

If you could make one major improvement in local government in the next 18 months what would it be?

“Strengthening the coordination of South Australian Councils’ climate change initiatives and recommending key changes to the State Government’s Draft Planning and Design Code”

Group 1:

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Executive Summary

The intent of this report is to present a paper demonstrating that it would not only be a major improvement to local governments, but that it should be absolutely mandatory to strengthen our collective response to climate change within the next 18 months.

This report broadly reviews which climate change initiatives South Australian Councils are undertaking and draws links-to and prompts discussion about the opportunities for positive changes to climate change, through changes of the Draft Planning and Design Code.

To gauge opinion regarding our topic, the group conducted a survey with 37 respondents which investigated opinions about climate change action and the perceived impact of the State Planning Reforms. The survey results indicated 94% of respondents were '*concerned*' regarding the effectiveness of the rollout of the reforms, specifically doubting its ability to deliver on the original objectives of a faster, simpler system that provides both certainty and flexibility.

The qualitative responses indicate people's perception that the reforms have been rushed; that privatisation of the development industry is concerning, that environmental initiatives have not been sufficiently addressed and that there has been an overall lack of appropriate and fit-for-purpose consultation.

The reforms and associated development policy is extensive and complex. This challenges local government to be able to respond in a relatively short timeframe to something that is not only going to change the way their planning or development assessment teams operate at a functional level, but the development policy parameters. The flow on of this potentially changes the landscape of metropolitan Adelaide by allowing less protection of buildings from fewer demolition controls, and less trees in backyards as a result of increased density.

With all tiers of Australian government now discussing (and some proposing) the declaration of a climate emergency; the issues in this project should be placed foremost on the agenda of all local government agencies in South Australia. Key climate topics included in this paper are tree canopy, water use, energy use, and to a lesser degree waste management and sea level rise. Fewer demolition controls coupled with easier ability to subdivide or create additional dwellings all impact on the key listed topics, and ultimately on climate change.

If we do not act now, there is increasing evidence of economic, social and environmental consequences for everyone including local government. A great opportunity now exists with the planning reforms as a driver, to create a more collaborative approach to climate change initiatives.

Introduction

This project suggests that the improved coordination of climate change projects across South Australian Councils and a better Planning and Design Code would be a major improvement across local government and is possible to implement within 18 months.

According to the World Economic Forum's survey of over 31,000 people, climate change is currently the biggest problem facing our world (World Economic Forum, 2019). The physical climate is constantly changing. How we respond and adapt to the ongoing variations is crucial to future proofing our city and regions of South Australia and will ensure our communities continue to survive and thrive.

Recently, global rallies through the Extinction Rebellion movement drew attention to the importance of the issue of climate change and were demanding governments globally to declare a 'climate emergency' (Extinction Rebellion, 2019).

Globally, (as of November 2019) 1,195 jurisdictions in 25 countries have declared a climate emergency. In Australia, more than 75 jurisdictions have declared a climate emergency. The South Australian Legislative Council and 13 local governments from South Australia have joined the global movement.

Local government plays an integral role in assessing development proposals in the built environment and managing responses to climate change through data collection and mitigation projects (Fünfgeld, 2015). Our built environment impacts heavily on the natural environment, primarily through the planning and use of materials that contribute to the urban heat island affect, the way houses are oriented to use less energy, and the amount of trees in our developments.

Local governments have the opportunity to mitigate climate change issues *through* careful design, planning, construction and management of the built environment. There is also benefit for municipalities to collaborate efforts on climate change projects (Fünfgeld, 2015).

South Australia is undertaking a state-wide planning reforms with the new Draft Planning and Design Code integral (GoSA, 2019a). Consultation on the Draft Code is being undertaken until 28 February 2020 and there is a great opportunity for a coordinated approach to advocate to climate change mitigation measures to be better incorporated into the Draft Code. Additionally, financial risks are an emerging facet of the climate argument which could increase the awareness of the issues and increase the importance of taking action on climate change.

Data sourced for this report includes a range of articles and reports, the collective knowledge of our local government group, and a survey which was undertaken. The survey targeted a range of local and state planning/environment officers to investigate opinions on climate change and the new planning reforms. The results are analysed and discussed below.

The project explores existing climate change measures amongst our Councils and recommendations are offered where improvements could occur for local government and or the new South Australian planning reforms. Finally, we review two interstate climate change initiatives to see if they can benefit South Australia.

We acknowledge that the scope of this report could not include the entirety of the vast amounts of academic research pertaining to this issue. Furthermore, that the Draft Planning and Design Code is over 3,000 pages long and only a limited analysis of the document was possible for this report. However, key points have been emphasised and introduced.

Analysis and Discussion

How we respond and adapt to the ongoing change of our climate is crucial to how we future-proof our cities. We need to create conditions that promote wellbeing, and allow our communities to continue to survive and thrive.

There are tangible changes to climate occurring Australia-wide (CSIRO, 2019). In South Australia, specific climate models predict that Adelaide will receive more extreme weather and a greater number of heatwaves with warmer than average temperatures throughout summer. Heatwatch Adelaide predicts the average number of days over 35 degrees Celsius may increase by 180 % without strong climate change policies and action. Historical averages of 18-52 days per year will increase up to 51-69 days per year by 2090 (The Australia Institute, 2019).

Materials such as concrete are known to hold heat and green space including trees is a good way to reduce heat. Up to 68 % of the World's population is projected to live in urban areas by 2050, and therefore, the way we develop our built urban environment is crucial to maintaining the balance to the intricate relationship between development and the environment (United Nations, 2018).

Additional global impacts include ocean acidification from absorbing more CO₂, reduced agricultural yields and an impact on wildlife. All the aforementioned climate predictions have negative social, environmental and economic impacts on local communities. To reduce the impacts of these extreme forecasts on our cities, measures for how we develop, adapt and mitigate these potential threats must be implemented.

A report by the Climate Council (2019) has identified that climate change is a major threat to Australia's financial stability and poses substantial systemic economic risks. It is anticipated that the property market may lose \$571 billion in value by 2030 due to climate change and extreme weather, and is expected to rise to \$611 billion by 2050, and \$770 billion by 2100 (Climate Council, 2019).

Of the 37 respondents to our survey, 35 (95 %) said they had concerns with the State Planning Reforms. A copy of our survey including questions is provided in Appendix 1. Respondents noted concerns regarding the extent of the reforms and the ability for local government to adequately respond to the scope and scale of changes to existing planning

policy and the operational aspects of the planning system. In regards to planning policy, respondents also noted the need for climate change and environmental considerations to be given equal weight with other important considerations such as development of the economy.

Respondents suggested that the reduced approval times may lead to plans being submitted incorrectly without consultation and 'more development' rather than 'quality' development could impact the 'character' of the Adelaide Metropolitan area. Additionally, concerns that with greater power being given to private certifiers, policy enforcement will be reduced resulting in more complaints and compliance issues for local government 'down the track'.

Respondents also cited a 'lack of long term planning' and the need to incorporate 'energy efficient designs' or more 'climate adapted' materials. One respondent said "the reforms will not come close to addressing the tree canopy targets for the city, and have minimal inclusions for features such as large rainwater tanks or appropriate landscaping to include trees". Another respondent noted that "greater protection of trees was ruled out of scope".

While some respondents mentioned they did not have a comprehensive understanding of the Draft Code to comment on the detailed environmental impacts, many did have an appreciation of the general environmental aspects and thought they could be improved.

What are South Australian local councils doing?

Aside from the State-based planning and design controls which local councils enforce across South Australia, a range of climate change projects are undertaken by local councils. These projects are largely coordinated through regional adaptation plans, e.g. Adapt West, Resilient South, Resilient East, Adapting Northern Adelaide and a range of other regional and rural groups (GoSA, 2019b). While State Government support and coordination of these groups varies from year to year, councils have the power and capability to lift and strengthen these plans to ensure better and more efficient use of local government resources to adapt to climate change.

The group's collated list of projects in selected Local Government across Adelaide (refer Appendix 2) presents the following works being undertaken to create communities be more resilient to climate change:

- Work on the 'Tree Canopy' which is vital to offset the urban heat island effect by cooling cities and by shading streets;
- Community projects to increase awareness on the reliance of potable water and water efficiency measures.
- Energy efficiency and waste management education that apply the principles of the waste hierarchy (Avoid, Reduce, Reuse, Recycle and Recover) in order to maximise the diversion of waste from landfill.

Effective urban planning and building design can substantially reduce greenhouse gas emissions and subsequently reduce impacts of climate change (GoSA, 2019b). Smart design and better minimum design requirements for ongoing reduction of emissions and reduction of the urban heat island effect should be implemented.

Planning, development and the built environment

The *Planning Development and infrastructure Act 2016* (PDI Act 2016) is the relevant legislation in South Australia that manages planning and building. This new PDI Act will fully replace the *Development Act 1993* in July 2020 when the new planning system becomes fully operational. The functional controls for planning and building will be all managed online by the Planning and Design Code, which is a universal document replacing all individual council development plans.

The new Act is purported to be a modern and competitive planning system aimed at “unlocking South Australia’s potential” (GoSA, 2019c). However, if the infill design policies allow more infill with less council assessment; badly designed infill development can reduce tree canopies and increase urban heat island effects. To facilitate any new development within our existing urban footprint, without it being well-designed and climate conscious, will have a negative impact on the climate. Therefore, a better Planning and Design Code is crucial to enable better development and local governments are best placed to provide insight to ensure the system addresses this.

A sample comparison of proposed new zoning to existing zoning was undertaken between the General Neighbourhood Zone (which is proposed for 80 % Adelaide’s residential areas), the Suburban Neighbourhood Zone (which is tipped to replace the more ‘character’ zones in Adelaide) and two existing policy areas in Marion Council and Burnside Council.

Typically, site area and site coverage (the maximum allowable percentage of that allotment can be taken up by the building) are key determining factors in how much land is left over for green space. Together with the front setback (which usually determine the size of a front yard) and site frontage (how wide an allotment can be), these are some key development assessment criteria.

As can be seen from Table 1 (below), the site areas, frontages, setbacks and site coverages have lower standards applied to them in the new system.

Table 1: Sample Comparison of Draft Planning and Design Code Zones to Existing Zones in Cities of Marion and Burnside

<i>Detached Dwellings</i>	<i>General neighbourhood Zone (Draft P&D Code)¹</i>	<i>Suburban Neighbourhood Zone (Draft P&D Code)¹</i>	<i>Residential Policy Area 13² – Dulwich (City of Burnside)</i>	<i>Marion Plains Policy Area 8³ (City of Marion)</i>
<i>Site Area</i>	300 m ²	This is variable	450 m ²	350 m ²
<i>Frontage</i>	9 metres	Average of 2 adjoining neighbouring properties or 8m if no buildings exist	15 metres	10 metres
<i>Site coverage</i>	60 %	50 %	40 %	40 %
<i>Primary street Setback</i>	5 metres	Average of the existing buildings not less than 4 metres	4 metres	5 metres

¹For ease of comparison, the ‘deemed to satisfy’ criteria have been used, this is similar to ‘complying development’ under the existing system. This is the most likely minimum standards that will be applied.

²This is a typical residential zone in City of Burnside.

³This accounts for most of the residential areas in City of Marion.

The example shown above uses the ‘deemed to satisfy’ criteria which in the new PDI Act means that if these criteria are met, Councils have to approve these buildings with little assessment undertaken. The Draft Code does indicate additional conditions for residential buildings such as mandating minimum tree planting (1 small, medium or large tree depending on the type or size of development); design criteria that encourages eaves (which can building help cooling in summer) as well as general environmental design criteria which are similar to what is in place now.

Where we build our homes is significantly impacted by climate change (see for example Ting et. al. 2019). Different standards generally apply to coastal versus hills development and some of these environmental hazards are mapped in the Draft Code. However, the significant work to map climate risk vulnerability is not included and this contributes to South Australia paying higher building insurance premiums (Ting, I. et. al. 2019).

As documented in this report, drastic action is needed to address climate change, and while there is some balance to environmental design criteria in the new system, the new standards do not go far enough. It may be that through postponing the implementation of the new system, further climate change mitigation strategies could be incorporated.

Survey

A survey was conducted to gauge an understanding people's opinions on the new and proposed state planning system and climate change concerns.

In the survey, respondents had the opportunity to rate their organisations based on their current 'action on climate change'. The average rating (among the 34 respondents) was 2.6 (where 1 is low action on climate change and 5 is high action). Despite their concerns with the reforms, a trend was seen where respondents still believed that in the next 3 years, they would be in a better place to take action against climate change, rating themselves 3.2 out of 5. This was generally because respondents felt the issue was gaining momentum, would continue to move forward and consequently, local government would follow suit.

Of our respondents, 16 of the 34 think there would be negative environmental impacts from the reforms. Another 17 responded 'maybe/unsure/possibly' (neutral) while only 1 believed there would not be any environmental impacts. Further detailed review of the Draft Code by environmental experts is recommended to further assess these aspects.

In response to the question "do you think more should be included in the reforms to address climate change?" 31 of the respondents replied in the positive, 5 were neutral, and only 1 said no. This is a telling statistic and demonstrates that there is wide spread shared view to improve climate change policies in the new system.

The results of the surveys are attached as Appendix 1.

Can South Australia benefit from interstate projects?

Victoria is deemed to be the largest and fastest growing state in Australia with an estimated population growth to reach between 7.5 million and 7.9 million by 2027 (ABS, 2019). Melbourne is 1 of 2 Australian cities included as one of the global challenge '100 Resilient Cities', established by the Rockefeller Foundation (2019).

From this challenge, Melbourne's first resilience strategy was endorsed by the City of Melbourne's 'Future Melbourne Committee' on 17 May 2016. It was the first resilience strategy produced by an Australian city, and was the result of the work of more than 1,000 individuals from 230 organisations, Melbourne's 32 local councils, and many Victorian Government departments. Three guiding principles were created:

1. build on Melbourne's existing structures and institutions;
2. avoid duplication of effort and investment; and
3. deliver tangible benefits to our communities.

While there other measures and programs in Victoria, it is evident that the recent inclusion of Melbourne in the 100 Resilient Cities program has given the state a great foundation to build on in terms of improving its position regarding climate change mitigation or adaptation.

Meanwhile south of Perth, in a suburb called Hilton in Fremantle, an 1160m² allotment was used to create Josh's house, completed in 2013. While this is not a Local government initiative, and the houses were built by a team (Josh Byrnes and colleagues), they set an intention of creating resource efficient homes at a comparable cost and timeframe to a standard built home. The project was created in 7 months and houses achieve a 10 star NaTHERS energy efficiency rating (6 stars is the minimum energy efficiency required under the Building Code of Australia). The homes do not use air conditioning or heating, they generate more electricity than they use, harvest and recycle water and have a common food garden.

Above are some examples of projects or ideas from interstate that local governments in South Australia could get involved in and at a minimum challenge local governments in South Australia in creating a more sustainable future and action against climate change.

Key Recommendations

The following table presents our observations and key recommendations from this project:

Table 2: Key Recommendations

	Observations	Recommendations	Who/How
1.	<p>1,195 jurisdictions in 25 countries have declared a climate emergency, including 7 SA local governments.</p> <p>This is a great step to recognising the seriousness of the issues surrounding climate change.</p>	<p>Encourage all other local government agencies to declare a climate change emergency.</p>	<p>Request the Mayors of existing councils who have already declared, to write an open letter to all SA councils urging them to declare the emergency.</p>
2.	<p>SA local governments already undertake significant climate change initiatives / projects.</p>	<p>(a) More climate change initiatives should be explored.</p> <ul style="list-style-type: none"> • Councils to amend procurement policies to give priority to companies who demonstrate that they have climate neutral products or contribute positively to climate change. • Councils could continue to innovate and use products that are “climate change friendly” i.e. new road bases made from recycled materials, more stormwater capture and re-use schemes etc. <p>(b) Interstate ideas should be explored for best practice and best outcomes.</p> <p>(c) Increased funding from State and Federal governments for local government (as the body best able to undertake “on the ground” projects) to undertake further initiatives and projects.</p>	<p>Council Environmental team staff to team up with contracts/ procurement team to propose changes to Council in a council report. Environmental team should be a default stakeholder on council projects.</p> <p>Australian Local Government Association (ALGA) to lead an advocacy campaign which includes capturing and analysing data to reflect the social and economical value Local Government create through the Climate change initiatives</p> <p>ALGA to develop lobby/marketing material to document all the good work local governments are doing to increase chances of funding.</p>

3.	<p>Climate change in South Australia is tackled in a variety of different ways by a variety of different bodies including local government.</p>	<p>Develop one State-led central body regarding climate change.</p>	<p>Local Government Association SA to lobby State Government for this.</p>
4.	<p>Councils are currently submitting feedback on the Draft Planning and Design Code.</p> <p>Many of our survey respondents were concerned about the planning reforms in terms of the lack of consultation, reforms have been rushed, developer driven, the expense of it, privatisation of the development industry is concerning, and environmental initiatives have not been sufficiently addressed.</p> <p>Some changes proposed include:</p> <ul style="list-style-type: none"> • increased density in certain areas through reduction in minimum lot sizes, frontages and/or additional dwelling types to what is currently accepted. • Fewer demolition controls. • Private open space areas reduced to 1.8m in width. 	<p>(a) Councils critically review their local area content changes and report these to the state government and the Local Government Association.</p> <p>(b) Change the minimum (deemed to satisfy) block size in the General Neighbourhood Zone to 400 square metres.</p> <p>(c) Double the mandatory environmental considerations (i.e. minimum tree planting, rainwater tank requirements).</p> <p>(d) Ensure climate change vulnerability mapping is included in the planning reforms.</p> <p>(e) Allow for better policy to allow for re-use and adaptability of existing buildings, the use of environmentally friendly building materials and methods.</p> <p>(f) Extend the implementation of the Planning and Design code to July 1 2021 to allow for the above initiatives to be created.</p> <p>Appendix 3</p>	<p>Key council planning and environmental staff, CEOs and Mayors.</p> <p>Government of SA to pass Mark Parnell's Bill recommending the change to the State Planning Commission.</p>
5.	<p>There are long term social, environmental and economic costs if local government ignores climate change impacts.</p> <p>The planning system may not have enough influence in building design to make necessary contributions to climate change.</p>	<p>Assist Australian Building Code Board (ABCB) to review the National Construction Code – specifically to increase minimum 6 star building efficiency to 8 star.</p>	<p>Local government to advocate to Federal Government / ABCB to undertake comprehensive review.</p>

At the conclusion of this project, the group will distribute this report to the leadership team within our respective Councils and to the SA Local Government Association for their consideration.

Team Reflection

In the early stages of our group's establishment, we discussed each person's Team Management Profiles in order to determine and understand our individual work preferences. This was then used to ascertain how our group could best link our skills and personality traits effectively.

To assist with reflecting on the team's performance, each member of our group utilised the My Team Application and completed the Project Performance Questionnaire. Use of this tool enabled the team to identify the areas it is performing well and the areas requiring improvement. This was conducted twice during the process. Once a few months ago at the commencement of the project and a second time in the last few weeks near the conclusion of the project.

In summarising our first reflection exercise, the group was strong in the "Linking", Organising" and "Inspecting" sectors. All respondents nominated "Innovating" as a sector on the way to high performance for our group. Areas for improvement were discussed at a meeting in early October and since then the innovative ideas have been further progressed as the project has moved into the "Producing" phase with the end in sight.

With two weeks remaining until the assignment is due, the team conducted the second and final team review using the TMS profile tool. "Developing" and "Producing" has been consistently high throughout the assignment which is pleasing as standards have remained high for project content and tasks completed. Areas of concern that have slipped in ranking as the assignment has progressed are "Linking", "Organising" and "Maintaining".

Towards the end of the project, the team agreed that disagreements within the team have not been handled effectively; however, this produced alternative views and encouraged further discussion, which value-added to the project. We had a fairly wide variety of opinions regarding the "Organising" sector and therefore reflective of a variety of individuals and personality types coming together for the same purpose.

The area of most concern was "Maintaining" which indicated a lack of cohesion and support within the team was lacking when difficulties arose. Upon reflection, in order to be a higher performing group, a set of ground rules should have been established at the commencement of the assignment to maintain the team's focus. These ground rules could have articulated

objectives to form a team charter for ongoing reference and thereby accountability of our actions.

Although the team performance results have changed significantly from start to finish, the team has delivered a quality well researched project that is relevant to local government and the question at hand. Upon completion and delivery of the project, a post-reflection catch-up is planned.

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Appendices

Appendix 1

Group 1 Survey Results – Investigating opinion and suggestions regarding the new Planning Reforms and Climate Change

Link to survey - https://drive.google.com/open?id=1552Y85PTOVKSPXON8fAeZgZq157-df_V

Link to results - https://drive.google.com/open?id=1rMoPmsj45tNZ0832LUeFfw_v0aoRAZK

Appendix 2

Table of select Council's current
climate change projects

Climate Change Projects	Adelaide	Burnside	Charles Sturt	Marion	Tea Tree Gully	West Torrens
Tree Canopy	Yes	Yes		Yes	Yes	Yes
Sea level rise	N/A	N/A	N/A	Yes	N/A	Yes
Water use reduction / reuse	Yes	Yes	Yes	Yes	Yes	Yes
Power		Yes	Yes	Yes	Yes	Yes
Vehicle		Yes				
Solar		Yes	Yes		Yes	Yes
Procurement		Yes				
Recycling		Yes	Yes	Yes	Yes	

Appendix 3

ELP – Group Environmental Sustainability Objectives

Tree Canopy

Tree canopy is important offset to the 'heat-island' effect, by cooling cities by shading streets and reserves

The 202020 report on Tree Canopy in Adelaide's greater-metro area showed that of the 19 Councils surveyed, only 2 showed any canopy increase (Adelaide City and Norwood, Payneham St Peters), while 10 showed a small decrease and 7 a significant decrease. 202020 Vision, (https://202020vision.com.au/media/72935/wsattg_sa_fa3_lr.pdf)

Although local governments are attempting to increase tree canopy with planting programs, canopy loss is still occurring.

Tree species resilience is also an issue as we move towards a climate with less rain and more heat-waves. Species vulnerability reports have been indicated as a must have.

Water Use

The CSIRO predicts that temperature increase by 1-2 degrees will reduce water flow in the Murray Darling basin. Alternative water sources will be required to:

- decrease the reliance on potable water consumption;
- maximise the use of alternative water sources to mains, including the potential use of rainwater captured on-site; and
- increase water efficiency measures.

Energy Use

Decrease reliance on fossil fuels will reduce greenhouse gas emissions and reduce impacts on climate change to:

- minimise the energy consumption requirements of the new dwelling; and
- increase energy efficiency measures within the dwelling.

Waste management

Waste management is increasingly necessary for the ongoing protection of the environment for the following reasons:

- apply the principles of the waste hierarchy (Avoid, Reduce, Reuse, Recycle and Recover) in order to maximise the diversion of waste from landfill;
- increase opportunities to use fit for purpose recycled materials; and
- consider the waste management and recycling requirements in construction and the operational phase of facilities and incorporate design innovation to encourage its efficient use.

Sea level rise

Sea-level rise acceleration is mostly due to human caused global warming which is driving thermal expansion of seawater and the melting of glaciers, climate scientists expect the rate to accelerate during the 21st century.

Effective urban planning and building design can reduce greenhouse gas emissions and subsequently reduce impacts of climate change. The government needs to take the lead and implement smart design and minimum design requirements for ongoing reduction of emissions and reduction of the urban heat island effect.

Smart urban planning to reduce urban sprawl will decrease vehicle kilometres in the passenger vehicle that are extremely inefficient at moving passengers. Transport oriented developments that include transport nodes seek to reduce distances travelled in private vehicles, encourage public transport options and make walking and cycling more attractive. A combination of smart transport options, green spaces, sustainable architecture and specific state/national environmental targets will reduce the impacts of climate change.

Glossary

Accepted Development - The Code classifies development as Accepted Development in an Accepted Development Classification Table relative to a particular Zone. An Accepted Development Classification Table for each Zone specifies criteria which must be met in order for specified classes of development to be classified as Accepted Development within the Zone. For a development to be Accepted Development all criteria applicable to a class of development must be satisfied.

Approval times -

Assessment times

Assessment times vary depending on the form of development proposed and the completeness of the application. Statutory timeframes are:

Application type	Time limit
Planning assessment (Development Plan Consent)	Complying - 2 weeks Merit - 8 weeks
Building assessment (Building Rules Consent)	4 weeks
Land division	12 weeks

Complex applications involving referrals and/or public notifications take additional time. In the case of referrals, the statutory time limit increases by 6 to 10 weeks, depending on the referral agency.

The time limits can be suspended if the assessment authority or referral agency asks the applicant to provide additional information. Generally, 12 weeks is allowed for more information to be provided. The assessment 'clock' restarts when the information is received.

Character - can divide by its features of output, its size, government as a main client, nature of demand for construction output, nature of construction work, variety of construction technology, and structure of industry.

Climate Adaptation - is a response to global warming. The Intergovernmental Panel on Climate Change defines adaptation as: 'the process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities.

Climate Emergency – Global warming human caused climate change. Climate crisis - an alternative name for global warming. Climate emergency declaration - a public declaration of a state of climate emergency.

Complying development - listed in development plans (or specified in the regulations as complying). Complying developments are considered to have a low level of impact on the surrounding area. An assessment authority cannot withhold approval for a complying development.

Deemed to satisfy - The Code classifies development as deemed-to-satisfy development in a Deemed-to-Satisfy Development Classification Table relative to a particular Zone. A Deemed-to-Satisfy Classification Table for each Zone specifies criteria which must be met in order for specified classes of development to be classified as deemed-to-satisfy development within the Zone. For a development to be deemed-to-satisfy development all criteria applicable to a class of development must be satisfied. A deemed-to-Satisfy

development does not require assessment against the policies and rules applicable to performance assessed development, and must be granted a consent subject to the requirements of section 106 of the Act.

Detached Dwelling - A single dwelling not attached to any other dwelling or structure (except its own garage or shed). A single-detached house has open space on all sides, and has no dwellings either above it or below it. A mobile home fixed permanently to a foundation is also classified as a single-detached house.

Development plan - is a planning document couched in the language of planning objectives and principles, rather than that of legal obligation. It uses language appropriate to the expressions of goals and guiding principles, rather than the expression of legal mandates.

Dwelling Densities - The term housing density is an urban planning term which may be defined as. ...a measure of the built or to-be built residential accommodation, being the number of persons or dwellings situated on a unit of area, eg acre/hectare of a particular site or district.

Emissions - the production and discharge of something, especially gas or radiation.

Energy Efficient - using less energy to perform the same task – that is, eliminating energy waste. Energy efficiency brings a variety of benefits: reducing greenhouse gas emissions, reducing demand for energy imports, and lowering our costs on a household and economy-wide level.

Extinction Rebellion - (abbreviated as XR) is a global environmental movement with the stated aim of using nonviolent civil disobedience to compel government action to avoid tipping points in the climate system, biodiversity loss, and the risk of social and ecological collapse. https://en.wikipedia.org/wiki/Extinction_Rebellion

Front setback / Primary Street setback - is the minimum distance which a building or other [structure](#) must be set back from a [street](#) or road, a river or other [stream](#), a shore or [flood plain](#), or any other place which is deemed to need protection. Depending on the [jurisdiction](#), other things like [fences](#), [landscaping](#), [septic tanks](#), and various potential hazards or nuisances might be regulated and prohibited by setback lines. Setbacks along state, provincial, or federal highways may also be set in the laws of the state or province, or the [federal government](#). Local governments create setbacks through ordinances, zoning restrictions, and Building Codes, usually for reasons of public policy such as safety, privacy, and environmental protection. Neighbourhood developers may create setback lines (usually defined in Covenants & Restrictions, and set forth in official neighbourhood maps) to ensure uniform appearance in the neighbourhood and prevent houses from crowding adjacent structures or streets. In some cases, building ahead of a setback line may be permitted through special approval.

Frontage - a strip or extent of land abutting on a street or water

Future Proof - (of a product or system) unlikely to become obsolete

General Neighborhood Zone - Will apply to most of the residential land in Greater Adelaide and some Regional Areas. Supports low-medium density housing of one to two storeys, with a mix of small-scale shops, offices and consulting rooms, as well as larger scale community services and facilities (e.g. schools, childcare and recreation facilities).

Green / Open Space - is any open piece of land that is undeveloped has no buildings or other built structures) and is accessible to the public. Open space can include:

- Green space (land that is partly or completely covered with grass, trees, shrubs, or other vegetation). Green space includes parks, community gardens, and cemeteries.

- Schoolyards, Playgrounds, Public seating areas, Public plazas, Vacant lots.
- Open space provides recreational areas for residents and helps to enhance the beauty and environmental quality of neighbourhoods. However, with this broad range of recreational sites comes an equally broad range of environmental issues. Just as in any other land uses, the way parks are managed can have good or bad environmental impacts, from pesticide runoff, siltation from overused hiking and logging trails, and destruction of habitat.

Green spaces - broadly encompass publicly accessible areas with natural vegetation, such as grass, plants or trees [and may include] built environment features, such as urban parks, as well as less managed areas, including woodland and nature reserves.”

Greenhouse Gas - A greenhouse gas (sometimes abbreviated GHG) is a gas that absorbs and emits radiant energy within the thermal infrared range. Greenhouse gases cause the greenhouse effect. The primary greenhouse gases in Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide and ozone.

Housing Diversity Neighbourhood - Supports the replacement of existing dwellings with medium-density housing, primarily in the form of terrace housing, group dwellings or apartment buildings.

<https://www.sa.gov.au/topics/planning-and-property/land-and-property-development/building-and-property-development-applications/assessment>

If a proposed development meets all but one of the criteria necessary for the development to comply, that one aspect is assessed on its merits.

Infill development - is the rededication of land in an urban environment, usually open-space, to new construction. Infill also applies within an urban polity to construction on any undeveloped land that is not on the urban margin. The slightly broader term "land-recycling" is sometimes used instead.

Merit - Proposals that are not categorised as either complying or non-complying are known as merit applications. They are individually assessed on their merits, with reference to the policies in the relevant development plan and to the Act and related regulations.

Mitigation Measures - are means to prevent, reduce or control adverse environmental effects of a project, and include restitution for any damage to the environment caused by those effects through replacement, restoration, compensation or any other means

Non Complying - are listed in development plans. Non-complying developments are land uses that are not envisaged or encouraged in the area because they are inconsistent with the objectives and principles of a zone or policy area, for instance an industrial development in a residential zone or a high-rise building in a heritage policy area. Non-complying development is approved only under special circumstances.

Policy Areas - generally represent area-specific policy within zones and contain additional objectives, desired character statements and principles of development control to those specified at the zone level. In the event of a conflict between the policies of a zone and policy area, the policy area is intended to prevail since the policies are more geographically specific.

Policy Enforcement - is the process of ensuring compliance with laws, regulations, rules, standards, and social norms. Governments attempt to effectuate successful implementation of policies by enforcing laws and regulations.

Private certifiers - A private certifier possesses building surveying qualifications and must be registered. They have the same power as a council in assessing applications for

Building Rules Consent. The private certifier acts as the council in the public interest and has a professional responsibility to ensure that the application is complete and that it complies with the Building Rules, including the current version of the Building Code of Australia (BCA).

Privatisation - the transfer of a business, industry, or service from public to private ownership and control

Residential Policy - are used for a range of housing types, styles and densities. Density refers to the number of dwellings allowable per subdivision or allotment. Generally residences are one to three stories in height

Setback - A distance from a curb, property line, or structure within which building is prohibited. Setbacks are building restrictions imposed on property owners. Local governments create setbacks through ordinances and Building Codes, usually for reasons of public policy such as safety, privacy, and environmental protection.

Site area - total area of the site within the site title boundaries (or the total area within the site title boundaries)

Site Coverage - is the maximum area your house can cover of your block as a percentage of the total area of your block

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Suburban Neighborhood Zone - Caters for areas of very low-density, heritage, character and foothill locations, with larger allotments on sloping land.

Suburbia - the suburbs or their inhabitants viewed collectively.

Sustainable architecture - Sustainable architecture is architecture that seeks to minimize the negative environmental impact of buildings by efficiency and moderation in the use of materials, energy, and development space and the ecosystem at large

Tree canopy - In biology, the canopy is the aboveground portion of a plant community or crop, formed by plant crowns. For forests, canopy also refers to the upper layer or habitat zone, formed by mature tree crowns and including other biological organisms. Sometimes the term canopy is used to refer to the extent of the outer layer of leaves of an individual tree or group of trees. Shade trees normally have a dense canopy that blocks light from lower growing plants.

Urban Corridor - Supports the development of high-density, vibrant, mixed-use neighbourhoods that provide a variety of new housing choices, along with a range of complementary retail and commercial activities. Development will generally have a greater proportion of housing than retail or commercial development.

Urban Footprint - is simply the total amount of the Earth's surface needed to support a given city's level of consumption and absorb its waste products.

Urban Heat island - An urban heat island is an urban area or metropolitan area that is significantly warmer than its surrounding rural areas due to human activities. The temperature difference is usually larger at night than during the day, and is most apparent when winds are weak. UHI is most noticeable during the summer and winter.

Urban Neighbourhood - Supports the highest density and mix of land uses outside the CBD, including residential, retail, office, commercial and civic, in locations where there is significant opportunity to increase the development density around a major public transit node or corridor, or a significant place of interest.

Urban Renewal - Caters for the renewal of sites with medium and high-density housing in precincts where the housing stock is being replaced as it no longer meets market and community needs.

Urban Sprawl - Urban sprawl or suburban sprawl mainly refers to the unrestricted growth in many urban areas of housing, commercial development, and roads over large expanses of land, with little concern for urban planning.