

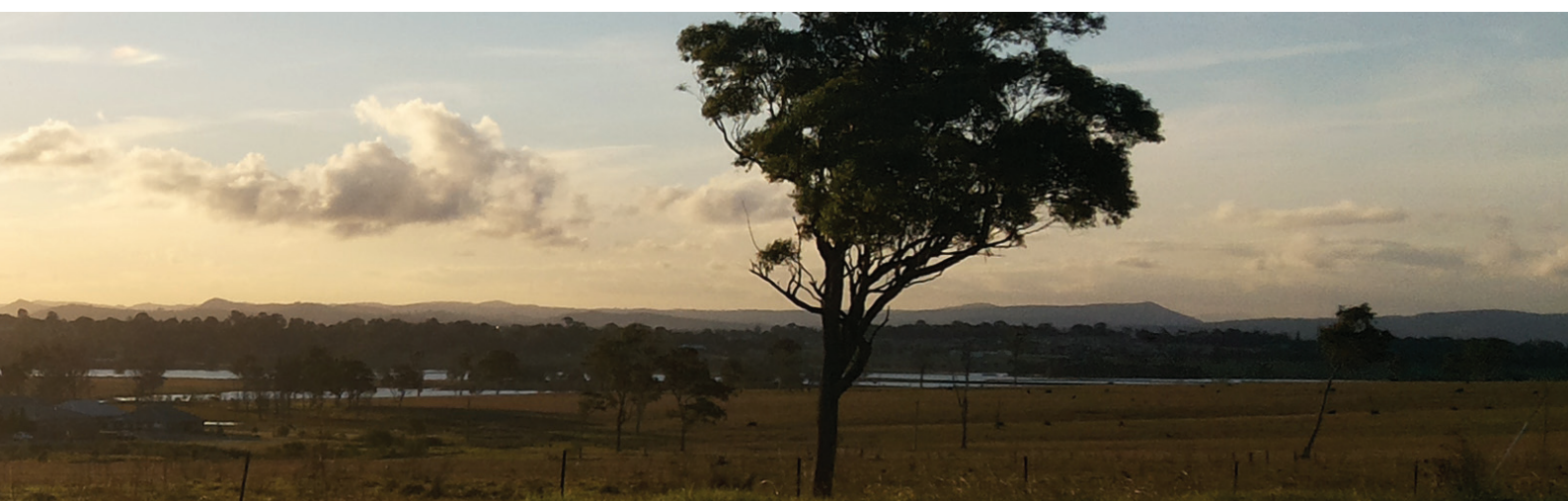


National Environmental
Research Program

LANDSCAPES &
POLICY *hub*

Mapping community values for regional sustainability in the Lower Hunter Region

Executive Summary



Report by:

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Extract - Executive Summary

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Purpose of Report

The purpose of this report is to present a robust, replicable method for mapping community values for regional sustainability and to present on the key findings from the application of this method in the Lower Hunter Region of New South Wales.

The research was commissioned by the Department of Sustainability, Environment, Water, Population and Communities. A research team from the Charles Sturt University was engaged to undertake the study through the Landscape and Policy Research Hub at the University of Tasmania. The report is an output of the Landscapes and Policy Research Hub.

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Executive Summary

The mapping of community values for regional sustainability in the Lower Hunter Region was funded by the Department of Sustainability, Environment, Water, Population and Communities (DSEWPac). The project is part of the National Environmental Research Program (NERP). A research team from the Charles Sturt University was engaged through the Landscape and Policy Research Hub (based at the University of Tasmania) to assess community values for regional sustainability in the Lower Hunter Region of NSW. Community values broadly refer to the social values that individuals assign to places on the landscape (for example, aesthetic, recreation, biodiversity), as well as the development preferences that individuals assign to places on the landscape (for example, residential, industrial, tourism). Our focus was on urban and rural residents who were adults, rather than the wider population in the Lower Hunter Region.

The project aimed to address three key objectives:

1. Identify and map the values assigned by multiple community types to natural and built features in the Lower Hunter Region;
2. Develop a robust methodology for eliciting community values for natural and built features, which can be applied in multiple regional planning contexts; and
3. Provide information and a series of policy recommendations that can be used to inform the Lower Hunter Regional Sustainability Plan, including a reliability check of sites tagged for conservation and regional development.

The community values mapping method comprised of two key phases of a community appraisal and a mail-based survey. The aim of the community appraisal was to identify key issues and opportunities with respect to regional sustainability planning in the Lower Hunter. The community appraisal involved one hour semi-structured interviews with 15 regional planning practitioners identified as key stakeholders by the Department of Sustainability, Environment, Water, Population and Communities and their contractors. The themes which emerged through these interviews informed the topics and items included in the mail-based survey. Key issues of potential interest to the department included the ongoing threats posed to biodiversity conservation by urban development in greenfield areas, the lack of a co-ordinated approach to land-use planning and the tensions related to biodiversity offset policy. Key opportunities included the development of new tools to justify the conservation of natural areas at the place-specific scale, the potential for the new Lower Hunter Regional Strategy to act as an umbrella document, which provides the pathway for different agencies responsible for land-use planning (for example, infrastructure, roads and land allocation) to work together to achieve common goals and outcomes, and pathways to reducing so called 'green tape' with respect to biodiversity offset policies at national and state scales of governance.

During the community appraisal, we noticed that communities of place (rural and urban landholders) and practice (planning practitioners employed in land-use, conservation or infrastructure planning fields) have a key stake in planning for regional sustainability. We therefore stratified our survey sample into rural landholder (n = 500), urban landholder (n = 500) and planning practitioner (n = 80) cohorts. The community of place cohort was obtained by undertaking a stratified random sample of the regional cadastre database provided on licence by PSMA Australia. The community of practice cohort was obtained by snowball sampling (that is, asking key planning practitioners to identify the names of up to 10 practitioners who they believed had an important voice on regional sustainability planning issues in the Lower Hunter and then seeking these candidates to pass on a further 10 names and contact details).

A survey response rate of 39.3% (393 completed surveys returned from the sample of 1,001) was achieved. To test for non-response bias, we compared survey respondents with a sample of non-respondents using data gathered during follow-up telephone surveys with non-respondents; and survey data on a limited number of variables with similar data collected from the wider population through the 2011 ABS Census. Those comparisons established that survey respondents were of similar age to non-respondents, but respondents had attained higher levels of formal qualification.

The mail-based survey comprised seven parts:

1. Community views on regional sustainability issues;
2. Knowledge of regional sustainability issues;
3. Beliefs about the future of the Lower Hunter region;
4. Values and preferences for the low hunter region;
5. Attitudes toward biodiversity offsets;
6. Respondent background (for example, socio-demographics); and
7. Open comment about the threats and opportunities facing regional sustainability planning in the Lower Hunter Region.

Part 4 was the unique aspect of the survey. Survey participants were asked to assign aesthetic, recreation, biodiversity, natural significance, cultural significance, food, water, natural materials, science, health and intrinsic values to places in the Lower Hunter Region using sticker dots. Additionally, they were asked to identify places on the map of the Lower Hunter Region that they believed were acceptable or inappropriate for residential, industrial, transport, agriculture and tourism development, in addition to areas acceptable and inappropriate for conservation outside existing national parks and conservation reserves. Survey participants could place up to six dots for each value and preference type on to the map of the region. They could place as many or as few dots as they liked on the map.

Subsequent sections of the Executive Summary provide a brief overview of key findings for each survey topic. There is also a summary of the conclusions section of the final report where we directly respond to each key research objective.

Level of Concern about Regional Sustainability Planning Issues

Of the 25 issues listed in the survey, those of concern to the highest proportions of survey respondents were:

1. Insufficient coordination between land-use, conservation, transport and infrastructure planning;
2. Lack of accessible public transport in regional centres;
3. Lack of integrated transport planning; and
4. Biodiversity (the variety of native plants and animals) decline as a result of development.

The issues of least concern out of those listed were:

1. Negative impacts from the construction of new roads such as the Hunter Expressway;
2. Establishment of new corridors for biodiversity conservation;
3. Rezoning of private land for biodiversity conservation; and
4. Laws that exist to limit native vegetation clearance.

All community types rated biodiversity decline as an issue of concern above infrastructure issues such as the lack of cycling paths, the increased frequency of trains to transport coal to the port of Newcastle and the availability of basic services (for example, water, electricity) to support residential development. Coal seam gas exploration was a medium-ranked issue; however, for rural landholders it was ranked in the top seven issues.

There are significant differences in the issues of concern between rural and urban landholders and planning practitioners. Both landholder cohorts were more concerned than planning practitioners about the lack of opportunities to express their views on regional planning issues that affect their community, the high rate of population growth of some regional centres; and development along main roads. The lack of full-time employment opportunities was of concern to a higher proportion of urban landholders than rural landholders or planning practitioners. The establishment of new corridors for biodiversity conservation was of greater concern to urban landholders than planning practitioners.

Knowledge of Regional Sustainability Planning Issues

It is important to highlight that most rural and urban landholders self-reported very little to some knowledge on most items included in this survey topic. For example, most rural landholders reported less than some knowledge for 17 out of the 18 aspects of regional sustainability (> 80% reported less than some knowledge) and most urban landholders reported less than some knowledge for 16 out of the 18 aspects (> 78% reported less than some knowledge). These results suggest there is a case for improving public knowledge of regional sustainability planning. Respondents self-reported most knowledge about the advantages and disadvantages of coal mining and coal seam gas mining, and the threats posed to biodiversity by residential and industrial development in the Lower Hunter Region. These results suggest there is a case for improving public knowledge about regional sustainability issues in the Lower Hunter.

Beliefs about Regional Sustainability Planning Issues

Respondents were generally very supportive of a diversified regional economy, including investment into renewable energy options such as wind and solar power generation (78% supported versus 13% opposed), increased tourism development to improve the economic viability of the region (86% supported versus 5% opposed) and building a more efficient public transport system (91% supported versus 4% opposed). The recent establishment of 20,000 ha of conservation reserves or flora reserves in the Lower Hunter Region was also supported by a large majority of respondents (80% supported versus 7% opposed).

A high proportion of respondents disagreed with belief statements about the openness and fairness of regional planning in the Lower Hunter. For example, 49% disagreed that regional planning organisations are open and honest when explaining plans for future development (versus 11% agreed); and 30% disagreed that the process used to develop land use plans in the Lower Hunter Region is fair and equitable (versus 12% agreed). There was general uncertainty about the desirability of the changes proposed to the NSW planning system under the 'A New Planning System for NSW' (78% unsure).

Overall, the majority of respondents agreed that the economic prosperity of the Lower Hunter Region is too dependent on the coal mining industry (75% agreed versus 14% disagreed) and the majority disagreed that coal-seam-gas mining is an acceptable land-use in the Lower Hunter Region (61% disagreed versus 17% agreed). Rural and urban landholders agreed significantly more than planning practitioners that coal seam gas mining presents an unacceptable risk to the health of residents in the

Lower Hunter Region ($F = 7.08$, $p^1 < 0.01$). Proportionally, 62% of rural and urban landholders versus 39% of planning practitioners agreed that coal seam gas mining presents an unacceptable risk.

Compared to planning practitioners, landholders were less supportive of high-density residential development in urban areas (34% rural and urban landholders versus 2% planning practitioners opposed). This is an important finding given that urban infill is often promoted as a way to better manage urban sprawl impacts on the environment (and perhaps improve urban amenity and lower infrastructure costs). Nevertheless, 52% of rural and urban landholders and 90% of planning practitioners supported higher density residential development in urban areas.

Further to this topic, during the community appraisal a number of planning practitioners believed that the cheap price of quarter acre blocks on the urban-rural fringe was a key driver of greenfield development and thus biodiversity decline. We included a question on these price signals in the mail-based survey. It seems that rural and urban landholders are not convinced that price is the principal driver of the trend towards the purchase of quarter acre blocks in the region. Indeed, rural and urban landholders were more likely than planning practitioners to believe that price was a weaker driver of this trend (58% rural and urban landholders versus 33% planning practitioners agreed). This result suggests that the ‘suburban dream’ of living on larger blocks of land is still alive in the Lower Hunter.

The majority of respondents (60%) were generally supportive of the restoration of brownfield (for example, old coal mining sites) for residential development ahead of the expansion of greenfield (previously undeveloped) area (versus 19% opposed). Restoration of brownfield areas may be a socially acceptable and practical means of providing for the rural lifestyle preferences of a substantial proportion of the Hunter population while minimising the impact of rural subdivision for urban development on biodiversity.

Social Values and Development Preferences for the Lower Hunter

Spatial pattern and overlap analyses

We generated a series of density surfaces (maps) to show the distribution and intensity of social values and development preferences assigned by all respondents across the Lower Hunter Region. A variety of patterns were identified, but those likely to be of greatest interest to the Department of Sustainability, Environment, Water, Population and Communities relate to the spatial arrangement of respondents’ values for biodiversity and natural significance, and their development preferences near areas of national environmental significance (Matters of National Environmental Significance - MNES) identified under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth).

Respondents identified existing national parks, state forests and conservation reserves across the region as areas with high conservation value, particularly Tomoree National Park, Watagans National Park, Yengo National Park and Heaton and Awaba State Forests (Figure i). When asked to identify areas that should be conserved outside of national parks and conservation reserves, respondents

¹ The **p value** is a statistical term that indicates how significant a result may be. Scientists use the *p* value to understand how likely the result is to be real and not just by statistical chance. There is a possibility that the results obtained by statistical methods might have happened purely by statistical chance. *P* is an estimate of the probability that the results have occurred by statistical chance. The smaller the value for *p* (for example, $p < 0.01$), the less chance a result is by chance, rather it is a reliable result. The threshold for *p* value significance is different for different survey design. In this report, the smaller the *p* value, the more confident we are in the result being a true indication of people’s preferences.

assigned 70% of their conservation preference dots to the Lower Hunter coastal strip, particularly between Nelson Bay and Newcastle. Proportionately more social values compatible with conservation (that is, biodiversity, natural significance and intrinsic values) were found in areas containing medium and high Matters of National Environmental Significance than low areas. For example, biodiversity and natural significance values were significantly over-represented in medium (14% and 14% of all value dots) and high (16% and 15%) Matters of National Environmental Significance frequency areas compared with what may be expected by chance ($p < 0.05$), and significantly under-represented in low Matters of National Environmental Significance areas frequency areas (8% and 7%). The community values mapping method therefore provides empirical evidence that there is widespread community support for the conservation of MNES in the Lower Hunter Region.

Overall, areas identified by respondents as highly acceptable for development were typically found outside areas of medium or high Matters of National Environmental Significance areas frequency areas (Figure ii). For example, areas perceived to be inappropriate for residential and agricultural development were significantly over-represented in areas of medium (16% and 6%) and high (17% and 8%) Matters of National Environmental Significance areas frequency compared with what may be expected by chance ($p < 0.05$). These results suggest that survey respondents are broadly aware that areas of environmental significance are unsuitable for development.

Nevertheless, in some cases areas of medium-high frequency of Matters of National Environmental Significance were identified by respondents as having medium-high acceptability for development. Those cases include Sugarloaf State Conservation Area, Cooragang Island, Williamstown Airport, Toronto West and an area south of Watagans National Park.

We then generated a separate 'potential-for-conflict' index based on the differences between acceptable and inappropriate residential and industrial development points found within a 2 km grid cell, then multiplied by the number of social value points found in that grid cell. Catherine Hill Bay, Branxton-Huntlee, Thornton North, Cooranbong, Lochinvar and Anambah were all identified as high conflict potential for both residential and industrial development. North Raymond Terrace, Bellbird and Newcastle Airport Employment Zone were identified as areas of high potential conflict for residential development, whereas the Hunter Economic Development Zone (Kurri Kurri) and Togago Employment Zone were identified as areas of high potential conflict for industrial development. The consistency of the results suggests that the method is a reliable way of identifying potential for land-use conflict.

In the main, it seems that respondents' preferred areas for residential and industrial development were closely aligned with the areas identified for development in the 2006 Lower Hunter Strategy. For example, acceptable residential (23.0%) and industrial development (16%) were significantly over-represented within the proposed urban lands compared with what may be expected by chance ($p < 0.05$). Those areas tended to be in close proximity to existing transport infrastructure such as the Hunter Expressway and its junction with the Sydney to Newcastle Freeway near Minmi. On the other hand, the Catherine Hill Bay area provided an example of potential conflict between the preferences of respondents and the direction of the strategy. The strategy nominated the Catherine Hill Bay area as acceptable for urban development but respondents indicated they thought high residential and industrial development was inappropriate here and placed a high conservation preference (non-reserves) on the area.

Figure i Overlay of hotspots of Matters of National Environmental Significance and acceptable development preferences

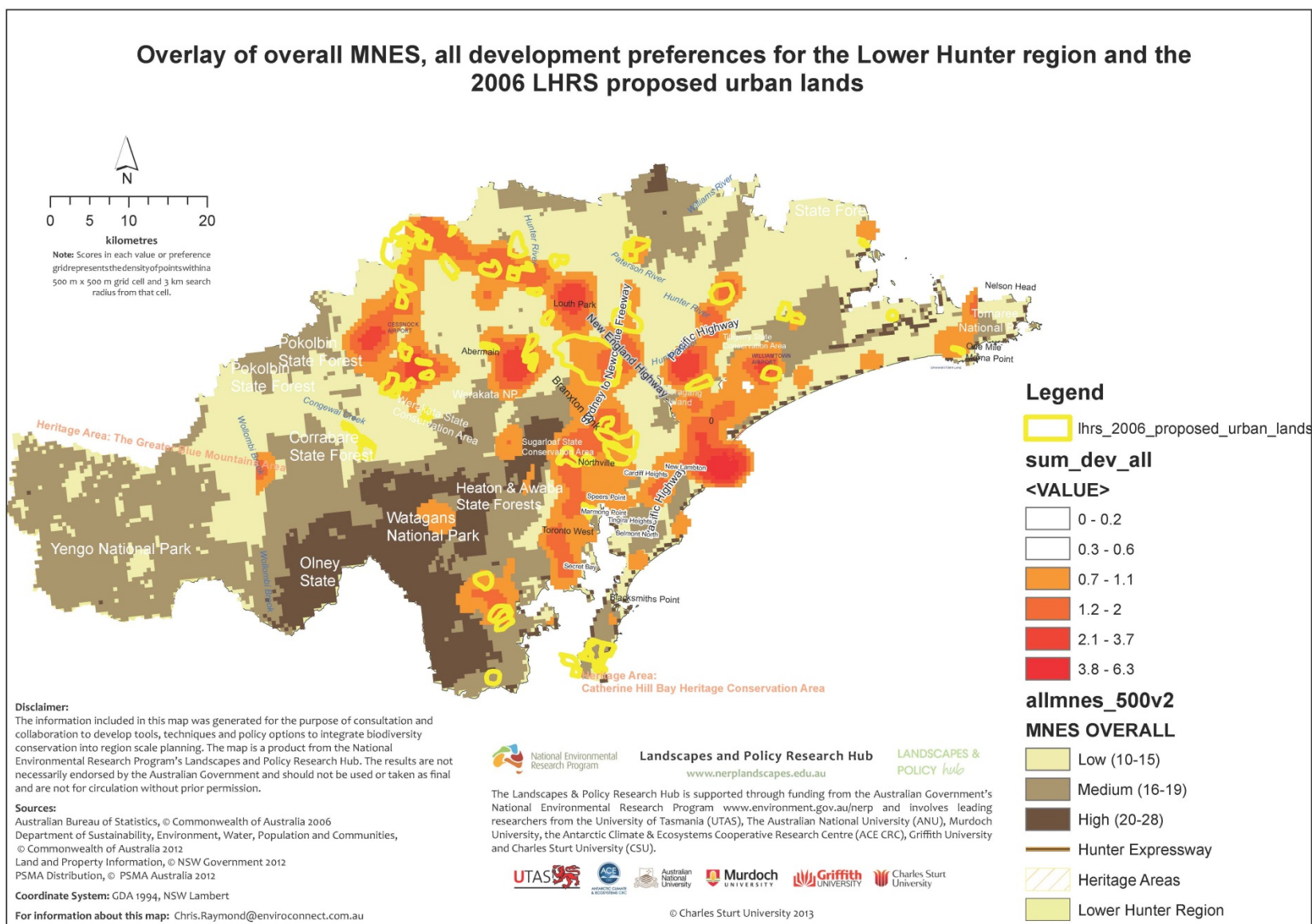
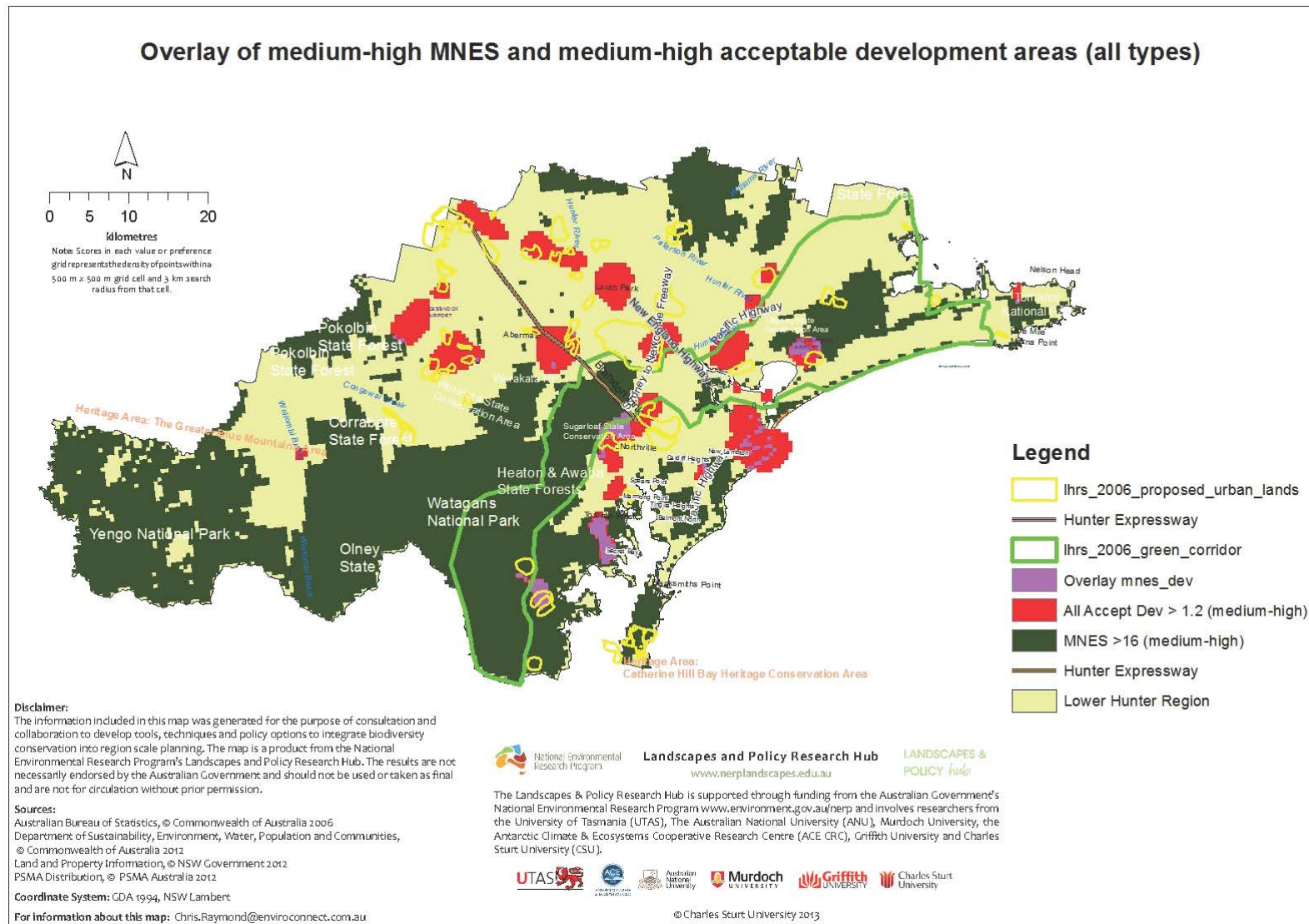


Figure ii Overlay of areas of moderate to high Matters of National Environmental Significance and moderate-high acceptable development.

(Purple areas highlight the potential for land-use conflicts.)



Effect of landholder type and local government area of residence on the assignment of values and preferences

In total, 14,357 value and preference dots were assigned to the map by respondents. Newcastle local government area (LGA) was assigned the most number of dots (3,305) and Maitland local government area was assigned the least number of dots (2,083). The proportion of total dots assigned by each community type was closely associated with their local government area of residence. For example, 35.4% of rural landholders lived in Cessnock local government area and 35.7% of their value and preference dots were assigned to this local government area. Conversely, only 0.7% of rural landholders lived in the Newcastle local government area and they only assigned 0.1% of their value and preference dots to this local government area. Similar patterns were found across the other respondent cohorts. These associations suggest the presence of a form of geographic discounting whereby environmental valuation is discounted from the home perspective across space. A greater proportion of values were assigned closer to one's place (for example, local government area) of residence, and fewer values to places further away, highlighting the need to engage a random and representative group of landholders from all local government areas in the study region.

To examine the influence of proximity on the mapping exercise we examined the mean distance at which each value and preference type was placed from respondent's place of residence. We also undertook that analysis based on landholder type. The LGA of residence generally had a stronger effect on the distance of value assignment than landholder type, with the exception of the assignment of recreation value. This finding suggests that overall respondents tend to assign social values within their own local government area of residence, with a key exception being recreation values for rural landholders. In community values mapping, it is therefore important to elicit values from residents who live across all the local government areas contained within a study region to ensure the values mapped are representative of that region.

Attitudes toward Biodiversity Offsets

We used feedback from the community appraisal to ask survey participants to rate the extent they agree or disagree with 16 statements related to biodiversity offsets. For ease of interpretation, we grouped responses into: 1) assessments of effectiveness/social acceptability; 2) type of approach preferred; 3) management of levy; 4) accountability; 5) application; and 6) longevity/duration.

Almost half of the respondents (48%) agreed that biodiversity offsets are an effective approach to maintaining or improving biodiversity in the Lower Hunter Region; however, there was a lot of uncertainty about their effectiveness (33% unsure). Two of the survey items explored respondent's views about the way that biodiversity offsets should be implemented. Overall, 49% of respondents agreed that a standardised approach to biodiversity offsets is needed in the Lower Hunter Region (versus 21% disagreed); and a majority (82%) agreed that the Australian Government should play a leadership role in the establishment of a consistent approach to biodiversity offsets in the Lower Hunter Region (versus 6% disagreed).

There were four survey items exploring respondent's views about ways to ensure the accountability of those involved in the administration of an offsets levy. Nearly all (93%) respondents agreed that a publicly available record needs to be established and updated so that governments, developers and the public can check where offsets have been established. Half (51%) of all respondents agreed that developers who do not plan to remove native vegetation should not have to pay the offset levy (versus 27% disagreed); and half (51%) of all respondents disagreed (versus 30% agreed) that developers

should be able to negotiate the amount of revegetation required as part of an offset rather than have to follow rules that apply to all cases. There were significant differences across the community types about the extent developers should be responsible for identifying and acquiring areas of similar ecological characteristics for offsets. A high proportion of rural and urban landholders (67%) agreed that developers should be responsible (mean > 3.65), whereas a high proportion of planning practitioners (47%) disagreed (mean = 2.85, $F = 10.64$, $p < 0.001$).

Two items explored the way in which the biodiversity offset levy should be managed. A majority of respondents agreed (71% agreed versus 10.4% disagreed) that a board of trustees independent of government and developer interests should be established in order to manage the levy. There was a lot of uncertainty as to whether the NSW Government could be relied on to effectively manage an offset levy in order to maintain biodiversity in the Lower Hunter Region. Overall, 52% of respondents disagreed that the NSW Government could be relied on to manage an offset levy, and 33% were unsure.

Future Delivery of the Community Values Mapping Method

We conclude that the community values mapping method presented here is useful for regional sustainability planning because the approach:

1. Systematically identified regional sustainability issues of concern to residents and other community types and is able to identify the spatial expression of values and preferences. That is vital information for planners making decisions about whether to engage and how to engage different community types, such as community consultation, conflict resolution and social acceptability assessments;
2. Provided a conceptual framework and technology for integrating the natural and social sciences to enhance regional sustainability planning. That is, spatially referenced ecological data layers can be linked to spatially referenced social data layers to enhance the capacity of planners to develop scientifically defensible and socially acceptable recommendations/decisions; and
3. Provided a way of capturing the values and preferences of a substantial sample of the public (segmented by community types) in a way that has scientific credibility. Such an approach is likely to enhance public trust in regional sustainability planning which often relies on input through public meetings/workshops and written submissions. Planning practitioners are often left with the unenviable task of subjectively sorting through and then prioritising community values and preferences.

Further:

1. The provision of an up-to-date database of the names and addresses of residents is a key to the success of the community values method. We encourage the department to consider the inclusion of a clause in a future bilateral agreement that requires the provision of cadastral databases containing the longitude and latitude coordinates and property identity number of each parcel and the names and address of each parcel/property owner (in accordance with provisions under the *Privacy Act 1988*);
2. The community values mapping method has not been applied to the consideration of Indigenous values and the values of specific interest groups such as mining interest. The Department of Sustainability, Environment, Water, Population and Communities could consider contracting researchers to expand the method to engage these wider stakeholders in regional sustainability planning in other areas of Australia;

3. Alternative approaches for eliciting community values are available to researchers, including online-mapping and workshop platforms. The department could fund projects to experiment with the use of multiple mapping platforms in order to engage a wider range of rural and urban landholders in regional sustainability planning; and
4. Current collaborations between research hubs highlight the potential for spatially integrating the community values presented here with ecological value assessments. The department could consider encouraging integrated assessments in other areas in order to understand the trade-offs associated with the integration of social values and preferences into conservation priority assessments. For example, the proportion of the landscape or species distributions which may be lost (or gained) as a result of the consideration of social values or development preferences.

Policy Recommendations and Future Directions

Conservation of Matters of National Environment Significance (MNES)

Areas of high and medium Matters of National Environment Significance (MNES) frequency in the Lower Hunter were also highly valued by survey respondents for conservation and considered highly inappropriate for residential or industrial development. These findings suggest the priorities and actions of environment/conservation agencies are likely to enjoy widespread community support in the Lower Hunter and that development proposals that threaten those values will be contested. At the same time, there are areas in the Lower Hunter where there is potential conflict between conservation and development. The Catherine Hill Bay area was one of those areas identified as acceptable for urban development by the NSW Government, as proposed under the 2006 Lower Hunter Strategy, but the majority of survey respondents identified this as an area where residential and industrial development was inappropriate. To address these potential conflicts, the Department of Sustainability, Environment, Water, Population and Communities and the NSW Department of Planning and Infrastructure should consider:

1. Identifying in relevant planning documents those areas this study suggests are areas of potential conflict if residential or industrial development is proposed for areas currently conserved;
2. Developing and publicising a policy which enables areas of identified potential conflict to be systematically considered at multiple stages of the strategic assessment process, including referral, assessment and decision phases; and
3. Further understand the nature of the land-use conflicts in the Catherine Hill Bay area to ensure areas of Matters of National Environmental Significance are appropriately conserved.

Integrated regional sustainability planning

Respondents appear to be supporting a more co-ordinated approach to regional sustainability planning in the Lower Hunter. As part of a more co-ordinated approach, the Department of Sustainability, Environment, Water, Population and Communities should:

1. Liaise with local and state government bodies to identify instances where areas in close proximity to MNES are proposed to be developed and then consider developing tools and processes to identify and evaluate the impacts, including cumulative impacts, of those potential developments on MNES;

2. Work with local and state governments to fund research to forecast demand for residential development in the Lower Hunter over the next 20 years and to explore the extent that demand can be met with a combination of increased density in existing urban areas, development of rehabilitated coal mining areas and new greenfield areas that can be developed consistent with MNES;
3. Fund research (including a literature review and specific case studies) investigating the apparent preference for larger (for example, quarter acre) suburban and peri-urban residential land amongst those living in regional Australia. That research should consider the economic and social factors at work and the opportunities to alter existing preferences through a suite of instruments, including marketing;
4. Investigate the need and utility of potential approaches for undertaking catchment-based assessments of the impacts of development proposals. This would entail understanding the socio-economic and environmental impact of development proposals on the Hunter Valley Catchment, not just the Lower Hunter Region; and
5. Further understand the social drivers of the ‘suburban dream’ of owning larger blocks in the Lower Hunter, and identify effective policies to manage this preference into the future.

Mining and energy

A majority of respondents across all community types expressed views suggesting they believe that coal seam gas is an unacceptable land-use in the Lower Hunter Region, which suggests that proposals to explore and mine coal seam gas in the Lower Hunter Region will generate widespread opposition. These community concerns need to be acknowledged and addressed by the mining industry and governments if those stakeholders remain committed to coal seam gas mining in the Lower Hunter Region.

Transport and other infrastructure

The Lower Hunter Region is a high residential development growth region and the need to provide an integrated transport network and other infrastructure to cope with those pressures was a concern to a majority of respondents. Given the likelihood of major infrastructure development in the region in the immediate future, including to service coal seam gas development, and of the potential for infrastructure development to negatively impact on Matters of National Environmental Significance, we recommend that the Department of Sustainability, Environment, Water, Population and Communities work with the Department of Planning and Infrastructure (NSW), Hunter Development Corporation (NSW), and Department of Roads and Maritime (NSW) to consider ways to:

1. Integrate transport planning into the 2013 revision of the Lower Hunter Regional Strategy; and
2. Provide infrastructure such as water, sewerage and power to areas proposed for new developments in a way that minimises the impact on areas Matters of National Environmental Significance.

Biodiversity offsets

Biodiversity offset policy is complex; however, our findings present some clear signals with respect to the direction of offset approaches and we recommend that:

1. The Department of Sustainability, Environment, Water, Population and Communities consider mechanisms for supporting a standardised, coordinated and transparent approach to biodiversity offsets delivery and accounting in the Lower Hunter that includes some/all of the following elements:
 - a) Funds from offsets should only be available for work to improve biodiversity outcomes;
 - b) Allow for offsets to occur on public land if the offset would improve biodiversity conservation;
 - c) The amount of revegetation required as part of an offset be fixed rather than negotiated with developers;
 - d) Land used for biodiversity offsets should not be available for future development unless all biodiversity losses are offset elsewhere;
 - e) Biodiversity offsets should not be applied on land previously set aside for conservation;
 - f) Provide offset revenue which should only be available for use in the region funds were sourced from and for projects that support biodiversity conservation; and
 - g) Allow offsets to be listed on the land title held by the NSW Government.
2. The Department of Sustainability, Environment, Water, Population and Communities and the Office for Environment and Heritage (OEH) NSW to consider communication/engagement programs to inform rural and urban landholders of the benefits of offsets, including the ways consolidated funds are spent in the Lower Hunter; and to listen to and address where possible, widely or strongly held views that are at odds with current offset policy/management. Engagement programs should focus on issues of conflict between landholders and planning practitioners regarding biodiversity offsets. That is:
 - a) Whether developers should be responsible for identifying and acquiring areas of similar ecological characteristics for offsets. Both rural and urban landholders agreed that developers should be responsible whereas the planning practitioners disagreed; and
 - b) Whether biodiversity offsets on specific parcels of land should only be erased by a separate NSW Act of Parliament. There was only moderate agreement among all respondents for this view.

Community consultation should also focus on elements listed in Section 8.6.5 (part 1) of the final report. However, these elements are at odds with the strategic directions outlined in the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy*². Specific attention to be directed at whether offsets should be fixed rather than negotiated with developers (element c), the long-term security of environmental offsets (element d), the appropriate siting of offsets (element e) and the listing of offsets (element g).

² DSEWPac (2012) *The Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy*, Department of Sustainability, Environment, Water, Population and Communities, Australian Government, Canberra.

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