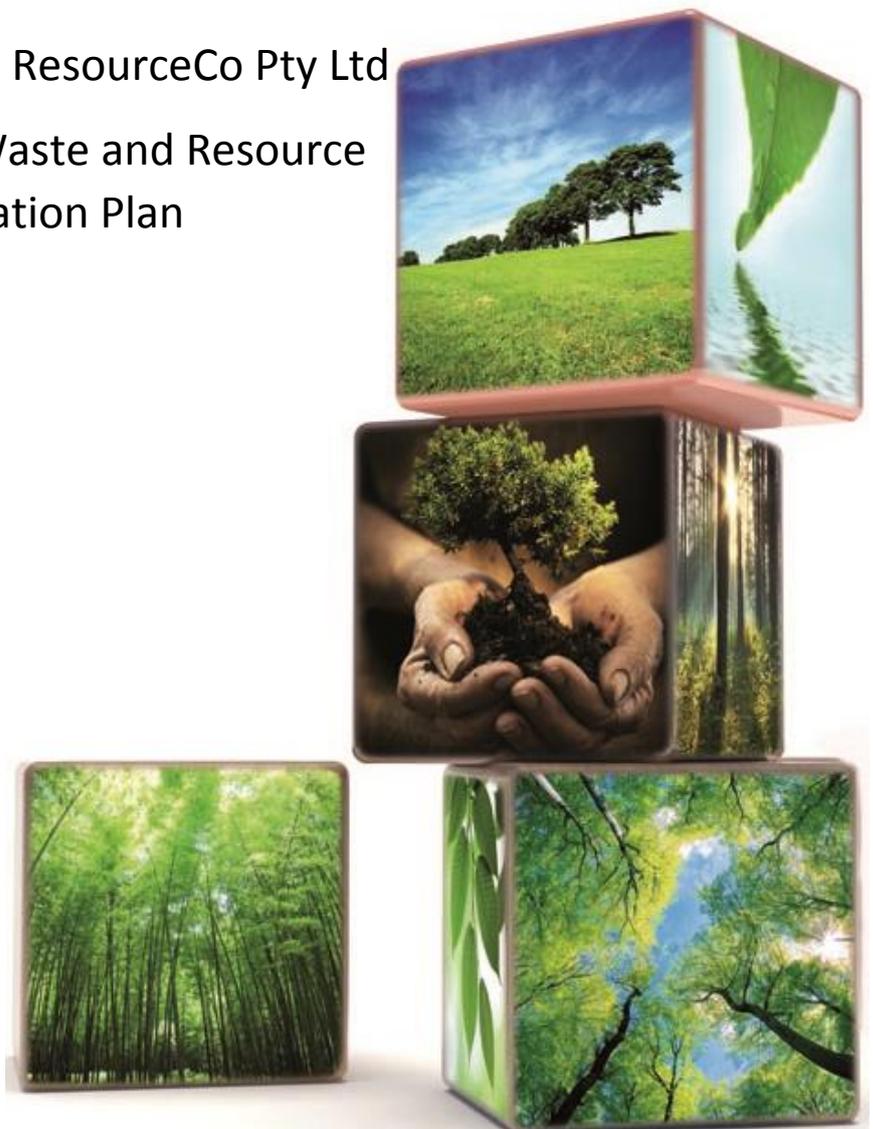


RESOURCECO

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Feedback Submission ResourceCo Pty Ltd
Draft Metropolitan Waste and Resource
Recovery Implementation Plan

18th December 2015



Foreword

ResourceCo Pty Ltd is an organisation committed to manufacturing and recovering value from waste in a number of different markets. State of the art equipment and constant technological innovation, make ResourceCo the leaders in transforming waste into useable products while maintaining focus on the environmental sectors that encompass renewable energy, alternate fuels and the emerging carbon markets.

ResourceCo Pty Ltd is actively supportive of The Metropolitan Waste and Resource Recovery Plan. We support the transparency and clarity of the process in developing policy and planning fundamentals within the waste environment. Private industry will adapt and deliver solutions in environments of relative certainty, ResourceCo Pty Ltd continues to develop facilities in markets across Australia where commercially sustainable solutions can be placed. Having a number of proposals with agencies within Victoria currently, ResourceCo Pty Ltd is focussed on leveraging its proven track record in resource recovery to this market. Our intent is to deliver infrastructure that is proven and is sustainable under conditions that are foreseeable.

Extraction of organics from the MSW waste stream will significantly alter the amount of material entering Melbourne metropolitan landfills. Currently >49% of the composition of MSW and C&I going to landfill is organic in nature (EC Sustainable – Metropolitan waste to landfill compositional audit project, 2014). Once organics are separated from this waste stream there is a vast volume of material that is not able to be recovered due to form, is problematic to separate through existing technology or is not viable commercially. ResourceCo Pty Ltd believe that this stream of residuals, as identified throughout The Metropolitan Waste and Resource Recovery Plan, provides a significant feedstock a recovery facility focussed on manufacturing a Solid Recovered Fuel (SRF).

Currently diversion rates from these types of facilities operated by ResourceCo Pty Ltd are approaching 95%. Markets exist both domestically and overseas for finished goods, however market development locally is something that ResourceCo Pty Ltd is heavily involved in.

Having an alternative to landfill, particularly in the South East of Melbourne, is vital for Victoria

ResourceCo Pty Ltd highlights the inherent issues in not having longer term landfill solution in planning now for the South Eastern region of Melbourne. We understand that in the plan the assumption not to expand landfill or any alternatives in the South East is part of the consideration (p. 51). We have a number of concerns which have been indicated in the plan which acknowledge the potential risk in not including a facility in the South East as part of this consideration. We believe that the combined weight of the negative impact of not planning a landfill or alternative in the South East to manage waste generated locally far outweighs any benefit gained by accepting that a local solution is to move all waste across a city as large as Melbourne. Reinforcing this position is outlined in the points below:

1. Having landfill capacity, or a viable alternative, in the South East decreases the need to set up numerous transfer stations within the region to manage the transport and

distribution of recyclables in line with the rest of the plan. Gaining community support and planning across multiple sites is likely to be difficult, time consuming and will diminish the outcomes intended from the plan – specifically Priority 9 The engagement of community and stakeholders. Meeting the stated objectives for siting infrastructure as proposed in Section 7.1 will be challenging with numerous transfer stations (Figure 17: Criteria to identify potential resource recovery infrastructure sites). As population density increases and waste increases it follows that we simply will need more transfer stations and have more vehicles travelling to suitable disposal options in the West.

2. Congestion, travel times and the increase in vehicle numbers on the road required to move the same volume of material will drive costs higher for waste generators and the public. Economic costs associated with delays, fossil fuel consumption, capital employed and labour are but a few of the direct negative impacts of travelling further with waste. Surrounding communities both in the South East and in the West where increased traffic flows will be experienced are impacted negatively hence this issue has broad exposure for the agencies charged with managing the process.
3. Increased costs in waste disposal will impact economic growth in the region and in general may drive high waste industries to other jurisdictions. On balance it will also provide impetus for an alternative i.e. EfW for normally landfilled waste.
4. Contingency issues highlighted within the plan in Section 5.6.6 are significant in the risk that is posed from failed or closed waste collection due to unforeseen circumstances. Finding an immediate solution is challenging as stated but without a site nominated for landfill or an alternative reduces flexibility further. The population who fund services expect waste to be collected, politically there is a considerable risk with contingency planning.

Recovery of energy from residual waste is a vital piece of infrastructure for Victoria:

Infrastructure which efficiently recovers recyclable fractions from existing waste streams are fundamental to the objectives in the plan around diversion from landfill. ResourceCo Pty Ltd supports this fundamental and have identified large markets for energy which is effectively recovered from waste streams.

EfW Facilities

Recovering value and diverting large volumes of materials from landfill opens a significant opportunity for infrastructure built for EfW plants. Waste flow calculations show that the South East of Melbourne will be short of airspace in the next 10 years (p. 53 Section 5.6.5). Even with the assumption that resource recovery rates will continue at the same trended rate adding conservatism to the modelling landfill volumes are expected to rise, the South East accordingly will also generate more waste. Knowing this and combining with the mitigation of the economic and public risks of concentrating landfill in the North West of Melbourne it follows an EfW facility fits into the strategic plan for the South East of Melbourne as an alternative to landfill. EfW provides a solution in diverting and reducing MSW, C&I and Residual Wastes from landfill. Processing materials at the front end of the facility will allow recyclable fractions to be recovered and reprocessed. In this sense the EfW

facilities act as an alternative to landfill, planning for a facility in the South East of Melbourne will fulfil a need and industry will support this development.

In Section 10.1 of the market assessment it has been noted that average landfill costs are \$110/t in Melbourne, closure of landfill in the South East will drive this cost up making EfW and advanced recovery facilities economically viable. Critically a gate fee and a product value must be achieved in these facilities to retain commercial sustainability.

Public benefits around reducing GHG emissions in EfW facilities should also be understood, not discounting that carbon abatement has value monetarily and socially to the greater community. In an article for Reneweconomy 11 March 2015, Mike Ritchie supports the 2007 Warnken ISE and SITA Australia report that waste to energy solutions are significant in their contribution to carbon emissions reductions.

From an industry perspective planning a receival point for the waste generated in the region, as opposed to a series of transfer stations to transport it across the city, provides the certainty required in planning an alternative sustainable commercial venture.

RDF Plants

ResourceCo Pty Ltd believes key recovery infrastructure in the form of a RDF Plant (Waste to Fuel) needs to exist that can capture all C&I, C&D and MSW wastes prior to being put to landfill, this includes all materials that are residuals from MRF's and reprocessing facilities already operating. Given suitable siting ResourceCo Pty Ltd believe that inclusion in the plan of a RDF facility should be in the short to medium term scheduling timeframe (currently listed as long term, Table 17, Assessment of infrastructure options, p.75 Draft Metropolitan Waste and Resource Recovery Implementation Plan). The purpose of these facilities is to generate a recovered fuel that can be either utilised in Energy from Waste (EfW) solutions locally OR can be readily exported as a product to already existing markets as a specified recovered fuel (SRF) for similar use. Residuals from these types of facilities is in the form of fines, this needs to be landfilled, represents approximately 5% of input volumes. ResourceCo Pty Ltd's experience from its existing facilities is that compaction of this residual better than other waste streams.

The arguments supporting a RDF facility as a critical infrastructure are outlined below:

Section 4.3 in the Metropolitan Waste and Resource Recovery Plan deals with the **collection of hard waste** and the inherent issue with cost and value available in the increasing amount of hard waste available. Hard waste is a very good source of feed for a RDF processing plant – utilising this as a viable option for this type of waste will allow collectors to control costs and have an outlet for the materials which are increasingly going direct to landfill.

Section 4.4 **Residential multi-unit development collections:** Identified as difficult to improve the separation and collection to assist in the objectives of the plan. Whilst strategies within the plan are delivered for MUD's, waste materials can be supplied as feedstock to RDF facilities, recovering valuable recyclables and recovering energy from the materials are not currently diverted to existing MRF's. MUD waste volume is not considered

core to the success of RDF facilities and the expectation that the MUDs waste stream will become homogenous with single dwelling collections will be achieved.

Section 5.4.2 Priority action – **residual waste processing**, Section 7.2 **Integrated planning and decision making**, Section 8 **Waste and Resource Recovery Hubs**: Aggregation of residual waste streams is necessary for the viability of reprocessing and recovery facilities. For planning and transport infrastructure reasons co location of RDF facilities at land fill sites provides the greatest opportunity for a sustainable solution. Residuals from the RDF facilities will go to landfill with the product going to market.

Operationally RDF facilities are congruous with landfills making co location logical and from a planning perspective simpler to both manage and monitor. Aggregating residuals from other processing and recovery plants along with domestic and commercial sources (by transfer station) can be achieved to the levels of volume that supports sustainable commercial operations.

Considerations of flows of materials from outside of the Metropolitan Region should also be considered as opportunities to optimise the economic viability of RDF facilities at existing landfill sites. The Regional Implementation Plans need not be exclusive in their considerations, such that flows of materials that will otherwise go to landfill due to lack of aggregated volume, are directed to reprocessing and recovery facilities in bordering regions. The output of the RDF facility is a product that needs to be taken to market. Consequently in planning the regions should consider proximity to available outlets for finished product, considering particularly the impact of logistics on the community, existing infrastructure and proximity to ports.

Section 5.6 **Metropolitan landfill infrastructure**, Section 6.2.1 **Management of emissions and amenity issues**, Section 7.1 **Siting infrastructure**: Best practice management of fewer sites by fewer entities has significant opportunities in delivering a reduction in adverse impacts to both the community and the environment. Co-location of RDF facilities at landfill sites need to be catered for when planning for placement of key infrastructure – this assists in meeting the goals of the State Infrastructure Plan whereby only residual materials go to landfill.

Feedback on the 10 Priority Actions

1. Diversion from landfill means greater resource recovery, it follows that markets must exist consistently for the recovered resources. ResourceCo Pty Ltd believe that delivering alternative energy solutions is a significant in that energy substitution is demanded commercially and at a community level. The opportunity exists in the South East to aggregate material for these alternatives.
2. Managing organics in waste is the single biggest driver for landfill reduction – receiving and processing uncontaminated organic/food matter is critical.
3. Creating waste recovery and processing hubs generates significant economic incentives and effectively puts volume and lower costs to the market. In turn this will generate solutions not currently being considered.

4. Effective planning and policy is critical for industry and the community to implement sustained behavioural change.
5. On site organic processing of uncontaminated materials meets community and reduction targets at the source. New markets will be created around the outputs from these facilities encouraging adoption of technologies at local level.
6. Transfer stations will play a growing role in reducing the amount of waste being transported long distances. The transfer station model acts as a filter for waste for the community and industry, providing aggregation for recyclables, recoverables and residuals.
7. Food producers should be directing materials away from landfill now based on economics – the landfill levy is supposed to provide an incentive for this to occur. Increasing the flow of organics from domestic sources will drive commercial processors to approach food producers for increased flows of feedstock.
8. Recovery of dry recyclables is driven again by the cost of landfill. As the levy increases increased costs will drive recycling behaviour by waste generators.
9. Involving stakeholders in decision making will drive the majority to compliance and behavioural change. Marketing the messages relentlessly to the stakeholders and broader community around this involvement is critical. MWRRG has a leadership position in this case.
10. Education for avoidance and separation at source is core to true change and not only improving reduction in landfill but providing more pure feedstocks for recycling and reuse.

Thank you for the opportunity to feedback on the Metropolitan Waste and Resource Recovery Implementation Plan. ResourceCo Pty Ltd is looking forward to receiving the final plan and playing a role in executing against the objectives outlined in that plan.

For further information and ongoing discussion please contact Clinton Habner at ResourceCo on