CORK COUNTY COUNCIL
Comhairle Contae Chorcaí
Water Services South
County Hall
Carrigrohane Road
Cork

APPLICATION FOR WASTE WATER DISCHARGE CERTIFICATE OF AUTHORISATION FOR ROSEMOUNT ESTATE, KILCULLY

December 2009

INDEX

Glossary

BOD	**Biochemical Oxygen Demand**
DBO	**Design, Build & Operate**
DI	**Ductile Iron**
DoEHLG	**Department of Environment, Heritage & Local Government**
LAP	**Local Area Plan**
PE	**Population Equivalent**
PPP	**Public Private Partnership**
RWSS	**Regional Water Supply Scheme**
SAC	**Special Area of Conservation**
SI	**Statutory Instrument**
SLI	**Serviced Land Initiative**
SPA	**Special Protection Area**
SS	**Suspended Solids**
SWRBD	**South Western River Basin District**
uPVC	**Unplasticised Polyvinyl Chloride**
WMUAP	**Water Management Unit Action Plan**
WSIP	**Water Services Investment Programme**
WSS	**Water Supply Scheme**
WWTP	**Waste Water Treatment Plant**
WWW	**Waste Water Works**

Application Form

This is a draft document and is subject to revision.

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Waste Water Discharge Certificate of Authorisation Application Form

EPA Ref. Nº: *(Office use only)* A0351-01

Environmental Protection Agency
PO Box 3000, Johnstown Castle Estate, Co. Wexford
Lo Call: 1890 335599 Telephone: 053-9160600 Fax: 053-9160699
Web: www.epa.ie Email: info@epa.ie

Tracking Amendments to Draft Application Form

Version No.	Date	Amendment since previous version	Reason
V. 1.	12/06/2009	N/A	
V.2.	17/06/2009	Delete reference to Design Build and Operate	To accurately reflect the information required for the small schemes programme
		Delete the requirement to provide contact information for the associated waste water treatment plant	To accurately reflect the information required and the scale of the waste water works
		Replace references to the Water Services investment Programme with the Small Schemes Programme	To accurately reflect the information required for the small schemes programme
		Update references to new legislation	To reflect changes in legislation
		Inclusion of the requirement to submit information on private WWTPs within the agglomeration.	To obtain an overview of all discharges within the agglomeration.

Environmental Protection Agency
Application for a Waste Water Discharge Certificate of Authorisation
Waste Water Discharge (Authorisation) Regulations, 2007.

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ABOUT THIS APPLICATION FORM

This form is for the purpose of making an application for a Waste Water Discharge Certificate of Authorisation under the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) or for the review of an existing Waste Water Discharge Certificate of Authorisation.

The Application Form **must** be completed in accordance with the instructions and guidance provided in the *Waste Water Discharge Certificate of Authorisation Application Guidance Note.* The Guidance Note gives an overview of Waste Water Certificates of Authorisation, outlines the certification application process (including the number of copies required) and specifies the information to be submitted as part of the application. The Guidance Note and application form are available to download from the licensing page of the EPA's website at www.epa.ie.

A valid application for a Waste Water Discharge Certificate of Authorisation must contain the information prescribed in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). Regulation 24 of the Regulations sets out the statutory requirements for information to accompany a Certificate of Authorisation application. The application form is designed in such a way as to set out these questions in a structured manner and not necessarily in the order presented in the Regulations. In order to ensure a legally valid application with respect to Regulation 24 requirements, please complete the Regulation 24 Checklist provided in the following web based tool: http://78.137.160.73/epa_wwd_licensing/

This Application Form does not purport to be and should not be considered a legal interpretation of the provisions and requirements of the Waste Water Discharge (Authorisation) Regulations, 2007. **While every effort has been made to ensure the accuracy of the material contained in the Application Form, the EPA assumes no responsibility and gives no guarantee, or warranty concerning the accuracy, completeness or up-to-date nature of the information provided herein and does not accept any liability whatsoever arising from any errors or omissions.**

Should there be any contradiction between the information requirements set out in the Application Form and any clarifying explanation contained in the accompanying Guidance Note, then the requirements in this Application Form shall take precedence.

PROCEDURES

The procedure for making and processing of applications for waste water discharge Certificates of Authorisation, and for the processing of reviews of such Certificates, appears in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) and is summarised below. The application fees that shall accompany an application are listed in the Third Schedule to the Regulations.

An application for a Certificate of Authorisation must be submitted on the appropriate form (available from the Agency website – http://www.epa.ie/whatwedo/licensing/wwda/) with the correct fee, and should contain relevant supporting documentation as attachments. The application should be based on responses to the form and include supporting written text and the appropriate use of tables and drawings. Where point source emissions occur, a system of unique reference numbers should be used to denote each discharge point. These should be simple, logical, and traceable throughout the application.

The application form is divided into a number of sections of related information. The purpose of these divisions is to facilitate both the applicant and the Agency in the provision of the information and its assessment. **Please adhere to the format as set out in the application form and clearly number each section and associated attachment, if applicable, accordingly.** Attachments should be clearly numbered, titled and paginated and must contain the required information as set out in the application form. Additional attachments may be included to supply any further information supporting the application. Any references made should be supported by a bibliography.

All questions should be answered. Where information is requested in the application form, which is not relevant to the particular application, the words "not applicable" should be clearly written on the form. The abbreviation "N/A" should not be used.

Additional information may need to be submitted beyond that which is explicitly requested on this form. Any references made should be supported by a bibliography. The Agency may request further information (under notices provided for in the Regulations) if it considers that its provision is material to the assessment of the application. Advice should be sought from the Agency where there is doubt about the type of information required or the level of detail.

Information supplied in this application, including supporting documentation will be put on public display and be open to inspection by any person.

Applicants should be aware that a contravention of the conditions of a waste water discharge Certificate of Authorisation is an offence under the Waste Water Discharge (Authorisation) Regulations, 2007.

The provision of information in an application for a waste water discharge Certificate of Authorisation which is false or misleading is an offence under Regulation 35 of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

Note: Drawings. The following guidelines are included to assist applicants:

- *All drawings submitted should be titled and dated.*
- *All drawings should have a unique reference number and should be signed by a clearly identifiable person.*
- *All drawings should indicate a scale and the direction of north.*
- *All drawings should, generally, be to a scale of between 1:20 to 1:500, depending upon the degree of detail needed to be shown and the size of the facility. Drawings delineating the boundary can be to a smaller scale of between 1:1000 to 1:10560, but must clearly and accurately present the required level of detail. Drawings showing the waste water treatment plant location, if such a plant exists, can be to a scale of between 1:50 000 to 1:126 720. All drawings should, however, be A3 or less and of an appropriate scale such that they are clearly legible. Provide legends on all drawings and maps as appropriate.*
- *In exceptional circumstances, where A3 is considered inadequate, a larger size may be requested by the Agency.*

It should be noted that it will not be possible to process or determine the application until the required documents have been provided in sufficient detail and to a satisfactory standard.

SECTION A: NON-TECHNICAL SUMMARY

Advice on completing this section is provided in the accompanying Guidance Note.

A non-technical summary of the application is to be included here. The summary should identify all environmental impacts of significance associated with the discharge of waste water associated with the waste water works. This description should also indicate, where applicable, the hours during which the waste water works is supervised or manned and days per week of this supervision.

The following information must be included in the non-technical summary:

A description of:

- the waste water works and the activities carried out therein,
- the sources of emissions from the waste water works,
- the nature and quantities of foreseeable emissions from the waste water works into the receiving aqueous environment as well as identification of significant effects of the emissions on the environment,
- the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the waste water works,
- further measures planned to comply with the general principle of the basic obligations of the operator, i.e., that no significant pollution is caused;
- measures planned to monitor emissions into the environment.

Supporting information should form **Attachment Nº A.1**

SECTION B: GENERAL

Advice on completing this section is provided in the accompanying Guidance Note.

B.1 Agglomeration Details

Name of Agglomeration:	Rosemount, Kilcully

Applicant's Details

Name and Address for Correspondence

Only application documentation submitted by the applicant and by the nominated person will be deemed to have come from the applicant.

Provide a drawing detailing the agglomeration to which the Certificate of Authorisation application relates. It should have the boundary of the agglomeration to which the Certificate of Authorisation application relates clearly marked in red ink.

Name*:	Cork County Council South
Address:	Floor 5
	County Hall
	Carrigrohane Road
	Cork
Tel:	021-4276891
Fax:	021-4276321
e-mail:	corporate.affairs@corkcoco.ie

*This should be the name of the Water Services Authority in whose ownership or control the waste water works is vested.

*Where an application is being submitted on behalf of more than one Water Services Authority the details provided in Section B.1 shall be that of the lead Water Services Authority.

Name*:	Ms. Patricia Power
Address:	Floor 5
	County Hall
	Carrigrohane Road
	Cork
Tel:	021-4276891
Fax:	021-4276321
e-mail:	patricia.power@corkcoco.ie

*This should be the name of person nominated by the Water Services Authority for the purposes of the application.

Co-Applicant's Details

Name*:	Not Applicable
Address:	
Tel:	
Fax:	
e-mail:	

*This should be the name of a Water Services Authority, other than the lead authority, where multiple authorities are the subject of a waste water discharge Certificate of Authorisation application.

Attachment B.1 should contain appropriately scaled drawings / maps (≤A3) of the agglomeration served by the waste water works showing the boundary clearly marked in red ink. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.2, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
	Y	

B.2 Location of Associated Waste Water Treatment Plant(s)

Give the location of the waste water treatment plant associated with the waste water works, if such a plant or plants exists.

Name*:	Mr. Gerard O'Hora, A/Senior Executive Engineer
Address:	Rosemount
	Kilcully
	Co. Cork
Grid ref (6E, 6N)	167830E, 075754N
Level of Treatment	Secondary

*This should be the name of the person responsible for the supervision of the waste water treatment plant.

Attachment B.2 should contain appropriately scaled drawings / maps (≤A3) of the site boundary and overall site plan, including labelled discharge, monitoring and sampling points. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.1, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
	Y	

B.3 Location of Primary Discharge Point

Give the location of the primary discharge point, as defined in the Waste Water Discharge (Authorisation) Regulation, associated with the waste water works.

Discharge to	Groundwater
Type of Discharge	Percolation Area
Unique Point Code	GW01
Location	See Drawing
Grid ref (6E, 6N)	167830E, 075752N

Attachment B.3 should contain appropriately scaled drawings / maps (≤A3) of the discharge point, including labelled monitoring and sampling points associated with the discharge point. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing the drawings and tabular data requested in sections B.1, B.2, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	Y	

B.4 Location of Secondary Discharge Point(s)

Give the location of **all** secondary discharge point(s)* associated with the waste water works. Please refer to Guidance Note for information on Secondary discharge points.

Discharge to	Not Applicable - there are no secondary discharge points associated with the waste water works
Type of Discharge	
Unique Point Code	
Location	
Grid ref (6E, 6N)	

*Where a septic tank is in existence simultaneous to a package plant within an agglomeration, discharges from the septic tank shall be considered as a secondary discharge.

Attachment B.4 should contain appropriately scaled drawings / maps (≤A3) of the discharge point(s), including labelled monitoring and sampling points associated with the discharge point(s). These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.5, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
		N

B.5 Location of Storm Water Overflow Point(s)

Give the location of **all** storm water overflow point(s) associated with the waste water works.

Type of Discharge	Not Applicable - there are no storm overflow points associated with the waste water works
Unique Point Code	
Location	

Grid ref (6E, 6N)	

Attachment B.5 should contain appropriately scaled drawings / maps (≤A3) of storm water overflow point(s) associated with the waste water works, including labelled monitoring and sampling points associated with the discharge point(s). These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
		N

B.6 Planning Authority

Give the name of the planning authority, or authorities, in whose functional area the discharge or discharges take place or are proposed to take place.

Name:	Cork County Council
Address:	County Hall
	Cork
Tel:	021-4276891
Fax:	021-4276321
e-mail:	corporate.affairs@corkcoco.ie

Planning Permission relating to the waste water works which is the subject of this application:- (tick as appropriate)

has been obtained		***is being processed***	
is not yet applied for		***is not required***	

Local Authority Planning File Reference Nº:	Not known at time of application

Attachment B.6 should contain ***the most recent*** planning permission, including a copy of ***all*** conditions, and where an EIS was required, copies of any such EIS and any certification associated with the EIS, should also be enclosed. Where planning permission is not required for the development, provide reasons, relevant correspondence, *etc.*

Attachment included	Yes	No
		N

B.7 Other Authorities

B.7 (i) Shannon Free Airport Development Company (SFADCo.) area

The applicant should tick the appropriate box below to identify whether the discharge or discharges are located within the Shannon Free Airport Development Company (SFADCo.) area.

Attachment B.7(i) should contain details of any or all discharges located within the SFADCo. area.

Within the SFADCo Area	**Yes**	**No**
		N

B.7 (ii) Health Services Executive Region

The applicant should indicate the **Health Services Executive Region** where the discharge or discharges are or will be located.

Name:	Health Service Executive South
Address:	Aras Slainte
	Wilton Road
	Cork
Tel:	021-4545011
Fax:	021-4927228
e-mail:	elaine.omahony@mailp.hse.ie

B. 8(i) Population Equivalent of Agglomeration

TABLE B.8.1 POPULATION EQUIVALENT OF AGGLOMERATION

The population equivalent (p.e.) of the agglomeration to be, or being, served by the waste water works should be provided and the period in which the population equivalent data was compiled should be indicated.

Population Equivalent	**100**
Data Compiled (Year)	**2009**
Method	**House Count**

B.8 (ii) Pending Development

Where planning permission has been granted for development(s), but development has not been commenced or completed to date, within the boundary of the agglomeration and this development is being, or is to be, served by the waste water works provide the following information;

- information on the calculated population equivalent (p.e.) to be contributed to the waste water works as a result of those planning permissions granted,
- the percentage of the projected p.e. to be contributed by the non-domestic activities, and
- the ability of the waste water works to accommodate this extra hydraulic and organic loading without posing an environmental risk to the receiving waters.

B.8 (iii) FEES

State the relevant Class of waste water discharge as per Regulation 5, and the appropriate fee as per Columns 2 or 3 of the Third Schedule of the Waste Water Discharges (Authorisation) Regulations 2007, S.I. No. 684 of 2007.

Class of waste water discharge	Fee (in €)
PE < 500	3,000

Appropriate Fee Included	Yes	No
		N*

* Please see copy of attached letter sent by registered post to Mr F. Clinton, Programme Manager, Licencing Unit, EPA on December 18th 2009

B.9 Capital Investment Programme

State whether a programme of works has been prioritised for the development of infrastructure to appropriately collect, convey, treat and discharge waste water from the relevant agglomeration. If a programme of works has been prioritised provide details on funding (local or national small schemes programme) allocated to the capital project. Provide details on the extent and type of work to be undertaken and the likely timeframes for this work to be completed.

Attachment B.9 should contain the most recent development programme, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	Y	

B.10 Significant Correspondence

Provide a summary of any correspondence resulting from a Section 63 notice issued by the Agency in relation to the waste water works under the Environmental Protection Agency Acts, 1992 and 2003, as amended by Section 13 of Protection of the Environment Act, 2003.

Attachment B.10 should contain a summary of any relevant correspondence issued in relation to a Section 63 notice.

Attachment included	Yes	No
		N

B.11 Foreshore Act Licences.

Provide a copy of the most recent Foreshore Act licence issued in relation to discharges from the waste water works issued under the Foreshore Act 1933.

Attachment B.11 should contain the most recent licence issued under the Foreshore Act 1933, including a copy of ***all*** conditions attached to the licence and any monitoring returns for the previous 12-month period, if applicable.

Attachment included	Yes	No
		N

SECTION C: INFRASTRUCTURE & OPERATION

Advice on completing this section is provided in the accompanying Guidance Note.

C.1 Operational Information Requirements

Provide a description of the plant, process and design capacity for the areas of the waste water works where discharges occur, to include a copy of such plans, drawings or maps (site plans and location maps, process flow diagrams) and such other particulars, reports and supporting documentation as are necessary to describe all aspects of the area of the waste water works discharging to the aquatic environment. Maps and drawings must be no larger than A3 size.

C.1.1 Storm Water Overflows

For each storm water overflow within the waste water works the following information shall be submitted:

- An assessment to determine compliance with the criteria for storm water overflows, as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows*', 1995 and any other guidance as may be specified by the Agency, and
- Identify whether any of the storm water overflows are to be decommissioned, and identify a date by which these overflows will cease, if applicable.

C.1.2 Pumping Stations

For each pump station operating within the waste water works, provide details of the following:

- Number of duty and standby pumps at each pump station;
- The measures taken in the event of power failure;
- Details of storage capacity at each pump station;
- Frequency and duration of activation of emergency overflow to receiving waters. Clarify the location where such discharges enter the receiving waters.

Attachment C.1 should contain supporting documentation with regard to the plant and process capacity, systems, storm water overflows, emergency overflows, etc., including flow diagrams of each with any relevant additional information. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, D.2, E.3 and F.2.

Attachment included	Yes	No
	Y	

SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT

Advice on completing this section is provided in the accompanying Guidance Note.

Give particulars of the source, location, nature, composition, quantity, level and rate of discharges arising from the agglomeration and, where relevant, the period or periods during which such discharges are made or are to be made.

Details of all discharges of waste water from the agglomeration should be submitted via the following web based link: http://78.137.160.73/epa_wwd_licensing/. ***The applicant should address in particular all discharge points where the substances outlined in Tables 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions' are emitted***

Where it is considered that any of the substances listed in Annex X of the Water Framework Directive (2000/60/EC) or any of the Relevant Pollutants listed in Annex VIII of the Water Framework Directive (2000/60/EC) are being discharged from the waste water works or are seen to be present in the receiving water environment downstream of a discharge from the works (as a result of any monitoring programme, e.g., under the Water Framework Directive Programme of Measures) the applicant shall screen the discharge for the relevant substance.

D.1(i) Discharges to Surface Waters

Details of all discharges of waste water from the agglomeration should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Discharge Point Details', 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions', should be completed for the primary discharge point from the agglomeration and for **each** secondary discharge point, where relevant. Table 'Discharge Point Details' should be completed for **each** storm water overflow. Individual Tables must be completed for each discharge point.

Where monitoring information is available for the influent to the waste water treatment plant this data should also be provided in response to Section D.1(i).

Supporting information should form **Attachment D.1(i)**

Attachment included	**Yes**	**No**
		N

D.1(ii) Discharges to Groundwater

Details of all discharges of waste water from the agglomeration should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Discharge Point Details', 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions', should be completed for the primary discharge point from the agglomeration and for **each** secondary discharge point, where relevant. Table 'Discharge Point Details' should be completed for **each** storm water overflow Individual Tables must be completed for each discharge point.

Where monitoring information is available for the influent to the waste water treatment plant this data should also be provided in response to Section D.1(ii).

Supporting information should form **Attachment D.1(ii)**

Attachment included	**Yes**	**No**
	Y	

D.1 (iii) Private Waste Water Treatment Plants

Provide information on all independently owned/operated private waste water treatment plants operating within the agglomeration. Submit a copy of the Section 4 discharge licence issued under the Water Pollution Acts 1977 to 1990, as amended for each discharge.

D.2 Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

Table D.2:

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING
Point Code Provide label ID's	Point Type (e.g., Primary/ Secondary/ Storm Water Overflow)	Local Authority Name (e.g., Donegal County Council)	Receiving Water Body Type (e.g., River, Lake, Groundwater, Transitional, Coastal)	Receiving Water Body Name (e.g., River Suir)	Protected Area Type (e.g., SAC, candidate SAC, NHA, SPA etc.)	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference

An individual record (i.e. row) is required for each discharge point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, E.3 and F.2.

SECTION E: MONITORING

Advice on completing this section is provided in the accompanying Guidance Note.

E.1 Waste Water Discharge Frequency and Quantities – Existing & Proposed

Provide an estimation of the quantity of waste water likely to be emitted in relation to all primary and secondary discharge points applied for. This information should be included in Table 'Discharge Point Details' via the following web based link: http://78.137.160.73/epa_wwd_licensing/.

Provide an estimation of the quantity of waste water likely to be emitted in relation to all storm water overflows within the agglomeration applied for. This information should be included in Table 'Discharge Point Details' via the following web based link: http://78.137.160.73/epa_wwd_licensing/.

Indicate if composite sampling or continuous flow monitoring is in place on the primary or any other discharge points. Detail any plans and timescales for the provision of composite sampling and continuous flow monitoring.

E.2. Monitoring and Sampling Points

Programmes for environmental monitoring should be submitted as part of the application. These programmes should be provided as Attachment E.2.

Reference should be made to, provision of sampling points and safe means of access, sampling methods, analytical and quality control procedures, including equipment calibration, equipment maintenance and data recording/reporting procedures to be carried out in order to ensure accurate and reliable monitoring.

In determining the sampling programme to be carried out, the variability of the discharge and its effect on the receiving environment should be considered.

Details of any accreditation or certification of analysis should be included. **Attachment E.2** should contain any supporting information.

Attachment included	Yes	No
	Y	

E.3. Tabular data on Monitoring and Sampling Points

Applicants should submit the following information for each monitoring and sampling point:

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
Point Code Provide label ID's assigned in section E of application	Point Type (e.g., Primary, Secondary, Storm Water Overflow)	Monitoring Type M = Monitoring S = Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

An individual record (i.e., row) is required for each monitoring and sampling point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and F.2.

E.4 Sampling Data

Regulation 24(i) of the Waste Water Discharge (Authorisation) Regulations 2007 requires all applicants in the case of an existing discharge to specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application.

Regulation 24(m) requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

Attachment E.4 should contain any supporting information.

Attachment included	Yes	No
	Y	

SECTION F: EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)

Advice on completing this section is provided in the accompanying Guidance Note.

Clear and concise information is required to enable the Agency to assess the existing receiving environment. This section requires the provision of information on the ambient environmental conditions within the receiving water(s) upstream and downstream of any discharge(s) and/or the ambient environmental conditions of the groundwater upgradient and downgradient of any discharges.

Where development is proposed to be carried out, being development which is of a class for the time being specified under Article 24 (First Schedule) of the Environmental Impact Assessment Regulations, the information on the state of the existing environment should be addressed in the EIS. **In such cases, it will suffice for the purposes of this section to provide adequate cross-references to the relevant sections in the EIS.**

F.1. Impact on Receiving Surface water or Groundwater

- Details of monitoring of the receiving surface water should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed for the primary discharge point. Surface water monitoring locations upstream and downstream of the discharge point shall be screened for those substances listed in Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details'. Monitoring of surface water shall be carried out at not less than two points, one upstream from the discharge location and one downstream.

- Details of monitoring of the receiving ground water should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed for the primary discharge point. Ground water monitoring locations upgradient and down gradient of the discharge point shall be screened for those substances listed in Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details'. Monitoring of ground water shall be carried out at not less than two points, one upgradient from the discharge location and one downgradient.

- For discharges from secondary discharge points Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed.

- Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other legislative standards. Submit a copy of the most recent water quality management plan or catchment management plan in place for the receiving water body. Give details of any designation under any Council Directive or Regulations that apply in relation to the receiving surface or groundwater.

- Provide a statement as to whether or not emissions of main polluting substances (as defined in the *Dangerous Substances Regulations S.I. No. 12 of 2001*) to water are likely to impair the environment.

- In circumstances where drinking water abstraction points exist downstream/down gradient of any discharge describe measures to be undertaken to ensure that discharges from the waste water works will not have a significant effect on faecal coliform, salmonella and protozoan pathogen numbers, e.g., Cryptosporidium and Giardia, in the receiving water environment.

- Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on –

  (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive) —

    (i) notified for the purposes of Regulation 4 of the Natural Habitats Regulations, subject to any amendments made to it by virtue of Regulation 5 of those Regulations,

    (ii) details of which have been transmitted to the Commission in accordance with Regulation 5(4) of the Natural Habitats Regulations, or

    (iii) added by virtue of Regulation 6 of the Natural Habitats Regulations to the list transmitted to the Commission in accordance with Regulation 5(4) of those Regulations,

  (b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC[1] in accordance with the procedures laid down in Article 21 of that Directive,

  (c) a special area of conservation within the meaning of the Natural Habitats Regulations, or

  (d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC[2];

  [1]Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ No. L 206, 22.07.1992)

  [2]Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (OJ No. L 103, 25.4.1979)

- This section should also contain details of any modelling of discharges from the agglomeration. Any other relevant information on the receiving environment should be submitted as **Attachment F.1.**

Attachment included	Yes	No
	Y	

F.2 Tabular Data on Drinking Water Abstraction Point(s)

Applicants should submit the following information for each downstream or downgradient drinking water abstraction point. The zone of contribution for the abstraction point should be delineated and any potential risks from the waste water discharge to the water quality at that abstraction point identified.

ABS_CD	AGG_SERVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
Abstraction Code	Agglomeration served	Abstraction Volume in m^3/day	Point Code Provide label ID's	Distance Downstream in meters from Emission Point to Abstraction Point	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

Note: Attach any risk assessment that may have been carried out in relation to the abstraction point(s) listed.

An individual record (i.e. row) is required for each abstraction point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and E.3.

Attachment F.2 should contain any supporting information.

SECTION G: PROGRAMMES OF IMPROVEMENTS

Advice on completing this section is provided in the accompanying Guidance Note.

G.1 Compliance with Council Directives

Provide details on a programme of improvements to ensure that emissions from the agglomeration or any premises, plant, methods, processes, operating procedures or other factors which affect such emissions will comply with, or will not result in the contravention of the;

- Dangerous Substances Directive 2006/11/EC,
- Water Framework Directive 2000/60/EC,
- Birds Directive 79/409/EEC,
- Groundwater Directives 80/68/EEC & 2006/118/EC,
- Drinking Water Directives 80/778/EEC,
- Urban Waste Water Treatment Directive 91/271/EEC,
- Habitats Directive 92/43/EEC,
- Environmental Liabilities Directive 2004/35/EC,
- Bathing Water Directive 76/160/EEC, and
- Shellfish Waters Directive (2006/113/EC).

Attachment G.1 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	Y	

G.2 Compliance with the European Communities Environmental Objectives (Surface Waters) Regulations 2009

Provide details on a programme of improvements, including any water quality management plans or catchment management plans in place, to ensure that improvements of water quality required under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 are being achieved. Provide details of any specific measures adopted for waste water works specified in Phosphorus Measures Implementation reports and the progress to date of those measures. Provide details highlighting any waste water works that have been previously identified as the principal sources of pollution under the Phosphorous Regulations (S.I. No. 258 of 1998).

Attachment G.2 should contain the most recent programme of improvements and any associated documentation requested under Section G.3 of the application.

Attachment included	Yes	No
		N

G.3 Impact Mitigation

Provide details on a programme of improvements to ensure that discharges from the agglomeration will not result in significant environmental pollution.

Attachment G.3 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	Y	

G.4 Storm Water Overflows

Provide details on a programme of improvements to ensure that discharges other than the primary and secondary discharges comply with the definition of 'storm water overflow' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007.

Attachment G.4 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
		N

SECTION H: DECLARATION

Declaration

I hereby make application for a waste water discharge Certificate of Authorisation/revised Certificate of Authorisation, pursuant to the provisions of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this application itself and to any further information or submission, whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Signed by : _____ **Date :** 17th Dec 09
(on behalf of the organisation)

Print signature name: P. POWER

Position in organisation: Director of Services

Agglomeration details

Leading Local Authority	Cork County Council
Co-Applicants	
Agglomeration	Rosemount
Population Equivalent	100
Level of Treatment	Secondary
Treatment plant address	Rosemount, Kilcully, Cork
Grid Ref (12 digits, 6E, 6N)	167830 / 075754 (Verifed using GPS)
EPA Reference No:	

Contact details

Contact Name:	Patricia Power
Contact Address:	Water Services Section Cork County Council Southern Division Carrigrohane Road Cork
Contact Number:	021-4276891
Contact Fax:	021-4276321
Contact Email:	patricia.power@corkcoco.ie

Table D.1(i)(a): EMISSIONS TO SURFACE/GROUND WATERS (Primary Discharge Point)

Discharge Point Code: GW-1

Local Authority Ref No:		
Source of Emission:	WWTP	
Location:	Rosemount, Kilcully, Cork	
Grid Ref (12 digits, 6E, 6N)	167830 / 075754 (Verifed using GPS)	
Name of Receiving waters:	Not Applicable	
Water Body:	Ground Water Body	
River Basin District	South Western RBD	
Designation of Receiving Waters:	Not Applicable	
Flow Rate in Receiving Waters:	0	$m^3.sec^{-1}$ Dry Weather Flow
	0	$m^3.sec^{-1}$ 95% Weather Flow
Additional Comments (e.g. commentary on zero flow or other information deemed of value)	All volume to be emitted above are estimated based on the following: 1/. Per Capita Contributary Rate = 225 ltr/head/day; 2/. Normal Flow = 1DWF; 3/. Maximum FLow = 6DWF; 4/. Annual Discharge = 3DWF.	

Emission Details:

(i) Volume emitted			
Normal/day	22.5 m^3	Maximum/day	135 m^3
Maximum rate/hour	5.6 m^3	Period of emission (avg)	0 min/hr 0 hr/day 365 day/yr
Dry Weather Flow	0.0003 m^3/sec		

Table D.1(i)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of The Emission (Primary Discharge Point)

Discharge Point Code: GW-1

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
pH	pH	Grab	= 7.1	
Temperature	°C	Grab	= 0	
Electrical Conductivity (@ 25°C)	µS/cm	Grab	= 352	
Suspended Solids	mg/l	Grab	= 125	
Ammonia (as N)	mg/l	Grab	= 12.5	
Biochemical Oxygen Demand	mg/l	Grab	= 38	
Chemical Oxygen Demand	mg/l	Grab	= 59	
Total Nitrogen (as N)	mg/l	Grab	= 20.85	
Nitrite (as N)	mg/l	Grab	= 0.397	
Nitrate (as N)	mg/l	Grab	= 2.653	
Total Phosphorous (as P)	mg/l	Grab	= 1.62	
OrthoPhosphate (as P)	mg/l	Grab	= 1.71	
Sulphate (SO_4)	mg/l	Grab	= 33.1	
Phenols (Sum)	µg/l	Grab	< 0.1	

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Table D.1(i)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of The Emission (Primary Discharge Point)

Discharge Point Code: GW-1

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
Atrazine	µg/l	Grab	< 0.01	
Dichloromethane	µg/l	Grab	< 1	
Simazine	µg/l	Grab	< 0.01	
Toluene	µg/l	Grab	< 0.28	
Tributyltin	µg/l	Grab	= 0	
Xylenes	µg/l	Grab	< 0.73	
Arsenic	µg/l	Grab	= 0.3	
Chromium	µg/l	Grab	< 20	
Copper	µg/l	Grab	< 20	
Cyanide	µg/l	Grab	< 5	
Flouride	µg/l	Grab	= 85	
Lead	µg/l	Grab	< 20	
Nickel	µg/l	Grab	< 20	
Zinc	µg/l	Grab	< 20	
Boron	µg/l	Grab	< 20	
Cadmium	µg/l	Grab	< 20	
Mercury	µg/l	Grab	< 0.03	
Selenium	µg/l	Grab	< 2.12	
Barium	µg/l	Grab	= 47.7	

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE E.1(i): WASTE WATER FREQUENCY AND QUANTITY OF DISCHARGE – Primary and Secondary Discharge Points

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m^3/annum)
GW-1	365	24638

TABLE E.1(ii): WASTE WATER FREQUENCY AND QUANTITY OF DISCHARGE – Storm Water Overflows

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m^3/annum)	Complies with Definition of Storm Water Overflow

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING

Primary Discharge Point

Discharge Point Code:	GW-1
MONITORING POINT CODE:	aGW-1d
Grid Ref (12 digits, 6E, 6N)	167200 / 075288 (Verifed using GPS)

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	17/11/09					
pH		= 7.5			Grab	2	Electrochemical
Temperature	= 0				Grab	0.5	Electrochemical
Electrical Conductivity (@ 25°C)		= 257			Grab	0.5	Electrochemical
Suspended Solids		= 11			Grab	0.5	Gravimetric
Ammonia (as N)		< 0.1			Grab	0.02	Colorimetric
Biochemical Oxygen Demand		< 1			Grab	0.06	Electrochemical
Chemical Oxygen Demand		< 21			Grab	8	Digestion & Colorimetric
Dissolved Oxygen	= 0				Grab	0.2	ISE
Hardness (as $CaCO_3$)	= 0				Grab	1	Titrimetric
Total Nitrogen (as N)		= 6.67			Grab	0.5	Digestion & Colorimetric
Nitrite (as N)		< 0.1			Grab	0.1	Colorimetric
Nitrate (as N)		= 5.15			Grab	0.5	Colorimetric
Total Phosphorous (as P)		= 0.097			Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)		= 0.1			Grab	0.02	Colorimetric
Sulphate (SO_4)		< 30			Grab	30	Turbidimetric
Phenols (Sum)		< 0.1			Grab	0.1	GC-MS2

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Additional Comments:	default of 01/01/09 and 0 where no results are available

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)

Primary Discharge Point

Discharge Point Code:	GW-1
MONITORING POINT CODE:	aGW-1d
Grid Ref (12 digits, 6E, 6N)	167200 / 075288 (Verifed using GPS)

Parameter	Results (µg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	17/11/09					
Atrazine		< 0.01			Grab	0.96	HPLC
Dichloromethane		< 1			Grab	1	GC-MS1
Simazine		< 0.01			Grab	0.01	HPLC
Toluene		< 0.28			Grab	0.02	GC-MS1
Tributyltin	= 0				Grab	0.02	GC-MS1
Xylenes		< 1			Grab	1	GC-MS1
Arsenic		< 0.17			Grab	0.96	ICP-MS
Chromium		< 20			Grab	20	ICP-OES
Copper		< 20			Grab	20	ICP-OES
Cyanide		< 5			Grab	5	Colorimetric
Flouride		= 30			Grab	100	ISE
Lead		< 20			Grab	20	ICP-OES
Nickel		< 20			Grab	20	ICP-OES
Zinc		< 20			Grab	20	ICP-OES
Boron		< 20			Grab	20	ICP-OES
Cadmium		< 20			Grab	20	ICP-OES
Mercury		< 0.03			Grab	0.2	ICP-MS
Selenium		= 1.1			Grab	0.74	ICP-MS
Barium		= 42.5			Grab	20	ICP-OES

Additional Comments:	TBT value is 0.02ug/l as Sn default of 01/01/09 and 0 where no results are available , TBT testing not required

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING

Primary Discharge Point

Discharge Point Code:	GW-1
MONITORING POINT CODE:	aGW-1u
Grid Ref (12 digits, 6E, 6N)	168239 / 075997 (Verifed using GPS)

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/09	17/11/09					
pH		= 7.5			Grab	2	Electrochemical
Temperature	= 0				Grab	0.5	Electrochemical
Electrical Conductivity (@ 25°C)		= 356			Grab	0.5	Electrochemical
Suspended Solids		= 9			Grab	0.5	Gravimetric
Ammonia (as N)		< 0.1			Grab	0.02	Colorimetric
Biochemical Oxygen Demand		< 1			Grab	0.06	Electrochemical
Chemical Oxygen Demand		< 21			Grab	8	Digestion & Colorimetric
Dissolved Oxygen	= 0				Grab	0.2	Electrochemical
Hardness (as $CaCO_3$)	= 0				Grab	1	Titrimetric
Total Nitrogen (as N)		= 6.75			Grab	0.5	Digestion & Colorimetric
Nitrite (as N)		< 0.1			Grab	0.1	Colorimetric
Nitrate (as N)		= 5.21			Grab	0.5	Colorimetric
Total Phosphorous (as P)		< 0.05			Grab	0.2	Digestion & Colorimetric
OrthoPhosphate (as P)		< 0.05			Grab	0.02	Colorimetric
Sulphate (SO_4)		< 30			Grab	30	Turbidimetric
Phenols (Sum)	= 0				Grab	0.1	GC-MS2

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Additional Comments:	default of 01/01/09 and 0 where no results are available , TBT testing not required

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)

Primary Discharge Point

Discharge Point Code:	GW-1
MONITORING POINT CODE:	aGW-1u
Grid Ref (12 digits, 6E, 6N)	168239 / 075997 (Verifed using GPS)

Parameter	**Results (µg/l)**				**Sampling method**	**Limit of Quantitation**	**Analysis method / technique**
	01/01/09	17/11/09					
Atrazine	= 0				Grab	0.96	HPLC
Dichloromethane	= 0				Grab	1	GC-MS1
Simazine	= 0				Grab	0.01	HPLC
Toluene	= 0				Grab	0.02	GC-MS1
Tributyltin	= 0				Grab	0.02	GC-MS1
Xylenes	= 0				Grab	1	GC-MS1
Arsenic	= 0				Grab	0.96	ICP-MS
Chromium		< 20			Grab	20	ICP-OES
Copper		< 20			Grab	20	ICP-OES
Cyanide	= 0				Grab	5	Colorimetric
Flouride		= 25			Grab	100	ISE
Lead		< 20			Grab	20	ICP-OES
Nickel		< 20			Grab	20	ICP-OES
Zinc		< 20			Grab	20	ICP-OES
Boron		< 20			Grab	20	ICP-OES
Cadmium		< 20			Grab	20	ICP-OES
Mercury	= 0				Grab	0.2	ICP-MS
Selenium	= 0				Grab	0.74	ICP-MS
Barium		= 38.8			Grab	20	ICP-OES

Additional Comments:	TBT value is 0.02ug/l as Sn default of 01/01/09 and 0 where no results are available , TBT testing not required

Annex 2: Check List For Regulation 16 Compliance

Regulation 16 of the waste water discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007) sets out the information which must, in all cases, accompany a discharge licence application. In order to ensure that the application fully complies with the legal requirements of regulation 16 of the 2007 Regulations, all applicants should complete the following.

In each case, refer to the attachment number(s), of your application which contains(s) the information requested in the appropiate sub-article.

Regulation 16(1) **In the case of an application for a waste water discharge licence, the application shall -**		**Attachment Number**	**Checked by Applicant**
(a)	give the name, address, telefax number (if any) and telephone number of the applicant (and, if different, of the operator of any treatment plant concerned) and the address to which correspondence relating to the application should be sent and, if the operator is a body corporate, the address of its registered office or principal office,		
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,		
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the waste water treatment plant and/or the waste water discharge point or points to which the application relates,		
(d)	state the population equivalent of the agglomeration to which the application relates,		
(e)	specify the content and extent of the waste water discharge, the level of treatment provided, if any, and the flow and type of discharge,		
(f)	give details of the receiving water body, including its protected area status, if any, and details of any sensitive areas or protected areas or both in the vicinity of the discharge point or points likely to be affected by the discharge concerned, and for discharges to ground provide details of groundwater protection schemes in place for the receiving water body and all associated hydrogeological and geological assessments related to the receiving water environment in the vicinity of the discharge.		
(g)	identify monitoring and sampling points and indicate proposed arrangements for the monitoring of discharges and, if Regulation 17 does not apply, provide details of the likely environmental consequences of any such discharges,		
(h)	in the case of an existing waste water treatment plant, specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application,		
(i)	describe the existing or proposed measures, including emergency procedures, to prevent unintended waste water discharges and to minimise the impact on the environment of any such discharges,		
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,		
(k)	give details, and an assessment of the effects, of any existing or proposed emissions on the environment, including any environmental medium other than those into which the emissions are, or are to be made, and of proposed measures to prevent or eliminate or, where that is not practicable, to limit any pollution caused in such discharges,		
(l)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,		
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.		
(n)	Any other information as may be stipulated by the Agency.		
Regulation 16(3) **Without prejudice to Regulation 16 (1) and (2), an application for a licence shall be accompanied by -**		**Attachment Number**	**Checked by Applicant**
(a)	a copy of the notice of intention to make an application given pursuant to Regulation 9,		
(b)	where appropriate, a copy of the notice given to a relevant water services authority under Regulation 13,		
(c)	Such other particulars, drawings, maps, reports and supporting documentation as are necessary to identify and describe, as appropriate -		
(c) (i)	the point or points, including storm water overflows, from which a discharge or discharges take place or are to take place, and		
(c) (ii)	the point or points at which monitoring and sampling are undertaken or are to be undertaken,		
(d)	such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		

Regulation 16(4) **An original application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under Regulation 16(3) in hardcopy or in an electronic or other format as specified by the Agency.**		**Attachment Number**	**Checked by Applicant**
1	An Original Application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under regulation 16(3) in hardcopy or in electronic or other format as specified by the agancy.		
Regulation 16(5) **For the purpose of paragraph (4), all or part of the 2 copies of the said application and associated documents and particulars may, with the agreement of the Agency, be submitted in an electronic or other format specified by the Agency.**		**Attachment Number**	**Checked by Applicant**
1	Signed original.		
2	2 hardcopies of application provided or 2 CD versions of application (PDF files) provided.		
3	1 CD of geo-referenced digital files provided.		
Regulation 17 **Where a treatment plant associated with the relevant waste water works is or has been subject to the European Communities (Environmental Impact Assessment) Regulations 1989 to 2001, in addition to compliance with the requirements of Regulation 16, an application in respect of the relevant discharge shall be accompanied by a copy of an environmental impact statement and approval in accordance with the Act of 2000 in respect of the said development and may be submitted in an electronic or other format specified by the Agency**		**Attachment Number**	**Checked by Applicant**
3	2 CD versions of EIS, as PDF files, provided.		
1	EIA provided if applicable		
2	2 hardcopies of EIS provided if applicable.		
Regulation 24 **In the case of an application for a waste water discharge certificate of authorisation, the application shall –**		**Attachment Number**	**Checked by Applicant**
(a)	give the name, address, telefax number (if any) and telephone number of the applicant and the address to which correspondence relating to the application should be sent and, if the operator of the waste water works is a body corporate, the address of its registered office or principal office	B.1	✓
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,	B.1	✓
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the discharge point or points to which the application relates,	B.3	✓
(d)	state the population equivalent of the agglomeration to which the application relates,	B8(c)	✓
(e)	in the case of an application for the review of a certificate, specify the reference number given to the relevant certificate in the register,	—	✓
(f)	specify the content and extent of the waste water discharge, the level of treatment provided and the flow and type of discharge,	D	✓
(g)	give details of the receiving water body, its protected area status, if any, and details of any sensitive areas or protected areas, or both, in the vicinity of the discharge point or points or likely to be affected by the discharge concerned,	F	✓
(h)	identify monitoring and sampling points and indicate proposed arrangements for the monitoring of discharges and of the likely environmental consequences of any such discharges,	E	✓
(i)	in the case of an existing discharge, specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application,	D	✓
(j)	describe the existing or proposed measures, including emergency procedures, to prevent unauthorised or unexpected waste water discharges and to minimise the impact on the environment of any such discharges,	H	✓
(k)	give particulars of the location of the nearest downstream drinking water abstraction point or points to the discharge point or points associated with the waste water works,	F.2	✓
(l)	give details of any designation under any Council Directive or Regulations that apply in relation to the receiving waters,	—	✓
(m)	give details of compliance with any applicable monitoring requirements and treatment standards,	H	✓
(n)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work,	H	✓
(o)	give any other information as may be stipulated by the Agency, and	—	✓
(p)	be accompanied by such fee as is appropriate having regard to the provisions of Regulations 38 and 39.	B.3(iii)	✓

Attachment A.1 Non-Technical Summary

A.1 NON-TECHNICAL SUMMARY

A.1.0 Introduction

Rosemount Estate is situated in Kilcully, which in turn is located within the overall Dublin Pike area. Dublin Pike is located immediately north and adjacent to the Cork City North Environs. Rosemount is located in the Glennamought River Valley.

Cork County Council South is the Water Services Authority serving Rosemount.

The agglomeration boundary can be seen at Attachment A.1. This boundary encompasses the estate and is within the Dublin Pike Development Plan boundary. The Development Plan boundary is set out in the 2005 Blarney Electoral Area LAP.

A house count undertaken in 2009 has found that the population of Rosemount is approximately 100. The calculated PE to be contributed to the WWW as a result of the planning applications granted since 2005 is 0. The total estimated PE of the agglomeration being served by the WWW is therefore 100. Refer to Attachments B.8(i) and B.8(ii).

A.1.1 Waste Water Works

The WWW serving the agglomeration comprises of a combined collection system draining storm runoff and waste water by gravity to a WWTP which discharges clarified effluent to a percolation bed. The final effluent from the percolation bed drains directly to groundwater.

The collection system is gravity only and there are no pumping stations. There are no secondary discharges from the collection system in the form of emergency overflows from pumping stations. There are no storm overflows from the collection system. All waste water collected drains by gravity to the WWTP.

The WWTP has a capacity of 100PE and provides primary and secondary treatment. The primary treatment is achieved by settlement. The secondary treatment is achieved by aeration of the settled waste water. There is no pumping within the WWTP. There is no emergency overflow upstream of the WWTP. There are therefore no secondary discharges or storm overflows from the WWTP. All treated effluent from the WWTP drains by gravity to the percolation bed where the final effluent drains directly to groundwater at the primary discharge point.

A.1.2 Sources of Emissions

There is one single source of emissions from the WWW to the aqueous environment and that is the primary discharge point referred to above.

A.1.3 Nature & Quantities of Foreseeable Emissions

The nature of foreseeable emissions from the WWW into the receiving aqueous environment is likely to remain unchanged. The waste water currently arising within the agglomeration is domestic in nature. There are currently no industrial or commercial producers of waste water within the agglomeration. Planning objectives for the agglomeration do not include for

any development within the agglomeration that would produce anything other than domestic waste water. Zoning objectives for Rosemount can be seen in the LAP.

The quantities of foreseeable emissions from the WWW into the receiving aqueous environment are unlikely to increase, based on the objectives of the LAP.

It should be noted that no further planning applications will be granted whereby the waste water arising from those applications would discharge to the existing WWTP. Planning permission will only be granted following the upgrading of the existing WWTP.

A.1.4 Significant Effects of Emissions

There are no known significant effects arising from the direct discharge of clarified effluent from the WWW to the receiving aqueous environment.

A.1.5 Proposed Prevention/Reduction of Emissions

There are no proposals at present to prevent or reduce emissions from the WWW serving the Rosemount Agglomeration.

A programme of works had been in place for the refurbishment of the WWTP. However, this refurbishment is subject to the availability of funding.

It is reiterated that no further planning applications will be granted whereby the waste water arising from those applications would discharge to the existing WWTP. Planning permission will only be granted following the upgrading of the existing WWTP.

A.1.6 Further Measures

There are no further measures proposed at present to comply with the general principle of the basic obligations of the operator or to monitor emissions into the aqueous environment.

A.1.7 Summary

Rosemount has an estimated PE of 100 and is served by a combined collection system draining by gravity to a WWTP. The WWTP treats to a secondary standard and treated effluent drains by gravity to a percolation bed. Final effluent from the percolation bed drains directly to groundwater at the primary discharge point. There are no secondary discharge points from the WWW. There are no storm overflows from the WWW.

No increase in PE is foreseeable based on the full development of the agglomeration.

There are no known significant effects arising from the direct discharge of clarified effluent from the WWW to the receiving aqueous environment.

There are proposals at present to prevent or reduce emissions from the WWW. These provide from the refurbishment of the WWTP.

No further planning applications will be granted whereby the waste water arising from those applications would discharge to the existing WWTP.

Planning permission will only be granted following the upgrading of the existing WWTP.

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Agglomeration -- Red

CORK COUNTY COUNCIL
South Cork Division
County Hall,
Carrigrohane Rd.,
Cork.
Tel. 021-4276891
Fax 021-4276321

Rev	By	Date	Description

N.O'Keeffe, B.Eng., C.Eng., Eur.Ing., F.I.E.I., M.I.C.E.,
County Engineer
County Hall, Cork

P.Power
Director of Services
South Cork.

Project:	CERTIFICATE OF AUTHORISATION APPLICATION		
Title:	B1-AGGLOMERATION .		
Location :	Rosemount, Co. Cork		
Surveyed: J.S./T.McM	Approv.: G.O'H		
Drawn: T.McM		Original Scales: 1: 2500	Drawing No:
Signed:		Date: Dec. 2009	A1-Map1

18 Dublin Pike

18.1 DUBLIN PIKE IN CONTEXT

18.1.1. Dublin Pike is located immediately north of and adjacent to Cork City North Environs. The settlement is surrounded by the Metropolitan Green Belt where it is an objective to preserve the largely undeveloped nature of these lands and to reserve lands generally for agriculture, open space or recreation use.

18.1.2. In the overall strategy of this Local Area Plan, Dublin Pike is designated as a **village nucleus** within Metropolitan Cork. The strategic aims for the settlement are to consolidate the existing settlement within its Green Belt setting.

18.1.3. Dublin Pike is a predominantly residential area, but has a number of important services and community facilities, which include a pub and a number of engineering works / builders. St Catherine's Cemetery is located to the west of Dublin Pike and serves the village nucleus itself as well as a much wider area. There are a number of other services in the area, outside of the development boundary, including playing pitches and a church.

18.1.4. Anname Bridge, which is located at the northern end of Dublin Pike is entered in the Record of Protected Structures.

18.1.5. Road access to Dublin Pike is adequate with direct links to the N20 and R614.

18.1.6. The village nucleus is connected to the Cork Harbour and City Water Supply Scheme. There is no public sewer available in Dublin Pike at present. Recent residential development has been served by individual treatment units.

18.2 PLANNING PROPOSALS

18.2.1. The development boundary for Dublin Pike will generally remain as it was in the 1996 Cork County Development Plan (as varied). The village nucleus should remain as a small low-density settlement, given the amount of development which has already occurred, its location within the Metropolitan Green Belt and its proximity to the City.

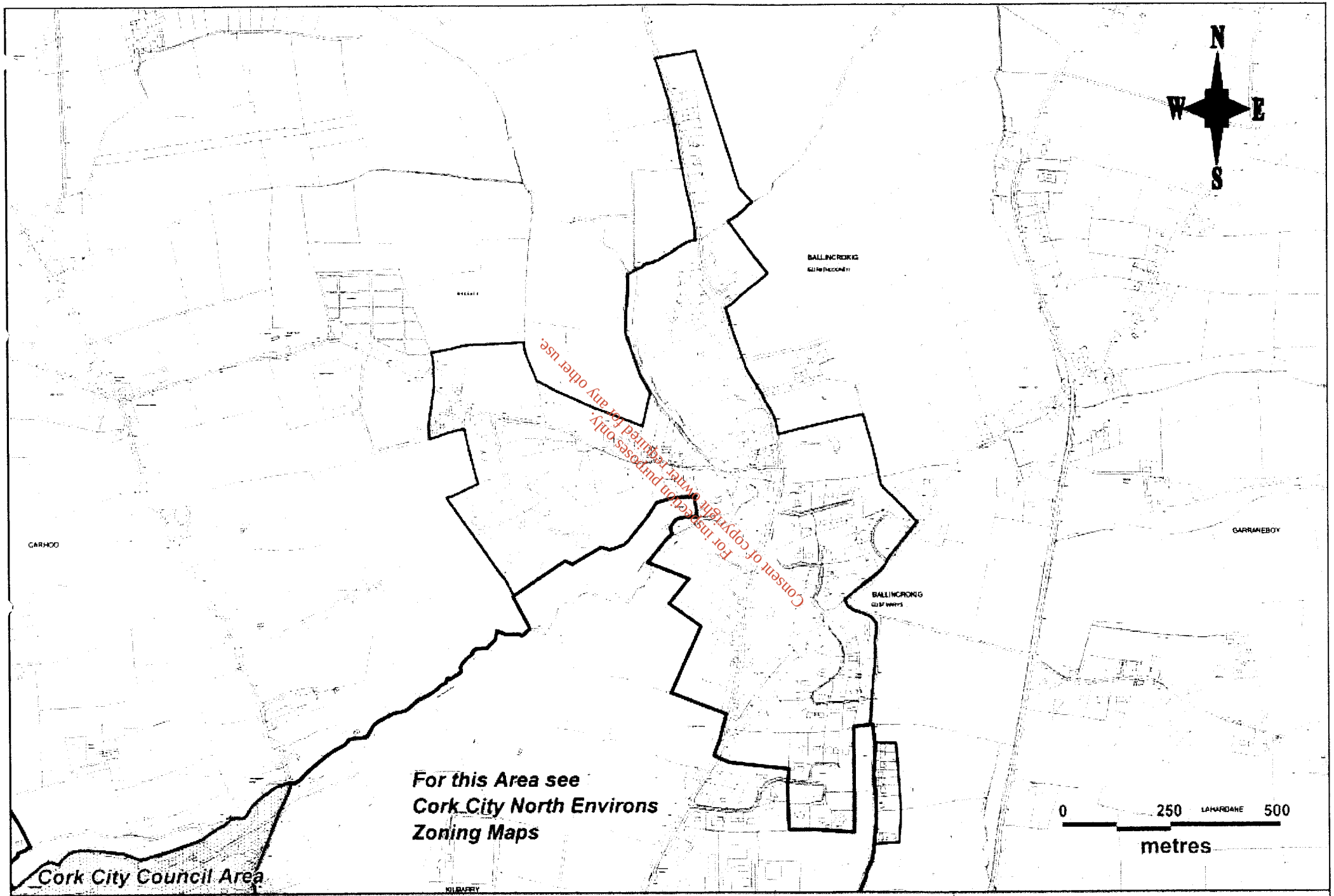
18.2.2. It is not proposed to zone any additional land in Dublin Pike, however within the village boundary further infill development at low densities where appropriate, may be considered.

18.3 SPECIFIC ZONING OBJECTIVES: DUBLIN PIKE

General Objective

18.3.1. The general objective for Dublin Pike is set out in the following table:

Objective No.	General Objective
GEN-01	The lack of a public sewer limits the area to small-scale development. Individual dwellings served by individual septic tanks or individual treatment units may be permitted subject to normal proper planning considerations.



Cork County Council
Local Area Plans

Blarney Electoral Area Local Area Plan

Issue 1
- September 2005

Settlement Map 18
Dublin Pike

Attachment B.1 Agglomeration Boundary

B.1 AGGLOMERATION BOUNDARY

The agglomeration boundary encompasses the estate and is within the Development Plan boundary. The Development Plan boundary is set out in the 2005 Blarney Electoral Area LAP and a copy is included at Attachment B.1. Site boundaries of all of the said planning applications are also included at Attachment B.1.

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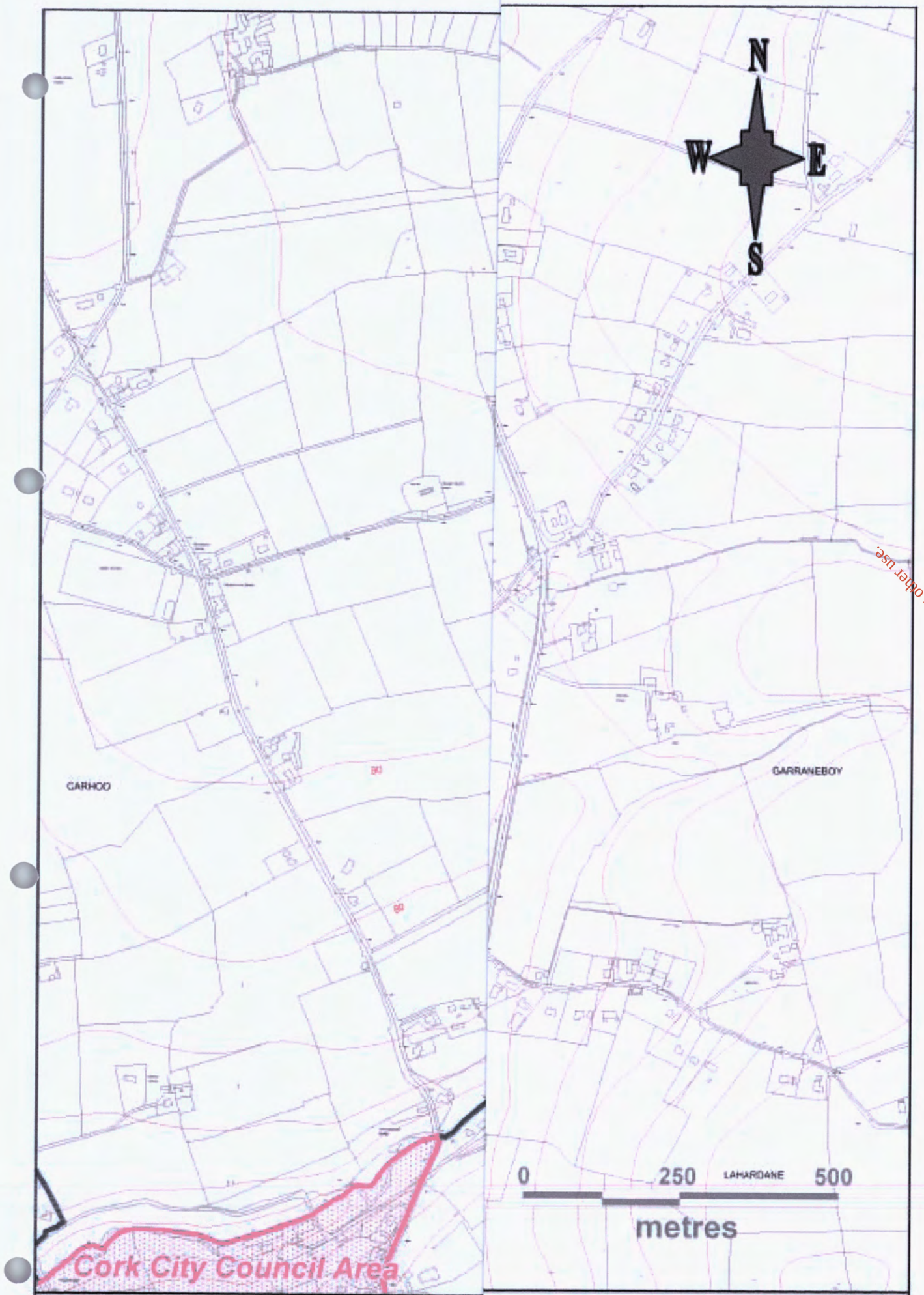
CORK COUNTY COUNCIL
South Cork Division
County Hall,
Carrigrohane Rd.,
Cork.
Tel. 021-4276891
Fax 021-4276321

Rev	By	Date	Description

N.O'Keeffe, B.Eng., C.Eng., Eur.Ing., F.I.E.I., M.I.C.E.,
County Engineer
County Hall, Cork

P.Power
Director of Services
South Cork.

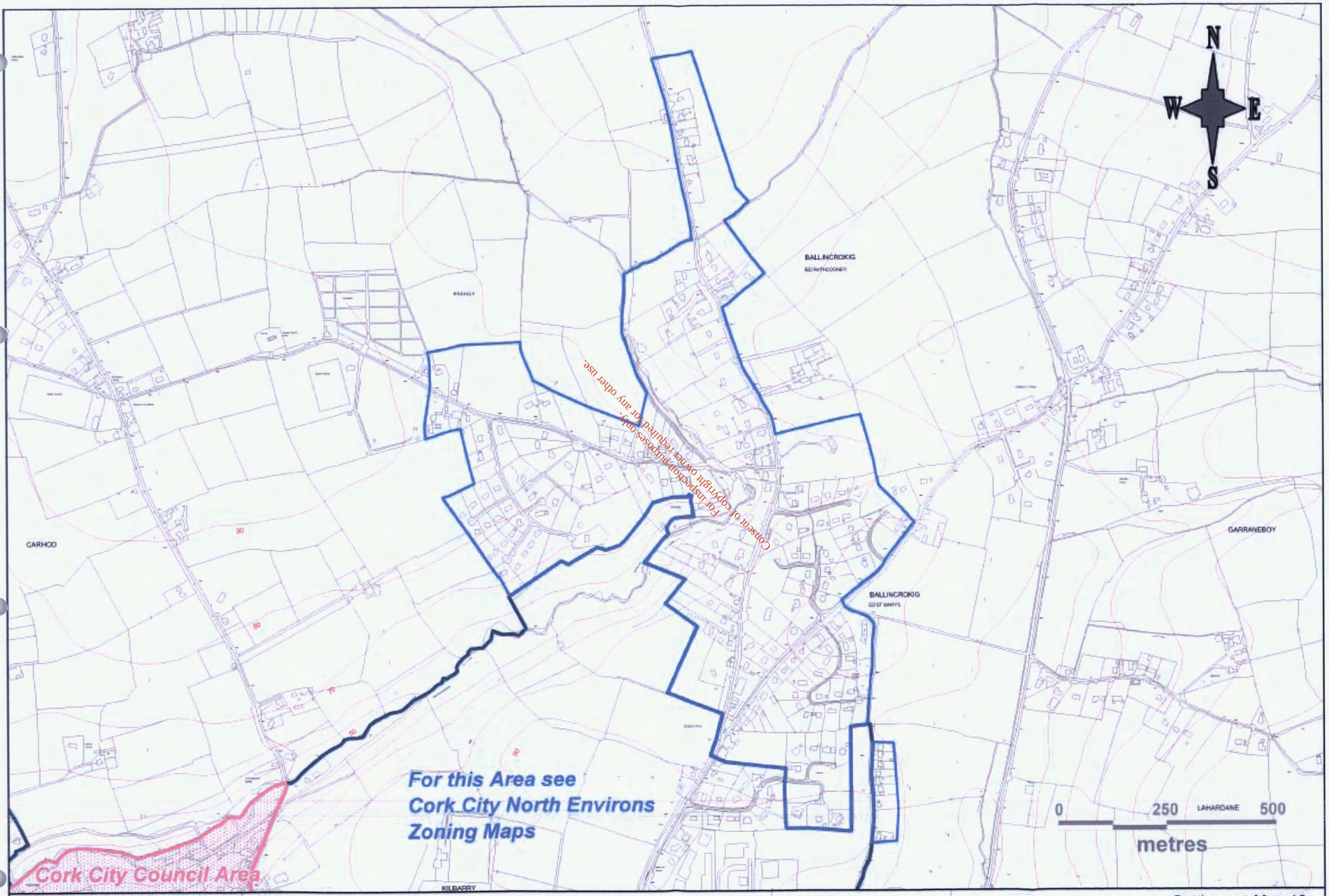
Project:	CERTIFICATE OF AUTHORISATION APPLICATION		
Title:	B1-AGGLOMERATION .		
Location :	Rosemount, Co. Cork		
Surveyed: J.S./T.McM	Approv.: G.O'H		
Drawn: T.McM		Original Scales: 1: 2500	Drawing No:
Signed:		Date: Dec. 2009	B1—Map2



Cork County Council
Local Area Plans

Blarn

Settlement Map 18
Dublin Pike



Cork County Council
Local Area Plans

Blarney Electoral Area Local Area Plan

Issue 1
- September 2005

Settlement Map 18
Dublin Pike

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Sports Ground

N

86.67

85.37

86.93

86.28

85.08

83.62

82.33

78.89

Kilcully House

38Kv

38Kv

Agglomeration -- Red

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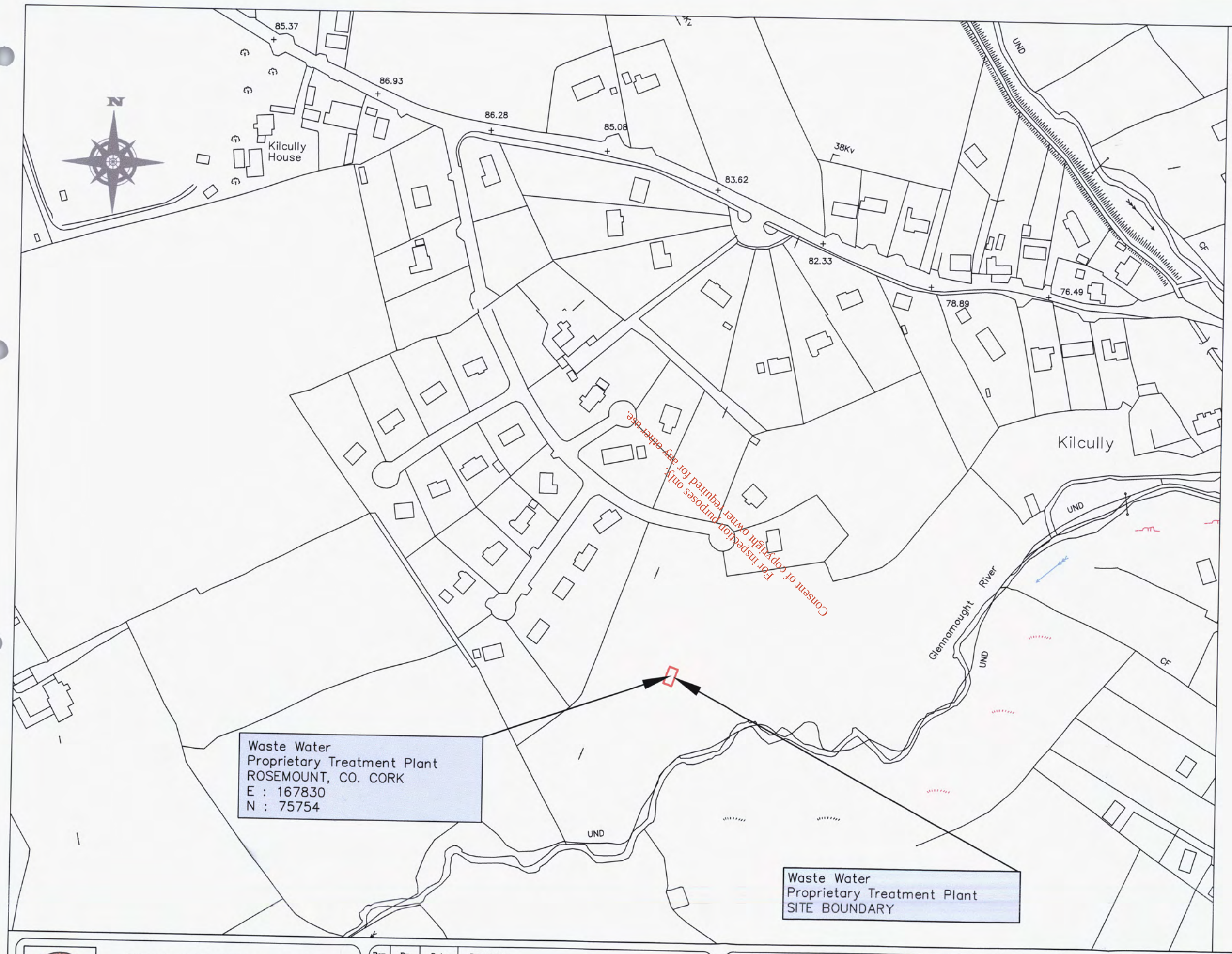
CORK COUNTY COUNCIL
South Cork Division
County Hall,
Carrigrohane Rd.,
Cork.
Tel. 021-4276891
Fax 021-4276321

Rev	By	Date	Description

N.O'Keeffe, B.Eng., C.Eng., Eur.Ing., F.I.E.I., M.I.C.E.,
County Engineer
County Hall, Cork

P.Power
Director of Services
South Cork.

Project:	CERTIFICATE OF AUTHORISATION APPLICATION		
Title:	B1-AGGLOMERATION .		
Location :	Rosemount, Co. Cork		
Surveyed: J.S./T.McM	Approv.: G.O'H		
Drawn: T.McM		Original Scales: 1: 2500	Drawing No:
Signed:		Date: Dec. 2009	B1—Map2



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Site Boundary -- Red

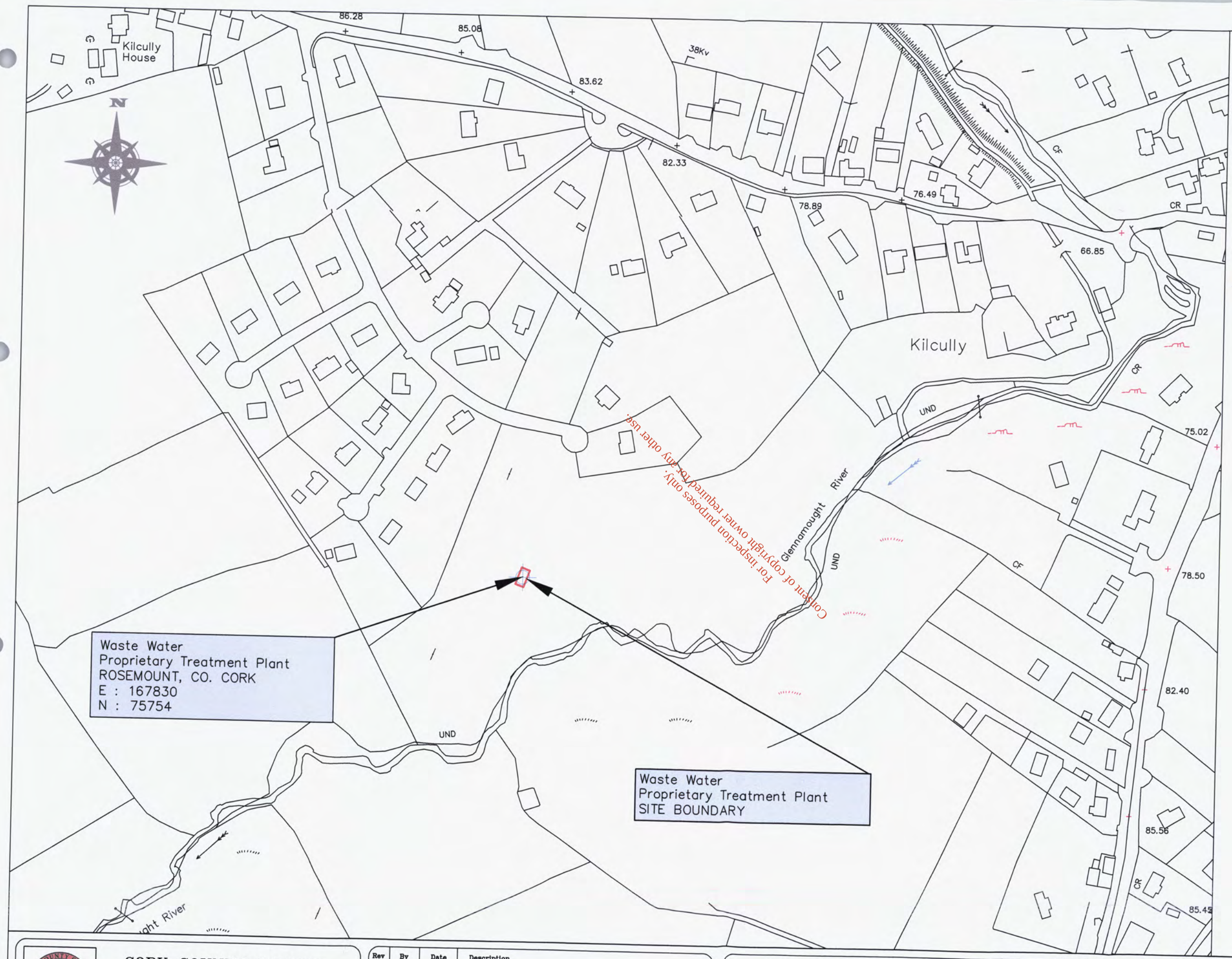
CORK COUNTY COUNCIL
South Cork Division
County Hall,
Carrigrohane Rd.,
Cork.
Tel. 021-4276891
Fax 021-4276321

Rev	By	Date	Description

N.O'Keeffe, B.Eng., C.Eng., Eur.Ing., F.I.E.I., M.I.C.E.,
County Engineer
County Hall, Cork

P.Power
Director of Services
South Cork.

Project:	CERTIFICATE OF AUTHORISATION APPLICATION		
Title:	B2-Site Plan of Waste Water Treatment Plant.		
Location :	Rosemount, Co. Cork		
Surveyed: J.S./T.McM	Approv.: G.O'H		
Drawn: T.McM		Original Scales: 1: 2500	Drawing No:
Signed:		Date: Dec. 2009	B2—Map3



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Site Boundary -- Red

Primary Discharge Point

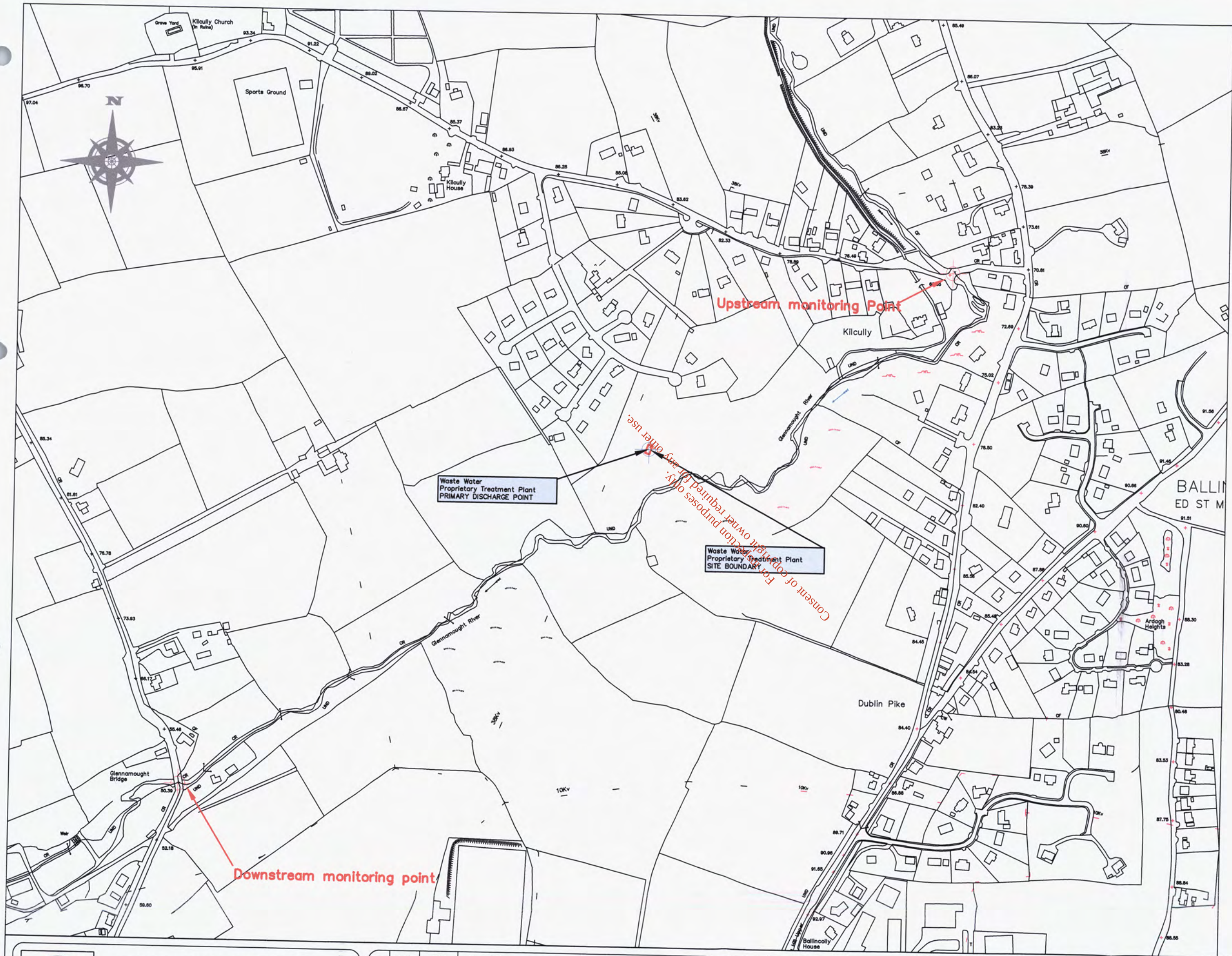
CORK COUNTY COUNCIL
South Cork Division
County Hall,
Carrigrohane Rd.,
Cork.
Tel. 021-4276891
Fax 021-4276321

Rev	By	Date	Description

N.O'Keeffe, B.Eng., C.Eng., Eur.Ing., F.I.E.I., M.I.C.E.,
County Engineer
County Hall, Cork

P.Power
Director of Services
South Cork.

Project:	CERTIFICATE OF AUTHORISATION APPLICATION		
Title:	B2-Site Plan of Waste Water Treatment Plant.		
Location :	Rosemount, Co. Cork		
Surveyed: J.S./T.McM	Approv.: G.O'H		
Drawn: T.McM		Original Scales: 1: 2500	Drawing No:
Signed:		Date: Dec. 2009	B2—Map4



NOTES:

Site Boundary -- Red

Primary Discharge Point

Upstream and Downstream monitoring points

CORK COUNTY COUNCIL
South Cork Division
County Hall,
Carrigrohane Rd.,
Cork.
Tel. 021-4276891
Fax 021-4276321

Rev	By	Date	Description

N.O'Keeffe, B.Eng., C.Eng., Eur.Ing., F.I.E.I., M.I.C.E.,
County Engineer
County Hall, Cork

P.Power
Director of Services
South Cork.

Project:	CERTIFICATE OF AUTHORISATION APPLICATION		
Title:	B2-Site Plan of Waste Water Treatment Plant.		
Location :	Rosemount, Co. Cork		
Surveyed: J.S./T.McM		Approv.: G.O'H	
Drawn: T.McM		Original Scales: 1: 5000	Drawing No:
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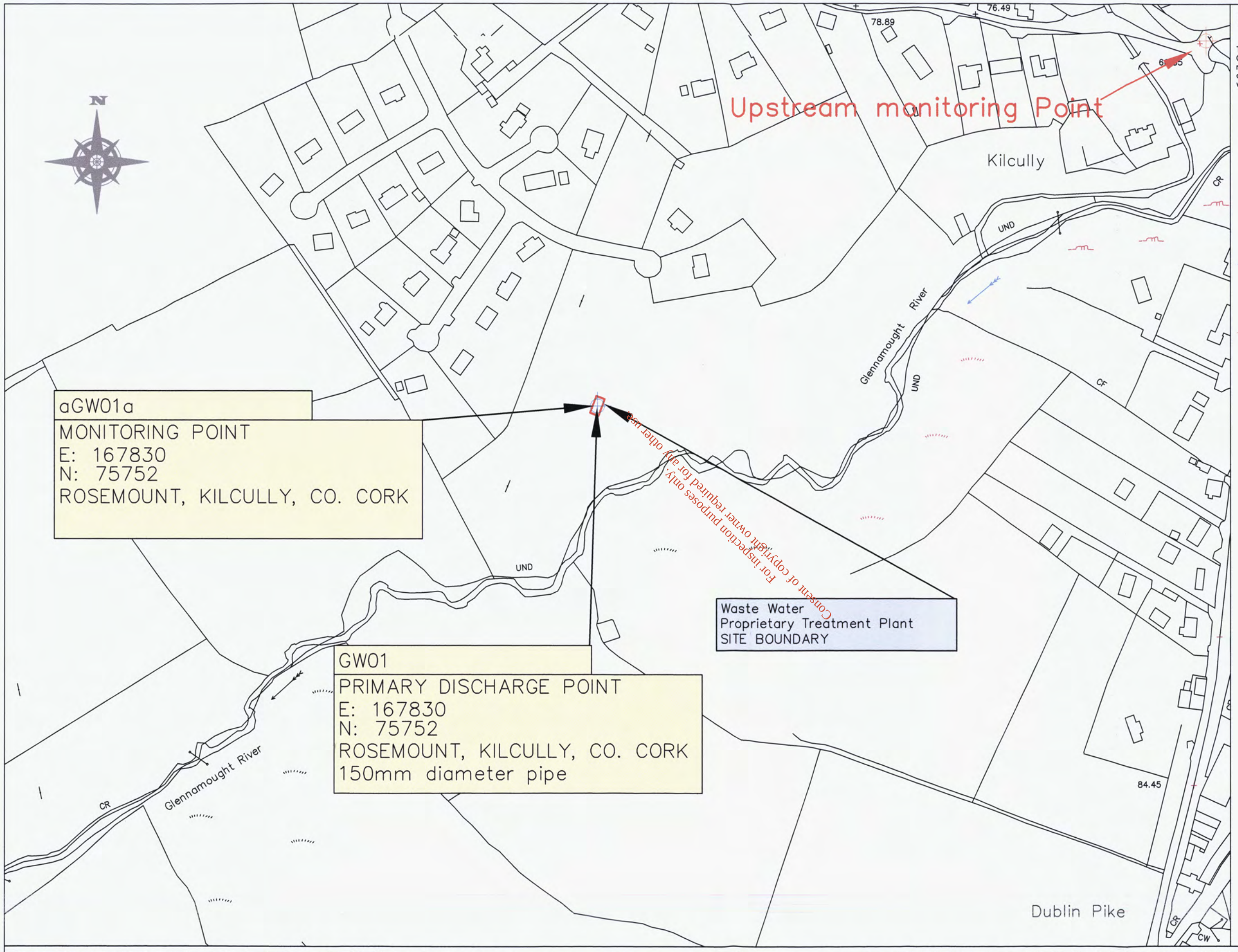

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Site Boundary -- Red

Primary Discharge Point

Monitoring Point

Upstream and Downstream monitoring points

CORK COUNTY COUNCIL
South Cork Division
County Hall,
Carrigrohane Rd.,
Cork.
Tel. 021-4276891
Fax 021-4276321

Rev	By	Date	Description

N.O'Keeffe, B.Eng., C.Eng., Eur.Ing., F.I.E.I., M.I.C.E.,
County Engineer
County Hall, Cork

P.Power
Director of Services
South Cork.

Project:	CERTIFICATE OF AUTHORISATION APPLICATION		
Title:	B2-Primary Discharge Point.		
Location :	Rosemount, Kilcully, Co. Cork		
Surveyed: J.S./T.McM	Approv.: G.O'H		
Drawn: T.McM		Original Scales: 1: 2500	Drawing No:
Signed:		Date: Dec. 2009	B3—Map6

Attachment B.8(i) Population Equivalent of Agglomeration

B.8(i) POPULATION EQUIVALENT OF AGGLOMERATION

A house count undertaken in 2009 has found that the population of Rosemount is approximately 100. The calculated PE to be contributed to the WWW as a result of the planning applications granted since 2005 is 0. The total estimated PE of the agglomeration being served by the WWW is therefore 100.

Attachment B.8(ii) Pending Development

B.8(ii)PENDING DEVELOPMENT

The calculated PE to be contributed to the WWW as a result of planning applications within the agglomeration boundary that have been granted but have not yet been commenced or completed is 0.

The WWTP serving Rosemount is currently at capacity and would be unable to accommodate any additional hydraulic or biological load.

Attachment B.9 Capital Investment Programme

B.9 CAPITAL INVESTMENT PROGRAMME

A programme of works had been in place for the refurbishment of the WWTP serving Rosemount. It is estimated that €17,000 would be required. Funding is currently being sought.

Attachment C.1 Operational Information Requirements

C.1 OPERATIONAL INFORMATION REQUIREMENTS

The WWTP serving the Rosemount Agglomeration consists of a package activated sludge treatment system. This provides primary and secondary treatment. The primary treatment is achieved by settlement. The secondary treatment is achieved by aeration of the settled waste water. Activated sludge is returned to the primary settlement tank as part of the treatment process.

The design capacity of the WWTP is 100PE. The WWTP is in need of refurbishment. The WWTP does not have sufficient capacity to treat any further development within the Agglomeration. Refer to Attachment C.1 for details relating to the WWTP.

C.1.1 Storm Water Overflows

There are no storm water overflows within the WWW serving the Rosemount Agglomeration.

C.1.2 Pumping Stations

There are no pumping stations within the WWW serving the Rosemount Agglomeration.

Biofilter The SAM System

Package Sewage Treatment System

Incorporating
Submerged Aerated Media

Benefits

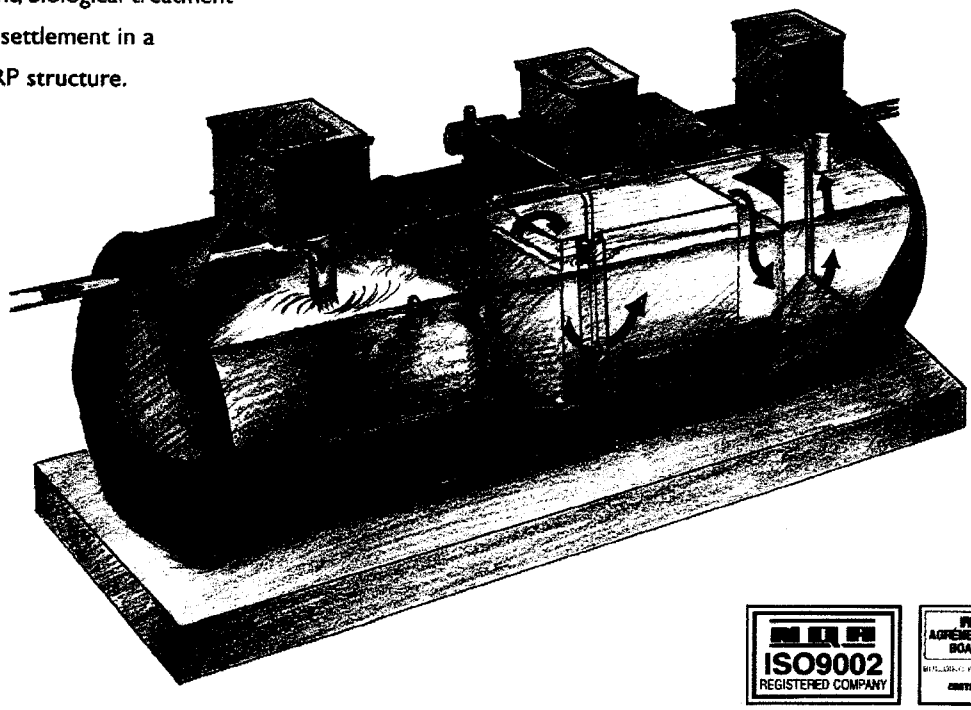
- ***Easy to install***
- ***Low Maintenance***
- ***Environmentally Acceptable***

The Biofilter SAM Package Sewage Treatment units are designed to treat wastewater flows for populations of up to 250 persons, producing an effluent to comply with discharge consent limits for BODs, SS, and nitrified effluents.

The Biofilter SAM system incorporates "Submerged Aerated Media" to provide a high quality biological treatment process. Of compact design, the unit contains primary sludge settlement, biological treatment and final settlement in a single GRP structure.

Applications

- ***Housing Schemes***
- ***Hotels & Restaurants***
- ***Caravan Parks***



ISO9002 REGISTERED COMPANY

Biofilter The SAM System

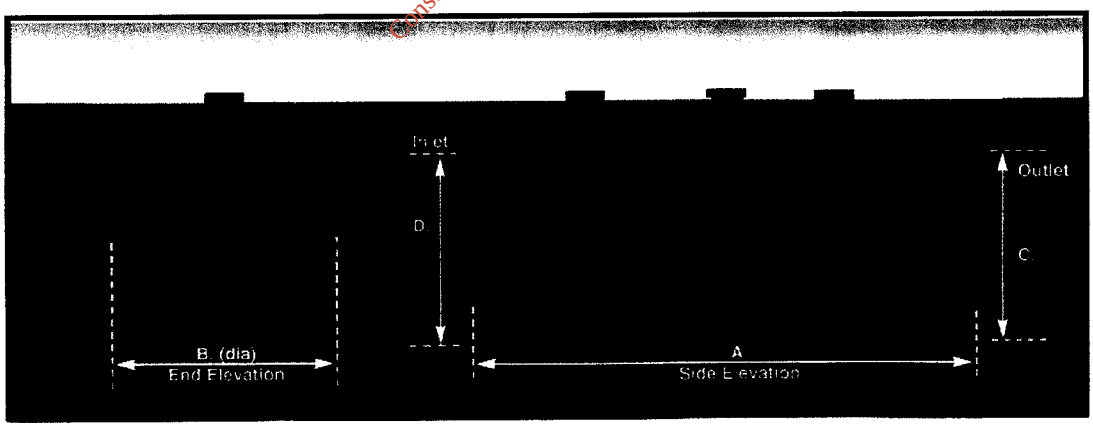
The SAM Process

Sewage entering the SAM unit flows through a two stage primary settlement compartment to ensure sufficient settlement time for gross solids. The separated liquor entering the biological compartment mixes with aerated liquor already undergoing treatment by recirculation through a submerged plastic filter media. Micro-organism activity is encouraged by fine bubble diffusion and full aeration of the media. The treated liquor then displaces into the final baffled settlement compartment before discharging to a receiving watercourse or percolation area. An automatic air lift system returns settled humus sludge from the final compartment back to the primary and biological compartments to assist the process.

The entire process is achieved using a surface blower housed in a weatherproof kiosk. SAM units are designed in accordance with BS 6297 to meet the strict effluent discharge standards set by local authorities, while also giving careful consideration to ease of maintenance and health and safety matters.

Model Ref	Equivalent Population	Average Flow 200 L/h/d	Applied Load BODs 60 g/h/d	Unit Weight Empty	Unit Weight Full	Air Lift Number	Inlet/Outlet Pipe Diameter	Approximate Dimensions (m)			
	Head	m^3/d	kg/d	tonnes	tonnes		mm	A	B	C	D
VES 5	40	8.00	2.40	1.0	16.1	1	150	5.57	2.50	2.00	2.13
VES 6	60	12.00	3.60	1.2	24.2	1	150	3.88	3.50	2.93	3.06
VES 7	80	16.00	4.80	1.6	35.4	1	150	4.43	3.50	2.93	3.06
VES 8	100	20.00	6.00	1.8	41.5	1	150	5.33	3.50	2.93	3.06
VES 9	120	24.00	7.20	2.0	47.0	1	150	5.88	3.50	2.93	3.06
VES 10	130	26.00	7.80	2.2	51.2	1	150	6.37	3.50	2.93	3.06
VES 11	140	28.00	8.40	2.3	55.2	1	150	6.86	3.50	2.93	3.06
VES 12	150	30.00	9.00	2.5	59.3	1	150	7.35	3.50	2.93	3.06
VES 13	170	34.00	10.20	2.8	66.8	2	150	8.36	3.50	2.93	3.06
VES 14	200	40.00	12.00	3.3	78.9	2	150	9.80	3.50	2.93	3.06
VES 15	220	44.00	13.20	3.6	86.8	2	150	10.78	3.50	2.93	3.06
VES 16	250	50.00	15.00	4.1	98.6	2	150	12.25	3.50	2.93	3.06

For larger or smaller applications please contact our sales office.



The company reserves the right to modify the design or amend the dimensions in respect of the equipment described in this leaflet.

Head Office | **FM Environmental Ltd.**
Greenbank Industrial Estate,
Newry, BT34 2PB, N. Ireland
Telephone **+44 [0] 28 302 66616**
From ROI Call **048 302 66616**
Fax **+44 [0] 28 302 63233**
e mail **sales@fmenvironmental.com**
www.fmenvironmental.com

Ireland | **FM Environmental Ltd.**
Pennywell Road,
Limerick,
Ireland
Telephone **00 353 61 318780**
Fax **00 353 61 318784**
e mail **fmenviro@eircom.net**
www.fmenvironmental.com

Malta | **FM Environmental Ltd.**
Water Technology House,
Plejju Street
B'kara, BK13, Malta
Telephone **+356 2149 7566 / 7**
Fax **+356 2149 7561**
e mail **mariod@fmenvironmental.com.mt**
www.fmenvironmental.com.mt

Michael Boyle Design 028 3025 2020

FM SYSTEMS LIMITED

JOB NO:3556

DATE: Dec '97

Kilcully

OPERATION & MAINTENANCE MANUAL

TOM COUGHLAN

MECHANICAL & ELECTRICAL PLANT

General instructions for VES Models 5 - 9

Commissioning - Operating & Maintenance Instructions

Suppliers & Parts List.

Included. Compressor Service Leaflet.
Sewpac information brochure.

Issue 2. 1995

Maintenance Instructions.

Although very little routine maintenance is required for the successful operation of the SEWPAC unit, the following guidance will ensure many years of excellent service from your treatment plant.

As the system uses aerobic biological treatment as a means of purification, toxic substances, strong acid or alkaline mixtures and grease must be excluded from the influent.

Grease traps, included in the influent pipe line feeding the plant will arrest oil and greases before entering the Primary Settlement Tank, however the traps must be regularly checked and cleaned to prevent excessive build up of grease and eliminate obnoxious odours.

The Primary Settlement Tank retains the gross solids discharged during normal operation together with finer solids in the baffled secondary compartment. At regular timed periods these must be removed by suction gully emptier. Obviously, the time between each emptying depends on the use and source of waste, as a general rule this period of time is between 3 - 4 months.

Access for emptying is via the circular manhole located on the top of the unit. When the cover is removed, an inlet dip pipe will be revealed which can be checked at this time to ensure that the inlet is free from trapped debris.

The Bio-zone or Filter centre section may be checked every 6 - 9 months via the manhole access. The centre air lift unit will become visible where a free upward flow of liquid may be checked, this is the aerated / circulated settled sewage undergoing biological treatment, and should be free from odour.

Access to the Final Settlement Tank is gained through the circular manhole. The outlet dip pipe may be checked at this point to ensure free flow operation. Settled sludge, (termed Humus Sludge), is automatically removed daily via an airlift unit on a timed basis set at the control panel.

The sludge removed daily is discharged into the Primary Settlement Tank to co-settle with the incoming Primary solids for removal later.

General cleanliness around the plant and particularly at the discharge point of the final effluent all helps to create good working conditions.

The SEWPAC unit has been designed and selected to fully cope with the maximum flow given at the time of tendering, should the incoming flow increase above this due to changed circumstances, check with Supplier / Distributor to ensure that the dis-charge consent may still be met.

Normal daily operation of the Packaged Sewage Treatment Plant.

As the electrical isolator switch is turned to the `on` position, the compressor immediately starts, feeding air into the Air Manifold located within the Control housing.
Air is fed via a pre-set valve at each outlet to (1) the main air lift mixer and oxygenator and (2) each of the fine bubble diffusers, all located in the Biological compartment. Each of these units run continuously at all times, to fully aerate and recirculate the influent through the submerged filter matrix where the micro organisms come into intimate contact with the settled sewage and oxidise the polluting organic material.
Sewage enters the Primary Tank where settleable solids are contained forming the Primary Sludge for Tanker Disposal at a later stage.
By displacement, the settled Sewage flows into the Biological stage where it undergoes treatment by the action of the micro-organisms, oxidising the organic pollution.
The biological life that colonises the suspended filter matrix, requires the correct and optium conditions to ensure complete removal of the polluting load, the main requirements being food in the form of soluble organic material, measured as B.O.D. (Bio-chemical Oxygen Demand) which indicates the strength of the pollutant and oxygen, in the form of dissolved oxygen which is taken up by the micro-organisms whilst converting the organic material into other forms that reduce the B.O.D. to acceptable limits.
To assist and supply the necessary requirements, the main air lift unit supplies dissolved oxygen in the form of small bubbles that rise in the upward flow as well as lifting the liquid from beneath the filter so preventing deposition and bringing the liquor into intimate contact with the micro-organisms attached to the filter matrix, and also those that are freely suspended in the circulating liquor.
To further aerate the Filter unit, fine bubble membrane diffusers are fitted directly under the matrix which may be used for a dual purpose, firstly, air is fed to each of the aerators by pipes coupled to the Air Manifold via a valved outlet, the air rate being set prior to delivery to site, secondly, should it be necessary to either strip excess bio-mass from the matrix or to create turbulence to remove any material that has found its way into the Bio-stage and settled at the bottom, by closing the valves at the manifold to the main air lift and the other membrane aerator(s), maximum air flow through the on-line aerator(s) will cause sufficient turbulence to dislodge any unwanted material.

Electric / Pneumatic Controls.

Maintenance Instructions / Operation.

A weather proof lockable cover unit houses the control panel and compressor. Ensure that air inlet ports around the fibre glass cover are clear so that air may be freely drawn in at all times to keep the compressor cool and supply compressed air to the treatment plant.

The electric's are housed in a clear front plastic enclosure and access is gained only when isolated by the Mains rotary switch in the `OFF` position.
Under normal circumstances it is not necessary to gain access, but this may be necessary to alter sequence timer or adjust daily timer, isolate electric's before carrying out any changes.

The compressor unit is rated for continuous operation, however the six carbon blades should be changed after the first 5,000 hrs (approx. 7 months) operating time and every 6000 hrs (approx. 9 months) thereafter.
Rotor Blade Changing. Remove the end cover and take out the blade to check. All the blades must have a minimum height (refer to compressor instruction leaflet). Clean the cylinder, replace new blades into the rotor slot with the curved side of the blade in line with the radius of the rotor and direction of rotation. Refit end cover. Before re-starting the compressor, it is advisable to turn the rotor by hand using the motor fan to reposition the blades. To do this the cover can be removed.

Initial Start. Checks for correct voltage and correct rotor direction will have been made during commissioning, and unless complete isolation from the mains and re-connection has been made, it will not be necessary to check rotation again.

Lubrication. The compressor has sealed for life bearings and needs no lubrication. The filter cartridge should be checked and cleaned monthly and replaced once a year depending on operating conditions.

To change filter, remove filter cartridge and gasket. The filter can be cleaned by using low pressure compressed air or by knocking out by hand. Check the gasket and reassemble all parts.
A Rietschle Service Leaflet is included in this operation & maintenance manual which details the parts that require service with illustrated photographs.

Submerged Bio-Filter Air -Lift Unit

The multi-purpose designed air lift is the fundamental unit which is installed centrally within the aerobic filter section.
A fine bubble diffuser, surmounted upon a specially designed support ensures a streamlined flow configuration to the upward circulating stream of liquid, thus intimately mixing oxygen in a shear fusing effect, promoting a highly efficient oxygen transfer between bubble and liquid, necessary for biological oxidation.
The oxygenated liquid flow of effluent undergoing treatment is constantly circulated downwards through the biological filter which carries the polluting liquid and oxygen into contact with the microscopic bacteria adhering to the filter surface where oxidising treatment takes place.
The flow pattern encouraged by the air-lift at the bottom of the filter, ensures that no deposition of solids takes place and that suspended bacteria, in the form of mixed liquor solids, which adds to biomass reducing the polluting load, are fully utilised within the system.
The Submerged Biological Aerated Filter is a fixed film process which has many advantages over traditional activated sludge plants or percolating filters, such as:

(a) an optimisation of the reactor bed.
(b) a full control of the hydraulic regime.
(c) maximum control of the biomass content.

Maintenance requirements.

Access to the air-lift is through the capped manhole above the central filter section.
During the annual maintenance visit, a visual check into the filter compartment to witness that the air-lift is operating is all that is usually necessary, as no mechanical moving parts are fitted.
Should it become necessary to remove the diffuser/locator, all that is required to raise the unit is to lift out by its attached cord secured within the access manhole directly above the air-lift unit.
Following inspection or cleaning, simply lower the unit gently down the central main tube until the locator comes to rest upon the floor of the filter section.
It is ESSENTIAL that air is fed to the air-lift constantly to provide oxygen and recirculation of the liquid within the filter unit.

Suppliers & Parts List

Electrical Control Panel.

(1) Supplier. FM Systems Ltd. Newry.

Main Electrical Components:

(a) 24 Hour programmable timer. Orbis Alpha Unit.
220-250 V a.c. 50/60 Hz.

(b) Circuit Protection Fuse.

(c) Motor Circuit Breaker. Telemechanic.
Rated for Compressor Motor fitted.

(d) Run Timer. Pulsed via relay.
0-8 Mins Set by hand to required operational time for Final Sludge return air-lift.

(e) Timer Relay. Schrack ZG 550 730.

Compressor. (RV blower)	Rietschle. Single or Three phase. c/w Pressure regulating valve, micro fine filter, suction silencer.
Solenoid Valve.	Single phase 220/230 V. 50 Hz. 2 - way suitable for air Energised to OPEN.
Air Lifts.	Supplied by FM Systems Ltd. Aerator/Air-Lift (Filter Section) 177 mm dia Alumina Porous, Rubber seals, Stainless Steel fixing, brass orifice stud, uPVC Base plate.
Air Manifold unit.	Complete with 3 outlets having ball type ON/OFF valves and 12mm Hose Tail Outlets, Filter air-lift and Membrane Diffusers. One outlet for connection to Solenoid valve and one air inlet port.

The following notes are to assist in the commissioning of the Sewpac VES 5 - 9 range of units.

Having correctly installed the unit on Site by following suppliers instructions, the unit should now be at the stage of being full of water in all compartments to their normal working levels and the inlet (influent) and outlet (effluent) pipework coupled ready for the Sewage flow.

The pneumatic and electrical controls wired and the air piped into the unit via the manifold, are ready for the timer controls to be set for initial start up in the following manner :-

Setting Timer for Solenoid Valve Sequence.

The 24 Hour Orbis Timer, located within the Electrical Control Panel, is set by moving the yellow pins outwards at the selected hour(s) the Final Sludge return Air-Lift is required to operate.
When this time is reached during normal operations, a pulsed signal is sent to the Period Timer (again located within the Electrical Control Panel). This timer should be set to the minutes range (setting mode located at the back of the Timer) and the number of minutes set by the hands on the front dial will be the opening time of the air solenoid feeding air to the air lift within the Final Tank.

We suggest that initially the number of `On` periods within 24 hours be set to four, with the timer set to 4 minutes duration giving an overall total of 4 number settings within the 24 hour day and a total 16 minutes return sludge time.

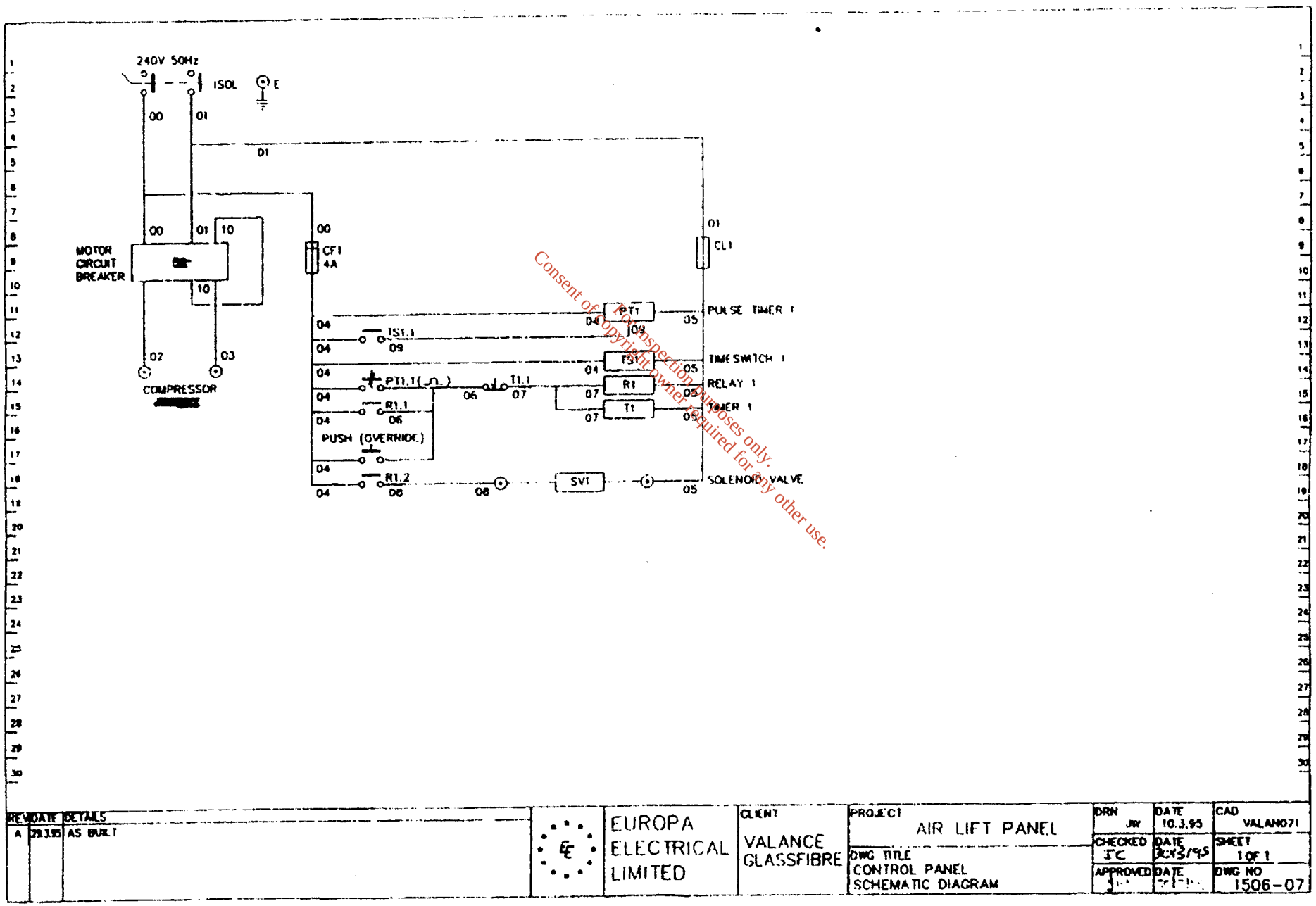
Located on the front of the Orbis Timer is a control switching facility which may be set to `0` for completely Off, to `I ` for permanently ON (test clock) or to ` A ` for auto operation, this is the setting selected for normal operation.

As experience of operation is gained, it may be necessary to increase the number of Sludge withdrawals per day to ensure complete removal from the Final Settlement Tank, this may be accomplished by adding further run hours to the main timer.

By displacement, a flow entering the Filter compartment, displaces a similar volume from the compartment into the Final Settlement Tank (FST).
A baffled inlet, within the FST, directs the suspended solids towards the bottom of the compartment where a specially designed collector retains the solids prior to them being air lifted out as either waste sludge to be co-settled with the Primary solids or a portion can be returned into the Filter compartment as an activated sludge to increase the Bio-mass if necessary.

It is this air lift in the FST that is actuated via the Solenoid valve under the control of the control of the timer which was set as described earlier. Solids and carrying liquor so removed at low flow times, during the nightime period, are beneficial to the system by transferring oxygenated liquor into the PST, also displacing feed into the Filter section at low flow times and removing solids from the FST that, if left for any period of time, will become anaerobic, or if Nitrification has taken place , De-Nitrification will cause the solids to rise so infecting the Final effluent.

From the foregoing, it will be readily seen, that following the commissioning of the SEWPAC unit at the start-up of the system, other than the periodic removal of solids from the Primary Tank, little or no further adjustments may become necessary.



REV	DATE	DETAILS
A	29.3.95	AS BUILT

EUROPA ELECTRICAL LIMITED

CLIENT: VALANCE GLASSFIBRE

PROJECT: AIR LIFT PANEL

DWG TITLE: CONTROL PANEL SCHEMATIC DIAGRAM

DRN JW	DATE 10.3.95	CAD VALAN071
CHECKED JC	DATE 30/3/95	SHEET 1 OF 1
APPROVED	DATE	DWG NO 1506-07

FM SYSTEMS LIMITED

Servicing SEWPAC models VES 5 and over.

If a sludge blanket forms and hinders the free mixing pattern of the influent down through the media in the biofilter chamber, the following process can rectify the problem. First switch off the air supply at the manifold to the central air lift and then remove it. Then if 2 Aerators are installed in the plant, turn 1 of these off. The air increased to the remaining aerator causes sufficient turbulence at the surface to remove sludge which can be dislodged by a soft bristled brush head attached to a flexible stale, a length of 1" dia. PVC pipe proving adequate for this operation. This repeated on the other half of the media surface clears the thicker sludge growth. Brushing lifts the sludge growth into suspension. with both aerators now switched on and the central carborundum air lift still removed, a submersible pump can be lowered down the central pipe to the bottom of the tank. The volume of air passing through the aerators will raise the liquid level in the biofilter so that a vortex will appear. carrying down the tube the sludge solids that have been released so that the submersible pump can lift them out and discharge these into the primary tank.

Once the pumped liquid appears clean use this water jetting from the pump to clear the media surface before replacing the central air lift.

The time to carry out this operation is no more than 20 minutes and done during servicing time would greatly assist the process operation.

Finally the final effluent tank needs very little attention but careful noting of conditions operating within the tank ensures a good effluent. Check any scum that appears on the surface and remove any excess during servicing. Thick brown sludge/scum is usually associated with denitrification, check air lift frequency and increase the number of returns and duration.

Operating Instructions

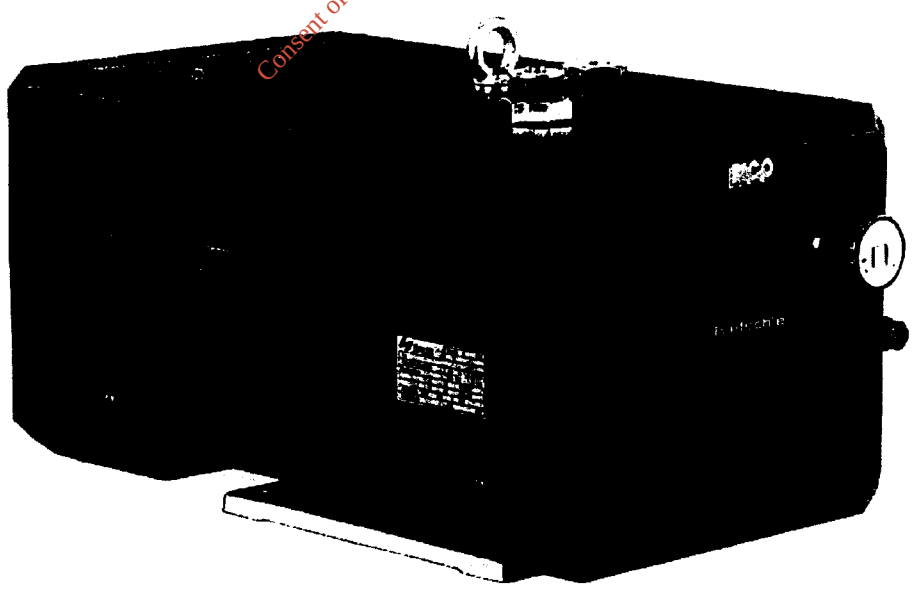
Rietschle

Compressors

DLT

PICO

DLT 6
DLT 10
DLT 15
DLT 25
DLT 40



BE 380

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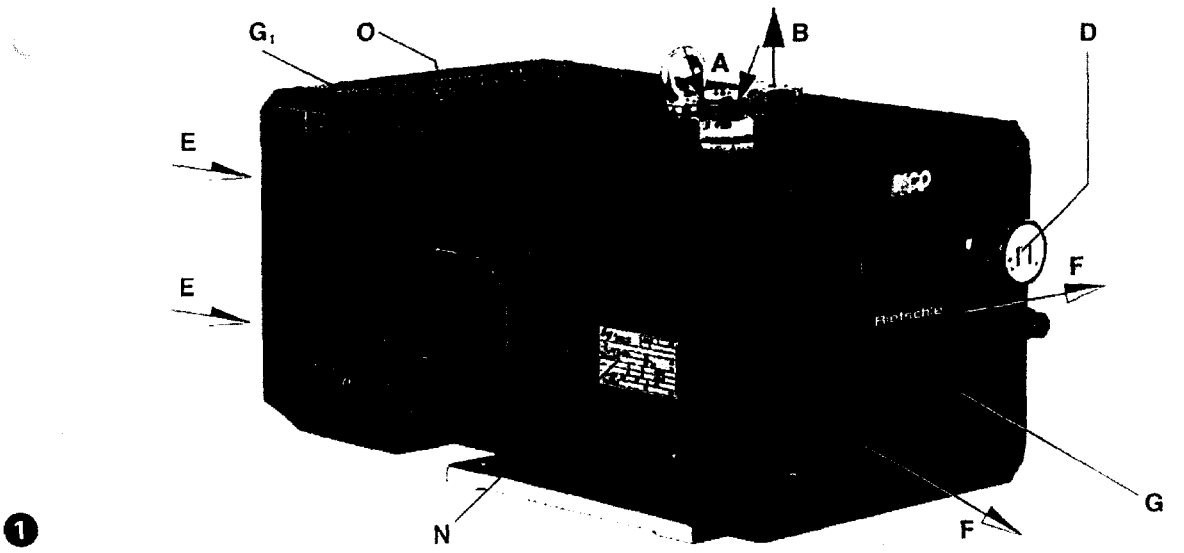
Rietschle
Postfach 1260
D-79642 Schopfheim
Tel. 07622/392-0
Fax 07622/392300
Telex 773225

Rietschle (UK) Limited
PWDC,
Paddock Wood,
Kent,
TN12 6UU
Tel. 01892/835237
Fax 01892/834643



1

Pump Ranges

These operating instructions concern the following dry running rotary vane compressors: Models DLT 6 to DLT 40.
They have nominal capacities of 6, 10, 15, 25 and 40 m³/hr operating on 50 cycles. The pressure limits (bar) are indicated on the data plate (N).
The pumping curves showing capacity against pressure can be found in data sheet D 380.

Description

All models are complete with a pressure connection and a silencer on the inlet. All the air handled is filtered by a built-in micro-fine filter. Excess carbon dust from the carbon blades is also filtered on the exhaust side by built-in filters. The compressor unit is encased in a rugged black plastic sound enclosure. The cooling fan for the DLT is located inside the sound enclosure. On sizes 15, 25 and 40 with the larger motor the compressed air is cooled by an aftercooler. Both the motor and compressor have a common shaft. Pressure can be adjusted to the required levels, however, they are limited to a maximum point.
Optional extras (as required): Non return valve (ZRK), motor starter (ZMS) and pipe connection (ZSA).

Suitability

The units DLT produce pressure up to the maximum limits, which are shown at the data plate (N). They may be operated continuously.

⚠ **The ambient and suction temperatures must be between 5 and 40° C. For temperatures outside this range please contact your supplier.**

These dry running compressors are suitable for use with air of a relative humidity of 30 to 90%.

⚠ **No dangerous mixture (i.e flammable or explosive gases or vapours), no extremely humid air, water vapour, aggressive gases or traces of oil and grease can be handled.**

The standard versions may not be handled in explosion areas. Special Ex-proof versions can be supplied.

⚠ **For all applications where an unplanned shut down of the compressor could possibly cause harm to persons or installations, a corresponding safety backup system must be installed.**

Handling and Setting up (pictures 1 and 2)

There must be a minimum space of 30 cm in front of exhaust grid (G), suction grid (G_1) and housing cover (b) for servicing. The cooling air entry (E) and the cooling air exits (F) must have a minimum distance of 10 cm from any obstruction. The discharged cooling air must not be re-circulated.

The DLT compressors can only be operated reliably if they are installed horizontally.

⚠ **For installations that are higher than 1000 m above sea level there will be a loss in capacity. For further advice please contact your supplier.**

When the compressors are installed on a solid base, they do not need to be fixed down. If the compressors are installed on a base plate we would recommend fitting anti-vibration mounts. This range of compressors are almost vibration free in operation.

Installation (picture 1)

⚠ **The compressors may not be operated without the standard pressure regulating and limiting valves fitted so that the maximum pressure is not exceeded (see data plate).**

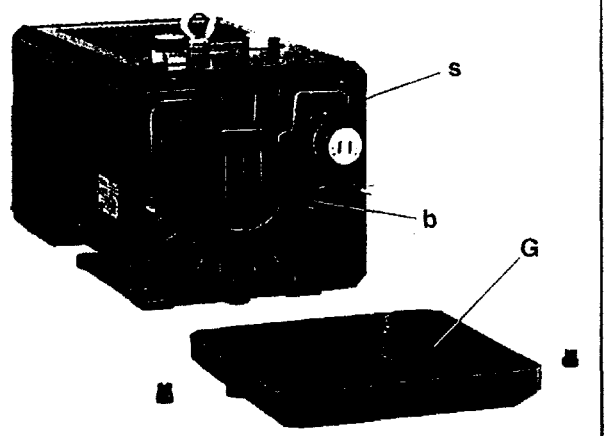
For operating and installation follow any relevant national standards that are in operation.

1. Pressure connection at (B).

⚠ **Long and/or small bore pipework should be avoided as this tends to reduce the capacity of the compressor.**

2. The electrical data can be found on the data plate (N) or the motor data plate. The motors correspond to DIN/VDE 0530 and have IP 54 protection and insulation class F. The connection diagram can be found in the terminal box on the motor (unless a special plug connection is fitted). Check the electrical data of the motor for compatibility with your available supply (voltage, frequency, permissible current etc.).
3. Connect the motor via motor starter. It is advisable to use thermal overload motor starters to protect the motor and wiring. All cabling used on starters should be secured with good quality cable clamps.
   We recommend that motor starters should be used that are fitted with a time delayed trip resulting from running beyond the amperage setting. When the unit is started cold overamperage may occur for a short time.

⚠ **The electrical installation may only be made by a qualified electrician under the observance of EN 60204. The main switch must be planned through the operator.**



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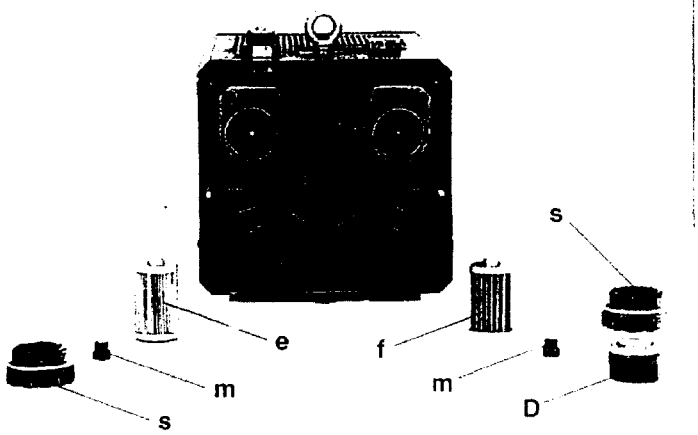


3

Initial Operation (picture ❶)

1. Initially switch the compressor on and off for a few seconds to check the direction of rotation against the direction arrow (O).
   Note: On this initial start the pressure pipework should not be connected. If the compressor runs backwards with the pipework connected a pressure could build up within the housing which could result in damaged rotor blades.
2. Connect the pressure pipe at (B).
   ⚠ **For pipework longer than 3 m we recommend using non-return valves (ZRK), to avoid reverse rotation when the units are switched off.**
3. The requested pressure ranges can be adjusted by turning the pressure regulating valve (D) according to the symbols on the top of the regulating valve.

Potential risks for operating personnel

Noise Emission: The worst noise levels taking into consideration direction and intensity measured according to DIN 45635 part 3 (as per 3. GSGV), are shown in the table at the back. When working permanently in the vicinity of an operating compressor, we recommend wearing ear protection to avoid any damage to hearing.

Maintenance and Servicing

⚠ **When maintaining these units and having such situations where personnel could be hurt by moving parts or by live electrical parts, the compressor must be isolated by totally disconnecting the electrical supply. It is imperative that the unit cannot be re-started during the maintenance operation. Do not maintain a compressor that is at its normal operating temperature as there is a danger from hot parts.**

1. Lubrication

The DLT compresors have bearings that are greased for life. They need not be serviced.

2. Air filtration (pictures ❷ and ❸)

⚠ **The capacity of the compressor can become reduced if the air inlet filters are not maintained correctly.**

The filter cartridges (e) on the inlet (f) for compressed air have to be cleaned depending on the amount of contamination. This is achieved by blowing compressed air from the inside of the cartridge outwards. Even if the cartridges are cleaned their separating efficiency deteriorates. We would therefore recommend exchanging the cartridges every six months.

Changing the filters:

Screw off exhaust grid (G). Remove screwed cover (s) and milled knob (m). Pull filter cartridges (e) and (f) off and clean or exchange. Re-assemble in reverse order.

3. Blades (pictures ❷ and ❹)

Checking blades: DLT 6 - 25 have 6 blades whilst the DLT 40 has 7 blades. The blades have a low but permanent wear factor.

DLT 6, DLT 10 and DLT 15: first check after 7,000 operating hours, thereafter every 1,000 operating hours.

DLT 25 and DLT 40: first check after 5,000 operating hours, thereafter every 1,000 operating hours.

Screw off exhaust grid (G). Screw off housing cover (b) from housing. Remove blades (d) for inspection. All blades must have a minimum height (X):

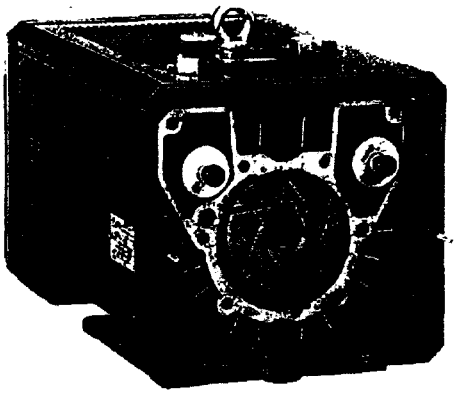
Model	X (minimum height)
DLT 6	20 mm
DLT 10	20 mm
DLT 15	24 mm
DLT 25	24 mm
DLT 40	35 mm

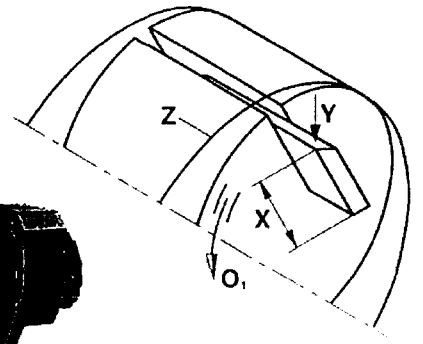
⚠ **Blades must be changed completely.**

Changing blades: If the minimum height is reached, then the whole set of blades should be changed.

Before fitting new blades clean out the housing and the rotor slots with compressed air. Place the blades with the radius outwards (Y) so that the bevel is in the direction of rotation (O_1) and corresponds with the radius of the housing (Z).

Fix end cover (b) and exhaust grid (G). Before restarting the pump check free movement of the blades by turning the motor cooling fan before refitting the cooling grid (G_1).





4

Trouble Shooting:

1. **Motor starter cuts out compressor:**
   Check that incoming voltage and frequency corresponds with the motor data plate.
1.2 Check the connections on the motor terminal block.
1.3 Incorrect setting on the motor starter.
1.4 Motor starter trips too fast.
   Solution: Use a motor starter with a time delay trip (version as per IEC 947-4).
1.5 Filter cartridges on the exhaust side are contaminated.
1.6 The regulating valve is dirty causing excess pressure.

2. **Insufficient pressure capacity:**
2.1 Inlet and/or exhaust filters are obscured.
2.2 Pressure pipework is too long or too small.
2.3 Leak on the compressor or on the system.
2.4 Blades are damaged.

3. **Compressor does not reach the required pressure:**
3.1 Leaks on the compressor or on the system.
3.2 Blades are damaged.
3.3 Motor rating selected too small.

4. **Compressor operates at an abnormally high temperature:**
4.1 Ambient or suction temperature too high.
4.2 Cooling air flow is restricted.
4.3 Problem as per 1.5 and 1.6.

5. **Unit emits abnormal noise:**
5.1 The compressor cylinder is worn.
   Solution: send your complete unit off for repair to the supplier or approved service agent.
5.2 The regulating valve is noisy.
   Solution: replace valve.
5.3 Blades are damaged.

Appendix:

Repair on Site: For all repairs on site an electrician must disconnect the motor so that an accidental start of the unit cannot happen.
All engineers are recommended to consult the original manufacturer or one of the subsidiaries, agents or service agents. The address of the nearest repair workshop can be obtained from the manufacturer on application.
After a repair or before re-installation follow the instructions as shown under the headings "Installation and Initial Operation".

Lifting and Transport: To lift and transport the DLT 15 - DLT 40 the eye bolt on the compressor must be used.
The weight of the compressors are shown in the accompanying table.

Storage: DLT units must be stored in dry ambient conditions with normal humidity. We recommend for a relative humidity of over 80% that the compressor units should be stored in a closed container with the appropriate drying agents.

Disposal: The fast wearing parts (as listed in the spare parts lists) should be disposed of with due regard to health and safety regulations.

Spare part lists: E 380 • DLT 6 - DLT 40

DLT			6	10	15	25	40
Noise level (max.)	dB(A)	50 Hz	62	63	66	67	71
		60 Hz	63	65	68	70	74
Weight (max.)	kg	3 ~	16,1	19,0	27,2	32,0	39,9
		1 ~	17,2	20,5	29,0	34,0	42,8
Length		mm	402	422	476	507	593
Width		mm	209	209	241	241	269
Height		mm	208	208	246	246	272