



Australian Paper

a member of the Nippon Paper Group

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RE: Energy from Waste Works Approval Application 20B Conference Clarifications

Dear Andreas and Belinda,

Thank you for the opportunity to continue our engagement with the community and stakeholders at the 20B Conference. It was great to see many familiar faces and to hear a diverse range of views. We think that the 20B Conference went very well and that everyone was appreciative for the opportunity to have their views heard and discussed.

Whilst the 20B Conference has concluded, we will continue our engagement with the community and stakeholders as we further develop the project. In the meantime, we made a number of observations of people's views during the 20B Conference where we think further clarification would inform all stakeholders and parties.

Accordingly, we thought it would be helpful if we provided the EPA with a summary of the key issues that we observed along with our response to those issues. Here are the aspects that we noted:

Health Risk:

Observations:

We noted that many people were concerned about potential health impacts from the proposed EfW facility. People raised concerns about the potential long term impacts and the amount of pollution that would be emitted from the EfW facility.

Our response:

In relation to the Works Approval process, EPA has responsibility for considering health risks and assessing the WAA for potential impacts to human health. AP understands that EPA will thoroughly review the WAA and assess the EfW Project's potential impacts on health risk.

The WAA document has a section that discusses potential health impacts (section 11.1) and concludes that potential health impacts are minimal. For this WAA, AP has been required to demonstrate compliance with State Environment Protection Policies (SEPPs) related to relevant segments of the environment. Specialist assessments have been conducted to confirm compliance (or otherwise) with SEPPs. By complying with particular clauses in SEPPs (e.g. SEPP Air Quality Management – “SEPP AQM”), compliance with human health exposure is also achieved. This is because the SEPP limits are derived from human health exposure limits.

For example, the SEPP AQM limits (“design criteria”) for PM2.5, ammonia and hydrogen chloride have been derived from the Worksafe Australia Occupational Health and Safety Time-Weighted Average values divided by a safety factor of 30 (i.e. 30 times less). This safety factor accounts for extrapolation from a healthy adult exposed over their working life to the general population potentially exposed over a lifetime. This extrapolation takes into account the protection of sensitive groups including the elderly and children (extract from SEPP AQM in italics).

Given that the specialist assessments conducted as part of the WAA show compliance with all of the SEPPs for potential impacts due to the EfW Plant, it can be concluded that human health risks due to the Project would be minimal.

The experience from Europe, where there are approximately 500 EfW facilities in operation under strict environmental regulations, is that emissions from EfW facilities would not be expected to give rise to any significant effects on health (http://www.cewep.eu/wp-content/uploads/2017/10/EfW_Health_Review_January_2012_FINAL.pdf).

A 2014 report by the UK Department for Environment, Food and Rural Affairs (DEFRA) references research conducted by Public Health England (PHE). The report states “Public Health England (PHE) notes that modern, well-managed incinerators make only a small contribution to local concentrations of air pollutants. The PHE’s view is that while it is possible that such small additions could have an impact on health, such effects, if they exist, are likely to be very small and not detectable.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/284612/pb14130-energy-waste-201402.pdf

There have been many reports and research papers on European energy from waste plants and their potential health impacts. The following reports and papers are a selection that have been written by or cited by European government bodies, concluding that there is no evidence to suggest that EfW facilities contribute to health impacts.

Health Protection Agency (now Public Health England) (2010). The Impact on Health of Emissions to Air from Municipal Waste Incinerators. Advice from the Health Protection Agency. This is the report that was referenced by DEFRA (above).

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/335090/RCE-13_for_web_with_security.pdf

This report reviewed research undertaken to examine the suggested links between emissions from municipal waste incinerators and effects on health. It reviewed many published and peer-reviewed papers and reports looking at particles, carcinogens, dioxins and epidemiological studies. The report concluded that any potential damage to the health of those living close-by from well regulated municipal waste incinerators is likely to be very small, if detectable.

Van Dijk, C., van Doorn, W. & van Alfen, B. (2015). Long term plant biomonitoring in the vicinity of waste incinerators in The Netherlands. *Chemosphere* 122: 45–51.

[https://www.wur.nl/upload_mm/3/1/9/e4e44326-b946-48da-aa27-829aee02d901_Chemosphere%20-%20Long%20term%20plant%20biomonitoring%20in%20the%20vicinity%20of%20waste%20incinerators%20in%20The%20Netherlands%20\(vDijk%20et%20al%202015\).pdf](https://www.wur.nl/upload_mm/3/1/9/e4e44326-b946-48da-aa27-829aee02d901_Chemosphere%20-%20Long%20term%20plant%20biomonitoring%20in%20the%20vicinity%20of%20waste%20incinerators%20in%20The%20Netherlands%20(vDijk%20et%20al%202015).pdf)

This paper was also cited by the European Commission in the Science for Environment Policy issue 411 on 23 April 2015.

http://ec.europa.eu/environment/integration/research/newsalert/pdf/waste_incinerator_impacts_monitored_via_milk_and_vegetable_quality_411na4_en.pdf

This paper researched emissions of toxic compounds from EfW facilities in the Netherlands through the monitoring of milk and vegetables over a long period of time. Multiple year (2004–2013) biomonitoring programs were set up around three waste incinerators for early detection of possible effects of stack emissions on the quality of crops and agricultural products.

The results showed that the emissions did not affect the quality of crops and cow milk. Concentrations of heavy metals, PAHs and dioxins/PCBs were generally similar to background levels and did not exceed standards for maximum allowable concentrations in foodstuffs (e.g. vegetables and cow milk).

Air quality monitoring and real time publication of emissions data:

Observations:

People were interested in the potential air emissions from the EfW stack and how the emissions would be monitored. People wanted real-time publication of monitoring data on the AP or EPA website.

Our response:

AP is committed to best practice monitoring of emissions from the EfW facility in line with EPA SEPP and EU IED requirements. This involves continuous monitoring of a wide range of emissions including total particulate matter (TPM), sulphur dioxide (SO₂), nitrogen oxides (NO_x), hydrogen chloride (HCl), carbon monoxide (CO), total organic compounds (TOCs) and hydrogen fluoride (HF). Heavy metals, dioxins and furans will be subject to periodic monitoring based on available detection technologies for these substances (samples of these substances need to be passed through a filter and then laboratory tested to determine their presence).

Annual public reporting is mandatory under EPA Licencing requirements through the Annual Performance Statement process. For the EfW facility, AP is proposing to publicly report our emissions monitoring performance on a quarterly basis. This commitment has been made based on a range of issues including the importance of verifying results, calibration of monitoring equipment, ensuring specific monitoring instruments are providing accurate readings and also taking into account the additional resourcing required to support quarterly reporting. Quarterly reporting would also require AP to provide significantly more detail regarding the results achieved by the EfW facility, improving transparency and accountability.

As is the case with our current EPA licence, AP would be required to report any breaches of our licence conditions for the EfW facility immediately to the EPA for assessment and action if required.

Removal of recyclables:

Observations:

People were concerned that the EfW facility would undermine recycling efforts. People were also concerned that recyclable materials would not be properly separated by households and would be burned in the EfW facility. People wanted all recyclables to be removed from the EfW feedstock.

Our response:

Australian Paper fully supports the waste hierarchy and the higher order preference for recycling. Currently AP recycles approximately 100,000tpa of waste paper into recycled paper products. After reviewing recycling practices in EU countries with high recycling rates, Australian Paper has formed the view that source separation (at the point the waste is generated eg. at the household) is the most efficient and effective approach to separating recyclables from the waste stream. This is supported by the observation that no “Dirty MRF’s” are operating in Victoria, most likely due to the low value of recycling from the residual waste stream (red lidded bins) and because it is difficult, expensive, prone to high levels of contamination, and has low volumes and economic returns from these recyclables.

AP proposes to collect residual waste from councils. As the bodies responsible for managing waste, it is the role of individual councils to determine the degree of source separation for recyclables. If councils would like higher separation rates of recyclables and residual waste, it is their responsibility to determine what extent of processing they are willing to implement.

For the proposed EFW facility the metal composition within the waste feedstock will be extracted from the post combustion bottom ash and diverted for recycling. Inert materials such as rocks, sand and glass collected in the bottom ash (as intended) will be diverted for re-use as replacement for aggregate including sand and gravel. These efforts all support society’s move towards a circular economy.

AP has investigated the possibility of further waste separation (also termed as “pre-treatment”) at the proposed EfW facility. The costs of separation were calculated based on a report by URS Australia titled “Economic Modelling of Options for Waste Infrastructure in the ACT (2010)”.

https://www.environment.act.gov.au/_data/assets/pdf_file/0003/576921/URS_Supplementary-Report-economic-modelling.pdf

From this report AP estimated that the cost of additional separation of recyclables from residual waste would be \$135/tonne (OPEX \$35/t + CAPEX \$100/t). The Gippsland Collaborative Resource Recovery Business Case 2018 (by GWRRG) suggested that a "Dirty MRF" achieving a diversion rate of 45% would cost in the order of \$212/tonne.

https://www.localgovernment.vic.gov.au/_data/assets/pdf_file/0029/123869/Gippsland-Resource-Recovery-Collaborative-Business-Case-PDF,-2.89MB.pdf

These costs are prohibitive for the EfW Project and these costs also do not include the costs of transporting recyclables to a recycling facility. The proposed EfW facility has the potential to divert over 95% of residual waste from landfill at a similar cost per tonne. In the current circumstance of the China Sword Policy, where some council's are having to pay recyclers to take their co-mingled recycling materials, there is no economic benefit for further separation at the EfW facility. Hence AP believes that pre-treatment is not practicable in combination with an Energy from Waste plant in Victoria.

The EPA Guideline: Energy from waste publication 1559.1 states:

"EfW should be considered for 'residual waste' and other wastes for which energy recovery represents the most feasible option, due to the absence of a market for the waste. 'Residual waste' is the waste that is left over after suitable materials have been recovered for reuse and recycling. This generally means the environmental or economic costs of further separating and cleaning the waste are greater than any potential benefit of doing so."

And

"The composition of the residual waste feedstock will depend on the level of source separation (by the householder in the case of municipal waste or by the business owner in the case of industrial waste), the availability of collection services and the availability of markets for the collected resources."

And

"Pre-treatment and/or source separation can occur at the point of generation, at a third-party site, or embedded within the EfW facility."

<https://www.epa.vic.gov.au/~media/Publications/1559%201.pdf>

AP believes it has adequately demonstrated that pre-treatment integrated with an EfW facility would make such an EfW facility uneconomic and is therefore not practicable.

AP is seeking residual waste based on source separation. For the MSW stream this is at the household and for the C&I stream this is at the business. Should a council choose to pre-treat their MSW waste stream then AP would be open to receiving the residual waste from such a facility.

AP supports the efforts of Councils and government agencies such as Sustainability Victoria and MWRRG in their ongoing efforts to educate the community and businesses on correct waste separation at the source. This is where the highest efficiency of waste segregation can be achieved.

Sustainability Victoria's statutory objective is to facilitate and promote environmental sustainability in the use of resources. For individuals this includes advice on everything from building to renting, rubbish to recycling and everyday choices which make an impact.

<http://www.sustainability.vic.gov.au/You-and-Your-Home/Waste-and-recycling/Recycling>

The Metropolitan Waste and Resource Recovery Group (MWRRG) has a range of responsibilities and aims including to “build capacity and promote waste and resource recovery best practice infrastructure and services for councils, businesses and the community through education, networks and partnerships”

<https://www.mwrrg.vic.gov.au/about-us/what-we-do/>

All Councils take an active role in educating their residents about waste management and recycling. Council's also conduct education with Recycling Programs such as this City of Monash program supported by MWRRG. <https://www.mwrrg.vic.gov.au/projects/the-metro-fund/metro-fund-round-one/recycling-education-program/>

The post-process ash is toxic and 25% of the input waste:

Observations:

A number of participants incorrectly concluded that all ash residues (~25% of feedstock mass) would be toxic.

Our response:

There are three broad categories of ash residues generated from the proposed EfW facility including bottom ash from the Moving Grate Furnace, boiler ash collected from the boiler tubes and flue gas treatment (FGT) residues (also known as Air Pollution Control residues, APCr) which includes the fly ash.

Bottom ash is generally considered inert and non-toxic in Europe and residual metals will be recovered and recycled from this stream. Analysis from international EfW facilities that process MSW indicates that bottom ash is not toxic and can be readily reused. During the initial operations of the EfW facility, bottom ash will likely be disposed to existing industrial waste facilities, pending analysis and while reuse opportunities are sought. Enclosed trailers will be used to transport bottom ash.

FGT residues include the captured hazardous materials and analysis suggests that this will be disposed to an existing Prescribed Industrial Waste (PIW) Landfill which is suitably engineered, managed and monitored. FGT residues must be transported in fully sealed and enclosed trailers (similar to cement trailers) and require transport approvals from EPA.

Boiler ash will be directed to the FGT residue stream pending compositional analysis. If possible (following testing and analysis in accordance with EPA requirements) the boiler ash may be diverted to the bottom ash stream for eventual reuse.

Each of these ash streams will be tested, categorised, handled and transported as per EPA Victoria guidelines/publications IWRG631 (Solid Industrial Waste Hazard Categorisation and Management), IWRG811.12 (Permit to transport prescribed industrial waste) and IWRG821 (Waste Transport Certificates).

Following testing, analysis and subject to EPA approvals, it is expected that bottom ash will be reused as a replacement for road base, further diverting waste from landfill (as is the case in Europe).

Australian Paper expects to work with local industry and the EPA to develop suitable beneficial re-use options for bottom ash following a period of operations, sampling and testing.

In terms of the amount of ash from the EfW process as a percentage of incoming feedstock mass, the ash residue streams will be approximately 20% bottom ash (which is not toxic) and approximately 4% flue gas treatment residues "FGTr" (aka APCr), which will include fly ash, boiler ash and chemical residues. The FGTr will contain hazardous materials (the majority of which would have already been present in the waste feedstock), which will be disposed of at a Prescribed Industrial Waste (PIW) landfill. With the AP EfW Project working towards reusing the bottom ash as road base, the aim is to have a 96% diversion rate of waste away from landfill.

Australian Paper's track record:

Observations:

We heard some concern from the community about Australian Paper's current environmental performance under our current EPA licence.

Our response:

We appreciate hearing this feedback and agree it is important that Australian Paper continues to challenge itself to optimise itself in all areas, including environmental performance. Australian Paper continuously investigates ways to minimise the environmental impacts of our operations. We recognise that ensuring the responsible use of natural resources is important for our long term sustainability. Our "Beyond Compliance" policy requires us to meet or exceed all applicable legal requirements which include those set by the EPA. Australian Paper recognises that our environmental performance informs our social licence to operate.

Australian Paper currently operates the Maryvale Mill under an existing EPA Licence (# 46547). This licence allows for discharges to air, the discharge of treated wastewater to the Latrobe River and the deposit of solid wastes to land. It is subject to many conditions. Australian Paper provides the EPA with annual performance statements which are a matter of public record on the EPA website. Australian Paper is required to report all breaches of its licence conditions to the EPA which has legislated authority to take a range of actions in response to significant breaches. The EfW facility would require an additional operating licence under the EPA and would also operate subject to the legislated authority of the EPA.

The EPA licence for the Maryvale site requires us to meet 46 separate conditions. This has more than doubled over the past 5 years from 22 licence conditions in 2012. Under our licence we are required to immediately report any instances of non-compliance.

Under our Beyond Compliance policy, we are committed to reducing the number of instances where our operations don't comply with the conditions in our licence. Over the past 5 years we have reduced our number of non-compliances by 80% and continue to focus strongly on continuously improving our performance.

This improved performance is consistent with our mission of Sustainable Growth for the Next Generation.

Storage of waste:

Observations: People were concerned about the storage capacity of waste and what would happen if the EfW facility had to shutdown.

Our response:

The proposed EfW facility would have a large bunker with up to 7 days' storage capacity, with a 'crane grab' to pick up waste and place it in the feed hopper to the boiler. An essential function of the crane grab is to routinely mix the waste in the bunker to reduce its variability and achieve a more stable fuel supply.

The EfW facility is being designed with two boiler lines. There will be infrequent occasions when one or both of the EfW boilers will not be operating. This could occur due to planned maintenance or a sudden outage (e.g. equipment fault results in a shutdown of the boiler). The design of the EfW facility adequately mitigates impacts during these occasions.

With two boiler lines in the EfW design, there is an inherent redundancy. This means that one boiler could undergo an emergency shutdown or could be taken offline for routine maintenance purposes and waste could still be processed through the other boiler. The EfW facility will implement a preventative and predictive maintenance program in order to ensure the facility operates at the best technical and environmental performance. Most planned maintenance and scheduled shutdowns of the boilers will be arranged to leave one boiler line in operation.

For occasions when both boiler lines are shut, the bunker is being designed to have storage for 7 days of waste, within the enclosed tipping hall and waste bunker building. As AP is in partnership with Suez, contingency arrangements are being planned to divert waste to landfill if necessary, for periods when both boilers are shutdown for maintenance or for extended planned or unplanned outages.

Transport of waste:

Observations:

There were several questions about the method of waste transport, with people questioning if waste is to be transported to the EfW facility via road or rail. Most people preferred transport via rail to minimise truck volumes on the Princes Freeway.

Our response:

AP has conducted detailed investigations on the logistics of transporting waste to the EfW facility at Maryvale. For many years AP has transported products from the Maryvale Mill to the Port of Melbourne using an existing rail line. The road network has also been used to transport raw materials and product to and from the Maryvale Mill, so AP has experience in managing freight on both the road and rail networks.

AP's preference is to maximise the use of the existing rail line to transport waste for the EfW Project. AP will continue to work on the transportation logistics as well as hold discussions with the relevant authorities that have responsibility for the rail and road networks.

The road network from southeast Melbourne to the proposed EfW site (predominantly Princes Freeway and Alexanders Rd) is designed for large trucks in terms of volume and mass of trucks. This is evidenced through the implementation of a VicRoads strategy for High Productivity Freight Vehicles (HPFVs) that aims to improve productivity of freight transport and reduce congestion on the road network. VicRoads is also currently undertaking a program of bridge upgrade works on the Princes Freeway to facilitate increased use of larger trucks throughout southeast Melbourne and the Gippsland region. The Princes Freeway and Alexanders Rd are also rated by VicRoads to carry trucks up to a mass of 85.5 tonnes.

For rail transport, only sealed containers will be utilised. For line haul trucks (A-Double trucks and single trailer trucks), the waste feedstock will be transported to the facility in enclosed trailers or sealed containers. For direct deliveries from the Gippsland area, the waste will be transported in refuse collection vehicles (trucks that collect waste from kerbside household bins).

Tipping of waste into the storage bunker will occur inside the enclosed tipping hall. These practices and equipment will actively support odour control and litter control. Ash residues will need to be transported from the EfW facility to suitably licensed facilities. The bottom ash will be transported in enclosed trailers utilising trailers similar to the way sand and aggregates (stones) are transported.

The Flue gas treatment residues will be transported from the EfW storage silo to fully enclosed trailers similar to trailers used for cement or lime transport. Transport of all waste and ash materials will be conducted in accordance with EPA requirements.

Eastern Creek EfW proposal:

Observations:

People did not know the difference between the Dial-a-Dump proposal in Western Sydney and the AP proposal. People wondered why the NSW government departments and the NSW EPA rejected the Dial-a-Dump proposal yet the Victorian government supports the AP proposal and EPA Victoria are considering the WAA.

Our response:

There are some fundamental differences between the Dial-a-Dump proposal and the AP proposal. The proposed feedstock for the Dial-a-Dump proposal was to include a component of Construction and Demolition waste (C&D) that includes treated timbers. Some of the treated timbers would contain hazardous chemicals. In addition, the Dial-a-Dump proposal planned to utilise “shredder floc” (a by-product of metal reprocessing, primarily from the recovery of end-of-life vehicles (ELVs) and white goods, including refrigeration and air conditioning equipment after metals are removed) which contains hazardous substances such as lead, cadmium and polychlorinated biphenyl (PCB).

It appears that there was difficulty in identifying a reference facility that was already processing similar C&D and shredder floc materials which led to concerns about the likely emissions. The chosen reference site “does not treat a like waste stream”.

<http://ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2018/04/eastern-creek-energy-from-waste-facility-ssd-6236/departments-of-planning-and-environments-assessment-report/assessment-report.pdf>

The waste to be accepted by the AP EfW facility will consist of approximately 80% Municipal Solid Waste (MSW) and approximately 20% Commercial & Industrial (C&I) waste (that is MSW-like; i.e. from shopping centres, office blocks, schools). A large number of international EfW facilities have been processing the same or similar materials over long periods of operation. Thus there are numerous reference sites for the AP EfW Project to refer to. AP has referenced the UK Suffolk EfW facility in its WAA material (<http://www.suffolkefw.co.uk>) which processes 85% MSW and 15% C&I.

Other observations:

There were a number of issues raised by the public that are not generally within the remit of EPA’s assessment of the Works Approval Application. In the interests of openness and transparency, we hereby provide some brief responses.

Subject matter	Concern or issue	AP response
Environment Effects Statement	Some people have formed the view that an EES should be conducted.	<p>Australian Paper referred the proposed EfW facility to the Minister for Planning for the purpose of determining whether there is a need for assessment under the Environment Effects Act 1978.</p> <p>The Minister concluded that under Section 8B(3) of the Environment Effects Act 1978, an EES is not required.</p>
Forestry	Some attendees believe that the proposed EfW facility should include the effects of the forestry associated with Australian Paper’s existing operations.	<p>Australian Paper is chain of custody certified to both the PEFC and FSC® which are the two major global forest certification systems and we also require our major wood suppliers to be independently third party certified to verify that their operations are sustainably managed. AS 4708-2013 is the Australian Standard for Sustainable Forest Management and is globally endorsed by the PEFC. Both of AP’s major wood suppliers are certified under AS 4708-2013 which requires the forest manager to “maintain or enhance forests’ contribution to the carbon cycle” (AS 4708-2013, p. 37). The standard also requires the forest manager to “maintain or enhance biodiversity” (p. 28), maintain forest ecosystem health and vitality” (p. 33) and “protect soil and water resources” (p. 35).</p> <p>In addition, the EfW facility would be a standalone facility capable of supplying to the national electricity grid.</p>
Land/house values	Residents close to the proposed EfW facility would have reduced land value as a consequence of the EfW operations.	AP does not have a view or the expertise to form a view on land values. The proposed EfW facility if approved would be constructed on suitably zoned existing industrial land which is suitable for industrial processes such as energy from waste.

We trust that this letter provides clarification on a range of concerns and issues raised at the 20B conference. Please do not hesitate to contact me if you require further information.

Yours Sincerely,

A handwritten signature in cursive script that reads "David Jettner". The signature is written in a dark ink and is positioned above the printed name and title.

David Jettner
General Manager – Corporate Development
Australian Paper