DOC.	ID	PAGE X/537	ENG DISCIPLINE	PERMIT	COMMENT	ADDITIONAL INFORMATION REQUIRED	IMPACT OF DESIGN CHANGE	AIR EMISSIONS	WATER EMISSIONS	NOISE	DUST	ODOUR
STR	3	17	GEN	The quarantine area will be internal to the waste reception hall, to allow safe discharge and containment of unauthorised or contaminated loads without the risk of fugitive odours or dust emissions. The quarantine area is shown on the site installation boundary figure in Appendix A1.2. Where a delivery of waste is suspected of containing non-compliant wastes, in respect of both the pre-authorisation of the waste and the WAP, and where it is safe to do so the tipping hall operator will direct the delivery driver to tip the waste within the designated quarantine area, inside the tipping hall.	Drawings to be updated		This design change has no impact on emissions to the environment	N/A	N/A	N/A	N/A	N/A
STR	4	19	MEC	The combustion air extracted from the bunker air will be taken at roof level.	The suction is not at bunker roof height, but at an enought height that avoids the blockage by light materials.		The combustion air intake is ussually taken from the highest available point to avoid presence of particles, the change of height from roof to upper level of bunker doesn´t have any impact on odours emissions. The combustion air will be taken in the bunker at 31 m elevation.	N/A	N/A	N/A	N/A	N/A
STR	5	19	MEC	The cranes will operate in manual mode, semi-automatic mode or fully automatic mode where it is controlled by the combustion management system.	When the crane is in fully automatic mode it is controlled by the crane system, not by the combustion management system. But the crane system will receive some signals from the combustion system (i.e: high level on fuel chute, etc.).		Confirmed. The sentence points out that the feeding system (cranes) will be able to operate in automatic, there will be some signals to allow that operation mode with the CMS. There are signals for example to avoid over feeding of the hopper.	N/A	N/A	N/A	N/A	N/A
STR	9	21	MEC&PRO	The air supply into the combustion process will be extracted at a rate of 48,660 Nm3/h at Design Load Point and 54,165 Nm3/h at Load Point H, from within the waste bunker room, which has a volume of approximately 49,685m3. This will result in a negative pressure in the bunker area which will contain the odour emission from the waste and avoid fugitive emissions from the bunker room	Please note that the volume of the bunker room has been estimated to be aprox 53,500 m3. Combustion air will be extracted from the waste bunker room resulting in negative pressure to contain odour emissions.	For Deodorization System refer to "NSS-00-PM-AN-ACC-0002_DEODORIZATION PROPOSAL_02" & "Apendix 1_00101_Odor_Study_Acciona"	No relevant change, the deodorization system will be sized according to the updated air volumes and is documented in the odour control report.	N/A	N/A	N/A	NO	NO
STR	13	22	MEC&CIV	The carbon filter will be positioned on the ceiling of the tipping hall. The tipping hall is designed to allow access to change the media. The location of the discharge vent, identified as A2, is shown on the Site Installation Boundary in Appendix A1.2.	The carbon filter will be positioned on the back side of the tipping hall at ground level, outside of the building	For Deodorization System refer to "NSS-00-PM-AN-ACC-0002_DEODORIZATION PROPOSAL_02" & "Apendix 1_00101_Odor_Study_Acciona"	No relevant change as far as emissions. Air exhaust will comply with values foreseen. The position of the carbon filters and associated equipment has been optimized in order to make the maintenance easier and simplify equipment integration. This will be shown in the odour control report	N/A	N/A	N/A	N/A	N/A
STR	14	22	MEC&PRO	The volume of the waste reception building is approximately 23,020m3and so the extraction will result in 2.1 air changes per hour. This will avoid the potential for odour from the waste deliveries in the tipping hall being emitted to outside.	Please note that air renovations in the tipping hall area will be higher during plant shutdowns and normal operation (depending on the operation mode) as the proposed air flow for the OCU is 54000 m3/h	For Deodorization System refer to "NSS-00-PM-AN-ACC-0002_DEODORIZATION PROPOSAL_02" & "Apendix 1_00101_Odor_Study_Acciona"	The report for odour control outlines the odour control meausres. The odour control system is only required during main shut down periods (14days per annum)	N/A	N/A	N/A	NO	NO
STR	15	22	MEC&PRO	The air extraction rate through the carbon filter will match the extraction rate during full operation of the combustion process.	Although the air flow estimated for the deodorization system is in the same magnitude order compared to the primary air during full operation, please note that the same extraction rate is not match.	For Deodorization System refer to "NSS-00-PM-AN-ACC-0002_DEODORIZATION PROPOSAL_02" & "Apendix 1_00101_Odor_Study_Acciona"	No relevant change, just a clarification. Deodorization system will be properly sized.	N/A	N/A	N/A	NO	NO
STR	16	23	Bo&FGT	Indicative BAT requirements - waste charging (1 of 3) 1 (Updated) IED Article 50(4) states 'Waste incineration plants and waste co-incineration plants shall operate an automatic system to prevent waste feed in the following situations: • at start-up, until the [required] temperature (850oC) … has been reached; • whenever the [required] temperature … is not maintained; • whenever the continuous measurements show that any emission limit value is exceeded due to disturbances or failures of the waste gas cleaning devices. 3 Waste charging must therefore be interlocked with furnace conditions so that charging cannot take place when the temperatures and air-flows are inadequate, when any flue gas cleaning bypasses are open or where the continuous monitors show that the emission limit values are being exceeded for a period of time in excess of the limits set within the IED 5. In systems that use a waste filled charging chute or hopper to achieve an airtight seal, the mechanism that loads the chute should be interlocked to prevent loading under the conditions outlined by the IED.	However, as said in p.24: In compliance with the IED, the facility automatic Control Management Systems (CMS) will provide the interlocked combustion control system which will prevent waste feed under the following circumstances: • During start-up until a temperature of 850°C has been reached and sustained within the qualifying zone. • When the required temperature of 850°C cannot be maintained. • When the continuous emissions monitors show that an ELV is exceeded due to the failure of the purification process, for a period of more than 4 hours (in line with Article 46(6) of the IED.		The plant will comply with the applicable requirements as per the IED. The CMS will manage all the information to prevent such conditions to happen.	NO	N/A	N/A	N/A	N/A
STR	18	24	Bo&FGT	The dimensions of the feeding chute will ensure a good air lock between the waste bunker and the furnace and, at the same time, in order to minimise the risk of blockages the chute opening widens in downward direction.	The dimensions of the feeding chute will ensure a good air lock between the waste bunker and the furnace		The current design allows the mentioned air seal and no blockages are expected as all feeded waste will comply with the specified limited dimensions and volumes. Besides the above, if there were unexpected blockages in the system, there wouldn´t be impact on environmental issues.	N/A	N/A	N/A	N/A	N/A
STR	21	25	Bo&FGT	The plant can be operated continuously at higher waste mass and higher waste LHV levels, in the overload area A-C-C'-A'-G'-G, as shown combustion diagram included in Appendix A4.1.3. This is possible as long as the average thermal load over any period of 8h does not exceed 49.1 MWth by more than 2% and as long as the average waste throughput over any period of 8h does not exceed 20.9 tonne/h by more than 10%, the latter under the condition that no burnout problems are observed.	Currently the maximum continuous rating load is 102%, not 100%. The maximum time per each period of 8h to exceed the blue limits of the combustion diagram are to be confirmed by SBG.	Updated Combustion Diagram	No relevant design change, just a clarification.	N/A	N/A	N/A	N/A	N/A
STR	23	26	Bo&FGT	An expansion joint will be installed between the hopper and the feeding chute in order to absorb the differences in thermal expansion. This proposed position of the expansion joint makes it less vulnerable to potential chute fires.	Delete. Expansion joint between hopper and feeding chute is not foreseen		No relevant change. The original sentence explains that position of the expansion joint is the best one to avoid fires extension. If there is no expansion joint there won´t be fires extension through this device. The reason why the expansion joint is not needed relies on the overall feeding design (process conditions, cooling system, design materials..). Notice the current design is just from a different supplier with other design criteria.	N/A	N/A	N/A	N/A	N/A
STR	24	26	Bo&FGT	In case of heat input, part of the water will be evaporated, and the water loss by evaporation will be compensated automatically by opening a make-up water valve, supplying fresh demineralised water into the water jacket.	In case of heat input, part of the water will be evaporated, and the water loss by evaporation will be compensated automatically by opening a make-up water valve, supplying process water into the water jacket.		The change is inherent to the boiler design, notice that at the time the permit application the proposed boiler supplier was Keppel but finally the one selected is Baumgarte whose boiler design is different. The reason behind the water used for cooling the feeding hopper is related with the whole feeding system (process conditions, design materials..). Regardless the final boiler supplier selected, the design will comply with the required functionalities.	N/A	N/A	N/A	N/A	N/A
STR	27	27	Bo&FGT	The auxiliary burners will be installed above the secondary air injection level and will be automatically regulated by means of the optical pyrometers on the top of the boiler first empty pass.	The auxiliary burners will be installed above the secondary air injection level and will be automatically regulated by means of the acoustic pyrometers on the top of the boiler first empty pass.		No relevant change, functionality is remained as both acoustic or optical works satisfactorily	N/A	N/A	N/A	N/A	N/A
STR	28	29	I&C	These will be regulated by an advanced CMS	These will be regulated by an ACCS (Advanced Combustion Control System) integrated into CMS.		No change, just a clarification	N/A	N/A	N/A	N/A	N/A
STR	30	29	Bo&FGT	Visual monitoring of the combustion grate will provide by one colour television cameras, mounted on the rear wall of the furnace.	Visual monitoring of the combustion grate will provide by two colour television cameras, mounted on the rear wall of the furnace.		No relevant change, functionality is remained. Two cameras to provide suitable coverage and by default provides a level of redundency	N/A	N/A	N/A	N/A	N/A
STR	32	30	Bo&FGT	Approximately 49,500 Nm³/h of primary air will be injected from below the combustion grate (at load point A of the combustion diagram, see Appendix A4.1.3). The primary air supply will split into 12 zones, six along the length of the combustion grate and six along the width of the combustion grate. This means that for each of the five combustion grate elements, the primary air supply can be controlled separately at the left and at the right side. Each of the ten primary combustion air zones will be equipped with its dedicated air supply and control system.	Approximately 49,240 Nm³/h of primary air will be injected from below the combustion grate (at load point A of the combustion diagram, see Appendix A4.1.3). The primary air supply will split into 12 zones, six along the length of the combustion grate and two sets along the width of the combustion grate. This means that for each of the six combustion grate elements, the primary air supply can be controlled separately at the left and at the right side. Each of the twelve primary combustion air zones will be equipped with its dedicated air supply and control system.		It is a change inherent to the Boiler design. Notice the current design is from a different supplier with other design criteria. Functionality and performance remains the same. No impact on overall emsision criteria.	N/A	N/A	N/A	N/A	N/A
STR	33	31	Bo&FGT	The secondary air flow will be measured using an ultrasonic device.	The secondary air flow will be measured using a Venturi flowmeter.		No relevant change, functionality is remained.	N/A	N/A	N/A	N/A	N/A
STR	34	32	I&C	The combustion temperature will be interlocked to the waste charging system to automatically prevent additional waste feed: • At start up, until the minimum combustion temperature is reached and sustained. • Whenever the relevant combustion temperature is not maintained. • Whenever the continuous emission monitors show exceedances of the permitted emission limit values.	The combustion temperature will be interlocked to the waste charging system to automatically prevent additional waste feed: • At start up, until the minimum combustion temperature is reached and sustained. • Whenever the relevant combustion temperature is not maintained. • Whenever the continuous emission monitors show exceedances of the permitted emission limit values. Not automatic.		The plant will comply with the applicable requirements as per the IED. The CMS will manage all the information to prevent such conditions to happen. Notice that according to IED there is a certain time while operator can regulate the process to comply with the required emissions and avoid undesired trips.	N/A	N/A	N/A	N/A	N/A
STR	35	41	Bo&FGT	The second and third empty pass of the boiler will be equipped with an on-line shower cleaning system (removing the deposits by spraying water upon the membrane walls). The boiler design will be based on a long residence time (± 15 sec) of the flue gas before reaching the first superheater tubes (see Figure 3 below).	The first, second and third empty pass of the boiler will be equipped with an on-line shower cleaning system (removing the deposits by spraying water upon the membrane walls). The boiler design will be based on a long residence time (15 sec. aprox.) of the flue gas before reaching the first superheater tubes ~~(see Figure 3 below)~~.		No change, just a correction to clarify the undefined residence time. Reference to Figure 3 has been deleted as there was no figure on the document.	N/A	N/A	N/A	N/A	N/A
STR	36	41	Bo&FGT	• Demineralised water losses for boiler blowdown will be 304 kg/h. • Demineralised water losses for SNCR-dilution will be 600 kg/h.	• Demineralised water losses for boiler blowdown will be 648 kg/h. • Demineralised water losses for SNCR-dilution will be 396 kg/h.	Updated Water Balance	The current figure for blowdown is 430 kg/h and SNCR + dosing consumption is 0,583 kg/h. No impact is adviced since SNCR consumption is about the same and blowdown water is reused in the process. A change of boiler supplier since application accounts for the change	N/A	NO	N/A	N/A	N/A
STR	37	42	Bo&FGT	The condensate of the flash steam will be cooled by the injection of process water. The cooled flash condensate will be recovered as process water. The process water temperature increase will be limited, due to the fact that condensate from the intermittent blow down tank will not always be present. The process water production by the intermittent blow down tank will be much lower than the process water consumption by the ash extractors and the flue gas treatment plant.	The condensate of the flash steam will be cooled by the injection of service water. The cooled flash condensate will be recovered as process water. The process water temperature increase will be limited~~, due to the fact that condensate from the intermittent blow down tank will not always be present~~. The process water production by the intermittent blow down tank will be much lower than the process water consumption by the ~~ash extractors and the~~ flue gas treatment plant.	Updated Water Balance	This is clarification in terminology.	N/A	N/A	N/A	N/A	N/A
STR	38	42	Bo&FGT	The Air Pollution Control residue (APCr), the particulate matter, is collected in the hopper at the bottom of the filter compartment and transported via an enclosed pneumatic conveyor to the APCr silo.	The Air Pollution Control residue (APCr), the particulate matter, is collected in the hopper at the bottom of the filter compartment and transported via an enclosed pneumatic conveyor to the APCr silo. Partially it is recirculated to the reactor in order to reduce the reagents consumption.	FGT HMBs	This is not a change but a clarification. Residue recirculation is common in the FGT in order to optimize the reagents consumption. The reuse of APCr reduces the overall consumption of natural resource and increases the overall incineration of produce, reducing waste	N/A	N/A	N/A	N/A	N/A

STR	39	43	I&C	The layout will ensure high availability of the whole facility. For reasons of safety, a backup control system will also make it possible to operate the most important facility components remotely even without the remote bus, process operator interface or visual display units. The backup will enable emergency shut-down of the facility.	More appropiate and accurate as follows: The proposed CMS architecture will ensure high availability of the whole Facility. A SIL redundant controller will contain all SIL 1 and SIL2 related logic. It fulfills the requirements of IEC 61508 and NFPA85. This controller are responsible for the safeguarding of the furnace-boiler, flue gas cleaning and water steam circuit.		This is not a change but a clarification. The original sentence is unclear. The back up system is known as SIS (Safety Instrumented System) which allows to shut down the plant in a safety way, the SIS is independent from CMS and is dedicated to watch the plant safety conditions. SIS system has to comply with specific SIL (Safety Integrity Level) according to the mentioned standards	N/A	N/A	N/A	N/A	N/A
STR	40	43	I&C	The system will have manual controls, including touch screen interfaces, to allow for manual override of the facility operation.	No touch screens will be provided.		There will be manual override but with other interface (no touch screens.)	N/A	N/A	N/A	N/A	N/A
STR	41	43	I&C	The proposed combustion control system will cover the main process areas of the EfW facility, including the..	The proposed Control Monitoring System will cover…		No change, just a clarification. Notice that Combustion Control System is just a specific part of the overall Control Monitoring System	N/A	N/A	N/A	N/A	N/A
STR	43	50	Bo&FGT	The Urea will be stored in a 40m^3 urea storage tank, which will provide for 14 days operation at nominal thermal load. The tank will be double walled tank.	The Urea will be stored in a 60m^3 urea storage tank, which will provide for 21 days operation at nominal thermal load. The tank will be double walled tank.		The change is not relevant for emissions, furthermore the safety measures will be kept the same (double wall, instrumentation..), in fact the change may be considered as an improvement from risk perspective as the unloading operations frequency have been reduced (-35%). No other impact advised	N/A	N/A	N/A	N/A	N/A
STR	44	50	MEC	Four automatically controllable injection levels.	There are four injection levels: three of them will be equipped for automatic control, and one level will remain un-equipped as reserve.		No relevant change, the functionality remains the same. Different injection levels are used to optimize the reagent reactions according to the Flue Gas temperature profile which is inherent to the Boiler design	N/A	N/A	N/A	N/A	N/A
STR	45	53	Bo&FGT	Based on the assessment, dry scrubbing using hydrated lime as the reagent has been shown to represent BAT for the NESS Aberdeen EfW facility.	Based on the assessment, semi dry scrubbing using hydrated lime as the reagent has been shown to represent BAT for the NESS Aberdeen EfW facility.		Both technologies are recognized as BAT, semi dry was selected as the final solution after detail engineering process. No relevant impact is adviced due to this change.	N/A	N/A	N/A	N/A	N/A
STR	47	57	CIV	The surface water will be drained by gravity, using SuDS components, including permeable paving, filter trenches, dry swales extending around the perimeter of the site, and attenuation prior to discharge to the East Tullos Burn culvert, which runs under the western boundary of the site. The SuDS system will remove any pollutants within the surface water through the staged treatment of run-off.	The surface water will be collected by gully pots with a grate cover to remove pollutants which lead the rain water to underground pipes by gravity, collecting both, rain water and Fire Fighting Water drainage. Rain water will be sent to flood abatement pond (SUDs storage basin) prior to discharge to the East Tullos Burn culvert, which runs under the western boundary of the site. Fire Fighting drainage will be sent to the underground concrete retention pond for isolation. A valve chamber and drain point will be installed at the retention pond outlet.	Updated Sustainable Drainage System	Drainge system design has been changed to comply with fire fighting requirements. Please refer to the updated SuDS/separate discussion for drainage.	N/A	N/A	N/A	N/A	N/A
STR	48	57	Bo&FGT	Water rejected from the boiler water cycle, due to its quality, will be used in the process as conditioning water, for the acid gas treatment reagents or in the IBA extractors as quench water.	Water rejected from the boiler water cycle, due to its quality, will be used in the process as conditioning water, for the acid gas treatment reagents ~~or in the IBA extractors as quench water.~~	Updated Water Balance	No change, the original sentence still applies. Please, refer to the updated water balance. The boiler water rejection is high quality water preffered to be used for FGT rather than for IBA extractors where the water quality required is much lower.	N/A	N/A	N/A	N/A	N/A
STR	49	57	MEC&PRO	As part of the SuDS system, a rainwater harvesting tank will retain rainwater from the building roof for appropriate uses across the facility, see Section 5.4.1. Surface water in the detention basin will be continuously analyse TOC, conductivity, temperature and volumetric flow via the CMS prior to discharge to the East Tullos Burn culvert diversion. A valve chamber and drain point will be installed to allow automatic isolation of the SuDS basin should the water quality standard not meet the surface water discharge consent	Flowmeter is not required as there will be a flow limiter. The paragraph will stay as follows: "As part of the SuDS system, a rainwater harvesting tank will retain rainwater from the building roof for appropriate uses across the facility, see Section 5.4.1. Surface water in the detention basin will be continuously analyse TOC, conductivity, temperature and via the CMS prior to discharge to the East Tullos Burn culvert diversion. A valve chamber and drain point will be installed to allow automatic isolation of the SuDS basin should the water quality standard not meet the surface water discharge consent"		The flowmeter will be finally installed, so no change on this regard.	N/A	N/A	N/A	N/A	N/A
STR	50	58	CIV	In the event of a fire, the water used will be collected in the same way surface water run-off is collected, via the SuDS. During a fire an automatic valve will be activated, preventing the water from leaving the site. Following the fire the best method to dispose of the water will then be assessed. If the SuDS storage basin reaches capacity, as a last resource, the overflow will flow into the waste bunker.	In the event of a fire, the water used will be collected in the same way surface water run-off is collected. Outdoor Fire Fighting drainage will be sent to the underground concrete retention pond equipped with a valve chamber for isolation. If the underground concrete retention pond reaches capacity, the valve will open and the overflow will be sent to the flood abatement pond (SUDs storage basin), which is also equipped with a valve chamber and drain point to allow isolation of fire water from discharge to watercourse.	Updated Sustainable Drainage System	Drainge system design has been changed to comply with fire fighting requirements. Please refer to the updated SuDS/drainage discussion	N/A	N/A	N/A	N/A	N/A
STR	51	58	CIV	In areas where the firewater might be contaminated, the drainage system will enable the firewater to be discharge through the waste water system.	This is applicable for Fire water inside the buildings. Fire water runoff outside the buildings will be sent to the retention pond	Updated Sustainable Drainage System	Drainge system design has been changed to comply with fire fighting requirements. Please refer to the updated SuDS/draiange document	N/A	N/A	N/A	N/A	N/A
STR	52	58	MEC&PRO	For cases where the water might be contaminated with oil and/or chemicals, the water will be conducted to the waste water pit. The waste water can then be used for the ash extractor cooling or exported off site if necessary.	Applicable to process areas of the plant and diesel unloading, and storage area.		Notice there will be oil separators before reusing the water for ash extractors. Please refer to the updated SuDS/draiange document	N/A	N/A	N/A	N/A	N/A
STR	53	61	CIV	As part of pre- commissioning tests for water tightness, the bunker and waste water tank will be checked to confirm that they remain dry for at least 14 consecutive days.	Prior to start of monitoring for the test the structure shall be allowed a period of absorption which shall not be less than 4 days. Water shall be added as necessary to maintain the required test level.It shall be recorded the wet and dry bulb temperatures, the humidity, the wind speed and the rain fall at 24 hours intervals for the test period of 7 days following an absorption period of 4 days. From the information recorded it shallbe calculated the variation to the depth of water due to rainfall, sunshine, etc. during these 7 days, making allowance for the degree of exposure of the site. The resultant loss or gain due to the foregoing shall be deducted or added as appropriate to the actual measured variation to the water level in the structure. The structure shall be deemed to be watertight if the approved calculations show that the balance of variation due to leakage is equivalent to a depth of less than 10mm. Should the leakage exceed this amount but is decreasing daily the structures will be deemed to be watertight if the limit is achieved in the subsequent 28 days.	Updated Water Balance	Both tests will demonstrate the bunker is properly designed and watertight, the proposed new test is more flexible because it can be carried out in different meteorological conditions. Waste water tank different from retention basin, please refer to the updated water balance.	N/A	N/A	N/A	N/A	N/A
STR	54	61	MEC&PRO	have a capacity greater than 110 percent of the largest tank or 25 percent of the total tankage, whichever is the larger;	Please note that the tank will be double wall construction with connections on the top of the tank, not additional bunded area designed for tank spillage is considered.		Double wall measure comply with applicable regulations to prevent leaks. All tanks containing liquids whose spillage could be harmful to the environment will have double wall, so in case of leakage from the primary enclosure, no spillage will happen. All fill points are protected to the drainage system	N/A	NO	N/A	N/A	N/A
STR	55	64	I&C	Vehicles will access and exit the buildings via fast-acting roller shutter doors. The door will remain closed between vehicles movements.	No fast acting rolling entry and exit doors at Tipping Hall. Main entry and exit doors will be motorized, locally and manually operated by tipping operator.		Fast acting doors will be installed	N/A	N/A	N/A	NO	NO
STR	56	75	Bo&FGT	Water 37,760 m3/yr m3/annum. Feedwater required to run the boiler (entering via the water demineralisation unit)	Water 5,140 m3/yr m3/annum. Feedwater required to run the boiler (entering via the water demineralisation unit)	Updated Water Balance	As a clarification, according to current Water Balance, anual raw water consumption is 30.169 m3/yr. 10.462 m3/yr is the demin water flow required to run the boiler (blowdown, sampling, SNCR…). The original sentence could be corrected as follows: (Notice we may keep the original water consumption value to be more conservative) "*Water 37,760 m3/yr m3/annum. Raw Water required to run the Plant*". Refer to the updated water balance for further information.	N/A	N/A	N/A	N/A	N/A
STR	57	75	Bo&FGT	Liquid (H2O) (P)- waste process water used for IBA, flue gas quenching and cooling the intermittent blowdown tank	Liquid (H2O) (P)- ~~waste~~ process water used for ~~IBA,~~ flue gas quenching ~~and cooling the intermittent blowdown tank~~	Updated Water Balance	The water consumption is raw water and its usage is for every plant consumer however the quality used for every consumer is different. Refer to the updated water balance for further information	N/A	N/A	N/A	N/A	N/A
STR	58	76	Bo&FGT	Hydrated lime solution 2,720 tonnes/annum. Stored in 120 m^3 silo – 9 days storage capacity	Hydrated lime solution 2,464 tonnes/annum. Stored in 160 m^3 silo – 9 days storage capacity		Refer to the provided response on point 43 (STR). All modelling will take into account the final equipment installed.	N/A	N/A	N/A	N/A	N/A
STR	59	76	PRO	Hydrated lime: 2720 tonnes/annum	2464 tonnes/annum		No relevant change (less reagent consumption) due to optomised design	N/A	N/A	N/A	N/A	N/A
STR	61	77	Bo&FGT	Powdered activated carbon. Stored in 50 m^3 silo	Powdered activated carbon. Stored in 70 m^3 silo		Increased silo size allows reduced delivery schedule.	N/A	N/A	N/A	N/A	N/A
STR	62	77	MEC	Powdered activated carbon: Stored in 50 m^3 silo	Stored in 70 m^3 silo		Increased silo size allows reduced delivery schedule.	N/A	N/A	N/A	N/A	N/A
STR	64	90	CIV	Aco-type drainage channels across the centre of the hall and across the two vehicle entrances will capture any water run-off from the IBA. This water run-off will be conveyed to the waste water tank.	"and across the two vehicle entrances" to be removed. A channel in the center of the hall will collect all run off inside the BAH		No relevant change, the way to collect the water is not relevant, it depends on the provided floor slope which has been considered to be in the middle of the IBA hall rather than splited in two different channels.	N/A	N/A	N/A	N/A	N/A
STR	67	91	Bo&FGT	Fly ash will consist of ash collected from the boiler. APCr will consist of residues from the FGT process, including reaction products from the acid gas scrubbing reactor, PAC with adsorbed metals and organic compounds and residue from the bag filter. In practice when the amount of fly ash produced increases the amount of APCr will decrease. Due to this equilibrium flux it is calculated that when combined the amount of these products will be 8,295 tonnes/annum.	Fly ash will consist of ash collected from the boiler. APCr will consist of residues from the FGT process, including reaction products from the acid gas scrubbing reactor, PAC with adsorbed metals and organic compounds and residue from the bag filter. In practice when the amount of fly ash produced increases the amount of APCr will decrease. Due to this equilibrium flux it is calculated that when combined the amount of these products will be 5,789 tonnes/annum.		Change of boiler supplier and optomised design with recirculation of ash into the incineration process to reuse reagents enables lower wastes.	N/A	N/A	N/A	N/A	N/A
STR	68	91	Bo&FGT	Boiler ash from the second and third empty passes will be mixed with IBA. Fly ash from the boiler passes and APCr will be pneumatically conveyed to the fly ash/APCrsilos, for collection and storage	Boiler ash from the second and third empty passes and fly ash from the boiler passes will be pneumatically conveyed to the boiler ash silo, for collection and storage. APC residues will be pneumatically conveyed to the residues silos (1 and 2), for collection and storage.		Boiler ash is collected seperately from the APCr. The boiler ash and IBA mixing is currently under study.	N/A	N/A	N/A	N/A	N/A
STR	69	91	MEC	The hopper of the residue silos will be trace heated and equipped with fluidisation pads and a device to enhance the evacuation of the fly ash and APCr during discharge. The full surface area of the residue silos will be thermally insulated and clad. The location of the two silos are illustrated on the Site Installation Boundary drawing in Appendix A1.2.	The hopper of the boiler ash silo and the two residue silos will be trace heated and equipped with fluidisation pads and a device to enhance the evacuation of the fly ash and APCr during discharge. The full surface area of the boiler ash silo and the two residue silos will be thermally insulated and clad. The location of the three silos are illustrated on the Site Installation Boundary drawing in Appendix A1.2.	Updated general layout	Change on the number of silos to be shown in the updated layout	N/A	N/A	N/A	N/A	N/A
STR	74	117	MEC&PRO	Smoke venting will be provided to serve the waste reception hall, waste bunker, boiler hall & flue gas treatment hall and turbine hall.	Turbine hall will not include smoke venting (currently under discussion within the Fire Strategy). The HVAC system of the turbine hall will be stopped and facade air inlet louvers closed, helping the fire extinquishing process.	Fire Fighting Strategy	Fire Fighting system will comply with local authorities which is still under discussion with the Aberdeen City council (Authority having jurisdiction)	N/A	N/A	N/A	N/A	N/A
STR	75	117	MEC&PRO	Local water spray protection will protect the glazed screen (minimum one-hour fire resisting), installed to retain a visual connection between the control room and the waste bunker.	No water spray protection will be included as per Fire Strategy.	Fire Fighting Strategy	Fire Fighting system will comply with local authorities which is still under discussion with the Aberdeen City council (Authority having jurisdiction)	N/A	N/A	N/A	N/A	N/A
STR	76	117	MEC&PRO	In the turbine hall, sprinkler protection will be provided under the turbine operating floor at least 6m beyond the pool exposure, i.e. the areas where spilled burning oil and sprinkler water will be allowed to flow.	Sprinkler protection system under the turbine will be designed according to applicable legislation.	Fire Fighting Strategy	Fire Fighting system will comply with local authorities which is still under discussion with the Aberdeen City council (Authority having jurisdiction)	N/A	N/A	N/A	N/A	N/A
STR	77	118	MEC&PRO	In addition, sprinkler protection will be provided to all intermediate floor levels in the same footprint area. A local fire suppression system will also be installed to serve all areas above the turbine generator operating floor which are subject to oil flow, oil spray, or oil accumulation.	In addition to the protection under the turbine, particular considerations will be made to protect all oil pipes, both control and lubrication oil (sprinkler system), and a preaction system to protect turbine-generator bearings.	Fire Fighting Strategy	Fire Fighting system will comply with local authorities which is still under discussion with the Aberdeen City council (Authority having jurisdiction)	N/A	N/A	N/A	N/A	N/A

STR	84	143	Drawings	Site Instalation boundary	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	85	146	Drawings	General layout	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	86	147	Drawings	Main building layout +0	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	87	148	Drawings	Main building layout +5	To be updated	updated drawing	Changes in layout have been checked in relation to drainage, noise and air emission and are refelcted in the individual reports.	N/A	N/A	N/A	N/A	N/A
STR	88	149	Drawings	Main building layout +6..5	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	89	150	Drawings	Main building layout +12	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	90	151	Drawings	Main building layout Roof	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	91	152	Drawings	Electrical – turbine building +0	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	92	153	Drawings	Electrical – turbine building +5	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	93	154	Drawings	Electrical – turbine building +7.5	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	94	155	Drawings	Electrical – turbine building Section	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	95	156	Drawings	Electrical – turbine building DH header	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	96	158	Drawings	Main building layout Long section	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	97	170	Drawings	Overall process flow	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	98	171	Drawings	FGT process flow	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	99	199	Drawings	Boiler drawing	To be updated	updated drawing		N/A	N/A	N/A	N/A	N/A
STR	101	244	Drawings	Drainage layout	To be updated	Updated Sustainable Drainage System		N/A	N/A	N/A	N/A	N/A
STR	102	251	Drawings	Building drainages	To be updated	Updated Sustainable Drainage System	As mentioned before, SuDS has been modified to comply with FF requirements. Part of drainage discussion eslewhere.	N/A	N/A	N/A	N/A	N/A
STR	103	253	MEC&PRO	Building Drainage P&ID	P&ID's to be updated	Updated Sustainable Drainage System		N/A	N/A	N/A	N/A	N/A
STR	107	263	CIV	A SUDs system will collect run off from external roads and building roofs, providing levels of treatment via filter trenches, swales, underground cellular storage and retention pond prior to discharge	To be removed.	Fire Fighting Information	Drainge system design has been changed to comply with fire fighting requirements and is part of separate discussion	N/A	NO	N/A	N/A	N/A
STR	108	265	MEC&PRO	There will be fast acting doors on the waste tipping chutes, to keep odours within the storage bunker.	fast acting doors on the waste tipping chutes will be included.		See ID2	N/A	N/A	N/A	N/A	N/A
STR	111	196-197	Drawings	Grate desing	Change of boiler supplier since original application, described above.		The grate design has been changed as other boiler supplier was finally selected. (e.g.12 grate zones instead of 10, refer to point 32)	N/A	N/A	N/A	N/A	N/A
SCR	13	38	CIV	It is estimated that approximately 760m³ will be available offering additional resilience to collect and store fire water on site in an emergency.	To be confirmed with final hydraulic calculations	Fire Fighting Information	According to FF strategy, the underground cellular storage will be 148 m3, additionally there will be a retention pond of 600 m3	N/A	N/A	N/A	N/A	N/A
SCR	14	39	CIV	There will also be a filter basket/chamber before the pit that will capture debris and silt that will be easily cleanable, this is to reduce the need to clean the underground tank	We are not considering any filters before the pits. This paragrapah needs to be removed. Cleaning should be done in the waste water pit		The filter/basket has been removed to avoid excesive cleanning operations that may intefere the normal operation and more frequent cleanning maintenance is assumed in the waste water pit. In addition, there is no impact to emissions	N/A	N/A	N/A	N/A	N/A
SCR	15	39	MEC&PRO	The pit will be complete with analogue level detection and protection from over fill along with a flow meter.	No flowmeter is foreseen nor for the waste water pit neither for the process water pit. Paragraph**s** should be rewritten as follows: "The pit will be completed with analogue level detection and protection from over fill"		Over filled will be prevented by the level indication transmitted to the CMS	N/A	N/A	N/A	N/A	N/A
SCR	16	40	MEC&PRO	A leakage detection will be installed with a level switch of the capacitive or vibrating type, positioned in between the two walls of the double walled tank on both the waste water and process water tank. It will be triggered as soon as it detects the presence of liquid. Linked to a level switch of the capacitive or vibrating type, which can be used to initiate interlocks or generate alarms in the central control system.	No leakage detection is foreseen as these are not tanks. Leakages will be detected with level transmitters in the pit.		The original description is incorrect since they are referring to water pits with no double wall. As described in the above paragraph "*The water storage tanks and sumps will be made from concrete*"	N/A	N/A	N/A	N/A	N/A
EIR	1	8	PRO	Chimney diameter 1,85m Flue gas efflux velocity 15.0m/s Efflux temperature 138C	Chimney diameter 1,80m Flue gas efflux velocity 15.62m/s at DLP Efflux temperature 140C		Updated in ELV report	NO	N/A	N/A	N/A	N/A
EIR	2	9	PIP	All emergency equipment was excluded from the assessment, as it will not be in regular usage and so will not significantly affect the overall LAeq of the facility during normal operation.	In terms of operability, emergency valves, silencers, and components that is not working in normal operation, and operate only in special emergency situation will be outside of admisible sound levels indicated in the document.	BOP Silencer Data Sheet / Boiler Silencer Data Sheet / DG Data Sheet	Updated in Noise report	N/A	N/A	NO	N/A	N/A
EIR	3	10	PRO	Table 3: PM10 - Daily 10 mg/Nm3 PM2,5 - Daily 10 mg/Nm3 NH3 - 5 mg/Nm3 PAH - 0,00012 mg/Nm3	Table 3: PM10 - Daily 5 mg/Nm3 PM2,5 - Daily 5 mg/Nm3 NH3 - 10 mg/Nm3 PAH - There is no guarantee value	NESS Determination responce - ELVs	Refer to ELV report	NO	N/A	N/A	N/A	N/A
EIR	4	20	CIV	Proposed facility buildings - Created in Soundplan 8.0 based on MS 1.10 Drawings, and a 3D model of the site provided by Acciona.	There have been changes on the facilty layout. To be updated.	noise study / Non material variations approval	Refer to Noise Report	N/A	N/A	N/A	N/A	N/A
EIR	8	64	Bo&FGT	Table 5: EfW facility physical properties used for modelling (normal operational state) Parameter Value Units Stack location 395449, 803968 NGR (m) Stack height (from ground) 80 m Stack diameter 1.85 m Flue gas efflux velocity 15 m/s Efflux temperature 138 ˚C Normalised volume flow rate 27.61 m3/s Actual volume flow rate (wet) 40.56 m3/s Reference oxygen content 11 % (volume) Reference water content 0 % (volume)	Table 5: EfW facility physical properties (normal operational state) Parameter Value Units Stack location 395448, 803968 NGR (m) Stack height (from ground) 80 m Stack diameter 1.80 m Flue gas efflux velocity 14,8 m/s Efflux temperature 138 ˚C Normalised volume flow rate 25.64 m3/s Actual volume flow rate (wet) 37,67 m3/s Reference oxygen content 11 % (volume) Reference water content 0 % (volume) Impact on modelling results?		Refer to ELV report	NO	N/A	N/A	N/A	N/A
EIR	9	118	MEC&PRO	the odorous air will be exhausted via an odour control unit (OCU) on the roof	The location of the OCU will be ground floor beside the Tipping hall and bunker area.		Refer to odour control report	N/A	N/A	N/A	N/A	N/A
EIR	20	232	MEC	The principle of Best Available Techniques has been applied throughout the proposed facility design development process by way of dialogue between Arup Acoustics, Acciona, and Keppel Seghers.	When the Permit was initially submitted, the potential supplier for "fuel-to-chute" equipment was Keppel Seghers. In 2020, BAT have been re-evaluated with the information from Standardkessel Baumgarte, which was the final awarded supplier for the "fuel-to-chute" equipment.	NESS PPC - BREF BAT conclusions checklist	Refer to additional document "NESS PPC - BREF BAT conclusions checklist".	N/A	N/A	N/A	N/A	N/A
EIR	21	243	MEC&PRO	Noise levels of plant items	These values should be reviewed.	Updated noise study	Refer to Noise Report	N/A	N/A	NO	N/A	N/A