



Information Paper

Review of the Australian Standard Geographical Classification

Australia

2007

New
Issue

Information Paper

**Review of the Australian
Standard Geographical
Classification**

Australia

2007

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AUSTRALIAN BUREAU OF STATISTICS

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ASGC	Australian Standard Geographical Classification
Bal	Balance
CD	collection district
ERP	estimated resident population
G-NAF	Geocoded National Address File
GIS	geographic information system
LGA	local government area
MUC	major urban concentration
PSMA	Public Sector Mapping Agencies
SA	statistical area
SD	statistical division
SEIFA	Socio-Economic Indexes for Areas
SLA	statistical local area
SSD	statistical subdivision

INTRODUCTION

BACKGROUND TO THE REVIEW

This paper gives the background to the review of the Australian Standard Geographical Classification (ASGC) and outlines a proposal to replace the current ASGC. The aim of the review is to create a new Australian statistical geography that better meets the contemporary needs of users and addresses some of the shortcomings of the ASGC.

To better meet these needs a new statistical geography must reflect the real world in more useful ways for the presentation and analysis of statistics. There are many aspects of the real world that could be of interest and no single boundary set will suit every purpose. It is therefore necessary to create a suite of such boundary sets.

The real world changes; there is therefore a tension between having a geography that reflects these changes versus one that remains stable, facilitating analysis over long periods of time. The resolution of this tension depends on which aspects of the real world are of interest and need to be measured.

Not only does the real world change, but so do the concerns of society. For example, concerns surrounding global warming and resource depletion have increased the demand for statistics presented on an environmental basis relative to other information. These changes must also be considered in the development of a new statistical geography.

The current ASGC concepts are based on the work of Professor G.J.R. Linge undertaken in the mid 1960s. The urban/rural concepts were applied for the first time to the results of the 1966 Census. The concept of a capital city statistical division (SD) was implemented for the 1971 Census. A complete restructure of the statistical geographical classification for the whole of Australia based on the work of Professor Linge was implemented for the 1976 Census. These concepts and classification rules were formalised to create the ASGC in 1984.

Major problems with the current ASGC include:

1. It is not stable due to the need to align boundaries with Local Government Area (LGA) boundaries.
2. The definition of urban and rural does not reflect recent developments in communications and social interactions.
3. The population range of the ASGC units at each level is too great.
4. Collection Districts (CDs) are compromised by the requirement to be the basis for both collecting and publishing statistics.
5. It is difficult to relate to other geographies (e.g. postcodes, electoral divisions).
6. It is not based on sufficiently objective criteria.

These criticisms were addressed in a review of the ASGC in 1996-1997 led by Professor Graeme Hugo. The review created considerable expectations amongst ABS clients, but ultimately few of its major recommendations were implemented, largely because of cost.

Since 1997 there have been several developments that have changed the economics of any likely outcome of a similar review, these include: the development of Geocoded National Address File (G-NAF); improvements in geographic information system (GIS) technology; and greater ability through the use of Intelligent Character Recognition and Automatic Coding to capture and cost-effectively code large volumes of addresses.

INTRODUCTION *continued*

BACKGROUND TO THE REVIEW *continued*

In response to these developments the Australian Bureau of Statistics (ABS) has developed mesh blocks. Mesh blocks are a spatial unit containing a relatively small number (between thirty and sixty) of households. They can be used as a building block for, or to approximate, larger geographic areas. Mesh block boundaries are designed to remain stable over time. In areas of growth, mesh blocks will be split.

Thus mesh blocks greatly improve the ability to create, disseminate and analyse geographically referenced data both spatially and over time. They provide a stable basis from which to build boundaries and provide the ability to recast data on different geographies.

PROGRESS OF THE REVIEW

In late 2006, the ABS convened the ASGC Review Committee, a panel of internal and external experts to guide the review and to generate ideas that could be taken to consultation. In early 2007 there was a round of consultation with key ABS stakeholders. This was followed by a later round of consultation with external stakeholders, including presentations and visits to all the States and Territories. This information paper is a product of these consultations and the Committee's advice and suggestions.

There will be a further period of consultation based on this Information Paper.

Later in the year, the Committee will again to consider a final proposal and a final report will be prepared for consideration by the ABS.

SCOPE OF THE REVIEW

The review includes all units and structures of the ASGC with three exceptions, these being the Remoteness Structure and the two structures defining Urban and Rural (Urban Centres and Localities, and Section of State). The definition of Rural and Urban will be the subject of a further review in 2008.

The review of the ASGC will develop concepts and criteria to build a new Australian statistical geography. The review will not finalise the specific boundaries, labels and codes of units within the new statistical geography – these will be developed should the recommendations of the review be accepted by the ABS.

The statistical geography that emerges from the review must be able to present data across a broad range of statistical subject matter; be conceptually rigorous, not overly complex and structurally simple and the ABS must be able to develop boundaries, codes and labels within a reasonable time frame.

YOUR INVOLVEMENT IN THE REVIEW

YOUR INVOLVEMENT

The ABS is interested in your comments on the proposal and the issues raised in this paper, particularly on the following issues:

1. The overall structure of the proposal.
2. The boundary sets proposed for inclusion in the proposal.
3. The conceptual basis of the proposal.
4. The impact of the proposal on you as either a supplier or user of spatial statistics.
5. Timing of updates to the various elements of the new Australian statistical geography.
6. What the ABS can do to minimise disruptions caused by the change over from the ASGC to the new statistical geography.
7. Does the proposal meet your statistical needs?

Although the definition of rural and urban is outside the scope of this information paper, the ABS would also be interested in any comments you may have on this issue.

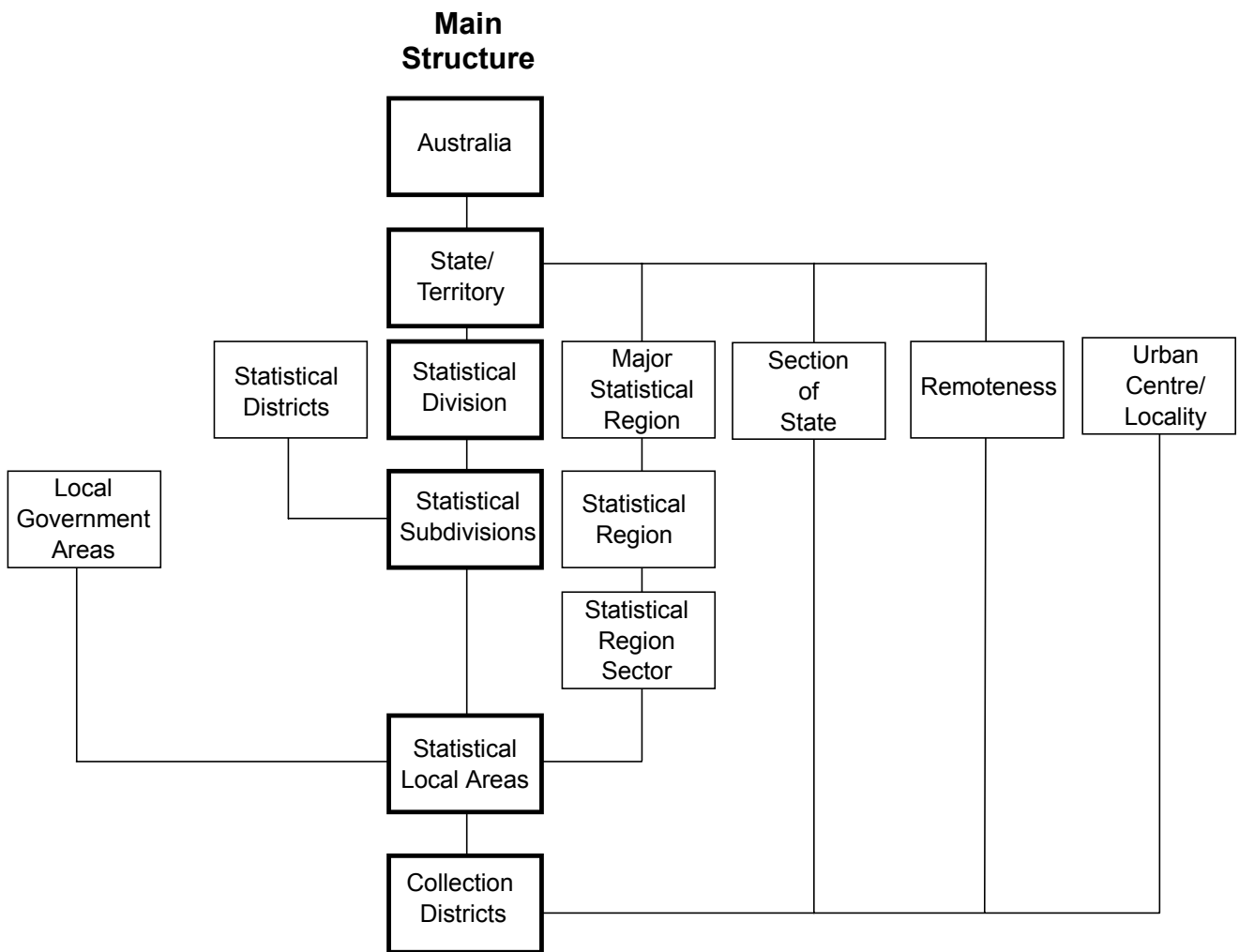
If you have any inquiries on any aspects of the Review please e-mail to geography@abs.gov.au with the words "ASGC Review" in the subject.

Formal written submissions can be sent to geography@abs.gov.au with the words "ASGC Review Submission" in the subject. The deadline for written submissions will be Friday 5 October 2007.

THE CURRENT ASGC

The current ASGC provides seven hierarchies of geographical areas, referred to as structures. Each structure is designed to suit different statistical purposes.

CURRENT ASGC STRUCTURES



The diagram above shows the interrelationships between the seven structures of the current ASGC.

SLA BASED STRUCTURES OF THE CURRENT ASGC

Four of the above structures have statistical local areas (SLAs) as their base unit. SLAs cover the whole of Geographic Australia without gaps or overlaps. There were 1,426 SLAs in ASGC 2006. One of the central principles of the classification is that LGAs must be made up of one or more whole SLAs. SLAs also exist for areas that are not incorporated into an LGA. The four structures described below are updated annually, largely to reflect ongoing changes in LGAs.

THE CURRENT ASGC *continued*

Main Structure

The Main Structure is most widely used of these structures. This is a general purpose statistical structure consisting of a nested hierarchy of 4 levels: SLAs; statistical subdivisions (SSDs), a medium scale statistical unit; statistical divisions (SDs) a large scale statistical unit and states/territories. The structure covers the whole of Australia.

Statistical Region Structure

The Statistical Region Structure is a rarely used structure originally intended as a basis for the labour force regions. It consists of SLAs, statistical region sectors, statistical regions, major statistical regions and states/territories. The structure covers the whole of Australia.

Statistical District Structure

Statistical districts represents major regional cities (those with a population greater than 25,000 people) outside the capital city SDs. It consists of three levels: SLAs, SSDs and statistical districts. Statistical districts can cross state boundaries (Canberra-Queanbeyan, Albury-Wodonga and Gold Coast-Tweed). Statistical districts do not cover the whole of Australia.

Local Government Area Structure

This structure represents local government. It consists of three levels: SLAs; LGAs and States. This structure only includes those parts of Australia incorporated into a LGA.

CD BASED STRUCTURES OF THE CURRENT ASGC

These three structures are built up of CDs. CDs are the smallest geographical unit in the ASGC. CDs only exist in Census years, therefore the three structures described below are only published in Census years.

Remoteness Structure

The Remoteness Structure represents remoteness as measured by access to services. It is based on the Accessibility Remoteness Index of Australia. It divides Australia into 5 remoteness areas: major cities of Australia, inner regional Australia, outer regional Australia, remote Australia and very remote Australia.

Urban Centres and Localities Structure

The Urban Centres and Localities Structure is based on a set of criteria developed by Professor G.J.R. Linge in 1965 which defines urban and rural settlement patterns.

Section of State Structure

The Section of State structure is also based on the Linge criteria, but divides the urban component of Australia based on the population of the urban centre in question.

MORE INFORMATION

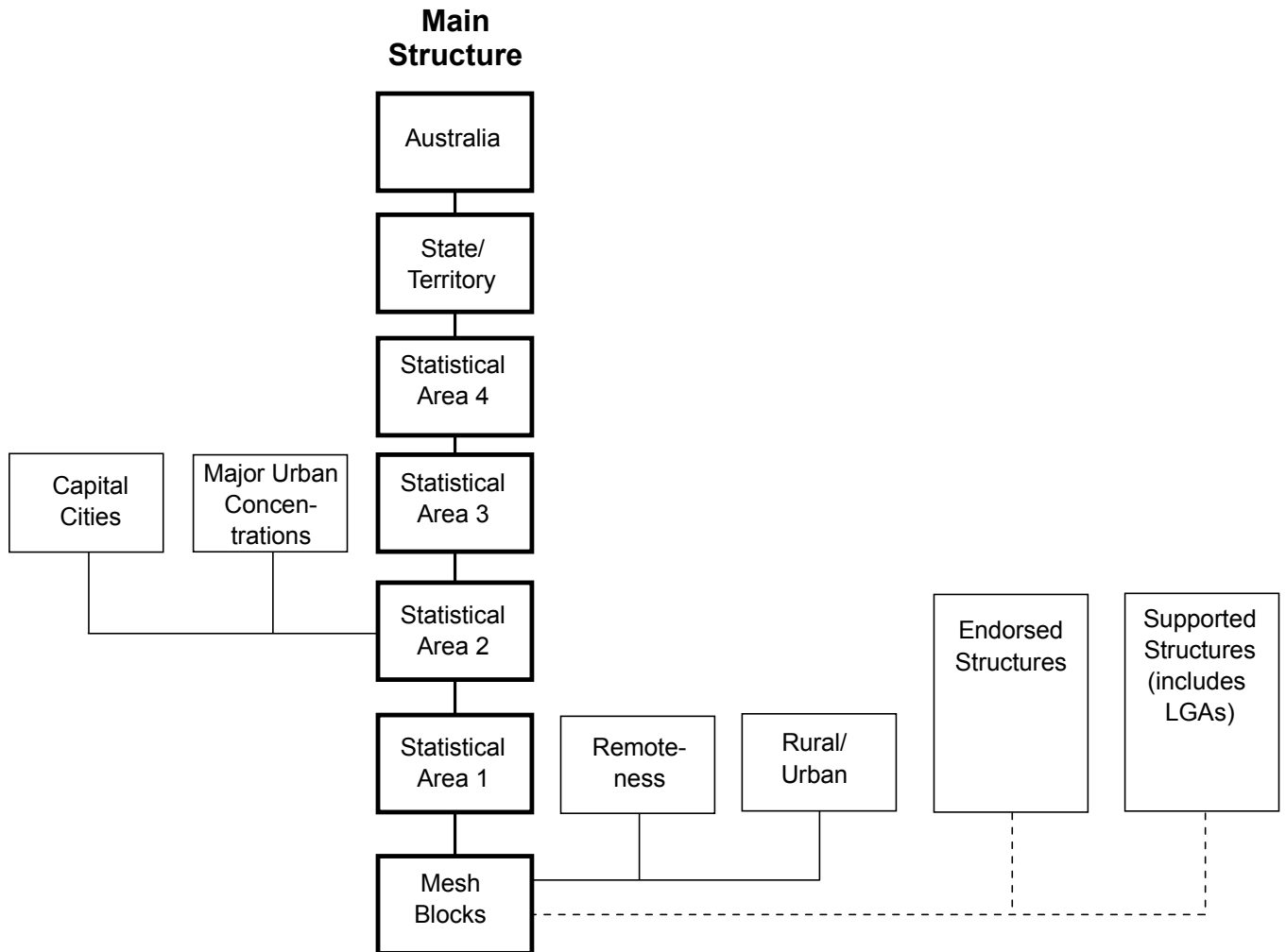
For more information regarding the current ASGC please refer to *Statistical Geography Volume 1 – Australian Standard Geographical Classification (ASGC) 2006 (cat. no. 1216.0)*.

OUTLINE OF THE PROPOSAL

This chapter outlines a proposal to replace the current ASGC.

OUTLINE OF THE PROPOSAL

The diagram below summarises the proposal. The various structures of the new Australian statistical geography are discussed in the text below.



Summary

The new standard geography will have three parts. Each part will contain a number of structures, each designed for a specific purpose. The ABS Structures include a new Main Structure based on functional zones (Statistical Areas (SAs) 1 to 4 in the diagram). Structures defining Capital Cities, Major Urban Concentrations (MUCs), Rural/Urban and Remoteness. The ABS Structures will be defined and maintained by the ABS and built up of whole mesh blocks.

The Endorsed Structures will be largely defined and maintained by organisations outside the ABS, with the ABS as an active stakeholder. These structures may be either built up, or very closely approximated by, whole mesh blocks. A set of criteria has been developed to incorporate new Endorsed Structures into the standard.

The Supported Structures contain boundaries on which there is widespread community demand for statistics, but are outside the control of the ABS. They will be approximated by mesh blocks. A set of criteria has been developed to incorporate new Supported Structures into the standard.

OUTLINE OF THE PROPOSAL *continued*

<i>Summary continued</i>	Each part is discussed in more detail below.
ABS STRUCTURES	These structures will be defined and maintained by the ABS. They will be stable between censuses. Geographic levels above mesh block will be designed to remain relatively stable for three censuses (15 years).
MAIN STRUCTURE	<p>This structure is the replacement for the current ASGC Main Structure. Conceptually this will be based on the functional zones around urban centres of different population sizes in regional areas and urban hubs in urban areas.</p> <p>It will be a hierarchy of four levels (SAs 1-4) between state and mesh block. The lowest level (SA1) will replace the CD as a base level dissemination unit for the Census. The second level (SA2) will be the lowest level for which Estimated Residential Population (ERP) and other ABS data will become generally available. The third level (SA3) represent intermediate sized regions and the fourth level (SA4) large regions.</p> <p>This structure is described in more detail in Chapter 4.</p>
CAPITAL CITY	State and territory capital cities will be identified in the Capital City Structure. The structure will also define a "Rest of State/Territory", this being the remainder of each state or territory outside the capital city.
MAJOR URBAN CONCENTRATIONS	<p>MUCs will replace the current Statistical District Structure. MUCs, as with statistical districts, will cross state borders where appropriate. This structure will be built from the SA2 level of the Main Structure.</p> <p>The MUC Structure will have two classes:</p> <ol style="list-style-type: none">1. Cities and Major Towns of Australia: This will define the urban and semi-urban conglomerations of over 10,000 people outside the capital cities. It will also incorporate their likely growth in the next 20 years, semi-urban fringe and satellite settlements.2. Rural Australia and Towns: everything outside of the capital cities and MUCs; generally small to mid sized regional towns, small rural communities, agricultural and unsettled land.
RE MOTENESS	This will be the current Remoteness Areas moved on to mesh blocks.
URBAN/RURAL	A definition of urban and rural will be part of the ABS Structures. This issue will be reviewed in 2008.
ENDORSED STRUCTURES CRITERIA	<p>To be included in the Endorsed Structures, a set of boundaries must meet the following criteria.</p> <ol style="list-style-type: none">1. The ABS must have significant input into the definition of the structure.2. Boundaries must be stable over a 5 year time frame.3. Boundaries must align or closely align to mesh blocks.4. There must be general stakeholder/user agreement on the value of the boundaries.

OUTLINE OF THE PROPOSAL *continued*

CRITERIA continued

One structure is currently proposed for the Endorsed Structures – more will be added as user needs are identified – this structure is described below.

STRUCTURES

INDIGENOUS GEOGRAPHY

This will be similar to the current Indigenous Geography. It will identify Aboriginal and Torres Strait Islander communities. It will also provide a geographical structure for Indigenous people outside these communities. The ABS will develop this for the 2011 Census with input from stakeholders.

SUPPORTED STRUCTURES *CRITERIA*

To be included as a Supported Structure a set of boundaries must meet the following criteria:

1. Must be widely used.
2. Able to be approximated with mesh blocks.
3. The ABS is willing to publish data, concordances and boundaries for them.

STRUCTURES

The Supported Structures will be maintained on an annual basis.

Currently nine structures are proposed for inclusion in the Supported Structures. They will be approximated with whole mesh blocks. The nine structures are:

- Australian River Basins
- Commonwealth Electoral Divisions
- Local Government Areas
- Natural Resource Management Regions
- Postcodes
- State Electoral Divisions
- Suburbs
- State Administrative Regions
- Tourism Regions

THE PROPOSED MAIN STRUCTURE

The proposed Main Structure will be a nested hierarchy of four geographical units between mesh block and state. Each level consists of one or more units from the level immediately below it. The levels of the classification are referred to as SA 1 to 4. All levels of the classification cover the whole of Australia without gaps or overlaps and nest within state boundaries.

CONCEPTUAL BASIS OF THE MAIN STRUCTURE

Pivotal to the Main Structure is the idea of the functional zone of a centre. This is the area from which people come to a centre for employment, to buy goods, access services and socialise. In regional areas the centre will be a town or city. In urban areas the centre will be an urban hub – generally a major shopping area with a nearby transport hub and its surrounding commercial area and possibly government offices. This idea is reflected in all the levels of this structure. The functional zone concept cannot be strictly applied to all areas. It is impossible to create a simple nested hierarchy of areas using the concept of functional zones. Furthermore, natural or man made barriers and corridors create distinct regions which the structure should also reflect, as this is the way people perceive themselves and the basis on which government and commercial goods and services are delivered.

The proposal also attempts to maximise the amount of data available at each level of the classification while applying the functional zone concept. For example the minimum population of the SA2 level of the classification will be set at 3,000 people as this is the minimum population for which ERP can be reliably generated.

Defining the functional zones will involve the analysis of Place of Work data, the transport network and any data that may be available on where people access goods and services. In practice it will involve considerable feedback from state and local stakeholders.

LEVELS OF THE PROPOSED MAIN STRUCTURE

Note that the accompanying maps are for illustrative purposes only. The final boundaries may be quite different as their definition will involve intensive data analysis and consultation with stakeholders.

SA1: CENSUS DISSEMINATION UNIT

The SA1 will replace the current CD as an output unit for the dissemination of Census data. The ABS will research the optimum population size for the SA1 for the release of Census data and they will be built around this. The optimum is likely to be around 400 people.

SA1s will be as nearly circular as possible to facilitate approximating larger regions. They will be internally linked by road, to avoid arbitrarily combining unrelated populations.

Small rural and indigenous communities will be bounded by SA1s where practical. Gazetted rural localities will be a consideration in their design and will be reflected as closely as possible in the SA1s.

Where appropriate zero population mesh blocks may be amalgamated into zero population SA1s.

THE PROPOSED MAIN STRUCTURE *continued*

SA2: SUBURBS, REGIONAL TOWNS AND LOCAL REGIONS

The SA2 is the level of the structure for which ERP and other ABS data will become generally available. They have a lower population limit of 3,000 as this is the smallest population for which reasonably accurate ERP data can be derived. Over the whole of Australia they will have an average population of 10,000 and a maximum of 25,000.

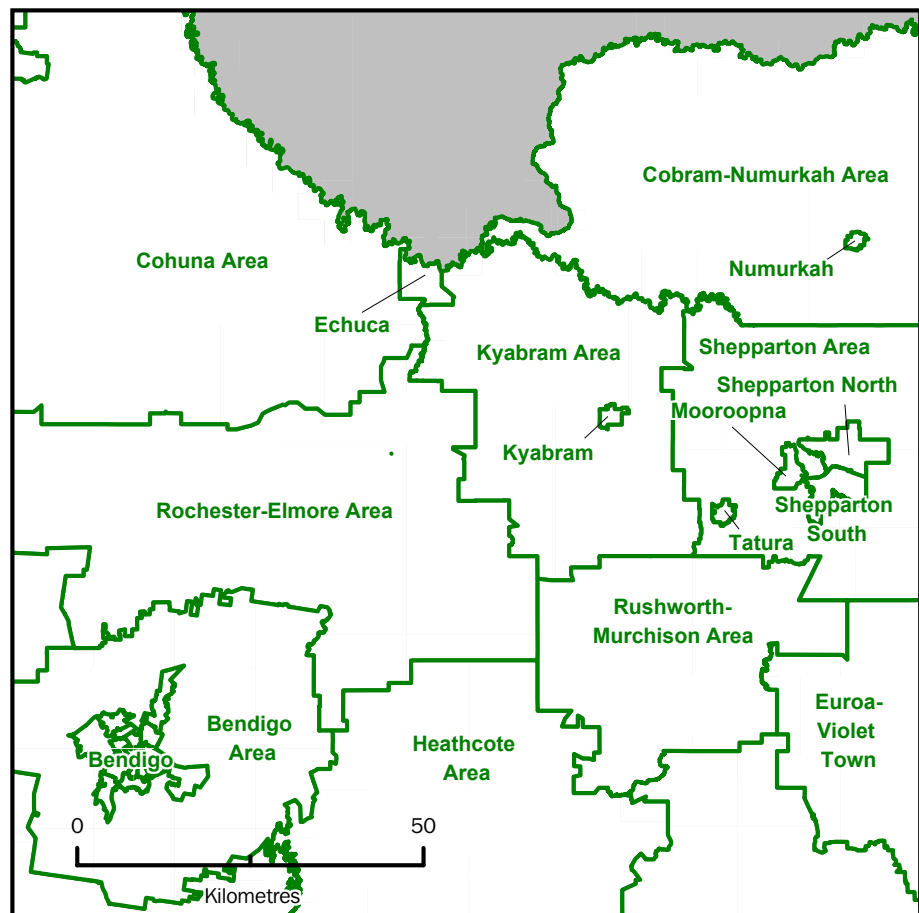
In regional areas they will represent the functional zones of a towns with a population between 3,000 and 19,999. They will have a maximum population of around 20,000 and the average will be about 7,000. Where practical they will be made up of whole gazetted rural localities.

In urban areas SA2s will be built around suburbs, combinations of small suburbs or parts of very large suburbs. They will probably have a greater population than regional SA2s.

Where functional areas cannot be reasonably identified (likely in remote or very remote areas) they will represent an identifiable local region.

Where appropriate, zero population SA1s will be aggregated into zero population SA2s. The likely circumstances include large industrial or commercial areas in urban areas, such as airports, and large areas of unsettled land in regional and remote areas such as National Parks.

ILLUSTRATIVE SA2 BOUNDARIES IN NORTH CENTRAL VICTORIA



THE PROPOSED MAIN STRUCTURE *continued*

SA2: SUBURBS, REGIONAL
TOWNS AND LOCAL
REGIONS *continued*

ILLUSTRATIVE SA2 BOUNDARIES FOR CENTRAL BRISBANE



THE PROPOSED MAIN STRUCTURE *continued*

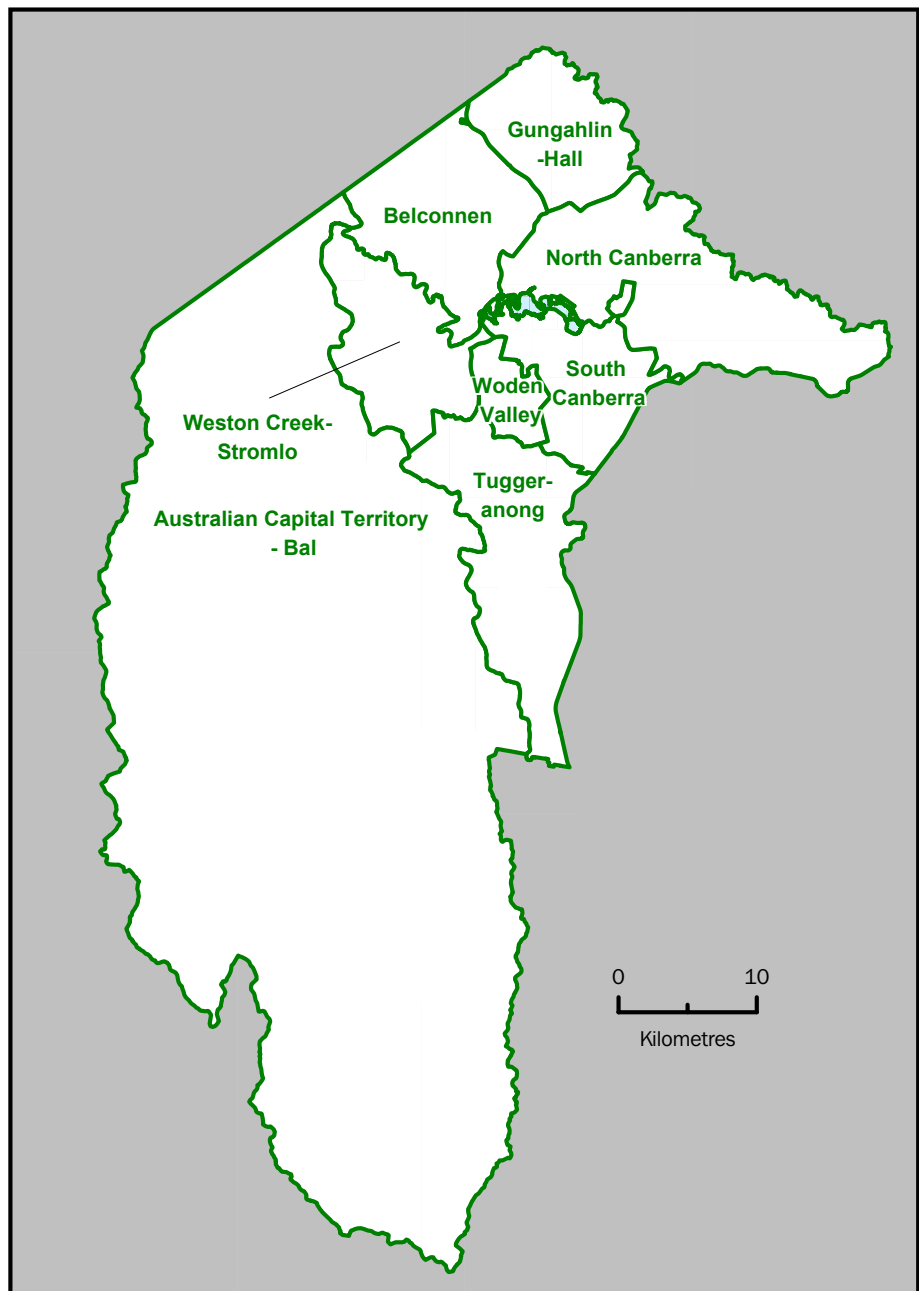
SA3: FUNCTIONAL ZONES OF MAJOR URBAN HUBS, REGIONAL CITIES AND MEDIUM SIZED REGIONS

The SA3 level aims to represent moderately large sized regions. In regional areas those dominated by the largest regional centres with a population between 20,000 and 99,999 people. In urban areas those dominated by large urban retail service and employment hubs. In areas where such functional zones cannot be reasonably identified they will represent medium sized regions.

Consideration will be given into incorporating state planning regions in this level.

The population of SA3s will range from about 30,000 to 130,000.

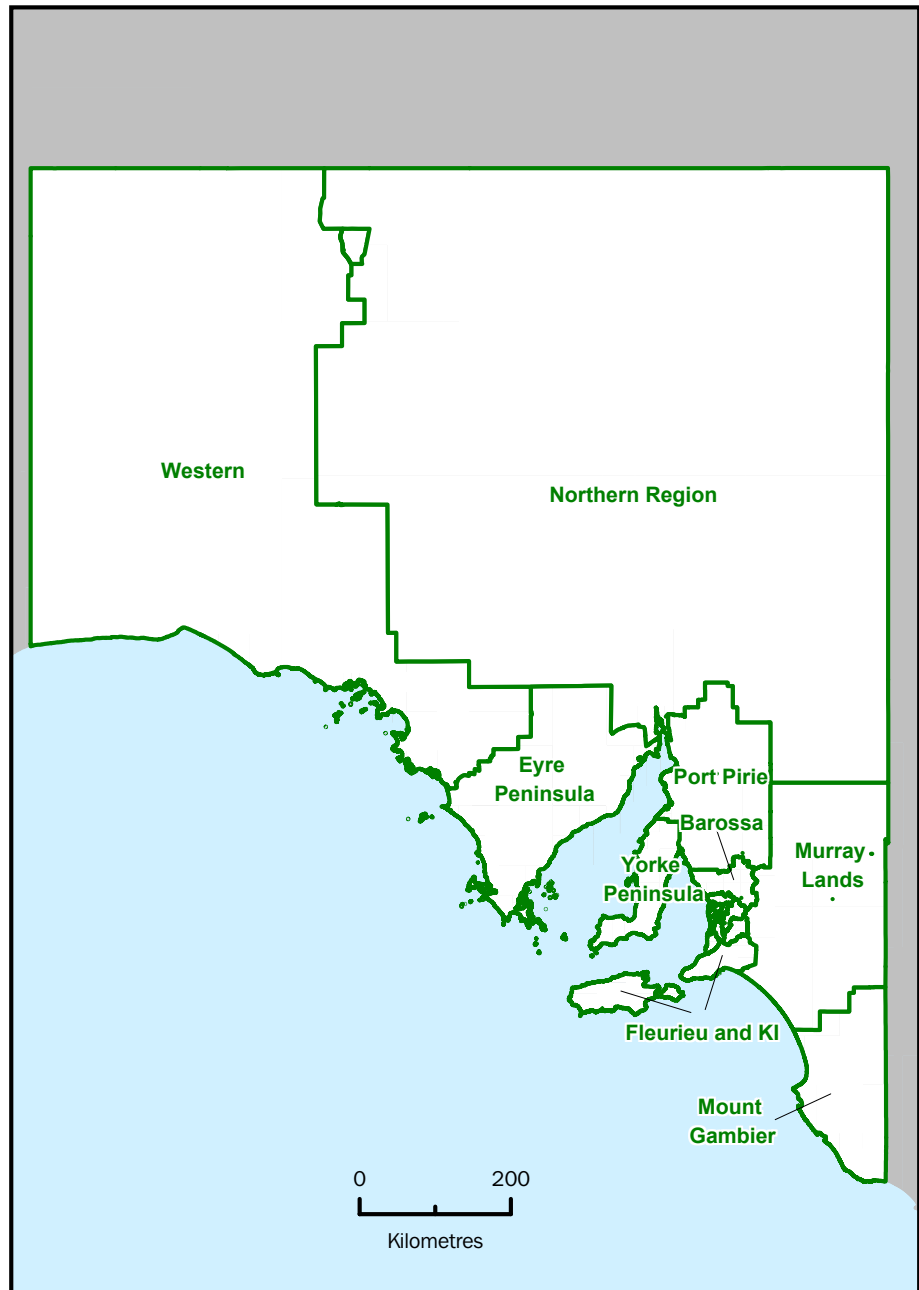
ILLUSTRATIVE SA3 BOUNDARIES IN CANBERRA



THE PROPOSED MAIN STRUCTURE *continued*

SA3: FUNCTIONAL ZONES
OF MAJOR URBAN HUBS,
REGIONAL CITIES AND
MEDIUM SIZED REGIONS
continued

ILLUSTRATIVE SA3 BOUNDARIES IN REGIONAL SOUTH AUSTRALIA



THE PROPOSED MAIN STRUCTURE *continued*

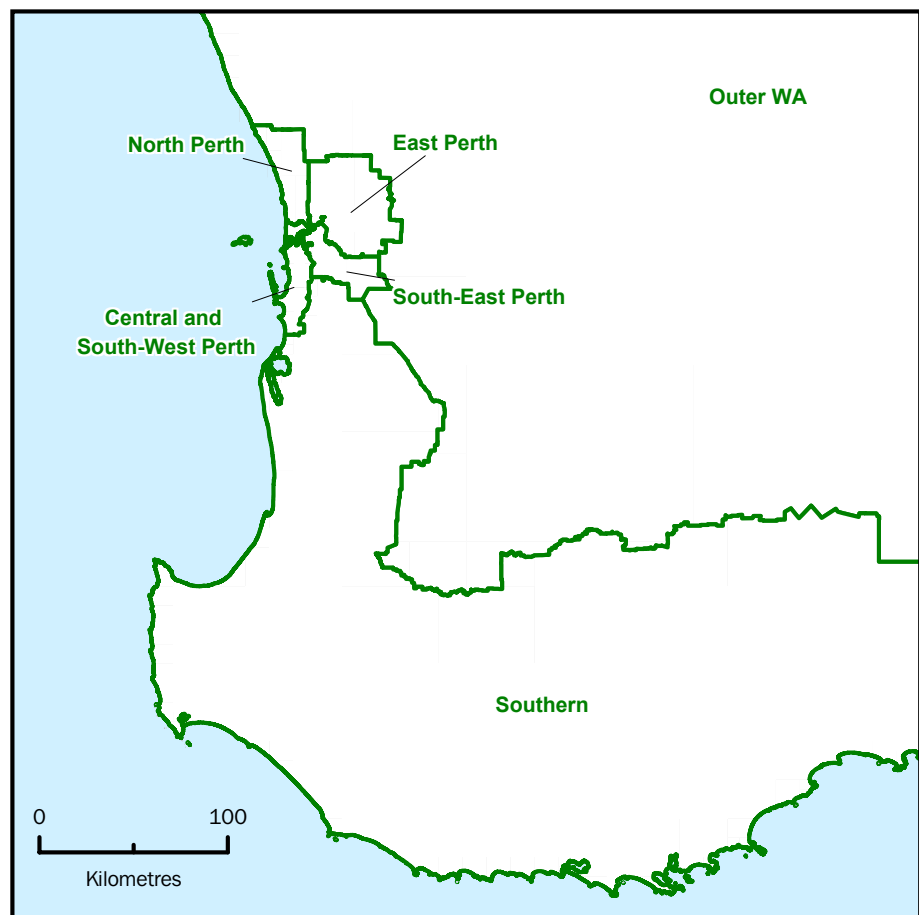
SA4: FUNCTIONAL ZONES OF THE LARGEST URBAN HUBS, MAJOR CITIES AND LARGE REGIONS

The SA4 level is intended to identify the largest regions within each State and Territory. In regional areas they will represent either large identifiable regions or the functional zones of regional cities with a population in excess of 100,000.

In Urban Areas they will represent the functional zones of the largest urban hubs within Sydney, Melbourne, Brisbane, Adelaide and Perth.

SA4s are intended to be suitable for the publication of survey data, including Labour Force. Labour markets will be a consideration in their design. Their population will range from about 250,000 to 500,000.

ILLUSTRATIVE SA4 BOUNDARIES IN SOUTH-WEST WA



THE PROPOSED MAIN STRUCTURE *continued*

SA4: FUNCTIONAL ZONES
OF THE LARGEST URBAN
HUBS, MAJOR CITIES AND
LARGE REGIONS *continued*

ILLUSTRATIVE SA4 BOUNDARIES IN SYDNEY



THE PROPOSAL AND THE ASGC COMPARED

SUMMARY

The proposal brings all the various boundary sets used by the ABS into the one scheme. The current ASGC will be replaced by the ABS Structures (except for LGAs). All of the structures are based on, or approximated by, mesh blocks. Conceptually much of the previous ASGC has been retained.

Main Structure

The concept of functional zones, implicit in the ASGC Main Structure, is explicit in new Main Structure. The significant change is the unlinking of LGAs from the Main Structure allowing the units to be designed around more objective statistical and geographical criteria. This permits greater freedom to define units on functional and population criteria that better reflect the real world and are more comparable in terms of population. The unlinking also permits greater stability as LGA changes do not have to be accommodated.

The data currently available at the LGA will still be available under the new structure. The only difference will be the position of LGAs in the overall classificatory scheme. Furthermore the ABS retains the ability to code to actual LGAs, rather than approximated LGAs, for many collections.

Capital Cities

The Capital City Structure will be similar in concept to the current Capital City SDs.

Major Urban Concentrations

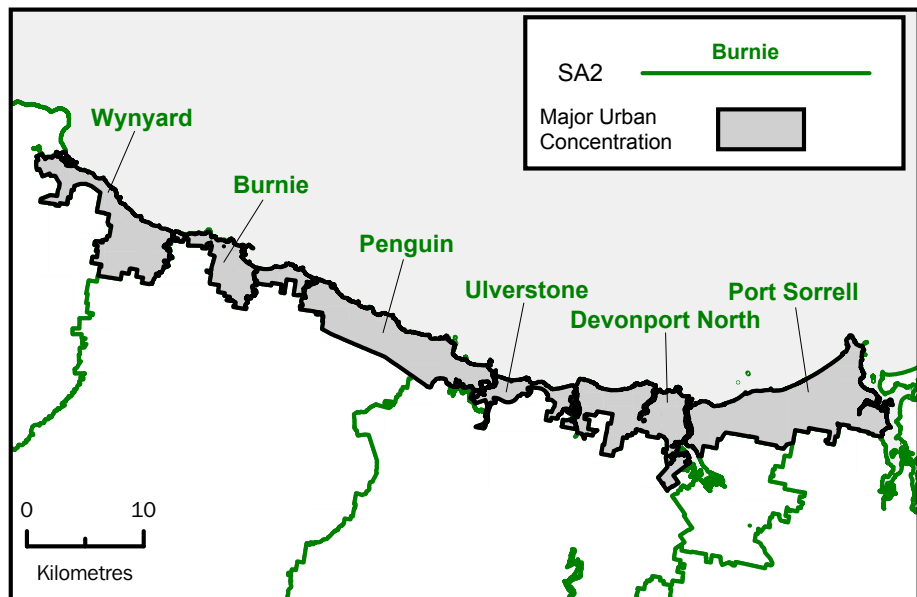
Statistical Districts will be replaced by MUCs. The minimum size for a MUC will be a regional centre with a population of 10,000 rather than 25,000 for Statistical Districts. The structure will combine coastal strip settlements and satellite settlements of larger urban areas in with the main centre. The reason is to better represent the interdependence of these centres and their regional significance.

The map below, of the Devonport-Burnie area of the Tasmanian North Coast, illustrates how a series of closely linked centres could be combined into one MUC. In this case the MUC stretches from Wynyard in the west to Port Sorrell in the east and includes the major centres of Burnie and Devonport.

THE PROPOSAL AND THE ASGC COMPARED *continued*

Major Urban
Concentrations *continued*

ILLUSTRATIVE DEVONPORT-BURNIE MAJOR URBAN CONCENTRATION



OTHER STRUCTURES

The conceptual basis of the Remoteness Structure will remain identical to the current Remoteness Areas, but transferred to mesh blocks.

The definitions of urban and rural will be reviewed in 2008.

There is no replacement proposed for the rarely used Statistical Region Structure.

Indigenous Geography will be an Endorsed Structure.

The ABS and Endorsed Structures will be stable between censuses. This will make compiling and maintaining time series easier, although there is a cost in terms of the responsiveness of the structures to changes in the real world.

The proposal includes LGAs, postal areas, tourism regions and electoral divisions as Supported Structures. Suburbs are partially incorporated into the main structure, but they will form a Supported Structure in their own right. The Supported Structures include two new environment specific structures: Natural Resource Management Regions and Australian River Basins. Supported Structures will be maintained annually.

DATA AVAILABILITY UNDER THE CURRENT ASGC AND THE PROPOSED STRUCTURE

The tables below summarise the data available from the ABS below state level at the lowest level of disaggregation generally available under both the ASGC and the new statistical geography. Data available at one level in the classification are available at higher levels that are direct aggregations.

THE PROPOSAL AND THE ASGC COMPARED *continued*

DATA AVAILABILITY UNDER THE CURRENT ASGC

<i>Level in the Classification</i>	<i>Data Available</i>	<i>Comment</i>
Census Collection District	Census data, Community Profiles, Socio-Economic Indexes for Areas (SEIFA)	Available for other levels of the ASGC and Census Geographic Areas by aggregation from CDs
Statistical Local Area	Agricultural Census, Tourism, Estimated Resident Population, Mortality, Births, Deaths, Building Approvals, some financial data from the Manufacturing Census, Business Demographics	This data is also available at the LGA level as LGAs are aggregations of SLAs
Local Government Area	Local Government Finance	
Capital City SD/Rest of State	Some Price Indexes, Survey of Motor Vehicle Use	The Consumer Price Index is available for capital cities only
Labour Force Regions	Labour Force, some Household Survey Data	Non-ASGC unit, based on Statistical Region Structure
Reported Postcode	Motor Vehicle Registrations	Non-ASGC unit
Natural Resource Management Regions/Australian River Basins	Agricultural Census and Surveys and Environmental Statistics	Non-ASGC unit
Tourism Regions	Tourism	Non-ASGC unit approximated by SLA

DATA AVAILABILITY UNDER THE PROPOSAL

<i>Level in the Classification</i>	<i>Data Available</i>	<i>Comment</i>
Mesh Block	Total population and dwellings on single mesh blocks.	Detailed Census data will be available for higher levels of the new statistical geography by aggregations of mesh blocks.
SA1	Census data generally, Community Profiles, SEIFA	
SA2	Agricultural Census, Tourism, Estimated Resident Population, Mortality, Births and Deaths, Building Approvals, some financial data from the Manufacturing Census, Business Demographics	
SA4	Labour Force, some Household Survey Data	
Capital City/Rest of State	Some Price Indexes, Survey of Motor Vehicle Use	
Local Government Areas	Agricultural Census, Local Government Finance, Tourism, Estimated Resident Population, Mortality, Births and Deaths, Building Approvals, some Financial Data from the Manufacturing Census, Tourism	
Postcode	Motor Vehicle Registrations	As reported
Natural Resource Management Regions/Australian River Basins	Agricultural Census, Agricultural Surveys and Environmental Statistics	Aggregations or close approximations of mesh blocks
Tourism Regions	Tourism	Approximated by mesh blocks

DATA AVAILABILITY UNDER THE CURRENT ASGC AND THE PROPOSED STRUCTURE *continued*

The level of geographical disaggregation of data under the proposal will be either comparable or better than under the current ASGC.

There are practical reasons why data is not always available at a particular level. These are:

- large sample error for survey data
- large non-sample errors over small areas
- confidentiality

These practical issues will remain, regardless of the geographical boundaries adopted. The population at each level of the proposal has been set to minimise the impact of these issues and to maximise the available data.

THE PROPOSAL AND THE ASGC COMPARED *continued*

DATA AVAILABILITY UNDER THE CURRENT ASGC AND THE PROPOSED STRUCTURE *continued*

Some customised data are currently available at lower level than noted in these tables. This is made available to users who have a particular need for the data and are aware of the problems associated with fine geographical disaggregations of the data. This will continue under the proposal.

Under the current ASGC any data coded or derived at the CD level is potentially available for higher levels of the geography.

In the future the ABS intends to code and derive its data at the mesh block level. Therefore any ABS data will be potentially available for any unit which is an aggregation of mesh blocks. It will ultimately be possible for clients to get data from the ABS on any customised set of boundaries based upon or accurately approximated by mesh blocks given the constraints of confidentiality, and sample and non-sample error. Approximations of reasonably large areas by mesh blocks are likely to be very accurate as mesh blocks generally equate to areas containing 30 to 60 households (a population of approximately 100 people).

PUBLICATION FREQUENCY

The ASGC was published annually with additional Census Geography; and Urban Centres and Localities published soon after each Census. The new Australian statistical geography will be published before each Census, however concordances to the Supported Structures will be published annually. The publication frequency of mesh blocks is still under consideration. They will be published with Census figures every 5 years, consideration is being given to publishing the boundaries between Censuses.

IMPLICATIONS OF THE PROPOSAL

It is expected that the new Australian statistical geography will be published, with supporting material such as boundaries and concordances, in late 2009. From 2010, data using the new statistical geography will be progressively published. Data from the 2011 Census will be disseminated on the new geography.

ADDRESS CODING

Central to the proposal is the ability of the ABS and many other data providers to be able to code statistical data to mesh blocks. Significant progress has already been made with address based geocoding to mesh blocks being used within the ABS and available commercially.

Several issues still remain. Most of the address coding software uses G-NAF. This file currently has many addresses not geocoded accurately enough to assign an address to a mesh block. There is currently a lag of between 3 and 18 months getting new addresses on to G-NAF. These two issues are being actively addressed by the custodians of G-NAF, PSMA Australia. Address standards have not been uniformly adopted across the country, making it hard to match some addresses to G-NAF, particularly in remote areas. These issues are being pursued by the various state jurisdictions. The ABS is confident that in the medium term matching rates and mesh block coding rates will improve with G-NAF and the adoption of uniform address standards.

PUBLICATIONS

All ABS publications using the ASGC will need to be changed to accommodate the new statistical geography as will any publications produced by non-ABS organisations.

TIME SERIES

The changes will cause some disruption to time series. Data collected at the mesh block level can be readily recast on to any previous (or future) boundaries which can be approximated accurately by mesh blocks. Data not collected on mesh block, cannot be so easily recast onto the new boundaries. The ABS will create a series of concordances to facilitate this. In the long run, data comparability across time will be greatly improved as the new classification is more stable. Data from the 2006 Census will be available on mesh blocks thus providing a benchmark for population based time series.

LEGISLATION

Aspects of the ASGC are also entrenched in State and Commonwealth legislation; this legislation may need to be amended. A letter explaining the consequences of the review will be sent out to all Attorneys General if the recommendations are accepted.

ADMINISTRATIVE BOUNDARIES

In the long term the ABS would like mesh blocks to become the standard building block for administrative boundaries. This will greatly facilitate the comparison of statistics across different boundary sets.

RESULTS OF THE FIRST ROUND OF CONSULTATION

Consultation sessions were undertaken in all capital cities early in 2007. Several changes have been made as a result of feedback and are summarised below. The issues raised below are still subject to further consultation.

RENAMING OF THE MAIN STRUCTURE OF THE PROPOSAL

Earlier versions of the proposal referred to the Main Structure of the proposal as the Socioeconomic Structure. Feedback was received that this was misleading, as it created the expectation that the units would be created using the socioeconomic characteristics of the populations, rather a reasonably self-contained region where the population interacts economically and socially.

CRITERIA FOR ENDORSED STRUCTURES

The criteria for the Endorsed Structures has been relaxed so that they no longer have to exactly align to mesh blocks. Any misalignment between mesh blocks and an endorsed structure must not be statistically significant.

REDUCTION OF THE LEVELS IN THE MAIN STRUCTURE

There was a proposed SA5 level between the SA4 and state, which separated the major cities with over 250,000 population from the rest of the state. Feedback revealed little support for this level.

ROLE OF GAZETTED LOCALITIES IN REGIONAL AREAS

Gazetted localities will be a consideration in determining the boundaries of SA1s and SA2s in regional areas. In earlier versions of the proposal they were not considered. Feedback was given that this would make coding of addresses to SA2s easier in these areas. In practice, mesh block boundaries closely align with locality boundaries in regional areas.

SA2 boundaries will not track subsequent locality boundary changes, nor will locality boundaries be necessarily followed where they do not reflect the underlying settlement pattern.

Where possible SA1 boundaries will also reflect gazetted localities.

SUPER METROPOLITAN AREAS

Earlier versions of the proposal referred to Super Metropolitan Areas. These were to represent the five one million plus conurbations:

- Sydney/Wollongong/Central Coast/Newcastle
- Melbourne/Geelong
- Brisbane/Gold Coast/Sunshine Coast/Tweed
- Adelaide
- Perth

There has been little support for this proposal outside of academic circles. The statistical users most interested in this idea are the various state planning departments, who have their own definitions of such areas and are sophisticated enough to create their own boundaries using elements of the proposed classification.

RESULTS OF THE FIRST ROUND OF CONSULTATION *continued*

CAPITAL CITIES

A definition of the state and territory capitals was considered generally useful. The capital cities will be defined in a similar way to the current capital city statistical divisions and be made up of whole SA2s.

A 'Rest of State/Territory' will also be defined for the remainder of each state or territory outside the capital city.

ZERO POPULATION SA1S AND SA2S

Earlier versions of this proposal did not canvass the possibility of creating zero population SA1s and SA2s.

Zero population SA1s may consist of contiguous or a single zero population mesh block, and zero population SA2s contiguous or a single zero population SA1. They may be used to separate out significant areas of unpopulated land. This may include large reserves, commercial and industrial areas in urban areas, national parks or other large areas of unsettled land in regional and remote areas.

BOUNDING RURAL LOCALITIES

Earlier versions of this proposal suggested that the SA1 level would bound small rural towns with a population between 200 and 1,000 in a similar way to CDs. Investigation has shown that this is not practical for the smallest of these towns, because bounding such towns in this way was not a criteria in mesh block design.

This issue impinges directly on the definition of urban centres and localities and is out of scope of this review. This will be the subject of a separate review in 2008.

The ABS will incorporate the gazetted rural localities in SA1 design where possible. SA1s will also be used to contain Indigenous communities and small rural towns wherever practical.

SUGGESTION THAT A LEVEL BETWEEN THE SA1 AND SA2 BE CREATED

A level between the current SA1 and SA2 has been suggested as a useful tool for analysis. This suggestion has not been taken up for the following reasons:

1. Support for the suggestion appears to be limited.
2. There would be little ABS data available at the proposed level not already available at the SA1 level.
3. It would complicate the Main Structure.
4. It would be difficult to identify an objective basis for defining these units.
5. Such a unit could be created by users from mesh blocks using their own criteria.

SUGGESTION THAT THE ABS IDENTIFY RURAL LOCATIONS WITH A POPULATION LESS THAN 200

It was suggested that the ABS identify rural locations below the population of 200. This suggestion was not taken up for following reasons:

1. Support for the suggestion appears to be limited.
2. The suggestion encroaches on the definition of rural and urban which are out of scope of this review.
3. Little ABS data beyond population counts would be available for such small units.
4. It would require a resource intensive exercise to identify these units and redesign mesh blocks to bound them.
5. It would be difficult to identify an objective basis for defining these units.

RESULTS OF THE FIRST ROUND OF CONSULTATION *continued*

SUGGESTION THAT THE
ABS TRACK THE GROWTH
OF URBAN CENTRES ON
AN ANNUAL BASIS

It was suggested that the ABS track the growth of urban centres and update mesh blocks annually to reflect this growth. This suggestion was not taken up for the following reasons:

1. The suggestion is out of scope of the review for two reasons: mesh block design and maintenance is not within the scope of this review; the suggestion encroaches on the definition of rural and urban which is also out of scope of this review.
2. Support for the suggestion appears to be limited.
3. The ABS currently does not have the data to track these changes.
4. The ABS is currently not able to release data on the changed urban areas.

SUGGESTION THAT A LINK
BETWEEN LGAS AND THE
MAIN STRUCTURE BE
RETAINED

This suggestion was not taken up for the following reasons:

1. Support for the suggestion appears to be limited.
2. It would require annual updates of the main structure.
3. It would require mesh blocks to track LGA changes, undermining their stability as a base unit of the classification.
4. LGA data will remain available under the proposal.

APPENDIX THE ASGC REVIEW COMMITTEE

EXTERNAL CONTRIBUTORS TO THE ASGC REVIEW COMMITTEE

The ABS wishes to thank the following people for their contribution to the ASGC Review Committee:

- Errol Bamford (National Centre for Social Application of GIS, Adelaide University)
- Ian Byron (Bureau of Rural Sciences)
- John Glover (Public Health Information Development Unit, Adelaide University)
- Dr Dennis Griffith (Department of Business, Economic and Regional Development; Northern Territory Government)
- Michael Hanslip (Bureau of Rural Sciences)
- Matt Lawrence (Australian Local Government Association)
- Angela Mikalauskas (Department of Health and Aging)
- Robert Stimson (Convenor of the ARC Research Network in Spatially Integrated Social Science, and Professor of Geographical Sciences and Planning, University of Queensland)

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