

FACT SHEET 2: COMPONENTS OF PROCESSING SLUDGE

SLUDGE PROCESSING

Management of sludge from wastewater treatment plants involve a series of steps to enable appropriate disposal and/or beneficial use. Such steps may include processes to reduce weight and volume (e.g. dewatering) to reduce disposal costs, and processes to reduce potential health and environmental risks of the sludge. At each step there are various options that can be considered. There are typically five steps being:



It is critical when developing solutions that a systematic approach is used to consider options for each component.



COMMON PROBLEMS

Many councils face the same issues when looking to beneficially use sludges and biosolids^{1,2}. Some common problems include:

- Urgency - typically the sludge needs to be extracted and managed within a specific time period, often to meet budgetary requirements;
- Unknowns – the quality and volume of sludge is often not accurately known or can't be assessed to an accurate level;
- Having to do something with the material, but not having identified end-use options;
- Lack of community engagement and/or appropriate community engagement framework which can limit options;
- Physical, infrastructural and financial restrictions limits options;
- Regulation and the burden of consenting processes adds additional time and costs; and
- Often no contingency or 'Plan B' in place.

These factors often lead to large quantities of sludge remaining in oxidation ponds, stockpiled or sent to landfill for disposal.

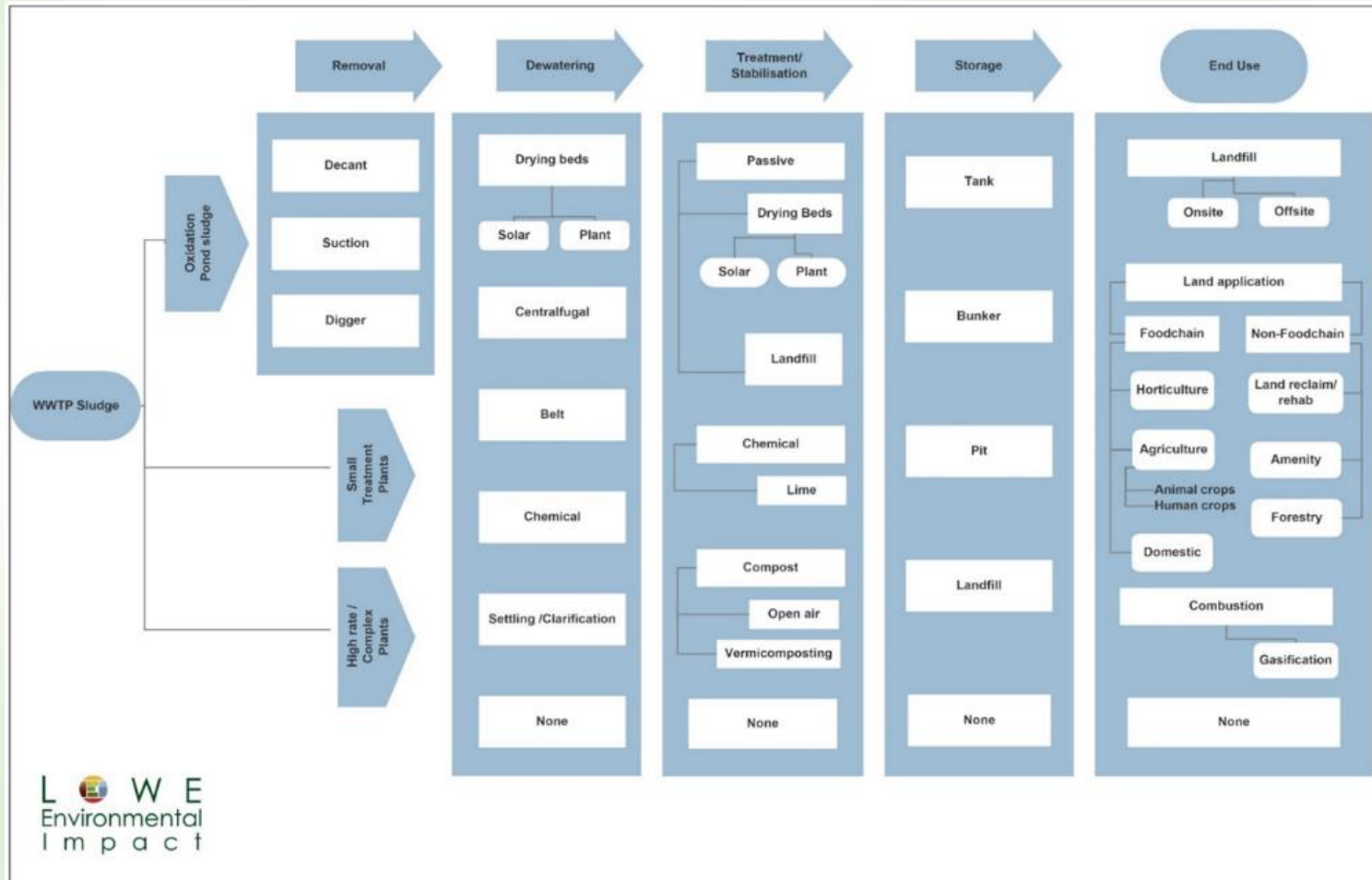
POTENTIAL SOLUTIONS

There are numerous combinations of the five components that can result in a viable option for use. Viable options that link the components can be achieved either individually or in many instances by working between Councils^{1,2}. Some potential solutions that involve collective management that make the linking of feasible components are:

- Sharing sludge processing infrastructure (either location or equipment), including timing of when contractors are 'in the area';
- Development of a common regional processing facility;
- Development of a Global Regulatory Framework;
- Having a forum to share knowledge and collaboration to establish contingency plans, and learn from past inefficiencies;
- Development of community engagement frameworks and maintaining the sharing of knowledge;
- Develop standards for all WWTP to reduce inconsistencies in describing quantity and quality of sludge (i.e. wet weight vs dry weight, volumes, testing requirements).

COMPONENT OPTIONS TO CONSIDER

For each of the components there are multiple options. A selection of these potentially include:



1. Report 3 of the Regional Biosolids Strategy: Opportunities to Work Together
2. Part A of the Regional Biosolids Strategy: A Strategy for the Collective Management of Biosolids.

BACKGROUND

The Regional Biosolids Strategy – Lower North Island is a collaborative project funded by the Waste Minimisation Fund. Ten lower North Island Councils have worked in partnership with Low Environmental Impact and research partners to develop a biosolids strategy that includes the potential collective management of sludge, focussing on beneficial use.



This project was undertaken with the support of the Ministry for the Environment waste minimisation fund, however, the Ministry does not necessarily endorse or support the content of this publication in any way.

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