

Comhairle Contae Chorcaí Cork County Council

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For Attention of: Mr. Gavin Clabby

25th April, 2013

**Re: Licensing Action - Reg 18(3)(b) Notice Sent - 3 for Banteer
Licence (D0448-01)**

A Chara,

I refer to correspondence issued on 11/04/2013 in relation to the above. The following addresses the queries which were raised.

REGULATION 16 COMPLIANCE REQUIREMENTS

Question 1: *Provide a revised drawing clearly detailing the boundary of the agglomeration to which this application relates. Please note the agglomeration boundary shall include all areas served by the sewer network and shall include the wastewater treatment plant. All areas of the agglomeration shall be within the agglomeration boundary.*

Response: The relevant drawings have been revised to incorporate a revision to the agglomeration boundary such that the entire sewer network and the site of the waste water treatment plant are now located within the agglomeration boundary. Copies of the revised drawings are attached. (Drawing No.B1 – Map 4, Agglomeration Boundary Rev.A & Drawing No.B2 – Map 6, Location of Primary Discharge Point SW01 – Banteer Rev.A)

Question 1: *Confirm if there are any pumping stations in the waste water works and provide the following details:*

- *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;*
- *If available, the frequency and duration of activation of emergency overflow to receiving waters. Clarify the location where such discharges enter the receiving waters.*

Response: There is one pumping station at the site of the treatment works and there is another private pumping station in the Banteer agglomeration which is maintained by a private operator and serves Ard na Si Housing Development. Details of pumping stations are as follows:



Pump Station No.1

Location:

Banteer Waste Water Treatment Plant
Forward feed pump sump

Number of Pumps:

2 pumps which operate on a duty/standby basis

Measures in event of Power Failure:

Should power failure occur, all plant at the waste water treatment works will cease to operate. Waste water flows arriving at the treatment works will build up in the forward feed pump sump. When the level in the sump exceeds the level of the inlet sewer, the waste water will back up in the sewer and will overflow a weir at the inlet manhole into the old septic tank system. The septic tank will provide primary settlement prior to discharge to the receiving waters. There is no history of extended power outages in the Banteer area.

Storage Capacity:

There is limited capacity available in the forward feed pump sump. This is estimated as 2.8cu.m. The septic tank on-site is not considered as storage as it does not have the facility to attenuate flows.

Emergency Overflow:

Emergency overflows can occur due to large flows arriving at the treatment works, power failure or pump failure. In this instance overflows are diverted to the septic tank which provides primary treatment. The frequency and duration of activation of the emergency overflow is not available as there is no measurement in place. The discharge from the septic tank combines with the treated effluent from the treatment works and all flows are discharged to the receiving waters via the Primary Discharge

Pump Station No.2

Location:

Ard na Si Housing Development, Banteer Village

Number of Pumps:

2 pumps which operate on a duty/standby basis

Measures in event of Power Failure:

The pump kiosk is fitted with a modem for a dial-out facility in the event of emergency. This dial-out facility is currently not active but can be set-up when required. There is also an external warning light fitted on top of the kiosk which activates in the event of a power failure (or other fault). There is also emergency storage available on site which has approximately 1.5days storage at peak occupancy for the development that the pumping station serves.

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Storage Capacity:

There is a foul sewage storage tank on the site adjacent to the pump-sump with 8,000 gallons (36 cubic metres approximately) capacity. Given that there are only 12/13 houses occupied at present, the tank currently has capacity for approximately 4.5 days storage in the event of a power failure. When the development is complete this tank will provide approximately 1.5 days storage

Emergency Overflow:

There is no overflow from this installation to a receiving water.

A revised non-technical summary which reflects the information supplied in compliance with this notice is attached.

A list of drawing titles, drawing numbers and revision titles and revision status which correlates the revised drawings with the superceded version is also attached.

Is mise le meas,



Billy O' Sullivan,
S/Senior Executive Engineer,
Waste Water Pumping & Treatment Zone 4,
WATER SERVICES DIRECTORATE

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Revised Drawing Schedule, Banteer WWDL, D0448-01.

Drawing No.	Drawing Title.	Revision Status	Revision Description
A1 – Map 1	Location Map Scale 1:50,000 Attachment A1 – Map 1	-	
A1 – Map 2	Site Locations of WWTP & Pumping Stations Attachment A1 – Map 2	A	Inclusion of Ard na Sli Pumping Station
A1 – Map 3	Waste Water Treatment Plant Site Layout Attachment A1 – Map 3	-	
B1 – Map 4	Agglomeration Boundary Attachment B1 – Map 4	A	Change to agglomeration boundary
B2 – Map 5	Wastewater Treatment Plant Site Layout Attachment B2 – Map 5	-	
B3 – Map 6	Location of Primary Discharge Point SW01 – Banteer Attachment B3 – Map 6	A	Change to agglomeration boundary
B3 – Map 7	Locations of Sampling Points Attachment B3 – Map 7	-	
B8 – Map 8	Location of Site Notice Attachment B8 – Map 8		
C1 – Map 9	Wastewater Treatment Plant Site Layout Attachment C1 – Map 9	-	
C1-Drawing 1	Schematic showing Existing Treatment Plant Process Attachment C1 – Drawing 1	-	

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SECTION A: NON-TECHNICAL SUMMARY

Banteer Village is located on the R579, 18km west of Mallow town. The village is well developed from the point of public services such as a primary school, shops and amenities.

The waste water from the Banteer agglomeration is currently treated by a package treatment plant prior to being discharged to the River Blackwater.

The Waste Water Works and the Activities Carried Out Therein

Banteer waste water treatment plant (WWTP) was commissioned in 2000 on the site of the pre-existing septic tank which had previously served the village. The design population equivalent (PE) of the treatment plant is 700.

The main elements of the WWTP are;

1. Inlet works: Forward feed pump sump
2. Secondary treatment: Activated Sludge (Aeration tank with surface aerator followed by a package settlement tank)
3. Septic Tank: provides primary treatment to any emergency overflows
4. Discharge of treated effluent to River Blackwater

The wastewater in Banteer is collected in a partially combined foul sewer network and gravitates to the waste water treatment plant. In more recent years a new housing development called "Ard na Sli" was constructed within the Banteer agglomeration. Planning permission was granted for 38 dwellings within this development but at present only 12/13 houses are occupied. The waste water from this development gravitates to a pumping station on-site from where it is pumped the existing foul sewer network.

Banteer WWTP is operated by a Council sanitary curator whose duties also involve the operation and maintenance of a number of other WWTP's in the area.

The Sources of Emissions from the Works

The pollution load from the Banteer agglomeration arises from the following sources:

- Domestic Population
- Commercial premises
- School & crèche
- Infiltration into sewer network

The waste water from all commercial premises is collected via the public sewer and treated in conjunction with the domestic waste water at the WWTP. There are no industrial waste streams discharging to the sewer network.

The main source of emissions from the treatment works is via a 225mm diameter open outfall pipe to the River Blackwater.

During power outages, the waste stream will back up in the pump sump and inlet sewer at the treatment works and will overflow at the inlet manhole into the pre-existing septic tank which will provide primary treatment before discharging directly to the effluent stream outfall pipe. There is no flow monitoring on the outlet from the pre-existing septic tank and thus the frequencies and quantities of the emissions involved are unknown.

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 waste water treatment plant only treats municipal waste water from the village and its environs via the foul sewer network.

The treatment plant is designed to treat the final effluent to a 25/35 BOS/SS standard for the design p.e. of the plant prior to being discharged to the River Blackwater. The discharge point is located circa 75m north of the treatment plant.

A flow survey was conducted from 14th February 2008 to 4th March 2008 on the flows arriving at the treatment plant. The average flow over this period was 360cu.m/day. It was determined that up to 59% of the flow arriving at the treatment plant was as a result of groundwater infiltration and surface water runoff. Hence the average waste water flow to the treatment plant is in the order of 148cu.m/day. The survey identified a flow to the treatment plant in the range of 200cu.m/day to 600cu.m/day. A flow meter was commissioned on the rising main into the aeration tank in January 2013 and flows to the treatment works are now being recorded and monitored.

The proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the waste water works

The treatment works consist of the following elements:

- Forward feed pump sump
- Aeration tank with floating surface aerator
- Clarifier with air lift sludge return line
- Composite sampler on outlet from WWTP
- Pre-existing septic tank which provides primary treatment to emergency overflows

In the event of power failure, all plant at the waste water treatment works will cease to operate. Waste water flows arriving at the treatment works will build up in the forward feed pump sump. When the level in the sump exceeds the level of the inlet sewer, the waste water will back up in the sewer and will overflow a weir at the inlet manhole into the old septic tank system. The septic tank will provide primary settlement prior to discharge to the receiving waters. There is no history of extended power outages in the Banteer area.

Further measures planned to comply with the general principle of the basic obligations of the operator, i.e. that no significant pollution is caused

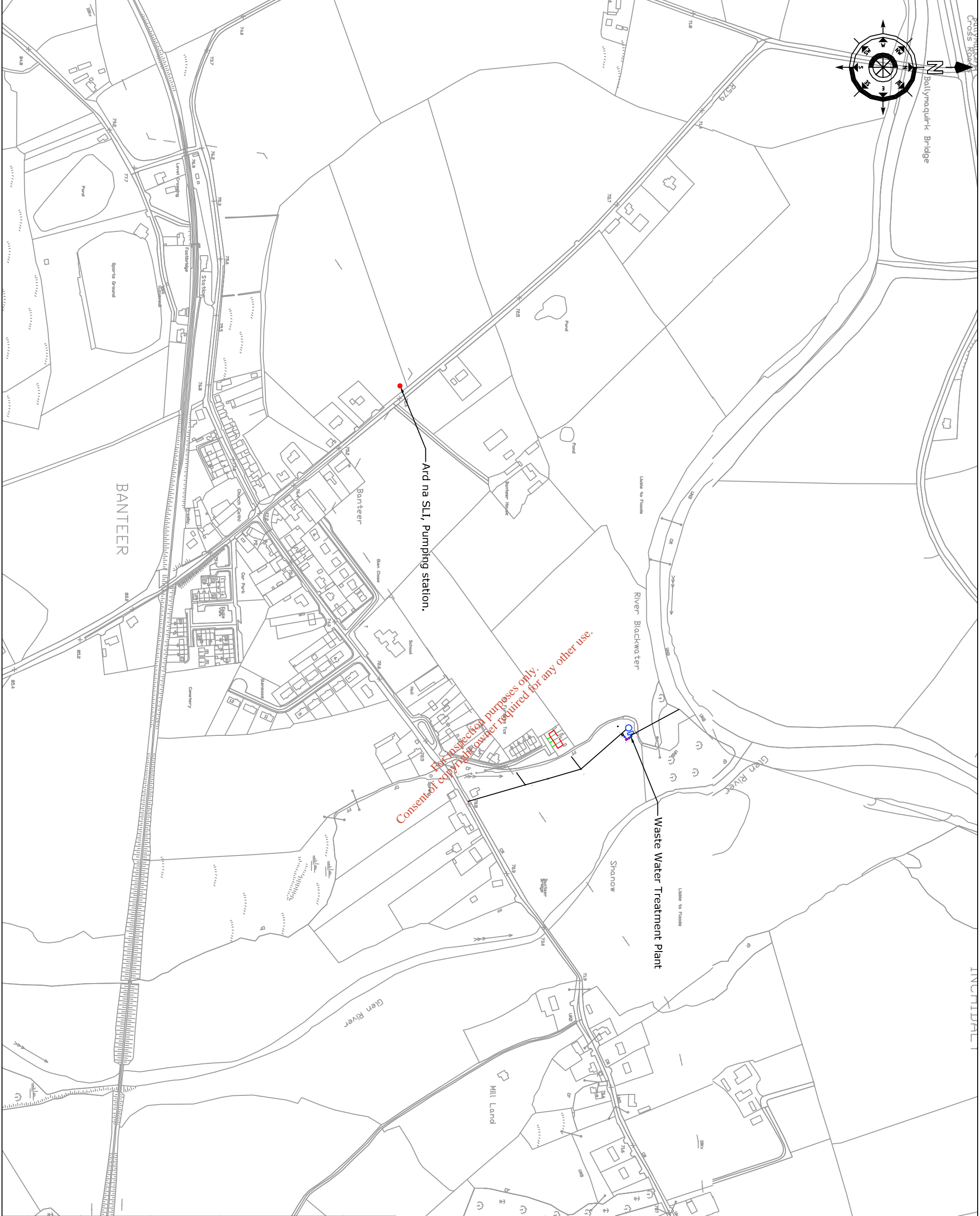
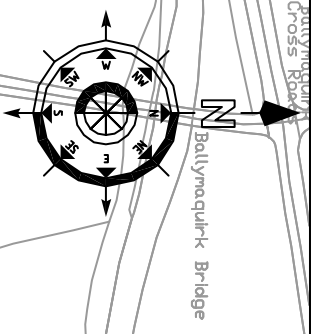
There are no planned works for the treatment plant serving Banteer at present.

Measures planned to monitor emissions into the environment

The Environmental Department of Cork County Council carry out sampling of the effluent from the treatment works as required under the Urban Waste Water Regulations. A composite sampler is provided on the outlet from the WWTP to facilitate obtaining samples of the treated effluent.

The EU Water Framework Directive Monitoring Programme is to be fully operational by the year 2012. This monitoring programme was prepared by the EPA to meet the requirements of the EU Water Framework Directive (2000/60/EC) and the National Regulations implementing the Water Framework Directive (S.I. No. 722 of 2003) and National Regulations implementing the Nitrates Directive (S.I. No.788 of 2005)

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NOTES

1. Dimensions are not to be scaled from drawing. For any discrepancies found consult with the design office.
2. This drawing is to be read in conjunction with the Specification.
3. This drawing is to be read in conjunction with all other contract drawings.

No.	Date	Drawn/Checked	Revision Description
A	04/13	DL	Inclusion of pumping station.

**Cork County Council,
Northern Division.**

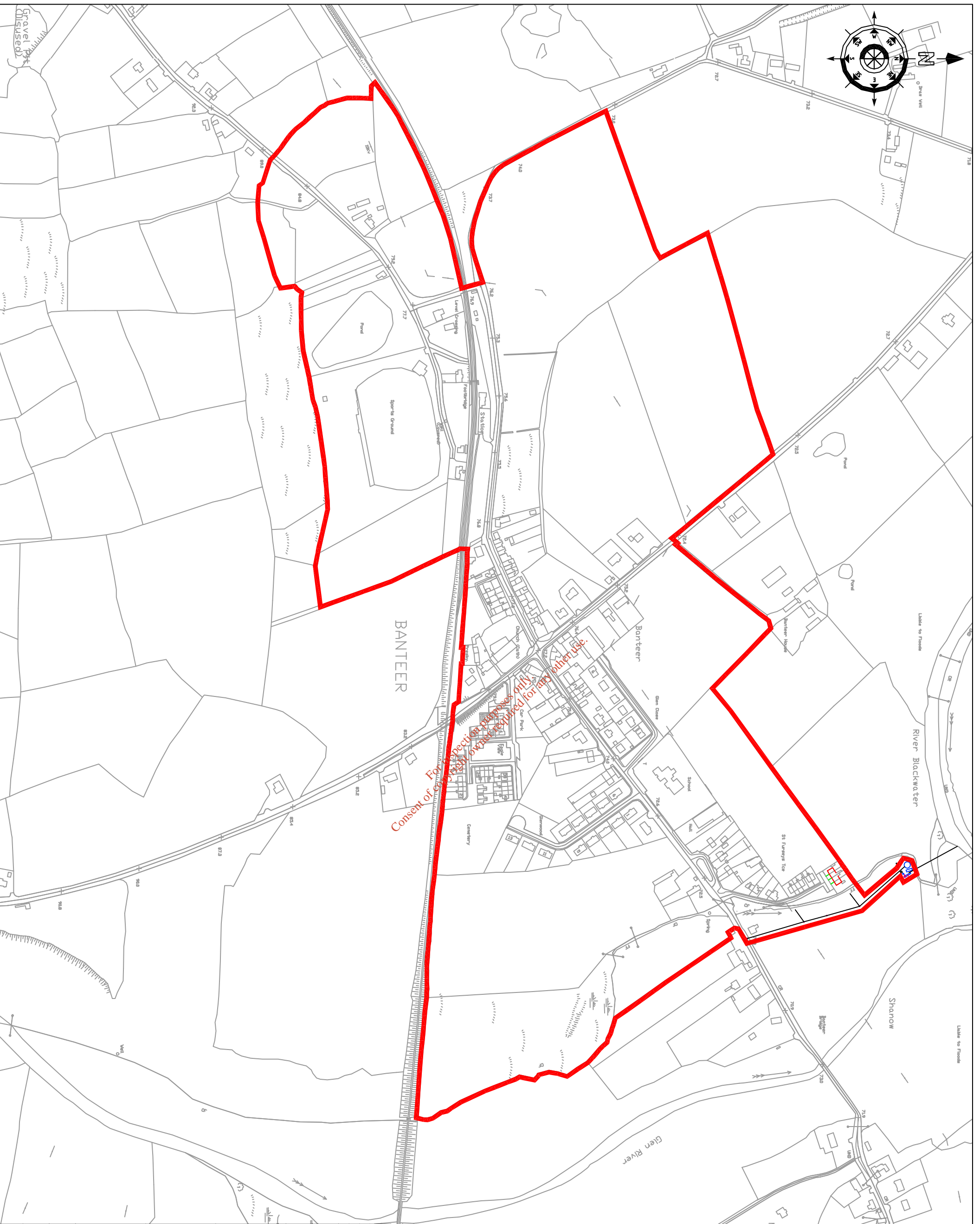
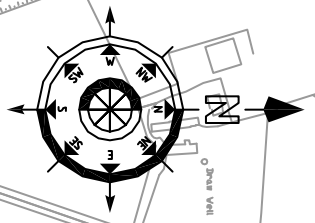


**N. O'KEEFE, B.E.,
COUNTY ENGINEER,
COUNTY HALL,
CORRK.**

Job Title:
Banteer & Environs
Waste Water Discharge
Licence Application


Drawing Title:
Site Locations of W.W.T.P.
& Pumping stations
Attachment A1 - Map 2

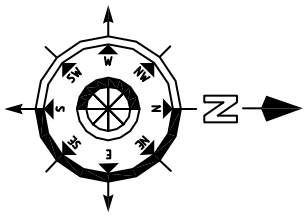
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1:5,000 @ A3	D.L.	DL	DL
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E.M.	F.C.	June 2009	A
Drawing number:		Rev.	
A1-Map2		A	



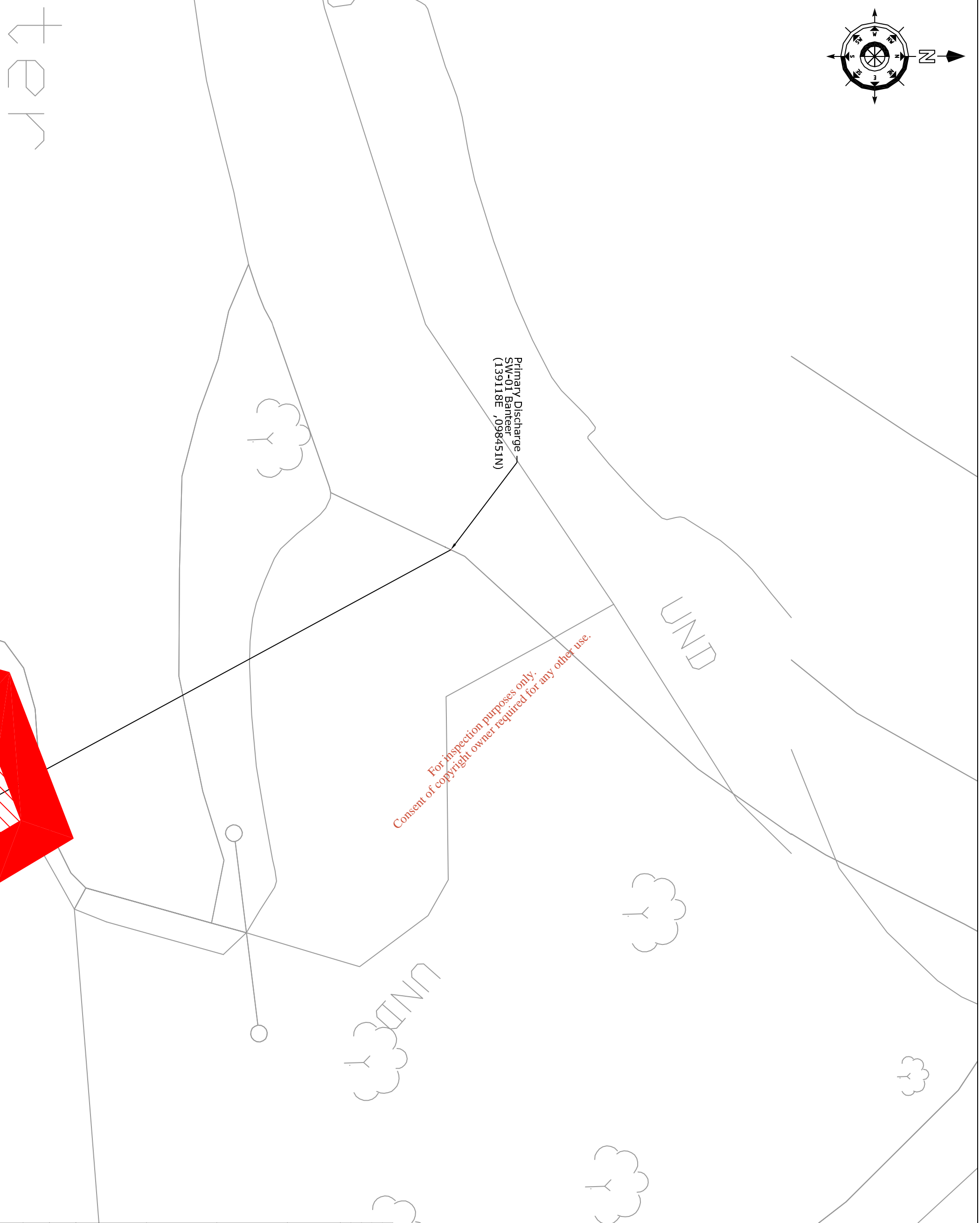
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 <p>Cork County Council, Northern Division.</p>		<p>N. O'KEEFE, B.E., COUNTY ENGINEER, COUNTY HALL, CORRIG.</p>	
<p>Job Title: Banteer & Environs Waste Water Discharge Licence Application</p>			
<p>Drawing Title: Agglomeration Boundary Attachment B1 - Map 4</p>			
<p>Scales: 1:5,000 @ A3</p>		<p>Drawn by: D.L.</p>	
<p>Designed by: E.M.</p>		<p>Checked by: F.C.</p>	
<p>Date: June 2009</p>		<p>Rev: A</p>	
<p>Drawing number: B1 - Map 4</p>			



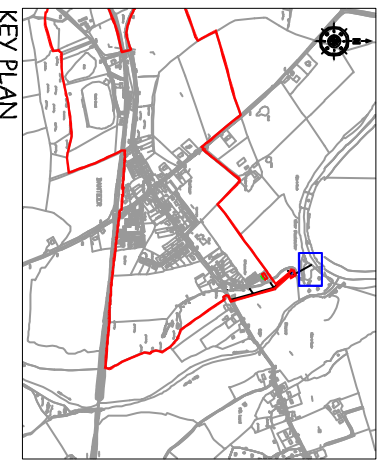
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<p>Job Title: Banteer & Environs Waste Water Discharge Licence Application</p>											
<p>Drawing Title: Location of Primary Discharge Point SW01 - Banteer Attachment B2 - Map 6</p>		<p>N. O'KEEFE, B.E., COUNTY ENGINEER, COUNTY HALL, CDR.K.</p>									
<p>Cork County Council, Northern Division.</p>											
<table border="1"> <thead> <tr> <th>No.</th> <th>Date</th> <th>Drawn/Checked</th> <th>Revision Description</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>14/13</td> <td>D.L.</td> <td>BUS Change to agglomeration boundary</td> </tr> </tbody> </table>				No.	Date	Drawn/Checked	Revision Description	A	14/13	D.L.	BUS Change to agglomeration boundary
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<p>Designed by: E.M.</p>		<p>Checked by: F.C.</p>									
<p>Drawing number: B2 - Map 6</p>		<p>Date: June 2009</p>									
		<p>Rev: A</p>									