AUSTRALIAN FLEXIBLE PAVEMENT ASSOCIATION

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AUSTRALIAN FLEXIBLE PAVEMENT ASSOCIATION SUBMISSION: Transport for NSW Sustainable Procurement in Infrastructure

The Australian Flexible Pavement Association (AfPA) is the peak body for the multi-billion dollar flexible pavement industry in Australia. For over 50 years, AfPA has represented the flexible pavement industry to lead safety, sustainability, innovation, knowledge, and collaboration outcomes unified voice on the advancement of flexible pavement technology for the benefit of all road users. Our membership brings together a unique and diverse collective of industry, all state road authorities including Transport for NSW, and a number of Councils from across Australia.

AfPA represent our members and act as a source of technical and reference information for both industry and governments nationally. We are proud to provide a range of services to our members including a wide suite of training courses, regular industry events and technical advice on a national and state basis.

AfPA works to deliver the following positive outcomes:

- support our industry to be healthy, safe, innovative and sustainable
- build a solid understanding of our industry with key stakeholders
- support the national harmonisation of best practice
- drive a culture of continuous improvement
- ensuring value for our members

AfPA welcomes the opportunity to make a submission for consideration to the Transport for NSW (TfNSW) Sustainable Procurement in Infrastructure Discussion Paper (February 2022), and congratulates TfNSW on seeking to working collaboratively with industry to ensure a more efficient, effective and sustainable procurement framework and processes.

The key recommendations of this submission are that TfNSW adopt the Sustainability Framework for Asphalt into the procurement processes to assist TfNSW to define best practice, quantify sustainability achievements, embed sustainability metrics into procurement, and reward the industry for continuous improvement initiatives and investment they undertake, and that TfNSW work with industry to ensure flexibility and the application of sustainability practices.

AfPA Sustainability Framework for Asphalt

Background

The role of the bituminous product industry in promoting sustainability and reducing our environmental impacts has been advanced by the development of the principles for the AfPA Sustainability Framework for Asphalt (SF4A).

The SF4A is a key pillar of a broader Sustainability Strategy that enables Road Authorities and other stakeholders to define best practice, quantify sustainability achievements, embed sustainability metrics into procurement, and reward the industry for continuous improvement initiatives and investment they undertake.

The SF4A has been developed through consultation across the industry and is now available for use by industry members and stakeholders. The SF4A is based on Circular Economy concepts, including life cycle thinking and Life Cycle Assessment (LCA) approaches, considers the UN Sustainability Development goals and recognises the role the industry plays in society's key waste reduction requirements, it is aligned to Transport for NSW Sustainability Plan.

The SF4A also permits individual members to assess their operations in terms of their sustainability across 'Asphalt Production', 'Organisation' and 'Project Delivery'.

Objectives and benefits of SF4A to Sustainable Procurement

AfPA encourages procurement agencies to adopt the SF4A to set quantifiable metrics and benchmarks for the reduction in environmental impacts (e.g., greenhouse gases, energy, waste, etc.) associated with asphalt production and operations as part of their normal tendering processes.

The Framework for Asphalt has demonstrated that it is possible to assist procurers of asphalt solutions to select from organisations demonstrating sustainable production processes leading to reductions in energy use and greenhouse gas emissions and maximising the use of RAP and other secondary materials (i.e., suitable "waste" products such as glass cullet, crumb rubber, plastics).

It is envisaged that in adopting the framework, procurement agencies will be able to uniformly and transparently evaluate and select from suppliers who demonstrate a willingness to invest in their infrastructure and technology to deliver these services more efficiently and to reward where more sustainable options exist, such as incorporation of suitable 'waste' products within accepted solutions.

The SF4A will contribute to Transport for NSW priorities around achieving a target of net-zero emissions. Fundamentally, choosing the highest scoring plants will result in procurement from a more sustainable entity.

To date, AfPA have achieved a number of milestones including the development of a linked calculator and toolkits, a voluntary pilot of 70 asphalt plant assessment and the introduction of a rating 'Stars System'. Industry is strongly aware of the benefits and obligations to sustainability, and industry is committed to sustainable improvements and outcomes.

AfPA recommend that TfNSW adopt the Sustainability Framework for Asphalt into the procurement processes to assist TfNSW to define best practice, quantify sustainability achievements, embed sustainability metrics into procurement, and reward the industry for continuous improvement initiatives and investment they undertake.

Greater flexibility for the increased use of materials e.g. glass, plastic, recycled asphalt pavement (RAP)

Background

Rapid advancements in technology and innovation surpass environmental legislation that now limits the opportunities, knowledge and sustainability practices of today around materials, products and resources.

Many resources once seen as 'waste' are in modern times a valuable, useable and safe commodity, we must move to rethink these in order to embrace the circular economy and sustainability in NSW.

In NSW, under the Protection of the Environment Operations Act 1997 No 156 'waste' includes:

> *(a) any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or*
>
> *(b) any discarded, rejected, unwanted, surplus or abandoned substance, or*
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> *(c) any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, processing, recovery or purification by a separate operation from that which produced the substance, or*
>
> *(d) any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations, or*
>
> *(e) any substance prescribed by the regulations to be waste.*
>
> *A substance is not precluded from being waste for the purposes of this Act merely because it is or may be processed, recycled, re-used or recovered.*

Reclaimed asphalt pavement (RAP) is the term given to removed and/or reprocessed pavement materials containing bitumen and aggregates. These materials are generated when asphalt pavements are removed for reconstruction or resurfacing. When properly managed, RAP provides a high-quality product that can be re-used.

Internationally and across Australia the use of RAP is common practice. Asphalt is 100% re-usable and for sustainable development its re-use should be encouraged. RAP should not be seen as 'waste' but as valuable material that can reduce the consumption of virgin material and save natural resources for the next generations.

Recycled Asphalt Pavement (RAP) is currently defined in NSW as a 'waste', only since 2008 have provisions (exemptions/recovery orders) been in place in NSW to enable RAP resource recovery. RAP presents an excellent secondary raw material option for road infrastructure.

The use of RAP is regulated by EPA through licensing and exemptions – these exemptions significantly limit the opportunities and flexibilities to use RAP. As a direct consequence, industry continues to utilise depleting and limited virgin materials, as opposed to maximising accessible and safe products.

There are very high levels of interest/appetite to use RAP by all levels of Government, however industry is limited by the current definition and provisions within the legislation/regulations are inflexible and limiting which does not enable RAP to be utilised to its full potential.

The extent of RAP used varies on road authority specification / availability. Virgin raw materials (aggregates and bitumen) and RAP are combined to meet detailed specifications and hence RAP is required to meet stringent quality control parameters for its re-use. There are procedures in-place (including the AfPA RAP Management plan – which AfPA NSW helped to create) to provide guidance for management of RAP and ensure homogeneous RAP product, free from unacceptable materials, is produced and the new asphalt having the same or improved properties compared to virgin asphalt.

Objectives and benefits to Sustainable Procurement

AfPA strongly supports, where economically and technically feasible, efforts to optimise the re-use of asphalt. AfPA and its members strongly support the principles of reuse both from a sustainability and a cost efficiency perspective. Reuse of asphalt will reduce the demand for imported bitumen and need for newly crushed high-quality natural aggregates. The value of RAP is maximised by reusing it in asphalt pavements as it replaces expensive non-renewable raw materials. Wherever possible RAP should not be downcycled to lower value applications to realise its full value.

There is a widely held perception that material properties in RAP stockpiles are highly variable and that using RAP, especially at high proportions, will negatively affect consistency of the asphalt product. This perception is unfounded. Published research shows that, if RAP stockpiles are properly managed, the grading of the aggregate in the processed RAP will be at least as consistent as that of the virgin sources. Binder content and binder properties of the RAP can be expected to be consistent as well. Compliance with the AfPA RAP management plan will ensure a homogeneous RAP product is produced.

AfPA seek to ensure best practices for managing and reuse of RAP that does not impact negatively on the quality and performance of the new asphalt, or have a detrimental impact to the environment or community. AfPA seek to ensure materials that are sustainable and suitable for reuse are repurposed, reducing landfill.

The use of RAP has significant environmental benefits in the circular economy, reusing as an entirely suitable material. RAP has benefits in that it reduces the consumption of virgin bitumen, aggregates, produces no dust, odour in storage, is not flammable and reduces the consumption of virgin bitumen, and has a number of environment benefits including reducing carbon emissions.

The issues experienced by industry concerning RAP relate to the definition of waste, the regulation/licensing, planning consent, EPA orders, RAP criteria and the waste levy. Most significantly AfPA seeks to work collaboratively with all relevant Departments across the NSW Government to address this issue, and ensure that the sustainable procurement arrangements address these issues.