

16th January 2011

Sue Penaluna

Devon County Council

Topsham Road

Exeter EX2 4QD

Our Ref: 402.0036.00350: Table A

Your Ref: DCC/2975/2010

Dear Mrs Penaluna

Application Reference DCC/2975/2010

Development of the New England Resource Recovery Centre, near Lee Mill, Devon, to include an Energy from Waste facility with a capacity of 275,000 tonnes per annum of residual Municipal Solid Waste (MSW) and Commercial and Industrial Waste (C&I) with bottom ash recycling, a non hazardous landfill; and associated visitor centre, ancillary offices, welfare, parking facilities, weighbridge/wheel wash; also new access road linking into the A38 at Lee Mill with new river crossing over River Yealm and associated aftercare and landscaping improvements across the whole site with associated woodland management plan.

I refer to your letter dated 21st May 2010 and the table of additional information requested pursuant to the above planning application.

You will be aware that a number of the issues raised have been dealt with in the submission of additional information in respect of the Regulation 19 request, and included in Volumes 5, 6, and 7. For the sake of completeness, the following addresses each of the requests made as per the table attached to your letter of 21st May.

A1 The County Waste Management Officer would request that the applicant should endeavour to provided more up to date information on Commercial and Industrial Waste Arising in association with the Environment Agency

The planning application is based on the most current data available at the time of submission.

A2 The EfW plant should provide an alternative to landfill (for other than inert residues of combustion), which carries climate change-related benefits largely because of avoided methane emissions associated with landfill gas.

What proportion of the 33,000 tpa of material to be landfilled at the proposed plant is biodegradable?

What is the source and nature of the biodegradable material to be landfilled (municipal or C & I?) and why can it not be incinerated?

How will the weight of the landfilled biodegradable material be determined (this could be of relevance for Landfill allowance Trading Scheme purposes)?

And what arrangements will be put in place to collect and treat the landfill gas that will arise from the on-site landfill?

What % efficiency of methane capture is anticipated from the landfill?

The WRATE assessment that has been re-run for the purposes of the latest submission has considered the avoided methane emissions in accordance with the best-practice operated in England and Wales at the current time. The revised information is included at Volume 7A R19.1.

With regards to the proportion, weight etc of biodegradable waste to be accepted this is not currently assessed at landfills operated in the UK.

In terms of the collection of landfill gas the nature of the material to be landfilled is unlikely to generate significant levels of methane.

A3 What % of the 25mW of electricity produced is to be used at the site?

Approximately 10 to 15% of the electricity generated will be used on site.

A4 Can Viridor update the WPA on progress made with securing local users for heat – i.e, the progress made since the application was submitted.

A number of discussions have been held with the developers of the development at Sherford New Market Town. These discussions are on-going.

A5 The applicant should clarify the proposed community benefits available (if any) from the proposal.

As you are aware, the Applicant has attempted to engage with a number of statutory and non-statutory consultees in respect of community benefits. The Applicant's response to these will be dealt with by separate correspondence in due course.

A6 The applicant should provide a business case for the provision of hot water to other users (including Sherford)

This is not considered to be a planning issue.

A7 How would the developer intend to deal with intervening land interests in terms of the provision of heat to other remote users?

The Highways Agency has agreed in principal that land within their control along the A38 would be available for use from the northern extent of the application boundary. Any other land owners would be party to negotiations in the event that this is necessary.

A8 Given the concerns expressed within the Lee Mill area about traffic projections and the potential impact on local safety and amenity, it would be helpful if the developer could provide a simple statement covering the “worst case scenario” on all projected traffic movements (number and type) within Lee Mill and the likely daily and seasonal variation.

The extensive information submitted within Volumes 3a, 5 and 7a include this detail. However, for the purposes of clarification, a separate letter will be issued to summarise the situation.

A9 Is there any seasonal variation in trip generation to the EfW based on summer population increase and has this variation been translated into the figures in the TA?

The response to R19.4 (Volume 7a) deals with this issue.

A10 Full safety audit of scheme is required.

A full safety audit is included in Volume 5, Section 6: Traffic Addendum.

A11 Swept path modelling of proposed junction required and consideration of priorities on T junction from underpass to Western Road.

The attached plans A11/1, A11/2 and A11/3 illustrate these requirements.

A12 What criteria did the applicant use to assess the impact of noise on the amenity of properties along the access roads and especially in Lee Mill Village?

The revised Noise Assessment (Volume 5: Section 8) deals with this issue.

A13 Has the applicant resolved the status of Zinc Oxide within the Incinerator Bottom Ash – its it hazardous?

This issue is considered in R19.114, Volume 7c.

A14 DCC previously requested information about hazardous wastes generated by the process (apart from fly ash). Not those that might be imported.

No other hazardous wastes will be generated.

A15 The applicant should clarify why it is preferable in environmental terms to have the IBA stored outside.

The “raw” IBA will be stored outside to assist with maturation.

A16 Paragraph 3.36 states that there will be no external storage of combustible wastes – what about non combustibles sorted from the waste stream in the transfer area?

Again, there will be no external storage.

A17 Paragraph 3.4.6: What is the efficiency figure for this plant with and without CHP?

This is an issue more appropriately considered during the Environmental permit process. Any efficiency in respect of CHP will depend wholly on the users, their proximity and the nature of the supply. As explained elsewhere in the submission this is yet to be determined.

A18 The applicant should clarify the treatment of leachate which the application states is either recirculated or taken off site or may be taken through a treatment facility. The location of the leachate lagoon needs to be specified.

It is not proposed to have leachate treatment on site as it is anticipated that the leachate will be very weak. Any leachate generated will be tankered off site.

A19 What happens to the water in the existing lagoon in the weighbridge area of the old quarry.

The water will remain in situ.

A20 There appears to be no consideration of the potential impact of laying the 33kV cable. This may have environmental effects and needs to be clarified.

The facility will be connected to the National Grid as an exporter of electricity. The proposed connection is immediately to the south of the site via an underground cable at a voltage of 33kV. This will be implemented by the electricity company as a statutory undertaker and therefore will not require planning permission.

A21 The receptors are all modelled within a 10km radius of the application site by do different standards apply to different gases and exposure times?

A 10km radius is that prescribed in the Environmental Permit Regulations H1 guidance for assessment of impacts at Nature Conservation sites. Since human receptors are equally sensitive in terms of approach and the maximum ground level concentration falls well within this radius, this radius is considered sufficient against which impact can be quantified.

A22 States that some vehicles may sheeted or netted but does not clarify which ones and what they may be carrying.

It is standard industry practice to cover the waste carried in bulked HGV's, to prevent litter. It is these to which the paragraph refers.

A23 Mentions gas engines and flares form the landfill but these are not referred to in the planning application itself – this needs clarification.

Given the predicted waste types, it is highly unlikely that the landfill will be able to support the use of a spark ignition gas engine. Combustion emission impacts are being assessed as part of the landfill Permit application.

A24 Where are tubes 4 and 5?

Table 4-10 of the Air Quality Technical Appendix includes OS grid coordinates for all tubes. Tube location 4 was GR259371,54312 and Tube location 5 was 257211,51621.

A25 Mentions the small pond filling with leaves – this was meant to be managed as a part of the Strashleigh restoration and should therefore be currently managed by the applicant as it is in their ownership.

The pond within Challonsleigh Plantation is subject to a management plan as part of the restoration scheme of the New England Quarry ROMP. Irrespective of this application, the applicant is committed to bringing this pond into favourable management in line with the management of other specific habitats identified in the ROMP. Management activities to be undertaken at this waterbody comprise the cutting back of grey willow scrub, partial removal of leaf litter (some will be retained for invertebrate egg laying and shelter) and control of bulrush and branched bur reed in order to maintain some areas of open water.

A26 The application states that there is no public access, however, there is clearly a tradition of walking on the east side of the Yealm – this should be further investigated in terms of providing some community benefit.

No permitted public access to the site or any of the Applicant's landholding currently exists. There is no definitive right of way along the east bank of the River Yealm. It is known that people do enter the site and walk in the area, and the Applicant is committed to supporting the principle of public access.

However the River Yealm supports otters and migratory salmonid populations, which might be sensitive to increased disturbance associated with public access, particularly if the incidence of dog walking were to increase in the area. As such, increased public access to the River Yealm riparian habitats may compromise ecological interest.

A27 Would be more helpful if it cross referred to a drawing [Volume 3c, Section 12, Table 5].

Table 5 details the habitats which would be lost as a result of the proposed development, this information has been updated in the revised ES chapter and the Regulation 19 response R19.68 and R19.69, which clearly details on a balance sheet the habitat loss and gain at the site. Maps associated with predicted impacts to habitats are also included in the ES.

A28 There needs to be a discussion about the timing of the removal of trees due to the potential presence of bats – including the early provision of alternative roosts.

The construction of the access road will require the removal of trees. Assessment of the trees along the line of the proposed access road has been undertaken and a protocol for mitigation and compensation for possible bat roosts in these trees is proposed. The detail of mitigation and compensation commitments is presented in ES Appendix 12/14 (Volume 5). In summary:

- Trees with potential for bat roosts (identified during current surveys) would be subject to a final survey to assess use by bats prior to felling. Any confirmed roosts would be dealt with under an EPS licence. All remaining potential roosts would be dealt with using Reasonable Avoidance Measures.
- All trees with potential for bats would be felled either in spring or autumn, which are the least sensitive time for this species group.
- There is a commitment to replace all potential roost trees with at least 2x bat boxes (or equivalent roosting resource) to be placed in retained woodland. The total no. of potential roost trees will be determined following detailed assessment (climb & inspection surveys) prior to felling.

- Additional mitigation/compensation measures would be installed where an EPS licence is required to remove confirmed roosts. The details of these measures would be set out in an EPS licence application.

These provisions for bats are in accordance with published good practice (Box 8.2; Bat Conservation Trust, Bat Surveys – Good Practice Guidelines, 2007).

A29 Is it not possible to provide alternative habitats for common toad elsewhere on the site – the proposed use of the old settling tanks for a reduced population doesn't seem particularly proactive.

As part of the Surface Water Management Plan, alternative water bodies are to be created throughout the development. Waterbodies of a size suitable for common toad breeding habitat would be created in the south-east corner of the site and adjacent to New England Fields CWS in the west. These waterbodies and associated terrestrial habitat would be enhanced to be suitable to support breeding toads translocated from the current population in the quarry void.

It should be noted that as with all native amphibians, common toad spend the majority of the year in terrestrial environments foraging, sheltering and hibernating. Aquatic habitat therefore only forms part of their habitat requirements. Therefore terrestrial habitats to be retained, enhanced and created as part of the proposed development, particularly in the proximity of the new surface water lagoons are considered essential to maintain a breeding population of toads.

A30 The issue of potential vibration near to the river during the autumn needs to be addressed in the consideration of the potential impact on the fishery.

It is considered that the only significant source of vibration related to the proposed Resource Recovery Centre is that produced during piling operations during the construction phase of the proposed development. At this stage it is not known whether vibratory or percussive piling techniques would be used and it is, therefore, not possible to predict the exact levels of vibration produced at the closest point of the river. However, based on a worst-case situation, i.e. the use of percussive piling techniques, the estimated vibration levels from piling operations at their closest approach to the river, i.e. 170m, would be 104dB.

Based on research to date, specifically that undertaken by the California Department of Transport, a criterion for auditory tissue damage of 189dB for fish greater than 2g in weight and of 183dB for fish less than 0.5g in weight was recommended. The predicted vibration levels are substantially below these levels.

It should be noted that piling operations would be temporary in nature and would only be undertaken for a relatively short period of time during the construction of the proposed Resource Recovery Centre.

A31 The otter report states that the holt nearest to the bridge is potentially used during the day and yet p.55 states “in the unlikely event of otter recorded using any of these structures during the day NE will be consulted” The should be clarified.

Appendix 12-6 of the ES details the otter survey work undertaken at the site. It identifies that the 1.5km stretch of River Yealm surveyed, likely represents up to 9% of a breeding female otters range and an even smaller proportion of a male otters range. Within this range were 6 potential day holts, indicating that the breeding female otter present here may have approximately 60 day holts along the entire length of its range. Therefore there is a low

probability of recording an otter in situ at one of the holts within the proximity of the proposed bridge crossing.

It should be noted that the route of the access road has been altered since the ES submission and now crosses the River Yealm 30m south of its originally proposed crossing point, some 45m from the closest recorded holt to the north and 450m to the closest recorded holt to the south. Monitoring of all holts will be carried out as detailed in the mitigation strategy for otters outlined in Appendix 12-14 of the revised ES Chapter 12 - Ecology. Whilst a methodology has been proposed to minimise the risk of disturbance to otters, in the event that this monitoring indicates that significant disturbance to otters is likely, an EPS licence would be prepared for consideration by Natural England.

A32 Clarification is required for the proposed location of the artificial badger sett.

The revised ES Chapter 12 – Ecology has been updated to include a 'Mitigation & Compensation for Protected Species' Plan. The location of all proposed artificial badger setts are clearly marked on this plan.

A33 The applicant should explain the reasoning behind the assumption that a <1% increase in acid deposition levels on a SAC whose critical levels have already been exceeded would have a “negligible” effect.

The 1% level has been set by the Environment Agency based on the uncertainties associated with the modelling, for example. The description in EPR H1 is:

The long term process contribution 1% threshold is based on the judgements that:

- *It is unlikely that an emission at this level will make a significant contribution to air quality since process contributions will be small in comparison to background levels, even if a standard is exceeded.*

And:

Substances released to air do not need to be assessed for deposition to ground unless:

- *they contribute to acidification and eutrophication and are released in substantial quantities. For nature conservation sites they contribute >1% of the relevant critical load.*

Under these circumstances, they are regarded as 'insignificant emissions' and can be screened out (irrespective of background levels) as they will not add significantly to any existing situation (i.e. *De minimis*).

A34 The management of the remaining CWS is not to be left to post decision as this will form part of the mitigation/compensation measures to the application. A management scheme should be submitted for consideration with the application.

A Management Plan for New England Fields County Wildlife Site (CWS) is a requirement of the New England Quarry ROMP. A copy of the management plan is provided in ES Appendix 12-15.

A35 The number of nest boxes required will depend on how many roosts might be disturbed and cannot be known until bat survey work is completed.

The use of artificial bat boxes has been assessed at approximately 2-15%, dependant on the season and species concerned¹. There are no published guidelines for the number of bat boxes which should be erected in mitigation for the loss of a bat tree roost, although a multiplier is usually applied. In ecological terms, it is preferable to compensate for lost potential roost features, i.e. tree holes, splits etc, in a woodland where a proportion of the trees are being felled rather than compensating for actual roosts. The aim of the compensation proposed would be to retain or enhance the actual number of potential roost features within the application site. Compensation for roost features has been set at 2-for-1 multiplier, with provision of additional features in the event that actual bat roosts are disturbed or destroyed during construction. This precautionary approach to compensation is considered more than adequate to ensure there is a net gain of bat roosting features within the applicant's landholding.

In addition to a range of different types of bat box; where possible, actual features observed in felled trees would be erected elsewhere in the woodland. For example, a section of tree containing a woodpecker hole would be permanently strapped to a retained tree close by. This translocation of natural roost features is considered more likely to be used by roosting bats, or birds, than an artificial box.

A36 This relates to new water bodies but does not say where they are to be.

The revised Surface Water Management Plan clarifies the location of all water bodies.

A37 The table is unreadable. (Appendix A5, page 5)

It is not clear what this refers to.

A38 The ES mentions a two stage channel – this is not clarified or located anywhere in the document

The revised Surface Water Management Plan clarifies the location of all water bodies.

A39 The applicant needs to clarify the number, location and design of the proposed new water bodies.

All waterbodies proposed as part of the development and Surface Water Management Plan (SWMP) are detailed on Drawing 9/8: Surface Water Management Plan.

A40 The applicant needs to clarify why substrate from the base of the quarry is being transferred when the invertebrate interest is at the margins.

The term 'base' refers to the visible floor of the quarry void, including the shallow sloping margins and surrounding drier areas and therefore substrate from the shallow margins, where the majority of the invertebrate interest is recorded would be transferred to the new waterbodies.

A41 The applicant should explain the rationale for the location of the water body within the New England fields county Wildlife site.

The SWMP plan has been amended in order to remove the requirement for waterbodies to be constructed within New England Fields County Wildlife Site (CWS). The SWMP is

¹ Poulton, S.M.C ' An analysis of the Usage of Bat Boxes in England, Wales and Ireland' May 2006. Vincent Wildlife Trust.

detailed in Section 9, Volume 5 of the ES, with the location of all new waterbodies detailed on Drawing 12/3 – Habitats Mitigation, Compensation & Enhancements Plan.

A42 Additional detail is required on the design of the attenuation pond and how it will be designed/managed for wildlife benefit.

In the latest proposals the New England Fields CWS is no longer required for attenuation purposes and thus additional detail is not relevant.

A43 Care will be needed to avoid damage to important geological features during the construction period and sensitive areas should not be used for temporary site offices or the storage of plant and equipment.

Noted

A44 The proposed wind turbines at Sherford should be modelled into any Visual Impact Assessment.

It was indicated at the DCC consultation meeting that the Sherwood wind farm had been refused at inquiry and would no longer need to be considered in any additional assessment work.

A45 More information is required concerning the potential reflectivity of the proposed construction materials.

The main construction materials that will be visible from middle and distant views are as follows:-

1. H30.1: Metal cladding to EfW Roof: (Material B on drawings)

This is the material used for the dome cladding.

Specification: - Single curvature aluminium standing seam roof cladding

Finish: - PVDF

Colour: - RAL 8016 (Mahogany brown).

PVDF is a finish produced by Corus Colourcoat. Corus state that the finish is particularly well suited to building envelope applications where colour fastness and gloss retention is important. The Colourcoat PVDF has a smooth topcoat which in this situation will be applied to an aluminium substrate. The typical properties of the PVDF finish are given below.

Typical properties

Property	Data	Test method
Nominal coating thickness (µm)	25-27	ECCA T1
Gloss % (60°)	10-35	ECCA T2
Flexibility:		
Reverse impact (Joules)	11	ECCA T5
Minimum bend radius (T)1	2	ECCA T7
Adhesion (cross hatch)	N/A	BS 3900/E6
Corrosion resistance:		
Salt spray (hours)	1000	ECCA T8
Humidity (hours)	1000	ECCA T9
Abrasion resistance (Taber)2 (mg)	16	ASTM D4060
Scratch resistance (g)	3000	ISO 1518
Max. continuous operating temperature (°C)	120	Corus
Minimum forming temperature (°C)	16	Corus

Figure 1: Extract from Corus Colourcoat PVDF product data

The PVDF finish is described by Corus as having good gloss retention properties. This is considered to be a positive attribute of the finish in the context of the New England design, because it means that the finish will reflect light which in turn will bring variety to the colour of the material. The New England dome is made up of curved surfaces that will catch the light in different ways at any one moment in time. This principle is illustrated in the images of domes below, where the domes appear to be a variety of colours, but in fact are a single colour. The curved surfaces reflect light in such a way that the dome shape is revealed.

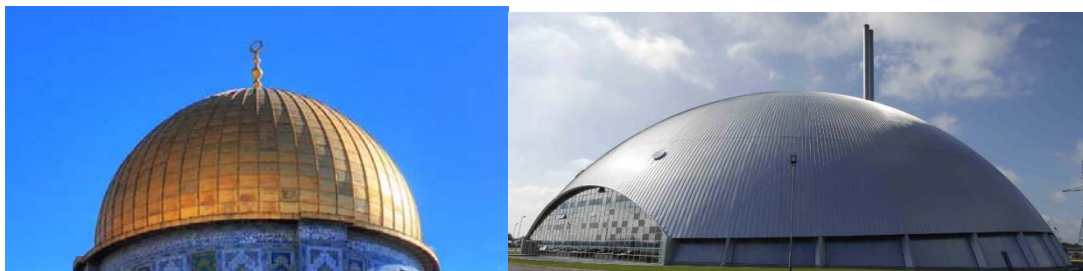


Figure 2: Dome is monochrome, but appears to be different hues

The appearance of the New England dome will change throughout the day as a result of the changing light reflecting off the dome's curved surfaces. Because the finish has a degree of reflectivity, the colour of the dome will also change from the base to the top, meaning that it will blend well into its setting because it responds to the setting and the changing light conditions. Refer to figure 3 below. These subtleties of changing colour and appearance would not be as successfully achieved with a matt finish.

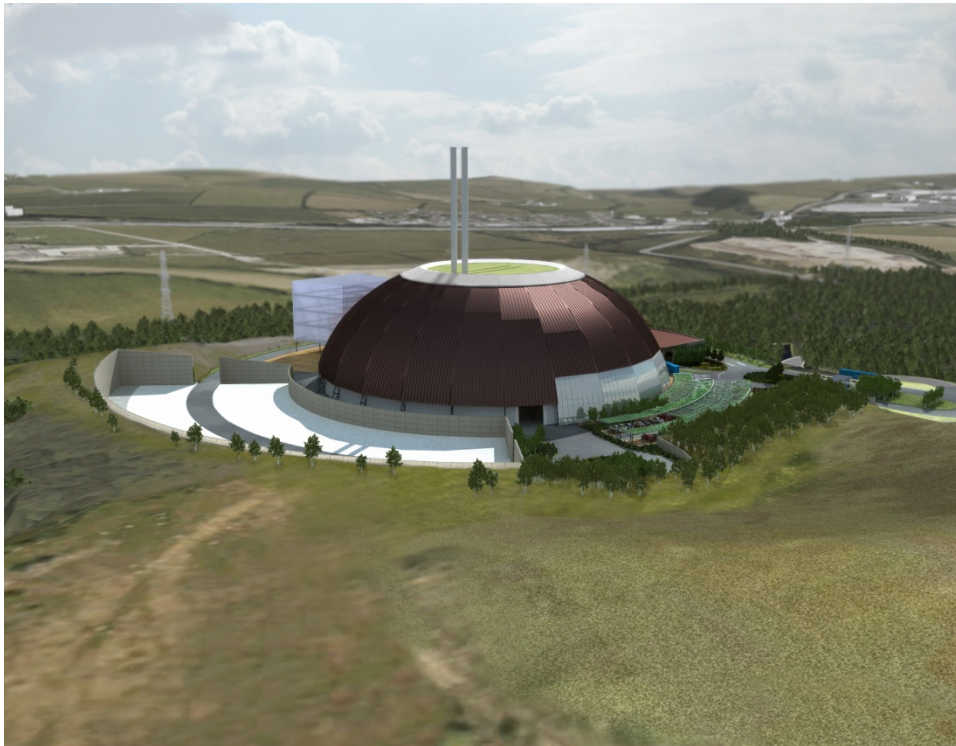


Figure 3: Artists impression of dome showing light reflecting off curved surfaces.

2. H31.1 Translucent roof light EfW dome (Material C on drawing)

This is the material used for the skylight at the top of the dome.

Specification: - Polycarbonate cladding such as Danpalon 16, double glazed

Finish:- Danpalon Soft light (on outside)

Colour:- Finely graded, variable light blue hue.

This material has a solar reflection of between 30 – 40%.

3. H20.1: Alucobond cladding (Material E on drawings)

This is the material used in the recess at the base of the dome.

Finish:-Metallic

Colour:- RAL 9022 (pearl light grey)

Alucobond materials with a metallic finish have a gloss of 30 – 40 % according to the Gardner Scale (see Figure 4 below)

	ALUCOBOND®	plus	A2	eco	ALUCORE®	Gloss*
Solid colours	✓	✓	✓	✓	✓	30-40%
Metallic colours	✓	✓	✓	✓	✓	30-40%
Special effect colours	✓	✓	✓			70-80%
Spectra colours	✓	✓	✓			> 80%
naturAL	✓	✓				> 80%
Wood Design	✓	✓	✓			
Anodized look	✓	✓	✓	✓	✓	
Anodised	✓			✓		
Mill-finished	✓	✓		✓		

*according to Gardner Scale

Figure 4: Alucobond product data.

The principles of light reflectivity of the dome described above will not be as pronounced on the Alucobond panels because the panels generally occur around the base of the building, where they will be screened from view by foreground planting and intervening land forms. This material will therefore not be as visible as the dome cladding from distant views.

4. H20.3: Perforated screen to Air Cooled Condensers (ACC's): (Material H on drawings)

Finish:-PVDF

Colour: - RAL TBC

The curved screen to the ACC will be less reflective than the dome cladding material, because the ACC screen is perforated, meaning that there is less material to reflect the light. The size of the perforation on the screen is varied in a pattern that resembles the rolling Devon Hills around the site. The perforations will also mean that some shadows behind the screen will be visible through the screen.

5. H11.1: Curtain walling to offices (material K on drawings)

Finish:-Polyester powder coated

Colour: tbc

Infill: Double glazed with argon filled cavity

Accessories: Projecting brise soleil

The brise soleil features will provide shading to the curtain walling at ground and first floors. This component will have a degree of reflectivity that is normally associated with conventional glazing.

6. Reinforced insitu concrete walls (Material J on drawings)

This material used around the base of the Waste transfer station and the IBA compound will have a matt finish. It will become concealed from view because the plating around these areas shall grow up the trellis as specified and form a 'green base' around these parts of the building.

7. Stack and accessories

Refer to R19.122 for response.

A46 Is there the potential to use and "afterburn" mechanism at 853°C to destroy dioxins?

This issue is considered to be more appropriate in the context of the Environmental permit

I consider that this information addresses all issues in respect of the 'Table A', but should you require any further clarification, please contact me.

Yours sincerely

for SLR Consulting Limited

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Encs.