

International Zero Waste Study Tour 2018







2018 Study Tour Dates

- Friday 24th Sunday 26th August
- Monday 24th Friday 31st August
- Saturday 1st & 2nd September
- Monday 3rd Thursday 6th September USA
- Saturday 8th September Ar

- Leave Brisbane arrive Denmark rest days
- Demark, Spain, UK
- Leave UK arrive USA rest day





Sample of Sites



Copenhagen – Amager Bakke EfW Facility







Changing public perceptions





Iconic





Integrated community facility



Amager Bakke EfW

- Constructed 2017
- Grate style combustor
- Processing capacity 400,000t
- Energy Generation capacity 63MW
- High efficiency
 - 100% utilisation of feedstock energy
- Low emissions
 - 107,000t less CO2 than coal fired plant
- High level of emissions transparency
- Australian Energy Council review cited the facility as a test case for public acceptance





London – Riverside Resource Recovery Facility





Riverside Resource Recovery

- Constructed 2011
- River tug haul route
- Grate style combustor
- Processing capacity 585,000t
- Energy generation capacity 50MW
- Replacing an existing landfill site

By-products from combustion and emission control utilised



London – Chineham EfW Facility





Chineham EfW

- Grate style combustor
- Processing capacity 90,000t
- Energy Generation capacity 8MW
- High level of community consultation and response to community concern.





London – Lakeside EfW Facility





Lakeside EfW Facility

- Constructed 2010
- Grate style combustor
- Processing capacity 450,000t
- Energy generation capacity 37MW
- Located close to major sources of waster
- High aesthetic appeal



Barcelona – Barcelona Eco Park





Barcelona Eco Park

- Grate style combustor
- Processing capacity 360,000t
- Co-location of combustion facility and AD



Miami – Palm Beach Renewable Energy Facility





Palm Beach Renewable Energy Facility

- Constructed 2015
- Grate style combustor
- Processing capacity 1,000,000t
- Energy generation capacity 70MW

- Award winning
 - SWANA 2017 Gold Award of Excellence
 - Power magazine 2017 Top Plant Award
 - WTERT 2016 Waste to Energy Global Award
 - Several Engineering and Environmental Awards - 2016



Study Tour Topics and Speakers

Overviews from each Country (TBC):

- Zero Waste Policy & Market Overview & Comparison to Australia
- Technology Overview

Topics to be covered throughout tour (TBC):

- Zero waste Success principles
- Zero waste Procurement and contract strategies
- Zero waste Partnerships and share agreement examples
- Zero waste Best practice facilities
- Zero waste High efficiency facilities
- Low emission facilities
- Zero waste Feedstock & upstream processing requirements
- Lessons learned
- Managing public expectations & concerns
- Zero waste innovations and Alternate Technologies
- Zero waste Strengths and weaknesses of countries globally

Regulators, Consultants, Operators & Local Municipalities (TBC):

- State, National & EU Regulators
- Local Municipalities
- Environmental Services Assoc (ESA)
- Chartered Institute of Waste Management (CIWM)
- SLR
- Arup
- John Enright EDF Energy
- Investec
- Laing Investments
- Foresight
- London Waste & Recycling Board (LWARB)
- SUEZ
- Wti
- Covanta
- Wheelabrator



Study Tour – Technologies & Sites

Types of facilities

- State of the art EfW and Zero Waste Technology:
 - Anaerobic Digesters
 - Gasification plants
 - Combustion facilities
 - Mechanical & Biological Treatment facilities
 - Materials Recovery Facilities
 - Recycling facilities
 - Emerging Technologies

Sites under consideration:

- Copen Hill Combustion EfW Iconic, inclusive, efficient, environmental conscience.
- Advanced Plasma Power Gasification EfW Award winning 2017 Energy Institute Technology Award – site toured by 2018 World Waste to Energy & Resources Summit.
- Agrivert Anaerobic Digester Award winning 2017 AD & Bio Resource Ass Best Food Waste Reduction & Collection System Award.
- Palm Beach Resource Recovery Facility Combustion EfW 2017 multi award winning facility for best practice technology, design and public education.
- Riverside Resource Recovery Combustion EfW Zero waste to landfill, by-products used in road construction and building industry.

Sites under consideration cont.:

- Lakeside Combustion EfW Low environmental impact, high visual appeal, adjacent Heathrow Airport.
- Barcelona Eco Park AD & Combustion EfW Multi-purpose facility Anaerobic Digester and EfW facility.
- Dagenham Refood Anaerobic Digester latest technology.
- Southwark Mechanical & Biological Treatment EfW plant.
- Edmonton MRF & EfW facility.
- Ardley EfW Facility.
- Lewisham EfW facility.
- Enfield Waste Energy Centre.
- Maidstone Integrated Waste Management Facility.
- Marchwood Southhampton ERF.
- Newhaven ERF.
- Portsmouth ERF.
- Tilbury EfW.
- Covanta Long Beach.
- California Anaerobic Digester.



Study Tour Options

| Options | Package | \$ | Locations |
|----------|---------------------------------|------------|--|
| A (Bus) | Entire Package - Business Class | \$24,900 * | Brisbane - Denmark - Spain - UK - USA - Brisbane |
| A (Econ) | Entire Package - Economy Class | \$15,600 * | Brisbane - Denmark - Spain - UK - USA - Brisbane |
| B (Bus) | Europe – Business Class | \$15,600 * | Brisbane - Denmark - Spain - UK - Brisbane |
| B (Econ) | Europe - Economy Class | \$10,100 * | Brisbane - Denmark - Spain - UK - Brisbane |

* Final EfW Study Tour pricing to be confirmed on 26 June 2018.

Delegates wishing to arrive earlier or stay longer can still book package A or B and book/pay for additional accommodation/people

All flights, accommodation, transfers, coach hire, conference room hire, seminars and most meals included.



RSVP & Deposit Deadlines

RSVP 23rd June 2018

To: sharedservices@wearepeak.com.au with 'Subject: 2018 EfW Study Tour'

Payment by **30th June 2018**



High efficiency, low contamination MRF and Recycling process to end product:

https://www.biffa.co.uk/about-us/operationalinfrastructure/recycling/



Proposed Itinerary



International Zero Waste Study Tour 2018

Application and cost of visas for Countries visited is the responsibility of delegates This itinerary is indicative only and subject to minor changes

| Friday, 24 August 2018 | OPTION | ITINERARY DETAILS | |
|--------------------------------|--------|---|------------------------------------|
| Brisbane to Copenhagen | A&B | | |
| 10:45 AM | | Meet at Qantas checkin - Brisbane International Airport | |
| 11:00 AM | | Checkin & debrief | |
| 12:15 PM | | Meet at Boarding Lounge | |
| 1:05 PM | | Depart Brisbane | |
| | | | |
| Saturday, 25 August 2018 | | | |
| Day 0.0 - Arrive in Copenhagen | A&B | | |
| 12:55 PM | | Arrive Copenhagen | |
| | | Transfer to accommodation | Hotel Airport Shuttle |
| | | Checkin 4 star hotel | |
| | | Free / rest day in Copenhagen | |
| 6:00 - 10:00 PM | | Dinner | |
| | | | |
| Sunday, 26 August 2018 | | | |
| Day 0.1 - Copenhagen rest day | A&B | | |
| | | Free / rest day in Copenhagen | |
| | | Accom 4 star hotel | |
| Monday, 27 August 2018 | | | |
| | | | |
| Day 1 - Denmark | A&B | | |
| | | | |
| 7:00 - 8:00 AM | | Breakfast in Hotel | |
| | | Most with Pogulators, Capault | anto Anoratoro & Local |
| 8:20 AM 10:20 AM | | Meet with Regulators, Consulta Municipalities | ants, operators & Local |
| 8:30 AM - 10:30 AM | | Morning tea included | |
| | | Morning tea included | |
| | | | |
| 10:30 AM - 5:30 PM | | Facility Inspections | |
| | | Lunch at facility or in transit | |
| | | Chackin 4 star batal | |
| | | Checkin 4 star hotel | |
| | | | Networking event TBC - |
| 7:00 PM | | Welcome Dinner | Regulators, Consultants, Operators |
| | | | & Local Municipalities |
| | | | |
| Tuesday, 28 August 2018 | | | |
| | | | |
| Day 2 - Denmark / Spain | A&B | | |
| | | | |
| 7:00 - 8:00 AM | | Breakfast in Hotel | |
| | | . | |
| 8:00 AM | | Checkout | |
| 8:00 AM | | Checkout | |
| | | Checkout Facility Inspections | |
| 8:00 AM 8:30 - 10:30 AM | | | |
| 8:30 - 10:30 AM | | Facility Inspections Morning tea at facility | |
| | | Facility Inspections | Hotel Airport Shuttle |
| 8:30 - 10:30 AM | | Facility Inspections Morning tea at facility | Hotel Airport Shuttle |
| 8:30 - 10:30 AM 10:30 AM | | Facility Inspections Morning tea at facility Transfers to airport | Hotel Airport Shuttle |

| | | Transfers to accommodation Checkin 4 star hotel | Hotel Airport Shuttle |
|---------------------------|-----|--|--|
| 7:30 PM | | Dinner | Networking event TBC - Regulators, Consultants, Operators & Local Municipalities |
| Wednesday, 29 August 2018 | | | |
| Day 3 - Spain / UK | A&B | | |
| 7:00 - 8:00 AM | | Breakfast in Hotel | |
| 8:00 AM | | Checkout | |
| 8:30 - 10:30 AM | | Meet with Regulators, Consulta Municipalities Morning tea included | ants, Operators & Local |
| 10:30 AM - 3:30 PM | | Facility Inspections Lunch at facility or in transit | |
| 3:30 PM | | Transfers to airport | |
| 6:25 PM - 7:45 PM | | Fly to LondonTransfers to accommodationCheckinRoyal Garden Hotel - I | Hotel Airport Shuttle King Room |
| 8:30 PM | | Dinner | Networking event TBC - Regulators, Consultants, Operators & Local Municipalities |
| Thursday, 30 August 2018 | | | |
| Day 4 - UK | A&B | | |
| 7:00 - 8:00 AM | | Breakfast in Hotel | |
| 8:30 - 10:00 AM | | Meet with Regulators, Consulta Municipalities Morning tea included | ants, Operators & Local |
| 10:00 AM - 5:30 PM | | Facility Inspections Lunch at facility or in transit | |
| | | Accom Royal Garden Hotel - I | King Room |
| 7:30 PM | | Dinner | Networking event TBC - Regulators, Consultants, Operators & Local Municipalities |
| Friday, 31 August 2018 | | | |
| Day 5 - UK | A&B | | |
| 7:00 - 8:00 AM | | Breakfast in Hotel | |
| 8:30 - 10:00 AM | | Meet with Regulators, Consulta Municipalities Morning tea included | ants, Operators & Local |

| 10:00 - 5:30 PM | | Facility InspectionsLunch at facility or in transitAccomRoyal Garden Hotel - King Room | | |
|--|---|--|--|--|
| | | Accom Royal Garden Hoter - | King Room | |
| 7:30 PM | | Dinner | Overview of tour to date. | |
| End of tour for Europe leg | | Checkout prior to 10am Saturd | day 1st September 2018 | |
| | | Package B Fly to Brisbane | | |
| Saturday, 1 September 2018 | | | | |
| Day 6 - UK / USA | A | | | |
| 7:00 - 9:00 AM | | Breakfast in Hotel | | |
| 10:00 AM 12:00 PM 1:00 PM 2:05 PM - 6:25 PM | | Checkout Transfers to airport Lunch at airport Fly to Miami | Hotel Airport Shuttle | |
| | | Transfers to accommodation Checkin 4 star hotel | Hotel Airport Shuttle | |
| Sunday, 2 September 2018 | | | | |
| Day 7 - Miami rest day | A | | | |
| | | Rest day Accom 4 star hotel | | |
| Monday, 3 September 2018 | | | | |
| Day 8 - USA - Miami / Philadelphia | A | | | |
| 7:00 - 8:00 AM | | Breakfast in Hotel | | |
| 8:00 AM | | Checkout | | |
| 8:30 - 10:30 AM | | Meet with Regulators, Consult Municipalities Morning tea included | ants, Operators & Local | |
| 10:30 AM - 1:30 PM | | Facility Inspections Lunch at facility or in transit | | |
| 1:30 PM | | Transfers to airport | Hotel Airport Shuttle | |
| 3:35 PM - 6:27 PM | | Fly to Philadelphia Transfers to accommodation | Hotel Airport Shuttle | |
| | | Checkin Philadelphia Marriot | | |
| 7:30 PM | | Dinner | Networking event TBC - Regulators, Consultants, Operators & Local Municipalities | |
| Tuesday, 4 September 2018 | | | | |

Day 9 - USA - Philadelphia / LA Α

| 7:00 - 8:00 AM | | Breakfast in Hotel | |
|-----------------------------|---|---|--|
| 8:00 AM | | Checkout | |
| 8:30 AM - 1:30 PM | | Facility Inspections Morning tea & lunch at facility c | or in transit |
| 1:30 PM | | Transfers to airport | Hotel Airport Shuttle |
| 3:35 PM - 6:26 PM | | Fly to Los Angeles | |
| 7:30 PM | | Transfers to accommodation Checkin 4 star Hotel Los Ange Dinner | Networking event TBC - |
| 7.50 PW | | Dime | Regulators, Consultants, Operators & Local Municipalities |
| Wednesday, 5 September 2018 | | | |
| Day 10 - USA - LA | A | | |
| 7:00 - 8:00 AM | | Breakfast in Hotel | |
| | | Meet with Regulators, Consult | ants, Operators & Local |
| 8:30 AM - 12:30 PM | | Municipalities Morning tea & Lunch included | |
| 12:30 - 5:30 PM | | Facility Inspections | |
| | | A | |
| | | Accom 4 star Hotel Los Ange | |
| 7:30 PM | | Dinner | Networking event TBC - Regulators, Consultants, Operators & Local Municipalities |
| Thursday, 6 September 2018 | | | |
| Day 11 - USA to Australia | A | | |
| 7:00 - 8:00 AM | | Breakfast in Hotel | |
| | | Facility Inspections | |
| 8:30 AM - 1:00 PM | | Morning tea at facility or in tran | sit |
| 1:00 PM | | Lunch - Overview of trip | |
| End of tour for Package B | | Late checkout | |
| 2:00 PM | | Checkout Transfors to simpart | |
| 6:00 PM 10:30 PM | | Transfers to airport Depart Los Angeles | |
| | | | |
| Saturday, 8 September 2018 | | | |
| 10:00 AM | A | Arrive Brisbane | |
| 10.007/101 | | | |