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DPTI

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DPTI Planning Engagement  
GPO Box 1815  
Adelaide SA 5001

## RE: DRAFT STATE PLANNING POLICIES FOR SOUTH AUSTRALIA CONSULTATION

Dear DPTI Planning Engagement

Green Industries SA (formerly Zero Waste SA) offers the following feedback and suggestions on the draft State Planning Policies currently out for consultation:

### **Incorporate a Specific Waste and Recycling Policy**

Given sustainable resource use, reuse and renewal are fundamental themes of the draft State Planning Policies we suggest adding a specific policy on 'Waste and Recycling', which is currently not explicitly addressed in the same way as other environmental issues like energy and water.

Whilst we recognise the draft documents commitment to the need for adaptive spaces the specific provision of appropriate land, infrastructure and space (storage, collection) for waste management and recycling is often overlooked, yet these are key elements of essential service provision in urban and regional South Australia.

In addition, 'waste and 'recycling' are not just about the infrastructure required to manage end of life materials - all developments can be considered 'material banks' – where for five, ten or fifty years, materials are bound up in the built form, but will eventually become end of life<sup>1</sup>. Consideration of materials and construction at the design stage is critical to giving materials the best chance of recovery and reuse.

I note the draft State Planning Policies #3 *Adaptive Reuse*, #9 *Employment Lands* and #16 *Emissions And Hazardous Activities* mention securing industrial land for waste management and materials recovery and processing to 'quarantine' it from encroachment by sensitive uses, and adaptive reuse to minimise new building requirements and maximise reuse of existing built infrastructure.

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<sup>1</sup> [www.bamb2020.eu/about-bamb](http://www.bamb2020.eu/about-bamb)

However, the planning system can further support and strengthen the ability of South Australians to achieve South Australia's Waste Strategy targets by incorporating, to the extent allowed by the planning framework, principles and provisions that:

- minimise waste in construction processes, and ensure on-site waste separation systems are established during construction and demolition to maximise reuse, recycling/resource recovery (and manage litter impacts on site)
- require an end-of-life plan for all classes of built infrastructure that shows consideration has been given at the design stage to construction technologies, products and materials which enable dismantling rather than demolition, and minimising damage so that component materials can be recovered and recycled
- incorporate the reuse of materials, materials with recycled content and materials that are identifiable as recoverable, reusable or recyclable at the end of their life, and all three wherever possible, by:
  - assessing materials, products and systems for their durability and low maintenance
  - selecting materials using life cycle costing principles for materials and system selection (give preference to materials with low embodied energy and locally sourced products where available)
  - avoid use of hard-to-recycle hazardous materials
- ensure higher density design that enables tenants/residents to safely and conveniently move materials from dwellings to collection point bins (see 'MUDs Guide' cited below for detail)
- provide sufficient and appropriate space to accommodate all outdoor waste management and recycling infrastructure, including general waste bins, and recycling bins for dry recyclables and garden/food waste, and ensuring collection vehicles have sufficient access, including overhead clearance for trucks to lift bins (see 'MUDs Guide' cited below for detail)
- require design interiors of dwellings and buildings to enable sufficient and appropriate space to accommodate all indoor waste management and recycling infrastructure eg. ensuring kitchen benches or cupboards have space for temporary storage to allow separation of dry recyclables and food waste

## **Key Issues**

It is recommended that three specific issues are addressed in the draft State Planning Policies:

### **Residential and Mixed Use Development (Multi Unit Development)**

In 2014, Zero Waste SA published the *Better Practice Guide for Waste Management in Residential & Mixed Use Developments*, or the 'MUDs' Guide, which was developed with Renewal SA and the Property Council of Australia and jointly released by the Minister for Sustainability, Environment and Conservation, and the Minister for Planning<sup>2</sup>.

Based on instances we are aware of where multi-unit residential developments were built, but omitted systems that enabled effective collection of waste and recycling from the design, we strongly suggest incorporating this guide either in a standalone Waste & Recycling policy, or by including relevant parts of the guide into existing policies (eg. Design Quality).

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<sup>2</sup> [www.greenindustries.sa.gov.au/LiteratureRetrieve.aspx?ID=165462](http://www.greenindustries.sa.gov.au/LiteratureRetrieve.aspx?ID=165462)

## Circular Economy

We note also that economic prosperity is a key area of focus in the draft document. The transition to a more circular economy is a priority guiding focus for South Australia's Waste Strategy 2020-2025 (in prep) and a core principle included in the Australia's National Waste Policy currently out for consultation<sup>3</sup>. The concept of circular economy is included as a guiding principle in the *Green Industries SA Act 2004* and is gaining considerable strategic planning and investment traction internationally and especially in the European Union.

The Ellen MacArthur Foundation, a leading authority on circular economy, defines a circular economy as:

*...one that is restorative and regenerative by design, and which aims to keep products, components and materials at their highest utility and value at all times, distinguishing between technical and biological cycles<sup>4</sup>.*

It is a generic term for an economy that is producing very little waste and pollution; by design or intention. It refers to the most effective utilisation of materials and labour within that economy by emphasising service over ownership and greater remanufacturing, repair and reprocessing to displace the traditional and unsustainable linear 'make, use, dispose' mode of our existing industrial economies. In the wake of the China National Sword announcement<sup>5</sup>, there is an increased policy focus on Circular Economy<sup>6</sup>.

The circular economy potential in cities can be much enhanced by conducive spatial planning policies, which promote the efficient use, regeneration and revitalisation of space, urban land and buildings<sup>7</sup>. Urban form, infrastructure and building design are among the greatest drivers of cost and resource efficiencies, through the benefits of economy of scale and agglomeration and by fostering energy efficiency, renewable energy, resilience, productivity, environmental protection and sustainable growth in the urban economy.

The circular economy goes beyond planning for waste management infrastructure and services. If a city is not making things locally, it does not have a circular economy. A city that is exporting recycled materials elsewhere to be remade into things arguably still has a linear economy, which is also a carbon intensive one, and these emissions are not even accounted for - emissions from shipping and aviation have not been included in international climate change negotiations<sup>8</sup>.

A true circular economy means relocalising production in our cities, needing to move less stuff, and making more of what we need, when and where we need it.

The planning system can help facilitate the local capture, remanufacture of material streams, both at the industrial and micro scale by supporting the relocalisation of production in cities and accommodating the rise in maker<sup>9</sup>, artisan and distributed manufacturing activity<sup>10</sup>. Such an ordinance<sup>11</sup> was recently established in Montana, US.

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<sup>3</sup> [www.environment.gov.au/protection/waste-resource-recovery/national-waste-policy](http://www.environment.gov.au/protection/waste-resource-recovery/national-waste-policy)

<sup>4</sup> [www.ellenmacarthurfoundation.org/circular-economy](http://www.ellenmacarthurfoundation.org/circular-economy)

<sup>5</sup> [www.greenindustries.sa.gov.au/chinas-new-policy-on-waste-and-recycling](http://www.greenindustries.sa.gov.au/chinas-new-policy-on-waste-and-recycling)

<sup>6</sup> [www.greenindustries.sa.gov.au/circular-economy](http://www.greenindustries.sa.gov.au/circular-economy)

<sup>7</sup> [https://ec.europa.eu/futurium/en/system/files/ged/ua\\_ce\\_draft\\_action\\_plan\\_-\\_final\\_09.02.2018.pdf](https://ec.europa.eu/futurium/en/system/files/ged/ua_ce_draft_action_plan_-_final_09.02.2018.pdf)

<sup>8</sup> <https://theconversation.com/the-shipping-sector-is-finally-on-board-in-the-fight-against-climate-change-95212>

<sup>9</sup> <https://hackernoon.com/the-resurgence-of-a-culture-of-makers-re-localizing-production-aaeab300c186>

<sup>10</sup> [www.nesta.org.uk/blog/the-factory-everywhere-the-present-and-future-of-distributed-manufacturing](http://www.nesta.org.uk/blog/the-factory-everywhere-the-present-and-future-of-distributed-manufacturing)

<sup>11</sup> [https://nbcmontana.com/news/local/proposed-changes-could-bring-artisan-manufacturers-to-downtown-bozeman\\_20160509152246753](https://nbcmontana.com/news/local/proposed-changes-could-bring-artisan-manufacturers-to-downtown-bozeman_20160509152246753)

The provision for the emergence and advancement of a more circular economy in SA is therefore entirely consistent with the draft documents intentions to provide a planning framework which ensures resilience and facilitates green technologies and industries that reduce reliance on a carbon based energy system.

## **Materials, Waste and Climate Change**

The embodied energy of materials (and their conversion to waste) used in city-making is also a significant climate change issue which is not identified in policy #5 *Climate Change*.

The volume of natural resources used in buildings and transport infrastructure increased 23-fold between 1900 and 2010<sup>12</sup>, with 800 billion tonnes of natural resource 'stock' tied up in these structures.

In its 1995 report 'Making Better Buildings', the Worldwatch Institute estimated that as much as a tenth of the global economy is dedicated to constructing and operating homes and offices, with this activity using several times as much wood, minerals, water, and energy as the rest of the economy: buildings consume one sixth to one half of the world's physical resources, and buildings account for roughly 40 per cent of the materials entering the global economy each year: some 3 billion tons of raw materials are turned into foundations and walls, pipes and panels.

More recently, work undertaken in relation to Melbourne has identified where materials can be 'mined' in the future as existing infrastructure is decommissioned<sup>13</sup>, reconceiving cities as places of material supply, not just consumption.

If the planning system intends to address climate change, it needs to address the overlap between energy use and materials in the design, specification, building and disassembly of buildings and infrastructure<sup>14</sup> as well as the energy impacts of operating them.

In providing its advice GISA is guided by the United Nations Sustainable Development Goals (SDGs)<sup>15</sup>, to which Australia became a signatory in September 2015, adopting a set of goals to end poverty, protect the planet and ensure prosperity for all as part of a new sustainable-development agenda. Each goal has targets to be achieved over the next 15 years. Sustainable Development Goals 9 (Industries, Innovation and Infrastructure)<sup>16</sup>, 11 (Sustainable Cities and Communities)<sup>17</sup> and 12 (Responsible Production and Consumption)<sup>18</sup> specifically refer to waste management, resource efficiency and reduction of waste generation through prevention, reduction, recycling and reuse. It is our view that contemporary planning policy should be framed within the context provided by the SDGs and where possible support delivery of them.

For further information or clarification, please contact Sharon Ede, Senior Adviser, Strategy, Policy & Programs on [REDACTED] or at [REDACTED].

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A/Chief Executive  
**GREEN INDUSTRIES SA**

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<sup>12</sup> <https://theconversation.com/the-20th-century-saw-a-23-fold-increase-in-natural-resources-used-for-building-73057>

<sup>13</sup> <https://theconversation.com/with-the-right-tools-we-can-mine-cities-87672>

<sup>14</sup> [www.bamb2020.eu/topics/reversible-building-design/sig-2](http://www.bamb2020.eu/topics/reversible-building-design/sig-2)

<sup>15</sup> [www.un.org/sustainabledevelopment/sustainable-development-goals](http://www.un.org/sustainabledevelopment/sustainable-development-goals)

<sup>16</sup> [www.un.org/sustainabledevelopment/infrastructure-industrialization](http://www.un.org/sustainabledevelopment/infrastructure-industrialization)

<sup>17</sup> [www.un.org/sustainabledevelopment/cities](http://www.un.org/sustainabledevelopment/cities)

<sup>18</sup> [www.un.org/sustainabledevelopment/sustainable-consumption-production](http://www.un.org/sustainabledevelopment/sustainable-consumption-production)