

## Sustainability Waste Alliance (SWA) – Product Stewardship Scheme

### *SWA Role and Purpose:*

The Sustainability Waste Alliance (SWA) is a unique stakeholder alliance established in 2020 by the Office of Major Transport Infrastructure Delivery (OMTID). The purpose of the SWA is to deliver on a commitment made to the Department of Water and Environmental Regulation (DWER) to identify opportunities for waste derived materials in major infrastructure projects such as the Bunbury Outer Ring Road. The SWA engages in product innovation and technical development to maximise opportunities for improved recycling and product innovation on the broader transport portfolio of Main Roads and METRONET projects.

The SWA aims to drive a 'Towards100' approach to accelerate the move to a circular economy in Western Australia. It is doing this by working closely with the ChemCentre and other collaborating organisations via the SWA Innovation Hub to bring together the best minds to broaden thinking, develop innovative solutions and assist with the removal of obstacles to the uptake of fit for purpose reused and recycled products.

A "Towards 100" approach leads to a shift in thinking. Instead of justifying increasing the amount of reused or recycled content in any given project, an objective of 100% waste derived materials is targeted and any departure from this objective must be justified.

### *SWA Product Stewardship Scheme Function:*

The SWA Product Stewardship Scheme (PSS) was established to explore the use of waste derived materials and industrial by-products for application in road and rail projects. This includes fast-track application into a number of 'Towards100' demonstration projects.

The Scheme explores the hazards and risks of a range of products proposed for use in road and rail projects. Specialized skills and knowledge are drawn from a range of technical disciplines (e.g., engineering, environment, chemistry) in the assessment process to ensure these new products are safe and will perform effectively through their full lifecycle. The aim is to minimise negative impacts and maximise value.

Industry partners contribute funds to the PSS in order for the SWA Innovation Hub to invest time and to undertake verification and potential demonstration related activities needed in order to provide confidence in their use, to help reduce perceived risks and to identify issues needing to be addressed.

The level of investment required from industry partners is dependent on the status of the product, the availability of useful independent technical and scientific information, and the anticipated effort required for verification and demonstration activities.

### *SWA Product Stewardship Scheme Linkages:*

The SWA Product Steward Scheme aims to align with the broad function and intent of the National Product Stewardship Scheme administered by the Commonwealth Government.

National Product Stewardship Schemes have focused on a single type of consumer product, e.g., architectural and decorative paint, tyres, hand-held batteries, solar panels, etc. and while most schemes are set up to focus on end-of-life options, best practice product stewardship should consider the whole-of-life impacts of the product and therefore a

'cradle-to-grave' approach. This would require consideration of everything, from exploration to mining and manufacturing, to consumer use and disposal. In Australia at the time of writing there are eight regulated and one voluntary accredited product stewardship schemes. There are 18 unaccredited schemes and 13 additional schemes in development.

The SWA has adopted a variation to the national approach for application in Western Australia. Rather than dealing with the end-of-life impacts of a particular product, the SWA is exploring options for the beneficial re-use of end-of-life products or by-products as inputs to infrastructure projects. Use of these materials in infrastructure avoids the impact of waste disposal and has the benefit of reducing the use of raw material. The approach is not limited to a sole product or by-product but explores a variety of options for products that can serve as direct replacements for raw material.

#### *SWA Product Stewardship Scheme Benefits:*

The SWA Product Stewardship Scheme provides a number of direct benefits as follows:

- Independent verification of product/material performance and compliance claims
- Confidence assurances in relation to the fit-for-purpose use of the product
- Fast-track product development for implementation into infrastructure projects
- Collaborative approach between suppliers and purchasers
- *Towards100* Circular Economy approach

#### *The Role of Product Stewards*

Product Stewards shall be appointed from 2<sup>nd</sup> party organisations in the product supply chain and their role will be to act as champions for those specific products (e.g., FOGO). The role of Product Stewards is complementary and parallel to the PSS verification and certification process. To maintain integrity and independence Product Stewards shall not participate in the PSS Expert Panel process for the products that they represent nor shall they be independent verifiers for those same products. They shall have a key role in progressing PSS applications and in promoting products once certified. That includes participating in demonstration projects, sharing lessons learnt, and working to embed new processes.

#### *SWA Product Stewardship Scheme Scope of Works:*

For each waste derived material or product, the SWA innovation Hub undertakes the following tasks:

1. Independently reviews and verifies proponent data including the ability of the material to comply with specified environmental and engineering technical requirements using a risk management approach
2. Develops a model product specification to enable use of the material in demonstration or other projects to ensure consistency of outcomes
3. Explores wider application to Main Roads and METRONET project activities

### SWA Product Stewardship Scheme Process:

A sequential multi-step process shall be followed to deliver the Scope of Works. A flow chart illustration of the process is presented as Figure 1.

- Step 1: An application is made to SWA using the standard PSS application form.
- Step 2: The Proponent is provided with the evaluation criteria and associated request for information for review and comment. The assessment criteria is developed by the SWA Innovation Hub with input from experts. The proponent then provides all relevant background information in relation to the material (for example: particle size distribution, Atterberg limits, CBR, permeability, material characterization, LEAF testing results, environmental classification, etc.), performance data and any relevant information on the product which will assist with an independent verification. The verification will be conducted by expert scientific panel members and certified independent laboratories. This can be subject to separate confidentiality agreement.

The SWA Innovation Hub will collate any additional information available within departmental records and in the public domain.

- Step 3: An independent expert panel of three to five members will be convened with representation from relevant environmental and engineering technical disciplines. These experts will be sourced through the SWA Innovation Hub. A Chairperson of the expert panel shall be appointed from one of the expert panel members by the SWA Innovation Hub Program Director. The expert panel shall conduct a targeted gap analysis focusing on the relevance, rigor, robustness and completeness of the information supplied. This analysis shall focus on the specific claims made by the proponent in relation to the proposed application of their product. An expert panel meeting shall be convened that is attended by the proponent. An expert scientific panel report will be prepared with recommendations on what is required to address any gaps, and the scope of any subsequent verification processes. Any show stoppers / red flags will be highlighted.

This step will generally require one day of input by each panel member and two days of input by the Chair of the Panel in addition to approx. 3 to 4 weeks research, coordination, criteria development, reporting, management and other support activities by the SWA Innovation Hub.

- Step 4: The expert scientific panel report will be circulated to the proponent and the SWA. The recommendations will be considered and endorsed or otherwise. Any show stoppers must be resolved before moving to the next step. Likewise, should the gaps be substantial then the matter will be resolved with the proponent before moving forward. This may mean that the proponent is requested to supply more information or the SWA Innovation Hub may initiate further testing. Further testing will be resourced by the funding provided by the proponent. The process will move to the next step when SWA agreement is reached based on advice from the panel that any gaps have been adequately filled.
- Step 5: The 3<sup>rd</sup> party verification process commences. The verification will address both environmental and engineering technical requirements. Independent

certified laboratories will be used in the process (ChemCentre and others). A consolidated verification report will be issued by the SWA Innovation Hub based on the outcomes of the verification process. Any issues identified throughout the verification process will be highlighted. The scope of this step will be product/material dependent and directly related to the intended use/claims made by the proponent.

- Step 6: The Certification Board will be convened to assess the compliance of the product based on the findings presented in the verification report. The proponent shall have an opportunity to address the Board. A 3<sup>rd</sup> party verification certificate will only be issued once all verification criteria are met. The 3<sup>rd</sup> party certificate will be issued jointly by the SWA and the ChemCentre (and other approved peak bodies).
- Step 7: Once a 3<sup>rd</sup> party verification certificate is issued, a simplified bespoke product specification will be developed for use in projects including demonstrations.
- Step 8: The product meeting the specification will be supplied by the proponent of sufficient quantity for application in a road or rail demonstration project.
- Step 9: Following product demonstration, actions will be taken to embed technical criteria from bespoke specifications back into core business-as-usual processes.
- Step 10: A lessons learnt report will be prepared and issued for wide dissemination.

#### *SWA Process for PSS Product Selection*

Not all products will be financially viable or have a circular economy outcome that is competitive, or at least comparable, to 'business-as-usual' products for application in civil infrastructure projects. This includes wider economic costs and benefits from things like road and rail cartage.

To ensure the most prospective products are progressed through the product stewardship scheme, a go/no go process shall be undertaken by the SWA and the proponent before a PSS application is accepted. That process shall include a discussion on the cost effectiveness of the product. It shall also be informed by market analysis, business cases, economic analysis and other relevant information as determined.

#### *SWA Process for Dispute Resolution*

Any issue requiring resolution shall be addressed at a meeting of senior representatives (with decision making powers) of the proponent, the SWA and the Certification Board.

If a dispute arises between the SWA and the proponent then both parties shall work together in good faith to resolve the dispute. If the dispute has not been resolved by negotiation within thirty (30) days, then either party may terminate the PSS process as per the terms of the SWA invitation letter.

#### *SWA Product Stewardship Scheme Frequently Asked Questions:*

A FAQ sheet is in the process of development and once endorsed will be hosted on the SWA website.

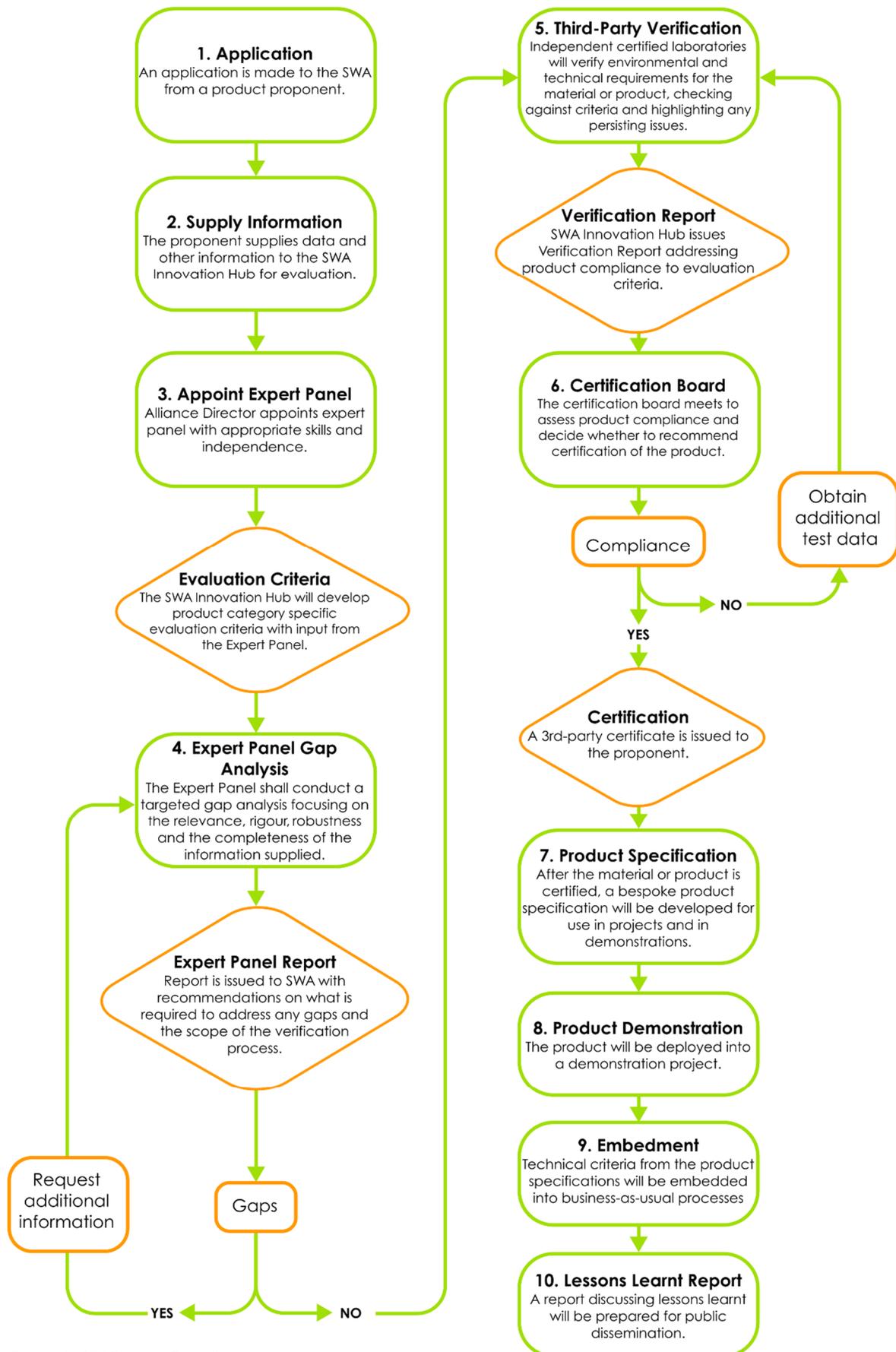


Figure 1: PSS Process Flow Chart