, and buildings.

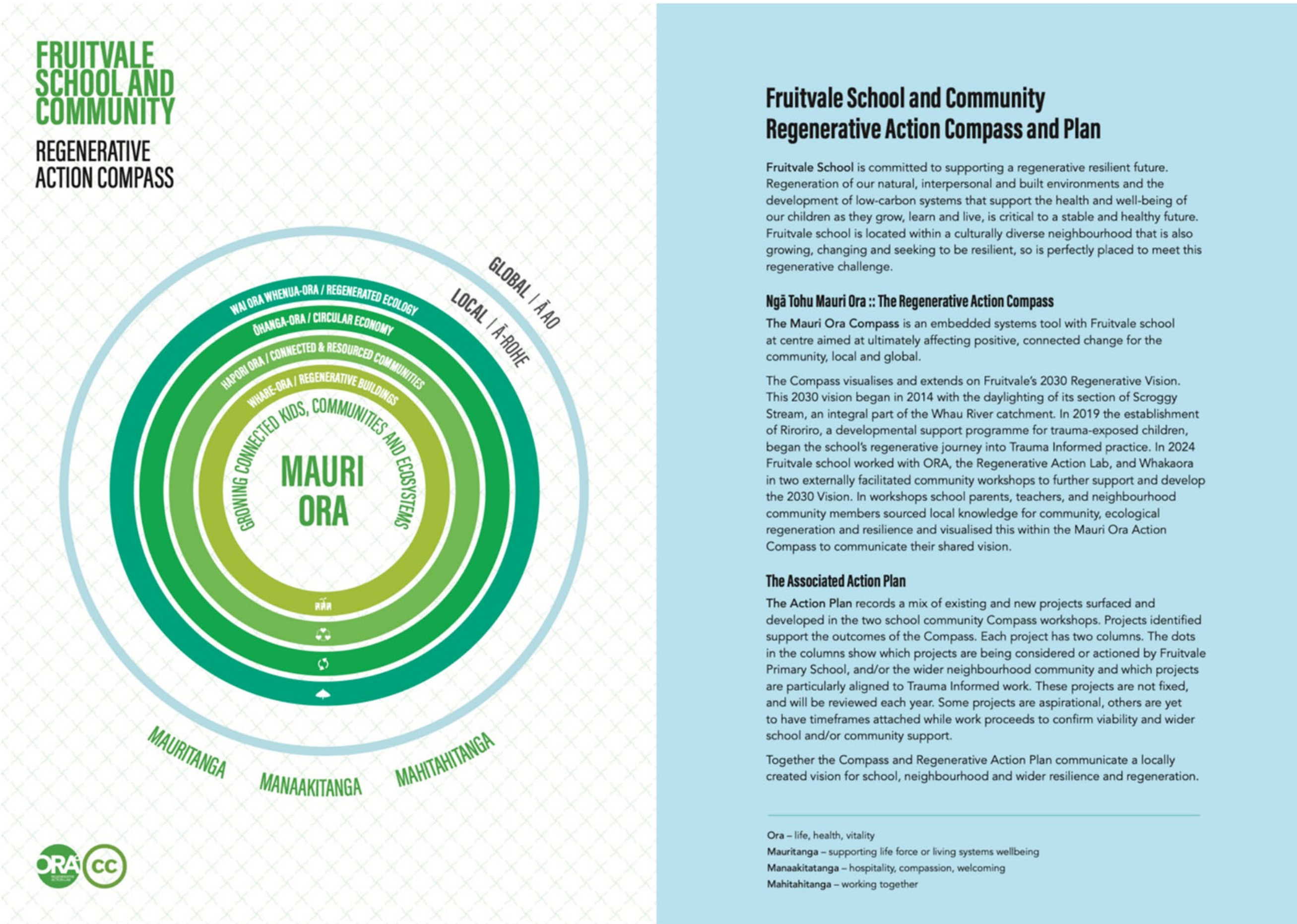

FIGURE 2 | Fruitvale Regenerative Action Compass. [Content Creation: Fruitvale community. Graphic Design: Amanda Yates, Jacinda Torrance]. [Colour figure can be viewed at wileyonlinelibrary.com]

Many communities are already sophisticated and 'expert' in what transformations are needed in their place or space—this is a significant finding from interactions with groups acting for care-full change. Iwi, neighbours, parents, educational communities, social enterprises, these diverse groups all showed deep care for and knowledge of the human and nonhuman communities with whom they live. Interestingly, many community members—planners, community nurses, landscapers, local politicians, lawyers—worked in local government or understood complex, governance-level approaches to making change. Engaging with place-based or intentional communities through workshops or interviews validated Hamdi's local knowledge networks—many people are invested, have care and expertise in their place and its wellbeing, and are already acting for care-based change in diverse ways.

1.5 | Transitioning to Urban Care Practices in Aotearoa

As compasses have been co-created in place with communities, the deep care that already exists for human and more-than-human communities has been evident. The communities that have engaged with the compass have largely arrived equipped with sophisticated insights into the cultural change needed at this time, and many have already been acting with care in ways that make a difference, whether for local families or for a local ecosystem or economy. The opportunity now is to deepen and then scale that change outwards from the individual to the neighbourhood or community, and then outwards again to the planning, governance, ecologies, economies, and environments of the wider city.

Transitioning more widely to regenerative urban care practices will involve a focused and systemic shift from a business-as-usual extractive cultural model to a model that centres on mauri ora and human and non-human vitality alike. During compass workshops, communities described how existing normative settler-colonial urban systems—social systems, economic practices, local bylaws, planning and zoning rules, housing types, transport types—impede care practices and need to change. As noted, this change process is ontological in order as it involves a fundamental shift from separating human-centric thinking to an understanding that we live always in relation to and in exchange with the living world, with sky, earth, sea, fish, birds, insects, plants, *and* other human beings.

The regenerative transition process must also be place-based, pragmatic, responsive, contingent, iterative, and good enough rather than perfect. Change on the ground can literally involve the development of local composting collectives for more local, regenerative, and para kore (zero waste) economies and ecologies. It may involve meeting as a community with Council planners to discuss the regenerative change the community wants to see

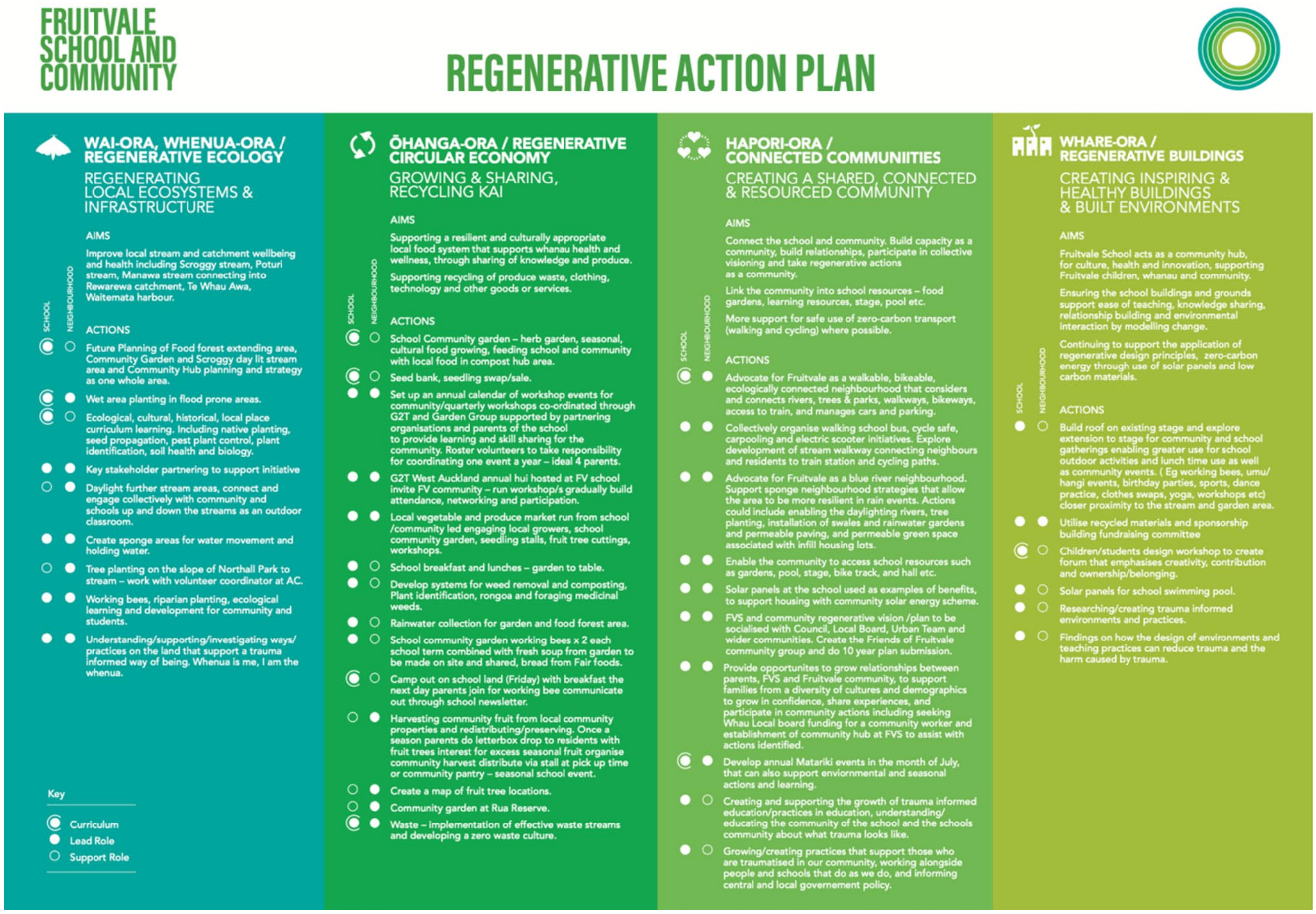

FIGURE 3 | Fruitvale Regenerative Action Plan. [Content Creation: Fruitvale community. Graphic Design: Amanda Yates, Jacinda Torrance]. [Colour figure can be viewed at wileyonlinelibrary.com]

in its neighbourhood. It can mean changing educational curricula to develop students with care-full sensibilities and capacities. Transition of this kind may involve the shift in local supermarkets to reusable or compostable containers away from bags that have globally distributed toxic petrochemical-plastic nano-particles.

This transition process is vast and microscopic. It is at once wide-ranging, high-level, a cultural-ontological shift and, at the same time, deeply local, personal and place-based, to do with how we engage with other beings including the living environment from which we compose. Change of this order is a messy, multiple and mutable process. Activating and catalysing change is also messy, multiple and necessarily adaptive. The temporality of transition is also multiple and divergent. It is intergenerational, as socialisation and mind-sets ecologise, or as building infrastructures age out and are replaced. And it is ephemeral or diurnal, as winds blow clouds away and solar panels charge, or as people change their daily habits and uptake new bike or bus systems to get to work or school. There are innumerable ways by which cultural transitions occur, but it is clear that scaffolding the place-based knowledge and agency of local communities to effect care-based action now is a just and effective change modality. The compass seeks to support such just transitions.

Testing out massive cultural change in place, with human and nonhuman communities, *is* what we are now doing within our cities, our neighbourhoods, our homes. It is vital that these transitions occur in a just, timely, coordinated, and connected manner that enables co-benefits. The compass is a locally grown, place-based tool that contributes to care-full change in a small and relational way that can underpin wider movements for change. As a strategic and planning device, the tool attends to the longer term, intergenerational, and infrastructural nature of cultural transition. As a pragmatic action plan, it supports the need for immediate change on the ground. As an ontological change tool, it centres collective attention to mauri ora, to a care-filled attention to the vitality and wellbeing of this living world. Thinking our cities through mauri and living-systems thriving brings a care-full ethics to urban practice (A. Yates 2010, 2016; A. M. Yates 2021). This is the kind of foundational, ontological, and care-full change that is necessary at this time.

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Conflicts of Interest

The author declares no conflicts of interest.

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