Comhairle Cathrach Bhaile Átha Cliath
Dublin City Council

MINUTES OF THE ENVIRONMENT STRATEGIC POLICY COMMITTEE HELD ON 8th DECEMBER 2016

1. Dublin Waste to Energy Project – Testing and Commissioning

The Chairperson, Councillor Naoise Ó'Muirí opened the meeting and welcomed the representatives of Covanta / Dublin Waste to Energy Limited and CDM Smith. The Chair further advised that the EPA will not be in attendance and that the Chief Executive's Dept. has written to the EPA requesting representation.

The Chair outlined that the purpose of the meeting is to deal specifically with the testing and commissioning of the plant.

(i) Environment Protection Agency – presentation

Not in attendance

(ii) Dublin Waste to Energy Limited (Covanta) – presentation

Mr. John Daly, Managing Director Covanta Ireland / Dublin Waste to Energy Limited welcomed the opportunity to present to the Committee and made the points below

- Construction has been ongoing for 26 months, c400 full time jobs have been created of which 53 people have been taken off the live register in the immediate area
- Mr Daly is leading this partnership for Covanta. It is intended to try allay any genuine concerns of this committee. Covanta accepts that the project was not to everyone's liking. Covanta wants to make it a win-win opportunity for the immediate area and Dublin in general
- Covanta took the opportunity to review some of the previous meeting videos and there are a lot of valid questions about the future use of bottom ash or fly ash and in relation to the development of the district heating capacity
- Some of the meeting comments such as '<u>we should not trust them</u>' are very unfair and close to defamatory. Concerns relating to the Durham York will be dealt with. Covanta will endeavour to clarify any misunderstanding which may have resulted in some of the inaccurate interpretation of our SEC filings.
- Tom Eriksen and Kieran Mullins – are the people who will have responsibility for operating the facility the people it has been stated you <u>should not trust</u>.

Mr Daly gave a detailed outline of the experience of his team outlined below

- Mr. Daly joined Covanta just under 2 years ago from the semi-state sector where he was Managing Director of Bord na Mona's Resource Recovery business. With over 30 years senior management experience.
- Kieran Mullins, with 25 years relevant experience joined Covanta in DWtE.
- There has never been a conviction against any of these licenses for a breach of their conditions.
- Similarly, Tom Eriksen brings 30 years WtE experience to the facility. A condition of our EPA licence is that the facility manager must have 10 years WtE experience.
- The team were handpicked to bring a combined 90 plus years of senior management experience of the waste, energy and environmental licensing sector to this facility.
- James Regan is Director of Communications from our head office and again he has come over today to address some of the genuine concerns you may have and give an update on the Durham York.

Mr. Daly outlined Covanta's scale of operation

- Operates 42 waste to energy facilities globally
- In the region of 18 million tonnes processed annually
- 15 material processing facilities
- In the region of 10 million megawatt hours produced per annum
- Covanta has a market valuation of approx. $2 bn
- Reports in great detail to the NYSE on all financial details
- Covanta is the world leader in waste processed via waste to energy.
- Dublin is probably the only European Capital that heretofore has not handled its MSW by converting to energy.

Mr Daly gave some background on Dublin's waste

- This will be the first time that Dublin will be self sufficient for waste recovery
- Dublin has been sending waste to landfill in Kildare for the last 20 years
- In the last 5-6 years waste has been exported which is not practical from a proximity principle basis
- In excess of 550,000 tonnes have been exported (2015)
- 2 Section 56 (Waste Management Act) had to be enacted to allow landfills to increase license and permit capacity (2016). The link below explains section 56 notices
  http://www.irishstatutebook.ie/eli/1996/act/10/section/56/enacted/en/html

Mr Daly further stated

- 90% of the capacity of the facility has been contracted with contracts averaging 9.1 years
- Such was the demand a further 250,000 tonnes could have been contracted.
- In excess of 75% of the Waste will be generated in the 4 Dublin Local Authority Areas. (DLA)

- The fact that 90% has been contracted this shows the financial strength of the project
- It is his view the DLA's will be in receipt of a positive return from the gate revenue from day 1

Tom Eriksen (TE) and Kieran Mullins (KM) presented to the members on the management, operation and commissioning of the facility.

- The Environmental License required the Operations Manager to have a minimum of 10 years experience in Waste to Energy, He has 30 (TE)
- This is his 5th WtE project; the last one was a 1.1 million tonne facility. (TE)
- This being a new industry to Dublin he was concerned about the staffing of the facility. It is the most experienced team he has organised and he outlined the experience of his team (TE)
- A number of the people that were taken off the live register as part of the Construction phase will be given roles in the operation of the plant. (TE)
- Covanta has constructed or expanded 20 facilities in 30 years without issue HZI has installed or provided the technology in over 500 facilities worldwide. A turnkey, chute to stack process is being provided for the DWtE KM)
- HZI must keep to contract obligations with Covanta to include performance and emissions (KM)
- The funders of the project have appointed a consultant to ensure their interests are met (KM)
- DCC has appointed CDM Smith to ensure the plant is constructed, commissioned and operated as per contractual obligations. (KM)
- The EPA will approve a testing and commissioning plan and will oversee the commissioning of the plant and monitoring of the emissions. (KM)
- HZI will not be checking the emissions which will be carried out by an accredited 3rd party previously used by the EPA. (KM)
- Ancillary activities (flu gas treatment, silo storage) are housed in one building. (KM)
- The emissions from plants that use HZI technologies are on average 12% of the EU limits. (KM)
- Only 10% of the original waste will remain at the end of the process (TE)
- Enough power will be generated to meet the requirements of 80,000 homes
- Outlined the waste treatment process and power generation.(TE)
- Air & Dust filtration process outlined. (TE)
- Fly ash is stored for transport off site. (TE)
- Would like the members to visit the plant and meet the team (TE)

Members raised the following questions

- The sequence of flu gas cleaning equipment is different to that presented the hearing of An Bord Pleanala and the EPA. Is there a substantial difference between the HZI and Elsom designs (JMcC)
- Who manages the continual monitoring system and who has access to this information in real time. (RM)
- What is the nature of the jobs provided through St. Andrew's Centre (MF)
- Is there a facility in the plant for freighters to be washed after depositing loads in order to minimise odours. (MF)

- A previous case in Ireland with a Pharmaceutical Company which had toxic fumes from the flu – this is our concern. This SPC has not criticised Covanta's credentials. (COM)
- On the economics side of the operation, as regulations continue to reduce waste will this have an affect over the 45 year lifetime of the plant. (MO'B)
- How will the water be monitored in advance of being discharged into the liffey. (WB)
- Mr Mullins said information will be available in real time however in his letter to the EPA he stated that information will be available 1 week behind (JMcC)

Tom Erikson, Kieran Mullins and John Daly responded

- He is not familiar with the previous design of the facility (before Covanta). The current design is similar to all mass burn facilities that he has been involved with the exception of a polishing scrubber (In Poolbeg) which helps compliance with the environmental license. (TE)
- The continual monitoring system will be under the control of the plant operators and the EPA will have access to the database. (KM)
- The data will be available on the DWtE website. (KM)
- Real time data for temperature and weekly summary emission data will also be available (KM)
- Many of the 53 recruited were low skilled workers. Having been on site for some time they have learned the facility. A number of these staff will be recruited as labourers, ash operators and equipment operators. (TE)
- Employees are encouraged to move up the ranks. (TE)
- 45 years is a long time but with expected population growth it is a big ask for recycling rates to increase at this level. He is of the view that 250,000 tonnes will still need to be exported so he doesn't believe there is a huge risk (JD)
- Water will be taken from the Liffey which will be in pipes and not in contact with any other part of the plant. There will be continuous temperature & ph monitoring which will available to the EPA. (KM)
- Temperature will be available in real time; weekly summary data will be available. (KM)

Commissioning

A Testing and Commissioning Plan sent to the EPA in September which included

- Verify the residence time as well as the minimum temperature and oxygen content of the exhaust gas which will be achieved during normal operation and under the most unfavourable operating conditions anticipated. (TE)
- Demonstrate that each combustion chamber will be able to achieve 850C on a continuous basis. (TE)
- Establish all criteria for operation, control and management of the abatement equipment to ensure compliance with the emission limit values specified in the licence. (TE)
- Assess the performance of any monitors on the abatement system and establish a maintenance and calibration programme for each monitor. (TE)
- Confirm that all measurement equipment or devices used for the purpose of establishing compliance with the licence has been subjected, in situ, to its normal operating temperature to prove its operation under such conditions. (TE)

- Establish a list of the standby and back-up equipment required to provide contingency arrangements in the event of a breakdown of critical waste handling, treatment or abatement equipment. (TE)

Commissioning Target Plan (TE)

- **Phase 1:** Cold Commissioning (November 2016)
- **Phase 2**: Refractory Cure & Boil Out (January 2017)
- **Phase 3**: Steam Line Cleaning (February 2017)
- **Phase 4:** First Firing with Waste (March 2017)
- **Phase 5:** Turbine Generator Synchronization (April 2017)
- **Phase 6:** Optimization (Spring 2017)
- **Phase 7:** Performance Demonstration Tests (Summer 2017)
- **Phase 8:** Commercial Operation (Autumn 2017)

EPA reporting (KM)

- Extensive Commissioning reports will be sent to the EPA.
- The EPA has sought some clarification on the Commissioning Plan and Covanta is currently preparing a response
- The EPA will have full access to the site during commissioning and are expected to have a full time presence during this period.
- All reports sent to the EPA will be available on the EPA website.
- All EPA reports will be available for review at the plant.
- Where required by the EPA, licence data will be available on the DWTE website.
- All EPA relevant documents are available for viewing at the construction site entrance. To date there have been 2 visitors to view the files.
- The documentation is also available to view at the EPA offices in Clonskeagh
- It is not a requirement to have contact details until the site becomes operational.
- Air Emission half hourly and daily averages will be determined by the continuous monitoring system
- A CEMS is deployed as a means to determine compliance with air emissions standards. It continuously collects and records emissions data.
- The CEMS is independently calibrated by a third party during commissioning
- Each line of the plant will have a calibrated CEMS additionally a standby CEMS will be in situ
- In stack testing will be carried out quarterly in the first year and bi-annually thereafter which will be carried by an accredited 3rd party sampling company
- In stack monitoring is carried out in accordance with standard methods and in line with the EPA guidance document.

Members raised the following questions

- Is there a facility in the plant for freighters to be washed after depositing loads in order to minimise odours. (MF)
- Address the level of traffic using / accessing the plant (MF)
- Will a monitor be installed to test for odours outside of the plant (WB)
- Who will be the 3rd party carrying out the quarterly testing and where will the results be displayed (RM)
- If the temperature can be measured and displayed in real time why not the emissions data. (RM)
- Will the continuous monitoring include dioxins(RM)

- Continuous emission monitoring is an established science and it is available in real time for many parameters. You are required to have half hourly readings so these should be made available to the public (JMcC)
- They are implied but not required in the license. The license refers to real time measurements and asks for them to be provided. (JMcC)
- In the interpretation of the license Covanta has stuck rigidly to what was required, i.e. real time data for temperature and a weekly summary of emissions data (JMcC)
- It is the instantaneous readings that are harmful to health (JMcC)
- An enormous amount of flu gas will be generated and if the gas is carrying some of the materials that are deleterious to health in a period of an hour, 2 hours or 5 hours. Peaks should be reported as they cause damage to health (JMcC)
- It is concerning that a third party to review what is going to be measured by the CEMS has not been appointed (JMcC)
- The presentation identified 8 phases to the commissioning process but the submission to the EPA only contained 6 (JMcC)
- We do require detailed documents covering the technical aspects of the commissioning (JMcC)
- The commissioning plan submitted to the EPA was received by a FOI request. (JMcC)
- Detailed commissioning plans are required (JMcC)
- How do we know what you are going to measure will be properly measured (JMcC)
- The technical detail was made available in the instance of Durham York failures (JMcC)
- Is it correct that Covanta have only built 2 plants (JMcC)
- The Durham York plant failed not once but twice for reasons not entirely scientifically clear. (JMcC)
- The cost of 3rd party review is between CAN $30K & CAN $250k and not the CAN $2M I previously mentioned. (JMcC)
- There was a proven failure in Durham York and there was a substantial failing in the Miami plant. (JMcC)
- The Miami plant failed to inject enough carbon to reduce the dioxins properly and a fine of in excess of $400,000 was levied on the previous operator(JMcC)
- Monitoring for dioxins is difficult and it is not clear when the stack test will be carried out. (JMcC)
- Who will do the stack tests, how will be done, will the tubes be cleaned. The challenge of managing this was used as a scientific reason to eliminate the first exceedance at the Durham York Plant.(JMcC)
- How was in not noticed that enough carbon was not being use in Miami (JMcC)
- Where is the detail of the commissioning plan (NO'M)
- Why will the real time data not be available (NO'M)

Kieran Mullins, Tom Eriksen & James Regan responded

- There will not be washing facilites for the trucks at the facility however Covanta will be pushing for the operators to maintain the trucks to a high standard (KM)
- The vast majority of trucks will access the facility via the Port Tunnel and Thomas Clarke Bridge (KM)

- Before trucks leave the facility they are required to ensure that refuse is not attached to bumpers, tail gates etc. This will be enforced on the tipping floor (TE)
- It is not anticipated that odours will emanate from the plant. Odour monitoring will be carried out around the plant. Should observations be made in relation to odours emanating from the plant they will be investigated. (KM)
- The third party company has not been appointed yet (KM)
- The data for the stack monitoring will be available on DWtE and EPA websites once the reports have been received and submitted to the EPA (KM)
- Temperature data will be supplied at half hour intervals (KM)
- The daily averages will be displayed 1 week behind. This is what Covanta has proposed to the EPA and it is far in advance of any other facility in the country which supplies this type of data. (KM)
- he was brought into the Miami plant to remedy the problems (TE)
- The carbon issue was indentified shortly after he arrived, it was brought to the attention of the DEP (TE)
- He does not believe that the lack of carbon was intentional by the previous operator; he believes the quantity was measured incorrectly. This problem was rectified.
- The Stack testing will be carried out by an independent 3rd party. (KM)
- The CEMS will be calibrated by a third party company – they have been appointed (KM)
- The continuous emissions monitoring is done on a 2 weekly scenario. A sample is taken over a 2 week period on a cartridge and sent for analysis.(KM)
- In relation to Real time information and data on the website, what we submitted to the EPA as required by our license has been accepted by the EPA. We will talk to our IT Department about increasing the availability of that data. (KM)
- The Durham York contract was different to the turn key solution Covanta has with HZI for the Poolbeg Plant (JR)
- We had unfortunate construction delays with the Durham project (JR)
- During compliance testing last Autumn some samples were compromised Best practice is to rerun these tests the which the regulator and the Ministry agreed. The tests were rerun and the facility was operating well within compliance thereafter (JR)
- In May during a biannual stack test an exceedance occurred over a brief period of time on one of the units. The unit was shut down and detailed abatement plan was formalised with the client with approval from the regulator. It did not represent a risk to human health or the Environment (JR)

- The suggestion at a previous meeting that the Chief Medical Officer was concerned was misreported and untrue. On the contrary the Medical Officer advised people not to worry.(JR)
- Covanta has not been fined to date for exceedance, contract penalties relate to construction delays (JR)
- Numerous tests show that the Durham facility complies with the emissions limits (JR)
- The facility is fully operational and the acceptance certificate has issued.
- Recent tests show the facility is 15% & 10% of the emissions standard.

Incinerator Bottom Ash & Fly Ash

Mr. John Daly presented on Ash and made the following points

- Bottom ash represents 10% of volume and 22% of weight of the waste that will be processed by the facility, In the region of 132,000 tonnes will be produced in the DWtE facility
- It is a non hazardous material
- The facility has capacity for the storage of c.10,000 tonnes
- In the region of 3 shipments per month from the south docks to the Netherlands
- Around 10% of the bottom ash will be screened as ferrous / non ferrous metal material
- The remaining 90% then matures; it is screened, graded and used in various applications such as roads construction.
- Covanta would like to see a long term solution for the Ash in Ireland, it's a pity that we are exporting something that a value and could be used in Ireland
- Fly ash represents about 27,000 tonnes a year from the facility. It is classified as a low grade hazardous material
- Fly ash will be moved from the site in sealed containers and exported from Dublin to facilities in Europe.
- Covanta's preferred option would be to remove the fly ash from the facility using a licensed hazardous waste contractor and bring it to a licensed hazardous waste facility where it would be stored under EPA controls and bulked up for shipment at a later date.
- The fly ash would have to achieve end of waste life status before it could be used.

James Regan presented on Covanta's track record.

- Covanta is the world leader in Waste to Energy
- The 42 facilities globally have an excellent track record
- Covanta's strives for continuous improvement and compliance 100% of the time
- The facilities operate far below their permitted emissions levels
- He referred to awards received e.g. US EPA, Clean Air Excellence Award, One of the clean 200 companies.
- Covanta takes pride in the relationship it has with communities it serves
- 92% of Municipal Contracts have been extended
- A recent client survey showed 100% of clients were happy with safety environment and overall operations
- We use client surveys as a tool to improve and this approach will be brought to the Dublin facility

Members raised the following questions

- Can it be confirmed that Durham York & Poolbeg are the only plants that Covanta built and operated (MO'B)
- Have the faults that gave rise to the problems at Durham York been built in to the Poolbeg facility (MO'B)

- In relation to transporting the fly / bottom ash, will specialist trucks be used, will they be escorted, will it be signed that it is hazardous material. (MF)
- Will a barge be used to take the ash to the North Quays (MF)
- Has an application been made to store the Ash (MF)
- Why Irish firms do not take the material (MF)
- How much energy is being put in to the plant and how much is been taken out. What is the ratio(AK)
- Is gas used for the for the boilers (AK)
- Do you have a tariff with the ESB (AK)
- Is the glass bottle site to be used for District Heating, it is difficult to retrofit houses (AK)
- The emissions will not be real time (MM)
- Dioxins, that aspect can be manipulated (Volkswagen). If the emission data was produced in real time it would avoid any perceived manipulation. Real time data would reassure the committee and the public (MM)
- Will the fly ash be moved twice, i.e. from the DWtE plant to the hazardous waste facility and the to the docks for export (JMcC)
- The planning permission does not allow for the export of Ash from the Poolbeg Peninsula. So that would be a variation to the planning permission. There is no planning permission to bring the ash to anywhere in Ireland other than to the South Dock (JMcC)
- Is there a real time display at the Durham York facility. (JMcC)
- The continuous monitoring is not just of the 10 air emission measurements but also some plant operations – The carbon injection, this should be displayed in real time. (JMcC)
- The license is remiss in not requiring Covanta to report on the amount of carbon used given the centrality of carbon in the process(JMcC)
- I cannot accept the assurances that you (Covanta) did it well before, the 2 pieces of research I undertook, Miami & Durham failed (JMcC)
- Volkswagen is a public listed company and they got it wrong in spades. I am not saying Covanta is getting it wrong in spades but I want evidence that Covanta is getting it right in spades. (JMcC)
- The visual impact of the facility on Dublin bay is not good – Measures should be put in place to minimise this (MF)
- The real time information should be displayed. (MF)
- There should be no reason why carbon monoxide and nitrous oxide are not displayed in real time. (RM)
- It is disadvantageous to the operator to allow the public to have any doubts about the data. (RM)
- The Panel at the Durham York plant displays measurements in real time, so the information is available. If it can be done for Toronto it can be done for Dublin (JMcC)
- Is there a Website that the public can contact with any questions about the plant (WB)
- Is there a back up generator for the eventuality of a power outage (RC)
- Will the heat from the District heating be steam of high temperature or hot water. (CO'M)

John Daly, James Regan, Kieran Mullins & Tom Eriksen responded

- Fly ash is hazardous and bottom ash is not. Fly Ash is a low level hazardous material. A comparable material would be a lorry of diesel oil. It is non regulated transport. (JD)

- The fly ash will be transported in a sealed container (JD)
- The fly ash will not be processed in this Country (JD)
- The bottom ash will not be processed on site. (JD)
- There is an aggregate tax in the UK and the Netherlands, Ireland has an abundance of aggregate. (JD)
- We have spoken to cement companies in relation to using the bottom ash (JD)
- Covanta has built 17 plants (JR)
- The technology from the Dublin plant has been taken to Durham. (JR)
- HZI were not used in the Durham plant. HZI have supplied the technology for over 20 plants in Europe and have a guaranteed track record. It is a different structure to Durham York (JD)
- Germany and Norway are the destination for fly ash. The Netherlands is destination for the bottom ash. (JD)
- Oil will be used to start boilers. All electricity on the site will be generated from the waste. Gas will not be used. (JD)
- There is certain information that is available in real time. What Covanta is being required to do is significantly more onerous than what is being asked from the majority of plants in Europe and the other plant in Ireland (JD)
- Covanta is not in the business of manipulating figures. The figures given today on contract renewal and environmental record display that figures are not manipulated. (JD)
- Real time measurement of dioxins is not possible (JD)
- Dioxins are measured continuously over are sampled over a two week period on a cartridge (KM)
- The cartridge is sent for analysis which determines the dioxin concentration. This data will then be put on the DWtE website. (KM)
- Dioxins are analysed by a third party. There will be limited access to the cartridge. (KM)
- The in stack testing is carried out by a third party. The EPA will be on site for in stack testing. The EPA has access to the data behind the CEMS and have the ability to read the data to ensure it is not manipulated (KM)
- Initially the Fly Ash will be moved from the plant directly to the quays. It is our preferred solution to move it to Rialta as they are a hazardous waste provider. It will be stored at the facility under EPA controls. At the moment Rialta have capacity issues and are going to process at the moment for another site (JD)
- We believe that our solutions for the storage & disposal ofbottom / fly ash are in compliance with the planning permission granted. (JD)
- We have had more favourable comments since the cladding went on to the building. (JD)
- A landscaping plan has been developed which has been submitted to the Parks Department. (JD)
- Carbon usage will be available in our annual environmental returns (JD)
- The expectations in relation to real time data can only be delivered if the technology is available. If it is available we will do it. We will discuss with our IT section and revert to the committee (JD)
- The Silos have load cells that the EPA have access to. This will demonstrate that Covanta has not spiked with activated carbon during a monitoring situation (KM)
- A communications programme is being rolled out. A newsletter will issue, members of the community will be invited to visit the facility (JD)
- The facility can run on its own turbine generator (TE)

- Without district heating there will be c.35% energy recovery, with District heating this will be c.85% (TE)
- The DH will be provided by hot water (KM)

Order: Presentation and questions and answers session noted, Covanta / DWtE Limited to provide the additional information below.

(i) Detailed technical commissioning plan

(ii) Consideration to be given on the display of real time data on dioxin and other air emissions measurements

(iii) A paper on how the activated carbon is managed, controlled, monitored and reported.

(III) Dublin City Council / CDM Smith (Client Representative Role) – Background to Client Representative Role

James Nolan, Executive Engineer gave the background the Client Representatives role

- DCC undertook a procurement competition for a Client Representative (CR) for the construction and commissioning of the project.
- The disciplines required included technical, legal and commercial services.
- The CR was engaged to ensure that the project was designed, constructed, operated & commissioned in line with the agreement DCC has with Covanta and the statutory consents.
- CDM were appointed in November 2014

Ruairi O'Carroll, Managing Director, CDM Smith (Irl) outlined CDM's role and background

- CDM Smith is a Boston based consulting engineering company focussing on the Water & Environment sector.
- CDM have worked on over 50 facilities worldwide
- CDM was the CR for DCC's expansion of the Waste Water Treatment Plant.
- Bob Gaudes was responsible for resolving the odour problems at the WWTP
- CDM's role is to ensure that the facility is designed & constructed in line with the statutory consents and the agreement between DCC and Covanta.
- CDM has sight of all the design documents & have been on site since the beginning of construction, attended factory acceptance tests for the major pieces of equipment.
- CDM also ensure that DCC's commercial interests are protected.
- CDM is to independently evaluate, monitor & report on DCC's behalf that facility is in compliance with the EPA license, project agreement, and statutory consents during the commissioning phase.
- Oversee pre-commission test and a report will issue to DCC & the SPC
- Oversee performance demonstration tests over 30 days. & a report issued to DCC & the SPC
- Oversee performance acceptance tests – report issues DCC & the SPC

Members raised the following questions

- The commissioning will proceed through 8 phases, the commissioning plan sent to the EPA says there will be 6 phases. What is the difference in the phases, when will the EPA be informed that there is a different phasing (JMcC)

- The stage gates would be of interest to the SPC. Third party independent evaluators are not yet appointed and won't be until a tender process takes place. The first firing will take place in March, so when will the independent monitoring company be appointed (JMcC)
- To clarify, the CR has no role in ensuring that the statutory consents are being met, e.g. 3 months before commissioning there is meant to be a full commissioning plan. The plan submitted to the EPA has 6 phases and today's presentation showed 8 (JMcC)
- Is it not worrying that the independent assessor has not yet been appointed (MF)
- When will the protocol referred to by Mr Gaudes be made available to this committee, the protocol used by the independent laboratory. (JMcC)
- Can the CR make recommendations to change how testing takes place. (WB)
- Normal operating condition –would that be just Summer or Winter as conditions will change according to the climate (WB)

Ruairi O' Carroll, James Nolan & Bob Gaudes responded

- I commented on what Covanta provided, it is set out very clearly in the project agreement what CDM provide. The tests are not linked to 6 or 8 phases but a series of stage gates when things are accepted and reported on. (ROC)
- Our role is on behalf of DCC, the independent testing will be carried out by a company contracted to Covanta. CDM will get sight of the appointment when it is made.
- It is not up to CDM to appoint the 3rd party, it is for Covanta and the 3rd party must be in place before the first fire. The commissioning plan was submitted to the EPA and is currently under review by the EPA (JN)
- CDM expects the independent assessor to be appointed in the new year, commissioning cannot start without the appointment being made. (ROC)
- The independent tester will get data that will be given to the EPA, the CR and Covanta. Our role is to ensure the data was collected correctly (ROC)
- A laboratory that is appointed to carry out testing must submit a protocol to identify how the data is extracted, for how long, from where & how will it be analysed in the laboratory (BG)
- The reports (CR reports) will be made available to the SPC (ROC)
- The protocol (independent laboratory) is not in place yet but it must be in place before commissioning can start (ROC)
- The CR will report to DCC on whether they are satisfied (or not) with the testing and it will be for DCC to take actions. The CR cannot change the testing procedure (ROC)
- The testing will take place over a single 720 hour test. (ROC)

Order: Presentation and Questions & Answers session noted. CDM smith to provide the additional information below.

(i) Client Representative Reports
(ii) The independent tester (laboratory) protocol

<u>Attendance</u>
Members

William Brennan, Dublin Community Growers
Robert Colleran, Dublin Docklands Business Forum
Councillor Mannix Flynn

Councillor Andrew Keegan
Joe McCarthy, An Taisce
Robert Moss - Dublin City Community Forum
Councillor Michael Mullooly
Councillor Michael O'Brien
Councillor Ciaran O'Moore
Councillor Naoise Ó Muirí (Chairperson)

Absent
Councillor Declan Flanagan

Apologies

Councillor Hazel DeNortuin
Councillor Edel Moran

Covanta / Dublin Waste to Energy Ltd.

John Daly
Tom Eriksen
Kieran Mullins
James Regan

CDM Smith

Ruairi O'Carroll
Bob Gaudes

Officials

John Flanagan, City Engineer
James Nolan, Executive Engineer
Simon Brock, Administrative Officer
Ciarán McGoldrick, Staff Officer
Owen Sweeney, Staff Officer
Oliver Esmonde, Clercal Officer

Councillor Naoise Ó Muirí
Chairperson, 1st December 2016.