

Puraflo

Wastewater Treatment System for the Residential Market



The Environmental Advantages of Puraflo

Puraflo is a 100% natural system that draws on the remarkable filtration properties of peat and uses no chemical additives in achieving exceptional results.

Puraflo's unique bio-fibrous peat filter provides unsurpassed treatment of domestic water, reducing the risk of pollution whilst providing protection for homes, the environment and public health.

Low carbon footprint.

99.9% reduction in total coliforms.

Elimination of pathogenic bacteria.

Micro-biological treatment of wastewater.

Phosphorous reduction <2mg/litre*.

Existing septic tank system can be easily upgraded to a high performance treatment plant by adding Puraflo modules.

The media covering the effluent distribution grid in the Puraflo module has odour absorption properties therefore suppressing sewage odours.

*optional extra if required

The Puraflo Advantages for You

Puraflo has minimal power requirements, costs typically averaging approximately €10 per annum.

The modular design of Puraflo can be installed above or at ground level. Puraflo units do not require concrete backfill and can utilise the existing excavated material as backfill.

The Puraflo bio-filters require no de-sludging or backwashing. Provided the septic tank and sump receive regular de-sludging, the system will continue to operate efficiently.

Intermittent or seasonal flows have no detrimental effect on treatment levels, making Puraflo ideally suited where fluctuating loads are expected.

The use of a septic tank means fewer de-sludging operations and reduced operational costs.

The only mechanical device in the system is the pump, which works on an intermittent basis, minimising the possibility of mechanical problems.

To further enhance the treated effluent quality with a tertiary treatment option the treated effluent can be passed through an additional Puraflo module capable of achieving a 5:5mg/l BOD: SS standard.

Simple Installation, Minimum Maintenance

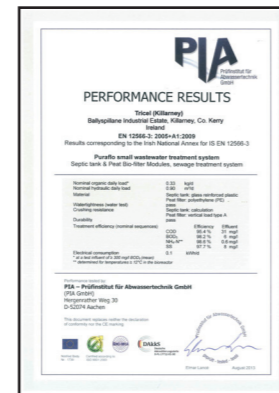
While the Puraflo Residential sewage treatment system is made up of a number of separate components, we understand the pressures to minimise installation costs while maintaining quality. Therefore we design and manufacture the system to provide a packaged solution with ease of installation and reduced maintenance in mind.

Complementary Products for the Puraflo Residential System

- Plant Alarm System
- High Level Alarm(s)
- Sample chambers
- Weatherproof GRP Enclosures & Kiosks
- Nutrient removal for SSI (Special Scientific Interest) areas
- Tertiary treatment for enhanced wastewater treatment

For inspection purposes only.
Consent of copyright owner required for any other use.

Your Tricel partner



Free
no obligation
quotations

Expert customer
support



Tricel (Killarney), Ballyspillane Industrial Estate, Killarney, Co. Kerry, Ireland.
Tel: +353 (0) 64 6632421 | Email: sales@ie.tricel.eu | www.ie.tricel.eu

In accordance with Tricel's normal policy of product development these specifications are subject to change without notice.

The Puraflo Residential System At Work

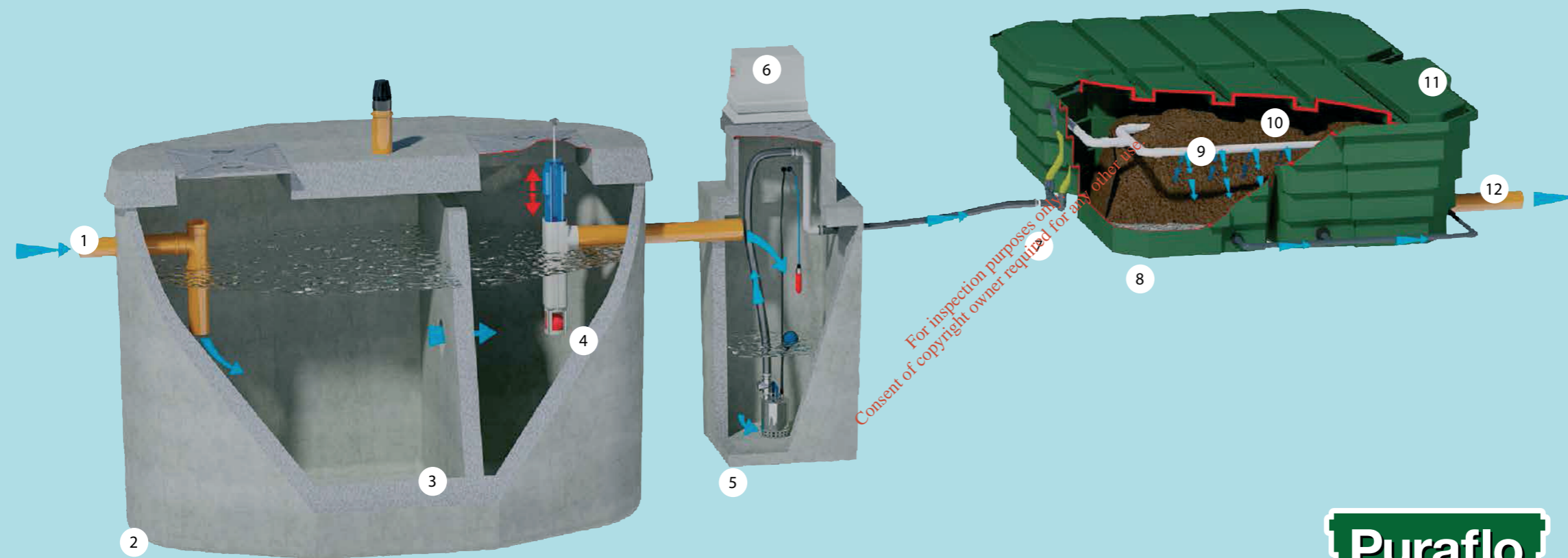
The Puraflo System is an advanced sustainable technology for the treatment of Wastewater in domestic homes.

Stage One: Primary Settlement – Physical Treatment

1. The wastewater from the house flows into the existing septic tank
2. Initial settlement occurs
3. The gross solids sink to form a sludge layer at bottom of the tank
4. The liquid effluent flows by gravity into the pump chamber

Stage Two: Puraflo Bio-filtration – Secondary Treatment

5. The liquid effluent is pumped into the Puraflo modules.
6. A pipework system at the top level in the modules evenly distributes the effluent onto a naturally occurring filter media.
7. A combination of biological chemical and physical processes treat the effluent as it filters through the media in the modules.
8. The treated effluent emerges from the modules through the outlet pipework for an approved disposal method.



For inspection purposes only
Consent of copyright owner required for any other use



The illustration above is a typical Puraflo System installation

Diagram Index

Stage One

1. Inlet pipe
2. Septic Tank
3. Baffle wall
4. Effluent filter
5. Pump chamber
6. Control panel

Stage Two

7. Inlet pipe
8. Puraflo module
9. Distribution pipework
10. Biofibrous peat
11. Sample chamber
12. Outlet pipe

Sewage Treatment Simplified

Sewage Treatment: Combination of physical and biological processes which breakdown the organic and inorganic sewage content which cause pollution to receiving waters.

Receiving Waters: All groundwaters and watercourses such as streams and rivers.

Population Equivalent (PE): A measure of the number of people the treatment plant serves.

Media: Bio-fibrous peat.

Sludge: The solids that settle to the bottom of the tank chambers.

BOD: Biological Oxygen Demand measured in milligrams per litre (mg/l) is a relative measure of how polluting the sewage is.

SS: Suspended Solids measured in milligrams per litre (mg/l) includes all suspended matter both organic and inorganic.

Coliform bacteria: A commonly used bacterial indicator of sanitary quality of foods and water.

Pathogenic Bacteria: Pathogenic bacteria such as Streptococcus are bacteria which cause disease in humans and animals.

The Puraflo Residential System has undergone a rigorous performance testing regime to achieve the highest results required. The tables alongside show the sizes and the wastewater treatment capability of Puraflo.

If you have any specific requirements, please contact the Tricel sales team who will be able to assist you with your enquiry.

Treated Wastewater Quality

pH (pH units)	5-8
BOD (mg/l)	<15
SS (mg/l)	<15
NH ₂ -N (mg/l)	< 5
Nitrate - N (mg/l)	20
Total Coliforms elimination	>99.9%
Faecal Coliforms elimination	>99.9%
*Pathogenic Bacteria	Absent

*Including Salmonella spp, Shigella spp, Sulphide reducing Clostridia, Staphylococcus and Psudomonas aeruginosa.

Puraflo Module Dimensions

Length	2,150 mm
Height	760 mm
Width	1,400 mm



BORD NA MÓNA ENVIRONMENTAL LIMITED

Roadstone Dublin Limited
Fortunestown
Tallaght
Dublin 24

10th November 2008

COMPLETION CERTIFICATE
Completion Certificate for Puraflo Effluent Treatment Unit

At: Calary Quarry, Killough Upper, Co. Wicklow

Job No: 10057

Installed: 29-Sep-03

System Type: 2 Modular

To Whom It May Concern:

In relation to the above system I wish to confirm that all works were installed and all components were up and running correctly in accordance with Irish Agrément Certification.

The guarantee of one year on the Puraflo treatment unit will be in place from the date the plant is installed.

Yours sincerely

Alan Wright
Operations Manager Puraflo[®] Ireland

MAIN STREET, NEWBRIDGE, CO. KILDARE, IRELAND
TELEPHONE: (045) 431 201. INT: +353-45-431201. Fax: (045) 431647. Int: +353-45-431647

REGISTERED OFFICE: MAIN STREET, NEWBRIDGE, CO. KILDARE
REGISTERED IN IRELAND NUMBER: 303313

Mr Paul O Brien
Roadstone Quarry
Kilmacanogue
Co Wicklow

18th April 2002

Re: Callary, Kilmacanogue

Dear Mr O Brien

With reference to the proposed Puraflo installation for your Office development at Kilmacanogue, Co Wicklow, I have the following comments to make:

From the details provided it is noted that there is a maximum of 10 people using the facilities on site. Therefore based on the EPA requirements with particular emphasis on Open Industrial sites, an allowance as follows has been given:

SOURCE	LITRES PER PERSON/PER DAY	GRAMS OF BOD PER PERSON/PER DAY
10 people	40	25
TOTAL	400	250

Therefore I have enclosed a detail for a 4 modular system to cater for these hydraulic and organic loading rates.

In response to our discussion on site there are 2 options available to you. The first option is to take the effluent from the vicinity of the septic tank and pump the effluent to a sealed Puraflo unit where it will be treated before discharge to the adjoining watercourse (on attainment of a discharge licence from the County Council). It is also noted that this is in effect an artificial watercourse and there is also a well serving the premises. You should consult with the County Council as to the distance to be maintained from the well to the percolation area.

An alternative option is to pump the effluent from a pumping chamber located at the back of the building upgradient to a constructed percolation area. Any percolation area upgradient must be in agreement with the new EPA requirements. I would therefore suggest that you conduct a percolation test and watertable test in accordance with EPA recommendations in the proposed area of percolation area.

I hope that this information is exactly what you require, if however, you need additional clarification or assistance, please do not hesitate to contact me.

Yours sincerely

Martin Conlan B.Sc
Area Marketing Manager
Wastewater Treatment Technologies

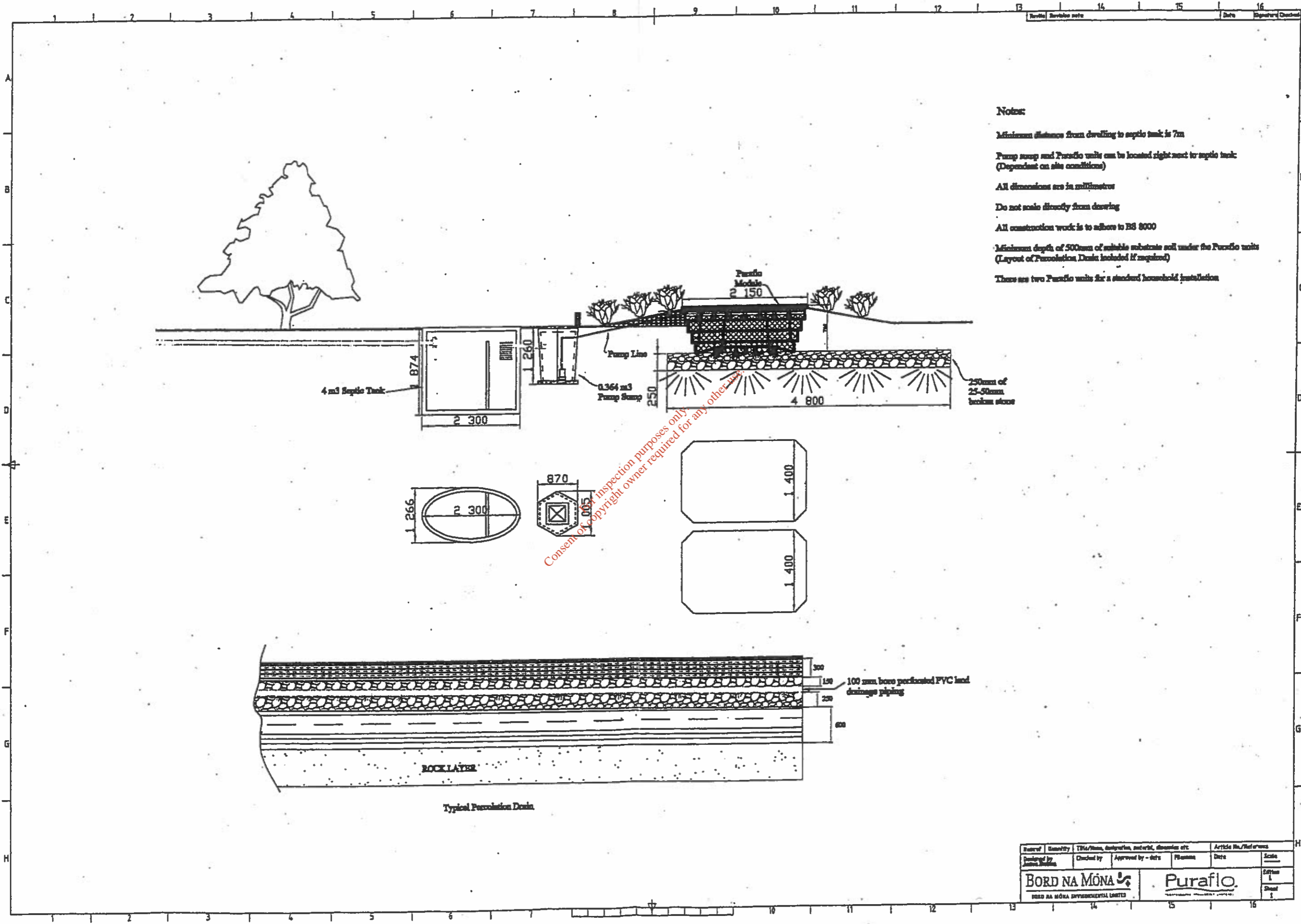
LB

BORD NA MÓNA

BORD NA MÓNA ENVIRONMENTAL LIMITED

PURAFLO PEAT FILTER SYSTEM QUOTATION

DATE	19 th April 2002	REFERENCE		QUOTE NO.	30656
SITE OWNER	Mr Paul O Brien Roadstone Quarry Kilmacanogue Co Wicklow	SITE ADDRESS		Office Complex Callary Kilmacanogue	
		PHONE			
SCOPE OF SUPPLY	Bord na Mona Environmental Ltd will deliver to site, install and commission the Puraflo Peat Filter System consisting of: see attached listing				
EXTRAS (If any)	Provision of the following is the responsibility of the customer: Septic Tank – SR6 Compliant (with T pieces, down leg and baffle wall), JCB and Driver, Electrical cable from house to control panel at septic tank, Electrician to complete electrical connection, a quantity of 1" – 2" clean broken stone (depending on percolation requirements), All site re-instatements.				
PRICE	Option 1 = € 6,069.38 Option 2 = € 11,282.00 <ul style="list-style-type: none"> • 30% Order Deposit to be paid when order is placed • Balance to be paid on day of installation • Additional charges may be incurred by the customer for any delays that result in the Installer having to make subsequent visits to the site to complete the installation. Please see Conditions of Sale for full details. FINAL PRICE OF SYSTEM IS SUBJECT TO SITE VISIT				
<p>When returning your signed quotation to Bord na Mona Environmental Ltd. please ensure the following items are included:</p> <ul style="list-style-type: none"> • Copy of your Site Map and Planning Conditions as approved by the County Council • Soil T / P Value (percolation test results) • Order Deposit Cheque • <p>Please return the signed quotation along with the items listed above to: Puraflo Co-ordinator, Bord na Mona Environmental Ltd, Newbridge, Co. Kildare</p> <p>Tel: 1850 381136 / 045 431201, Fax: 045 432312, E-Mail: ed.info@bnm.ie, Website: www.bnm.ie</p>					
TO BE COMPLETED BY INVOICEE (Please use block capitals)	NAME:	ADDRESS:	COMPANY: (if applicable)		
		PHONE:	TITLE: (If applicable)		
SIGNED (Customer)		DATE			
SIGNED (For Bord na Mona Environmental Ltd)		DATE			
<p><i>I have read, understand and accept the above quotation & General Conditions of Sale attached. This form when signed by both parties constitutes a binding contract. A copy showing both signatures will be returned to you.</i></p>					



Notes:

- Minimum distance from dwelling to septic tank is 7m
- Pump sump and Puraflo units can be located right next to septic tank (Dependant on site conditions)
- All dimensions are in millimetres
- Do not scale directly from drawing
- All construction work is to adhere to BS 8000
- Minimum depth of 500mm of suitable substrate soil under the Puraflo units (Layout of Percolation Drains included if required)
- There are two Puraflo units for a standard household installation

Consent of copyright owner required for any other use

Drawn/Checked by	Quantity	Title/Specs, description, material, dimension etc	Article No./Reference

BORD NA MÓNA
BORD NA MÓNA ENVIRONMENTAL LIMITED

Puraflo

Scale
Edition 1
Sheet 1