

Found at: Journal of Rural Studies, 79, 136-144.

<https://www.sciencedirect.com/science/article/pii/S0743016719314081>

To boundary or not: the structural bias of ‘fair representation’ in rural areas

Author

Kirsten Martinus*

Department of Geography and Planning
Faculty of Arts, Business, Law and Education
The University of Western Australia
35 Stirling Highway, Crawley, WA, 6009, Australia

E: kirsten.martinus@uwa.edu.au

T: +61 8 6488 7674

M: +61 431 435 602

Benjamin Reilly

School of Social Sciences
Faculty of Arts, Business, Law and Education
The University of Western Australia

E: ben.reilly@uwa.edu.au

Key words: communities of interest; rural Australia; local government; fair representation; electoral boundaries.

Acknowledgements: The Australian Research Council for funding the project (Award Number: DE170100727).

***Corresponding author**

To boundary or not: the structural bias of ‘fair representation’ in rural areas

Abstract

Fair representation of different communities of interest is a central tenet of democracy. In Australia, governments at all levels historically employed rural weightings to maintain the representation of sparsely-populated regions. However, these have fallen out of favour as demands for one-person, one-vote equality have become the norm. This nominal equality can create other forms of bias in areas of uneven population which have distinct communities of interest, as is the case in many rural local governments. This paper explores this bias by unpacking findings of a ward boundary review in the rural local government Shire of Dandaragan in Western Australia. Drawing on interviews with councilors and community stakeholders, it examines different proposals for fair representation via ward and non-ward based structures. It finds that fair representation of all communities is challenged by inherent biases in the criteria for drawing ward boundaries that are often not well understood by those involved. It shows how a ‘no ward’ system which allows smaller communities to coordinate behind a single reputable candidate can generate fairer representation than a system of wards whose boundaries may or may not align with communities of interest.

Key words: communities of interest; rural Australia; local government; fair representation; electoral boundaries.

Introduction

Fair representation, where each vote is of equivalent value, is a central tenet in democracies; and therefore, an issue that has long been of interest in urban and political studies (Cole and Thrasher, 2012; Rallings et al., 2004a; Rao, 1998). In systems using geographically-defined electoral districts, this is usually afforded by ensuring a rough equality in the population of enrolled electors across each constituency. This equalizes the ratio of electors to elected officials to deliver numerically equitable representation across electorates (Norman et al., 2007). In Australia, for example, since 1983 federal electoral boundaries have been drawn so as to equalize the enrolled electorate in each to within plus or minus 10 percent of the mean. Similar criteria are also applied to the drawing of most state and local government electorates. In Western Australia, the Local Government Advisory Board uses this criteria to approve or reject proposed ward boundary changes, in addition to other legislative requirements which consider community of interest, physical and topographic features, demographic trends, and economic factors.

The division of a local government areas into wards is often seen as critical to upholding a balance between the one-vote one-value requirements and broader criteria such as ensuring that communities of interest are not separated (Barkan et al., 2006; Rallings et al., 2004a). But in practice these two criteria – of maintaining both numeric equality and communities of interest – are often in tension. Particularly in rural areas, they can result in highly arbitrary outcomes given the desire of local communities to have their own representative on Council; low turnout at most local government elections; low barriers to entry and often victory which together encourages both viable and unviable candidates to stand; and the way demographic changes across wards can create new voter geographies under shifting economic and social realities (Barkan et al., 2006; Cole and Thrasher, 2012; Pattie et al., 2012).

These structural biases are magnified in non-metropolitan or regional¹ areas where populations are not evenly distributed across wards. Local government in Australia is also the last vestige of property-based qualifications and plural voting, which was the norm across many democracies before the expansion of the franchise and the one-person, one-vote norm which today is taken for granted. In much of Australia, owning or occupying property in a Council area will generally entitle the owner or occupier to vote in that area, irrespective of whether the owner or occupier is also a resident. In some cases, this means that multiple votes are available to some individuals at local government elections (Goss, 2017).

Most scholarship on representation focuses on national-level questions and urbanized areas, with less focus on issues that affect rural or regional areas such as local elections. While there is a body of scholarship on how voting patterns for political parties change when boundaries are redrawn,

¹ This paper adopts the Australian definition for 'regional' – being any area outside of metropolitan regions.

there is much less attention given to questions of fair representation in non-party contexts such as local government, in which differential clustering of residents plays more of a role than ideological differences (cf. Taylor and Johnston, 1979). In such cases, questions of fair representation are most salient in rural and regional areas, given how deeply-embedded communities of interest and identity (Alexander, 2013) can intersect with the political economy of emerging multi-functional areas with strong agricultural traditions (cf. Barkan et al., 2006).

This paper will therefore focus on a regional case study of how different communities of interest can be conceived and represented in various ward and no-ward systems. It draws on a review of boundary configuration options in the Western Australian (WA) Shire of Dandaragan (SoD) and its constituent townships of Badgingarra, Cervantes, Dandaragan and Jurien Bay (see Martinus, 2016). Since 1971, the Shire has experienced repeated internal electoral boundary changes in response to rapid population shifts, following a State government recommendation that elector-councilor equality across all wards in a Shire not deviate by more or less than ten percent (see LGAB, 2014a, 2014b). This paper emerged from this review of ward boundaries in SoD, and is structured into five sections.

The first section examines questions of fair representation and electoral structural biases, particularly in the context of regional areas, before looking specifically at relevant literature on ward boundaries. It then outlines the methodology for a case study of SoD. Using data from elite interviews and council documents, a third section overviews the history of representation in SoD, as well as councilor activities and voting patterns. A fourth section looks specifically at communities of interest and elector-to-councilor ratios in the context of six ward boundary reform options. The paper concludes that leveraging the potential advantages of smaller communities in council elections is likely to be more beneficial than ensuring representation through a system of artificial ward boundaries which may not align with actual communities of interest.

Fair representation and inherent structural bias

A simple test of how people feel about the representative nature of their political system is whether or not there is agreement amongst voters that the system is fair. In national elections which are won and lost in urban areas, fair representation is often taken to mean a broad equivalence between votes cast in an election and seats won in an assembly (Reynolds et al, 2005). At lower levels, such as in local government elections and particularly in rural areas, fair representation can mean something quite different. Rather than a strict equality of ratios between representatives and electors, or proportionality between votes and seats, rural voters often cite geographical under-representation as their major concern when it comes to fair representation (Curtin, 2004).

In Australia, which has enormous variation between urban and rural areas, what might be considered 'fair' when drawing up electoral districts has long been contested. Historically, the

federal parliament and most states adopted various forms of rural weighting, on the understanding that far-flung country areas should be entitled to electorates containing fewer voters than metropolitan areas, in order to compensate for problems of size, distance and remoteness. Until 1974, the federal parliament allowed a deviation from the average enrolment in each state for rural electorates of up to 20 per cent, while special provisions for constituencies larger than 5,000 km² prevailed until 1984. Similar schemes also existed in states such as Queensland. Together, these helped to ensure the over-representation of rural areas in parliament (Farrell and McAllister, 2006).

Over time, such rural weighting schemes fell out of favor as demands for one-person, one-vote equality became the norm. Western Australia is the only Australian state to retain mandated over-representation of rural areas. The WA Legislative Council (the upper house of the bicameral state parliament) retains a significant 'malapportionment', meaning that the votes of electors in different parts of the state carry different weights. Voters in remote rural areas such as the designated "Mining and Pastoral Region" can carry up to six times the weight of voters in Perth, the capital and only major city, while voters in the "Agricultural Region" may have four times the weight of Perth voters. Ongoing rural-urban migration and declining population of many rural areas point to these weightings increasing in the future (Kelly, 2006).

At the local government level, by contrast, there is no provision for rural weighting. Rather, WA Local Government follows a system whereby Cities and Shires can be divided into wards or elected "at large" across an entire district. In both cases the electoral system used is straight first-past-the-post, and in many cases electors will have multiple councilor positions to fill in a multi-member district. Voters are asked to tick up to the number of vacancies specified on the ballot paper; in practice many just choose one candidate while others will vote for several. There are usually multiple vacancies, so that the highest-polling candidates up to the number of vacancies to fill are declared elected.

In such cases, the system will elect the candidate(s) with the highest vote totals, but can also facilitate minority representation, both in terms of over-representing minority groups and the more relevant case for this article of giving councilors from smaller population centers an improved chance of being elected. Much depends on the number of candidates and the vote split between them. In the 2017 election for the City of Gosnells, for instance, no winner gained more than ten percent of the vote, and one councilor was elected on just 4.8 percent in a 7-member district with 31 candidates standing. Similar patterns also occurred, albeit with less extreme results, in other local government areas which had not gone down the path of dividing into separate wards. While dubious in terms of majority rule, such a vote spread does offer opportunities for otherwise marginalized communities to gain representation, which is often seen as an important element of electoral system design (Reilly, 2001).

This minority representation occurs because of the relationship between a district's "magnitude"

(the number of councilors to be elected overall) and the method by which votes are tallied. The greater the magnitude, the more likely it is that small communities who would usually be outnumbered can cast enough votes to elect a councilor, especially if they can coordinate behind a single representative rather than splitting their vote across multiple candidates. In cases where political parties are present, they may try to instruct their voters to allocate their votes to candidates in a way which maximizes a party's likely seat-winning potential. Too many votes for one candidate will see them pile up useless majorities; too thinly spread a vote across multiple candidates could see them lose seats they would otherwise have won. This feature of plurality voting in multi-member districts has been studied in the international literature (Grofman et al., 1999; Reynolds et al., 2005).

In contests without parties, such as most local government elections, the same logic applies to larger and smaller towns. Large towns can easily see votes split across multiple candidates, opening the door to smaller but more disciplined regions to gain representation and indeed to be over-represented. Jakobsen and Kjaer (2016) have shown how this process of over-representation of peripheral regions occurs in local government elections in Denmark. Much depends on smaller communities' ability to coordinate behind a single nominee and an attractive choice of candidate. The remainder of this paper examines how smaller communities in the Shire of Dandaragan achieved fair representation despite losing their local ward due to population movements. Council representation has been maintained across all communities, apart from the 2013-2015 election cycle where there was no councilor from Badgingarra. This generated feelings of under-representation and mistrust in various parts of SoD, and led to the ward boundary review discussed below.

Ward boundaries, bias and regional communities

The drawing of any electoral boundaries – be they local wards, state districts, or federal electorates – inevitably impacts equality in elector and councilor ratios and the fair representation of interests (Barkan et al., 2006). As ways of spatially organizing society, such delineations of human geography inevitably have political implications. Examples are found in how boundaries constituting local government areas represent different parts of a city, as well as how constituent wards are assigned to represent different social groups within a local government area (Burdess and O'Toole, 2002).

Rural communities in particular tend to be highly sensitive to how local boundaries structure representation between regional and metropolitan areas. For example, in a study of Kenya and South Africa, Barkan et al. (2006) showed how *space matters for rural communities*, with electoral outcomes impacted greatly by the dispersion or concentration of voters. This was a particular issue in agrarian societies with diverse communities of interest that were not easily represented by each other. Similarly, Cole and Thrasher (2012) found councilors in rural localities

in Britain placed more value on boundaries drawn according to communities of interest than elector-to-councilor ratios. Rural areas often have greater demands for local service delivery and basic infrastructure than metropolitan areas, and also tend to be smaller and more homogenous, facilitating effective collective action (Reilly and Reynolds, 1999).

Electoral boundaries within local government areas – wards – inevitably have political implications, even when drawn by a ‘neutral’ Commission informed by local authorities. As Pattie et al. (2012) observed, arguments for specific boundary alignments in the UK (with a plus-or-minus five percent elector-to-councilor ratio requirement) often come from political parties who gain from adopting one set of boundaries over another. Thus, Rallings et al. (2004b) found that ‘astute local parties holding a majority of council seats might be able to draw, and get the Commission to accept, boundaries that distribute their support most efficiently’ (p.484).

In research on voter turnout in a Metropolitan London borough, Orford et al. (2008) surmised that the geographical clustering of election participation rates found in different elections might be due to variations in how parties campaigned in marginal wards with fewer core voters. There is limited scholarship on how such electoral biases may play out differently in regional communities. Rallings et al. (2004a) suggests that biases might be sorted into two general groups. First, *malapportionment bias* where councilors are advantaged because they represent smaller wards and need relatively fewer votes for election; and second, *vote efficiency bias*, depending on how votes are cast within and across wards. For example, some rural wards may have a more passionate community of interest, and therefore turnout more core voters than others.

In regional communities, these biases may play out differently to urban areas if voter distribution is spatially unequal. Western Australia – Australia’s largest state, and most affected by remoteness and distance – is not unique in having structural malapportionment in favor of rural areas built into its political system. Boone and Wahman (2015) found that malapportionment occurred frequently in African democracies, generating a rural bias in electoral outcomes. Similarly, Jakobsen and Kjaer (2016) found amalgamations in Denmark created over-representation in smaller jurisdictions; while Feldhoff (2017) observed that small agricultural areas in Japan were significantly over-represented. In the United States, winning the rural vote in smaller states was a key to Donald Trump’s unexpected victory at the 2016 presidential election (Monnat and Brown, 2017).

Arzheimer and Evans (2014) show that regional electors tend to vote for candidates who live geographically closer to them. Many voters from smaller regions therefore express a preference for a ward system in which they are guaranteed a minimum level of representation. However, one-person one-vote standards of equality make it difficult for areas with declining populations relative to others to maintain discrete wards. Smaller communities then often feel ‘marginalised’, a phenomenon examined by Orford et al. (2008). As such, Rallings et al. (2004a) argue against the capacity of ward boundary changes to deliver equality through ‘one vote, one value’ principles

which do not account for such marginalization.

However, as Rao (1998) argues, representation is more than just allocation of a councilor to a specific ward; it is about the capacity of a councilor to represent their ward's interests and character. That is, the capacity of a councilor to represent the interests of constituents depends on the *quality* of their representation as well as the nature of the ward. Rao's findings that quality of representation became less important as electors knew (and cared) less personally about their representing councilor is particularly relevant to small rural communities with tight social networks. Thrasher et al. (2015) found that more socially deprived places demanded more of a councilor's time. They also found women and retirees made greater time investments as councilors than working persons or men. They concluded that how a councilor represented a ward depended on the nature of the ward itself.

Seeking to add to our understanding of fair representation and potential bias of wards in regional areas, the remainder of this paper unpacks a review of ward boundaries for one Shire in regional WA. This ward review occurred in the context of WA local government elections which are distinctive from those of other Australian states in several respects. Councilors are elected for terms of four years, with elections held every two years for half of the council. Unlike most other Australian elections, voting is voluntary, and most local elections are conducted by post, rather than in person. Election is by a categorical first-past-the-post system, rather than the ranked preferential ballot used elsewhere in Australia. And due to WA's unique demography, with one major city in an area the size of Western Europe, elections take place in a context where regional communities have very different needs than urban ones.

Ward boundary review background and methodology

The WA Local Government Act of 1995 identifies five factors which need to be taken into account when drawing ward boundaries: 1) communities of interest; 2) physical and topographical features; 3) demographic trends; 4) economic factors; and, 5) ratio of electors to councilors in constituent wards. The Local Government Advisory Board recommends that wards be aligned within plus or minus ten per cent in their elector-to-councilor ratio, with local governments required to put forward a strong case on other factors if this ratio was not upheld (see LGAB, 2014a, 2014b). This effectively privileges equality of size in terms of electors, but not geography, which affects the representation of smaller communities in local government councils.

As such, this paper focuses on the two most relevant factors – *communities of interest* and *ratio of electors to councilors* – in the Shire of Dandaragan (SoD), based on data from two key sources (see Martinus, 2016). Firstly, on elector and councilor numbers, relevant information was extracted from SoD Council meeting minutes over the 2014 and 2015 period when a review was being discussed in council, as well as from public submissions on the various ward options. These were

combined with findings from a series of interviews conducted in 2015 with elite stakeholders representing the SoD community, local government councilors and administrators.

The SoD put forward five ward options for Council review (Figure 1). *Option 1* was to revert to the previously used four wards of 2005. *Option 2* was a four ward option where elector-to-councilor ratio conformed to the plus or minus ten per cent ruling. *Option 3* was the two-ward system of 2005-2009 – abandoned as the small community of Badgingarra was placed with the largest area of Jurien Bay, making representation more difficult than having no wards. *Option 4* was a four-ward system responding to topographical changes caused by the opening of Indian Ocean Drive. *Option 5* was a two-ward scenario putting the Badgingarra farming population (not the township) in the same ward as the Dandaragan township and farming community. *Option 6* had no wards or boundaries.

INSERT FIGURE 1

At least four interviewees were selectively chosen to represent each of the four constituent townships. These four interviewees comprised a combination of councilors, ex-councilors or knowledgeable community members (including SoD local government staff). Each interviewee was heavily engaged in the SoD community, and therefore had an appreciation for the diverse character of the Shire. Unstructured 30-minute interviews sought to examine: a) how each stakeholder perceived their community of interest, and the relationship of their community to others; and, b) how fair representation could be achieved under the different ward options.

A total of 27 participants were interviewed, with those unable to attend in person interviewed via phone. Interviewees received invitation emails, with interview questions and maps of ward scenarios attached. Interviews were digitally recorded, with comments of relevance extracted and de-identified to ensure confidentiality, which was of particular importance given their sensitive and politically-charged nature. Narrative analysis was used to unpack the ‘story’ told by the various perspectives of the interviewees – italics are used in this paper to denote their own words – as responses only represented part of a ‘truth’. Indeed, interviewees often appeared most interested in discussing their own community’s interests rather than others, often with limited understanding of complex regional issues related to large infrastructure and funding. For example, there appeared to be incomplete knowledge of why council decisions were made, what councilors in other wards did, why the Shire had shifted to progressively fewer wards since the 1970s, how postal voting impacted smaller communities, and the evidence base required by State government if ward changes not aligning to suggested councilor-to-electors ratios were to be accepted. The next section discusses the history of these issues across SoD.

History and background to boundary changes in Shire of Dandaragan

The Shire of Dandaragan (SoD) is a WA local government area around 200 kms north of Perth, covering 6,716 km² of coastal to inland land with access via two arterial routes, Indian Ocean Drive or Brand Highway. SoD was first founded around the Dandaragan farming community in 1890, with Badgingarra, Cervantes and Jurien Bay townships emerging later as agricultural profits were used for coastal development. SoD residents can be characterized by one of four communities of interest centered on these four towns, and by two largely separate industry profiles related to either the coastal industries of tourism and crayfishing or to agriculture in Dandaragan and Badgingarra rural areas. It is predicted to almost double in population (to 5000 persons) by 2022 (Shire of Dandaragan, 2012). Most growth will be centered on Jurien Bay given its comparative high level of amenities, which draws retirees migrating from Perth to enjoy the coastal lifestyle. In contrast, Dandaragan and Badgingarra residents are dispersed across the rural community – having a younger, but declining population.

SoD residents of these and other less-populated communities have over time become concerned with the threat of under-representation on Council given the exponential growth of the largest town, Jurien Bay. This became a reality during the 2013-2015 election cycle which saw two years of no representation by Badgingarra on the SoD Council. In response, and after 41 submissions from the public, the SoD Council sought to review the no-ward system that had been used since 2009. It was thought that implementing a two- or four-ward system would ensure fair representation for each major township.

The SoD was formed in 1961, and first put in place a four-ward system (option 1) in 1971 after an election cycle delivered no representation for Jurien Bay, amid concerns that something similar might also happen to other communities. These wards roughly divided SoD into communities surrounding the four townships of Badgingarra, Dandaragan, Cervantes and Jurien Bay. Table 1 outlines historic SoD ward changes and associated councilor numbers.

INSERT TABLE 1

The four wards worked well during the 1970-90 period of rapid growth, with councilor representation in each ward allowing collaborations to improve the Shire as a whole. A one-vote, one-value system was introduced, giving all electors equal say in Council elections. However, nationwide changes in the 1990s impacted upon how populations were distributed in and across regional local governments in several ways. First, there was the consolidation of the Australian populations in large metropolitan cities and (largely coastal) areas facilitated by a rising fly-in/fly-out workforce living in amenity-rich areas and working in rural areas (Martinus, 2018). Second, a shift from the traditional family-owned farms to large corporate-managed farms (e.g., broad-acre farming) led to declines in population and investment for smaller farming communities (Peel et al.,

2016).

The 1995 Local Government Act introduced five factors guiding ward boundary reviews, which resulted in SoD moving to two wards to generate an elector-councilor ratio within the recommended plus-or-minus ten percent. It combined coastal (west) and rural (east) communities of interest by dividing the Shire into north and south wards. The voluntary voting system and election of multiple councilors simultaneously meant the turnout rates of different communities were critical to election outcomes. If all SoD electors voted, there would be a structural bias towards the larger Jurien Bay over the other smaller communities — as occurred in 2013. By contrast, higher turnout rates in smaller communities could overcome this structural bias, as happened at the 2011 and 2013 elections.

Table 2 shows the relationship between these differential turnout rates and township representation over the 2003 to 2015 election cycles. In WA local government elections, half the Council are elected in each four-year term. For example, the Badgingarra Ward had two councilors after the 2003 election — one with two years remaining and one elected for four years. The 2005 and 2007 elections also saw two councilors voted in from Badgingarra in the North Ward (under a two ward system). From the 2009 elections onwards (no wards), all communities had at least one Council representative — except during the 2013-2015 cycle when Badgingarra was not represented. However, Badgingarra had been previously over-represented, with two councilors each year from 2003 to 2011.

INSERT TABLE 2

Interviewees reported that the continual review of ward boundaries since 2003 had occurred because it was becoming increasingly difficult to satisfy the elector-to-councilor ratio as Jurien Bay grew faster than the rest of the Shire. The costs of these reviews was seen as wasteful by Council, as there was no evidence that ward boundaries changes were addressing more substantive issues of fair representation. Indeed, the introduction of two wards made it more difficult for Badgingarra (as the least populated), being dwarfed in the North Ward by the most populated Jurien Bay. This led to the abolishment of all ward boundaries in 2009. As one interviewee noted:

Demographics and size of the towns led us to abandon the ward system because there wasn't the evidence at the time that we would end up with skewed representation. Also, it would be too expensive to keep reviewing ward boundaries. Nothing has changed in the legislation, but there have been changes in population distribution. We are now in an even worse situation to sustain a ward system. We will need to keep shifting boundaries, which means not meeting requirements of communities of interest. The only way to maintain a ward system is to isolate Jurien, but that is not a viable solution.

In 2011, WA introduced postal voting for most local government elections to make voting easier and to increase turnout from its persistently low level, being well below the equivalent for state

and national elections (Department of Local Government, Sport and Cultural Industries, n.d.). There was an immediate increase in votes returned, particularly for Jurien Bay candidates, as *'people make selection without effort'*. Interviewees noted that the postal vote encouraged the participation of electors who would not normally vote, such as those not actively interested in local politics because they were new to the area. Most of these were likely to be in Jurien Bay, which comprised a greater proportion of SoD's population and had a less active voting profile compared to the tightly-knit smaller communities. That is:

Postal voting cleared the path for apathetic voters, which makes it more difficult for places like Badgingarra. If the same level of voting interest that is in Badgingarra was exhibited in Jurien Bay, then it would be hard for Badgingarra as Jurien Bay voters will discount a candidate from there. But in-person voting means that an apathetic person, who doesn't know the candidates, won't bother voting. If people can't be bothered to get to know the candidates, then it shouldn't be made easy that they can vote.

In this way, the postal vote was seen to shift representation in favor of Jurien Bay, as voter preference was likely to be driven by residential location over knowledge of an actual candidate (such as qualifications or representative capacity). Thus, some interviewees suggested abolishing the postal vote despite its growing adoption State-wide.

Community representation

All Councilors interviewed said they worked hard to represent all communities, not just the community they resided in. But on questions relating to Council achievements, most cited successes within their own communities, indicating an unconscious bias. Whilst noted by some, this bias was largely unrecognized. Further, Dandaragan, Cervantes and Badgingarra interviewees felt the Council was under pressure to address the *'wants and needs'* of growing Jurien Bay and that representation in the farming communities of Dandaragan and Badgingarra was affected by population declines and farm operative changes (e.g. more seasonal casual workforce rather than permanent residents).

In general, community representation was time-consuming, occurring through informal and formal community interactions as well as council meetings and forums. Most community-based interactions were in Councilors' own communities (e.g., at meetings, social or sporting events, ratepayer telephone conversations) rather than in Council chambers. For example, informal information gathering was via various social groups or in the local pub discussing issues with constituents *'over a beer'*. Informal discussions were reported to be most often in a Councilors' community rather than elsewhere. Formal information-gathering occurred at Council meetings and forums.

Whereas Jurien Bay Councilors reported working 11-18 hours per week, rural councilors worked

33-38 hours and the SoD President 38-45 hours. Rallings and Thrasher (2003) noted that hours worked by Councilors, as well as problems associated with travel to and from council meeting, generates barriers which lead to a lower proportion of some groups in Council (e.g., women). Cole (2002) observed workload differences and a willingness to represent outside wards between councilors from geographically small but populated wards, and geographically large but less populous wards. In this research, Councilors cited difficulties in representing the whole Shire given their own community commitments, primarily as councilors were not able to: 1) go to many (if any) events outside their own community; 2) comprehend issues facing other communities; and, 3) travel easily across the large Shire:

Councilors from other wards have tried their best to represent other wards, but still fall short because Shire is too big and difficult to get actual boots on the ground in all the different community groups. There needs to be feeling of contact and touch with people of Dandaragan, coastal Councilors don't need to have an interest in the hinterlands.

Most interviewees thought votes within Council tended to support the projects a Councilor was familiar with and felt was of more 'value'. These decisions had a real impact on how infrastructure assets were developed and managed, and were seen as skewing decisions towards one community because more Councilors came from there. For example, there were more roads throughout the rural areas, whereas the coast had comparatively more parks and reserves than rural areas. The road maintenance cost around \$1 million, with 75 per cent spent in the rural areas, being crucial to support transport and logistics of agriculture and other products, and community services (such as the school bus, ambulance, sporting and social activities). As a result, most interviewees noted the importance of having a dedicated representative of the smaller communities in Council decision-making.

The remainder of this section summarizes findings relating to the factors of *communities of interest* and *ratio of electors to councilors*, and how these generate fair representation or bias across the Shire.

Community of interest: Interviewees thought communities of interest were defined by whether the community had a coastal or rural lifestyle. Most noted this was captured in the respective sporting clubs of each community, and that this contributed to an '*identity*' and enjoyable '*rivalry*'. The coastal lifestyle of Jurien Bay and Cervantes were largely linked to tourism and crayfishing. All interviewees noted most '*people on the coast are new to the Shire with no knowledge of the connecting history or heritage of the Shire*', the needs of rural communities or how income from the rural areas historically supported coastal development. *Jurien Bay* was cited as having declining fishing with '*48 crab boats in early 90s [and] now eight*', growing government administration and commerce. It has a transient population, servicing tourists from nearby Perth in accommodation and holiday homes which are '*used infrequently*'. It receives State

funding for development as a regional center, and has a relatively large older population. *Cervantes* is less developed; one interviewee stating that it was more ‘*international*’ than Jurien with the tourism draw of the Pinnacles² and an established live export crayfish industry.

The rural lifestyle of Dandaragan and Badgingarra was linked to production in agriculture, horticulture, cattle (*‘brought from up North and unloaded, Dandaragan is a transition feedlot for 72 hours. Then, decisions are made about where the cattle go’*) and mineral sands. Interviewees described the communities as close-knit, passionate and strongly self-reliant, with families linked to the historic establishment of Dandaragan (mid 1800s) and Badgingarra (early 1900s). Dandaragan residents were extremely proud of their heritage and their contribution to SoD development, given Shire administration was housed in the township until 2004. Interviewees noted that the shift of the Shire administration building to Jurien Bay had created conflict and mistrust between communities, in that *‘threats were made and it has never been forgotten’*. Interviewees noted many Dandaragan residents were closer to Moora (a town in an adjacent LGA) and therefore did not travel to Jurien Bay for provisions, services, socializing, sports and work. Given that rural issues were different from coastal ones, residents from rural communities felt dislocated from the coast and that fair representation for their community was hampered by farmers with heavy overhead costs who *‘find it difficult to find time to do council duties’*.

Neither proposed two-ward systems aligned with the coastal and rural characters of the communities, with a two-ward east-west partition being unviable due to population differences of the larger coastal and smaller rural communities. Option 4 fits the communities of interest criteria as it reflects the divisions of the coastal and rural lifestyles, as well as divides between the four distinct townships. The no-ward option also does this, as the lack of boundaries allows people to effectively self-select as voters which community they belong to and which councilor should represent them.

Ratio of councilors to electors in wards: Comparing representation across SoD in election cycles is difficult, with no wards after 2009. Table 3 shows that over 2004-2009, the South Ward was better represented than the North – albeit both were roughly within plus or minus ten percent.

INSERT TABLE 3

Table 4 shows representation across SoD before and after the October 2015 election in the no ward system. There was enormous variation in the elector-to-councilor ratio between the four townships, with Badgingarra having no representation before the election. There was also under-representation in Dandaragan and Cervantes after and Jurien Bay before, perhaps demonstrating less structural disadvantage than a straight comparison of populations may imply.

INSERT TABLE 4

² Limestone formations near the coast in Nambung National Park.

Table 5 shows the elector-to-councilor ratio under four wards. Whilst option 1 is structured around historic communities of interest, neither options 1 nor 2 reflect the perceived coast-rural delineation of the Indian Ocean Drive. Option 4 accounts for this, placing other coastal communities with Cervantes. However, most of this land has almost no residents and therefore only adds two voters over option 2, and is national park, natural reserve or undeveloped freehold land with little similarity with Cervantes. Further, the elector-to-councilor ratio means Cervantes is significantly over-represented in option 1, and Dandaragan in option 4. Therefore, none of the options would likely be recommended by the Local Government Advisory Board.

INSERT TABLE 5

Table 6 shows both two-ward options have an elector-to-councilor ratio of plus-or-minus ten percent. They differ only in whether a farming community near Cervantes is included, which balances the ratio but ignores it is a coastal community of interest. Both options place Badgingarra with Jurien Bay in the North Ward, with its relatively small population making representation harder than if there were no wards. Further, the North/South divide disregards communities of interest, with most interviewees suggesting an East/West divide would be better if it didn't generate large imbalances in the elector-to-councilor ratio.

INSERT TABLE 6

Discussion

Representation of the four communities appeared crucial for regional stability and trust in the democratic process for all interviewees, given perceived rural and coastal communities of interest and the value placed on having diversity in decision-making. This was the key driver of the ward boundary review. Indeed, all interviewees answered 'yes' when asked if they would be happy with no wards if there could be representation of all four communities. Nonetheless, there was no consensus on how to achieve fair representation, with interviews highlighting various alternative and competing perspectives and understandings of the SoD stakeholders. This included feelings of unfairness with some communities seen as more privileged and receiving more favorable votes Council. Some appeared linked to conflicts which emerged when Council offices and administration moved from Dandaragan to Jurien Bay townships. Others emerged as interviewees focused on the development of their own community rather than the whole Shire, or due to incomplete information, knowledge or 'anecdotal' evidence on complex regional issues.

Nonetheless, the research found some SoD communities were advantaged over others due to four structural biases. The first structural bias lay in the postal voting system which increased participation in some areas as voting became easier. This was seen as a proportionally larger benefit for Jurien Bay than smaller communities. Voters in '*smaller but very close-knit*'

communities often had greater passion for and support of local politics, so voted irrespective of the change from in-person or postal voting. Interviewees felt that this reliable voting base of smaller communities did not increase under postal voting. Evidence for this was found in their largely consistent representation before the introduction of postal voting despite the larger voting base of Jurien Bay which comprised more ‘*apathetic voters*’ who were less interested in local politics.

The second structural bias towards Jurien Bay lay in its socio-economic characteristics, where there are more time-rich retirees living on the coast than rural communities with their time-poor farmers. The third bias related to the relatively greater number of voters in Jurien Bay, as well as more businesses and a greater economic base. The fourth bias favored the smaller communities in that they had greater passion and community support which could be more easily harnessed to stand behind candidates. As one interview stated: ‘*passion is in the smaller communities as there is a fear of not being heard*’.

Despite these biases, and aside from the 2013-2015 electoral cycle, fair or over-representation of all townships occurred with both two-ward and no-ward structures. Two reasons emerged for why candidates from smaller townships were more likely to be elected: 1) the willingness of smaller communities to support their candidates; and, 2) candidate quality and ability to campaign and win votes from other communities. As one interviewee observed with the postal vote: ‘*candidates need to be more proactive in engaging across the Shire*’. Nonetheless, interviewees of the three smaller communities still felt their interests and needs were not being represented in Council, and that Council processes favored Jurien Bay. While each interviewee presented information on this, these individual perspectives were not enough to assess which community was most advantaged. Data on council decisions showed virtually no dissent by representatives from smaller communities, and a general consensus within the Chamber on rulings suggesting fairness in decision-making processes.³

Conclusion

Fair representation is of particular importance to regional areas where populations are unevenly spread between communities of interest, or where communities are so different that electors do not feel candidates from other communities can represent theirs. Nonetheless, delivering fair representation is often difficult in practice – such as when one community of interest is growing exponentially faster than any of the others. This is particularly the case when rapid growth within one area brings elector-to-councilor equality into conflict with legislative requirements that wards represent communities of interest, and take into account economic, social and geographic realities.

This study found deeply embedded communities of interest in the SoD, with a perceived rural-coastal divide and residents having a strong sense of belonging that had nothing to do with where

³ For example, during the twelve Ordinary (averaging 58 minutes each) and two Special Council Meetings (around 2 to 2.5 hours each) in 2015-2016 financial year, 164 decisions were made and of which 155 decisions (94.5 per cent) received no dissent.

electoral boundaries were drawn. This translated to a belief from the rural populations that councilors from the more populous coastal areas were unable to represent them, due to several perceived biases in the system of representation. First, there was a perceived *geographic* bias – as the SoD administration building was located on the coast, councilors from there had little reason to travel to rural areas to understand specific issues. Second, a *social or cognitive* bias – with most councilors residing on the coast and therefore part of the same social and sporting communities, they were perceived to also share an underlying understanding and ways of approaching issues which aligned with their coastal community of interest. Third, a *workload* bias – as many Council decisions related to the development of Jurien Bay as the main regional center. These inherent voting biases led to a perception of rivalry between the four communities when putting their respective projects up to Council. As such, having representatives from each community on Council was widely seen as the only way of ensuring stability and community satisfaction in decision-making processes.

Biases which *favoured* rural community representation, by contrast, were not well understood or recognized. For example, at most elections smaller communities were more likely to be over- than under-represented – irrespective of the ward system in use. A ward-based system was not essential. Indeed, the success of candidates from smaller towns such as Cervantes, Dandaragan and Badgingarra at the 2016 election demonstrated that candidates from smaller communities have a good chance of election if supported by their township even under a no-ward system. This somewhat counter-intuitive finding is in keeping with other studies (cf. Boone and Wahman, 2015) regarding the effective representation of rural areas, and the importance of passionate ‘core’ voters and indeed of passionate communities (cf. Rallings et al., 2004a). Turnout data from the West Australian Electoral Commission also supports this, with elector participation higher for local governments with smaller elector bases (especially those below 1000 voters) compared to larger shires and municipalities.⁴ This was compounded by the larger abstaining voter base of areas populated by more recent arrivals, such as Jurien Bay, offering potential advantages to smaller towns in asymmetrical Shires such as the SoD.

The disproportionate population increase of certain coastal towns over other areas is well-documented in Australian rural areas and driven largely by processes outside of local, state and even national government control and influence. In ward-based system, this can generate a costly game of repeated boundary adjustments to accommodate the growth of larger, more attractive communities and fulfill nominal electoral equality provisions (e.g., the plus-or-minus ten percent preference of the government). Our findings suggest that in the SoD, smaller communities were able to maintain their representation in a no-ward system just as well as in a ward-based one. The key driver was the nature of the electoral system and the ability of candidates from smaller communities to mobilize support from their own core voters. As such, greater understanding the

⁴ See elections.wa.gov.au

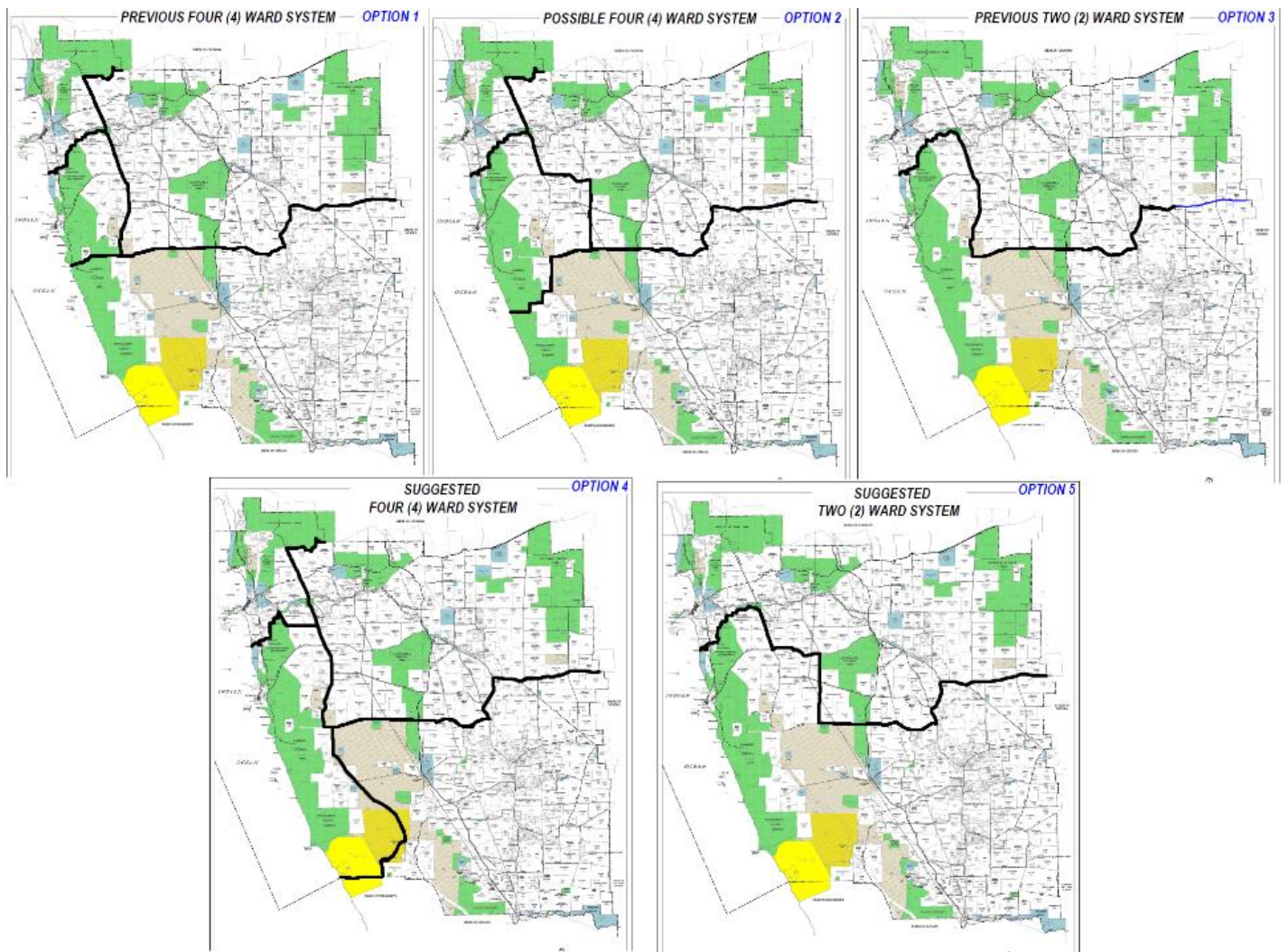
effects of the electoral system and the impact of reforms on smaller communities (e.g., the postal vote) is likely to be more beneficial for fair representation than forced electoral boundaries which may not align with communities of interest. Despite the expressed wishes of many interviewees, this research found little evidence to support a return to a ward system.

References

- Alexander, D. (2013) Crossing boundaries: action networks, amalgamation and inter-community trust in a small rural shire. *Local Government Studies*, 39(4), 463-487.
- Arzheimer, K. and Evans, J. (2014) Candidate geolocation and voter choice in the 2013 English County Council elections. *Research and Politics*, 1(2), 1-9.
- Barkan, J., Densham, P. and Rushton, G. (2006) Space matters: designing better electoral systems for emerging democracies. *American Journal of Political Science*, 50(4), 926-939.
- Boone, C. and Wahman, M. (2015) Rural bias in African electoral systems: legacies of unequal representation in African democracies. *Electoral Studies*, 40(December), 335-346.
- Burdess, N. and O'Toole, K. (2002) Elections and representation in local government: a Victorian case study. *Australian Journal of Public Administration*, 63(2), 66-78.
- Cole, M. (2002) The role(s) of county councilors: an evaluation. *Local Government Studies*, 28(4), 22-24.
- Cole, M. and Thrasher, M. (2012) Councilor perceptions of the boundary review process: recommendations for future practice. *Local Government Studies*, 38(6), 711-730.
- Curtin, J. (2004) *The Voice and the Vote of the Bush: The Representation of Rural and Regional Australia in the Federal Parliament*. Canberra: Parliamentary Library Information and Research Services.
- Department of Local Government, Sport and Cultural Industries (n.d.) *Elections Summary Review*. Perth: Government of Western Australia.
- Farrell, D. and McAllister, I. (2006) *The Australian electoral system: origins, variations, and consequences*. Sydney: UNSW Press.
- Feldhoff, T. (2017) Japan's electoral geography and agricultural policy making: the rural vote and prevailing issues of proportional misrepresentation. *Journal of Rural Studies*, 55, 131-142.
- Goss, R. (2017) Voting Rights and Australian Local Democracy. *UNSW Law Journal*, 40(3).
- Grofman, B., Lee, S., Winckler, E. and Woodall, B. (1999) *Elections in Japan, Korea, and Taiwan under the Single Non-Transferable Vote: The Comparative Study of an Embedded Institution*. Ann Arbor, MI: University of Michigan Press.
- Jakobsen, M. and Kjaer, U. (2016) Political representation and geographical bias in amalgamated local governments. *Local Government Studies*, 42(2), 208-227.
- Kelly, N. (2006) Western Australian Electoral Reforms: Labor Finally Succeeds. *Australian Journal of Political Science*, 41(3), 419-26.
- Local Government Advisory Board (LGAB) (2014a) *A Guide for Local Governments: How to Conduct a Review of Wards and Representation for Local Governments with and without a Ward System*. Government of Western Australia, Perth.
- LGAB (2014b) *Ward Boundaries and Representation: The Processes Associated with Reviewing Ward Boundaries and Representation*. Government of Western Australia, Perth.
- Martinus, K. (2018) Inequality and regional development in advanced capitalist economies. *Geography Compass*, 12(11), e12405.

- Martinus, K. (2016) *Shire of Dandaragan Ward Boundary Review: Fair Community Representation*. Centre for Regional Development, The University of Western Australia, Perth.
- Monnat, S. and Brown, D. (2017) More than a rural revolt: landscapes of despair and the 2016 presidential election. *Journal of Rural Studies*, 55, 227-236.
- Norman, P., Purdam, K., Tajar, A. and Simpson, L. (2007) Representation and local democracy: geographical variations in elector-to-councilor ratios. *Political Geography*, 26(1), 57-77.
- Orford, S., Rallings, C., Thrasher, M. and Borisyyuk, G. (2008) Investigating difference in electoral turnout: the influence of ward-level context on participation in local and parliamentary elections in Britain. *Environment and Planning A*, 40(5), 1250-1268.
- Pattie, C., Johnston, R. and Rossiter, D. (2012) Change the seats, change the participation? Parliamentary redistricting and constituency turnout. *Representation*, 48(4), 419-428.
- Peel, D., Berry, H. and Schirmer, J. (2016) Farm exit intention and wellbeing: a study of Australian Farmers. *Journal of Rural Studies*, 47(A), 41-51.
- Rallings, C., Johnston, R. and Thrasher, M. (2004a) Equalizing votes but enabling bias: the electoral impact of the 1977 and 1999 ward boundary reviews in London. *Urban Studies*, 41(7), 1367-1393.
- Rallings, C., Thrasher, M., Johnston, R. and Downe, J. (2004b) Redistricting local government in England: rules, procedures, and electoral outcomes. *State Politics and Policy Quarterly*, 4(4), 470-490.
- Rallings, C. and Thrasher, M. (2003) *Local Elections in Britain*. London, UK: Routledge.
- Rao, N. (1998) Representation in local politics: a reconsideration and some new evidence. *Political Studies*, XLVI, 19-35.
- Reilly, B. (2001) *Democracy in Divided Societies: Electoral Engineering for Conflict Management*, Cambridge University Press, Cambridge.
- Reilly, B. and Reynolds, A. (1999) *Electoral Systems and Conflict in Divided Societies*. Washington DC: National Academy Press.
- Reynolds, A., Reilly, B. and Ellis, A. (2005) *Electoral System Design: the New International IDEA Handbook*. Stockholm: International Institute for Democracy and Electoral Assistance.
- Shire of Dandaragan (2012) *Community Strategic Plan*. Shire of Dandaragan, Western Australia.
- Taylor, P. and Johnston, R. (1979) *The Geography of Elections*. Penguin, New York.
- Thrasher, M., Borisyyuk, G., Shears, M. and Rallings, C. (2015) Councilors in context: the impact of place upon elected representatives. *Local Government Studies*, 41(5), 713-734.

Figure 1: Five ward boundary proposals submitted for Shire of Dandaragan Council review.



Source: Martinus (2016)

Table 1: History of Shire of Dandaragan ward boundaries and councilor numbers

Approx. Year/Ward	No. Councilors	Total councilors / Ward changes
1961		
9 Councilors	9	
1971		
Coastal Ward	2	9 Councilors; Wards introduced
Central Ward	2	
North Ward	2	
South Ward	3	
1981		
Coastal Ward	3	9 Councilors; Coastal Ward gained one Councilor, South Ward lost one Councilor
Central Ward	2	
North Ward	2	
South Ward	2	
1986		
Coastal Ward	4	10 Councilors; Coastal Ward gained one Councilor
Central Ward	2	
North Ward	2	
South Ward	2	
1987		
Jurien Ward	3	10 Councilors; Coastal Ward split into Jurien (3 Councilors) and Cervantes (2 Councilors) Wards; North Ward lost one Councilor
Cervantes Ward	2	
Central Ward	2	
North Ward	1	
South Ward	2	
1988		
Jurien Ward	3	10 Councilors; North, South and Central Wards abolished and new North and South Wards established.
Cervantes Ward	2	
North Ward	2	
South Ward	2	
1990		
Jurien Ward	3	10 Councilors; South and North Wards renamed Dandaragan and Badgingarra Wards
Cervantes Ward	2	
Dandaragan Ward	3	
Badgingarra Ward	2	
1992		
Jurien Ward	3	9 Councilors; Dandaragan Ward lost one Councilor reducing total number of Councilors to nine.
Cervantes Ward	2	
Dandaragan Ward	2	
Badgingarra Ward	2	
2005		
North Ward	5	9 Councilors; Jurien and Badgingarra Wards amalgamated to create North Ward; Cervantes and Dandaragan Wards amalgamated to create South Ward
South Ward	4	
June 2009 onwards	9	9 Councilors; Discontinued Wards system.

Table 2: Election summary data, 2003 - 2015

Election year	Type of election	No. candidates	No. councilors	Newly elected Councilor community	Voting	No Council representation
2003	In person	5	5	4 Wards = 2 Jurien Bay / 2 Cervantes / 1 Badgingarra		
2005	In person	5	5	2 Wards = 3 North Ward (1 Badgingarra / 2 Jurien Bay); 2 South Ward (Cervantes)		
2007	In person	5	5	2 Wards = 3 from North Ward (2 Jurien Bay / 1 Badgingarra); 2 South Ward (1 Cervantes / 1 Dandaragan)		
2009	In person	6	4	No wards = 2 Jurien Bay / 1 Cervantes / 1 Dandaragan	2284 electors on roll; 29.95% voted	
2011	Postal	9	5	No wards = 2 Jurien Bay / 1 Cervantes / 1 Badgingarra / 1 Dandaragan	2339 electors on roll; 52.07% voted	
2013	Postal	8	5	No wards = 4 Jurien Bay / 1 Dandaragan	2499 electors on roll; 42.82% voted	Badgingarra (2 years)
2015	Postal	10	6	No wards = 3 Jurien Bay / 1 Cervantes / 1 Badgingarra / 1 Dandaragan	2447 electors on roll; 48.88% voted	

Table 3: History of ward changes and councilor to elector ratio

Year	Ward	Councilors	Electors	Ratio	Ratio Deviation (%)
2004	North Ward	5	1281	1 : 256	-3.64
	South Ward	4	953	1 : 238	+3.64
2007	North Ward	5	1338	1 : 267	-7.88
	South Ward	4	914	1 : 228	+7.88
2009	No Wards	9	2288	1 : 254	
2011	No Wards	9	2365	1 : 262	
2013	No Wards	9	2491	1 : 276	
2015	No Wards	9			

Notes: Jurien and Badgingarra Wards amalgamated to create North Ward; Cervantes and Dandaragan Wards amalgamated to create South Ward.

Table 4: Councilor to elector ratio in no ward system before and after the Oct 2015 election

Ward	No. electors	No. councilors		Councilor elector ratio		% Ratio deviation	
		Before	After	Before	After	Before	After
Jurien Bay	1203	6	6	1:200	1:200	-27.79	+46.24
Cervantes	450	1	1	1:450	1:450	+62.45	-20.97
Dandaragan	565	2	1	1:565	1:565	+1.80	-51.88
Badgingarra	273	0	1	-	1:273	-	+26.61

Table 5: Councilor to elector ratio in options 1, 2 and 4 - four-ward systems

Ward	No. electors			No. Councilors	Councilor elector ratio			% Ratio deviation		
	Option 1	Option 2	Option 4		Option 1	Option 2	Option 4	Option 1	Option 2	Option 4
Jurien Bay	1203	1203	1203	4	1:301	1:301	1:301	+8.57	+8.57	+8.57
Cervantes	450	496	498	2	1:225	1:248	1:299	-18.75	-10.47	+7.94
Dandaragan	565	545	417	2	1:282	1:272	1:208	+1.98	+1.63	-24.73
Badgingarra	273	247	273	1	1:273	1:247	1:273	-1.45	-10.84	-1.45

Table 6: Councilor to elector ratios of options 3 and 5 - two-ward systems

Ward	No. electors		No. Councilors	Councilor/elector ratio		% Ratio deviation	
	Option 3	Option 5		Option 3	Option 5	Option 3	Option 5
North	1476	1456	5	1:295	1:291	+6.57	+5.12
South	1015	1035	4	1:254	1:259	-8.40	-6.59