

OH Doc No: 27

Rec'd From: Declan White

Date Rec'd: 10/03/08  
14.10 p.m.

# PROPOSED LANDFILL AT NEVITT LUSK CO. DUBLIN

EPA ORAL HEARING REF. W0231-01

## NON TECHNICAL SUMMARY

BY

DECLAN WHITE

Bsc (Hon's) Bsc (open)  
DIP ENG DIP DES INN  
AMIMECHE

MARCH 2008

*PART 1* → *OVERVIEW*

*PART 2* → *EXPLAINING THE MODEL OF THE NEVITT*

*My name is Declan White and I live with my wife Ann and my two sons Oisín 11 years and Luke 8 years of age beside the Nevitt.*

“Water is a precious resource and it is not acceptable that our groundwaters are being polluted unnecessarily” so said the Minister for the Environment, Heritage and Local Government, DOEHLG Mr. John Gormley TD (12<sup>th</sup> October, 2007).

MAP 1 gives the location of the Nevitt in the Lusk area, North Dublin. The proposed location is on the side of a hill. There are hills in the west, north and east that are higher than the Nevitt. The people living on these hills would be looking down into the proposed landfill. The people living in the South would be looking up at the proposed landfill on the side of a hill.

A new school will be built on the east of this proposed landfill (only 300m approximately away). The day we brought the EPA Inspector, Dr. Ian Marnane, to the old school, the wind was blowing across from the Nevitt. It is totally unacceptable to have children sitting in a classroom 5 days a week inhaling dust and smells from this proposed landfill.

To the north of the Nevitt is a public water supply called the Bog of the Ring. This is the only water supply in Fingal. The rest is imported from Leixlip, Co. Kildare. The Bog of the Ring water supply is delivering 28 million litres approximately of clean, bacteria free, water to mainly the people of Balbriggan every week.

The Nevitt is in an aquifer that stretches approximately from Offaly, Kildare, Meath and across Fingal. Amazingly, this full aquifer was not mentioned in the EIS. The aquifer of Fingal is the cleanest, biggest food producing aquifer in Ireland. North County Dublin now accounts for 55% approximately of the country's vegetable production and 75% approximately of the country's protected crops. The industry depends on industrial wells for its production process and therefore, depends on a clean water supply from this aquifer. Industrial wells have the same protection as public water supplies. The Horticultural industry can be traced back approximately 300 years.

- The Environmental Impact Statement (EIS) did not identify, survey, evaluate, or record this full aquifer in North Leinster.

- The EIS did not identify, survey, evaluate or record the huge Horticultural Industry of National Importance that is concentrated over this aquifer in Fingal.
- The EIS did not identify, survey, evaluate or record approximately 140 wells (the majority of which have industrial status) in the Fingal aquifer.
- The EIS did not identify the Nevitt, Annsbrook (along North/South fault line) as a water supply but yet all the following people have shown that there is a supply of water here

\* Dr. Paul Ashley

\* White Young and Green

\* Kevin Cullen

\* Geological Survey of Ireland (GSI)

\* Retired Senior Engineer, Mr. Jim Burke

\* EPA Inspector shows there is potential in the area for a water supply and of course, we have the physical evidence and examples are

**Kerrigan's 650,000 litres of water per day [capacity 1.9 million l/d ]**

**Moore's 750,000 litres of water per day**

**Larry Hagan's 800,000 litres of water per day**

**Country Crest 3 million litres of water per day**

**Bergin's 2 million litres of water per day (supplies water to ten farmers)**

**3 pump tests in the Nevitt 1.5 million litres of water per day**

**4 Artesian wells in the Nevitt**

**John Landy 436,000 litres of water per day**

**John Murray 872,000 litres of water per day**

***THORNS 750,000 litres per day***

and there are many more wells in the area.

Of course, at the top (in the north) of this major north/south fault line is the Bog of the Ring Public water supply that is producing 28 million litres of water per week.

The applicant, Fingal County Council (FCC) has stated that 1.5 million litres of water flows through the bedrock of the Nevitt every day. It is obvious that the Nevitt is a water supply.

Why was all this critical environmental and technical information left out of this multi million euro EIS. FCC has spent €20 million approximately on this project and approximately 10 years of time.


The EIS did not identify or discuss the ownership of groundwater. It is believed in Ireland, that the landowner owns the groundwater underneath their land, including extraction. Because we are in the huge Horticultural Centre of Ireland, there are a huge number of landowners. FCC, the applicant, has shown that 36,500 litres of Leachate will leak out of the proposed landfill per year. FCC has also shown that they will use the water in the aquifer to dilute the leachate. This is, of course, contamination and is against the Water Framework directive. Landowners own this groundwater including extraction. You are using other peoples property, i.e. groundwater, to dilute your poisonous leachate. You will be causing damage to other peoples property, i.e. groundwater, and it is considered to be against national law.

This area has been identified by Paddy Boyle and raises serious legal implications.

The EIS did not discuss the landfill plume over a possible Visitor Archaeological Centre. There are a huge number of archaeological sites in the Nevitt. A large section in the south/east of the site is a protected archaeological site. Access to artesian water was a factor for our ancestors to settle in the Nevitt approximately 1,500 years ago.

The close proximity of the Bog of the Ring public water supply to the proposed landfill at the Nevitt is very dangerous. FCC put forward a theory called a water divide. They suggested the water divide is at HR13 approximately. There are many pathways ;

→ A major north/south fault line and minor fault lines

- 
- Huge depths of gravel
  - The rock is highly fissured, water and therefore contamination will flow through this rock, gravel and fault lines very quickly
  - A syncline from underneath the proposed landfill to the Bog of the Ring public water supply
  - 50% approximately of the bedrock underneath the proposed landfill slopes northeast towards the public water supply
  - 50% approximately of the topography of the proposed landfill slopes northeast to the public water supply
  - The angle of the major north south fault line in the aquifer tends to direct the water in the fault line northwards to the public water supply
  - Our National Geological Survey of Ireland GSI, states the water divide cannot be determined and they recommend to drill more wells along the north south fault line. These proposed extra wells were not drilled.
  - It is obvious the experts are not able to agree and obviously, the precautionary principle should be applied. The EPA asked for a computer mod flow to be completed. The mod flow was not completed.

**WHY DID THE EPA NOT INSIST THAT THE MOD FLOW BE COMPLETED?**

**WHY DID THE EPA NOT INSIST THAT THE EXTRA WELLS, RECOMMENDED BY THE GSI, BE DRILLED?**

White, Young and Green Hydrologists Report show the zone of contribution (ZOC) of Thorn's, Kerrigan's and Moore's industrial wells extends underneath the proposed landfill. They also state Kerrigans is down gradient of proposed landfill. The zone of contribution of industrial wells is R4 classification [ DoELG/ EPA/ GSI 1999 ] and therefore, you cannot put a landfill in the Nevitt. White Young and Green employ 700 people and have a turnover of approximately €178 million.

White Young and Green Hydrologists have shown in their report that the ZOC of Kerrigan's industrial well extends underneath this proposed landfill R4. Dr. Marnane is also showing that the water from underneath this proposed landfill will also go south [ via fault line ] and obviously, will travel into Kerrigan's industrial well ZOC and also into a new supply of water in Annsbrooke which will obviously destroy this new water supply. White Young and Green have confirmed Kerrigan's is down gradient of this proposed landfill.

Dr. Marnane has shown that the water from underneath the landfill will flow to the rock face of the fault line. Thorn's well is at the face of the fault line. Dr. Marnane also states that the ZOC for this area would encompass the landfill area [ page 11 Inspectors report ]. This means that the inspector is confirming the ZOC of an industrial well extends underneath the landfill and is therefore R4. Dr. Marnane was not aware of Thorns Industrial status because its new information.

You cannot put a landfill in public or industrial wells ZOC because they are classified as R4.

We note that Dr. Marnane is an intelligent man. We are requesting you, Mr. Chairman, in the interest of professionalism, to ask Dr. Marnane (EPA Inspector) to review his report. We now know Dr. Marnane was examining maps that was incorrect, Thorns new information of industrial status, a possibly minor fault line underneath proposed landfill and of course extra new information presented at oral hearing.

What is the definition of a water supply ? .

Under the Drinking Water Regulations 2007, S. I. No. 106/ page 4 , the Regulations state an exempted supply means a supply of water which constitutes an individual supply of less than 10 cubic metres a day on average or serves fewer than 50 persons and is not supplied as part of a commercial or public activity. You therefore cannot call an individual supply, a water supply, if the well or wells is producing less than 10,000 litres a day. I rang the Water Department of the EPA for advice . Obviously the Nevitt is a water supply.

What is at stake ?.

- A new water supply at Nevitt and Annsbrooke.
- A water supply for the town of Balbriggan [ 20,000 people approximately ]. The so called water divide has not been confirmed ref GSI .

- The huge Horticultural Industry of National status [ not in the EIS], Which depends on the water in this aquifer being of the highest standard. A low risk is not acceptable because of the sensitivity of growing and processing of food. The Supermarkets will pick up low contamination very quickly because they test the water in some processors every week. The Horticultural industry can be traced back 300 years. There are huge question marks over the clay [ low depth in places and higher permeability in places ] as explained by Dr. Paul Ashley.

Why put all above at risk unnecessarily and we recommend you refuse this application.

If you feel you need more information, we recommend;

- You ask for a Mod Flow and MP3D [ Dr. Paul Ashley ]
- Depth of clay map underneath proposed landfill and showing all higher permeability areas [ AGB4 0.7 metres of clay and then gravel ].
- Obviously an EIS of the huge Horticultural Industry, the new water supplies identified, industrial wells identified etc .
- A legal opinion on ownership of groundwater and future possible claims.
- A possible dye test
- To drill more wells along North / South fault line [ GSI ]
- To ask all industrial well users across this aquifer for there opinion [ we estimate 150 wells ]
- To ask for guarantee in writing from RPS consultants including pathways for compensation.
- The Water Framework Directive requires water to be managed on the basis of natural features , river basins rather than national or county boundaries . This aquifer flows through 4 counties [ ie. An International River Basin District ] and all jurisdictions must cooperate in managing it. To write to the three councils to ask for there opinion [ref water matters Eastern river basin district, 12 councils involved ].
- Obviously a proper gravel and bedrock map
- Obviously if a landfill is put in this water supply at the Nevitt, who is going to accept full responsibility ?. We want their names clearly identified.
- Dr. Ian Marnane review his report
- GSI carry out a full investigation of this aquifer including Industrial wells and present a report.

- Because of the risk to human health, to a large population of Ireland, Health Service Executive should be notified and a response required.

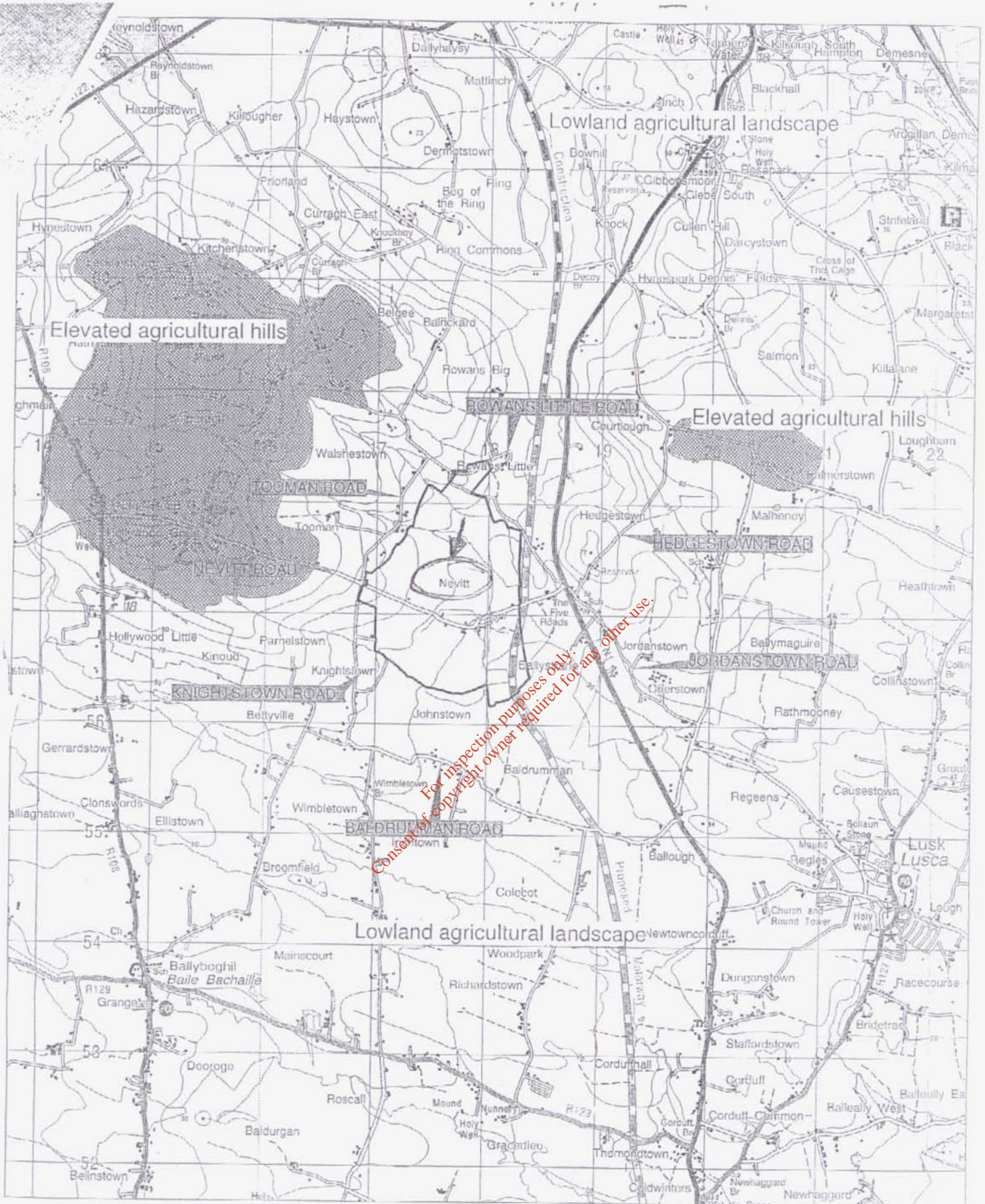
We will be going back to Europe to give an update on this project and process. We will asking the European Commission to carry out a full investigation of this EIS.

Water is essential for life. Humans need it for drinking and food preparation.

It is time to think, plan and act to protect our waters. We have a legal obligation to comply with the Water Framework Directive, but more importantly if we do not meet this challenge we will have failed ourselves and future generations [ ref Water Matters ] .

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Project: Fingal Landfill  
 Figure 1.3  
 Title: Landscape Character Areas  
 Scale: 1cm = 0.3km @ A3

- Key**
- Landfill Boundary
  - Lowland agricultural landscape
  - Elevated agricultural hills



**PROPOSED LANDFILL AT NEVITT,  
LUSK, CO. DUBLIN**

**PART 2**

**NON TECHNICAL SUMMARY**

***EXPLAINING THE MODEL OF THE NEVITT***

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**MARCH 2008**

**BY**

**DECLAN WHITE**

## Picture Of model

→ Map 1 – Aquifer of Ireland

From EPA Water Quality Report 2005

The aquifer begins in Co. Offaly and flows through Co. Kildare, Co. Meath and out through Fingal . Meath County Council is extracting water from this aquifer.

- Bog of the Ring Public Water Supply
- The Nevitt (in red) . Note Kerrigans, Thorns and Moores INDUSTRIAL WELLS , R4 PROTECTION.
- Annsbrooke
- Major north/south fault line [ note angle of fault line ]
- M1 Motorway

→ Map 2 – Aquifer of Fingal showing the major north south fault line – note the angle of the fault line.

→ Map 3 – Showing the fault line

→ Map 4 – Aquifer of Fingal showing wells (most are industrial) in the aquifer

→ Map 5 – Showing the location of old and new school in the Nevitt area

→ Picture 1 – Showing an artesian well in the Nevitt. Dr. Paul Ashley witnessed this well.

→ Picture 2 – Bog of the Ring flooded after rain in 2004

→ Picture 3 – Bog of the ring flooded after rain in 2008



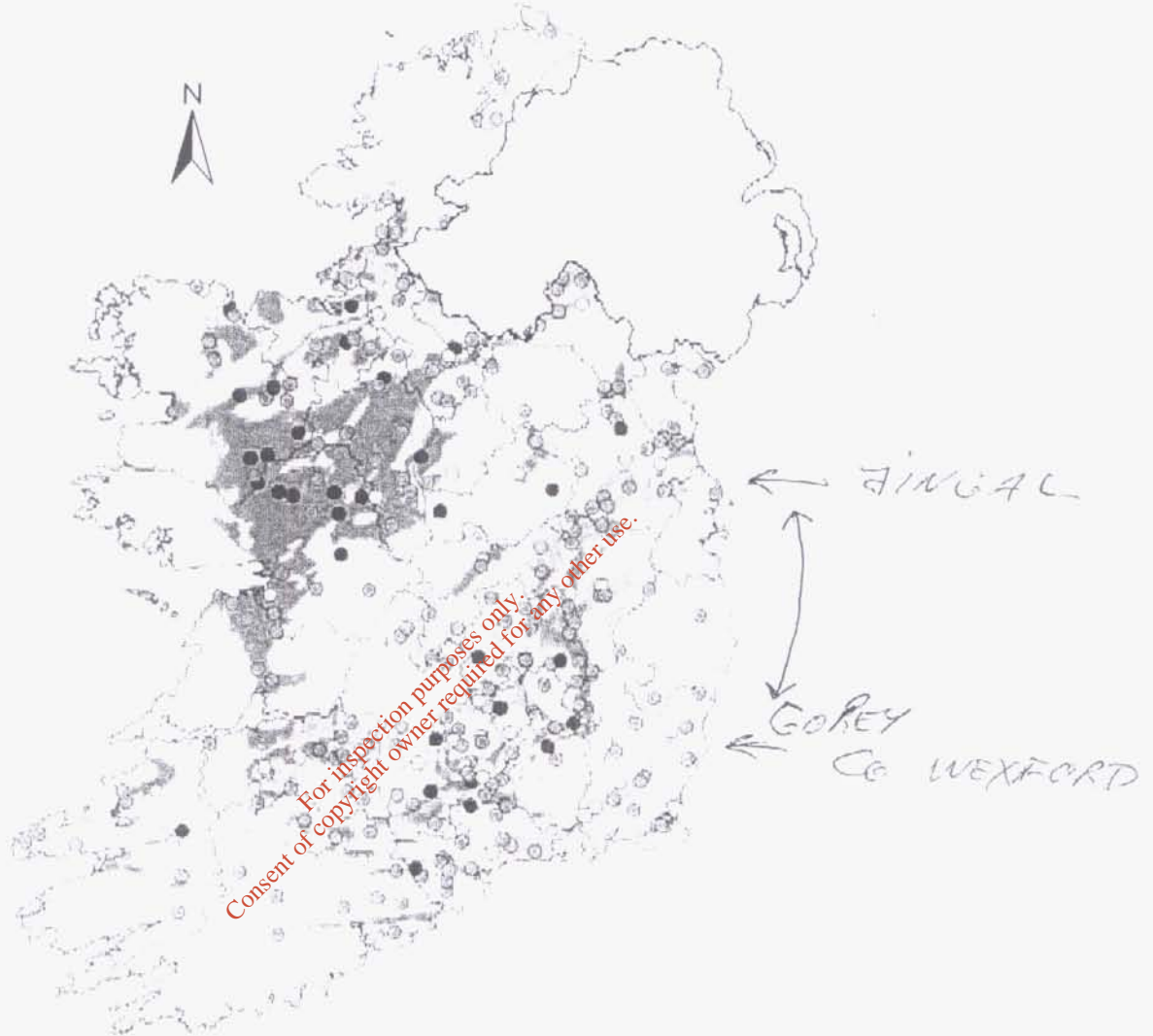
GREEN : MODEL OF IRELAND

LIGHT BLUE : AQUIFER FLOWING  
THROUGH OFFALY, KILDARE  
MEATH AND OUT THROUGH  
FINNAL.

# AQUIFER MAP OF IRELAND

MAP 1

Figure 9b Maximum Faecal Coliform Count/100ml during 2003-2005



### Aquifer Legend

- Gravel Aquifer
- Productive Fissured Bedrock Aquifer
- Productive Karstified Aquifer
- Poorly Productive Bedrock Aquifer

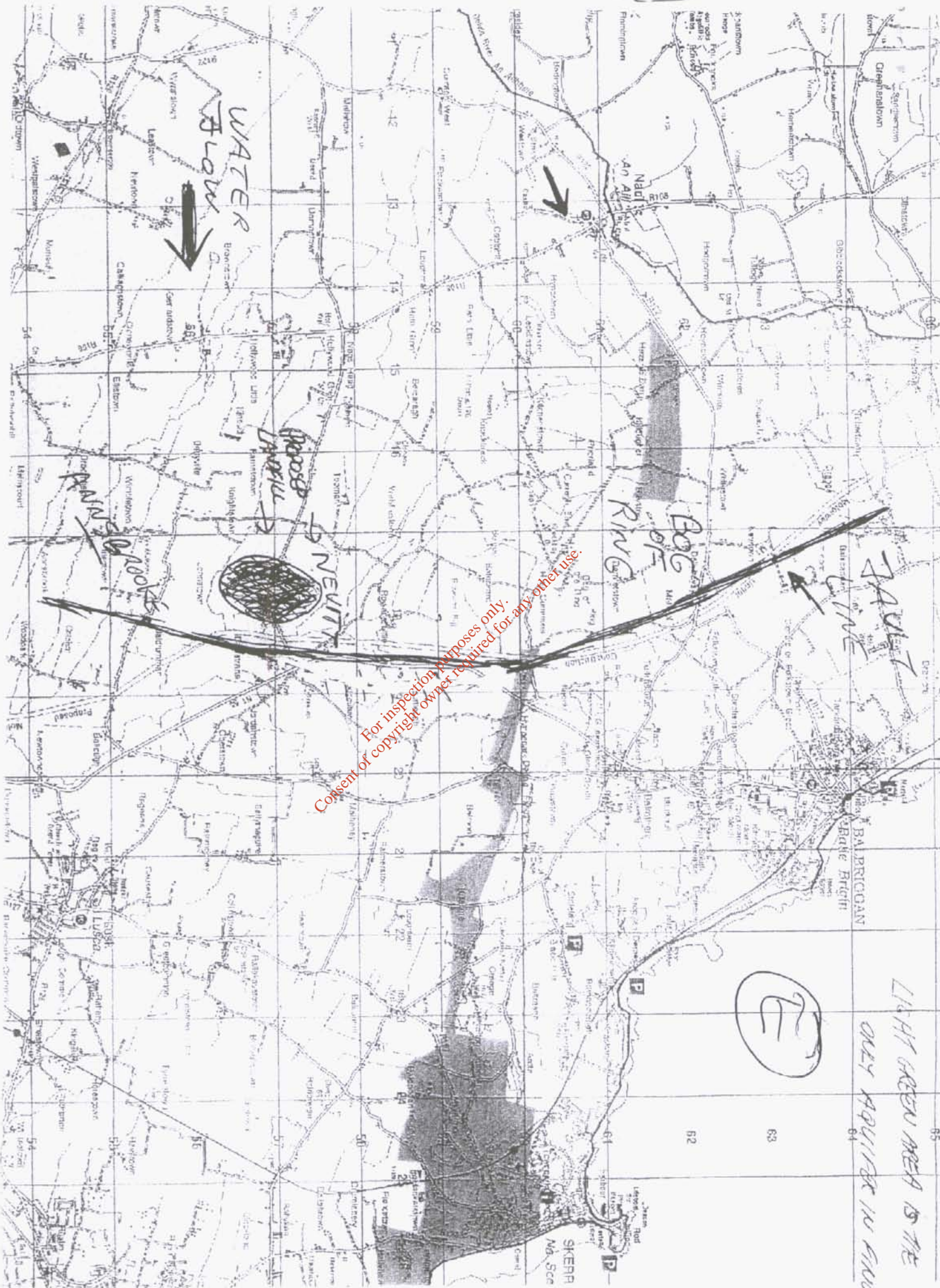
### Maximum Faecal Coliform Count/100 ml

- Zero Faecal Coliforms
- 1-5 Faecal Coliforms
- 6-10 Faecal Coliforms
- 11-100 Faecal Coliforms
- >100 Faecal Coliforms

Source: EPA (M. Craig)

### Sources

EPA (M. Craig); Page, D., Moriarty, J., Doris, Y. and Crowe, M., 2004, *The Quality of Drinking Water in Ireland. A report for the year 2003 with a review of the period 2001-2003*, EPA, Wexford; Toner, P., Bowman, J., Clabby, K., Lucey, J., McGarrigle, M., Concannon, C., Clenaghan, C., Cunningham, P., Delaney, J., O'Boyle, S., MacCárthaigh, M., Craig, M. and Quinn, R., 2005. *Water Quality in Ireland 2001-2003*. EPA, Wexford.



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L1411 GREEN MEA IS THE ONLY ACQUISIT IN AREA

E



- Legend**
- Bedrock Geology
  - Footprint of the Proposed Landfill
  - Cross Section



Project:  
**Fingal Landfill**

Fingal County Council  
Geomatics Dept. Franchill

**Bedrock Geology**

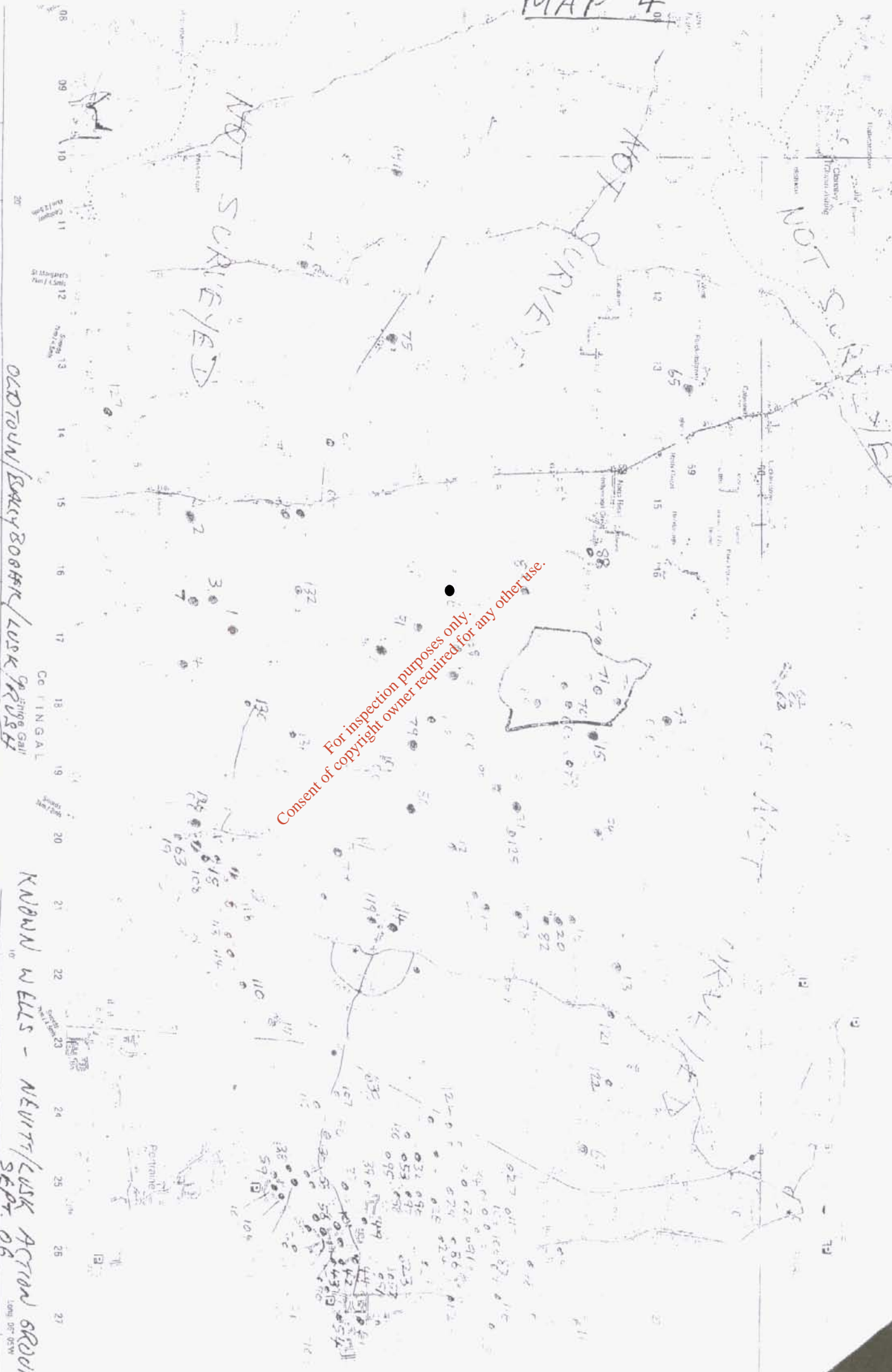
Figure 4  
**RPS** Consultant's Engineers

Site: 1-2020-1-1-1  
Date: 15/04/2018

Scale: 1:5000  
Drawing No: 401

**OS / Survey**  
Ordnance Survey  
National

# MAP 4



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OLD TOWN / BALLYBOONK / LUSK RIDGE  
CO. KINGAL

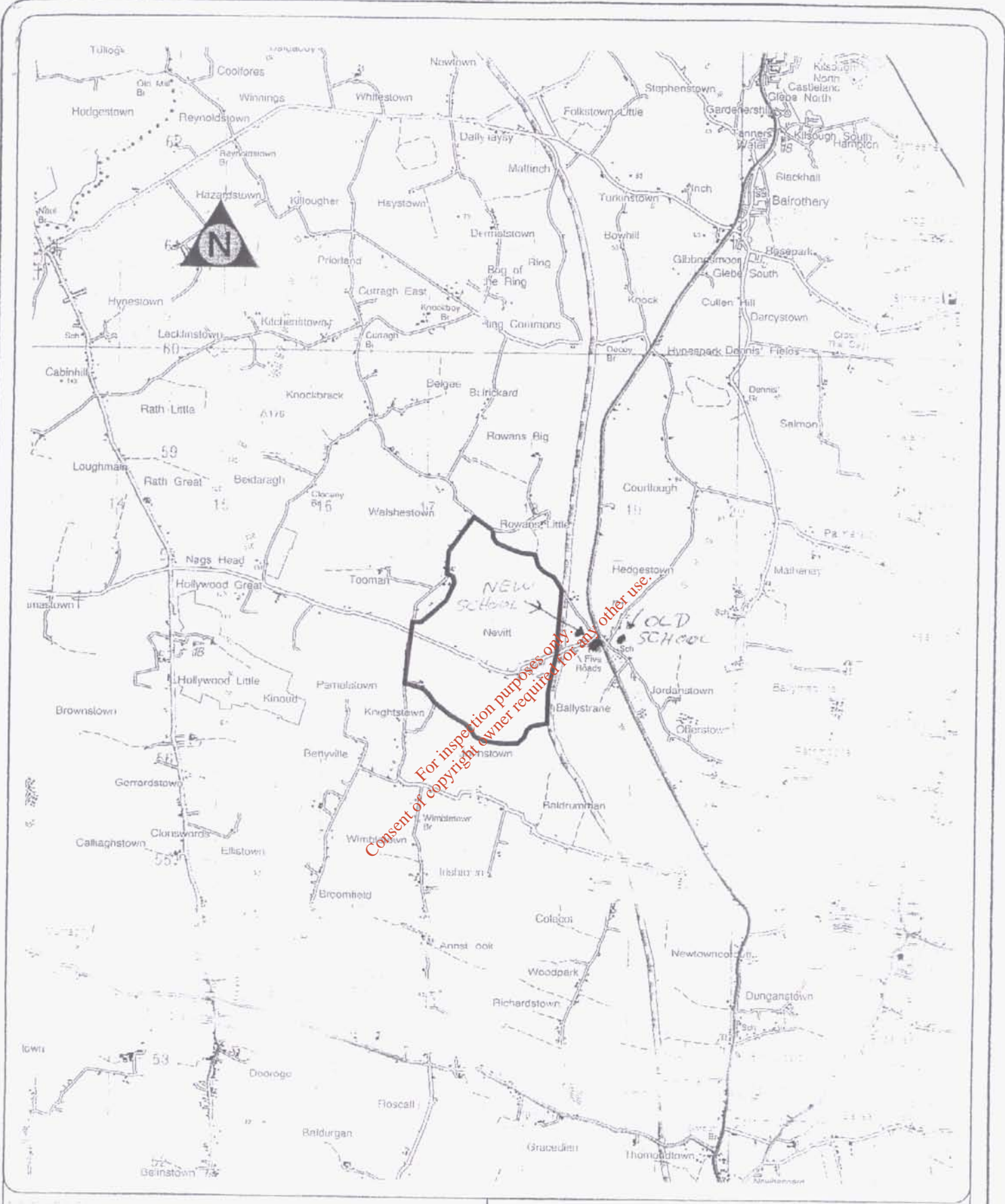
KNOWN WELLS - NEWITT / LUSK ACTION BRDCH  
SEPT. 06

Cartographica

Sandwichbartha

Relif





Fingal Landfill Project - Additional Works

Mapping Overview



Fingal County Council

RPS Group Plc

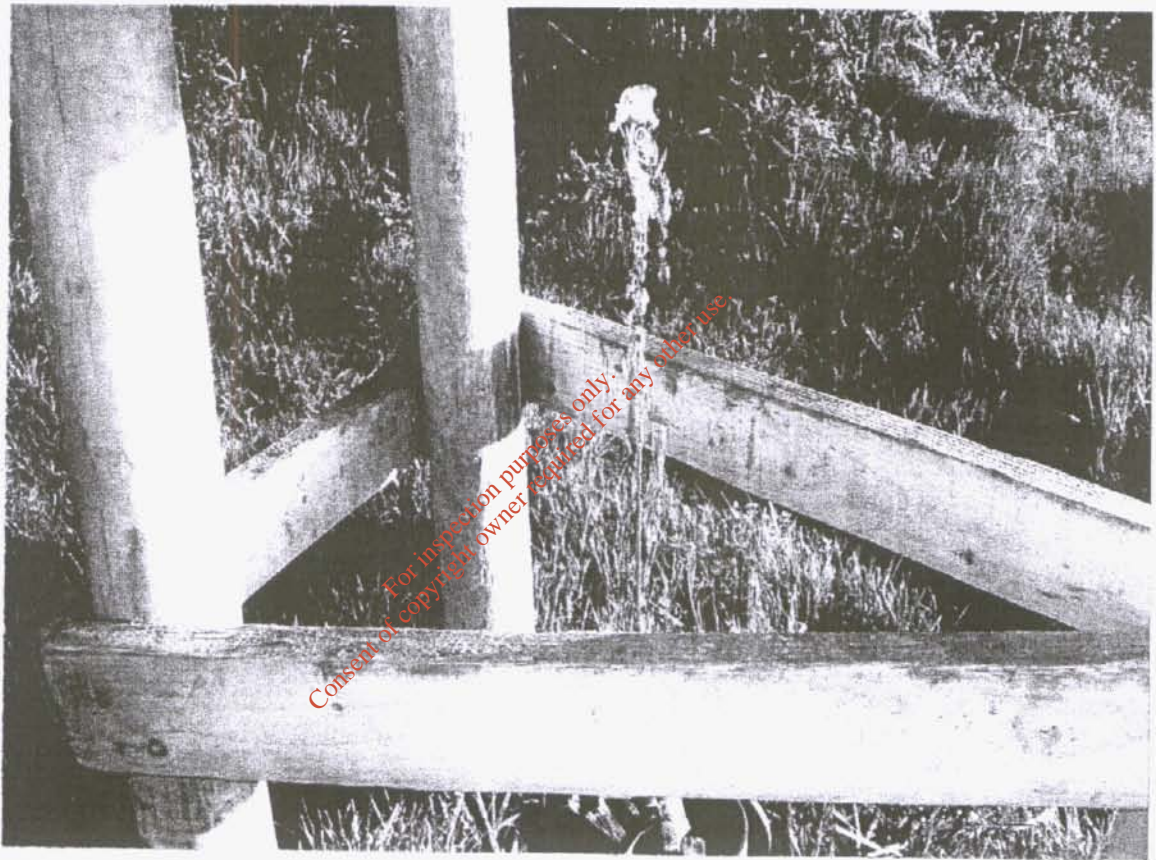


- Area of Site

Scale	Sheet	Date	Drawn	Checked
NTS	01 of 01	24/02/06	A.W.	T.R.

Project No.	06-074-Map-Overview-001
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PICTURE 1



ARTESIAN WELL

IN THE NEVITT

PICTURE TAKEN BY

DEAGLAN DE FAOITE

PIC TURE 2

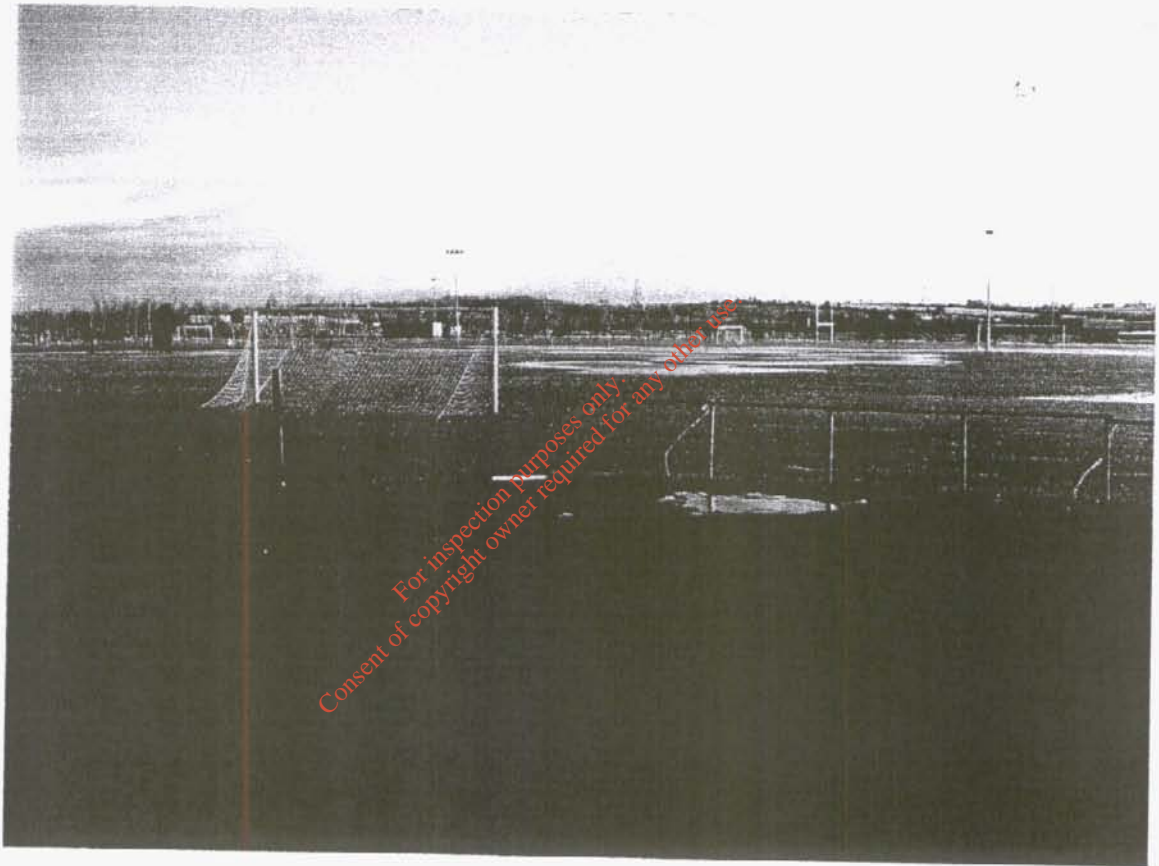


2004

BOG OF RING

NOTE : GOAL POSTS

PICTURE 3



14 / 1 / 2008

BOG OF RING

May I remind everybody, the three pump tests in the Nevitt yielded  
PW1 560,000 litres per day 1/d  
PW2 311,000 1/d  
ASA2 623,000 1/d

The applicant FCC has confirmed that 1.5 million litres of water flows through the bedrock of the Nevitt every day.

Geological Survey of Ireland GSI has confirmed there is potential for a new water supply along the North / South fault line.

Dr. Ian Marnane EPA has shown there is a potential water supply in the East and South of the Nevitt.

The applicant FCC has shown there is a potential for a new water supply in the South, Annsbrooke.

We also note artesian wells and high yielding wells exist to the West of the Nevitt [ examples are James McNally , the holy well etc] .

Obviously , the Nevitt is a water supply as defined by the Drinking Water Regulations 2007 , S. I. No. 106.

We also note , the GSI has shown the water divide can not be determined and they recommend more wells to be drilled along the North / South Fault line . These extra wells were not drilled.

The following Hydro geologists have shown there is potential for a water supply in the Nevitt area, Dr. Paul Ashley, Kevin Cullen , White Young and Green.

Mr Terry Dockrell suggested there was a huge amount of water in the area about three three years ago.

Mr. Jim Burke , was the first Senior Engineer to work on the Bog of the Ring in 1961 / 1962 ,as Engineer with Dublin City Council. His job was to drain the lake at the Bog of the Ring. We presented a presentation to a full FCC Council meeting over three years ago stating that, Mr. Jim Burke believes that the area is one unified water resource. In my opinion , Mr. Jim Burke has been proven 100 % correct, now that we have gathered all the physical evidence.

The model is approximate to scale.

# water matters

*"Have your say!"*

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**eastern**  
river basin district

## Your views

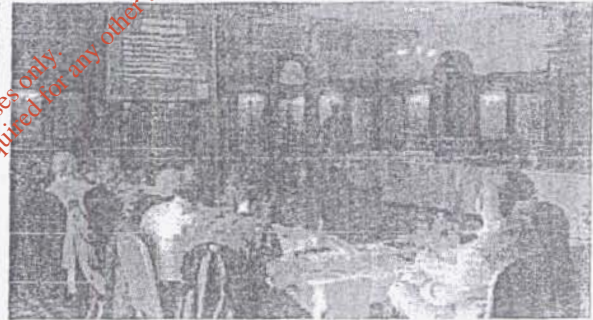
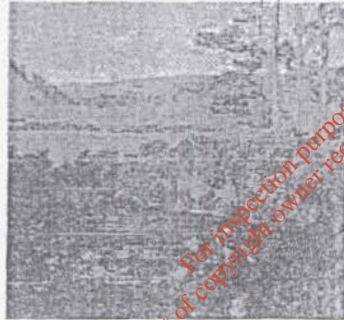
Have we identified the most important issues? Have we overlooked any significant issues? What do you think about the proposed actions?

For each of the most important water problems, the booklet sets out:

- Background information showing the extent of each issue and the way that it can cause water problems
- A summary of existing controls and an assessment of their adequacy
- The proposed actions, the parties responsible for taking those actions and the users who would be affected.

Finally, you are asked for your opinion about the issues and the proposals to address them. We will be consulting for six months on the water problems and suggested actions contained in this booklet. We will gladly accept your comments up until 22 December 2007. Early responses would be appreciated to allow more time to clarify and resolve issues that may arise.

You can send comments to:  
Ray Earle  
Dublin City Council  
Project Co-ordinator  
Eastern River Basin Project  
Dublin City Council  
68-70 Marrowbone Lane,  
4<sup>th</sup> Floor  
Dublin 8,  
ray.earle@dublincity.ie



We will comply with data protection requirements and will use information that you provide to compile a digest of responses. Please advise us if you wish your response to remain anonymous and not attributable in the digest. If you want to add new comments or information you can contact our website at any stage.

## Eastern River Basin District

The Directive requires water to be managed on the basis of natural features, river basins, rather than national or county boundaries. If a basin district (containing neighbouring basins) is in one jurisdiction, it is a **River Basin District (RBD)**; if it crosses a border, it is an **International River Basin District (IRBD)**, and both jurisdictions must cooperate in managing it. This island has about 400 basins, which have been assigned to eight districts: four RBDs wholly within Ireland, one wholly within Northern Ireland and three cross-border IRBDs.

The Eastern Basin incorporates all or part of twelve counties; Westmeath, Meath, Cavan, Kildare, Offaly, Fingal, Dublin City, South Dublin, Dun Laoghaire-Rathdown, Wicklow and a small portion of Wexford and Louth. This booklet is issued jointly by the twelve local authorities involved.

Background: the WFD story so far 2

OPINION FROM  
ALL THE COUNTIES  
IN EASTERN RIVER BASIN DISTRICT?  
ESPECIALLY KILDARE MEATH  
FINGAL OFFALLY

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CarbonNeutral publication

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eastern  
region

Westmeath County Council | Meath County Council | Cavan County Council | Kildare County Council | Offaly County Council  
Fingal County Council | Dublin City County Council | South Dublin County Council | Dun Laoghaire-Rathdown County Council  
Wicklow County Council | Wexford County Council | Louth County Council





STATUTORY INSTRUMENTS.

S.I. No. 106 of 2007

EUROPEAN COMMUNITIES (DRINKING WATER) REGULATIONS  
2007

{ LEACHATE  
TOXIC (IN AN AQUIFER)

{ BOTTOM ASH.  
TOXIC (IN AN AQUIFER)

→ RISK ASSESSMENT NEEDS TO BE COMPLETED.

(Pm. A7/0385)

S.E.A. WAS CARRIED OUT FOR  
PROPOSED PORTRANE SEWAGE TREATMENT PLANT  
c/o JOE CORR.

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EUROPEAN COMMUNITIES (DRINKING WATER) REGULATIONS  
2007

The Minister for the Environment, Heritage and Local Government in exercise of the powers conferred on him by section 3 of the European Communities Act 1972 (No. 27 of 1972) and for the purpose of giving effect to Council Directive No.98/83/EC<sup>1</sup> of 3 November 1998, and Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000,<sup>2</sup> hereby makes the following Regulations:

*Citation.*

1. These Regulations may be cited as the European Communities (Drinking Water) Regulations 2007.

*Commencement.*

2. These Regulations shall come into operation with immediate effect.

*Interpretation.*

3. (1) In these Regulations, except where the context otherwise requires—

“the Agency” means the Environmental Protection Agency;

“authorised person” means a person appointed by a sanitary authority or the Agency to be an authorised person for the purposes of these Regulations;

“the Directive” means Council Directive 98/83/EC<sup>1</sup> of 3 November 1998 on the quality of water intended for human consumption;

“CEN” means Comité Européen de Normalisation (the European Committee of Standardisation);

“domestic distribution system” means the pipework, fittings and appliances within the curtilage of a premises, which are installed between the distribution network and the taps in the premises that are normally used for the provision of water for human consumption;

“exempted supply” means a supply of water which—

(a) (i) constitutes an individual supply of less than 10 cubic metres a day on average or serves fewer than 50 persons, and

(ii) is not supplied as part of a commercial or public activity, 

10,000 L/DAY

<sup>1</sup>O.J. No. L330/32, 5.12.1998

<sup>2</sup>O.J. No. 327/1, 22.12. 2000

*Notice of the making of this Statutory Instrument was published in  
“Iris Oifigiúil” of 13th March, 2007.*

+ P 5 / P 6

+ P 12 / P 13

WATER INTENDED FOR HUMAN  
CONSUMPTION MEANS

(b) all water used in any food production undertaking for the manufacture, processing, preservation or marketing of products or substances intended for human consumption, unless the supervisory authority is satisfied that the quality of the water cannot affect the wholesomeness of the foodstuff in its finished form,

other than—

HIGH WATER CONTENT  
IN FRUIT, POTATOES ETC. —

- natural mineral waters, recognised as such by the responsible authority as defined in the European Communities (Natural Mineral Waters, Spring Waters and Other Waters in Bottles or Containers) Regulations 2005 (S.I. No. 79 of 2005),
- water supplied in bottles or containers,
- waters which are medicinal products within the meaning of Council Directive 65/65/EEC of 26 January, 1965<sup>3</sup>, or
- an exempted supply;

"water supplier" means any person supplying water intended for human consumption.

(2) In these Regulations—

- (a) a reference to a Regulation or the Schedule which is not otherwise identified is a reference to a Regulation or the Schedule of these Regulations,
- (b) a reference to a paragraph, sub-paragraph or clause which is not otherwise identified is a reference to a paragraph, sub-paragraph or clause of the Regulation in which the reference occurs, and
- (c) a reference to a Schedule or part of it includes, where the context permits, any accompanying notes.

*Duties of suppliers.*

4. (1) Subject to any departure granted under Regulation 11, a water supplier shall ensure that the water is wholesome and clean and meets the requirements of these Regulations.

(2) For the purposes of paragraph (1), water shall be regarded as wholesome and clean if—

- (a) it is free from any micro-organisms and parasites and from any substances which in numbers or concentrations, constitute a potential danger to human health, and
- (b) it meets the quality standards specified in Tables A and B in Part 1 of the Schedule.

<sup>3</sup>O.J.No. L22,9.2.1965 p.369 as last amended by Directive 93/39/EEC (O.J.No. L214 24.8.1993, p22)

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**PROPOSED LANDFILL AT NEVITT,  
LUSK, CO. DUBLIN**

**PART 2**

**NON TECHNICAL SUMMARY**

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**MARCH 2008**

**BY**

**DECLAN WHITE**

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## Picture Of model

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From EPA Water Quality Report 2005

The aquifer begins in Co. Offaly and flows through Co. Kildare, Co. Meath and out through Fingal . Meath County Council is extracting water from this aquifer.

- Bog of the Ring Public Water Supply
- The Nevitt (in red) . Note Kerrigans, Thorns and Moores INDUSTRIAL WELLS , R4 PROTECTION.
- Annsbrooke
- Major north/south fault line [ note angle of fault line ]
- M1 Motorway

→ Map 2 – Aquifer of Fingal showing the major north south fault line – note the angle of the fault line.

→ Map 3 – Showing the fault line

→ Map 4 – Aquifer of Fingal showing wells (most are industrial) in the aquifer

→ Map 5 – Showing the location of old and new school in the Nevitt area

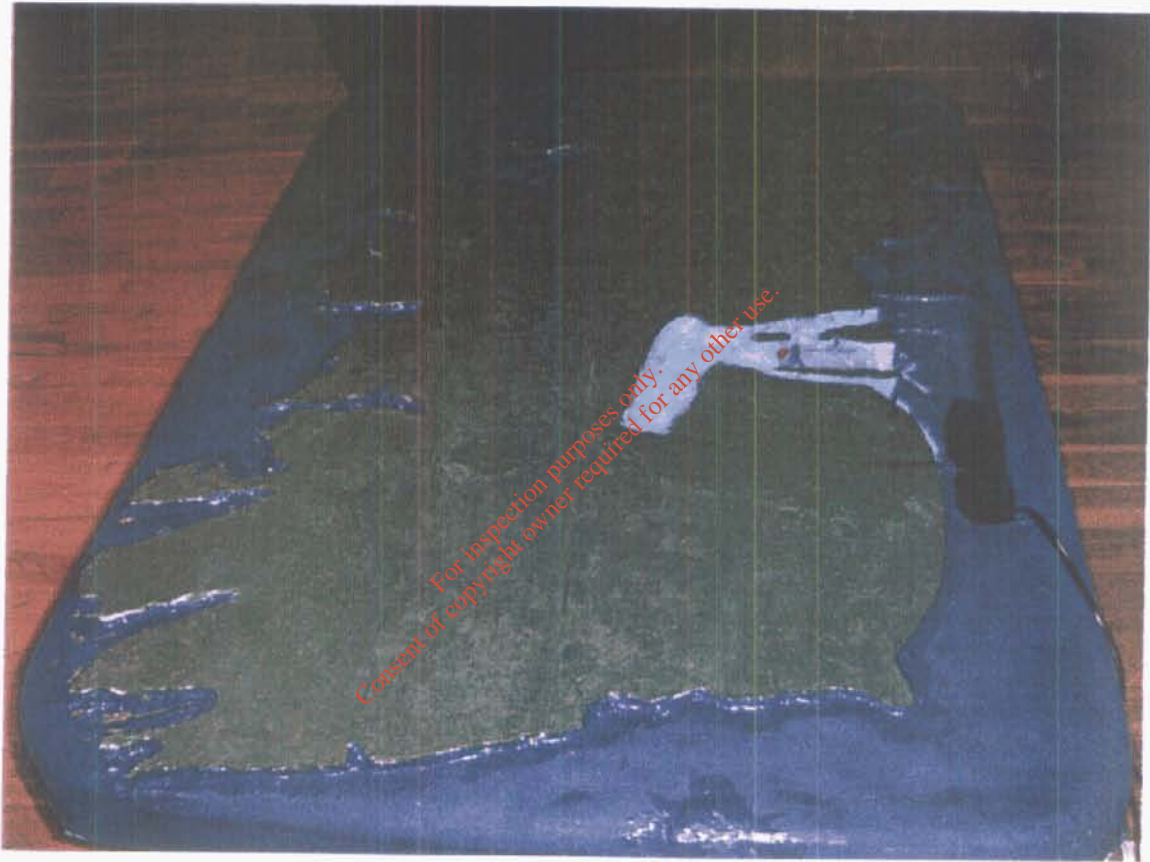
→ Picture 1 – Showing an artesian well in the Nevitt. Dr. Paul Ashley witnessed this well.

→ Picture 2 – Bog of the Ring flooded after rain in 2004

→ Picture 3 – Bog of the ring flooded after rain in 2008

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GREEN : MODEL OF IRELAND

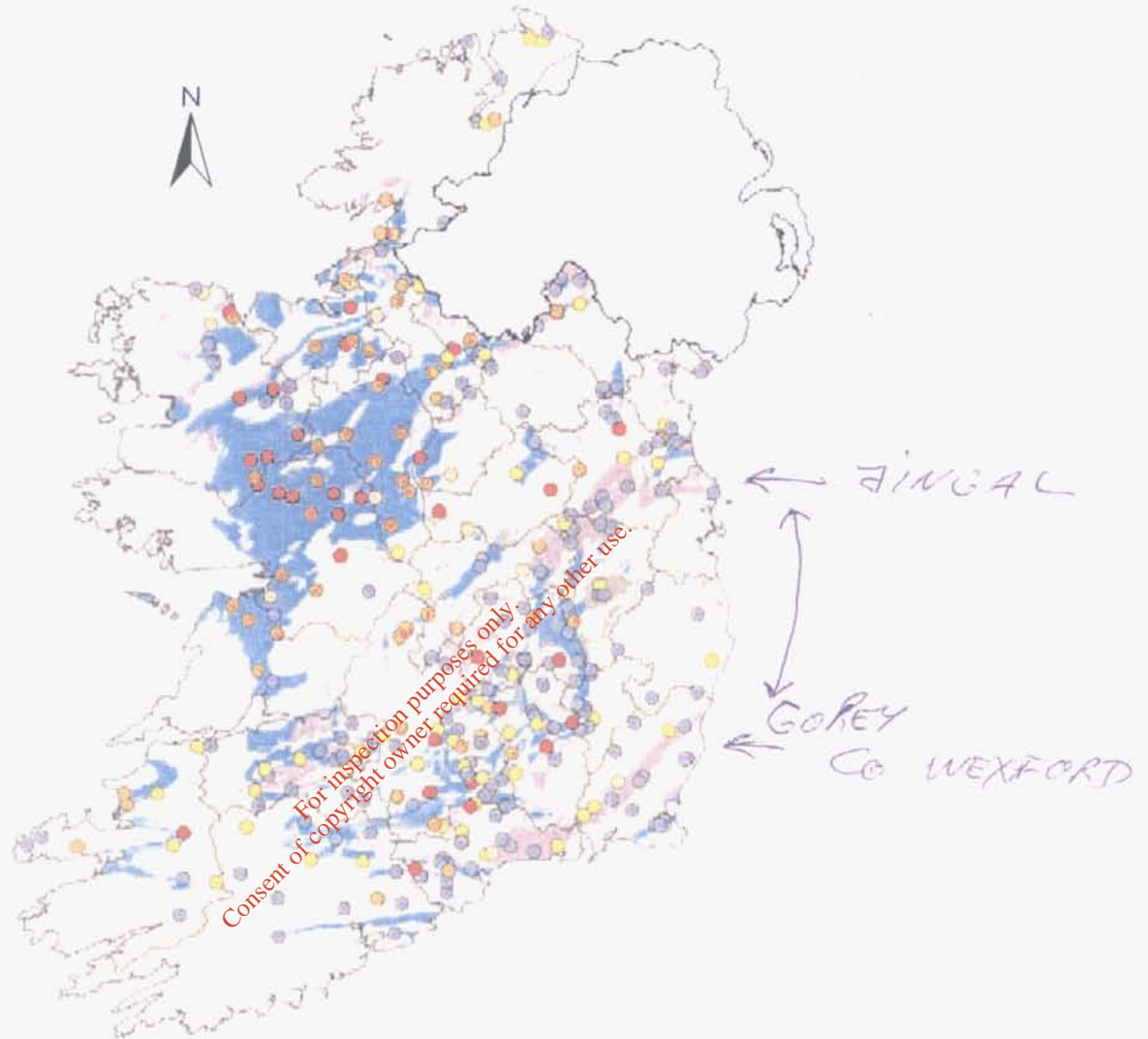
LIGHT BLUE : AQUIFER FLOWING  
THROUGH OFFALY, KILDARE  
MEATH AND OUT THROUGH  
FINGAL.

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# AQUIFER MAP OF IRELAND

MAP 1

Figure 9b Maximum Faecal Coliform Count/100ml during 2003-2005



Aquifer Legend	Maximum Faecal Coliform Count/100 ml
Gravel Aquifer	Zero Faecal Coliforms
Productive Fissured Bedrock Aquifer	1-5 Faecal Coliforms
Productive Karstified Aquifer	6-10 Faecal Coliforms
Poorly Productive Bedrock Aquifer	11-100 Faecal Coliforms
	>100 Faecal Coliforms

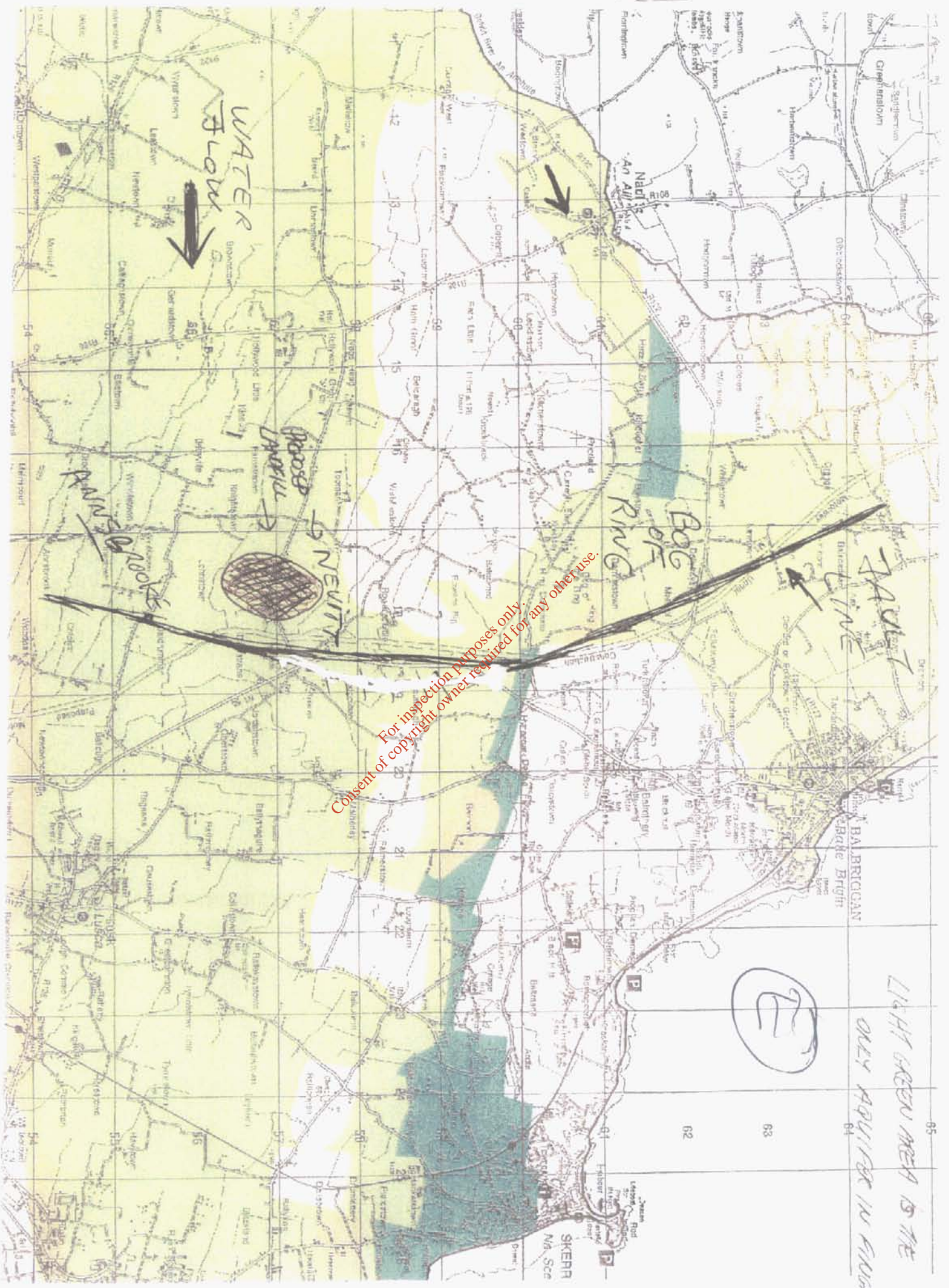
Source: EPA (M. Craig)

### Sources

EPA (M. Craig); Page, D., Moriarty, J., Doris, Y. and Crowe, M., 2004, *The Quality of Drinking Water in Ireland. A report for the year 2003 with a review of the period 2001-2003*, EPA, Wexford; Toner, P., Bowman, J., Clabby, K., Lucey, J., McGarrigle, M., Concannon, C., Clenaghan, C., Cunningham, P., Delaney, J., O'Boyle, S., MacCárthaigh, M., Craig, M. and Quinn, R., 2005. *Water Quality in Ireland 2001-2003*. EPA, Wexford.

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MHI 2



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E

LIGHT GREEN MEAN IS THE  
 ONLY ACQUISITION LINE

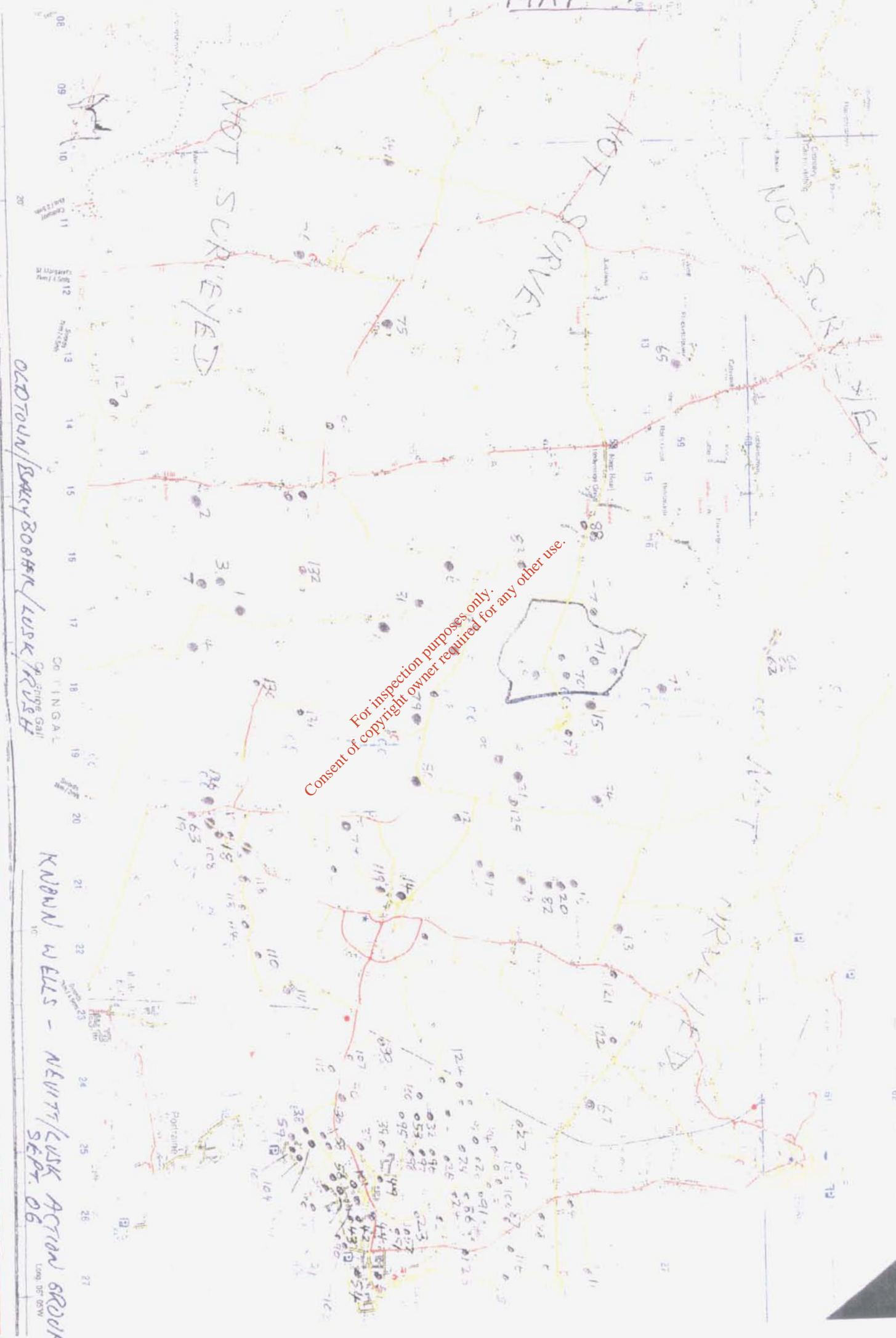
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MAP 4

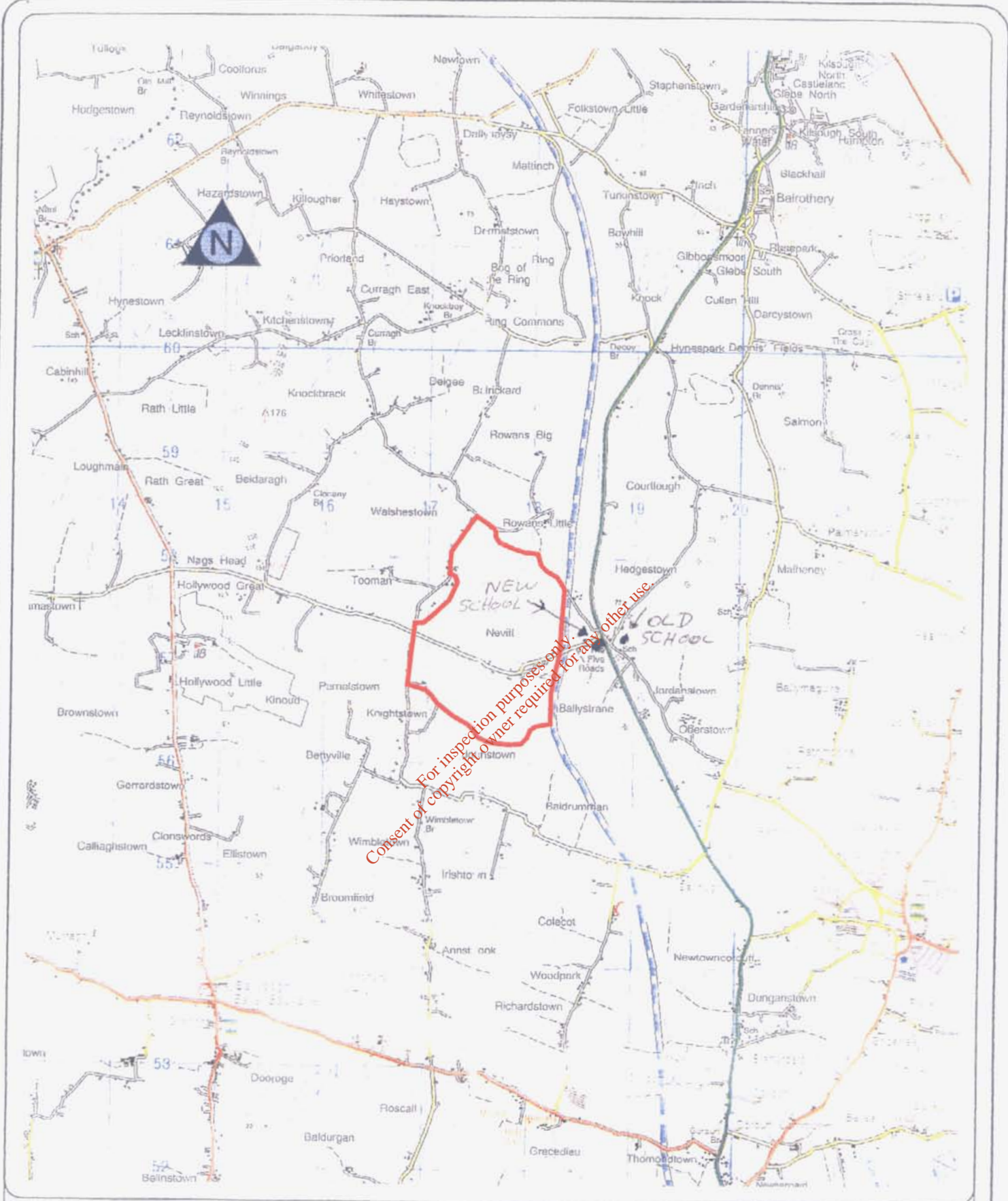


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OLD TOWN / BARRY BOOTH / LUSK / RUSH

KNOWN WELLS - NEWITT / LUSK ACTION GRID  
 SEPT. 06

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Fingal Landfill Project - Additional Works

Mapping Overview

 Fingal County Council

 GLOVER SITE INVESTIGATIONS LIMITED

 - Area of Site

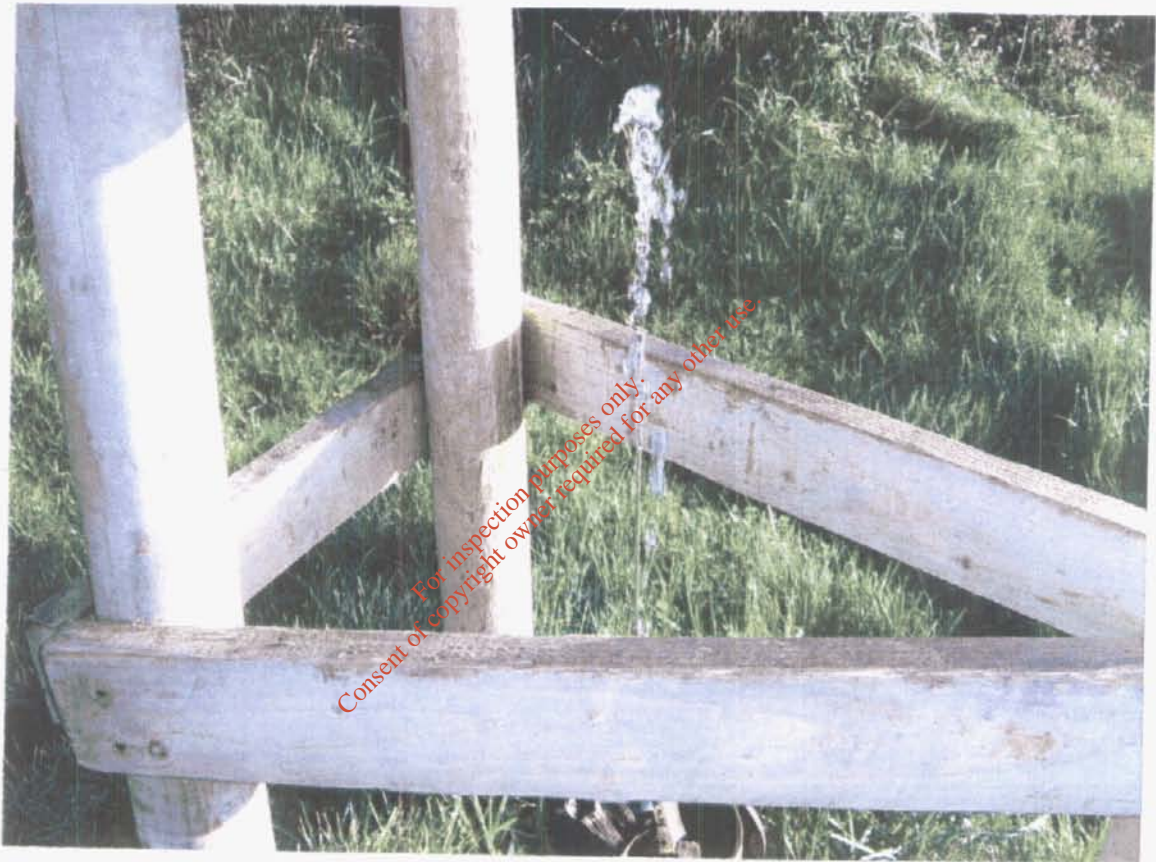
RPS Group Plc

SCALE	SHEET	DATE	PR	UNIT
N.T.S	01 of 01	24/02/06	A W	T.R.

FILE	REV
06-074-Map-Oview-001	

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PICTURE 1



ARTESIAN WELL

IN THE NEVITT

PICTURE TAKEN BY

DEAGLAN DE FAOITE

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PIC TURE 2



2004

BOG OF RING

NOTE ; GOAL POST'S

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PICTURE 3



14 / 1 / 2008

BOG OF RING

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May I remind everybody, the three pump tests in the Nevitt yielded  
PW1 560,000 litres per day l/d  
PW2 311,000 l/d  
ASA2 623,000 l/d

The applicant FCC has confirmed that 1.5 million litres of water flows through the bedrock of the Nevitt every day.

Geological Survey of Ireland GSI has confirmed there is potential for a new water supply along the North / South fault line.

Dr. Ian Marnane EPA has shown there is a potential water supply in the East and South of the Nevitt.

The applicant FCC has shown there is a potential for a new water supply in the South, Annsbrooke.

We also note artesian wells and high yielding wells exist to the West of the Nevitt [ examples are James McNally, the holy well etc ] .

Obviously, the Nevitt is a water supply as defined by the Drinking Water Regulations 2007, S. I. No. 106.

We also note, the GSI has shown the water divide can not be determined and they recommend more wells to be drilled along the North / South Fault line. These extra wells were not drilled.

The following Hydro geologists have shown there is potential for a water supply in the Nevitt area, Dr. Paul Ashley, Kevin Cullen, White Young and Green.

Mr Terry Dockrell suggested there was a huge amount of water in the area about three three years ago.

Mr. Jim Burke, was the first Senior Engineer to work on the Bog of the Ring in 1961 / 1962, as Engineer with Dublin City Council. His job was to drain the lake at the Bog of the Ring. We presented a presentation to a full FCC Council meeting over three years ago stating that, Mr. Jim Burke believes that the area is one unified water resource. In my opinion, Mr. Jim Burke has been proven 100 % correct, now that we have gathered all the physical evidence.

The model is approximate to scale.

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