

## **Devonport EfW CHP Facility –**

### **CEMP – Proposal for Continuation of Non Destructive Testing Activities.**

#### **1. Introduction**

This application is issued in compliance with the principles of the approved Construction Environmental Management Plan (CEMP) which requires that should activities be necessary outside of the defined normal working hours, prior permission must be sought from the local authority including details of any noise that may result from the activities.

This application is a request for agreement to continue with certain testing and inspection activities as detailed below, which are to be undertaken outside of normal site working hours for a certain period.

An initial 3 month trial period of these testing and inspection activities has been carried out during which no incidents or justifiable and substantiated complaints have been recorded and the continuation of the activities is now necessary to allow the works to progress in order to meet the construction timetable expected by the Local Planning Authority (LPA) and the local community.

The various measures outlined in this document to mitigate the impacts of the activities are to be regarded as a supplementary to the procedures described in the approved CEMP.

#### **2. Basis for the Application**

The EfW facility recovers heat generated by the burning of residual waste to heat water and produce steam which is fed to a steam turbine generator to generate electricity, steam is also extracted from the turbine to provide heat to the adjacent Devonport dockyard. The boiler and steam and water pipework systems which produce and distribute the steam and water operate under pressure to maximise the efficiency of the process.

The design, manufacture and installation of these systems is carried out in accordance with stringent international standards to ensure safe and reliable operation. These standards have very strict quality assurance provisions which require that the parts of the systems that operate under pressure are subject to a clearly defined inspection and testing regime at all stages of manufacture and installation.

Due to the physical size of the boiler, steam and water system components, only a limited amount of workshop prefabrication can take place prior to arrival of the components on site. The extent of prefabrication is limited by transportability and therefore a significant amount of further assembly work involving welding of pressure containing parts, needs to be carried out on site; and the quality assurance inspection and testing standards need to be maintained to ensure the integrity of the site welded joints in accordance with relevant international standards.

### **3. Activities to be Carried Out**

To fulfil these inspection and testing requirements it is necessary to carry out Non-Destructive Testing (NDT) on a certain proportion of the welded joints made on site as defined by the relevant international standards. This NDT will be performed using industrial radiography according to the requirements of these standards. This inspection and testing needs to be carried out in a carefully controlled manner to ensure satisfactory results and hence should ideally be undertaken without interference from other construction activities, vibration, dust or other disturbances and specifically in the case of radiographic testing, a safety exclusion zone around the testing area of approximately 25 metres is required to protect personnel.

For the reasons listed above it is normal practice to carry out such NDT at times when no other construction activities are going on, such as at night time, and weekends.

The inspection and testing activities are neither dirty nor noisy and no heavy machinery is used. They are unlikely to cause disturbance as they are carried out by small teams of specialist engineers using the appropriate instrumentation to conduct the tests and process the resulting test data. To make the best use of available testing time it is normal to carry out testing on several welds simultaneously, so there may be up to 5 teams of 2 persons each working in different areas of the site at any one time.

No other forms of testing such as pressure tests, tests involving the raising of steam etc. will be carried out whilst the NDT activities covered by this application are being done.

Vehicles that will be required to bring operatives and testing equipment and materials to site will be medium capacity vans and in the case of radiographic testing a vehicle containing equipment for developing the images may also be deployed.

### **4. Duration of the activities**

It is proposed that the inspection and testing activities will proceed for a further 3 month period following which, subject to the local planning authority's agreement of there being no justifiable and substantiated complaints related to the inspection and testing activities, MVV will apply for an extension to cover a further period of the inspection and testing activities.

The period covered by this application will run from the beginning of January 2014 until the end of March 2014. It is anticipated that the overall testing period will run through to July 2014.

### **5. Timings**

During the period covered by this application it is proposed that the activities be carried out between 18:00 and 23:00 Mondays to Fridays and 13:00 to 17:00 on Saturdays.

There will be no inspection and testing activities on Sundays or Bank Holidays.

## 6. Mitigation Measures

The areas where inspection and testing will be carried out will be primarily the boiler house and turbine hall. In the case of the boiler hall activities, these will be substantially screened from the nearest residential areas by the reinforced concrete walls already constructed, whilst the turbine hall is an enclosed concrete structure. Some prefabrication of parts of the piping systems will take place in the workshop enclosures located on the “Table Top Mountain (TTM)” site establishment area. This on site prefabrication is necessary to ensure that these parts are made to the required dimensions to suit the installed plant layout, and therefore some inspection and testing may also be carried within these enclosed workshop areas which in fact provide an advantageous environment in terms of control of noise and lighting.

Personnel traffic will be minimised in accordance with the principles of the Construction Workers Travel Plan (CWTP) and testing personnel will arrive at site during normal site working hours to be briefed by the site management on the extent of the testing and inspection required that day.

Prior to the end of normal site working hours on inspection and testing days the required equipment and materials will be brought to site by vehicle. This vehicle will then remain parked on site and leave only at the end of that night’s activities. All inspection and testing personnel will be specifically identified by their work clothes and will wear red high visibility vests so as to differentiate them from normal construction site workers. Regular audits of the personnel present on site will take place to ensure only inspection and testing activities are being carried. However it will be readily evident that construction activities are not taking place as these require the use of cranes, mobile and static plant and tools that would be easily identifiable in use on site at the same time.

During radiographic testing a vehicle containing additional film development equipment may be required. This vehicle will be positioned on the site access road near to the site entrance security hut where it is screened by the access road noise barrier fencing, so that the development of the films can be completed and the results made available for evaluation by site management on the next working day. This vehicle will not enter the construction site.

All lighting will be minimised to that necessary for safe access to and at the working area and to comply with the requirements of legislation and health and safety procedures to identify the necessary exclusion zones. Discreet lighting of the inspection and testing working area will be used. All such lighting will be positioned and directed appropriately to minimise any nuisance or disturbance to local residents. Where necessary the working areas will also be screened to provide further mitigation.

All electrical power supplies will be provided from the site mains supply network so avoiding the need for mobile generators. The necessary access arrangements (platforms, scaffolding etc) to facilitate the inspection and testing activities will be put in place during the normal site working hours.

A Code of Conduct will be drawn up for all personnel working on the inspection and testing activities and special inductions will be given to ensure all relevant personnel are fully briefed in avoiding loud conversations, the appropriate use of mobile phones or radios (other than in an emergency) and general minimisation of noise when carrying out the inspection and testing activities. Regular audits will be carried out to ensure compliance with the Code of Conduct.

MVV will carry out noise monitoring during the inspection and testing activities as described in the supplementary URS document “Noise Monitoring Methodology – Non Destructive Testing”.

It should be noted that any corrective works that are shown to be necessary by the inspection and testing will be carried out during normal site working hours on subsequent days, no corrective works will be done during the inspection and testing hours proposed.

## **7. Community**

MVV will inform the local community in the relevant areas about the inspection and testing activities by means of a special letter drop. This letter will also be copied to the LPA together with any other relevant correspondence received from members of the public in accordance with the Amenity Complaints Protocol under Planning Condition 56, and posted on the MED website. The Incinerator Liaison Committee (ILC) will also be informed.

Should there be complaints, which are considered to be justified by the LPA as having an adverse impact on the amenity of the area, work on the inspection and testing activities shall cease until such additional control measures are agreed with the LPA and implemented.

During the period of the activities, members of the public can contact the site security office on 07805 684516. All incidents and contacts will be logged by the site security and these records will be made available to the LPA and the PCC PPS unit and reported to the Noise Monitoring Steering Group.