Title

Fields of Decline: Landscape Strategies in Western Australia's Wheatbelt Region

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Painted grain silo in the Wheatbelt. By Phlegm for PUBLIC Art in the Wheatbelt, 2015. Photograph by Bewley Shaylor, image courtesy of FORM.

It took just fifty years to replace 250 million years of biodiversity with a monoculture of wheat. Now that large swathes of the Wheatbelt have proven unsustainable in as little as two generations, landscape architecture is called in as the profession of last resort.

Population decline is difficult. Clearly, it presents enormous challenges for the communities directly afflicted by population outflows. But decline also confronts the design and planning fields. At the most fundamental level, the usefulness of design is premised on the modern culture of progress, which is tied to growth. Decline undermines this alliance to such a degree that most efforts seek consciously or unconsciously to reverse the process. Perpetuating decline is perceived as a concession of failure, leaving a dearth of strategies for managing decline gracefully. Instead, design culture tends to romanticize imagery taken from the frontlines of urban decay.

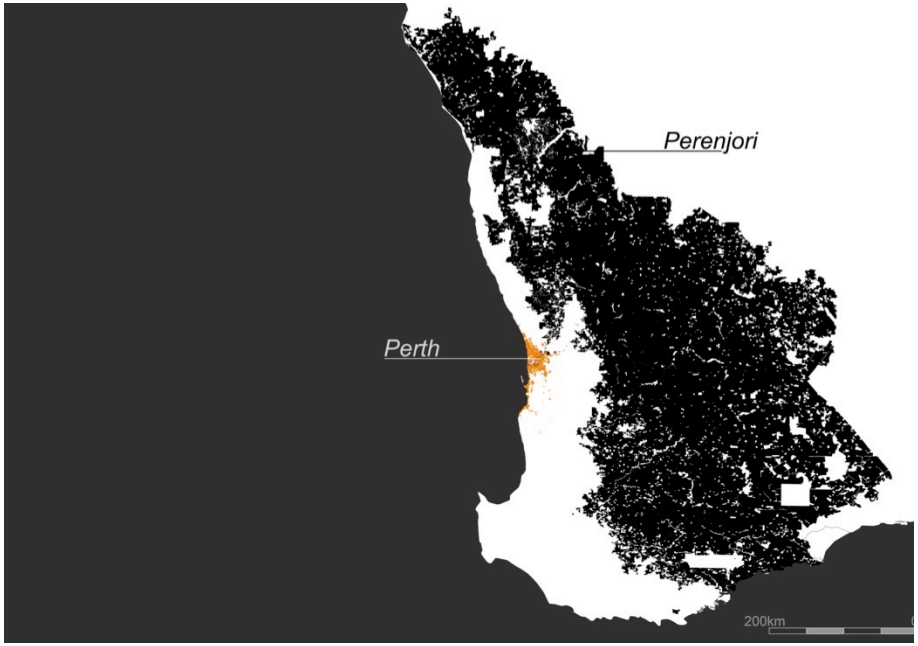
But decline is not reducible to ruin-porn and nor is it simply growth in reverse. Viewed within a larger context, decline is a part of a dynamic process of population flows at multiple scales, whereby contraction in one area feeds growth elsewhere. Hollowed-out cities are among the most visible expressions of this process, with abandoned swathes of

grassland now ubiquitous across the post-manufacturing cities of the Northern Hemisphere.

In the gentrified capital cities of Australia, urban hollowness is largely unknown. In its place, hollowness occurs at the continental scale, as population flows from the inland agricultural regions to the burgeoning coastal urban centers. Although the inhospitable interior has always been sparsely inhabited, the population differential between the cities and the bush continues to widen. This ongoing sea change fuels what Bernard Salt terms the “empty island syndrome,” which is both a demographic reality and a subconscious sense of strategic vulnerability.

In the absence of any field that specializes in the difficult problems associated with decline, landscape architects often default into this role. This is partly pragmatic, in the sense that the process of population loss usually substitutes buildings with new open landscapes that require attention. But more intrinsically, landscape architecture’s longstanding emphasis on articulating and stewarding processes of emergence and decay suits the challenge more than other more development-oriented professions. Moreover, with its traditionally strong grounding in environmental and social ethics, landscape architecture presents as a flexible and empathetic discipline.

This article explores the efficacy and limits of landscape architecture in a region afflicted with some of Australia’s highest rates of population loss. Of the fifty-seven shires Australia-wide that are registering population loss, approximately half are located in Western Australia’s Wheatbelt, and of those, twelve make the top-twenty list of shires with the most rapid shrinkage. With statistics like these, the Wheatbelt has become a primary engine of continental hollowing.



Top right: Population distribution in Australia - each dot represents 500 people (image by Karl Kullmann)

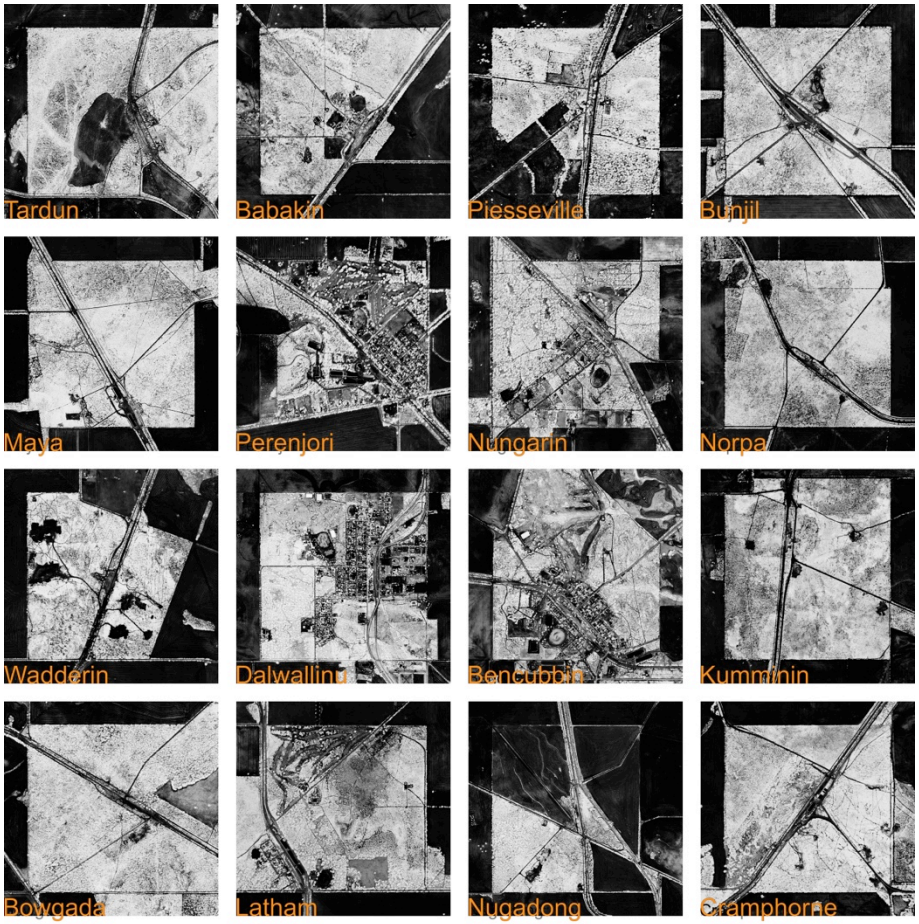
Bottom right: Extents of the Western Australian Wheatbelt in relation to Perth (image by Karl Kullmann)

Creating the Wheatbelt

The Wheatbelt is underlain by the Yilgarn Craton, which is one of earth's oldest and most stable landmasses and generates some of the world's poorest soils. Free from geological activity for 250 million years and isolated from the rest of Australia by ten deserts, the region developed extremely high biodiversity that drew the attention of Charles Darwin in the mid-nineteenth century. In the twentieth century it took just a couple of generations of settlers to subdue this biodiversity with monocultures of wheat and sheep.

At the post-World War II peak, returned soldier settlement schemes targeted one million acres of new farmland per year. The rapid clearing of 90 percent of the native vegetation cover caused the saline groundwater table to rise. Despite losing one quarter of productive land to salinity, grain yields were maintained with fertilizers, trace elements, herbicides, and insecticides. To expedite these artificially boosted harvests to coastal ports, railroads were deployed at fifty-kilometre intervals. Based on the distance a farmer could haul grain, depots were typically located every fifteen kilometres along the tracks.

With the misplaced projection of the scale of the European landscape onto Western Australia, the rail depots were expected to quickly develop into thriving well-populated country towns. But while appropriate for the English countryside, the over-prescription of settlements ignored the realities of sparse population, low rainfall, poor soils, and large farms in the Wheatbelt. Consequently, the majority of surveyed town sites were never settled. Scores of their footprints remain today as cardinally aligned one-mile squares (each equivalent to about 2.5 square kilometres) of uncleared bushland. Officially named, bisected by a railroad aligned to the contour and often housing a grain silo, these sites offer little else in the way of town amenities. Somewhat fortuitously, bush squares that were originally reserved for communities that never eventuated are often the only remnants of native vegetation in a sea of wheat.



Examples of 1 square mile town sites that were located at fifteen-kilometre intervals along the railway lines that ran throughout the wheatbelt (image by Karl Kullmann)

Seeds of decline

Of those towns that did become functioning communities, three waves of structural and technological transformations eroded their social and economic sustainability. Automobiles tripled the catchment radius of country towns, while communications technologies further reduced the need for administrative journeys into town. And most critically, globalization enforced economies of scale, which in turn resulted in the mass-amalgamation of the original 1,000-acre family farms. Larger farms meant fewer farmers, who in turn supported an

economic matrix of fewer, smaller rural towns. In a feedback loop, population loss caused local economies to contract and lose facilities and services, which in turn compounded population decline.

Within this new normal, a handful of Wheatbelt towns launched ambitious strategies to attract the liquid flows of tourist and investment capital considered essential to slow or stabilize population loss. These strategies include streetscape and civic space improvements, event organization, tourism campaigns and creative projects. At the same time, other towns simply ceased to function as communities. Situated in the north-eastern Wheatbelt and with a population of about five hundred and falling, the town of Perenjori is balanced precariously between these two futures.

Precarious Perenjori

Perenjori is located just inside the 3,200-kilometre rabbit-proof fence, which marks the outer limit of the Wheatbelt. The town's name is derived from the aboriginal name *Peranj-jiddee*, for a nearby waterhole that lay at the convergence of the Amangu, Kalaamaya and Badimaya people. From its founding in 1913 as a rail siding and depot, the town progressively acquired a main street with a bank, a grain storage silo, a golf course, a cricket/football field, and tennis courts. A caravan park and drive-in theatre were added after Word War II.

The presence of water, and later Perenjori's position as the administrative centre of the surrounding shire, underpinned the town's resilience where other nearby settlements failed. Despite this status, in the last quarter of a century the municipal area lost nearly 50 percent of its population, making Perenjori at one point Australia's most rapidly declining shire. In a series of workshops and studios run by the University of Western Australia, we approached Perenjori's predicament through a landscape architectural lens and yielded three principal strategies: consolidation, adaptation, and retreat.

Landscape strategy 1: consolidation

In settlements experiencing shrinking populations, decline occurs in a piecemeal manner. As local governments decommission services and demolish surplus structures, town facilities become increasingly isolated. Consolidating the town into a more compact form potentially counteracts this process of urban perforation. Clearly, while relocating the dwellings of remaining residents would be a fraught undertaking, other land uses do suggest considerable potential for consolidation. For example, as core aspect of rural community life, sporting facilities are critically affected by population decline. Large team sports such as football and cricket have fared particularly badly, while non-team sports such as tennis often remain viable for longer.

To harness the galvanizing power of community sport, the first landscape strategy relocates viable non-team sports from Perenjori's periphery to vacant railway land opposite the commercial strip in the centre of the town. Facilities for team-based sports that require large maintenance- and water-intensive fields are simultaneously decommissioned. Consolidation allows a single, multi-use sports club to be located in the heart of the town and serve all remaining sports. The central location increases the accessibility of the facilities and effectively reconfirms their importance to community life.

A second component of the consolidation strategy focuses on the caravan park that is popular as a staging point for tourists journeying further inland during wildflower season. Although the caravan park often houses a significant percentage of Perenjori's overnight population, guests have little reason to interact with the commerce and culture of the town. By redistributing the caravan park from its single peripheral site into discontiguous vacant lots within the town, visitors will be more likely to interact with – and contribute to – the sense of activity and vitality in Perenjori.

Controlled consolidation project by Ben Liddelow proposes relocating sports facilities and caravan sites from the edge of Perenjori to the centre (image by Ben Liddelow)

Landscape strategy 2: adaptation

The traditions of urban permanence and solidity are key assumptions for addressing rural settlement decline. Nevertheless, it was actually only with mid-century prosperity that permanent buildings and landscapes began to be constructed in styles and techniques imported from Europe. Prior to this time, both the itinerant early settlers and nomadic indigenous peoples relied on adaptable infrastructure that could readily be established, modified, and deconstructed in response to shifting climatic or cultural conditions.

Continuing to invest in permanent townscapes is further problematized by a lack of specialist skills and materials in remote and demographically depleted Wheatbelt towns. An alternative approach adapts mining industry techniques, with lightweight modular structures erected as required. Certainly, there is an unenviable legacy of prefabricated housing literally being dumped in remote locations, with little or no consideration given for how buildings and their inhabitants engage with the unforgiving environments into which they are cast.

To reset this unfortunate legacy, high-quality prefabricated dwellings are designed to specifically address the unique climatic imperatives of the region. Toward this goal, the second landscape strategy focuses on the key challenge of how landscape and architecture meet in a less adversarial and more inhabitable and sustainable way. It involves a simple kit of parts, comprised of local flora and farming materials and techniques, to grow a garden that is both resilient and acts a seed bank to re-vegetate the footprint of the dwelling, should the structure be removed or relocated at a future date.

Landscape strategy 3: retreat

Prioritizing the need to settle returned soldiers without respecting the ecological carrying capacity of the land dictates the extents of the Wheatbelt. As the extensive environmental degradation now confirms, the eastern margins of the Wheatbelt should never have been cleared for agriculture. Indeed, sooner or later, and with or without intervention, the Wheatbelt is likely to contract to a more sustainable equilibrium.

Predicated on the assumption that the socioeconomic forces afflicting Perenjori will continue to erode the population base over time, the third landscape strategy orchestrates the controlled decline of the town. The seemingly paradoxical intent of this process is for Perenjori

to eventually cease to function as a socio-economic hub while retaining a residual sense of place. Steps in the timeline for decline include a combination of inevitable occurrences and deliberate actions that will result in the decommissioning of the town as a functioning rural community.

Set over a projected timeframe of twenty years, the process includes phased withdrawal of services, removal of agencies of governance, progressive demolition of uninhabited dwellings, decommissioning of sporting facilities and finally, removal of the wheat storage silo. The end game for Perenjori involves the population stabilizing at a very low number, wherein the wildflowers that are a feature of the region are seeded along the town street grid as a trace of the former settlement. While re-seeding biodiversity into the town is a symbolically important act, it is also enhances the process of re-wilding. Although spontaneous ruderal vegetation rapidly fills vacant sites in temperate climates, this process occurs more slowly and less predictably in dryer climates.

De-stigmatizing rural decline

The experience of working in shrinking communities illustrates that landscape architecture offers far more than the embellishment of the public realm, to be indulged during prosperous periods of growth and withdrawn in difficult social, environmental, and economic situations. In addition to seeking to stabilize and revitalize rural communities, where appropriate the role of design includes facilitating the process of decline in a controlled and meaningful manner. To do this requires shaking what the sociologist Bob Birrell terms “the intellectual hegemony of the ideology of growth.” Removing this stigma potentially reduces the tendency to aestheticize decline as an “other” condition, rather than part of the same global flows that feed growth. Those flows are now so real in the Wheatbelt that they are difficult to romanticize.

Abandonment in the Wheatbelt town of Dowerin (photograph by Brad Rimmer © 2011, reproduced with permission)

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