

FILE DISCUSSED AT COUNCIL/COMMITTEE MEETING

FILE REF:

9-1A/0126

MEETING	COMMENTS	NOTED IN DEV. CONTROL	NOTED BY
Belgard 24/9/91	<p> Cllr C McLyraeth rec seem be opposed & also suggested that new wastewater treatment system should not be judged against old standards </p>		

9/14/026

CERTIFICATE NO: 24216

House

Beermount Road, Newcastle

John McNally

1	2	3	4	5	6	7
DWELLINGS/AREA LENGTH/STRUCT	RATE	AMT. OF FEE. RES.	AMOUNT LODGED	BALANCE DUE	BALANCE DUE	DATE/ RECEIPT NO.
Dwellings	£332	1.0p	£24	£24	/	
	£316					
	£500 per MP in excess of 300MP Min. £40					
metres	£21.75 per MP of £40					
x .1 hect.	£225 per hect. of £250					
	£225 per hect. of £250					
x .1 hect	£225 per hect. of £250					
	£225 per hect. of £250					
x metres	£210 per m ² of £40					
x 1,000m ²	£205 per 1,000m ² of £40					
x .1 hect	£23 per .1 hect. of £40					

Column 1 Certified Signed: _____

Column 1 Endorsed Signed: _____

Columns 2,3,4,5,6 & 7 Certified Signed: *[Signature]* Grade: 50 Date: 13/2/97

Columns 2,3,4,5,6 & 7 Endorsed Signed: _____ Grade: _____ Date: _____

DECISIONS
APPEALS CHECK LIST

REG. REF. NO. 91A 126

1	ENTERED IN OBJECTORS REGISTER	✓
2	ENTERED IN BLUE FOLDER	✓
3	ENTERED IN APPEALS REGISTER	✓
4	ENTERED IN PLANAPS: I.E.:	✓
	Appeal Decision: K.O.	✓
	Appeal Date: 22/4/92	✓
5	COPY OF DECISION FOR WEEKLY LIST (LAURA/MARY)	✓
6	DECISION CIRCULATED TO LISTED PERSONS	✓
6	TO BONDS & CONTRIBUTIONS FOR FINANCIAL ASSESSMENT	
7	TO L. DOYLE FOR NOTING	

CHANGE STATUS IN PLANAPS:

REFUSAL:.....55
 GRANT:.....62
 WITHDRAWN:.....54
 CONDITIONS:.....53

p/2113/92

FINANCIAL
CONTRIBUTION :-
AMOUNT & NIL

AN BORD PLEANÁLA

Refusal

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1990

County Dublin

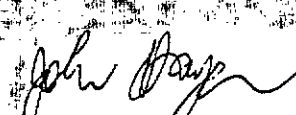
Planning Register Reference Number: 91A/126

APPEAL by John McNally care of Feargall Kenny of 45 Hainault Drive, Foxrock, Dublin against the decision made on the 21st day of October, 1991 by the Council of the County of Dublin to refuse an outline permission for development comprising the construction of a residence with wastewater treatment system and irrigation area at Peamount Road, Newcastle, County Dublin:

DECISION: Pursuant to the Local Government (Planning and Development) Acts, 1963 to 1990, outline permission is hereby refused for the said development for the reasons set out in the Schedule hereto.

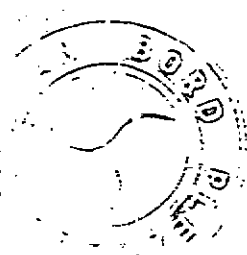
SCHEDULE

1. The proposed development would be premature by reference to the following constraint and the period within which the constraint may reasonably be expected to cease -
 the existing deficiency in the provision of sewerage facilities in the area which arises from the lack of further dilution capacity in the stream to which effluent is discharged from the Newcastle treatment plant.
2. Having regard to the limited area of the site and its location in a built-up area, it is considered that the site is inadequate to provide for the satisfactory treatment and on-site disposal of the waste water arising from the proposed development and that the proposed development would, accordingly, be prejudicial to public health and contrary to the proper planning and development of the area.



Member of An Bord Pleanála duly
authorized to authenticate the
seal of the Board.

Dated this 30th day of April 1992.




AN BORD PLEANÁLA

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1990

County Dublin

Planning Register Reference Number: 91A/126

Order Noted: <u>L.D.</u>	
Dated: <u>7th May 92</u>	<u>ASST. COUNTY MANAGER</u>
to whom the appropriate powers have been delegated by order of the Dublin City and County Manager.	
Dated <u>10th</u> day of <u>FEBRUARY</u> <u>1992</u>	

An Bord Pleanála,
Floor 3,
Blocks 6 & 7,
Irish Life Centre,
Lower Abbey St.,
Dublin 1.

Our Ref: 91A/0126

Your Ref.: PL6/5/87351

23 April 1992

Re: Proposed outline permission for residence, wastewater treatment system and irrigation area at Peamount Road for Mr. J. McNally.

Dear Sir/Madam,

I refer to your letter dated 20th November, 1991 & 31st December, 1991, enclosing correspondence with regard to the above appeal.


The Planning Authority's comments are as follows:-

The Newcastle Treatment Plant serving this area is fully committed to existing development, the treated effluent from this plant discharges to a water course which can not assimilate additional discharge either of greater quantity or of poorer quality without creating a situation prejudicial to Public Health or the Environment.

In principle a waste water treatment plant can be acceptable in certain situations and circumstances where its viability can be proven beyond reasonable doubt.

In this particular instance, notwithstanding the above, the Supervising Environment Health Officer points out that if this system (or any of the other new system) was installed, and failed to work, the Council would be left in the position whereby the house was constructed on a site which is too small for the conventional septic tank, and the main drainage system is too full to take the extra sewage. The Supervising Environmental Health Officer concurs with the reason for refusal in this case.

Yours faithfully,


for Principal Officer.

Sanitary Services Section
 P.O. Box 174
 46/49 Upper O'Connell Street
 Dublin 1
 Telephone (01) 727777
 Fax No. 725782



(Handwritten initials and circled number 351)

29 JAN 92

Our Ref. BM/DF

Your Ref.

Date 27/1/92

Mr. A. Smith,
 P. O.,
 Planning Department.

DEVELOPMENT
 31 JAN 92
 CC/...

29 JAN 92

For the attention of: Mr. Les Doyle

Re: Residence, Wastewater treatment system and irrigation area at Peamount Road for Mr. J. McNally.

Thank you for your letter dated 2nd January, 1992, with enclosures concerning the above proposal.

The Newcastle Treatment Plant serving this area is fully committed to existing development, the treated effluent from this plant discharges to a water course which can not assimilate additional discharge either of greater quantity or of poorer quality without creating a situation prejudicial to Public Health or the Environment. The breaching of this principle which has been acknowledged by the Board in the past would be invidious to previous applicants who have been refused.

In principle Engineering Services would have no objection to a proposal for a waste water treatment plant subject to the following criteria;

- (i) It did not pose a threat to the intended inhabitants of the dwelling.
- (ii) It did not pose a threat to neighbouring properties and inhabitants.
- (iii) The means of effluent disposal meets the requirements of B.S.6297.
- (iv) It did not form one of a number of properties in close proximity which were all dependent on wastewater treatment plants or septic tanks. In such circumstances the aggregate effect would be far more detrimental than a single isolated unit.
- (v) A firm committment to maintain the plant was undertaken and the plant was not susceptible to deterioration in respect of its operation or disposal of effluent, which could not be remedied by simple and inexpensive maintenance.

It is noted that one of the reasons for rejection given by the Eastern Health Board refers to the fact that the proposal is in a sewered area. The first paragraph of this report addresses that point.

(Handwritten signature)
 B. Morris,
 A/S.E.E.

Endorsed: *(Handwritten signature)*
 F. G. Coffey,
 Senior Engineer.

Mary Galvin

EASTERN HEALTH BOARD

PLANNING DEPT.
DEVELOPMENT CONTROL SECT.
Date 19.01.92
Time 10.00

P.C. _____ Reg. Ref: 91A/0126

Proposed: Residence, wastewater treatment system and irrigated area

At: Pearmount Road, Newcastle

For: J. McNally

Plans lodged: 6 Feb 91

Architect: Feargall Kenny

Observations and recommendations of Env. Health Officers and/or Supervising Env. Health Officer.

For the attention of L.S. Doyle - Planning approval

I agree with the reasons for refusal as outlined in the Record of Executive Business and Managers orders dated 21 Oct 91.

The National Standard collection of 3000 are not in a position to ...
in the absence of a standard against which the performance of the system can be measured. If this system (or any of the other new systems) was installed, and for one reason or another failed to work, the Council would be left in its position whereby the house was constructed on a site which is too small for a conventional septic tank, and the main drainage system is too full to take the extra sewage.

Enforced
Sta Dev re Kelly 8870
for 50m of Kelly 8870
15/1/92

Jillie Kelly EHC
91192

Mr. C. Corrigan,
Assistant Staff Officer,
Environmental Health Office.

Our Ref: 91A/0126

2ND JANUARY 1992

Re: Residence, wastewater treatment system and irrigation
area at Peamount Road for Mr. J. McNally.

Dear Sir,

I attach copy of grounds of appeal and Planning Officers report
in regard to the above.

I should be most obliged to received your comments on same before
13th January, 1992.

PLEASE MARK YOUR REPLY FOR THE ATTENTION OF LES DOYLE

Yours faithfully,

L. D
for Principal Officer.

Barry Morris,
Senior Engineer,
Sanitary Services Department.

Our Ref: 91A/0126

2ND JANUARY 1992

Re: Residence, wastewater treatment system and irrigation
area at Peamount Road for Mr. J. McNally.

Dear Sir,

I attach copy of grounds of appeal and Planning Officers report
in regard to the above.

I should be most obliged to received your comments on same before
23RD January, 1992.

PLEASE MARK YOUR REPLY FOR THE ATTENTION OF LES DOYLE

Yours faithfully,

L. J

for Principal Officer.

COMHAIRLE CHONTAE ATHA CLIATH

Appeals

TO:

N.R. Pendergast

REG. REF.

9117-926

RE:

Residence, Wastewater treatment system & irrigation area Peamount Road.

I attach for your observations memo/letter dated

20-11-91

from An Bord Pleanala.

Please reply before:

22/12/91

S
for Principal Officer

DATED:

11/12/91

OBSERVATIONS:

Mr. Reford S.S. Insp. + E.H.O. Receipts 12/13/12

ISSUED 2/1/92

Signature of person making observations: _____

Countersigned: _____

(S.E.D.C.)

DATE: _____

DATE: _____

P/4833/91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Register Reference : 91A/0126 Date Received : 30th August 1991

Correspondence : Mr Feargall Kenny, Architect,
Name and : 45 Hainault Drive,
Address : Foxrock,
Dublin 18.

Development : Residence, wastewater treatment system and irrigation area

Location : Peamount Road

Applicant : Mr J. McNally,

App. Type : Outline Permission

Zoning :

Floor Area : 0.125 Sq.metres

Report of the Dublin Planning Officer, dated 14 October 1991.

This is an application for outline permission for a dwelling house, wastewater treatment system and irrigation area on site at Peamount Road, Newcastle Village, for Mr. J. McNally.

The proposed site is located in an area zoned 'B' for agriculture. It has an area of 930sq. metres and is essentially an infill site in Newcastle Village. It adjoins the site of a pair of semi-detached cottages to the south. There is a vacant site immediately to the north and thereafter existing cottage and a bungalow. A row of 14 no. semi-detached two storey houses are located opposite. *The proposed site is located in an area zoned 'B' in the Draft Development Act 1991*

Reg. Ref. No. ZA.413 refers to a 1985 refusal of planning permission (by the Council and on appeal to An Bord Pleanála) for 2 no. pairs of semi-detached houses on this site. The Boards reason for refusal referred to the fact that there was no public sewer available to serve the development.

The current proposal provides for a residence of floor area c.125sq. metres. The applicant proposes to service the development with a "Bio Cycle" Wastewater treatment system designed to provide effluent treatment to secondary level. Lodged plans identify the location of the biocycle unit and the irrigation and reserve irrigation areas on site.

Additional Information was requested from the applicant with regard to the following:-

1. Method of drainage proposed is a 'Bio-Cycle' waste water treatment system. This system provides for the disposal of treated effluent by irrigation over a 50 sq.m. (stated) 'irrigation area'. The applicant is requested to submit

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/0126

Page No: 0002

Location: Peamount Road

evidence to prove the suitability of the soil for the disposal of this treated effluent. This will require the inspection of trial holes on site by the Environmental Health Officer. The applicant is requested to contact the Environmental Health Officer, (33 Gardiner Place, Dublin 1, Phone 727777) in this regard.

Additional information was submitted on 30 August 1991. This included the results of trial hole tests carried out by the applicant on site.

Environmental Health Officer's report (received 02.10.91) states that the proposal is unacceptable and refers to an earlier report of 20.03.91. (It is noted that this report was not to hand when additional information request was made). The Environmental Health Officer had been contacted by phone at that stage (see previous report dated 26.03.91). This report noted that the proposal was unacceptable for a number of reasons: (1) wastewater systems not recommended in sewered area, (2) road frontage is inadequate, (3) site is too small to accommodate wastewater system etc.

Roads Department report noted.

Parks Department report noted.

I recommend that a decision to REFUSE ^{outline} PERMISSION be made under the Local Government (Planning and Development) Acts 1963-1990, for the following (1) reasons:-

REASONS FOR REFUSAL

01 The proposed site is considered to be inadequate in terms of road frontage and area to accommodate a private drainage system of the type proposed. The proposed development would, therefore, be prejudicial to public health and contrary to the proper planning and development of the area.

The proposed irrigation areas are too close to the proposed dwelling and adjoining dwellings.
The proposed irrigation areas are too close to the site boundary.
- There is no guarantee that irrigation of recreational areas will be avoided due to restriction of site size.
- The size of the site is considered to be inadequate particularly having regard to its location.

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Reg.Ref: 91A/0126

Page No: 0003

Location: Peamount Road

[Signature]
.....
for Dublin Planning Officer

[Signature]
.....
Endorsed:.....
for Principal Officer

Order: A decision pursuant to section 26(1) of the Local Government (Planning and Development) Acts, 1963-1990 to REFUSE ^{planning} PERMISSION for the above proposal for the () reasons set out above is hereby made.

Dated : 21 OCTOBER 1991

[Signature]
.....
ASSISTANT COUNTY MANAGER/APPROVED OFFICER
to whom the appropriate powers have been delegated by order of the Dublin City and County Manager dated 21st October 1991.

Peter Byrne.

EASTERN HEALTH BOARD

P.C. _____ Reg. Ref: 91A/0126

Proposed: Residence, wastewater treatment system + irrigation area

At: Peasemount Road, Newcastle

For: J. Mc Nally

Plans lodged: Add. Info. 30/8/91

Architect: Feargall Kerry

Observations and recommendations of Env. Health Officers and/or Supervising Env. Health Officer.

This proposal is not acceptable to this office.

See items 1-3 (c) in report dated 20/3/91.

Note: I inspected a trial hole on this site on 25/9/91, which showed a water table level of 6 ft. below surface. Both the Architect and the Applicant were advised that it is not the policy of this office to allow trial holes and percolation tests without supervision. The Architect advised me that he misunderstood the procedure.

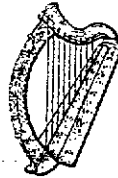
Stad Devine
for John O'Reilly SEHO
26/9/91

Jackie Kelly
E.H.O.
PLANNING DEPT 26/9/91
DEVELOPMENT CONTROL SECTION
Date 2.10.91
Time 10.00

Seol aon fhreagra chun
(Reply to)

AN RÚNAÍ
(The Secretary)

faoin uimhir seo:—
(Quoting)



AN ROINN COSANTA
(Department of Defence)

TEACH NA PÁIRCE
(Park House)

BAILE ÁTHA CLIATH, 7
(Dub. n. 7)

17

2/50719

Teileafón 01/20703 771881

13 March, 1991.

Dear Sir,

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 15 / 3 / 91
Time 12.45

Re: Planning Applications which might affect the use
of Casement Aerodrome, Baldonnel, Co. Dublin.

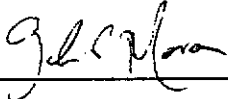
I am directed by the Minister for Defence to refer to applications:

- 90A/2147 - Sprucefield Developments Ltd., Buckandhounds, Clondalkin.
- 91A/0091 - Pumpower Ltd/D & B Gray Ltd., Unit No. 20, Cookstown Industrial Estate, Dublin 24.
- 91A/0098 - Kelland Homes Ltd., Cherrywood Drive, Nangor Road, Clondalkin.
- 91A/0106 - Southside Tavers Ltd., The Foxes Covert, Main Street, Tallaght.
- 91B/0053 - Mr. S. McAuley, 1 Bancroft Avenue, Tallaght, Dublin 24.
- 91B/0072 - Mr. & Mrs. D. McAuley, 70 Coolamber Drive, Rathcoole.
- 91B/0073 - Mr. J. Deans, 33 Oak Downs, Clondalkin.
- 91A/0117 - J. Mulvey, Main Street, Tallaght.
- 91A/0124 - I.B.M. Ireland Ltd., Unit 31 on the corner of Airton Road and Broomhill Road, Tallaght.
- 91A/0125 - Gay Carter, Springfield, Kingston, Blessington Road, Tallaght.
- 91A/0126 - Mr. J. McNally, Peamount Road.
- 91A/0132 - Irish Biscuits Limited, Belgard Road, Tallaght.
- 91A/0136 - Gregory Allen, Hazelhatch Road, Newcastle.
- 91B/0085 - Mr. J. Purcell, Castle Road, Saggart.
- 91B/0086 - R. Flynn, 13 The Drive, Millbrook Lawns, Tallaght.
- 91B/0100 - B. Rogers, 39 Alderwood Park, Springfield, Tallaght.
- 91B/0101 - D. McCarthy, 81 Lanndale Lawns, Tallaght.

/.....

No objection is seen to these developments provided they do not exceed 11M. in height above ground level.

Yours sincerely,



JOHN P. MORAN
EXECUTIVE OFFICER

The Secretary,
Dublin County Council,
Planning Department,
Irish Life Mall,
Lower Abbey Street,
Dublin 1.

PLANNING DEPT.	
DEVELOPMENT CONTROL SECT	
Date	15 / 3 / 91
Time	12:45

Register Reference : 91A/0126

Date : 14th February 1991

Development : Residence, wastewater treatment system and irrigation area

PB

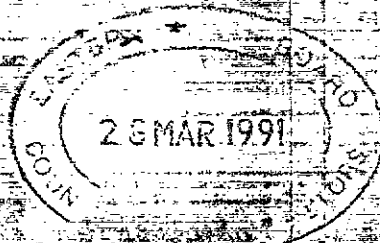
LOCATION : Peamount Road

Applicant : Mr J. McNally,

App. Type : OUTLINE PERMISSION

Planning Officer : P. BYRNE

Date Recd. : 6th February 1991



Attached is a copy of the application for the above development. Your report would be appreciated within the next 28 days.

Yours faithfully,

PRINCIPAL OFFICER

*This proposal is not acceptable
See items 1-4 in report of this office dated
20/3/91*

*Kieran J. Kerberry E.H.O
8/4/91*

*Stadovine
for John O'Leary*
SUPER. ENVIRON. HEALTH OFFICER,
33 GARDINER PLACE,
DUBLIN 1.

PLANNING DEPT.	
DEVELOPMENT CONTROL SECT	
Date	11/4/91
Time	9.00



Bosca 174,
P. O. Box 174,
5 Rae Gardnar,
5 Gardiner Row,
Baile Atha Cliath 1.
Dublin 1.
Telephone: (01) 727777
Fax: (01) 725782

Mr. D. Drumgoole,
Senior Administrative Officer,
Planning Department,
Dublin County Council.

Our Ref.

Your Ref.

Date 28.02.1991

PB

RE: Application for Outline Planning Permission for Residence
at Peamount Road, Newcastle. Reg. Ref. 91A/126.

In the event of it being decided to grant outline planning
permission, the following matter should be included:-

- 1) The applicant has not provided any public open space in accordance with the 1983 Development Plan Standards. The applicant should, therefore, be requested to submit additional information on how it is proposed to meet these requirements. Alternatively, the applicant should be requested to pay a financial contribution of £1,000 towards the cost of provision and development of the open spaces in the area.

PLANNING DEPT.
DEVELOPMENT CONTROL CLERK
Date 4.03.91
Time 9.35

SENIOR PARKS SUPERINTENDENT

SS + CMO

~~P.B.~~ P.B. file

70

Register Reference : 91A/0126

Date : 14th February 1991

Development : Residence, wastewater treatment system and irrigation area

LOCATION : Peamount Road

Applicant : Mr J. McNally,

App. Type : OUTLINE PERMISSION

Planning Officer : P.BYRNE

Date Recd. : 6th February 1991

Attached is a copy of the application for the above development .Your report would be appreciated within the next 28 days.

Yours faithfully,

DUBLIN Co. COUNCIL
22 FEB 1991
SAN SERVICES

DUBLIN Co. COUNCIL
SANITARY SERVICES
PRINCIPAL OFFICER
27 MAR 1991
Returned *ef*

Date received in sanitary services

FOUL SEWER

Septic Tank proposal: refer to E.H.S.

The existing sewers are unavailable by reason of insufficient dilutions in the receiving stream of the treatment plant serving Newcastle.

SURFACE WATER

In sufficient information.

These surface water road drains serving the area which appear to discharge into soak-a-ways on land adjacent to the highway. Before any permission is granted, outline or otherwise it must be established that this site is not located over such a soak-a-way. The applicants are

SENIOR ENGINEER,
SANITARY SERVICES DEPARTMENT,
46/49 UPPER O'CONNELL STREET,
DUBLIN 1

advised to contact the Road Dept

R. Mulholland
27.3.91

*Check line of
Sewers*

Not for 887

P. 5

Register Reference : 91A/0126

Date : 14th February 1991

.....
ENDORSED _____ DATE _____

WATER SUPPLY..... Available for good use 24 hour
storage to be provided.

[Signature]
27/2/91
GMM 27/2/91

.....
ENDORSED 29/3/91 DATE 25/3/91

File

LOCAL HEALTH BOARD

P.C.

Reg. Ref:

91A/126

Proposed:

(Continued)

At:

For:

Plans lodged:

Architect:

Observations and recommendations of Env. Health Officers and/or Supervising Env. Health Officer.

3-d) In the event of overflow of the unit there is no evidence that the soil will absorb the effluent within the site boundaries

4) There is no evidence to indicate the soil suitability for the disposal of any effluent on the site

Kieran J. Carbery E.H.O.

20/3/91

for J/a Devine
John O'Reilly S.E.H.O.
20/3/91

~~File~~ P.B. ~~126~~

EAST DUBLIN HEALTH BOARD

PB

P.C.

Reg. Ref: 91A/126

Proposed: Residence, wastewater treatment system +
At: Pearmount Rd, Newscastle Irrigation area

For: J. McNally

Plans lodged: 6 Feb 91

PLANNING DEPT. DEVELOPMENT CONTROL SECT
Date 21/3/91

Contact: Feargall Kenny

Observations and recommendations of Env. Health Officers and/or
Supervising Env. Health Officer.

The proposal is not acceptable for the following reasons

- 1) This is a sewerage area. The installation of alternative wastewater ^{disposal} systems in a sewerage area is not recommended by this office.
- 2) The road frontage is inadequate. A minimum road frontage of 50 metres is required by Dublin County Council for sites with private drainage systems.
- 3) The site is too small to accommodate the proposed wastewater treatment system and irrigation areas for the following reasons:
 - a) The proposed irrigation areas are too close to the proposed dwelling and adjoining dwellings.
 - b) The proposed irrigation areas are too close to the site boundary.
 - c) There is no guarantee that irrigation of recreational areas will be avoided due to the restrictions on site size.

DUBLIN COUNTY COUNCIL

REG. REF:

91/A/126

LOCATION:

Peamount Road.

APPLICANT:

Mr. J. McNally.

PROPOSAL:

Residence, wastewater treatment system and irrigation area.

DATE LODGED:

6th February, 1991.

This application is for outline permission for wastewater treatment system and irrigation area at Peamount Road.

Roads Department have no objection in principle to the development subject to the boundary to be set back in line with the boundary wall of the adjacent dwellings to the south. The applicant should also be conditioned to provide parking for two vehicles and construct a standard access according to Council standards, should an application for full permission be submitted.

PLANNING DEPT.
DEVELOPMENT CONTROL SECT
Date 20 / 3 / 91
Time 4.00

MA/MM 14/3/91.

SIGNED: _____

ENDORSED: C. B. L.

DATE: _____

DATE: 14 / 3 / 91

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Proposed outline permission for residence, wastewater treatment system and irrigation area at Peamount Road for Mr. J. McNally.

Mr. Feargall Kenny, Architect,
45, Hainault Drive,
Foxrock,
Dublin 18.

Reg. Ref. 91A-0126
Appl. Rec'd: 06.02.1991
Floor Area:
Site Area:
Zoning: B

Report of the Dublin Planning Officer, dated 26 March 1991

This is an application for outline permission for a dwelling house, wastewater treatment system and irrigation area on site at Peamount Road, Newcastle for Mr. J. McNally.

The proposed site has an area of 930 sq. m. It is essentially an infill site in Newcastle Village. It adjoins the site of a pair of semi-detached cottages to the south. There is a vacant site immediately to the north and thereafter existing cottages and a bungalow. A row of 14 no. semi-detached two storey houses are located opposite.

Reg. Ref. No. ZA 413 refers to a 1985 refusal of planning permission (by the Council and on appeal to An Bord Pleanála) for 2 no. pairs of semi-detached houses on this site. The Board's reason for refusal referred to the fact that there was no public sewer available to serve the development.

The current proposal provides for a residence of floor area c. 125 sq. m. The applicant proposes to service the development with a 'Bio Cycle' Wastewater treatment system designed to provide effluent treatment to secondary level. Lodged plans identify the location of the biocycle unit and the irrigation and reserve irrigation areas on site.

Environmental Health Officers' report not received. Environmental Health Officer was contacted. According to the Environmental Health Officer trial holes and possibly percolation tests will have to be carried out to determine the suitability of the soil for the disposal of treated wastewater.

Roads Department reports no objection subject to conditions regarding the setting back of the boundary and car parking.

The proposed site is located in an area zoned 'B' - "to protect and provide for the development of agriculture". As stated, the proposed site is surrounded by establishing housing and represents an infill site in Newcastle Village. Housing development at this site is acceptable providing an acceptable means of drainage is achieved and the applicant can satisfy the planning authority of his need to reside in an B zone in compliance with Council policy (Para 2.3.9). The applicant has

(Continued)

COMHAIRLE CHONTAE ÁTHA CLIATH

Record of Executive Business and Manager's Orders

Proposed outline permission for residence, wastewater treatment system and irrigation area at Peamount Road for Mr. J. McNally.

(Continued)

~~submitted no details to this effect.~~

I recommend that **ADDITIONAL INFORMATION** be requested from the applicant with regard to the following:-

1. The method of drainage proposed is a 'Bio-Cycle' waste water treatment system. This system provides for the disposal of treated effluent by irrigation over a 50 sq. m. (stated) 'irrigation area'. The applicant is requested to submit evidence to prove the suitability of the soil for the disposal of this treated effluent. This will require the inspection of trial holes on site by the Environmental Health Officer. The applicant is requested to contact the Environmental Health Officer, (33, Gardiner Place, Dublin 1, Phone 727777) in this regard.

Omit it.

2. The applicant is requested to submit evidence which shows how it is proposed to comply with the requirements of paragraph 2.3.9 of the Councils Development Plan.

MS(MG/DK)

Endorsed: *[Signature]*
for Principal Officer

[Signature]
For Dublin Planning Officer

Order:- I direct that **ADDITIONAL INFORMATION** be requested from the applicant for planning permission as set out in the above report and that notice thereof be served on the applicant.

Dated: 27 March, 1991.

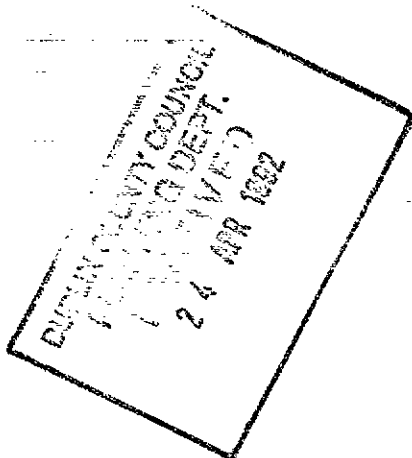
K. O'Sullivan
Dubl. City & Co. Manager.
dated 27th March 1991.

to whom the appropriate powers have been delegated by Order of the Dublin City and County Manager, dated 27th March 1991.

Our Ref: PL 6/5/87351
P.A. Reg. Ref: 91A/126

ZOH

Principal Officer,
Dublin County Council,
Planning Department,
Block 2,
Irish Life Centre,
Dublin 1.



Date: 22 APR 1992
APR 1992

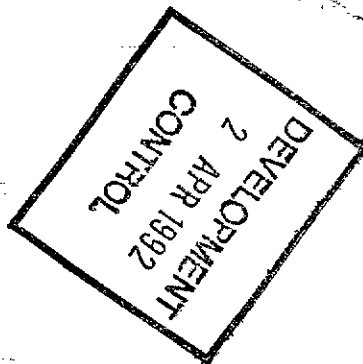
Appeal re: Construction of a residence with wastewater treatment system and irrigation area at Peamount Road, Newcastle, County Dublin.

Dear Sir,

An order has been made by An Bord Pleanála determining the above-mentioned appeal, under the Local Government (Planning and Development) Acts, 1963 to 1990. A copy of the order is enclosed.

Yours faithfully,

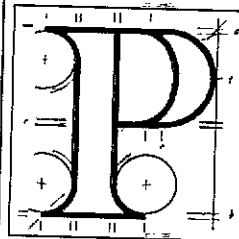
Norma O'Connor
Norma O'Connor



Encl.

BP 352

An Bord Pleanála



Floor 3 Blocks 6 & 7
Irish Life Centre
Lower Abbey Street
Dublin 1
tel (01) 728011

AN BORD PLEANÁLA

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1990

County Dublin

Planning Register Reference Number: 91A/126

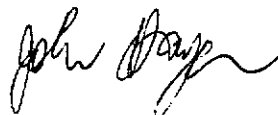
APPEAL by John McNally care of Feargall Kenny of 45 Hainault Drive, Foxrock, Dublin against the decision made on the 21st day of October, 1991 by the Council of the County of Dublin to refuse an outline permission for development comprising the construction of a residence with wastewater treatment system and irrigation area at Peamount Road, Newcastle, County Dublin:

DECISION: Pursuant to the Local Government (Planning and Development) Acts, 1963 to 1990, outline permission is hereby refused for the said development for the reasons set out in the Schedule hereto.

SCHEDULE

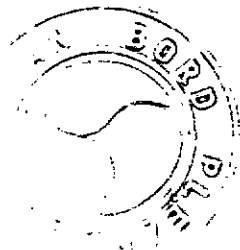
1. The proposed development would be premature by reference to the following constraint and the period within which the constraint may reasonably be expected to cease -

the existing deficiency in the provision of sewerage facilities in the area which arises from the lack of further dilution capacity in the stream to which effluent is discharged from the Newcastle treatment plant.
2. Having regard to the limited area of the site and its location in a built-up area, it is considered that the site is inadequate to provide for the satisfactory treatment and on-site disposal of the waste water arising from the proposed development and that the proposed development would, accordingly, be prejudicial to public health and contrary to the proper planning and development of the area.



Member of An Bord Pleanála duly
authorised to authenticate the
seal of the Board.

Dated this 30th day of April 1992.



Our Ref: PL 6/5/87351
P.A. Reg. Ref: 91A/126

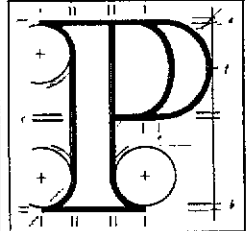
pk

Reed
7/11

The Secretary,
Dublin County Council,
Planning Department,
Block 2,
Irish Life Centre.

03 JAN 92

An Bord Pleanála



Floor 3 Blocks 6 & 7
Irish Life Centre
Lower Abbey Street
Dublin 1
tel (01) 728011

Date: 31st December 1991.

Appeal re: Residence, wastewater treatment system and irrigation area at Peamount Road, Newcastle, County Dublin.

Dear Sir/Madam,

Enclosed for your information is a copy of correspondence received in relation to the above-mentioned appeal. While it is not necessary for you to furnish any comments on the correspondence, you may do so if you wish. Any such comments should be forwarded within fourteen days from the date of this letter to ensure that they will be taken into consideration in the determination of the appeal.

Please quote the above appeal reference number in any further correspondence.

Yours sincerely,

Suzanne Lacey
Suzanne Lacey

BP 553A

PLANNING
CONTROL

Ob

FERRGALL KENNY B.Arch, Dip. T.P., RIBA, MIPI
CONSULTANT ARCHITECT AND TOWN PLANNER
45 HAINAULT DRIVE FOXROCK DUBLIN 18

Tel: 289 2119
289 5956
Fax: 289 6142

An Bord Pleanála
Floor 3, Blocks VI & VII
Irish Life Centre
Lr Abbey Street
Dublin 1



18th December 1991

RE: Appeal against the decision of Dublin County Council to refuse to grant outline planning permission for a house, waste-water treatment works and irrigation area on a site at Peamount Road, Newcastle, Co Dublin for Mr John McNally. (PA Reg. Ref. No. 91A/0126; ABP Ref. No. PL6/5/87351).

Dear Sirs

Further to the appeal in the above case dated 18.12.91 and your letter dated 20.11.91, I have now had an opportunity to consult the Planning Authority documents referred to in your letter. I would comment as follows:

The only objection to this proposal is on the grounds of drainage. The Planning Officer's report dated 21.3.91 states that "...the proposed site is surrounded by established housing and represents an infill site in Newcastle village. Housing development at this site is acceptable provided an acceptable means of drainage is achieved." In his report dated 14.2.91 the Sanitary Services Engineer states that "the existing sewers are unavailable by reason of insufficient dilution of the receiving stream of the treatment plant serving Newcastle." He refers the septic tank proposal (sic) to the Eastern Health Board for their comments.

It is clear from the above that the basic proposal for a house connected to the existing drains was deemed unacceptable only because of the unavailability of the existing sewer for the reasons stated by the Sanitary Services Engineer. The Planning Authority failed to state this reason in their refusal notice and, as noted in the letter of appeal, it is therefore considered that the Planning Authority have issued an invalid refusal notice which is tantamount to a planning permission by default.

I now refer to the report from the Health Officer dated 21.3.91. The proposal for a "Biocycle" treatment works is stated to be unacceptable for the following reasons:

- 1) *"The proposal is located in a sewered area. The installation of alternative waste-water disposal systems in a sewered area is not recommended by this office."*
- 2) *"The Road frontage is inadequate. A minimum of 50 metres is required."*

cont/.....

- 3) *The site is too small for the following reasons:*
- a) *The irrigation areas are too close to the proposed dwelling and adjoining dwellings.*
 - b) *The proposed irrigation areas are too close to the site boundary.*
 - c) *There is no guarantee that irrigation of recreational areas will be avoided due to the restrictions on site size.*
 - d) *In the event of an overflow of the unit, there is no evidence that the soil will absorb the effluent within the site boundaries.*
- 4) *There is no evidence to indicate site suitability for the disposal of any effluent on the site.*

Having considered the above objections I would reply to them as follows:

- 1) This statement does not appear as a reason for refusal in the notice issued by the Planning Authority. Nonetheless it is the first reason put forward by the Health Officer and there are good grounds to believe that it is the fundamental reason for the Health Officer's objection in principle to this proposal and that all of the other stated reasons for refusal stem from this principle. Yet what is an applicant to do in a built-up sewered area where the Planning Authority will not provide a connection to the sewer? As far as the Health Inspectorate is concerned he is not entitled to turn to any feasible alternative. The principle that alternative waste-water disposal works are unacceptable in sewered areas is more important than any other consideration.
- 2) Again we have a situation where principle is deemed more important than the specific merits of the proposal. In this case the principle is mis-applied because it emanates from requirements for septic tank drainage. It must be stated once again that this is not a proposal for a septic tank.
- 3) a) & b) The proposed "Biocycle" unit has been monitored over a period of years by Eolas, prior to the issue of an Agreement Certificate for the unit. It is expected that the Agreement Certificate will be issued in January 1992. It is confidently expected that the present proposal will more than adequately comply with the criteria which will be laid down in the Certificate for minimum distances from buildings, boundaries and area of irrigation areas. A copy of the Agreement Certificate will be sent on to the Bord if it is received before the conclusion of this appeal.
- 3)c) Again it is expected that the Agreement Certificate will indicate the suitability of this site. However in order to allay the Health Officer's fears on this point, the applicant would be willing to fence off the irrigation area as well as covering it with ground cover planting. Furthermore ~~it is~~ perfectly feasible to dispose of the treated effluent by ~~sub-soil irrigation~~ rather than surface irrigation and the applicant would be willing to comply with this requirement also.

cont/.....

- 3)d) Test holes were dug on site at the request of the Planning Authority and inspected by the Health Officer. In inspections and tests carried out by this office the following results were achieved:

Location "A": Water table test hole, approx. size 1 metre x 1 metre x 2 metres deep. At initial opening and at a later inspection on 13th July 1991, the water table was established to be at a constant 1.830 metres depth.

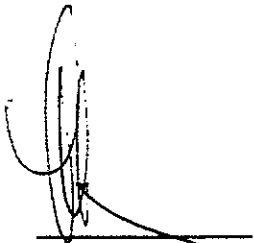
Location "B": Percolation test hole, approx. size 300mm x 300mm x 600mm deep. In tests carried out during mid-August 1991, the value of "T" (SR6: 1975 - Page 10) was calculated at 13.33.

It is significant that this reason for the unacceptability of the site was withdrawn in the Health Officer's later report dated 26.9.91.

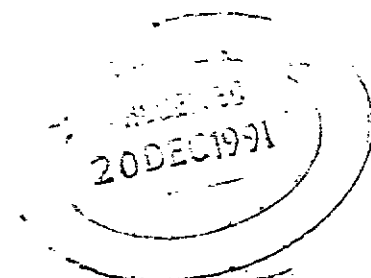
- 4) The trial holes and tests confirmed the suitability of the site for effluent disposal and again it is significant that this reason for the unacceptability of the site was withdrawn in the Health Officer's later report.

In conclusion it is clear that the Planning Authority's decision to refuse this proposal is based on biased and inappropriate criteria being applied to the proposal by the Health Inspectorate. The "Biocycle" unit has been tried and tested in use in Ireland and abroad and has proved itself perfectly acceptable for use on this site. Dozens of the units have been installed throughout the country, many on sites smaller than this, some even on Local Authority sites in the Dublin County Council area. In common with other Local Authorities the Council have learned to appreciate the value of this unit for use on their own problem sites where septic tank drainage is not feasible. If the unit is acceptable to the Planning Authority when carrying out its functions as the Housing Authority then surely it is acceptable for use on a private site such as this?

Yours faithfully



Feargall Kenhy



20 DEC 1991

COMHAIRLE CHONTAE ATHA CLIATH

tel.: 724755
Ext. 268/269

Planning Department,
Irish Life Centre,
Lr. Abbey Street,
Dublin 1.

Your Ref.: PL6/5/ 87351

Our Ref.: 910/0126

An Bord Pleanála,
Blocks 6 and 7,
Irish Life Centre,
Lr. Abbey Street,
Dublin 1.

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1983

Proposal: Residence, wastewater treatment system & roughness
area.

Applicant: J. M. Nally

Dear Sir,

With reference to your letter dated 20/11/91 I enclose
herewith:-

(1) & (2) A copy of the application which indicated the applicant's
interest in the land or structure.

(3) A copy of the public notice given, i.e.

Irish Press 24/1/91.

(4) The plan(s) received from the applicant on 20/11/91.

(6) & (7) A certified copy of Manager's Order P/1,833/91.

DATED, 21/10/91 together with technical reports in
connection with the application.

(8)

Yours faithfully,

P. Farrell
for Principal Officer.
Encls.

Our Ref: PL 6/5/87351
Your Ref: 91A/0126

The Secretary,
Dublin County Council,
Planning Department,
Block 2,
Irish Life Centre.

Date: 20th November 1991.

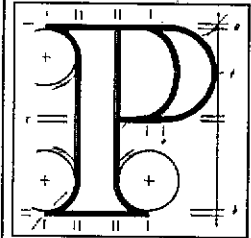
Planning authority decision re: Residence,
wastewater treatment system and irrigation area at
Peamount Road, Newcastle, County Dublin.

Dear Sir/Madam,

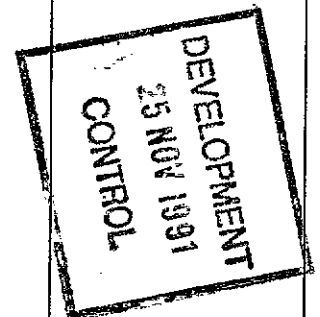
Enclosed is a copy of an appeal under the Local Government (Planning and Development) Acts, 1963 to 1990, in relation to the above-mentioned decision. So that consideration of the appeal may proceed, you are requested to forward to the Board within two weeks:

- (1) The application made to the planning authority.
- (2) Particulars of the applicant's interest in the land or structure, as supplied to the planning authority.
- (3) A copy of the public notice, whether published in a newspaper or on the site.
- (4) Any drawings, maps, particulars, information, evidence or written study received or obtained from the applicant, including the ordnance survey number.
- (5) Copies of requests (if any) to the applicant for further information relating to the application under appeal and copies of reply and documents (if any) submitted in response to such requests.
- (6) A certified copy of the relevant Manager's Order.
- (7) Copies of any technical or other reports relevant to the decision on the application.
- (8) Particulars and relevant documents relating to previous decisions affecting the same site or relating to applications for similar development close by.

An Bord Pleanála

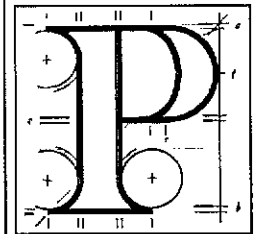


Floor 3 Blocks 6 & 7
Irish Life Centre
Lower Abbey Street
Dublin 7
tel (01) 728011



065

An Bord Pleanála



Floor 3 Blocks 6 & 7
Irish Life Centre
Lower Abbey Street
Dublin 1
tel (01) 728011

Please note that the other party to the appeal are being notified that copies of the planning authority documents relevant to the decision which gave rise to the above-mentioned appeal will be available for inspection at your offices after the expiration of a period of fourteen days from the date of this letter. It would be appreciated if parties could be facilitated in this regard.

Copies of the representations or observations made to the planning authority in relation to the application should not be sent to the Board. It is assumed that the planning authority has notified observers of the decision made and of the right of appeal.

The planning authority may make to the Board, in writing, such observations on the appeal as it thinks fit. Where practicable, any such observations should be submitted with the documents listed above but the furnishing of the documents should not be held up until observations are available. In any event, to ensure that they will be taken into account in the determination of the appeal, any such observations should be furnished within one month of the date of this letter.

Please quote the above appeal reference number in any further correspondence.

Yours faithfully,

Suzanne Lacey
Suzanne Lacey

Encl.

BP 005

FEARGALL KENNY B.Arch, Dip. T.P., RIBA, MIPI

CONSULTANT ARCHITECT AND TOWN PLANNER

45 HAINAULT DRIVE FOXROCK DUBLIN 18

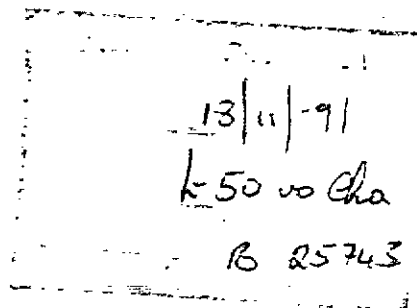
Tel: 289 2119

289 5956

Fax: 289 6142

An Bord Pleanála
Floor 3, Blocks VI & VII
Irish Life Centre
Lr Abbey Street
Dublin 1

18th November 1991



Dear Sirs

On behalf of my client, Mr John McNally, I wish to appeal against the decision of Dublin County Council to refuse to grant outline planning permission for a house on his site at Peamount Road, Newcastle, Co Dublin. A copy of the refusal notice is attached together with my cheque for £50.00 in respect of the appeal fee on behalf of Mr McNally.

The grounds for this appeal are as follows:

The sole reason for the Planning Authority's decision to refuse permission is stated to be because "The proposed site is considered to be inadequate in terms of road frontage and area to accommodate a private drainage system of the type proposed", followed by a number of criteria under which the Planning Authority consider that the site is inadequate for a private drainage system.

My client disputes the validity of this reason for refusal and contends that in refusing permission for the reason stated the Planning Authority did not take sufficient account of the documents presented to them with the application.

The application was primarily for a house which would be connected to the existing County Council mains sewer in the roadway adjoining the site. It was pointed out that the site is ideally suited to the construction of a bungalow as proposed. It is in the middle of the built-up area of Newcastle village and there are existing houses on either side of the site and on the other side of the road, all of which are served by the sewer.

The site was the subject of a decision to grant outline planning permission for four houses connected to the sewer by order of An Bord Pleanála dated 19.9.80 (Reg. Ref. SA 522; ABP Ref. PL6/5/46097). This permission has now lapsed. The present application, being for one house only, would have considerably less impact on the existing services that would have the lapsed application had it been proceeded with.

cont/.....

Being in the middle of a residential area, the site has no alternative viable use than that proposed, particularly now that the Council has effectively isolated it completely by granting planning permission for a residential development on the site to the rear. (PA Reg. Ref. 89A/2038).

73 NOV 1991

It is not in the interests of the proper planning and development of the area that this isolated site should remain undeveloped. In its present state it is seriously detrimental to the amenities of adjoining dwellings. Given these factors, as well as the Planning Authority's known antipathy to individual waste-water treatment plants, the Planning Authority had a duty to seriously consider the granting of planning permission on the basis of a connection to the existing sewer as proposed.

To sum up, it is pointed out that the Planning Authority failed totally to consider the primary basis of the application for a connection to the existing sewer. The installation of a waste-water treatment works was proposed as an alternative, and only as an alternative, in the event that the Council decided that they could not permit a connection to the sewer. By failing to address the question of a connection in the Refusal Notice, the Planning Authority failed to consider the application adequately within the statutory period and have issued an invalid refusal notice. This is tantamount to a planning permission by default. However my client does not wish to pursue this point but instead requests the Board to reverse the decision of the Planning Authority and grant outline permission for a bungalow with connection to the main sewer as applied for.

Without prejudice to the foregoing my client disputes the Council's contention that the site is inadequate for the alternative proposal for a waste-water treatment plant of the type specified.

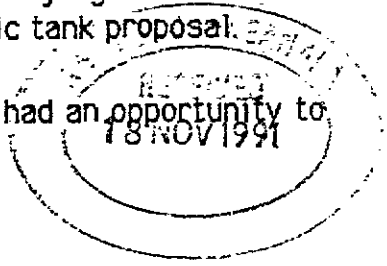
The Planning Authority appears to judge all applications for such treatment plants on the basis of the criteria which apply to septic tank drainage. As an example of the Planning Authority's approach to these matters they requested additional information on the proposal. The applicant was asked to submit evidence to prove the suitability of the soil for the disposal of the treated effluent. When queried as to the exact nature of the evidence required the applicant was asked to dig test holes and provide test results for water table and percolation. There was no reference to percolation in the application, the method of disposal being described as surface irrigation, which is a different process altogether. However the holes were dug as requested and the test results were satisfactory.

In submitting the results of the tests to the Planning Authority it was emphasised that the tests, particularly the percolation test, are applicable to a proposal for a traditional septic tank. It was also emphasised that the proposed "Bio-cycle" waste-water treatment plant is not a septic tank and does not function like a septic tank.

cont/.....

The "Bio-cycle" installation proposed is far more sophisticated and technically advanced than a traditional septic tank. With the "Bio-cycle" unit the treated effluent is disposed of by irrigation rather than by percolation. As a result the minimum size of site and the other limitations imposed by a traditional septic tank and percolation area do not apply. In this respect the unit has been successfully used both in Ireland and abroad on sites where the normal criteria governing the location and proper traditional septic tanks cannot be met. This application should therefore be judged on its own merits and not by the standard criteria normally applied to a septic tank proposal.

These ground of appeal may be added to or expanded after I have had an opportunity to study the Planning Authority's file on the application.



Yours faithfully

A handwritten signature in black ink, appearing to be "Feargall Kenny". The signature is written in a cursive style with a long, sweeping tail that extends to the right and then loops back down. Below the signature is a horizontal line, and the name "Feargall Kenny" is printed in a simple, sans-serif font.

Feargall Kenny



Bloc 2, Ionad Bheatha na hEireann,
Block 2, Irish Life Centre,
Sraid na Mainistreach Iacht,
Lower Abbey Street,
Baile Atha Cliath 1.
Dublin 1.
Telephone. (01)724755
Fax. (01)724896

OUTLINE
NOTIFICATION OF DECISION TO REFUSE PERMISSION
LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS 1963-1990.

Decision Order Number : P/ 4833 /91 Date of Decision : 21st October 1991

Register Reference : 91A/0126 Date Received : 30th August 1991

Applicant : Mr J. McNally,

Development : Residence, wastewater treatment system and irrigation
area .

Location : Peamount Road

Floor Area : Sq.Metres

Time Extension(s) up to and including :

Additional Information Requested/Received :270391//300891

In pursuance of its functions under the above mentioned Acts, the Dublin
County Council, being the Planning Authority for the County Health
District of Dublin, did by Order dated as above make a decision to
REFUSE PERMISSION in respect of the above proposal.

SM

For the Reasons set out on the attached Numbered Pages.

NUMBER OF REASONS:-ATTACHED.

Signed on behalf of the Dublin County Council.....
for Principal Officer

Date:.....

22/10/91

Mr Feargall Kenny, Architect,
45 Hainault Drive,
Foxrock,
Dublin 18.

Reg.Ref. 91A/0126
Decision Order No. P/ 4833 /91
Page No: 0002



Bloc 2, Ionad Bheatha na hEireann,
Block 2, Irish Life Centre,
Sraid na Mainistreach Iacht,
Lower Abbey Street,
Baile Atha Cliath 1.
Dublin 1.
Telephone. (01)724755
Fax. (01)724896

REASONS FOR REFUSAL

01 The proposed site is considered to be inadequate in terms of road frontage and area to accommodate a private drainage system of the type proposed. The proposed irrigation areas are too close to the proposed dwelling and adjoining dwellings. The proposed irrigation areas are too close to the site boundary. There is no guarantee that irrigation of recreational areas will be avoided due to restriction of site size. The size of the site is considered to be inadequate particularly having regard to its location. The proposed development would, therefore, be prejudicial to public health and contrary to the proper planning and development of the area.

Building Control Department,
Liffey House,
Tara Street,
Dublin 1.
Telephone:773066



Bloc 2, Ionad Bheatha na hEiréann,
Block 2, Irish Life Centre,
Sraid na Mainistreach Iacht,
Lower Abbey Street,
Baile Atha Cliath 1.
Dublin 1.
Telephone. (01)724755
Fax. (01)724896

Register Reference : 91A/0126

Date : 3rd September 1991

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1990

Dear Sir/Madam,

DEVELOPMENT : Residence, wastewater treatment system and irrigation
area

LOCATION : Peamount Road

APPLICANT : Mr J. McNally,

APP. TYPE : Additional Information

With reference to the above, I acknowledge receipt of additional information
received on 30th August 1991.

Yours faithfully,

.....

for PRINCIPAL OFFICER

Mr Feargall Kenny, Architect,
45 Hainault Drive,
Foxrock,
Dublin 18.

FERRGALL KENNY B.Arch, Dip. T.P., RIBA, MIPI
CONSULTANT ARCHITECT AND TOWN PLANNER
45 HAINAULT DRIVE FOXROCK DUBLIN 18

Tel: 289 5950
289 5950
Fax: 289 6142

Dublin County Council
Planning Dept
Irish Life Centre
Lower Abbey St
Dublin 1

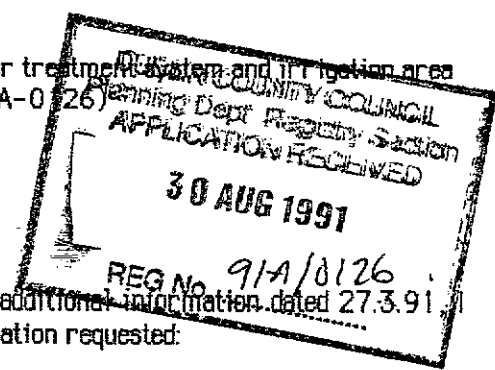
91A/0126
1.4.0
A.I.



27th August 1991

ADDITIONAL INFORMATION

Re: Application for outline planning permission for residence, wastewater treatment system and irrigation area at Peamount Road, Newcastle, Co Dublin for Mr J McNally. (Reg. Ref. 91A-0126)



Dear sirs

Further to the planning application dated 5.2.91 and your request for additional information dated 27.3.91, I now append on behalf of my client Mr John McNally the additional information requested:

The Environmental Health Officer for the area was contacted with a view to arranging for the inspection of trial holes on the site as suggested in your letter. However the Health Officer asked instead that the trial holes be opened by the applicant and tests carried out by him. She further requested that the test results be submitted with the additional information. Accordingly trial holes have been opened on the site as follows and as shown on the attached block Plan. The results achieved are as follows:

Location "A": Water table test hole, approx. size 1 metre x 1 metre x 2 metres deep. At initial opening and at a later inspection on 13th July 1991, the water table was established to be at a constant 1.830 metres depth.

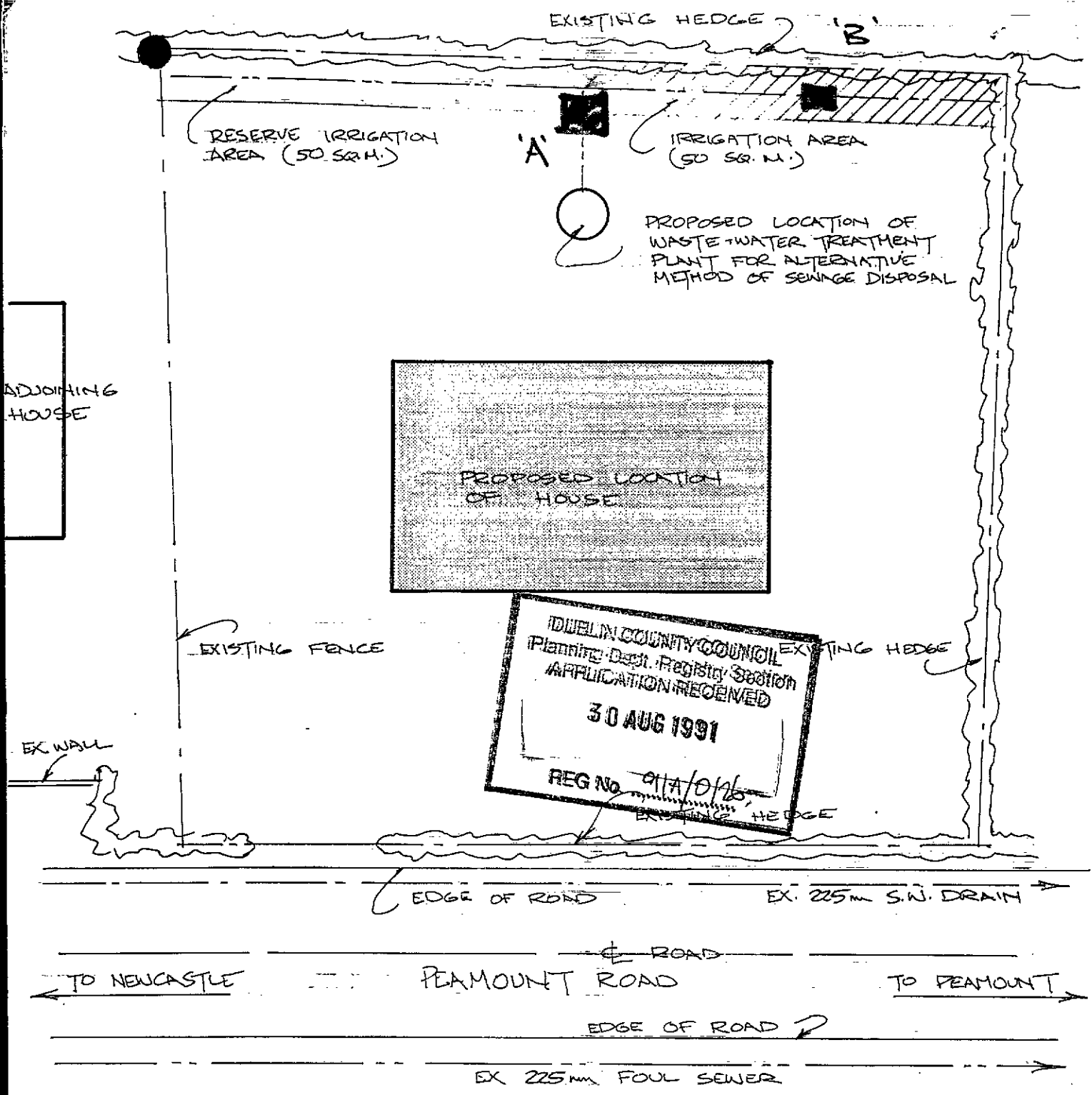
Location "B": Percolation test hole, approx. size 300mm x 300mm x 600mm deep. In tests carried out during mid-August 1991, the value of "T" (SR6: 1975 - Page 10) was calculated at 13.33.

It must be emphasised that these tests, particularly the percolation test, are applicable to a proposal for a traditional septic tank. It is important to understand that the proposed "Bio-cycle" waste-water treatment plant is not a septic tank and does not function like a septic tank. With the "Bio-cycle" unit the treated effluent is disposed of by irrigation rather than by percolation. As a result the minimum size of site and the other limitations imposed by a traditional septic tank and percolation area do not apply. This application should therefore be judged on its own merits and not by the standard criteria normally applied to a septic tank proposal.

The Environmental Health Officer is welcome to visit the site and inspect the test holes at any time. This can be arranged by telephoning the undersigned. If there is any other information required by the E.H.O. regarding the "Bio-cycle" system and its suitability for this location, we will be happy to supply it.

Yours faithfully

Feargall Kenny



PROPOSED HOUSE AT NEWCASTLE, Co DUBLIN

BLOCK PLAN

SCALE: 1 to 200

FEARGALL KENNY B. Arch., Dip. T.P., RIBA, MPI
 CONSULTANT ARCHITECT AND TOWN PLANNER
 FOXROCK, DUBLIN 18 Tel: 892119/895956 Fax 896142

Mr. Feargall Kenny, Architect,
45, Hainault Drive,
Foxrock,
Dublin 18.

Reg. Ref. 91A-0126

27 March 1991

Re: Proposed outline permission for residence, wastewater
treatment system and irrigation area at Peamount Road
for Mr. J. McNally.

Dear Sir,

With reference to your outline planning application, received
here on 6th February, 1991, in connection with the above, I wish
to inform you, that before the application can be considered
under the Local Government (Planning and Development) Acts, 1963-
1983, the following additional information must be submitted in
quadruplicate:-

1. The method of drainage proposed is a 'Bio-Cycle' waste water
treatment system. This system provides for the disposal of
treated effluent by irrigation over a 50 sq. m. (stated)
'irrigation area'. The applicant is requested to submit
evidence to prove the suitability of the soil for the
disposal of this treated effluent. This will require the
inspection of trial holes on site by the Environmental
Health Officer. The applicant is requested to contact the
Environmental Health Officer, (33, Gardiner Place, Dublin
1, Phone 727777) in this regard.

Please mark your reply "ADDITIONAL INFORMATION" and quote the
Reg. Ref. No. given above.

Yours faithfully,

J. de Beirland
for Principal Officer.

Building Control Department,
Liffey House,
Tara Street,
Dublin 1.
Telephone: 773066



Bloc 2, Ionad Bheatha na hEireann,
Block 2, Irish Life Centre,
Sraid na Mainistreach Iacht,
Lower Abbey Street,
Baile Atha Cliath 1.
Dublin 1.
Telephone. (01)724755
Fax. (01)724896

Register Reference : 91A/0126

Date : 8th February 1991

LOCAL GOVERNMENT (PLANNING AND DEVELOPMENT) ACTS, 1963 TO 1990

Dear Sir/Madam,

DEVELOPMENT : Residence, wastewater treatment system and irrigation
area

LOCATION : Peamount Road

APPLICANT : Mr J. McNally,

APP. TYPE : OUTLINE PERMISSION

With reference to above, I acknowledge receipt of your application received
on 6th February 1991.

Yours faithfully,

.....
PRINCIPAL OFFICER

Mr Feargall Kenny, Architect,
45 Hainault Drive,
Foxrock,
Dublin 18.



PLEASE READ INSTRUCTIONS AT BACK BEFORE COMPLETING FORM. ALL QUESTIONS MUST BE ANSWERED.

1. Application for Permission Outline Permission Approval Place / in appropriate box.
 Approval should be sought only where an outline permission was previously granted. Outline permission may not be sought for the retention of structures or continuances of uses.

2. Postal address of site or building PEAMOUNT ROADS
 (If none, give description NEWCASTLE, CO. DUBLIN
 sufficient to identify)

3. Name of applicant (Principal not Agent) MR JOHN McNALLY
 Address 513 RIVER ROAD LEIXLIP, CO. KILDARE Tel. No.

4. Name and address of person or firm responsible for preparation of drawings FERRGALL KENNY ARCHITECT
45 HAINAULT DRIVE
FOX ROCK, DUBLIN 15 Tel. No. 892119

5. Name and address to which notifications should be sent ARCHITECT BYE LAW APPLICATION

6. Brief description of proposed development HOUSE, WASTE-WATER TREATMENT SYSTEM AND IRRIGATION AREA

7. Method of drainage MAINS OR TREATMENT SYSTEM (SEE LETTER) 8. Source of Water Supply MAINS

9. In the case of any building or buildings to be retained on site, please state:
 (a) Present use of each floor or use when last used N/A
 (b) Proposed use of each floor N/A

SEE PAID: 24 DATE 7/2
21/31/91

10 Does the proposal involve demolition, partial demolition or change of use of any habitable house or part thereof? NO

11. (a) Area of Site 903 Sq. m.
 (b) Floor area of proposed development 125 Sq. m.
 (c) Floor area of buildings proposed to be retained within site _____ Sq. m.

12. State applicant's legal interest or estate in site (i.e. freehold, leasehold, etc.) FREEHOLD

13. Are you now applying also for an approval under the Building Bye Laws?
 Yes No Place / in appropriate box.

14. Please state the extent to which the Draft Building Regulations have been taken in account in your proposal:
N/A

15. Documents enclosed with LOCATION MAP, BLOCK PLAN, SPECIFICATIONS (4 COPIES)
NEWSPAPER ADVERT (IRISH PRESS 24.1.91), CHARTER FOR APPLICATION FEE, APPLICATION FORM, COVERING LETTER.

16. Gross floor space of proposed development (See back) 125 Sq. m.

No of dwellings proposed (if any) _____ Class(es) of Development _____
 Fee Payable £ 24 Basis of Calculation 75% OF FULL FEE (OUTLINE APPLICATION)
 If a reduced fee is tendered details of previous relevant payment should be given

Signature of Applicant (or his Agent) _____ Date 5.2.91

Application Type OUTLINE FOR OFFICE USE ONLY
 Register Reference 91A/0126
 Amount Received £ 28.4 6/2
 Receipt No _____
 Date _____

LOCAL GOVERNMENT (PLANNING & DEVELOPMENT) REGULATIONS 1977 to 1984.

Outline of requirements for applications for permission or Approval under the Local Government (Planning & Development) Acts 1963 to 1983. The Planning Acts and Regulations made thereunder may be purchased from the Government Publications Sales Office, Sun Alliance House, Molesworth Street, Dublin 2.

1. Name and Address of applicant.
 2. Particulars of the interest held in the land or structure, i.e. whether freehold, leasehold, etc.
 3. The page of a newspaper, circulating in the area in which the land or structure is situate, containing the required statutory notice. The newspaper advertisement should state after the heading Co. Dublin.
 - (a) The address of the structure or the location of the land.
 - (b) The nature and extent of the development proposed. If retention of development is involved, the notice should be worded accordingly. Any demolition of habitable accommodation should be indicated.
 - (c) The name of the applicant.
- NB. Applications must be received within 2 weeks from date of publication of the notice.**
4. Four (4) sets of drawings to a stated scale must be submitted. Each set to include a layout or block plan, proposed and existing services to be shown on this drawing, location map, and drawings of relevant floor plans, elevations, sections, details of type and location of septic tank (if applicable) and such other particulars as are necessary to identify the land and to describe the works or structure to which the application relates (new work to be coloured or otherwise distinguished from any retained structures). Buildings, roads, boundaries and other features bounding the structure or other land to which the application relates shall be shown on site plans or layout plans. The location map should be of scale not less than 1: 2500 and should indicate the north point. The site of the proposed development must be outlined in red. Plans and drawings should indicate the name and address of the person by whom they were prepared. Any adjoining lands in which the applicant has an interest must be outlined in blue.
 5. In the case of a proposed change of use of any structure or land, requirements in addition to 1, 2, & 3 are:
 - (a) a statement of the existing use and the proposed use, or, where appropriate, the former use and the use proposed.
 - (b) (i) Four (4) sets of the drawings to a stated scale must be submitted. Each set to consist of a plan or location map (marked or coloured in red so as to identify the structure or land to which the application relates) to a scale of not less than 1:2500 and to indicate the North point. Any adjoining lands in which the application has an interest must be outlined in blue.
(ii) A layout and a survey plan of each floor of any structure to which the application relates.
 - (c) Plans and drawings should indicate the name and address of the person by whom they were prepared.
 6. Applications should be addressed to: Dublin County Council, Planning Department, Irish Life Centre, Lr. Abbey Street, Dublin 1, Tel. 724755.

SEPTIC TANK DRAINAGE: Where drainage by means of a septic tank is proposed, before a planning application is considered, the applicant may be required to arrange for a trial hole to be inspected and declared suitable for the satisfactory percolation of septic tank effluent. The trial hole to be dug seven feet deep at or about the site of the septic tank. Septic tanks are to be in accordance with I.I.R.S. S.R. 6:75.

INDUSTRIAL DEVELOPMENT:

The proposed use of an industrial premises should, where possible, be stated together with the estimated number of employees, (male and female). Details of trade effluents, if any, should be submitted.

Applicants to comply in full with the requirements of the Local Government (Water Pollution) Act, 1977 in particular the licencing provisions of Sections 4 and 16.

PLANNING APPLICATIONS

BUILDING BYE-LAW APPLICATIONS

CLASS NO.	DESCRIPTION	FEE
1.	Provision of dwelling — House/Flat.	£32.00 each
2.	Domestic extensions/other improvements.	£16.00
3.	Provision of agricultural buildings (See Regs.)	£40.00 minimum
4.	Other buildings (i.e. offices, commercial, etc.)	£1.75 per sq. metre (Min. £40.00)
5.	Use of land (Mining, deposit or waste)	£25.00 per 0.1 ha (Min. £250.00)
6.	Use of land (Camping, parking, storage)	£25.00 per 0.1 ha (Min. £40.00)
7.	Provision of plant/machinery/tank or other structure for storage purposes.	£25.00 per 0.1 ha (Min. £100.00)
8.	Petrol Filling Station.	£100.00
9.	Advertising Structures.	£10.00 per m ² (min £40.00)
10.	Electricity transmission lines.	£25.00 per 1,000m (Min. £40.00)
11.	Any other development.	£5.00 per 0.1 ha (Min. £40.00)

CLASS NO.	DESCRIPTION	FEE
A	Dwelling (House/Flat)	£55.00 each
B	Domestic Extension (improvement/alteration)	£30.00 each
C	Building — Office/Commercial Purposes	£3.50 per m ² (min. £70.00)
D	Agricultural Buildings/Structures	£1.00 per m ² in excess of 300 sq. metres (min. - £70.00) (Max. - £300.00)
E	Petrol Filling Station	£200.00
F	Development or Proposals not coming within any of the foregoing classes.	£9.00 per 0.1 ha (£70.00 min.)
		Min. Fee £30.00 Max. Fee £20,000

Cheques etc. should be made payable to: Dublin County Council.

Gross Floor space is to be taken as the total floor space on each floor measured from the inside of the external walls.

For full details of Fees and Exemptions see Local Government (Planning and Development) (Fees) Regulations 1984.

COMHAIRLE CHONTAE ÁTHA CLIATH

PAID BY — DUBLIN COUNTY COUNCIL
46/49 UPPER O'CONNELL STREET,
DUBLIN 1.

CASH
CHEQUE
M.O.
B.L.
I.T.

Issue of this receipt is not an
acknowledgement that the fee
tendered is the prescribed application
fee. N° 31196

£24.00

Received this 7th day of February 1991.

from Farsall team/
45 Mainault drive

the sum of twenty four Pounds
Pence, being for the

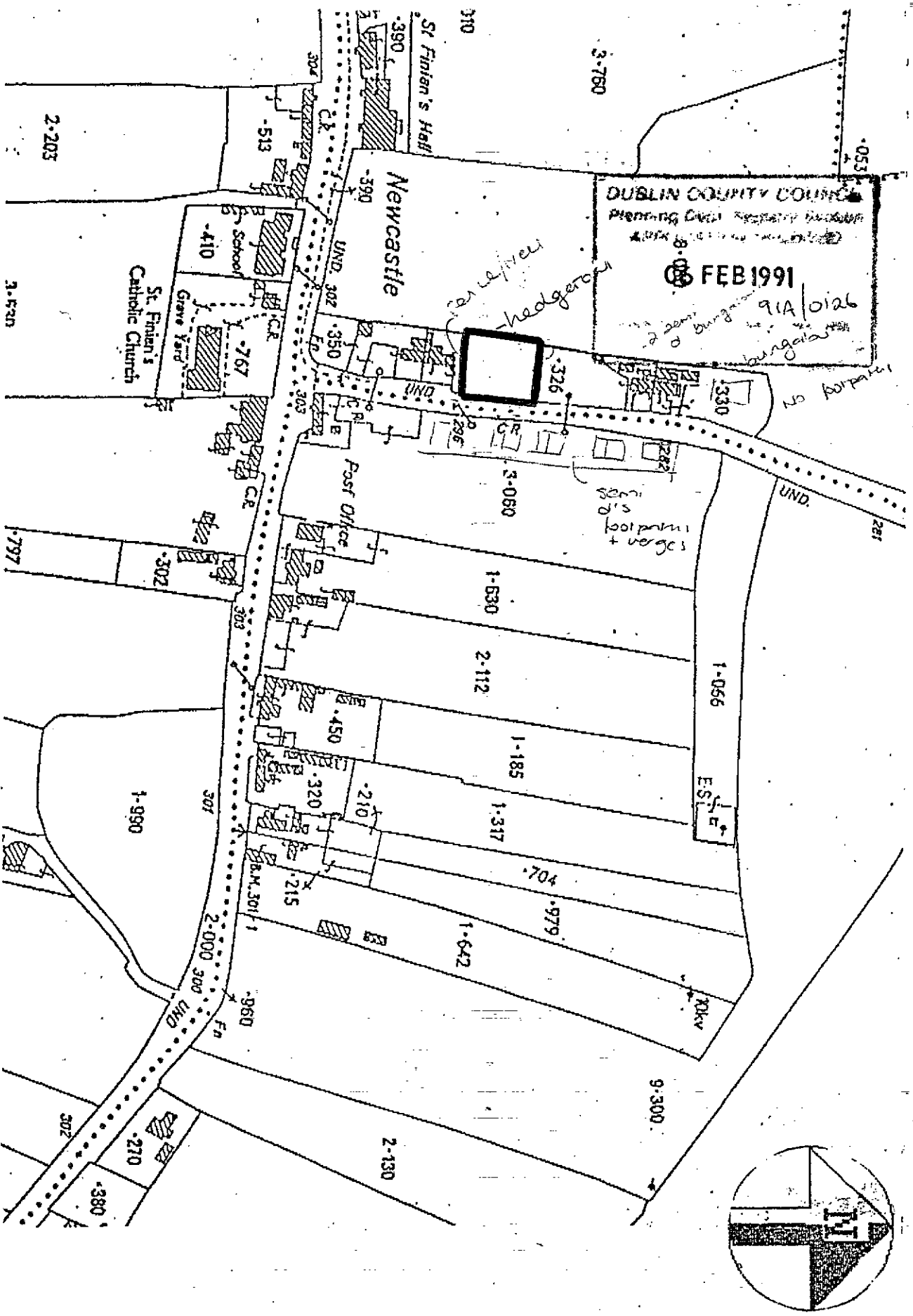
planning application at Mainault road, Newcastle

Michael O'Hara Cashier

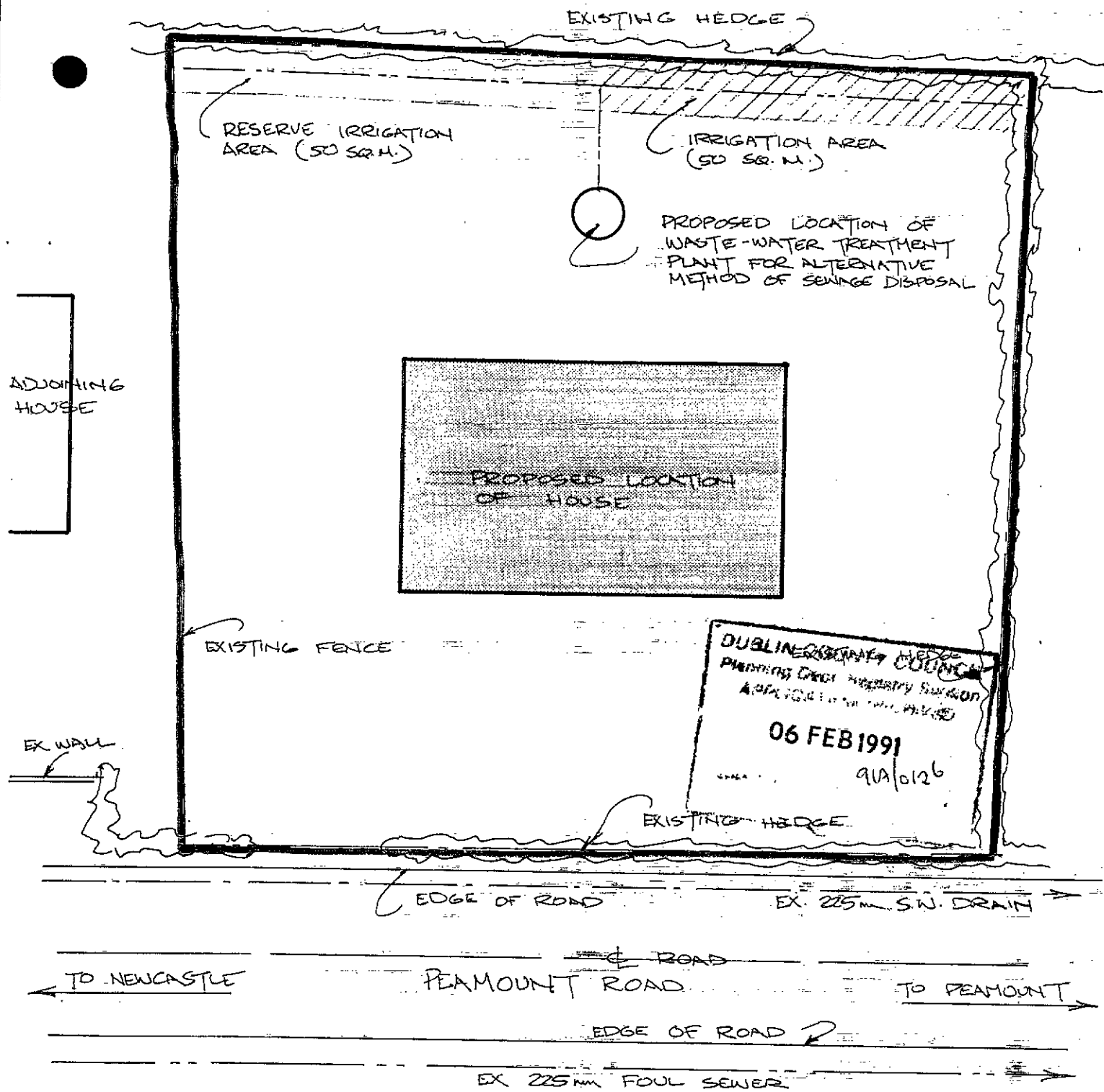
S. CAREY
Principal Officer

Class 1
House.

SITE PLAN PEAMOUNT ROAD, NEWCASTLE, CO DUBLIN
 LOCATION MAP
 Scale: 1/2500



FEARGALL KENNY
 CONSULTANT ARCHITECT AND TOWN PLANNER
 B.Arch., Dip.T.P., RIBA, MRPI
 FOXROCK, DUBLIN 18
 Tel: 892119/895956 Fax: 896142



PROPOSED HOUSE AT NEWCASTLE, Co DUBLIN

BLOCK PLAN

SCALE: 1 to 200

FEARGALL KENNY B.Arch., Dip.T.P., RIBA, MPI
 CONSULTANT ARCHITECT AND TOWN PLANNER
 FOXROCK, DUBLIN 18 Tel: 892119/895956 Fax: 896142

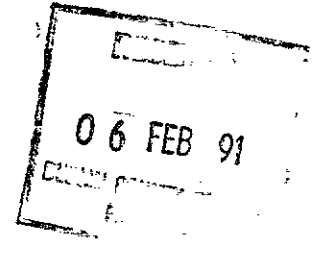
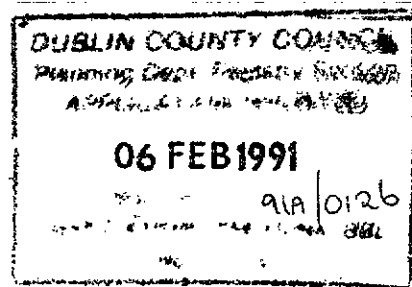
FEARGALL KENNY B.Arch, Dip. T.P., RIBA, MIPI
CONSULTANT ARCHITECT AND TOWN PLANNER
45 HAINAULT DRIVE FOXROCK DUBLIN 18

Tel: 892119
895956
Fax: 896142

Dublin County Council
Planning Dept
Irish Life Centre
Lower Abbey St
Dublin 1

5th February 1991

Dear sirs



I wish to apply for Outline Planning Permission for a bungalow type dwelling house on a site at Peamount Road, Newcastle, Co Dublin on behalf of my client Mr John McNally. In support of the application I enclose four copies of the location map and block plan, together with a specification for the proposed alternative waste water treatment plant and irrigation area, a cheque for £24 in respect of the application fee, the application form and the page from the Irish Press of 24.1.91 with the advertisement.

The site is in the middle of the built-up area of Newcastle village and is ideally suited to the construction of a bungalow. The site was the subject of a decision to grant outline planning permission for four houses by order of An Bord Pleanála dated 19.9.80 (Reg. Ref. SA 522), but this permission has now lapsed.

With regard to services my client would ideally like to connect to the existing County Council sewer in the roadway adjacent to the site. If the Council decide that they cannot permit a connection to this sewer, my client would propose as an alternative to install on the site an individual package waste-water treatment plant and irrigation area as fully described in the enclosed specification. Disposal of surface water would be to the existing public surface water drain in the roadway alongside the site or alternatively to soakaways on the site.

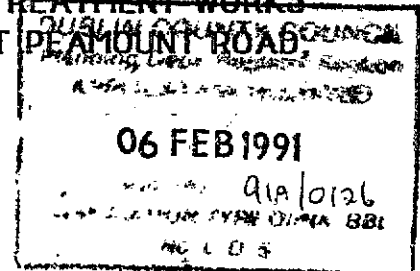
Yours faithfully

Feargall Kenny

FEARGALL KENNY B.Arch, Dip. T.P., RIBA, MIPI
CONSULTANT ARCHITECT AND TOWN PLANNER
45 HAINAULT DRIVE FOXROCK DUBLIN 18

Tel: 892119
895956
Fax: 896142

**SPECIFICATION FOR PROPOSED WASTE WATER TREATMENT WORKS
AND IRRIGATION AREA FOR PROPOSED HOUSE AT PEAMOUNT ROAD
NEWCASTLE, CO. DUBLIN.**



Design Criteria: The design is based on a requirement to cater for a normal domestic loading for one house where mains sewers are not available to provide for the requirements of an average family size of four persons. The requirement is for a unit which will provide primary and secondary treatment of domestic waste water to a level of quality which will allow it to be dispersed by surface irrigation rather than by percolation. A standard septic tank and percolation area would not fulfil these criteria.

System: The system will consist of a "Bio-cycle" waste water treatment system with a total working capacity of 5100 litres. The system will be designed, manufactured and installed by "Bio-cycle" Ltd., Unit 107 Baldoyle Industrial Estate, Dublin 13. The system will incorporate a 2.14M internal diameter circular concrete tank divided into 4 principal chambers together with Air-blowers, Irrigation Pump and automatic alarms and equipment. The system is fully described in the attached detailed specification and descriptive literature.

Irrigation: The irrigation water will be discharged via a 25mm polythene pipe to the irrigation area where it will be dispersed at surface level through a series of microjet sprayheads placed at intervals in the required positions on the irrigation pipe to give a discharge rate of 75 litres per minute. The effluent will be held in the irrigation chamber and the submersible irrigation pump will be controlled by an electric timing mechanism to ensure that surface dispersal of the effluent in the dispersal area will take place only at night. A primary irrigation area of 50 sq. metres is considered more than adequate to disperse the effluent but a reserve area of another 50 sq. metres will also be provided. The irrigation area will be planted with a variety of suitable shrubs.

SPECIFICATION

BICYCLE 5100 LITRE

WASTEWATER TREATMENT

SYSTEM

General

The Biocycle 5100 litres system is a packaged Waste Water Treatment Plant for domestic applications where mainline sewage is not available or where the soil types or terrain do not suit conventional site disposal systems but particularly where environmental damage wishes to be avoided.

The System is designed and installed in accordance with the British Standards code of practice for "Design and Installation of small sewage treatment works and cesspools" (B.S. 6297: 1983)

The Unit provides for a retention period of four days and has an actual working capacity of 5100 litres. In addition, the System has a further capacity of 2,400 litres to cater for any overflow resulting from power failure which provides for over two days use before action must be taken to avoid overflow. However, even if the system overflows there are sufficient chlorine stocks within the system that dissolve as the liquid level rises and renders the overflow relatively harmless.

Design Criteria

The designed capacity for the Biocycle 5100 litres system is for up to 8 people.

The plant is designed to function automatically between routine service inspections.

The plant is designed to operate under the following loads

Hydraulic Loads

(a)	Average daily per capita flow	230 litres
(b)	Maximum per capita flow rate in any two hour period	125 litres

Biological Loads

(a)	Average daily per capita 5 day BOD	100 Grammes
(b)	Average daily per capita total suspended solids	100 Grammes

ELECTRICS

All electrical work is carried out in accordance with I.E.E. regulations.

MEDIA

The active surface of growth media per capita contained in the aerobic chamber is 4.05 m².

Specification sheets on the growth media used are enclosed.

TANK

The outer tank is designed and constructed from re-inforced pre cast concrete in accordance with B.S 8007 (design of concrete structures for retaining aqueous liquids).

INTERNAL/CHAMBERS

The main dividing "Bladder" and clarification/irrigation chambers are constructed from fibreglass in accordance with B.S. 4994 (vessels and tanks on reinforced plastics).

<u>Clarification Chamber:</u>	Height	1400mm
	Diameter	950mm
	Capacity	310 litres

<u>Irrigation Chamber:</u>	Height	1400mm
	Diameter	950mm
	Capacity	300 litres

AIR SYSTEMS

Pipework used for the fabrication of the aeration system, sludge return and top level skimmer are in accordance with B.S. 3505/4346

The compressor/blower used provides continuous supply of air at 95 litres/minute and has a power rating of 110 watts.

CHLORINATION SYSTEM

Chlorination takes place as effluent flows between the clarification and irrigation chambers.

The chlorinator unit is designed and calibrated to suit above normal suage and to provide sufficient chlorine stocks under maximum usage.

Safety factors are included to cover all foreseeable circumstances between maintenance calls with a 100% safety margin. Pipework and fittings used in the construction of the chlorinator are in accordance with local government requirements Eg. wavin pipe.

IRRIGATION SYSTEM

The submersible irrigation pump used has a capacity of 40-130 litres/minute and comes complete with its own float switch.

A specification sheet for the pump unit is enclosed.

Polyethelene pipework is used for the irrigation lines which are fitted with approximately 25-30 brass spray heads.

- *Biocycle is an environmentally safe and approved system.*
- *Soakaways receive a high quality discharge unequalled by any other system.*
- *Where surface dispersal is employed as an alternative, there is no direct discharge to affect ground water quality.*
- *The BIOCYCLE SYSTEM is made in IRELAND.*



BIOCYCLE—HOW IT WORKS

The unit is a highly effective and clean replacement for the conventional septic tank and consists of a 2 metre diameter circular tank available in either fibreglass or concrete, within which are four chambers.

The first chamber called the **receiving chamber** receives all domestic waste and sewage effluent and achieves an immediate reduction of 40% in organic loading by anaerobic action before passing the effluent to the next chamber. This chamber known as the **aeration chamber** allows the effluent to be influenced by air from a small blower via diffusers which increases the dissolved oxygen level. The effect of this on a submerged self cleaning media enables aerobic bacteria to further digest solids and significantly reduce biological sludge accumulation.

After aeration the effluent flows into the **clarification chamber** where sludge settles under quiescent conditions to the bottom and is picked up by a pipe (air pumped from the blower unit) and recycled to the first chamber to maintain activity even in conditions of zero flow when the residence is unoccupied. A skimmer pipe operating on the same principle transfers floating matter also to the first chamber.

The final chamber known as the **outflow or irrigation chamber** receives the main effluent flow from the clarification chamber via a chlorination bank and this disinfected effluent remains in this outflow chamber for a minimum period of twenty to thirty minutes before it is discharged by a float operated submersible pump to surface dispersal sprays or a conventional soakaway.

bio**CYCLE**

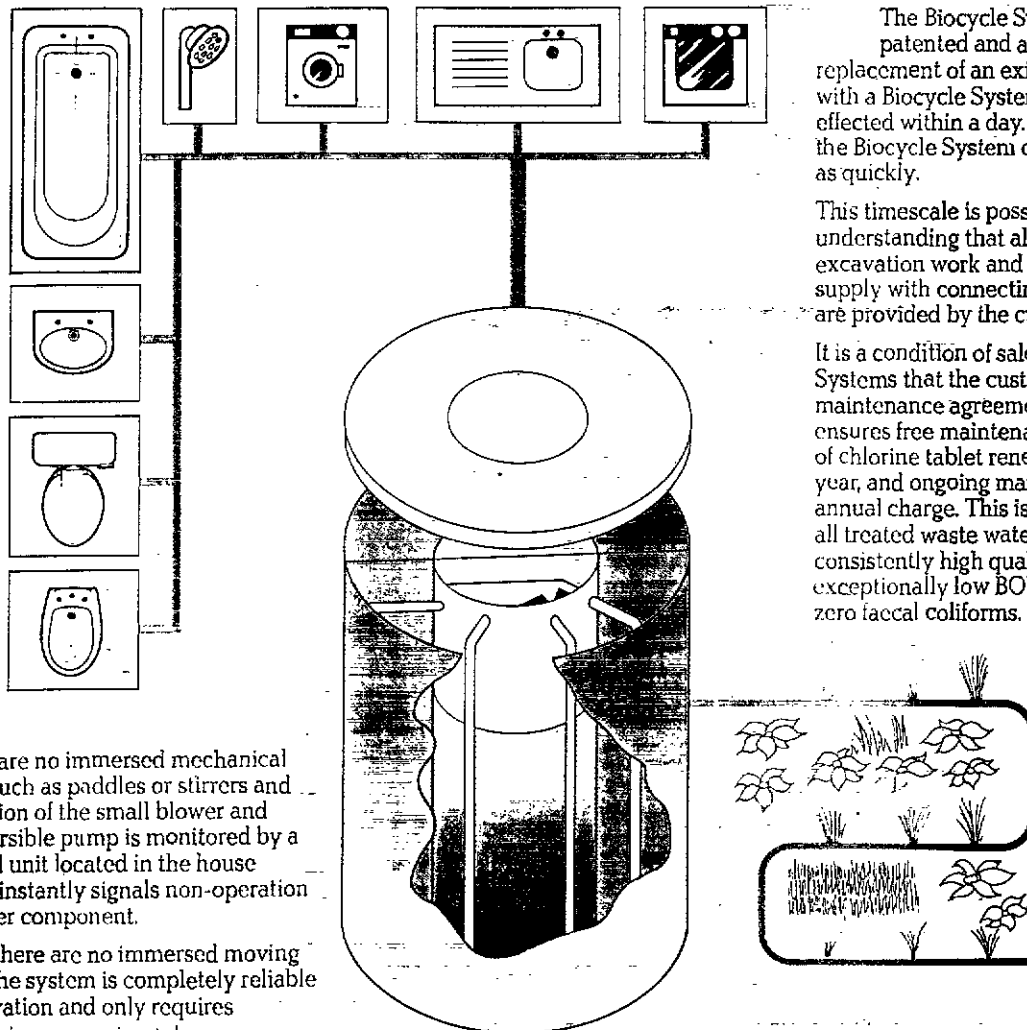


INSTALLATION AND MAINTENANCE

The Biocycle System is fully patented and approved. The replacement of an existing septic tank with a Biocycle System can be effected within a day. For new homes the Biocycle System can be installed as quickly.

This timescale is possible on the understanding that all necessary excavation work and an electrical supply with connecting cable trench are provided by the customer.

It is a condition of sale of all Biocycle Systems that the customer sign a maintenance agreement which ensures free maintenance (exclusive of chlorine tablet renewal) for the first year, and ongoing maintenance at an annual charge. This is to ensure that all treated waste water is of a consistently high quality with exceptionally low BOD 5 values and zero faecal coliforms.



There are no immersed mechanical parts such as paddles or stirrers and operation of the small blower and submersible pump is monitored by a control unit located in the house which instantly signals non-operation of either component.

Since there are no immersed moving parts the system is completely reliable in operation and only requires desludging approximately every nine years.

THE BIOCYCLE AEROBIC WASTEWATER TREATMENT SYSTEM

INTRODUCTION

THE EFFECTIVE COLLECTION, TREATMENT AND DISPOSAL OF HUMAN WASTE AND WASTEWATER HAS BEEN A PUZZLE AND A CHALLENGE TO HUMANS SINCE TIME BEGAN. IT IS NOT INTENDED TO GIVE A POTTED HISTORY OF HOW WE HAVE ARRIVED AT THE STAGE WE ARE TODAY, BUT SUFFICE TO SAY THAT COLLECTION AND TREATMENT SYSTEMS HAVE DEVELOPED SINCE LAST CENTURY TO COPE WITH THE INCREASING DEMANDS FOR GOOD PUBLIC SANITATION PRACTICES. AUTHORITIES, BOTH STATE AND LOCAL, HAVE ESTABLISHED RETICULATION SYSTEMS FOR COLLECTION, AND HAVE DEVELOPED TREATMENT FACILITIES TO COPE WITH QUANTITIES OF WASTES GENERATED FROM COMMUNITIES, BOTH LARGE AND SMALL.

WHAT WILL BE DISCUSSED IN THIS PAPER IS THE FUNCTION AND OPERATION OF THE BIOCYCLE SYSTEM WHICH PROVIDES A HIGHER LEVEL OF TREATMENT THAN PREVIOUSLY OBTAINED, AND WHICH ALLOWS THE RECYCLING OF THE WASTEWATER EFFLUENT. THE BENEFITS OF THE AEROBIC WASTEWATER TREATMENT SYSTEM WILL BECOME OBVIOUS. THE RECYCLING OF TREATED EFFLUENT IS NOW A MAJOR TOPIC IN ITSELF, AND OTHERS WILL ADVANCE THIS CAUSE IN THE PASSAGE OF TIME THROUGH AWARENESS CAMPAIGNS AND GOVERNMENT ENCOURAGEMENT.

A BIOCYCLE AEROBIC TREATMENT UNIT IS A PACKAGED WASTEWATER TREATMENT PLANT FOR DOMESTIC APPLICATION WHEN MAINLINE SEWAGE IS NOT AVAILABLE, OR WHERE THE SOIL TYPES OR TERRAIN DO NOT SUIT CONVENTIONAL SITE DISPOSAL SYSTEMS, BUT PARTICULARLY WHEN ENVIRONMENTAL DAMAGE WISHES TO BE AVOIDED.

IT PROVIDES AN EXCELLENT AND VIABLE ALTERNATIVE FOR THOSE AREAS WHICH ARE INTENDED TO BE PROVIDED WITH A RETICULATED SEWAGE SCHEME IN YEARS TO COME.

THE TREATED EFFLUENT FROM A BIOCYCLE AEROBIC TREATMENT PLANT IS IDEAL FOR GARDEN OR LANDSCAPE IRRIGATION. IN CERTAIN COLD CLIMATES WHEN DISPERSED VIA SUB-SOIL DRAINAGE, IT HAS A DISTINCT ADVANTAGE OVER TRADITIONAL ON-SITE DISPOSAL SYSTEMS BECAUSE OF ITS SLUDGE-FREE CONDITION.

HOW IT WORKS

BIOLOGICAL SEWAGE TREATMENT PLANTS FOR FAIRLY SMALL AND SOMETIMES QUITE LARGE ESTABLISHMENTS HAVE BEEN AVAILABLE FOR MANY YEARS. SUCH SYSTEMS ARE GENERALLY BASED ON THE ACTIVATED SLUDGE PRINCIPLE, FOLLOWED BY CLARIFICATION BY MEANS OF SETTLING; AND TERTIARY TREATMENT BY MEANS OF CHLORINATION OR PONDING.

THE BIOCYCLE AEROBIC TREATMENT PLANTS, USED FOR SINGLE DWELLINGS AND SMALL COMMERCIAL CONCERNS ARE SOMEWHAT DIFFERENT FROM THE CONVENTIONAL PACKAGE TREATMENT PLANT.

THE SYSTEM AND ITS FUNCTIONS

THE BIOCYCLE SYSTEM IS DIVIDED INTO FOUR PRINCIPAL CHAMBERS.

1. RECEIVING CHAMBER (anaerobic/SEPTIC)
2. AERATION CHAMBER
3. CLARIFICATION CHAMBER
4. IRRIGATION (PUMP) CHAMBER

CHLORINATION TAKES PLACE BETWEEN CHAMBERS 3 AND 4.

THE RECEIVING CHAMBER

ALL WASTES ARE RECEIVED INTO THIS FIRST CHAMBER. ANAEROBIC DIGESTION OF SOLIDS OCCUR AS A PRIMARY TREATMENT ACHIEVING A REDUCTION IN THE B.O.D.5 LEVEL (ORGANIC LOADING) OF UP TO 40%. THIS CHAMBER ALSO PROVIDES OTHER VALUABLE SERVICE TO THE BIOCYCLE SYSTEM IN THAT IT ACTS AS A RECEIVING CHAMBER FOR NOT ONLY ORGANIC WASTE BUT ALSO ILNORGANIC MATTER, SLUDGE AND SKIMMED MATERIAL (SENT BACK FROM THE CLARIFICATION CHAMBER) AND CELLULOUS MATERIALS THAT REQUIRE LONGER RETENTION FOR BREAKDOWN. THE INTRODUCTION OF AERATED/ACTIVATED SLUDGE FROM THE CLARIFICATION CHAMBER EXCITES AND FURTHER ASSISTS THE DIGESTION OF SOLIDS.

SLUDGE, (THE ULTIMATE BY-PRODUCT OF WASTE), IS ACCUMULATED IN THIS CHAMBER AND WHEN DISLUDGING IS REQUIRED, (ESTIMATED AT 9 YEARS IN THE AVERAGE HOUSEHOLD), THEN ONLY THIS CHAMBER REQUIRES PUMPING OUT.

AERATION CHAMBER

WHILST THE RECEIVING CHAMBER DIGESTS A PERCENTAGE OF THE ORGANIC LOADING, THE AERATION CHAMBER IS CAPABLE OF ACHIEVING THE REQUIRED TREATMENT STANDARD WITHOUT THE ASSISTANCE OF THE FIRST CHAMBER.

THE METHOD ADOPTED IN THE RETURN OF SETTLED OR FLOATING MATTER IS VIA A VENTURI PUMP, (RUN OFF THE AIR SUPPLY TO THE AERATION CHAMBER) AND IS CAPABLE OF AUTOMATIC AND CONTINUOUS OPERATION.

THE BENEFIT OF A CONTINUOUS SLUDGE/SKIMMER RETURN TO THE RECEIVING CHAMBER PROVIDES A CONTINUOUS SUPPLY OF "FOOD" TO THE PLANT AND THUS ENSURES A "HEALTHY" SYSTEM DURING PERIOD OF ZERO FLOW OR EXTENDED VACANCY OF A RESIDENCE.

FROM THE CLARIFICATION CHAMBER THE EFFLUENT IS DRAWN-OFF AT BELOW THE SURFACE LEVEL AND FLOWS TO THE PUMP CHAMBER.

CHLORINATION

DURING THIS FLOW THE EFFLUENT COMES INTO CONTACT WITH CALCIUM HYPOCHLORITE TABLETS (GUARANTEED 70% ACTIVE).

WITHIN THE BIOCYCLE CHLORINATOR A WEIR HAS BEEN SET AND CALIBRATED TO SUIT ABOVE NORMAL WATER USAGE, AND IS DESIGNED FOR A FLOW RATE GENERATED BY A HOUSEHOLD OF UP TO 10 PERSONS, AND TO PROVIDE SUFFICIENT CHLORINE STOCKS UNDER MAXIMUM USAGE WITH IN-BUILT SAFETY FACTORS TO COVER ALL FORSEABLE CIRCUMSTANCES BETWEEN THE TWICE YEARLY MAINTENANCE CALLS WITH A 100% SAFETY MARGIN.

IRRIGATION (PUMP) CHAMBER

AFTER DISINFECTION, THE AERATED, SETTLED AND CHLORINATION WATER IS RETAINED IN THIS CHAMBER TO ENSURE A MINIMUM 20 TO 30 MINUTES CONTACT TIME THEN PUMPED VIA AN IRRIGATION SYSTEM TO WHEREVER IT IS REQUIRED IN THE GARDEN LANDSCAPE AREA OF THE PROPERTY.

FINAL EFFLUENT QUALITY

A PROPERLY MAINTAINED PLANT PRODUCES TREATED WASTE WATER OF VERY HIGH QUALITY WHICH MEETS THE REQUIREMENTS OF LOCAL AUTHORITIES. (BOD 5 AND SUSPENDED SOLIDS OF 20/30 MG/LITRE RESPECTIVELY)

THE DISPLACED, AND PARTIALLY TREATED WASTE FLOWS FROM THE RECEIVING CHAMBER TO THIS CHAMBER AND AIR IS SUPPLIED BY MEANS OF A BLOWER (COMPRESSOR) AND DISTRIBUTED VIA DIFFUSERS. THE AMOUNT OF AIR REQUIRED IS DEPENDENT UPON A CALCULATION BASED ON THE ANTICIPATED ORGANIC LOADING (B.O.D.5 AND THE TRANSFER OF OXYGEN ONTO THE WATER, (INCREASING THE DISSOLVED OXYGEN LEVEL). THE BLOWER USED IN THE BIOCYCLE SYSTEM FOR THE INDIVIDUAL HOUSEHOLD IS SPECIFIED TO TREAT A LOADING OF 2 800 LITRES PER DAY WITH A B.O.D.5 INFLUENT LOADING OF 250mg. PER LITRE.

THE AERATION CHAMBER CONTAINS A SUBMERGED MEDIA UPON WHICH GROW BOTH AEROBIC AND ANAEROBIC BACTERIA. THE MEDIA IS LOCATED WHERE BENEFICIAL BACTERIA THRIVE. A ZOOGLIAL FILM OF BACTERIAL AND ALGAL MATRIX DEVELOPS ON THIS MEDIA THUS PROVIDING BIOLOGICAL TREATMENT. THE TYPE OF MEDIA USED IN THE BIOCYCLE SYSTEM HAS A DISCREET FLOW PATTERN WITH A BIG SURFACE AREA TO VOLUME RATIO AND SELF CLEANSING ACTION.

THE AERATION CHAMBER IN THE BIOCYCLE SYSTEM IS HOWEVER DIFFERENT IN THEORY FROM AN ORDINARY SUSPENDED GROWTH SYSTEM. BOTH SUB-SURFACE ANAEROBIC AND SURFACE AEROBIC MICRO-ORGANISMS GROW ON THE SUBMERGED MEDIA. HOWEVER THE ANAEROBIC BACTERIAL ACTION RESULTS IN A CONTINUOUS REDUCTION OF THE MEDIA GROWTH AND THEREFORE A REDUCTION IN BIOLOGICAL SLUDGE ACCUMULATION.

NEVERTHELESS, AS THE THICKNESS OF THE MATERIAL GROWS, SOME SEPARATION CAUSED BY THE HIGH LIQUID MOVEMENT, WILL OCCUR. THIS SEPARATION WILL ULTIMATELY RESULT IN EXCESS SLUDGE IN THE AERATION COMPARTMENTS WHICH WILL ULTIMATELY FLOW TO THE NEXT CHAMBER, (CLARIFICATION CHAMBER), FOR PICK UP AND RETURN TO THE RECEIVING CHAMBER.

AN AMOUNT OF ACTIVATED SLUDGE IN THE AERATION CHAMBER PLAYS AN IMPORTANT ROLE, ALLOWING ADDITIONAL MICRO-ORGANISMS TO GROW ON THE SLUDGE PARTICLES FURTHER ASSISTING DIGESTION.

IN THE BIOCYCLE SYSTEM THE CAPACITY OF THIS CHAMBER ALLOWS FOR A 24 HOUR DETENTION TIME OF THE INFLUENT LOAD, (16 HOURS, GENERALLY BEING REGARDED AS SUFFICIENT: IN SOME COMMERCIAL APPLICATIONS, A GREATER DETENTION PERIOD MAY BE NECESSARY.

CLARIFICATION CHAMBER

AFTER AERATION, THE EFFLUENT FLOWS INTO THIS CHAMBER AND ALLOWED TO SETTLE DOWN UNDER QUIESCENT CONDITIONS. SLUDGE/UNDIGESTED MATERIAL SETTLES TO THE BOTTOM WHERE IT IS PICKED UP AND RETURNED TO THE RECEIVING CHAMBER. FLOATING MATTER IS ALSO COLLECTED AND RETURNED TO THE RECEIVING CHAMBER.

IN PERIODS OF VACANCY:

A USER OF A BIOCYCLE SYSTEM IS ADVISED TO CONTACT THE COMPANY IF THEY EXPECT PERIODS OF VACANCY GREATER THAN THREE MONTHS.

INSTALLATION OF A BIOCYCLE SYSTEM

THE SAME INSTALLATION PROCEDURES SHOULD BE FOLLOWED AS IF INSTALLING THE TRADITIONAL SEPTIC TANK.

BIOCYCLE IRRIGATION SPECIFICATIONS

THE BIOCYCLE SYSTEMS IRRIGATION WATER IS DISCHARGED VIA A 25mm POLYTHENE PIPE THROUGH A SERIES OF 25 TO 30 MICROJET SPRAYHEADS. THESE SPRAYS ARE PLACED AT INTERVALS IN THE REQUIRED POSITIONS ON THE PIPE FROM THE TANK. ALTHOUGH THE SUBMERSIBLE PUMP IN THE IRRIGATION CHAMBER IS CAPABLE OF A DISCHARGE RATE OF 0.13 CUBIC METRES PER MINUTE, THE TYPE OF SPRAYHEADS AND FRICTION LOSS BROUGHT ABOUT BY THE FILTER AND IRRIGATION LINE REDUCES THE DISCHARGE RATE TO .75 LITRES PER MINUTE WHEN 25 SPRAYHEADS ARE USED, THEREFORE EVACUATING 200 LITRES IN APPROXIMATELY 10 MINUTES. IN CERTAIN SITUATIONS ADDITIONAL SPRAYHEADS MAY BE REQUIRED FURTHER REDUCING THE FLOW RATE.

THE MINIMUM AREA REQUIRED FOR IRRIGATION VARIES DEPENDING ON SITE CONDITIONS, HOWEVER AN AREA OF ABOUT 100 SQUARE METRES IS THE GENERALLY ACCEPTED AVERAGE. THIS MAY BE IN ANY CONFIGURATION AND WITH SOME INNOVATIVE PLANNING CAN PROVIDE FOR A FULLY INTEGRATED IRRIGATION SYSTEM AND PROVIDE FOR A FULLY INTEGRATED IRRIGATION SYSTEM AND PROVIDE GENUINE LANDSCAPING BENEFITS. AFTER IRRIGATION, NUTRIENT REMOVAL IS ACHIEVED.

IRRIGATION OF RECREATIONAL AREAS AND GROWING VEGETABLES OR FRUIT MUST BE AVOIDED. DISCHARGE OR RUN-OFF INTO STORMWATER EASEMENTS OR OTHER DRAINAGE CHANNELS IS NOT RECOMMENDED. ALL EFFLUENTS MUST BE DISPOSED OF WITHIN THE BOUNDARIES OF THE PROPERTY.

IN THE CASE OF "SPLIT" IRRIGATION AREAS, BIOCYCLE WILL INSTALL VALVES NECESSARY TO ALLOW THE ALTERNATE USE. THE SYSTEM IS DESIGNED TO ENSURE THAT AT LEAST ONE IRRIGATION AREA IS AVAILABLE FOR USE AT ALL TIMES.

THE IRRIGATION AREA SHOULD IDEALLY HAVE A VEGATIVE COVER AND THE SYSTEM IS DESIGNED TO BE OPERATIVE WITH AN EVAPORATION RATE OF ABOUT 6MM PER DAY. IF THE IRRIGATION AREA CONSISTS OF SHRUBS AND NATIVES WITH A PLANT COVER OF SAY 40% WE WOULD ESTIMATE A TRANSPIRATION RATE OF ABOUT 30%.

COMMISSIONING:

IT SHOULD BE REMEMBERED THAT IT MIGHT BE NECESSARY TO INSTAL THE BIOCYCLE SYSTEM PRIOR TO BUILDING COMMENCEMENT, PARTICULARLY WHEN THE PROPERTY, WHEN BUILT, MAY PRECLUDE PHYSICAL ACCESS TO THE PREFERRED LOCATION ON YOUR SITE OR IF IT IS REQUIRED FOR THE SYSTEM TO BE USED DURING BUILDING OPERATIONS, HOWEVER SOME TIME WILL PROBABLY ELAPSE BETWEEN INSTALLATION AND COMMISSIONING OF THE SYSTEM.

THE NORMAL BIOCYCLE INSTALLATION LEAVES THE SYSTEM READY FOR AUTOMATIC COMMISSIONING.

AS THE BIOCYCLE IS A COMPLETELY NATURAL BIOLOGICAL PROCESS, TIME MUST BE GIVEN FOR THE BACTERIA CULTURES TO FORM. IT WILL GENERALLY TAKE UP TO ABOUT FOUR WEEKS FOR THIS TO OCCUR. WHILST THIS SETTLING PERIOD TAKES PLACE SLIGHT ODOURS MAY COME FROM WITHIN THE SYSTEM.

TO ASSIST WITH A MORE RAPID SETTLING IN PERIOD IT IS RECOMMENDED THAT A CUP FULL OF ORDINARY GARDEN LIME IS DEPOSITED IN THE PRIMARY CHAMBER DAILY FOR THE FIRST WEEK OF OPERATION. THIS ASSISTS THE BREAKDOWN OF SOLIDS AND USUALLY HALVES THE SETTLING-IN PERIOD. OR ALTERNATIVELY, A BUCKET FULL OF WASTE FROM AN OPERATING SEPTIC SYSTEM WILL ACHIEVE THE DESIRED EFFECT. THERE ARE ALSO SEVERAL PROPRIETARY LINES OF "ENZYME ACCELERATORS" THAT CAN BE USED.

IN-BUILT SAFETY FACTORS AND ALARMS

WITHIN THE BIOCYCLE SYSTEM TWO ALARMS ARE INSTALLED AS WARNING DEVICES. AN ALARM PLATE (AUDIO/VISUAL) IS SUPPLIED TO BE INSTALLED WITHIN THE HOUSE, (THE KITCHEN BEING THE MOST PREFERRED ROOM). THE ALARM PLATE IS SIMILAR TO AN ORDINARY LIGHT SWITCH WITH TWO COLOURED LIGHTS. A SWITCH PROVIDES FOR THE ALARM TO SOUND AND TO BE SWITCHED TO THE "MUTE" POSITION WHEN HEARD. THE TWO LIGHTS INDICATE IF:

1. THE HIGH WATER LEVEL ALARM - DESIGNED TO SOUND IF THE WATER LEVEL IN THE IRRIGATION/DISINFECTANT CHAMBER REACHES A CERTAIN LEVEL. THIS INDICATES THAT THE SUBMERSIBLE PUMP IS MALFUNCTIONING.
2. THE AIR PRESSURE ALARM - DESIGNED TO SOUND IF THE DIAPHRAGM BLOWER CEASES TO OPERATE.

THE HOUSEHOLDER IS REQUIRED TO CONTACT THE COMPANY WHEN THIS OCCURS AND BIOCYCLE LIMITED IS OBLIGED TO RESPOND WITHIN 24 HOURS.

FURTHER, THE DOMESTIC BIOCYCLE DESIGN PROVIDES FOR AN AIR SPACE THAT IS CAPABLE OF ACCEPTING NOT LESS THAN AN ADDITIONAL 1,200 LITRES SHOULD THE IRRIGATION PUMP FAIL. THIS GIVES AT LEAST 2 DAYS CAPACITY IN THE AVERAGE HOUSE-HOLD SAFETY SPAN, PRIOR TO THE SYSTEM OVERFLOWING. HOWEVER, EVEN IF THE SYSTEM OVERFLOWS THERE ARE SUFFICIENT CHLORINE STOCKS WITHIN THE SYSTEM THAT DISSOLVE AS THE LIQUID LEVEL RISES TO RENDER THE OVERFLOW RELATIVELY HARMLESS.

MAINTENANCE OF AEROBIC TREATMENT PLANTS

ALL BIOCYCLE UNITS REQUIRE TWICE YEARLY MAINTENANCE. IN THE FIRST YEAR AFTER COMMISSIONING THE LAYOUT IS INCLUDED IN THE SALE PRICE OF THE SYSTEM AND THE ONLY CHARGE IS FOR CHLORINE TABLET REPLENISHMENT. IN THE SECOND AND ENSUING YEARS, THE CURRENT COST OF THIS IS £100.00 (DOMESTIC) BUT EXCLUDES ALL CHLORINE TABLET REPLENISHMENT.

NOTE: THERE ARE NO REQUIREMENTS FOR MAINTENANCE OR TESTING OF THE TRADITIONAL SEPTIC, AND CONSEQUENTLY, THERE IS NO KNOWLEDGE AFTER INSTALLATION AS TO WHETHER THE SEPTIC IS WORKING EFFICIENTLY OR WHETHER IT HAS COMPLETELY FAILED.

ACCEPTANCE OF THE BIOCYCLE SYSTEM

BIOCYCLE PTY LIMITED FIRST GAINED APPROVAL TO COMMENCE MANUFACTURE OF THEIR SYSTEMS IN NEW SOUTH WALES IN NOVEMBER 1985. SINCE THEN BLANKET APPROVALS HAVE BEEN GAINED IN SOUTH AUSTRALIA, NORTHERN TERRITORY AND QUEENSLAND. BLANKET APPROVAL IS PENDING IN WESTERN AUSTRALIA AND IRELAND.

NEGOTIATIONS ARE BEING CONCLUDED IN TECHNOLOGY TRANSFER AGREEMENT IN BAHRAIN, SAUDI ARABIA, ISRAEL, THE USA.

THERE ARE NOW APPROACHING 40000 DOMESTIC BIOCYCLE SYSTEMS IN OPERATION IN AUSTRALIA AND ABOUT 500 LARGER COMMERCIAL (BIOCYCLE JUMBO) UNITS IN OPERATION.

THE ACCEPTANCE BY THE GENERAL PUBLIC, AND LOCAL AND STATE AUTHORITIES IS MUSHROOMING, PARTICULARLY IN NEW SOUTH WALES, QUEENSLAND AND IN IRELAND SINCE THE LAUNCHING OF BIOCYCLE LIMITED ON 11th SEPTEMBER, 1989.

MANY LOCAL GOVERNMENT AREAS IN AUSTRALIA NOW "EXCLUSIVELY" SPECIFY THE BIOCYCLE SYSTEM OR SIMILAR IN PREFERENCE TO THE OUT-MODED SEPTIC TANK.

CONCLUSIONS

THE BIOCYCLE SYSTEMS ACHIEVE THE PRIMARY OBJECTIVE OF HIGH QUALITY EFFLUENT THAT CAN BE RE-CYCLED FOR IRRIGATION PURPOSES.

THE BIOCYCLE SYSTEM OVERCOMES THE SIGNIFICANT COMMUNITY STRESS CAUSED BY FAILED ON-SITE DISPOSAL, ILLÉGAL DISCHARGE AND SUBSEQUENT POLLUTION OF THE LOCAL ENVIRONMENT.

THE BIOCYCLE SYSTEM MAY RELIEVE THE COMMUNITY COST WHERE A RETICULATED MAINS SEWER SCHEME IS NOT ECONOMICALLY VIABLE.

THE BIOCYCLE SYSTEM IS THE MOST ACCEPTABLE ALTERNATIVE.

FRANK CAVANAGH
MANAGING DIRECTOR
BIOCYCLE LIMITED

Biocycle Irish Test Results

Provided By

Mr. Dave O'Brien

Environmental Science - Trinity College, Dublin

National Environmental Services Agency

For Samples taken from Biocycle Units

AT

Swords,

CO. DUBLIN

SUMMARY OF TEST RESULTS AS TAKEN BY DAVE O'BRIEN

22nd March, 1990

1989			PARAMETER (% REDUCTION)
<u>DATE</u>	<u>B.O.D.</u>	<u>S.S.</u>	
7/10	92.5	81.25	
23/10	76	93.5	
2/11	80	83.25	
4/12	60	83	
11/12	77	66	

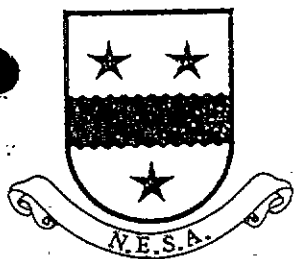
1990		
<u>DATE</u>	<u>B.O.D.</u>	<u>S.S.</u>
16/01	92	78
9/2	99	99
20/2	97	93

MEAN REDUCTIONS

	<u>B.O.D.</u>	<u>S.S.</u>
Overall (9 samples)	80%	67%

Some alterations to drainage arrangements (ie. 16/1-20/2)

Mean overall reductions of total coliform count has been 97%



National Environmental Services Agency

Ashbourne, Co. Meath. Tel. 01/350197

2 MAR 1990

Mr. Brian McGonagle,
BIOCYCLE Wastewater Treatment Systems,
Unit 107 Baldoyle Industrial Estate,
Dublin 13.

Date: Feb. 27, 1990

Our Ref: B7/89008001

Re: Treated Effluent from Biocycle Unit Serving Single House at Swords, Co. Dublin.

Dear Mr. McGonagle,

This site was visited on 16/2/90, and the Biocycle unit was examined. It was observed to be treating the domestic sewage discharges from a single house on the site. A sample of the treated effluent was collected from the discharge chamber of the Biocycle unit and analysed as requested.

The analytical results obtained on the sample were:

pH	8.3
Suspended Solids w/v	8.0 mg/l
Total Unoxidised Nitrogen as N	36.0 mg/l
Total Phosphorous	15.0 mg/l
Biochemical Oxygen Demand as O	2.5 mg/l
(5 days @ 20 degrees C)	

The analytical test procedures used in the analysis of this sample were according to those set down in the 18th Edition of Standard Methods for the Examination of Water and Wastewater.

Yours sincerely,

Tom Keenan

THOMAS A. KEENAN, M.Sc., MIWEM
Environmental Scientist.

Director: Tom Keenan M.Sc., M.I.W.E.M.



Biocycle Ltd.,
107 Baldoyle Industrial Estate,
Dublin 13.

THE IRISH SCIENCE AND TECHNOLOGY AGENCY
Glasnevin, Dublin 9, Ireland. Telephone 01-370101.
Fax 01-379620. Telex 32501.

Attention: Mr F Kavanagh.

Our Ref: R.6/07999E

5 April 1990.

Re: Biocycle Waste Water Treatment System.

Dear Mr Kavanagh,

Thank you for sending details of the above system for treating domestic waste water. We also acknowledge receipt of analytical results. Having examined two working units in North County Dublin we are in a position to comment on the Biocycle as a means of treating and disposing of domestic waste water.

In our opinion the system is superior to the conventional septic tank and percolation method for disposing of domestic waste water from single house dwellings. The septic tank is really only a settling tank and removes the pollution load associated with the solids. It does not remove the soluble organic load and this can only be removed or reduced by the percolation process in suitable conditions.

The Biocycle achieves degradation of the total organic load and the sludge produced will be stable ie., it will have been self digested. The system is a mini-version of the modern method of effluent treatment used by the local authorities to treat municipal effluent ie., biological oxidation. The principal difference is that the detention time per capita in the Biocycle is longer than in a local authority plant. Because of this the effluent from the Biocycle should be of higher quality. The effluent from the system will be of much better quality than that from a septic tank. Consequently the

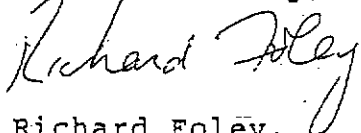
risk of surface and groundwater pollution will be much reduced. As such the system is to be recommended.

We have examined the test reports submitted and the results (BOD removal greater than 90% and suspended solids removal greater than 80%) are in line with what we would have expected from this type of treatment system given the principal of operation and the retention time involved.

As you are probably aware there are areas in the country where conventional septic tanks and percolation are not suitable as a means of treating and disposing of domestic waste water. For example, bacteriological contamination of groundwater by the septic tank method of treatment is of increasing concern to the local authorities and health boards. Properly selected the Biocycle will be particularly suitable for such areas.

The fact that the Biocycle requires electrical power for the air blower and pump means that consideration must be given at each installation to the effects of power cuts and blower and pump malfunction. Even allowing for the capacity of the system to accept about 4 days of raw effluent after say a pump malfunction, it would be important to equip each installation with a high liquid level alarm, independently powered (eg., battery pack), to alert the house holder to a malfunction.

Yours sincerely,



Richard Foley,
Environmental Services.

rf/RF.