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ARTICLES

In Praise of Small Quadrats and Systematic Sampling When Surveying Small Sites – *AnneMarie Clements, Margaret Donald and Pamela Hazelton*

Controversy has continued for the past 30 years about the conservation significance on a 1.16 ha undeveloped residential zoned site in the Sydney suburb of Little Bay. The National Park adjoining the site is recognised as a reference site for the listed ecological community Eastern Suburbs Banksia Scrub in the Sydney Basin Bioregion (ESBS). On this disturbed and edge-affected small site, use of systematic sampling in 10 m × 10 m quadrats along transects allows more accurate mapping and more reliable statistical analyses than a small number of larger and “haphazardly” chosen 0.04 ha quadrats. Inference from the floristic data from the smaller quadrats allows valid spatial conclusions to be made, in particular the likely distribution of ESBS on this small site. For small sites (approximately 1 ha or less), systematic and intensive sampling permits a rigorous scientific basis for land use planning. 137

Agrivoltaics: Planning and Property Law Challenges in Combining Renewable Energy and Agriculture – *Madeline Taylor, Cathy Sherry and Hannah Harris*

Solar energy is a leading mature renewable energy technology crucial to achieving rapid decarbonisation. Cleared, flat agricultural land with high solar penetration often offers ideal conditions to develop large-scale solar projects. To rapidly deploy utility-scale solar, the Australian Federal Government has mapped 41 Renewable Energy Zones (REZs) to connect new renewable energy infrastructure, generation, storage, and high-voltage transmission infrastructure. The REZs cover large swathes of agricultural land creating potential land use conflicts, as well as disruption to rural communities. Agrivoltaics, the co-location of agricultural and renewable energy production, seeks to mitigate land use competition, enhance solar generation, and amplify the resilience and value of agricultural activities. However, there are property and planning law challenges to the co-location of solar energy farms on agricultural land in Australia. In this article, we examine these challenges and explore potential policy and regulatory reform to bolster an Australian agrivoltaics sector. 149

Australia’s Biodiversity and the Bushfire Climate Catastrophe: Neoliberalism, Causality, Responsibility and Recovery – *Rosemary Lyster, Ed Couzens and Glenda M Wardle AM*

Australia’s climate-induced bushfire disaster during the 2019–2020 summer devastated ecological and human communities. The wildfires burnt over 10 million hectares, including vegetation that rarely burns or is poorly adapted to fire, led to population declines of hundreds of species of biota, and contributed to the extinction of at least one species as far as is known. This article investigates the causal factors which contributed to the catastrophe, including climate change and the prevailing social and environmental policy

context in Australia. The fires placed a catastrophe lens on top of the slow violence against Australia’s biodiversity caused by both the Federal and State governments’ abrogation of their responsibilities to protect it. Their records on averting the biodiversity crisis are inadequate. Neoliberalism and its deregulatory agenda provide the overarching narrative to explain how the disaster unfolded, how the background conditions were created, and what stands in the way of recovery. Neoliberal ideas have been devastating for Australia’s biodiversity, impeding the science-based policy frameworks required to prevent such disasters. Neoliberalism must not continue to dominate if we are to build better regulatory frameworks that will move us swiftly towards science-based legal protections for biodiversity, and ultimately benefits to society. The paradigm of what we value and how we interact with our environment needs to be reset. Absent such shifts, prospects for recovery and improved outcomes are dim. Here we build from our interdisciplinary knowledge to provide scientific, legal and philosophical perspectives to analyse the past critically and to reflect on Nature Positive as a pathway to recovery. 168