URS

EfW CHP Facility, Devonport

Noise Management Plan

August 2012

Prepared for:

MVV Environment Devonport Ltd

UNITED KINGDOM & IRELAND

REVISION SCHEDULE					
Rev	**Date**	**Details**	**Prepared by**	**Reviewed by**	**Approved by**
1	February 2012	Draft Report	Robert Colder Senior Assistant Acoustic Consultant Alf Maneylaws Associate	Suzanne Scott Principal Acoustic Consultant	Ian Roach Principal Environmental Planner
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1 INTRODUCTION

This Noise Management Plan is provided primarily in response to the noise monitoring and management requirements of the Section 106 Agreement which requires a Noise Management Plan for the EfW CHP facility. The Noise Management Plan also addresses those Planning Conditions which relate to noise monitoring and management during construction and operation of the EfW CHP facility.

2 SECTION 106 AGREEMENT AND PLANNING CONDITIONS

2.1 Section 106 Agreement

Schedule 5 of the Section 106 Agreement states the following in relation to noise:

1. NOISE MANAGEMENT PLAN

1.1 Prior to the Main Development Commencement Date MVV shall submit to the Council in writing the Noise Management Plan

1.2 MVV shall not Commence the Main Development until the Council has approved in writing the Noise Management Plan

1.3 With effect from the Main Development Commencement Date MVV shall implement the Noise Management Plan.

1.4 In the event that there is a Noise Event MVV shall submit to the Council in writing for approval the Noise Mitigation Measures

1.5 With effect from the date of approval of the Noise Mitigation Measures MVV shall implement the same and shall use its reasonable endeavours to do so within the timetable specified in the Noise Mitigation Measures

1.6 Subject to paragraph 1.7 paragraphs 1.3 to 1.5 shall only apply for a period of twenty-five (25) years starting with the Main Development Commencement Date

1.7 In the event that there are no Noise Events during any continuous period of five (5) years beginning after the Main Development Commencement Date Clauses 1.3 to 1.5 shall cease to apply

Part 1.0 of the Section 106 Agreement provides Definitions and Interpretation. The relevant definitions are provided overleaf in Table 2.1.

Schedule 5, Clause 3 of the Section 106 Agreement provides for the following:

3.1 Between the Main Development Commencement Data and a date twelve (12) months after the Operational Date MVV shall within twenty-eight (28) days of a written demand of the Council:

3.1.1 Pay to the Council up to a maximum sum of two hundred pounds (£200) per demand in respect of its reasonably incurred administrative costs in investigating and handling justified complaints and enquiries (and undertaking associated site investigations) relating to the obligations in paragraphs 1 and 2 of this Schedule [Noise Management Plan and Air Quality Management Plan respectively]*; and*

3.1.2 Pay to the Council its reasonably incurred costs in respect of attendance at local liaison meetings during the construction and commissioning phases of the Development up to a maximum sum of two hundred pounds (£200) per meeting

PROVIDED THAT the aggregate of such payments under Clause 3 is not to exceed five thousand pounds (£5,000).

The Local Planning Authority will be able to request the aforementioned payments by emailing MVV's Finance Manager, Martin Freeman, martin.freeman@mvvuk.co.uk, with the reference Noise Management Plan. Martin will then arrange an electronic payment to be made to the Local Planning Authority.

TABLE 2.1: SECTION 106 DEFINITIONS	
Noise Comparison Report	A written report setting out and comparing: (i) The predicted rating levels of noise emissions at each Noise Receptor; and (ii) The actual rating levels of noise emissions at each Noise Receptor, The report shall identify any Noise Event
Noise Event	An occasion at any Noise Receptor where the actual level of noise emissions at the relevant time of day exceeds the operational noise levels as specified in the Planning Permission and this can be demonstrated to be attributable to the Plant
Noise Management Plan	A plan: (i) Specifying the location of the Noise Receptors; (ii) Setting out details in relation to the establishment of the Noise Monitoring Steering Group and the provision of reasonable resources to the Noise Monitoring Steering Group to allow it to undertake its duties under paragraph (v) below; (iii) Providing for the submission by MVV to the Noise Monitoring Steering Group of a Noise Comparison Report. (iv) Where the Noise Comparison Report shows that there has been a Noise Event the provision to the Noise Monitoring Steering Group of information about the measures which MVV intends to take to regularise noise emissions from the Plant so as to reduce the risk of future Noise Events attributable to the Plant at any relevant Noise Receptor (v) Setting out the frequency of meetings of the Noise Monitoring Steering Group to afford it the opportunity to regularly analyse and review the Noise Comparison Report
Noise Monitoring Steering Group	A body made up of representatives of MVV, the Council's Public Protection Service and the Environment Agency
Noise Receptors	Such of the noise receptors identified in Chapter 14 of the Environmental Statement as may be agreed with the Noise Monitoring Steering Group
Noise Mitigation Measures	A scheme setting out appropriate measures to be undertaken by MVV to regularise noise emissions from the Plant so as to reduce the risk of future Noise Events attributable to the Plant at the relevant Noise Receptor including a timetable for implementation of such measures

2.2 Planning Conditions

The Planning Permission contains a number of noise related conditions, as follows:

Noise Levels During Construction

19. The noise levels indicated within the submitted Acoustics Technical Note dated 28th July 2011 are the maximum permitted levels.

If during the stage 1 and stage 2 construction phases of the development noise levels exceed the approved limits then the noisy activity shall cease until such time as noise reduction measures have been carried out. Noise monitoring shall then be carried out to verify that the noise levels do not exceed the approved limits.

Operational Noise and Start-Up Noise Protocol

21. During the operational phase of the development, prior to any planned noisy events (e.g. testing the operation of the emergency pressure valve, steam purging) the Local Planning Authority shall be given written notice of the events, which shall not be carried out other than between the following hours: 09:00 – 17:00 Monday to Fridays. No such planned noisy events shall take place on Saturdays, Sundays, Public or Bank Holidays. Prior to re-start of the facility after either breakdown or maintenance shut-down the re-start process should be planned so that all noisy events during the process, such as exhaust steam valve testing, will not occur outside the following hours: 0900 - 1700 Monday-Fridays and 1000 - 1600 Saturdays and Sundays. A protocol for the procedures to be followed to avoid noisy activities such as exhaust steam valve testing occurring at unsocial hours outside 0900 - 1700 Monday to Fridays shall be submitted to, and receive the written approval of the Local Planning Authority prior to the commissioning of the plant. Evidence of adherence to this protocol should be maintained by the operator for inspection by the Local Planning Authority when requested.

Pollution Minimisation Protocol - Site Traffic

22. Prior to the commencement of site preparation works, a protocol for the procedures to be followed for minimising any adverse impact that the warning signal emitted by reversing vehicles may have on residential amenity and for minimising noise and air pollution from any HGV traffic queuing on the access road to the east of the railway viaduct shall have been submitted to and have had the written approval of the Local Planning Authority. The arrangements that are approved shall be implemented and maintained throughout the life of the site.

Noise Mitigation – Acoustic Barriers and Loudspeakers

24. Acoustic barriers shall be erected along the site access road in the locations to be agreed in writing by the Local Planning Authority as part of development within the area delineated as stage 1 on drawing number 009-02-D123356-406 (the Base Enhancement Works) and along the northern boundary of the proposed Maintenance Lay down Area (west of the Workshop building) as part of development within the area delineated as stage 2 on drawing number 009-02-D123356-406 (the Main Construction Works) in accordance with full detailed specifications having the prior written approval of the local planning authority. The barriers shall be maintained in place for the life of the plant. Any public address system or loudspeakers used within the site boundary shall not be audible beyond the site boundary.

Workshop Operation

25. The workshop shall not be operational between the hours of 23:01 to 06:59. Any opening (windows and doors) shall remain closed during use of the workshop.

Noise Mitigation during Periods of Shut Down

26. In accordance with section 14.6.64 of the ES, no baling and storage of wastes shall take place on the site other than during periods of breakdown, planned shutdown or maintenance of the facility.

Operational Tonal Noise

27. There shall be no tonal element to the noise emitted from the plant during operation at night (23:01hrs to 06:59hrs), as measured by the methodology set out within BS 7445 [1].

Operational Noise Levels

28. The rating level of the noise emitted from the site shall not exceed the existing background noise level values reported at the receptors identified in the ES by more than 5 dBA at the relevant time of day (07:00 to 23:00) or night time (23:01 to 06:59). The noise levels shall be determined and the assessment shall be made according to BS 4142:1997 [2]. The application or otherwise of an acoustic character correction in order to determine the rating level shall be in line with the advice of BS 4142, with any discrete note assessed as per the advice on tonality of the note to section 4.1.2 of BS 7445:1994.

Noise Monitoring Arrangements

31. A schedule of proposed noise verification monitoring shall be submitted to, and agreed in writing by the Local Planning Authority prior to the plant being brought into use. The schedule shall include, but shall not be limited to, a requirement to monitor within three months of the completion of the commissioning phase of the Energy from Waste Facility and at regular intervals thereafter. Noise measurements during monitoring shall be undertaken at the site for a continuous 24 hours period by a competent person during suitable weather conditions. The results shall be submitted to the following Local Planning Authority for consideration in accordance with arrangements set out in the approved schedule.

[1] British Standard BS 7445 'Description and Measurement of Environmental Noise', British Standards Institution, 1991.
[2] BS 4142: 1997, 'Method for rating industrial noise affecting mixed residential and industrial areas.

3 BASELINE NOISE MONITORING

3.1 Receptor Locations

Baseline noise measurements at locations representative of surrounding sensitive receptors were carried out in 2010, prior to the construction and operational noise assessment as reported in the Environmental Statement. These are the 'baseline' levels.

It is also considered appropriate to carry out additional baseline noise measurements to support these previous measurements. These additional measurements should be carried out prior to the commissioning of the EfW CHP facility and when the noise climate is not significantly affected by any construction works.

The receptor locations employed in the operational noise model, as reported in the Environmental Statement, are shown in Figure A1 in Appendix A of this Noise Management Plan. This Figure is a slightly modified version of Figure 14.2 from the Environmental Statement.

The proposed receptor locations to be employed for baseline noise monitoring are a subset of those shown in Appendix A and are listed in Table 3.1. These receptors provide a good representation of the closest receptors in each direction from the EfW CHP facility. The proposed receptor locations will require agreement with the Noise Monitoring Steering Group (Item 5 in Table 2.1).

TABLE 3.1: PROPOSED RECEPTOR LOCATIONS-CONSTRUCTION

Receptor	Address
R3	13-15 Savage Road, PL5 1BP
R15	1 – 12 Talbot Gardens, PL5 1BU
R20	514 Wolseley Road, PL5 1BE
R22	22 Hamoaze Avenue, PL5 1BQ

3.2 Measurement Methodology

Additional noise measurements shall be carried out by a competent person during suitable weather conditions. A competent person is defined as someone holding an Institute of Acoustics Diploma, or another recognized qualification in acoustics, with at least 5 years experience in environmental noise measurement and assessment.

The following measurement procedure shall be adhered to:

- A Type 1 integrating sound level meter and calibrator shall be employed (the sound level meter shall have a calibration certificate dated within the previous 2 years and the calibrator shall have a calibration certificate dated within the previous year).
- The sound level meter shall be calibration checked prior to the measurement at the first receptor, and calibration checked following the measurement at the last receptor. The calibration levels shall be noted.
- Short-term noise measurements shall be carried out at receptors R3, R15, R20 and R22 as listed in Table 3.1 and shown in Appendix A.

- The measurements at each receptor shall comprise $L_{Aeq,T}$ and $L_{A90,T}$ values plus third octave $L_{eq,T}$ and $L_{90,T}$ values in contiguous 5 minute intervals over a period of 60 minutes during the quiet part of the daytime (10:00 to 12:00 and 14:00 to 16:00) and over a period of 60 minutes during the quiet part of the night (01:00 to 03:00).
- At each monitoring location, a note of the prevailing noise climate shall be made.
- The guidance for the monitoring of noise levels given in BS4142 and BS7445 shall be followed.

3.3 Reporting

The additional baseline noise measurements shall be provided in a short report.

4 NOISE MONITORING DURING CONSTRUCTION

4.1 Receptor Locations

Planning Condition 19 requires noise monitoring during the construction works.

The receptor locations employed in the operational noise model, as reported in the Environmental Statement, are shown in Figure A1 in Appendix A of this Noise Management Plan. This Figure is a slightly modified version of Figure 14.2 from the Environmental Statement.

The proposed receptor locations to be employed for noise monitoring during the construction works are a subset of those shown in Appendix A and are listed in Table 4.1. These receptors provide a good representation of the closest receptors in each direction from the EfW CHP facility. The proposed receptor locations will require agreement with the Noise Monitoring Steering Group (Item 5 in Table 2.1).

TABLE 4.1: PROPOSED RECEPTOR LOCATIONS-CONSTRUCTION

Receptor	Address
R3	13-15 Savage Road, PL5 1BP
R15	1 – 12 Talbot Gardens, PL5 1BU
R17	25 – 36 Talbot Gardens, PL5 1BU
R20	514 Wolseley Road, PL5 1BE
R22	22 Hamoaze Avenue, PL5 1BQ

Receptor R17 is specifically included for monitoring construction noise impacts during the construction of the workshop.

4.2 Measurement Methodology

Noise measurements shall be carried out by a suitably trained consultant or member of the construction works team on a nominal fortnightly basis. The frequency of measurements will vary, as measurement surveys will also be dependent on the construction schedule and the timing and location of specific noisy activities. It will be ensured that these potentially noisy activities are fully captured in the construction noise monitoring surveys.

Suitably trained is defined as someone who has attended a recognized course in environmental noise measurement and reporting.

The following measurement procedure shall be adhered to:

- A Type 1 integrating sound level meter and calibrator shall be employed (the sound level meter shall have a calibration certificate dated within the previous 2 years and the calibrator shall have a calibration certificate dated within the previous year).
- The sound level meter shall be calibration checked prior to the measurement at the first receptor, and calibration checked following the measurement at the last receptor. The calibration levels shall be noted.

- Noise levels shall be logged at the receptors given in Table 3.1 consecutively.
- At each location, noise levels shall be logged for a minimum of 30 minutes. This will give an indication of whether or not the approved maximum 10 hour noise limits (set under Planning Condition 19) might be exceeded, but will not itself definitively prove whether or not the approved maximum 10 hour noise limits have been exceeded.
- Logged parameters shall comprise $L_{Aeq,T}$ and L_{Amax} values.
- At each receptor, a note of the prevailing noise climate shall be made. This will include a brief description of construction works noise and the contribution of noise from other non-site sources.
- At each receptor, a note of the prevailing meteorological conditions shall be made. If conditions are unsuitable for noise monitoring, the measurements shall be postponed until the following day.
- The guidance for the monitoring of noise levels given in BS4142 and BS7445 shall be followed.

The above scheme of noise monitoring may be supplemented by additional spot monitoring undertaken by the construction site Health and Safety Manager using a noise monitor retained on site. The Health and Safety Manager will have received suitable training on the use of the noise monitoring equipment.

The Local Authority would also be at liberty to monitor noise levels and/or investigate noise complaints made by members of the public through the course of undertaking their statutory duties.

4.3 Reporting

Prior to the start of the construction works, a noise monitoring reporting sheet template shall be produced.

A reporting sheet shall be completed for each receptor. The sheet can be partially completed during the noise measurements, and fully completed following the measurements.

The reporting sheets shall document the maximum permitted level of noise at the relevant receptor as documented within the Acoustics Technical Note dated 28th July 2011, and the measured noise levels at the relevant receptor.

The reporting sheets shall be examined immediately following their completion. If the data show that the approved 10 hour noise limit is likely to be exceeded at any receptor, the actions outlined below in section 4.4 shall be followed.

If necessary and appropriate, the main noise monitoring data monitored by the suitably trained person will be supplemented by data monitored by the construction site Health and Safety Manager using a noise monitor retained on site.

If the approved noise limit is not likely to be exceeded, the reporting sheets shall be filed and be made available to PCC as required. Copies of these sheets should be submitted to the Noise Monitoring Steering Group.

4.4 Actions In the Event of a Likely Exceedence of the Approved Noise Limits

In the event that the measured noise level at a receptor shows a likely exceedence of the approved 10 hour limits, the following actions shall be carried out:

1) The site activity (or activities) responsible for the elevated noise level shall be identified.

2) Further noise measurements shall be carried out at the receptor over an extended period of time, 2 hours. The measured noise levels will be adjusted to account for lunchtime and morning and afternoon breaks to derive the corresponding 10 hour daytime noise levels. Depending on the proportion of working time and break time during the 2 hour monitoring period, the adjustment would be made to derive a proxy 10 hour noise level that fairly represents the proportion of working time and break time across a full working day. Breaks are taken at set times rather than staggered, which allows the adjustment to be representative. These 10 hour daytime noise levels will be compared with the planning condition noise limits. The monitoring period of 2 hours and the subsequent adjustment have been agreed with the Local Planning Authority as a suitable time to allow for a reasonable judgement about the exact cause(s) of the elevated noise level and its characteristics. It is agreed that this measurement shall be sufficient to ascertain if the 10 hour working day limit is exceeded or not.

3) If at this point, based on the minimum 2 hours of additional (adjusted) measurements, the approved limits over the 10 hour working day are not exceeded, no further action shall be taken.

4) If, based on the minimum 2 hours of additional (adjusted) measurements, the approved limits over the 10 hour working day are exceeded, the activity(ies) that are deemed to be responsible for the exceedence shall cease (as per Planning Condition 19), the Noise Monitoring Steering Group shall be informed in writing, and a scheme for reduction of the noise levels shall be developed (this scheme will depend on the activity/location of the noise source and may comprise for example the provision of temporary shielding or the separation of noisy activities).

5) Following implementation of the noise reduction scheme and resumption of the identified site activities, further noise measurements shall be carried out at the receptor over another 2 hour period (as described in point 2 above including adjustment for breaks) to confirm and provide noise monitoring evidence that noise levels are below the approved limit over the 10 hour working day.

6) If the approved limit of the 10 hour working day is not exceeded, no further action shall be taken except that the noise monitoring reporting sheet shall be amended with details of the actions taken and the resultant outcome. The Noise Monitoring Steering Group shall be advised in writing within 48 hours of the completion of the further monitoring.

7) If the approved limit over the 10 hour working day is still exceeded, the activity(ies) shall cease and the scheme for the reduction of noise levels shall be revised further to investigate whether further noise reduction is possible. If this is not practicable the Noise Monitoring Steering Group should be informed and will meet to decide on how to proceed. The activity(ies) should not continue until the steering group have decided upon a course of action, as per Planning Condition 19.

As mentioned above, the Local Authority would also be at liberty to monitor noise levels and/or investigate noise complaints made by members of the public through the course of undertaking their statutory duties. If necessary, the Local Authority could take enforcement action under Planning Condition 19.

5 NOISE MONITORING DURING COMMISSIONING AND OPERATION OF THE FACILITY

5.1 Receptor Locations

The Section 106 Agreement and Planning Condition 31 require noise monitoring of the operational facility. Noise monitoring will also be undertaken during commissioning.

The receptor locations employed in the operational noise model, as reported in the Environmental Statement, are shown in Figure A1 in Appendix A of this Noise Management Plan. This Figure is a slightly modified version of Figure 14.2 from the Environmental Statement.

The proposed off-site receptor locations to be employed for noise monitoring during operation of the facility are a subset of those shown in Appendix A and are listed in Table 5.1. These receptors provide a good representation of the closest receptors in each direction from the EfW CHP facility. The proposed receptor locations will require agreement with the Noise Monitoring Steering Group (Item 5 in Table 2.1). Also listed in Table 5.1 are a set of on-site monitoring locations to be employed in parallel with the off-site receptor locations.

TABLE 5.1: PROPOSED RECEPTOR LOCATIONS-OPERATION

Receptor	Address
R3	13-15 Savage Road, PL5 1BP
R15	1 – 12 Talbot Gardens, PL5 1BU
R20	514 Wolseley Road, PL5 1BE
R22	22 Hamoaze Avenue, PL5 1BQ
A	On-site monitoring location
B	On-site monitoring location
C	On-site monitoring location

5.2 Measurement Methodology

During commissioning, within three months of the completion of the commissioning phase of the facility, and at six monthly intervals thereafter, noise measurements shall be undertaken at the site for a continuous 24 hours period by a competent person during suitable weather conditions. A competent person is defined as someone holding an Institute of Acoustics Diploma, or another recognized qualification in acoustics, with at least 5 years experience in environmental noise measurement and assessment.

It is proposed to monitor noise levels continuously over 24 hours at a set of unmanned on-site receptors, in parallel with short-term noise measurements at the off-site receptors. The off-site measured noise levels will then be correlated with the on-site measurements to provide 24 hour noise profiles at the off-site receptors. This approach is considered preferable to other options, which have significant drawbacks.

Noise monitoring over 24 hours on the street at receptors R3, R15, R20 and R22 would pose serious problems in terms of equipment (and personnel) security. Noise monitoring

would need to be manned and would require a significant input in terms of man hours to complete. This approach is not recommended.

Another alternative would be to arrange access to a set of representative off-site receptors where unmanned noise monitoring equipment could be installed for the 24 hour period. However, this alternative would pose problems in that the receptors could be affected by potentially significant, non-attributable off-site noise sources which could substantially increase the measured noise levels.

The following measurement procedure shall be adhered to:

- Type 1 integrating sound level meters and calibrator shall be employed (the sound level meters shall have calibration certificates dated within the previous 2 years and the calibrator shall have a calibration certificate dated within the previous year).
- The sound level meters shall be calibration checked prior to the measurements and calibration checked following the measurements. The calibration levels shall be noted.
- Prior to the measurements, suitable meteorological conditions shall be confirmed using local weather forecasts.
- Sound level meters, with all-weather protection, shall be installed at locations A, B and C, as listed in Table 5.1 and shown in Appendix A.
- At each on-site location, noise levels shall be logged for a minimum 24 hour period.
- Logged parameters shall comprise $L_{Aeq,T}$ and third octave $L_{eq,T}$ values in contiguous 5 minute intervals.
- At each on-site location, a note of the prevailing noise climate shall be made during installation and retrieval of equipment. This will include a brief description of plant noise and the contribution of noise from other non-site sources.
- At each on-site location, a note of the prevailing meteorological conditions shall be made during installation and retrieval of equipment. If conditions are unsuitable for noise monitoring, the measurements shall be postponed until the following day.
- During the 24 hour period, short-term noise measurements shall be carried out at receptors R3, R15, R20 and R22 as listed in Table 5.1 and shown in Appendix A.
- The short-term noise measurements shall comprise $L_{Aeq,T}$ and third octave $L_{eq,T}$ values in contiguous 5 minute intervals over a period of 60 minutes during the quiet part of the daytime (10:00 to 12:00 and 14:00 to 16:00) and over a period of 60 minutes during the quiet part of the night (01:00 to 03:00). However a degree of judgement will need to be applied when determining the exact timings of the measurements on site.
- At each short-term monitoring location, a note of the prevailing noise climate shall be made. This will include a brief description of plant noise and the contribution of noise from other non-site sources. In particular, any characteristics of the plant noise which may contribute to the application of a penalty to derive the BS 4142 Rating Level shall be noted.
- The guidance for the monitoring of noise levels given in BS4142 and BS7445 shall be followed.

5.3 Assessment Methodology

To derive the Specific Noise Level at each receptor (as defined in BS 4142) for operation of the facility, the following procedure shall be carried out for the daytime, evening and night-time periods.

The measured Overall L_{Aeq} level shall be corrected to remove the contribution of noise sources other than the facility. For example, if the measured noise level with the facility operating is 43 dB L_{Aeq}, and the measured noise level without the facility operating is 40 dB L_{Aeq}, then the corrected noise level for operation of the facility is 43 - - 40 = 40 dB L_{Aeq} , where - - means logarithmic subtraction. This is the Specific Noise Level.

The measured third octave band L_{eq} levels with the facility in operation shall be corrected as for the Overall level above. The resulting noise spectrum (which are the third octave band levels resulting from operation of the facility) shall be assessed for tonality according to the procedure given in BS 7445.

Notes made at each receptor regarding the character of the noise from the facility (e.g. presence of bangs, clicks, clatters or thumps or presence of distinct whine, hiss, screech or hum) shall be consulted.

The outcome of the above process shall be employed to decide whether a +5 dB correction is required. The Rating Level is equal to the Specific Noise Level plus the correction (the latter may be 0 or +5 dB).

The Rating Level shall be compared to the measured background noise level reported in the ES. If the Rating Level exceeds the measured background noise level by more than 5 dB, the agreed actions shall be taken.

5.4 Provision of Noise Comparison Report

Within five working days of the completion of the noise measurements, a Noise Comparison Report shall be provided to the Noise Monitoring Steering Group. The report shall comprise the following;-

- The predicted daytime and night-time Rating Levels at the off-site receptors given in Table 5.1.
- The measured daytime and night-time background noise levels at the off-site receptors given in Table 5.1.
- The measured daytime and night-time Rating Levels at the off-site receptors given in Table 5.1.
- A comparison of the measured daytime and night-time Rating Levels with the predicted daytime and night-time Rating Levels.
- An assessment of the measured daytime and night-time Rating Levels against the measured daytime and night-time background noise levels (the Rating Level shall be less than or equal to background noise level plus 5 dB(A)).
- The identification of any Noise Events, with commentary on the duration and cause (the latter based on a log of site operations during the measurement period).

5.5 Actions Following Occurrence of a Noise Event

Following the occurrence of a Noise Event which, following submission of the Noise Comparison Report to the Noise Monitoring Steering Group, is deemed to require further investigation, the following actions shall be taken:

- If the particular on-site source (or sources) responsible for the Noise Event is not obvious, further noise measurements shall be carried out at the affected receptors, with simultaneous noise measurements on-site, to identify the source (or sources) of that Noise Event.

- In conjunction with the site engineering team, a scheme shall be developed, setting out appropriate mitigation measures to be undertaken by MVV to regularise noise emissions from the Plant, so as to reduce the risk of future Noise Events attributable to the Plant at the relevant Noise Receptors. If there is a Noise Event, as defined in the Section 106 Agreement, then the Noise Mitigation Measures shall include remediation measures within the Site of the Plant and may also include those measures off site which are reasonably deemed by the Local Planning Authority to be necessary to fully overcome the Noise Event. Such remediation measures which include third parties will require their consent. The measures to be taken at the Plant to regularise the noise emissions from the Plant may include the installation of additional noise attenuation materials, barriers or enclosures, remedial maintenance or replacement of equipment that may be exhibiting adverse noise characteristics, the replacement of items of equipment with quieter units where practicable.
- A timetable for implementation of such mitigation measures shall be developed.
- A report shall be submitted to the Noise Monitoring Steering Group, detailing the scheme of noise mitigation measures, with a timetable for implementation.

6 NOISE MONITORING STEERING GROUP DURING OPERATION OF THE FACILITY

6.1 Establishment

The Section 106 Agreement requires that the Noise Monitoring Steering Group be made up of representatives of MVV, the Council's Public Protection Service and the Environment Agency. The members of the Noise Monitoring Steering Group are:

- MVV – Operations Manager
- MVV – Community Liaison Manager
- Plymouth City Council – Public Protection Service
- Environment Agency

Plymouth City Council and the Environment Agency are at liberty to take advice from independent consultants and, with the agreement of the Noise Monitoring Steering Group, invite them to attend meetings of the Noise Monitoring Steering Group.

6.2 Provision of Resources

MVV will provide a meeting place at the EfW CHP facility.

6.3 Frequency of Meetings

Construction

The Noise Monitoring Steering Group will first meet within one calendar month of the first round of construction noise monitoring. Thereafter the Noise Monitoring Steering Group will meet at approximately three monthly intervals.

Commissioning

The Noise Monitoring Steering Group will meet within one calendar month of the first round of commissioning noise monitoring.

Operation

The Noise Monitoring Steering Group will meet within one calendar month of the first round of operational noise monitoring. Thereafter, the Noise Monitoring Steering Group will meet at six monthly intervals, following the provision of the corresponding Noise Comparison Report.

6.4 Provision of Noise Comparison Reports

Within five working days of the completion of a set noise measurements, a Noise Comparison Report shall be provided to the Noise Monitoring Steering Group in advance of its meeting.

6.5 Provision of Noise Mitigation Measures Reports

Within fifteen working days, or such other period as may be agreed, of submission of a Noise Comparison Report to the Noise Monitoring Steering Group, which identifies a Noise Event requiring further investigation, a Noise Mitigation Measures Report shall be provided to the Noise Monitoring Steering Group for approval.

With effect from the date of approval of the Noise Mitigation Measures, MVV shall implement the same and shall use its reasonable endeavours to do so within the timetable specified in the Noise Mitigation Measures Report.

7 OPERATIONAL CONTROLS

7.1 Management and Staff Responsibilities

The Operations manager has overall responsibility to ensure noise from the site is kept to a minimum. The Operations manager is responsible for ensuring the noise limits set by the planning permission are met.

All site staff have a responsibility to ensure noise generated by the site is kept to a minimum, and to report any potential issues or any potential improvements.

7.2 Liaison with Neighbours

Maintaining good relations with the local community is crucial to the successful operation of the facility. The Operations manager is responsible for responding to any issues or concerns raised.

The Local Authority and the local community will be notified in advance of the timing and duration of any works or activities expected to result in unusually high noise levels or any such activities required outside of their normal operating hours, although it should be stressed that such works or activities would not occur regularly.

7.3 Training

The Operations manager must be aware of the site specific issues in this Noise Management Plan.

Relevant personnel shall receive general training on a range of environmental issues on joining the site staff, which includes their responsibility to have an awareness of the need to keep noise to a minimum, and to report any potential issues or improvements.

7.4 Selection of Plant and Equipment

When new plant is to be purchased the relative noise emissions of the various options should be taken into consideration as a factor in the decision making process.

Any additional equipment which is hired and used on site must be in good working order, including, if applicable, an exhaust silencer.

7.5 Maintenance of Plant and Equipment

All items of plant on site shall be maintained in accordance with the planned programme of maintenance and records kept accordingly.

Changes in the level or nature of noise generated by an item of plant can be an indication of a fault, or that an item is nearing the end of its operational life. Site staff have a responsibility to raise any such changes in the normal noise generated by plant on site with the site manager.

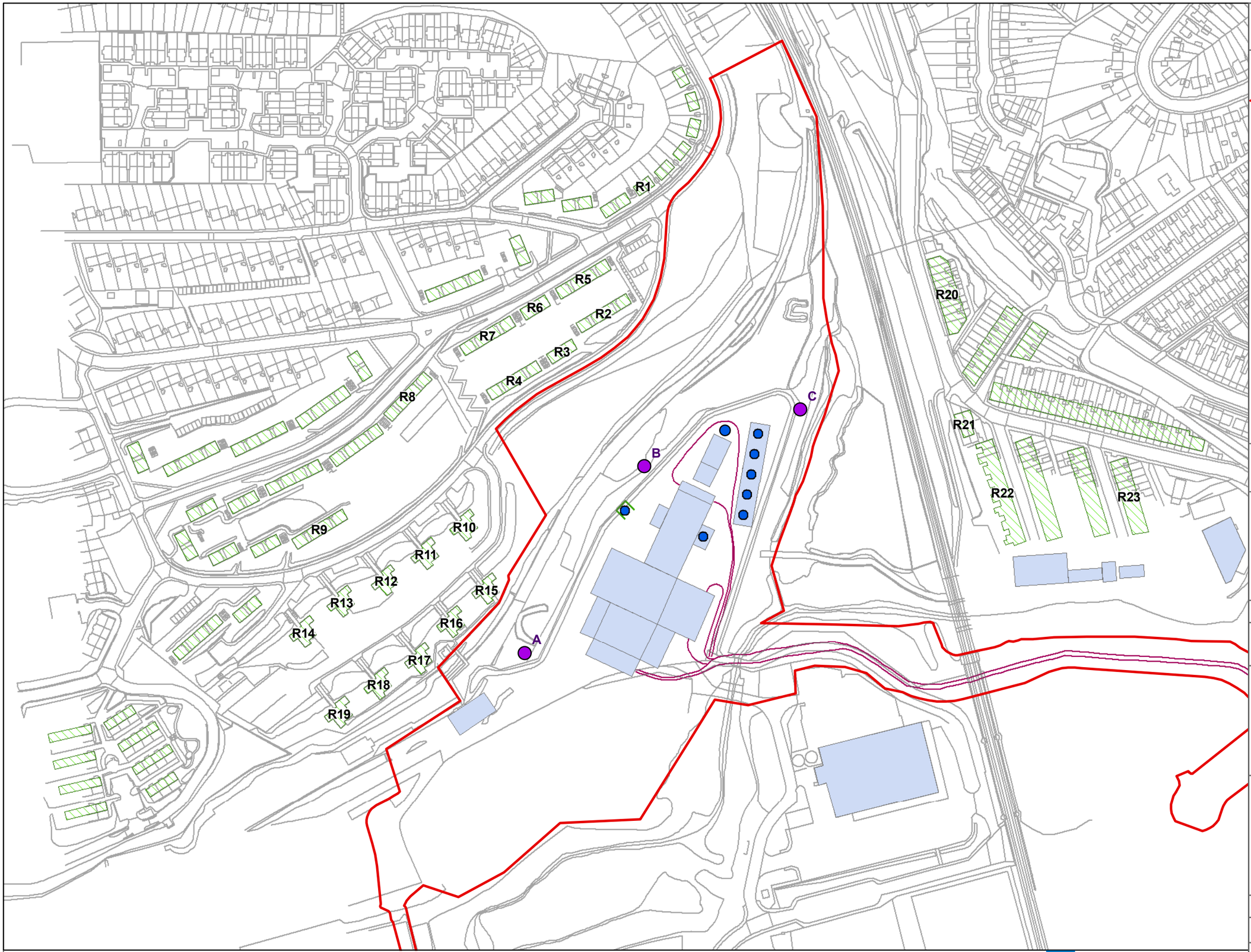
7.6 Good Practice Measures

General good practice measures with regards to minimising noise emissions from the site shall be followed. These will include:

- All doors to site buildings shall be kept shut, unless there is a requirement to have them open.

- Plant in intermittent use shall be shut down in the intervening periods between work, or throttled down to a minimum.
- Excessive revving of vehicle engines shall be avoided.
- The site speed limit shall be observed at all times.
- All vehicles delivering waste or other materials to the site shall follow the designated circulation routes.
- The access road within the site shall be regularly maintained to prevent the development of potholes in order to minimise noise, in particular from empty vehicles leaving the site.

APPENDIX A: FIGURE A.1



THIS DRAWING MAY BE USED FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

NOTES

- Site Boundary
- Operational Noise Monitoring Locations
- Point source

R1-R23 Operational Noise Receptors

Revision Details	By / Check	Date	Suffix

Drawing Status: FINAL

Job Title: EFW CHP FACILITY, NORTH YARD, DEVONPORT

Drawing Title: OPERATIONAL NOISE RECEPTORS

Scale at A3: 1:2,500

Drawn	Approved
EW	AM

Stage 1 Check	Stage 2 Check	Originated	Date
AM	AM	9511NM	09/02/02

Rev

Drawing Number: APPENDIX A. FIGURE A1

MVV Environment Devonport Ltd	Scott Wilson	MVV O&M	Envi Con Envi Con & Plant Engineering GmbH	KIER	SC	Lab	Standardkessel Baumgarte	SAR www.sar.biz	Imtech
Contractor to SWDWP	Environmental & Planning Consultant	EPC Contractor	General Designer	Civil Works	Architect	Air Pollution Control	Boiler & Grate	Electrical & Control	Water Steam System