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Proposed Regulatory Amendments to Categories 63-66, 89  
Department of Water and Environmental Regulation  
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Dear Sir/Madam

**PROPOSED AMENDMENTS TO THE DEFINITIONS OF 'CLEAN FILL' AND  
'UNCONTAMINATED FILL' IN ENVIRONMENTAL PROTECTION REGULATIONS**

I refer to the recent Consultation Paper by the Department of Water and Environmental Regulation (DWER) on the proposed changes to the definitions of 'uncontaminated fill' and 'clean fill' in Environmental Protection Regulations following the decision of Justice Beech in *Eclipse Resources Pty Ltd v The State of Western Australia [No 4]*. The National Committee for Acid Sulfate Soils (NatCASS) notes that the revised definition of 'clean fill' will be limited to virgin excavated natural material (VENM) that does not contain any acid sulfate soil.

NatCASS is concerned that the proposed changes in regulations will lead to neutralised acid sulfate soil materials being classified as wastes which will require disposal at a landfill site. This measure is considered to be excessive given the generally low level of environmental risks that are associated with the reuse of acid sulfate soils that have been adequately treated with calcium carbonate or other acid neutralising agents. It is considered that the proposed changes could lead to large amounts of treated acid sulfate soil materials being unnecessarily disposed of at landfill facilities whereas it is usually good practice to reduce landfill disposal wherever possible.

As similar issues are being experienced in other State and Territory jurisdictions, NatCASS is currently developing a national Code of Practice for the reuse of acid sulfate soil materials which has been adapted from a similar Code of Practice for managing the reuse of soil materials in urban areas in the United Kingdom. It is intended that the Code of Practice will provide a high level of certainty for both regulators and industry that acid sulfate soils will be investigated, chemically analysed and managed in land development projects according to national best management practices. This in turn would provide a high level of confidence that the reuse of the materials will be managed in a manner that will not cause adverse environmental impacts.

Details of how the proposed Code of Practice would work are provided in the attached Discussion Paper. NatCASS recommends that this or a similar mechanism is implemented in Western Australia to regulate the reuse of acid sulfate soil materials rather than have a potentially useful natural resource being sent to landfill sites.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Steve Appleyard', with a long, sweeping flourish extending to the right.

Dr Steve Appleyard

CHAIR  
NATIONAL COMMITTEE FOR ACID SULFATE SOILS

11 December 2017

Attach.

## **Proposed National Code of Practice for Managing the Reuse of Acid Sulfate Soil Materials**

### **1. Background to NatCASS**

The National Committee for Acid Sulfate Soils (NatCASS) is the peak advisory body for technical, regulatory and practical expertise in the management of acid sulfate soils in Australia. NatCASS espouses and promotes the principles of avoid, minimise, mitigate and remediate the disturbance of acid sulfate soils, particularly in relation to protecting water quality, preventing environmental harm and limiting infrastructure degradation from the disturbance of these soils.

NatCASS advises governments, industry and other relevant bodies on the planning for and management of coastal and inland acid sulfate soils (ASS). In particular, NatCASS:

Provides expert advice to governments, industry, academia/research organisations and natural resource managers on policy proposals, emerging issues, management approaches and critical research gaps related to ASS

- Exchanges technical and policy information amongst jurisdictions, with extension to other relevant bodies, to build capacity/knowledge in ASS processes, management and environmental impacts
- Provides the framework and national guidance on ASS assessment and management.
- Supports training and facilitates communication that enhances the management of ASS nationally
- Provides advice on and encourages funding for ASS management initiatives

NatCASS membership includes representatives from State, Territory and Commonwealth jurisdictions, industry, research organisations and non-government organisations.

### **2. Current management of ASS disturbance due to urban development**

Due to increasing population and the value of real estate in many Australian cities, low-lying land has been historically considered to be unsuitable for use is now being developed. These low-lying areas are typically underlain by sulfidic materials that have the potential to become acid sulfate soils when exposed to air by construction dewatering and excavation. As a consequence of the intense development pressure, large amounts of potential acid sulfate soil materials are currently being excavated in urban areas throughout the country, and management of these materials has become problematic.

At present, where acid sulfate soils are identified on a construction or infrastructure project in the urban environment, options for their beneficial re-use are very limited. In NSW for instance, if there is insufficient space on site, there are only two options for sulfidic material namely, immediate burial below water at a licensed facility, or disposal to landfill once treated. Treated ASS could be managed under a Site Specific Exemption (SSE) however the NSW EPA has admitted that they have been reluctant to issue an SSE because of uncertainty around liming methodology and validation procedures.

Limiting re-use options for treated acid sulfate soil materials has several implications for regulatory authorities, namely:

- Increased waste disposal costs and financial burden for developers;
- Loss of landfill space - Filling of landfills with potentially re-usable material;
- Lack of licensed facilities for burial below water has led to unrealistic pressures on costs of disposal;
- Governments failing to hit waste reduction targets.

### **3. Proposed solution for managing the reuse of treated ASS and other soil materials**

One option currently being explored by NatCASS to improve the management of lime-treated acid sulfate soils that are excavated during urban development programs, is the development of a Code of Practice for the beneficial offsite reuse of these materials which has been adapted from the UK Code of Practice for the reuse of soil materials at development sites (CL:AIRE, 2011).

The UK soil management Code of Practice provides a clear, consistent and auditable process which enables the reuse of excavated materials on-site or their movement between sites.

The UK soil management Code of Practice enables:

- the direct transfer and reuse of clean naturally occurring soil materials between sites;
- the conditions to support the establishment/operation of fixed soil treatment facilities;
- the reuse of both contaminated/uncontaminated materials on their site of origin and between sites within so-called "Cluster Projects"

The key to the success of the UK scheme is that the soil management process is overseen by an independent "Qualified Person" who plays much the same role as the independent auditor under Contaminated Sites legislation in most States, and potentially registered Contaminated Sites Auditors could fulfil this role in Western Australia. The Qualified Person reviews all documentation associated with site investigations and the material management plan, ensures that soils will be appropriately managed and assesses criteria that will be used for closing out the project. The Qualified Person signs a declaration that work complies with the Code of Practice and this is submitted to the relevant regulatory authority and the person commissioning the work.

It is anticipated that the proposed ASS Code of Practice would function in a similar way to the UK scheme with additional steps to distinguish between ASS and contaminated soil materials. A flowchart showing how the process could work in Western Australia is shown in Figure 1. The process incorporates a number of risk assessment and management steps to ensure that treated acid sulfate soil materials would not be placed in environmentally sensitive locations. The process could also incorporate appropriate leaching tests to demonstrate that environmentally harmful chemical constituents are not leached at significant concentrations from treated acid sulfate soil materials. Further confidence in the process could be achieved if groundwater investigations were carried out at sites where treated acid sulfate soil materials had been reused to demonstrate that no harmful changes in groundwater quality had taken place in these areas.

## References

CL:AIRE, 2011. *Definition of Waste: Development Industry Code of Practice (Version 2)*. Contaminated Land: Applications in Real Environments (CL:AIRE) Technical report. The report and supporting documents are available from web site <https://www.claire.co.uk/projects-and-initiatives/dow-cop>.

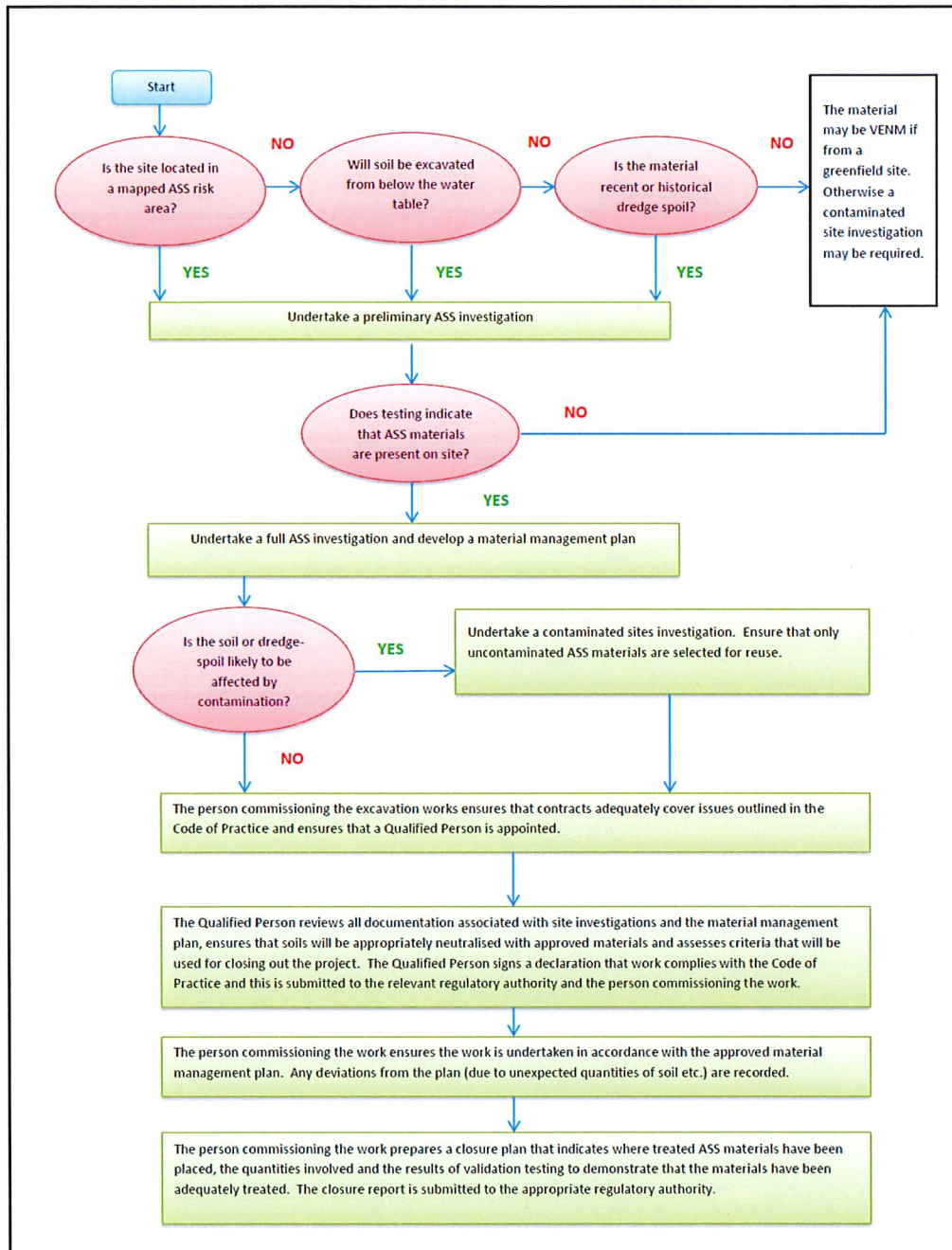


Figure 1. Flowchart outlining the proposed method for managing the reuse of acid sulfate soil materials in Western Australia

