

A case of place

Solastalgia comes before the court

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In 2005, Professor Glenn Albrecht wrote in this journal about the concept of 'solastalgia', a phenomenon he had witnessed and researched in the Upper Hunter Valley in Australia following the rapid expansion of open-cut coal mining.² A combination of the concepts of solace and desolation, Albrecht's neologism attempted to capture the distress and suffering experienced by people when their place of residence was threatened by significant environmental transformation. In 2013, the concept came before the Land and Environment Court of New South Wales, in the case of *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and Warkworth Mining Limited* [2013] NSWLEC 48. In this case, the Court overturned a government decision to approve an application to expand the Mount Thorley-Warkworth coal mine. The Court held that the expansion of the mine would have had significant negative impacts upon the community and the environment, which would not have been outweighed by the projected economic benefits to be gained. The decision was heralded as a triumph of David over Goliath; indeed, it has been rare for major development approvals of this kind to be subsequently overturned by the Court.

This article explores how the relatively new concept of solastalgia was received by the Court in the *Bulga* decision as a means to understand and articulate the psychological effects of place transition upon a community. It also discusses developments in the case since the appeal, contemplating how the notion of 'place' might be considered in future land use decisions involving mining.

Solastalgia: a brief history of the concept

Albrecht created the term 'solastalgia' to describe the feelings of isolation and the inability to obtain comfort and solace from one's surroundings owing to rapid landscape change.³ The term first appeared in 2004, in a case study of environmental change in the Hunter Valley which Albrecht was involved in.⁴ This qualitative research project sought to explore the impact of ecosystem changes upon residents who remained in places that had been transformed by the expansion of open-cut coal mining, and uncovered a form of place-based distress which revealed a deep connection between 'ecosystem health, human health, and powerlessness'.⁵ The concept of solastalgia was thus coined to describe this specific branch of place-based distress.

The word itself, as Albrecht has previously explained in this Journal,⁶ derives its prefix from the concepts of solace and desolation. The term 'solace' finds its origins in the Latin term *solacium*, and refers to the provision of comfort in the event of sorrow or misfortune, as well as the alleviation of discomfort or distress. The root of the term 'desolation' is the Latin *desolare* ('to abandon'), and refers to a state of great unhappiness or loneliness, as well as emptiness and destruction. The suffix, *algia* (derived from the Greek *algos*), refers to pain and suffering. Albrecht notes that the term was deliberately constructed in similarity to the established term *nostalgia* (the sickness caused by absence from home; from the Greek terms *nostos*, to return home, and *algos*), capturing the importance of one's home or 'place' within the concept.⁷ But in contrast to *nostalgia*, where there is a dislocation between the individual and their 'place', solastalgia refers to changes or

threats to the place that one remains in, and the resulting lack of solace and isolation suffered. As Albrecht puts it:

[Solastalgia is]... the pain experienced when there is recognition that the place where one resides and that one loves is under immediate assault (physical desolation). It is manifest in an attack on one's sense of place, in the erosion of the sense of belonging (identity) to a particular place and a feeling of distress (psychological desolation) about its transformation. It is an intense desire for the place where one is a resident to be maintained in a state that continues to give comfort or solace. Solastalgia is not about looking back to some golden past, nor is it about seeking another place as 'home'. It is the 'lived experience' of the loss of the present as manifest in a feeling of dislocation; of being undermined by forces that destroy the potential for solace to be derived from the present. In short, solastalgia is a form of homesickness one gets when one is still at 'home'.⁸

Albrecht wrote further on the concept of solastalgia in 2007 with colleagues from the Centre for Rural and Remote Mental Health at the University of Newcastle, drawing upon his previous qualitative work as well as research from the Centre in drought-affected areas.⁹ It was concluded that the concept of solastalgia captured the 'essence of the relationship between ecosystem health, human health and control (hopelessness and powerlessness) and negative psychological outcomes'.¹⁰ The concept has since found adoption in various forms of popular and artistic expression,¹¹ and has also gained some traction in academic circles as a means to describe and understand the pathological effects of landscape change and threats to place identity. Tschakert and Tutu utilised solastalgia in 2010 to explore and explain the impact of climate change migration in two Ghanaian communities on the mental wellbeing of those residents who chose to remain in an environmentally degraded area.¹² McNamara and Westoby, in their 2011 case study of the impact of climate change in the Torres Strait, drew upon the concept of solastalgia to explain the feelings of 'sadness, worry, fear and distress, along with a declining sense of self, belonging, and familiarity'¹³ caused by environmental impacts. In a 2013 text on global health and the anthropological paradigm, Singer and Erickson allude in a case study of the Inuit peoples of Alaska and Canada that the reported psychological impacts of climate change upon the Inuit may well include solastalgia.¹⁴

Whilst some have expressed concern over the proposed categorisation of solastalgia as a clinically recognised mental illness,¹⁵ it is clear that the concept has normative potential in articulating the relationship between human and ecological wellbeing, and legitimising these perspectives in the broader discourse. This potential was recognised by the Bulga Milbrodale Progress Association, who introduced the concept to a court of law as a means to express their distress over the place transition they were experiencing, in seeking to challenge the expansion of an open cut coal mine in their local area.

The Bulga case¹⁶

Bulga, a tiny village nestled on the edge of the Wollemi National Park (home to the only known wild specimens of the Wollemi Pine tree),¹⁷ is in close proximity to the integrated Mount Thorley - Warkworth open cut coal mine operation. Both mines are operated by Coal & Allied, who is substantially owned by Rio Tinto.¹⁸ Whilst there are several coal operations in the area, the Mount Thorley - Warkworth mine is the largest, employing around 1300 people and operating day and night to produce approximately 10 million tonnes of coal per year (predominantly for export).¹⁹

Whilst mining has been conducted at Mount Thorley Warkworth since 1981, the current development consent was granted in 2003 by the Minister for Planning under the *Environmental Planning and Assessment Act 1979* (NSW), permitting mining through to 2021 pursuant to a range of conditions.²⁰ The conditions spanned biodiversity offsets, as well as a number of conservation undertakings provided in a Deed of Agreement that the mine would not mine certain areas within the leasehold; namely, the Warkworth Sands Woodland, and Saddleback Ridge.²¹ The Warkworth Sands Woodland is an ancient dune landform, the last known of its kind, and is home to squirrel gliders and other threatened fauna species.²² Saddleback Ridge is a hill which acts as a buffer between the mine and the village of Bulga.²³

When the price of thermal coal soared in 2008 to over \$190 US per tonne,²⁴ the mine sought to expand its operations, projecting vast royalty payments and job growth. In 2010, they lodged an application under the former Part 3A of the *Environmental Planning and Assessment Act 1979* (NSW), which sought to extend the physical boundaries of the mine, as well as its operating term.²⁵ Specifically, the extension included the removal of Saddleback Ridge, and the clearing of hundreds of hectares of land which included several endangered ecological communities listed in the *Threatened Species Conservation Act 1995* (NSW) as well as 68 hectares of the Warkworth Sands Woodland. The expansion operation would see the mine advance to within 2.6 kilometres of the village of Bulga.²⁶ In early 2012, the Planning Assessment Commission (as delegate for the Minister) approved the application subject to several conditions.²⁷ These conditions included the provision of biodiversity offsets to compensate for the impact that the expansion would have on biological diversity. Notwithstanding their approval, the Planning Assessment Commission did note that many rural communities have faced similar situations, and that approval of such developments was ‘almost inevitable’ given the economic benefits to be gained. They remarked that communities ‘...have either been radically altered in character or become non-viable...’²⁸ in the face of such rapid development, but that the framework for decision making provided limited guidance as to how social impacts upon towns should be weighted, urging the government to consider further policy guidance.

Following the expansion approval a local resident group, the Bulga Milbrodale Progress Association, instructed the Environmental Defender’s Office²⁹ to lodge an appeal to the NSW Land and Environment Court. They submitted that the expansion application should have been refused given the impacts upon biological diversity, as well as the detrimental social impacts upon the community. The hearing took place from August until November in 2012, presided over by the Chief Justice of the Land and Environment Court, Brian Preston. In this case, Chief Justice Preston re-exercised the statutory power of the Minister under s75L(3) of the *Environmental Planning and Assessment Act 1979* (NSW), requiring him to consider the environmental, social and economic impacts of the proposal alongside the general objects of the *Act* – which includes the public interest, and principles of ecologically sustainable development. However, as an external merits review of an administrative decision, fresh evidence was able to be tendered, and different issues considered to those of the original decision-maker.

In weighing up the matters noted above, Chief Justice Preston found that notwithstanding the economic benefits to be gained, there would be significant social and environmental problems arising from the expansion, including irreparable damage to biological diversity and substantial social changes. In a rare defeat for such a large mining project, the Planning Assessment Commission’s decision was overturned.³⁰

Whilst it was noted that the project would generate considerable economic benefits, Chief Justice Preston found that the values claimed by the proponent company were inaccurate, and did not outweigh environmental and social costs. The company had employed an Input-Output Analysis and a Benefit-Cost Analysis to quantify the economic gains to be made, which included the stimulus of \$16 billion to the local economy as well as the direct and indirect and creation of approximately 44,000 jobs (and continuation of existing jobs).³¹ The court found, however, that these calculations were deficient in their data and assumptions (for example, technological gains and automation would have negated some of the job creation claims) and more importantly, that they gave insufficient weight to principles of ecologically sustainable development and intergenerational equity, and did not fully consider the burdens that would be placed on the surrounding environment, nor on the people of Bulga.

On the point of biological diversity, it was held that there would be significant threats to a number of endangered ecological communities (including the possible extinction of the Warkworth Sands Woodland); with subsequent impacts upon the habitats of fauna species. The proposed offset package was deemed inadequate as it did not provide ‘like for like’ (it put forward as offsets different areas of vegetation some distance from the mine site—including some more than 100 kilometres away); and planned measures to minimise impacts to the endangered ecological communities were found to reverse previously pledged protections. As Chief Justice Preston remarked, ‘[it] is not appropriate to trade offsets across different ecological communities. Where a project impacts on a

specific ecological community, any offset must relate to that same ecological community which is impacted.³²

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Turning to the issue of social impacts, and the matter of 'place', the Court heard evidence of the impacts that the mine expansion would have on noise and air quality, as well as effects upon resident's health and wellbeing. Central to the community's concerns were the impacts of increased noise and dust, which in some cases would necessitate property acquisition; as well as the visible changes to the surrounding environment. The Progress Association contended that these transitions would greatly alter the composition of the community and aggravate the loss of sense of place already felt.

The potential loss of Saddleback Ridge was illustrative of this claim. The landmark retains symbolic importance in the local landscape, and evidence was proffered that 'Bulga' is an Aboriginal name meaning 'single peaking mountain range', with Saddleback Ridge the single peak of reference.³³ Moreover, beyond its cultural relevance Saddleback Ridge also acts as a natural buffer against the noise generated by mining activities. The Progress Association argued that the cumulative noise impacts had already resulted in sleep deprivation, stress, anxiety, negative effects upon relationships and recreational activities in the community, and overall a sense of 'loss of place' or solastalgia, positing that further mine expansion would exacerbate these issues.³⁴ In response, the company argued that the current noise levels were compliant with necessary requirements, and that they had proposed mitigation strategies to minimise impacts from the proposed expansion. Part of their mitigation scheme included the acquisition of several homes from the heart of the village that would be excessively exposed to noise. The proposed strategies were found by the Court to be unlikely to reduce the projected impacts to appropriate levels for the burdened residents. The offers of acquisition to residents were considered inadequate to address the 'subjective or emotional loss occasioned by being dispossessed of their home'.³⁵

The Progress Association drew upon Albrecht's concept of solastalgia to articulate the psychological effects of this land transition. Professor Albrecht was put before the court as a witness of the Progress Association, and the court accepted that his concept of solastalgia was '...a condition caused by the gradual erosion of the sense of belonging to a particular place and a feeling of distress about its transformation'.³⁶ Albrecht went on to detail his analysis of solastalgia in the Bulga community, drawn from new research which utilised the same set of questions from his previous study of solastalgia in the Upper Hunter Valley. He noted that that 10 out of the 17 residents he had interviewed reported feelings of solastalgia, and concluded that overall the testimonies revealed a '...deep solastalgic distress about the damage that has already been done to their loved landscape and deep anxiety that this level of distress could get even worse as the mine expands towards the edge of the town'.³⁷

Whilst the court was open to consideration of the concept of solastalgia, it was somewhat critical of Albrecht's research on the phenomenon in the Bulga community. Albrecht had interviewed 17 residents, and reported solastalgia for 10 of these individuals. This sample size was considered to be low, and comprised of non-random self-selecting respondents who had been objectors to the development. Further, the questionnaires they completed contained specific language prompts (as they had been designed to be administered by an interviewer with training). The company submitted that this may have influenced the language used by the respondents, thus qualifying Albrecht's contention that language may provide insight into an individual's feelings.³⁸ They also argued that evidence of other factors such as low population turnover and increasing property prices suggested there had been some positive social indicators in the period of time since lodgement of the expansion application.³⁹ The company argued that the failure of the research to consider these issues, as well as community capacity to adapt to change rendered it a 'snap shot' of resident feelings rather than a detailed study.⁴⁰ Ultimately, whilst the Court was open to the concept of solastalgia, Chief Justice Preston determined that the constraints of the methodology limited the reliance that could be placed on Albrecht's interview data.⁴¹

Nonetheless, it was held that the residents' feelings could not be disregarded.⁴² Irrespective of the label accorded to the resident's experiences, it was clear to the Court that there had been negative impacts within the community owing to environmental change. It was noted that the company did not sufficiently dispute this, as they did not seek to test the opinions expressed by witnesses through cross-examination, nor did it proffer any evidence to the contrary from residents who were in support of the project.⁴³ Albrecht's research and testimony thus became part of the 'larger picture of evidence' submitted by the community, which when corroborated with affidavit evidence of residents and site viewings provided a portrait of the impacts already sustained, and the real risk that these would be exacerbated in the event of the project's approval.

Overall, whilst Albrecht's evidence of solastalgia in Bulga was found to have limitations, the court in the appeal hearing was clearly open to the concept. Importantly, it placed substantial weight upon the evidence which indicated that Bulga would undergo considerable transition at significant psychological distress to members of the community. Chief Justice Preston eventually found that the impacts of the expansion would '... exacerbate the loss of sense of place, and materially and adversely change the sense of the community, of the residents of Bulga and the surrounding countryside',⁴⁴ thus rendering the concept of 'place' central in the decision.

The appeal was upheld, and the approval of the expansion as granted by the Minister (by delegation to the Planning Assessment Commission) was disapproved.

Developments following the *Bulga* case

Since the *Bulga* case, there have been several critical developments which have further influenced how the notion of 'place' may be considered in land use decision-making processes.

Following the Land and Environment Court decision, Warkworth lodged an appeal to the NSW Court of Appeal, arguing that Chief Justice Preston had erred at law in overturning the approval.⁴⁵ Shortly after, they applied to the Supreme Court to expedite proceedings, claiming that many jobs were vulnerable in light of the expansion not progressing.⁴⁶ After this was permitted, the State Government joined the appeal, adding further grounds for review focused on the Court improperly construing its role.⁴⁷ The appeal was heard in August 2013.

However, whilst the appeal hearing took place, the State Government tabled amendments to the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (the 'Mining SEPP'), a legal instrument which provides further guidance to decision makers as to the assessment and approval of mining development decisions under the *Environmental Planning and Assessment Act 1979*. Specifically, it provides a range of matters which decision makers should take into consideration when making land use decisions, including compatibility with nearby land uses, environmental management, the impacts of transport to and from the site, the efficiency of recovering the mineral resource, and any issues of land rehabilitation. The proposed changes to the Mining SEPP saw the inclusion of a new criterion—that decision makers must prioritise the 'significance' of a mineral resource as the 'principal consideration', having regard to the economic benefits of developing the resource, when deciding whether or not to approve a development.⁴⁸ Following the Planning Assessment Commission's request for policy guidance in the wake of the original extension determination,⁴⁹ it seemed to some that the proposed amendments to the Mining SEPP sent a very clear message:

It appears that the proposed SEPP is intended to clarify the Government's policy position when mining comes into insoluble conflict with environmental and social values. However, it is concerning that the amendments appear to endorse and reinforce the view that the approval of mining projects is 'almost inevitable', even where they have significant negative impacts on human settlements and the environment.⁵⁰

Following a period of consultation, these changes were adopted in early November 2013 with some modifications. These included the addition of specific examples of economic benefits to guide decision makers, as well as the extension of the changes to

modifications of existing consents (as well as new applications). Effectively, the amended Mining SEPP now requires that decision makers (whether this is the Minister, the Planning Assessment Commission, or a judge) give greater consideration to the economic significance of a mining proposal, such as the level of State royalties generated, the amount of jobs created, as well as any regional expenditure and capital investment.⁵¹ The equal weighting of these factors alongside potential social or environmental impacts—as Chief Justice Preston did in the Bulga decision—would appear to be precluded under the amended Mining SEPP.

It is important to bear in mind that the matters for consideration prescribed in the Mining SEPP are not the only matters a decision maker can take into account when assessing a development application. The overarching planning legislation, the Environmental Planning and Assessment Act 1979 (NSW), provides that discretionary standards such as any likely environmental and social impacts, and the public interest, may also be taken into account.⁵² However, what remains unclear following the Mining SEPP amendment is the extent to which a decision maker should give weight to these considerations, given the clear directive in the amended Mining SEPP.

As planning instruments do not typically specify weightings for factors under consideration in a development proposal, it had been unclear what the effect of this new criterion would be. However, whilst the result of their appeal against the Bulga decision was still pending, Warkworth submitted an application in November 2013 under the amended Mining SEPP to expand the Warkworth mine, albeit on a smaller scale than their original expansion application.⁵³ Specifically, this expansion application noted that Saddleback Ridge would be retained, and the Warkworth Sands Woodland endangered ecological community would not be impacted. In late January 2014, the Planning Assessment Commission handed down their decision, approving the application on the basis that the economic benefits to be gained far outweighed the ‘comparably minor’ additional noise and dust impacts.

In the meantime, it was announced by the Commonwealth Attorney-General’s department in December 2013 that approximately \$10 million AUD worth of funding would be cut from the nine Environmental Defender’s Offices (EDOs) throughout Australia. This included funding for the NSW EDO, who acted for the BMPA in their initial litigation and also throughout the subsequent appeal. This move followed the NSW state government’s 2013 removal of Legal Aid funding for public interest environmental litigation and prohibition on the use of public funds to provide legal advice to lobby groups.⁵⁴

In March 2014, whilst the appeal determination was still pending, Rio Tinto then indicated their intention to lodge two fresh development applications that would be ‘substantially similar’ to the application originally refused by the Land and Environment Court.⁵⁵ Then in early April 2014, requests were lodged with the Minister for Planning for Director-General environmental assessment requirements (DGRs) for the Warkworth Continuation Project and the Mount Thorley Continuation Project. The requirements set out matters that a proponent must address in preparing an environmental impact statement as a part of their development application.

On 7 April 2014 the decision of the Court of Appeal regarding the original Bulga case was finally handed down. The appeal was dismissed unanimously—both the arguments put forward by the government and Rio Tinto were rejected, and Chief Justice Preston’s decision was affirmed. Nevertheless, the government was quick to note that following changes to the Mining SEPP, their role was now to ensure that the ‘significance of a resource and its economic benefits are properly considered in the assessment process’.⁵⁶ Following the appeal decision, the Director-General of Planning and Infrastructure issued the DGRs for the two proposals on 22 May. The proponent lodged lengthy environmental impact reports in response on 15 June, amidst allegations that their speedy reply was facilitated by ‘workshopping’ their reports with the Department. It was claimed that this was evidence of ‘regulatory capture of the worst kind’.⁵⁷

A PAC public hearing was held on 18 and 19 December 2014 to consider submissions regarding the two proposals. On 4 March 2015, the PAC handed down its review report, recommending that both the Warkworth and Mount Thorley mines proceed. Whilst the Commission noted that the mine will ‘undoubtedly’ have adverse impacts upon Bulga and its residents, it was acknowledged that both projects were ‘consistent’ with current

government policy and legislation (e.g. the changed Mining SEPP), and thus 'capable of being approved'. The Department must now prepare a final assessment report, having regard to the findings of the PAC. This report is then forwarded back to the PAC, who will make a final determination of the application later in 2015. As the PAC held a public hearing (rather than a public meeting), there is no right to appeal the merits of their determination under the legislation.

Despite the fact that two courts have previously rejected the mine, a changed regulatory environment has enabled the proponent to lodge fresh applications which cover a similar range of works, appealing to the economic focus of the amended Mining SEPP. This has left residents understandably frustrated, and disillusioned with the planning process. As John Krey, spokesperson for the BMPA recently remarked: 'We have fought this project in court, and won twice, but despite this the NSW government changed the rules to push it through, quashed our rights to appeal in court, and worked behind closed doors with mining giant Rio Tinto to ensure it proceeds.'⁵⁸ The developments since the original Bulga litigation indicate that under the current regulatory framework, the capacity for decision makers to give due consideration to social and environmental factors, and the impact upon 'place', has been severely constrained by the prioritisation of economic factors.

Considering 'place' in future land use decisions

The *Bulga* litigation provides a case example of a decision maker thoroughly considering the notion of 'place' as it was relevant to assessing the impact of land use change within a community. Whilst it was noted that there were limitations in some of the data concerning solastalgia, the concept was nonetheless helpful to the court in articulating the psychological effects of place transition upon some of the residents. Importantly, the discussion of solastalgia in the case contributed to the overall assessment of the resident's experiences, and their anxiety and distress over the loss of their sense of place. The concept of place, and the likelihood that it would undergo significant transition was central in Chief Justice Preston's decision to overturn the approval of the expansion application.

However, subsequent regulatory developments would appear to have limited the capacity of decision makers to give weight to the importance of 'place' in land use decisions where economic benefits are significant. This marks a significant departure from Chief Justice Preston's position in the *Bulga* case that it is the decision maker's responsibility to assess the multifaceted and diverse economic, environmental and social factors to determine the best use of the land under the Environmental Planning and Assessment Act 1979 (NSW).⁵⁹ As he noted in the decision, the weight to be allocated to these factors is typically a subjective task for the decision maker, whereby they should '...evaluate the relative importance of the relevant matters, each compared to the others' in each individual case.⁶⁰ Chief Justice Preston applied American legal philosopher Lon L. Fuller's characterisation of complex 'polycentric' legal problems as akin to a spider web in the *Bulga* decision, noting that a '...pull of one strand of the web will distribute tensions, after a complicated pattern of adjustment, throughout the web as a whole'.⁶¹ Thus, sequential analysis and adjudication of each issue becomes problematic. The preferred approach is to examine the facts of each and every social, economic and environmental issue presented, then for the decision maker to subjectively attribute weight to each of these before balancing the weighted matters to reach a decision.⁶² In a case where significant concerns regarding social factors and the transition of place are put forward, these are able to be appropriately weighted by the decision maker under this approach. The Mining SEPP amendments remove this weighting capacity, and it remains to be seen in future development assessments how the prioritisation of economic factors will play out against any negative social or environmental factors—notably, the impact of place transition.

These most recent reforms are illustrative of an agenda where development interests are prioritised, and opportunities for members of the community to engage in meaningful public participation in land use decision making processes are being systematically curtailed. It is arguable that these regressive amendments have constrained access to environmental justice.⁶³ The concept of environmental justice finds its origins in drawing attention to the inequitable distribution of environmental harms (such as the siting of

toxic waste dumps), and has over time expanded to include broader conceptions of justice—such as whether communities burdened by environmental harms are recognised within the political and regulatory sphere, whether they have the ability to participate meaningfully in environmental decision making processes, and whether they possess the capabilities to both function and flourish.⁶⁴ Where institutional and legislative instruments subvert or suppress the ability to engage in authentic public participation, access to environmental justice is weakened.⁶⁵ Curing such impediments to justice requires the political will to ensure that regulatory and policy instruments provide members of the public with (at a minimum) notice and information about land use decisions; active multi-directional consultation; participation in decision making; the right to challenge decisions through an impartial and independent body; and a broad interpretation of standing for those eligible to commence such proceedings.⁶⁶ However, with political and regulatory ambitions presently focused upon reaping the economic benefits of resource extraction, reforms along these lines in the near future seem doubtful.

Despite judicial openness to the concept of solastalgia, the current political and regulatory climate has limited the scope for community perspectives and ‘place’ to be weighed as relevant considerations in land use decisions. Nevertheless, Albrecht has noted that solastalgia can also be ‘future oriented’, in that ‘...those who suffer from it might actively seek to create new things or engage in collective action that provides solace and communion in any given environment.’⁶⁷ Across Australia, many communities have formed groups and alliances to bring greater awareness to the impact that place transition is having on them.⁶⁸ In Bulga, John Krey from the BMPA announced that he would join the state-wide ‘Our Land, Our Water, Our Future’ campaign in New South Wales in the lead up to the 2015 state election.⁶⁹ The campaign is lobbying for regulatory reform which enables greater recognition of communities and their right to appeal against projects which would lead to significant place transition.⁷⁰ More recently, the ‘Bulga Declaration’ has been signed by over 2000 people, who have pledged to use ‘all peaceful means’ to ‘protect community and culture from the Warkworth coal mine’.⁷¹ By actively resisting ‘...the power and arrogance of both government and corporate bodies to silence and isolate public participation in the development approval and environmental monitoring process,’⁷² these movements provide an opportunity for the community to respond to their solastalgic distress by challenging the disparity in our present land use decision making framework.

Notes

- 1 Amanda Kennedy, Associate Professor and Deputy Director of the Australian Centre for Agriculture and Law, University of New England. The author wishes to thank Matthew Ryan for research assistance, and the Journal’s anonymous reviewers for their helpful comments and feedback.
- 2 G. Albrecht (2005), ‘Solastalgia: A New Concept in Health and Identity’, *Philosophy Activism Nature* 3, (1) pp. 41-55.
- 3 Ibid.
- 4 L. Connor, G. Albrecht, N. Higginbotham, S. Freeman and W. Smith (2004), ‘Environmental Change and Human Health in Upper Hunter Communities of New South Wales, Australia’, *EcoHealth Journal* 1, (2) pp. 47–58.
- 5 Ibid., p. 55.
- 6 G. Albrecht (2005), ‘Solastalgia: A New Concept in Health and Identity’, *Philosophy Activism Nature* 3, (1) pp.41-55, at p 45.
- 7 Ibid.
- 8 Ibid.
- 9 G. Albrecht, G. Sartore, L. Connor, N. Higginbotham, S. Freeman, B. Kelly, H. Stain, A. Tonna, and G. Pollard (2007), ‘Solastalgia: The Distress Caused by Environmental Change’, *Australasian Psychiatry* 1, pp. 95-98.
- 10 Ibid., p. 98.
- 11 For example: UK band Zero 7 released a song entitled ‘Solastalgia’ on their 2009 album ‘Yeah Ghost’ retrieved 28 March 2014 <https://myspace.com/zero7official/music/song/solastalgia-56857169-61745951>; US punk rock band Cobra Skulls released a song entitled ‘Solastalgia’ on their 2011 album ‘Agitations’ retrieved 28 March 2014 <http://www.cobraskulls.com/blog/discography/>; and the ‘Life in Your Hands: Art From Solastalgia’ touring exhibition curated by Robin Daw, displayed the work of artists which recognised solastalgia at galleries around Australia, including the Lake Macquarie Art Gallery (NSW), Horsham Regional Gallery (VIC), Signal Point Gallery (SA), Object Australia Centre for Craft and Design (NSW), Craft ACT (ACT), Gladstone Regional Art Gallery (QLD), and the Perc Tucker Regional Gallery (QLD) retrieved 28 March 2014 <http://www.artgallery.lakemac.com.au/exhibitions/past/life-in-your-hands-art-from-solastalgia>.

- 12 P. Tschakert and R. Tutu (2010), 'Solastalgia: Environmentally Induced Distress and Migration Among Africa's Poor Due to Climate Change', in T. Afifi & J. Jager (eds), *Environment, Forced Migration and Social Vulnerability*, Springer Publishers, Berlin, pp. 57-69.
- 13 K. McNamara and R. Westoby (2011), 'Solastalgia and the Gendered Nature of Climate Change: An Example from Erub Island, Torres Strait', *EcoHealth Journal* 8, pp. 233-236, at 233.
- 14 M. Singer and P.I. Erickson (2013), *Global Health: An Anthropological Perspective*, Waveland Press, Long Grove IL, USA.
- 15 S. MacSuibhne (2009), 'What Makes 'A New Mental Illness'?: The Cases of Solastalgia and Hubris Syndrome', *Cosmos and History: The Journal of Natural and Social Philosophy* 5, (2) pp. 210-225.
- 16 *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and Warkworth Mining Limited* [2013] NSWLEC 48. See <http://www.caselaw.nsw.gov.au/action/pjudg?jgmid=164038> for a full transcript.
- 17 Office of Environment and Heritage, NSW National Parks and Wildlife Service, Wollemi National Park: Native Vegetation, retrieved 28 March 2014 <http://www.environment.nsw.gov.au/NationalParks/parkVegetation.aspx?id=N0051>.
- 18 Rio Tinto, Mount Thorley Warkworth, retrieved 28 March 2014 http://www.riotintocoalaustralia.com.au/ouoperations/3453_mount_thorley_warkworth_3584.asp.
- 19 Ibid.
- 20 Ibid.
- 21 *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and Warkworth Mining Limited* [2013] NSWLEC 48.
- 22 Department of Environment and Heritage, Warkworth Sands Woodland in the Sydney Basin Bioregion—Profile, retrieved 28 March 2014 <http://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10833>; see also T. Peake, S. Bell, T. Tame, J. Simpson and T. Curran (2002), Warkworth Sands Woodland—An Endangered Ecological Community Distribution, Ecological Significance and Conservation Status, Hunter Region Botanic Gardens Technical Paper, retrieved 28 March 2014 <http://www.huntergardens.org.au/forms/Warkworth%20Sands%20Woodland.pdf>
- 23 S. Howden (2012), 'Villagers fear mine would destroy town', *The Sydney Morning Herald*, October 20 2012, retrieved 28 March 2014 <http://www.smh.com.au/environment/villagers-fear-mine-would-destroy-town-20121019-27wgp.html>.
- 24 See IndexMundi, Coal, Australian thermal coal Monthly Price—US Dollars per Metric Ton, retrieved 28 March 2014 <http://www.indexmundi.com/commodities/?commodity=coal-australian&months=300>. It is interesting to note that the current price (as at February 2014) is just over \$81 USD per metric tonne. Optimistic forecasts as to the economic benefits of coal proposals are nonetheless subject to price instability in an increasingly volatile market.
- 25 For all documents relating to the Warkworth extension application, refer to the Department of Planning and Environment, Major Project Assessment—Mt Thorley-Warkworth Mining Complex, Warkworth Extension Project retrieved 15 March 2015 http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=3639
- 26 *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and Warkworth Mining Limited* [2013] NSWLEC 48.
- 27 A copy of the determination of the Planning Assessment Commission is available at <https://majorprojects.affinitylive.com/public/6fef9d4b5d37a581ced40ebe05fd5203/Project%20Approval.pdf>.
- 28 Planning Assessment Commission (2012), Report on Warkworth Extension Project (09_0202), 3 February 2012, pp. 8-9.
- 29 The EDO is a community legal centre which specialises in environmental law. See NSW EDO, retrieved 28 March 2014 April 2014 <http://www.edonsw.org.au/>.
- 30 *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and Warkworth Mining Limited* [2013] NSWLEC 48.
- 31 Ibid., at [447].
- 32 Ibid., at [205].
- 33 Ibid., at [437].
- 34 Ibid., at [256].
- 35 Ibid., at [346]. Interestingly, the mining company had argued on this point that these houses would not in fact be lost, as they could be rented out to mine employees. However, this argument did not find favour with the Court, and the Chief Justice was deeply troubled with the potential for discrimination against employee tenants.
- 36 Ibid., at [404].
- 37 Ibid., at [425].
- 38 Ibid., at [426].
- 39 Ibid., at [423].
- 40 Ibid.
- 41 Ibid., at [426].
- 42 Ibid., at [429].
- 43 Ibid., at [428].
- 44 Ibid., at [18].
- 45 *Bulga Milbrodale Progress Association Inc. ats Warkworth Mining Limited & Ors*, see Environmental Defender's Office NSW, Current Cases, retrieved 10 March 2015 http://www.edonsw.org.au/current_cases.
- 46 P. Wen (2013), 'Mine rejection will cost jobs, Rio Tinto warns', *The Sydney Morning Herald*, May 1 2013, retrieved 28 March 2014 <http://www.smh.com.au/business/mine-rejection-will-cost-jobs-rio-tinto-warns-20130430-2ir1q.html>.
- 47 S. Tasker (2013), 'Minister joins Rio Tinto in Warkworth mine appeal', *The Australian*, May 13 2013,

- retrieved 28 March 2014 <http://www.theaustralian.com.au/national-affairs/state-politics/minister-joins-rio-tinto-in-warkworth-mine-appeal/story-e6frgczx-1226640706774#>.
- 48 State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, Reg 12AA.
- 49 Planning Assessment Commission (2012), Report on Warkworth Extension Project (09_0202), 3 February 2012, pp. 8-9.
- 50 Environmental Defender's Office NSW, Submission on amendments to the Mining SEPP—State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) Amendment (Resource Significance) 2013, retrieved 28 March 2014 <http://d3n8a8pro7vnm.cloudfront.net/edonsw/pages/335/attachments/original/1380680264/130809MiningSEPPamendments.pdf?1380680264> at p. 4.
- 51 State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, Reg 12AA (2). A concerning aside is the growing recognition that there is a 'carbon bubble' in international markets. As noted earlier, the economic benefits of coal may be uncertain, particularly where there is an assumption of price stability in a volatile market. New research by the Carbon Tracker Initiative and the Grantham Research Institute suggests that '...companies will likely respond to falling commodity prices by... mothballing assets... However, a long-term low-carbon scenario will ultimately lead to closure of assets, decommissioning and if possible, sale of sites for alternative land use' (Unburnable Carbon (2013), Wasted Capital and Stranded Assets, retrieved 28 March 2014 <http://carbontracker.live.kiln.it/Unburnable-Carbon-2-Web-Version.pdf>). Even Australian based analysts at Citigroup are warning investors that '...the value of thermal coal reserves are likely to be slashed dramatically if governments get serious about climate action' (G. Parkinson (2013), Dig, baby, Dig! Citi says coal investments at risk, retrieved 9 April 2013 <http://reneweconomy.com.au/2013/dig-baby-dig-citi-says-coal-investments-at-risk-20942>). For the more immediate concerns of this paper, it is important to note that these investments of financial and natural capital are potentially based on a coal price poised to collapse.
- 52 Environmental Planning and Assessment Act 1979 s 79c.
- 53 For all documents relating to the Warkworth modification application, refer to the Planning Assessment Commission, D261/13—Warkworth Coal Project Mod 6 retrieved 10 March 2015 <http://www.pac.nsw.gov.au/Projects/PACDeterminations/tabid/104/ctl/viewreview/mid/459/pac/358/view/readonly/myctrl/rev/Default.aspx>.
- 54 H. Aston (2013), 'Miners lobbied O'Farrell to pull the plug on legal centre', The Sydney Morning Herald [online], 11 January 2013, retrieved 15 March 2015 <http://www.smh.com.au/nsw/miners-lobbied-ofarrell-to-pull-the-plug-on-legal-centre-20130110-2cixj.html#ixzz34lxXZaOq>; B. Cubby (2012), 'Legal aid cuts a blow for anti-gas groups', The Sydney Morning Herald [online], 22 December 2012, retrieved 15 March 2015 <http://www.smh.com.au/national/legal-aid-cuts-a-blow-for-antigas-groups-20121221-2brgt.html>
- 55 Media Release—Rio Tinto Coal Australia (2014), 'Mount Thorley Warkworth seeks long term future for 1300 workers', Rio Tinto Coal Australia, March 20 2014, retrieved 28 March 2014 http://www.riotinto.com/media/media-releases-237_10381.aspx; L. Nichols, (2014), 'Back to Bulga', The Singleton Argus, 28 March 2014, retrieved 10 June 2014 <http://www.singletonargus.com.au/story/2180390/back-to-bulga/?cs=1282>.
- 56 P. Hannam (2014), 'Rio Tinto loses Bulga coal mine expansion appeal', The Sydney Morning Herald [online], 7 April 2014 retrieved 10 June 2014 <http://www.smh.com.au/environment/rio-tinto-loses-bulga-coal-mine-expansion-appeal-20140407-367rz.html#ixzz34mDTvftn>
- 57 P. Hannam (2014), 'Rio Tinto 'workshopped' Warkworth coal plan with Planning Department, Greens say', The Sydney Morning Herald [online], 21 August 2014, retrieved 18 November 2014 <http://www.smh.com.au/environment/rio-tinto-workshopped-warkworth-coal-plan-with-planning-department-greens-say-20140820-106bdx.html>
- 58 P. Hannam (2015), 'Rio Tinto wins planning nod for controversial Warkworth coal mine', the Sydney Morning Herald [online], 5 March 2015 retrieved 10 March 2015 <http://www.smh.com.au/environment/rio-tinto-wins-planning-nod-for-controversial-warkworth-coal-mine-20150305-13vonn.html>
- 59 *Bulga Milbrodale Progress Association Inc v Minister for Planning and Infrastructure and Warkworth Mining Limited* [2013] NSWLEC 48 at [39].
- 60 *Ibid.*
- 61 *Ibid.*, at [31].
- 62 *Ibid.*, at [36].
- 63 D. Schlosberg (2007), *Defining Environmental Justice: Theories, Movements and Nature*, Oxford University Press, Oxford; D. Schlosberg (2013), 'Theorising Environmental Justice: The Expanding Sphere of a Discourse', *Environmental Politics* 22, (1) pp. 37– 55.
- 64 *Ibid.*
- 65 F. Millner (2011), 'Access to Environmental Justice', *Deakin Law Review* 16, (1) p. 191; E. Arcioni and G. Mitchell (2005), 'Environmental Justice in Australia: When the RATS Became IRATE', *Environmental Politics* 14, (3) p. 363.
- 66 F. Millner (2011), 'Access to Environmental Justice', *Deakin Law Review* 16, (1); C. Hunold and I. M. Young (1998), 'Justice, Democracy, and Hazardous Siting', *Political Studies* 46, pp.82–95.
- 67 G. Albrecht (2005), 'Solastalgia: A New Concept in Health and Identity', *Philosophy Activism Nature* 3, (1) pp.41-55, at 45.
- 68 See, for example, the Lock the Gate Alliance (<http://www.lockthegate.org.au>), and the many groups which affiliate with this Alliance (<http://www.lockthegate.org.au/groups>).
- 69 J. Krey (2014), 'OPINION: Uneven battle exhausts ordinary people', *Newcastle Herald*, March 26 2014, retrieved 28 March 2014 <http://www.theherald.com.au/story/2178657/opinion-uneven-battle-exhausts-ordinary-people/?cs=308>.
- 70 The 'Our Land, Our Water, Our Future' campaign is online at: <https://www.landwaterfuture.org.au>.
- 71 The Bulga Declaration is online at: http://www.lockthegate.org.au/the_bulga_declaration.

- 72 G. Albrecht (2005), 'Solastalgia: A New Concept in Health and Identity', *Philosophy Activism Nature* 3, (1) pp.41-55, at 54.

