



ENVIRONMENTAL CONSULTANTS
LoCall 1890 522 000

Mr Brian Meaney
Inspector
Environmental Protection Agency (EPA)
PO Box 3000
Johnstown Castle Estate
Co Wexford

12th November 2010

RE: KMK Metals Recycling Ltd. (W0113-03)

**Unsolicited further information to supplement waste licence review application
ref: W0113-04 as received by your office on 20th October 2009.**

Dear Mr Meaney,

Further to my letter dated 23rd September 2010 and submitted to your office, my client KMK Metals Recycling Ltd wishes to provide the following information to you prior to a proposed determination of the licence review ref; W0113-04;

- (1) As previously stated, planning permission was recently granted by Offaly County Council on 19th August 2010 for the development of 'E' area (planning ref:0/46) which is presently under licence review. A copy of this permission was previously submitted to you. I also now attach a finalised site layout drawing (ref; 10-001-C02) for your information on scale A1, 1:250.

In summary, the proposed site development at E area will achieve the following environmental protection measures;

- o All yard water, roof water and water run-off from the proposed weighbridge will pass through a combination of a silt trap, followed by a storm water attenuation tank system (all located at the north part of E area). The outfall from the attenuation system will be treated by a Class 1 hydrocarbon interceptor unit.

BOW HOUSE O'MOORE STREET TULLAMORE CO. OFFALY

T: 057 935 2200 • F: 057 935 2342 • email: info@enviroco.ie • www.enviroco.ie

Registered in Ireland, Number 297801 • Directors: A. Fahey. D. Fahey



- The subsequent treated water discharge from the Class 1 interceptor will be diverted to the existing storm water network of the industrial estate prior to final discharge to the existing land drain along the west boundary of the site. Therefore KMK Metals Recycling Ltd will adequately treat all surface water run-off from their site at E area prior to discharge to the land drain off-site.
- An inspection surface water manhole for sampling and inspection will be installed immediately downstream of the Class 1 interceptor. See SW MH07b on the attached layout drawing. This sampling location is now proposed as the emission and monitoring point for the E area as is required in the waste licence review. The Grid ref is E635862 N725119 and is highlighted blue on the attached same layout drawing.

All WEEE acceptance, handling and storage at E area is previously described in Attachment H of the waste licence review application (received by the Agency on 20th October 2009). In summary, WEEE management will occur as per agreement with the Sixth Schedule of the Waste Management (Waste Electrical and Electronic Equipment) Regulations 2005 – technical requirements in accordance with Article 20 which states;

1. *Sites for storage (including temporary storage) of Waste Electrical and Electronic Equipment prior to their treatment (without prejudice to the requirements of Council Directive 1999/31/EC):*
 - impermeable surfaces for appropriate areas with the provision of spillage collection facilities and, where appropriate, decanters and cleanser-degreasers.
 - weatherproof covering for appropriate areas.
2. *Sites for treatment of Waste Electrical and Electronic Equipment:*
 - balances to measure the weight of the treated waste
 - impermeable surfaces and weatherproof covering for appropriate areas with the provision of spillage collection facilities and, where appropriate, decanters and cleanser-degreasers
 - appropriate storage for disassembled spare parts
 - appropriate containers for storage of batteries, PCBs/PCTs containing capacitors and other hazardous waste such as radioactive waste.
 - equipment for the treatment of water in compliance with health and environmental Regulations

In relation to the proposed storm water attenuation tank, design calculations and Class 1 interceptor unit, I attach the specification details of same for your information.

As discussed last week, KMK Metals Recycling Ltd, now proposes to proceed with construction and development of E area as per planning permission with completion expected by end of January 2011.

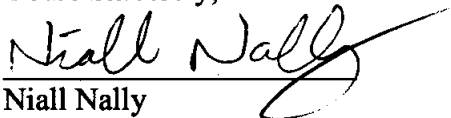
The schedule of construction is as follows;

- Site clearance work followed by installation of storm water drainage lines and associated gullies.
- Sub structure for the proposed site building (foundation to ground level.)
- Installation of the silt trap, attenuation system and Class 1 interceptor unit.
- Concrete surface work, building construction and car park development.

I request acknowledgement of this letter either by formal reply or via e-mail at nnally@enviroco.ie

If you have any questions, please do not hesitate to contact me.

Yours Sincerely,



Niall Nally

Senior Environmental Consultant

cc. Kurt M Kyck, KMK Metals Ltd, Cappincur Industrial Estate, Tullamore, Co Offaly.
Dermott Burke, Officer, Environmental Protection Agency (EPA), Seville Lodge, Callan Road, Kilkenny

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MALACHI CULLEN
CONSULTING ENGINEERS LTD

Old Bridge House, Strand Street, Athlone, Co. Westmeath
Ph.: 090 647 4264 Fax: 090 647 8422

Niall Nally
ENVIROCO Management Ltd.,
Bow House
O'Moore St.
Tullamore
Co. Offaly

Date: 8 November 2010

Ref: 10-001 LT06

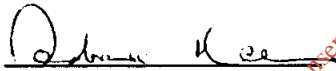
Dear Niall,

RE: KMK Metals Recycling Ltd., Middle Yard Development

Further to your email correspondence, please find enclosed specification for BMS Class 1 Petrol Interceptor, as requested.

Trusting you find this in order, however, should you have any queries, please contact us.

Yours sincerely,

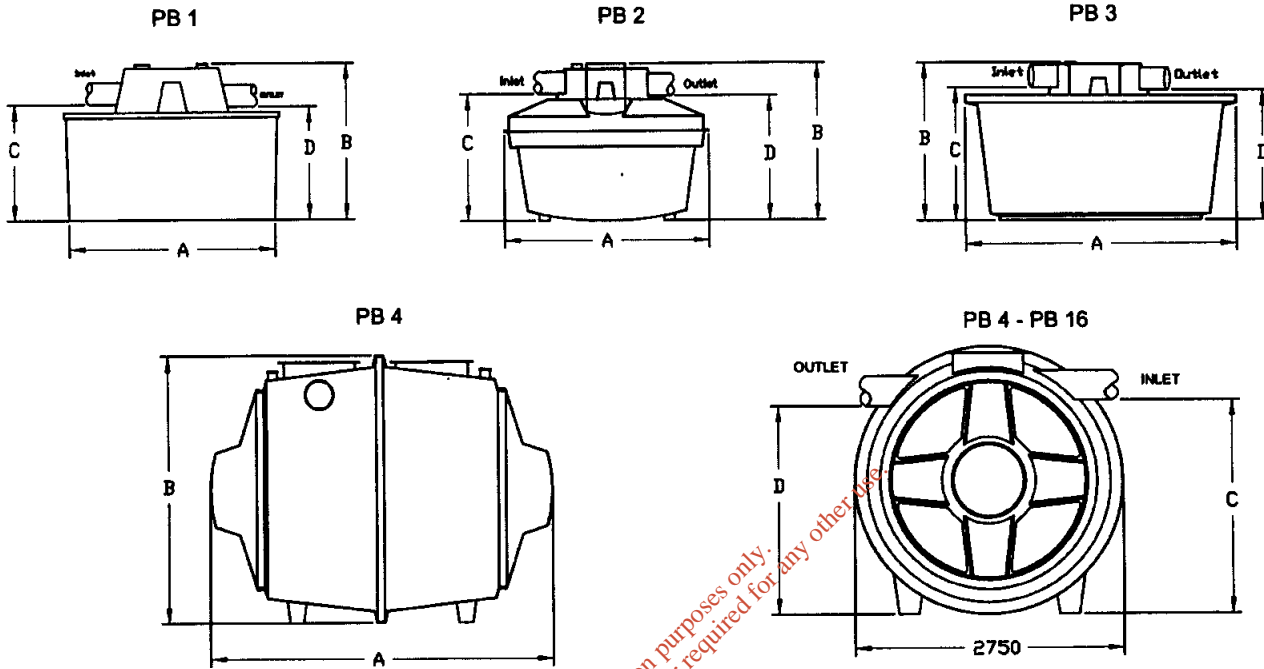


Padraic Keena
Malachi Cullen Consulting Engineers Ltd.

BMS CLASS 1 & CLASS 2 BYPASS INTERCEPTORS

SIZING & SELECTION CHART

FOR PIPE SIZES UP TO 400mm DIAMETER

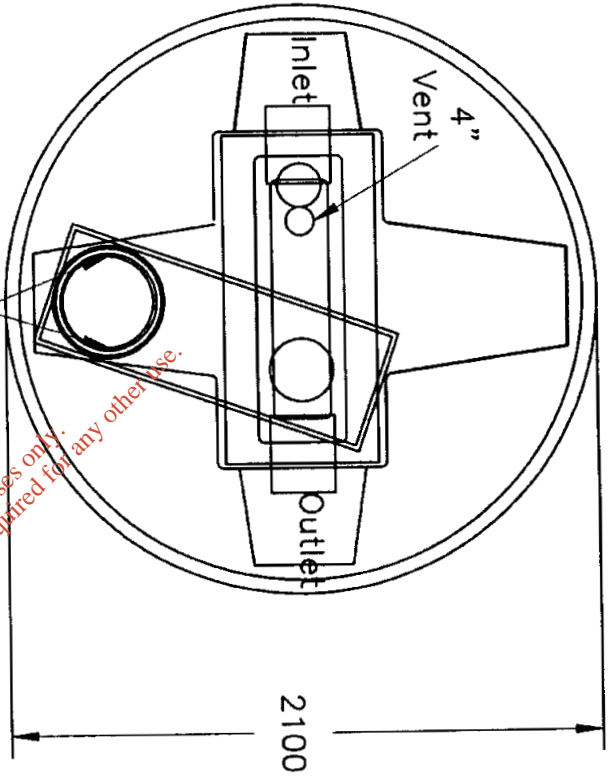


	LENGTH	HEIGHT	INLET	OUTLET	Nominal Size L/S	PEAK FLOW RATE L/s	DRAINAGE AREA 50mm/hr	DRAINAGE AREA EN658-1:2002	OIL STORAGE CAPACITY Lts	SILT STORAGE CAPACITY Lts	MAX PIPE SIZE
	A	B	C	D							
PB 1	2195	1590	1180	1150	4	40	2880	2223	60	400	375
PB 2	2100	1600	1300	1270	8	80	5760	4444	120	800	375
PB 3	2750	1600	1350	1325	16	163	11759	9074	245	1633	400
PB 4	3490	2750	2190	2140	29	293	21118	16296	440	2933	400
PB 5	4750	2750	2190	2140	47	473	34077	26296	710	4733	400
PB 6	5970	2750	2190	2140	58	580	41757	32222	870	5800	400
PB 7	7220	2750	2190	2140	76	760	54716	42222	1140	7600	400
PB 8	8430	2750	2190	2140	87	867	62395	48148	1300	8667	400
PB 9	9700	2750	2190	2140	105	1047	75354	58148	1570	10467	400
PB 10	10900	2750	2190	2140	115	1153	83033	64074	1730	11533	400
PB 11	12160	2750	2190	2140	133	1333	95992	74074	2000	13333	400
PB 12	13360	2750	2190	2140	144	1440	103672	80000	2160	14400	400
PB 13	14640	2750	2190	2140	162	1620	116631	90000	2430	16200	400
PB 14	15840	2750	2190	2140	173	1727	124310	95926	2590	17267	400
PB 15	17090	2750	2190	2140	191	1907	137269	105926	2860	19067	400
PB 16	18300	2750	2190	2140	201	2013	144948	111852	3020	20133	400



**MANUFACTURERS OF SEWAGE TREATMENT PLANTS
PETROL INTERCEPTORS - GREASE TRAPS -
ENVIRONMENTAL PROTECTION PRODUCTS**

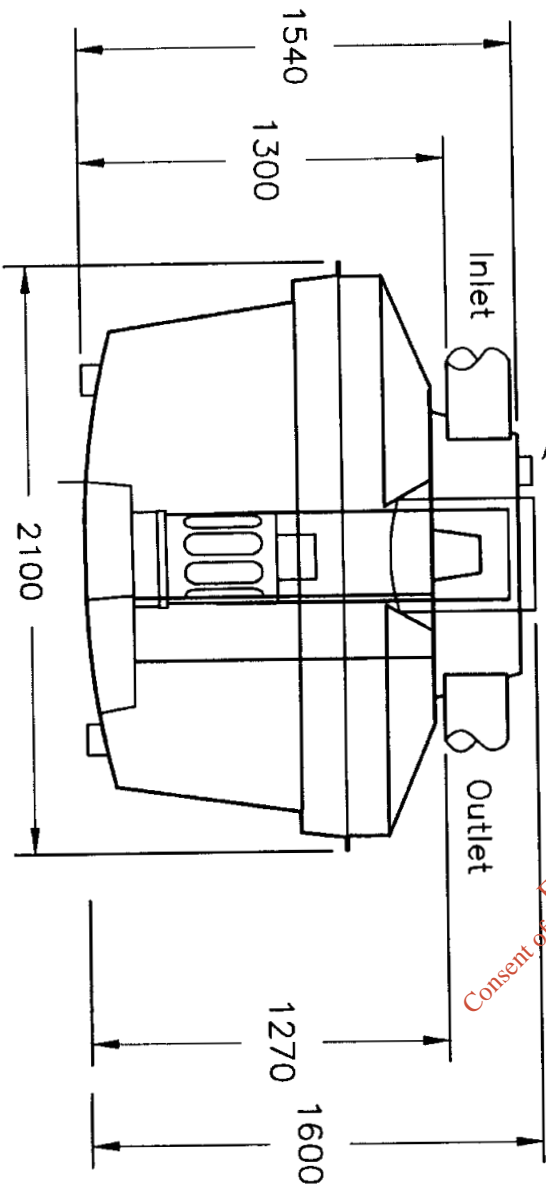
Strokestown Road, Longford, Ireland.
Tel: (043) 26100, 26018. Fax: (043) 26258.
Tel. Int: +353-43-26100 / 26258
Website: www.waste-watertreatment.com
E-mail: info@butterm.com




PIPE SHOWN IN DRAWING IS 9" (225)
 INVERT LEVELS TO BE THE SAME FOR
 ALL PIPES FROM 4" TO 9"

Model	NS	Peak Flow	AREA [50mm/hr]	AREA EN 858-1:2002	Oil Storage Capacity	Silt Storage Capacity
PB2	8	80	5760	4444	120	800

4" vent pipe
 400mm Clear Opening



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Company  BUTLER'S MANUFACTURING SERVICES LTD		Drawn by N.S.
Title PB2 CLASS 1 - S		Date 30.11.05
Approved by		Drawing no. PB2 - CL1 - S
REVISION		
5	30.11.05	NEW DRAWING AS OF NOV. '05



Petrol/Oil Interceptors

www.watstg.com



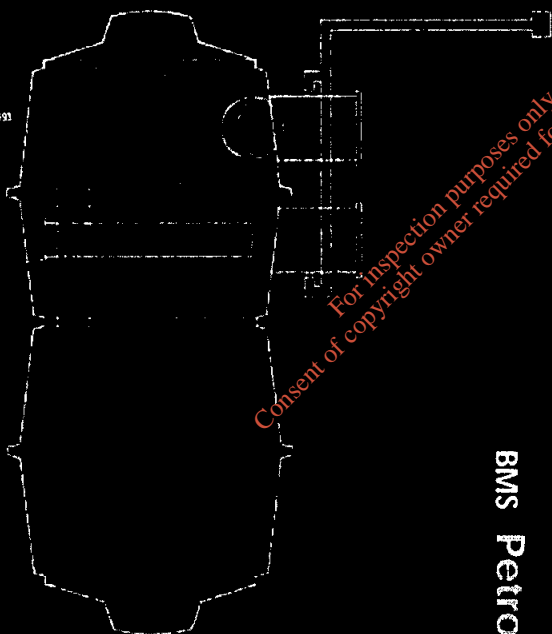
LA 001 001 000

All BMS products are
manufactured under
the ISO 9001:2000

Butler Manufacturing Services Ltd
Stokesown Rd
Longford
Ireland

Tel: 00 353 43 26100 / 26018
Fax: 00 353 43 26258
Email: butler@iol.ie

www.watstg.com - [water-treatment.com](http://www.water-treatment.com)



Date: Drafting Communications 1850 693 693

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BMS Petrol/Oil Interceptors



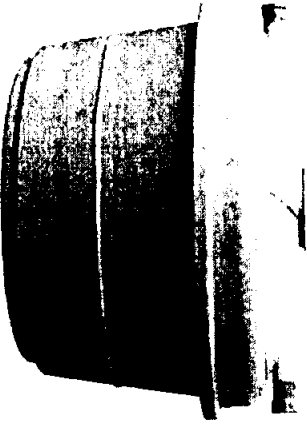
"A New Dimension"

For almost two decades, BMS have provided the foremost Construction and Industrial sectors with a quality range of proven products. In line with their ongoing Research and Development programmes, BMS are pleased to introduce an entirely new range of interceptors designed to suit all applications.

All products are manufactured to S.F.N. ISO 9001/2000 and conform to European Standard BS EN 858: 1 & 2.

With their flexible construction, interceptors are available in a wide range of sizes ranging from 1.5m to 3.0m in length. The design was specifically developed on order.

The American interceptors are used in areas where there is a high risk of petrol and oil contamination, the design form, size such as Fuel Distribution Depots, Solid Fuels, Car Vehicle Workshops and Residential areas.

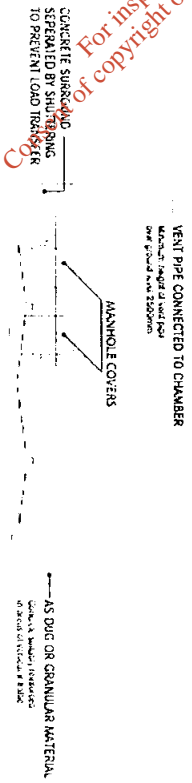


Used in low risk areas such as car parks and roadways where there is a risk of frequent oil contamination of surface water run off.

Used in applications where there is unlikely to be frequent oil contamination but potential risk of large spillage from an oil storage area.

Double down as an interceptor and separator of pollutants on the petrol forecourt where there is significant risk of petrol/oil spillage. Designed to contain the maximum contents of a spillage from a fuel tanker compartment.

New Designs have resulted in easier handling and better quality products. All interceptors are manufactured in Glass Reinforced Polyester ensuring that they are robust and rot proof. Finished units are rigorously tested by our Quality Control Department prior to dispatch. Detailed wiring, installation and maintenance instructions are available with each unit.



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BMS Interceptors



Petrol/Oil Interceptors

MAINTENANCE INSTRUCTIONS FOR BMS SEPARATORS

1. Oil separators require regular maintenance. Routine inspections should be undertaken at least every six months, and a log maintained of inspection date, depth of oil and any cleaning undertaken, in accordance with PPG3 Pollution Prevention Guidelines.
2. Coalescer Filters, if fitted, are easily removable to facilitate general inspection, cleaning and maintenance or renewal.
3. Accumulated sludge should be removed by vacuum tanker from the bottom of the sludge storage chamber.
4. Accumulated surface oils and greases should be removed from each chamber of the separator with the vacuum tanker hose. Care should be taken to avoid drawing up contaminated water from below the oil/water interface.
5. Care should be taken during maintenance to avoid damage to the internal pipework and components.
6. Pipework and internal components should be checked for blockages to ensure flow is not impaired.
7. Access to the separator should be kept clear and should not be used for storage.
8. A separator will not work properly for soluble or emulsified oils or if detergents or degreasers are present. Such discharges should be to the foul sewer.

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**SURFACE WATER STORAGE CALCULATIONS FOR
KMK Metals Recycling Ltd.
Tullamore Co. Offaly**

Storm Return Period = 10 Years
 Allowable Outflow = 0.9 Litre/sec/hect
 Allowable Discharge = 0.4 Litre/sec
 Maximum Storage Required = 183 m³

Rainfall Data as Recorded by Met Eireann in Tullamore

Proposed Impermeable Areas	Gross	Unit	Impermeability	Nett
Buildings	0.112	ha	@ 95%	0.106
Roads and Hardstanding	0.356	ha	@ 90%	0.320
Total	0.468	0.36		0.427

Duration (min)	Rainfall (mm)	Intensity (mm/hr)	Rainfall (m ³ /ha)	Proposed Imperm. Area (ha)	Proposed Run-off (m ³)	Allowable Outflow (m ³)	Storage Required (m ³)
1	2.1	126.00	21	0.43	9	0	9
2	3.6	108.00	36	0.43	15	0	15
5	6.4	76.80	64	0.43	27	0	27
10	9.3	55.80	93	0.43	40	0	39
15	11.7	46.80	117	0.43	50	0	50
30	15.1	30.20	151	0.43	64	1	64
60	19.0	19.00	190	0.43	81	2	80
120	23.0	11.50	230	0.43	98	3	95
240	29.0	7.25	290	0.43	124	6	118
360	34.0	5.67	340	0.43	145	9	136
720	42.0	3.50	420	0.43	179	18	161
1,440	50.0	2.08	500	0.43	213	36	177
2,880	60.0	1.25	600	0.43	256	73	183

Maximum Storage Required = 183 m³

Assuming 95% voids

193 cu metres

Introduction to AquaCell

The Wavin AquaCell Stormwater Management System comprises individual infiltration modules assembled together to form an underground structure which can either be used for stormwater storage or as an alternative to domestic soakaways. The AquaCell Stormwater Management System is fully BBA (British Board of Agrément) approved, Certificate No. 03/4018, and can meet with the Technical Requirements of NHBC.

Heavy storms and major cloudbursts are becoming more frequent, resulting in ever increasing volumes of stormwater flowing into conventional drainage systems and water courses. When the capacities of these systems are exceeded the consequences can be dramatic and damaging.

Stormwater must be controlled; either by limiting the outflow and providing temporary storage or where the ground conditions are suitable, providing soakaways for the stormwater to infiltrate back into the surrounding ground. This has the added benefit of recharging the local groundwater.

Both options can be achieved using the Wavin AquaCell Stormwater Management System.



Large scale AquaCell storage tank



Domestic AquaCell soakaway

AquaCell System Overview

AquaCell System

The Wavin AquaCell unit is modular in shape (1.0m x 0.5m x 0.4m), has a capacity of 190 litres and weighs 9Kg. It is 95% void and has a surface area that is 43% perforated. Conical columns within the unit ensure high strength and rigidity. The AquaCell units are clipped together in single layers and pegged together in multiple layers. Conventional pipework is connected to the units by means of a number of adaptors.

Control Manhole

This manhole is designed to limit the downstream discharge using an outflow control and if necessary redirect the excess stormwater via an overflow control into the AquaCell units.

Geomembrane/Geotextile Wrap

An impermeable geomembrane wrap is required for storage solutions and a permeable geotextile wrap is required for soakaway solutions.

Manifold Configuration

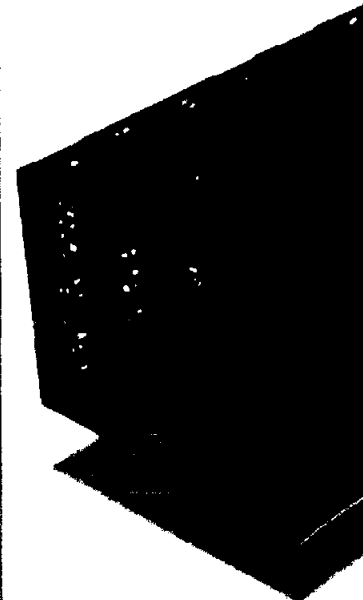
A junctioned pipework assembly providing a controlled multiple feed of stormwater into the AquaCell Units. The configuration is tailored to suit the capacity required upon entry into the AquaCell Unit assembly and upon discharging to the control manhole.

HOW IT WORKS

Stormwater exceeding the capacity of the conventional drainage system is attenuated by the control manhole and channelled into the AquaCell unit assembly. The internal structure of each unit is designed to bring surging water under control and hold it in temporary storage. If the wrap that envelopes the unit assembly is impermeable the water will remain in the unit assembly until such a time as it can flow back into the control chamber and discharge through the outflow control. However if the wrap is permeable, the temporarily stored water may be released into the surrounding ground; soil conditions permitting. By controlling the stormwater at source and recharging the local groundwater it not only eases the pressure on conventional drainage systems but benefits the local environment as well.

KEY BENEFITS

- Significantly reduced risk of flooding and its consequences.
- Controlled and reduced volume discharge into existing main sewer systems and water courses.
- Aerobic purification stimulated within the system improves water quality.
- Sustainable, cost effective management of the water environment.
- Recharging the local groundwater.



AquaCell Principal Components

AquaCell Unit 6LB100
160mm diameter pre-formed socket

0.4m
1m
0.5m

6UR141 UltraRib S/S Adaptor
(fits into pre-formed socket to connect to 150mm UltraRib)

6TW141 TwinWall S/S Adaptor
(fits into pre-formed socket to connect to 150mm TwinWall)

6D099 160mm x 110mm OsmaDrain S/S Reducer
(fits into pre-formed socket to connect to 110mm OsmaDrain)

6LB102 Shear Connector
(used to hold units together vertically)

6LB105 Clip
(used to hold units together horizontally)

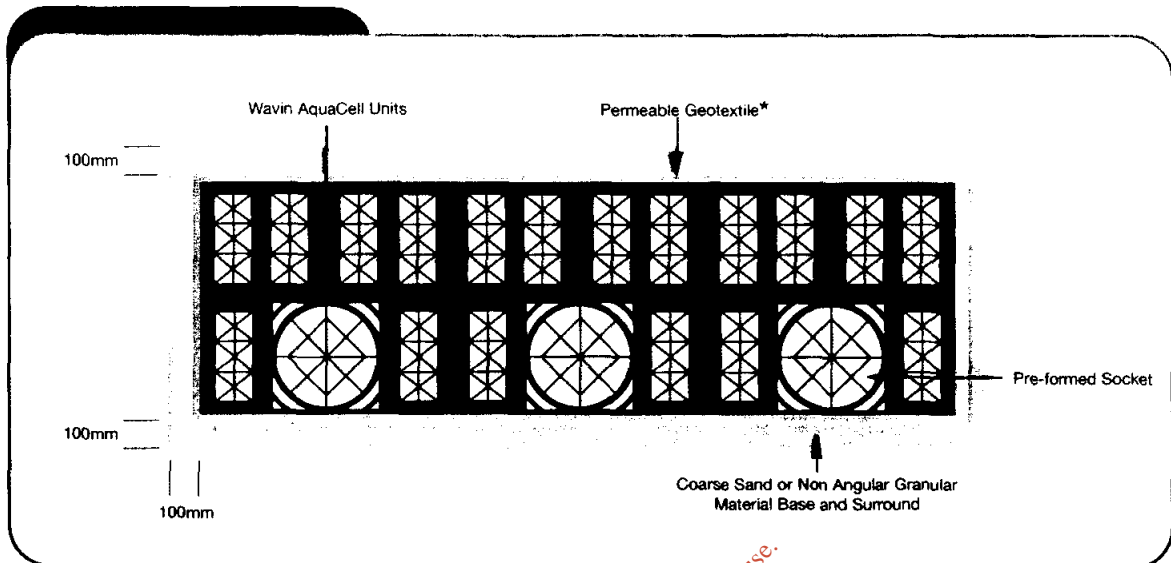
4D916 160mm OsmaDrain P/E Adaptor
(fits into pre-formed socket as an extension connection piece)

6LB104 Flange Adaptor
(Adaptor to be used at points other than pre-formed socket to connect to 150mm UltraRib)

Silt Trap 6LB600
(Extension Kit also available if required, see page 20 for details)

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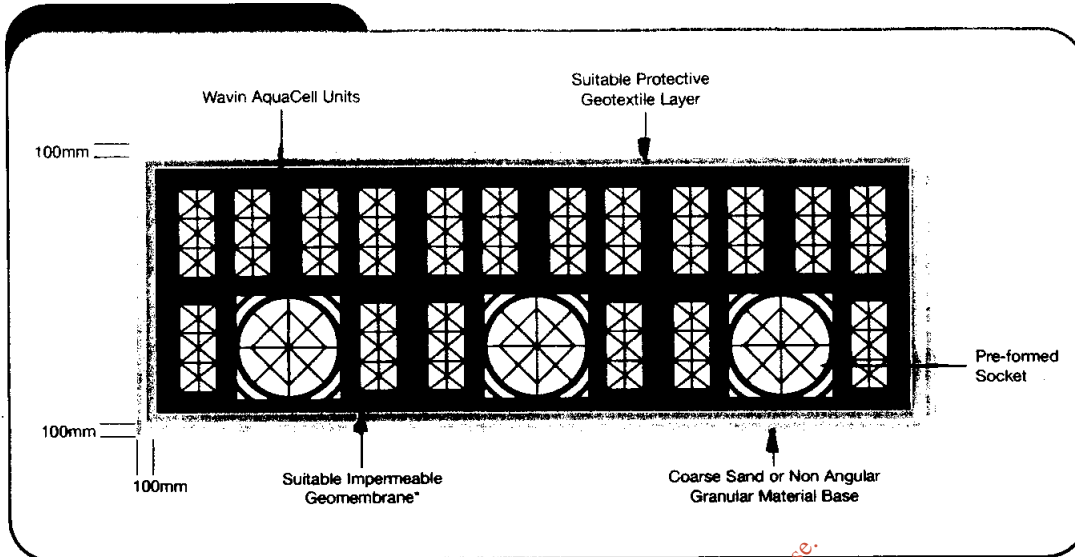
Typical Soakaway Installation Method



1. Excavate the trench to the required depth ensuring that the plan area is slightly greater than that of the AquaCell Units.
2. Lay 100mm bed of coarse sand or non angular granular material, level and compact.
3. Lay the geotextile* over the base and up the sides of the trench.
4. Lay the AquaCell Units parallel with each other. In multiple layer applications, wherever possible, continuous vertical joints should be avoided. AquaCell units can be laid in a 'brick bonded' formation (i.e. to overlap the joints below). For single layer applications use the Wavin Clips and for multi layers use the Wavin Clips and the Wavin Shear Connectors.
5. Fix the Wavin Adaptors to the AquaCell Units as required and connect pipework.
6. In order to prevent silt from entering the tank, clogging inlet pipework and reducing storage capacity, it is recommended that the Wavin Silt Trap (6LB600) is installed prior to the inlet pipework - see page 8 for installation guidelines.
7. Wrap and overlap the geotextile covering the entire AquaCell structure.
8. Lay 100mm of coarse sand or non angular granular material between the trench walls and the AquaCell structure and compact.
9. Lay 100mm of coarse sand or non angular granular material over the geotextile and compact. Backfill with stone free as-dug material.
10. Rainwater from roof areas may discharge directly into the soakaway but rainwater from carparks must discharge through a catchpit manhole or a petrol interceptor.

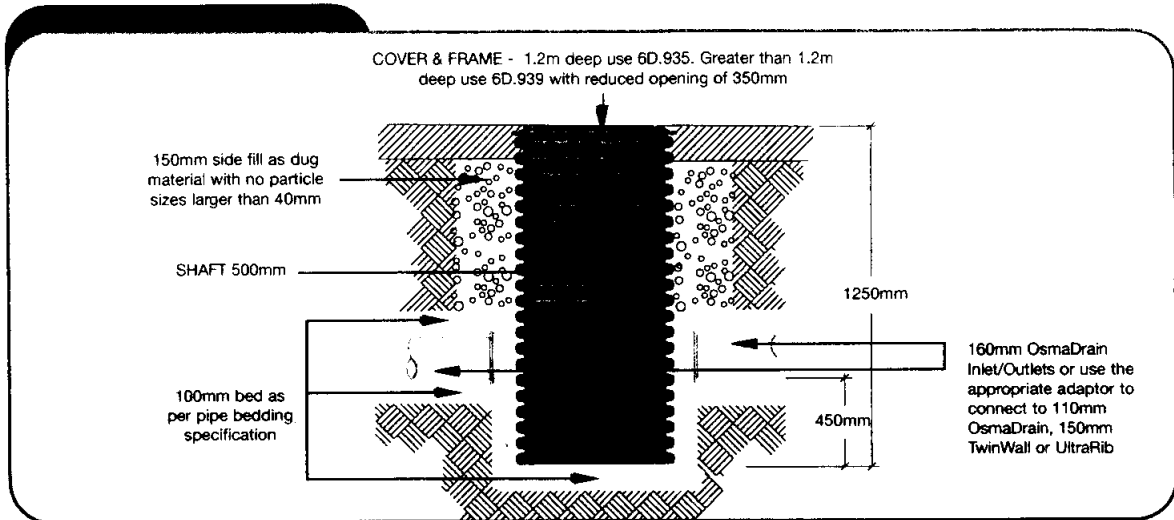
* The geotextile should be selected according to specific site conditions, however, typically a 300g material will be suitable. Specialist advice should be sought if surrounding soil characteristics exhibit a high degree of fines/low infiltration capacity and/or there is a high risk of damage from ground contaminants.

Typical Storage Tank Installation Method



1. Excavate the trench to the required depth ensuring that the plan area is slightly greater than that of the AquaCell units.
 2. Lay 100mm bed of coarse sand, level and compact.
 3. Lay the geotextile over the base and up the sides of the trench.
 4. Lay the geomembrane on top of the geotextile over the base and up the sides of the trench.
 5. Lay the AquaCell units parallel with each other. In multiple layer applications, wherever possible, continuous vertical joints should be avoided. AquaCell units can be laid in a 'brick bonded' formation (i.e. to overlap the joints below). For single layer applications use the Wavin Clips and for multi layers use the Wavin Clips and the Wavin Shear Connectors (vertical rods).
 6. Wrap the geomembrane around the AquaCell structure and seal to manufacturers recommendations.*
 7. Place the Wavin Flange Adaptor into position (at a point other than the pre-formed socket) and fix using self tapping screws. Drill a hole through the Flange Adaptor and connect pipework.
 8. In order to prevent silt from entering the tank, clogging inlet pipework and reducing storage capacity, it is recommended that the Wavin Silt Trap (6LB600) is installed prior to the inlet pipework - see page 8 for installation guidelines.
 9. Wrap and overlap the geotextile covering the entire AquaCell structure, to protect the geomembrane.
 10. Lay 100mm of coarse sand between the trench walls and the Wavin AquaCell units and compact.
 11. Lay 100mm bed of coarse sand over the geotextile and compact. Backfill with stone free as-dug material.
- NB: A storage tank must be vented, and it is recommended that one vent pipe, 110mm in diameter is provided per 7,500 square metres of impermeable catchment area on a site, see page 8 for design.
- * For large scale, deep installations a 1mm thick geomembrane is recommended and joints should be sealed using proprietary welding techniques. However, for shallow, domestic installations it may be suitable to use a geomembrane with taped joints. For further details contact Wavin Technical Services.

Typical Silt Trap Installation Method



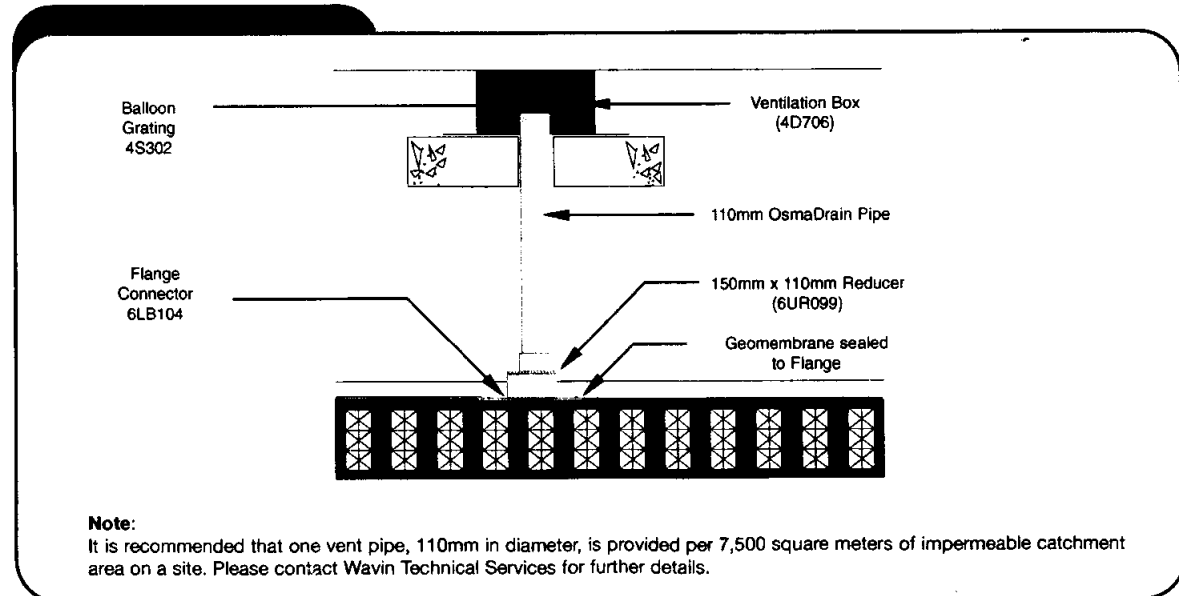
1. Place the Silt Trap (6LB600) on a minimum of 100mm bed as per pipe bedding specification. Ensure that the unit is as close to AquaCell tank as possible and in a suitable position to allow pipework connection.
2. Connect the relevant pipework in accordance with standard pipe installation guidelines.
3. Surround the sides of the Silt Trap with 150mm of 'as dug' material, with no particle sizes larger than 40mm.
4. Fit relevant cover and frame according to the depth of unit:
Up to and including 1.2m deep = 6D935
Deeper than 1.2m = 6D939.

Notes:

When surrounded by a concrete plinth (150mm x 150mm) the cover can be used in situations with a loading of up to 30Kn (3 tonnes) i.e domestic driveways.

The silt trap can be extended (if required) using the 500mm Extension Kit (see details on page 20) in conjunction with a 500mm shaft of TwinWall cut to suit.

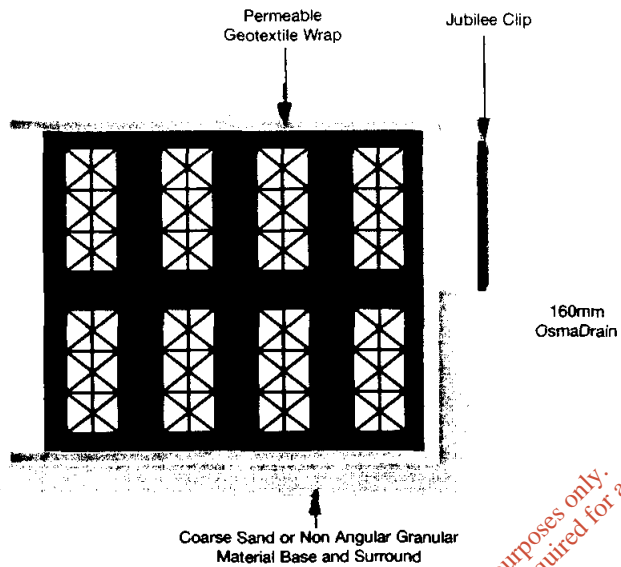
Typical Air Vent Design



Typical Connections to AquaCell

Note: It is recommended that all connections and air vent installations in storage applications (using geomembrane) are made using a Flange Adaptor. Adhesive or double sided tape should be used between the geomembrane and the flange plate to ensure a watertight seal.

Connection for soakaway application using either the pre-formed socket (as shown below) or standard adaptors into pre-formed socket*

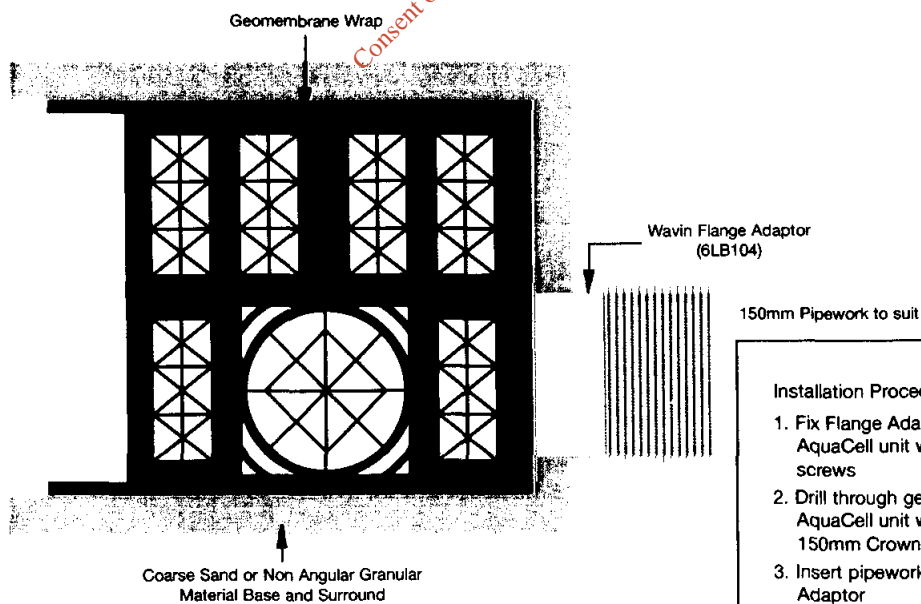


***Note:**

For pipework other than 160mm OsmaDrain, these adaptors can be used to connect to the following:

- 6TW141: TwinWall S/S Adaptor connects to 150mm TwinWall
- 6D099: 110mm OsmaDrain Adaptor connects to 110mm OsmaDrain
- 4D916: 160mm OsmaDrain PE Adaptor connects to 160mm OsmaDrain
- 6UR141: UltraRib S/S Adaptor connects to 150mm UltraRib

Connection for storage application using flange adaptor at points other than pre-formed socket

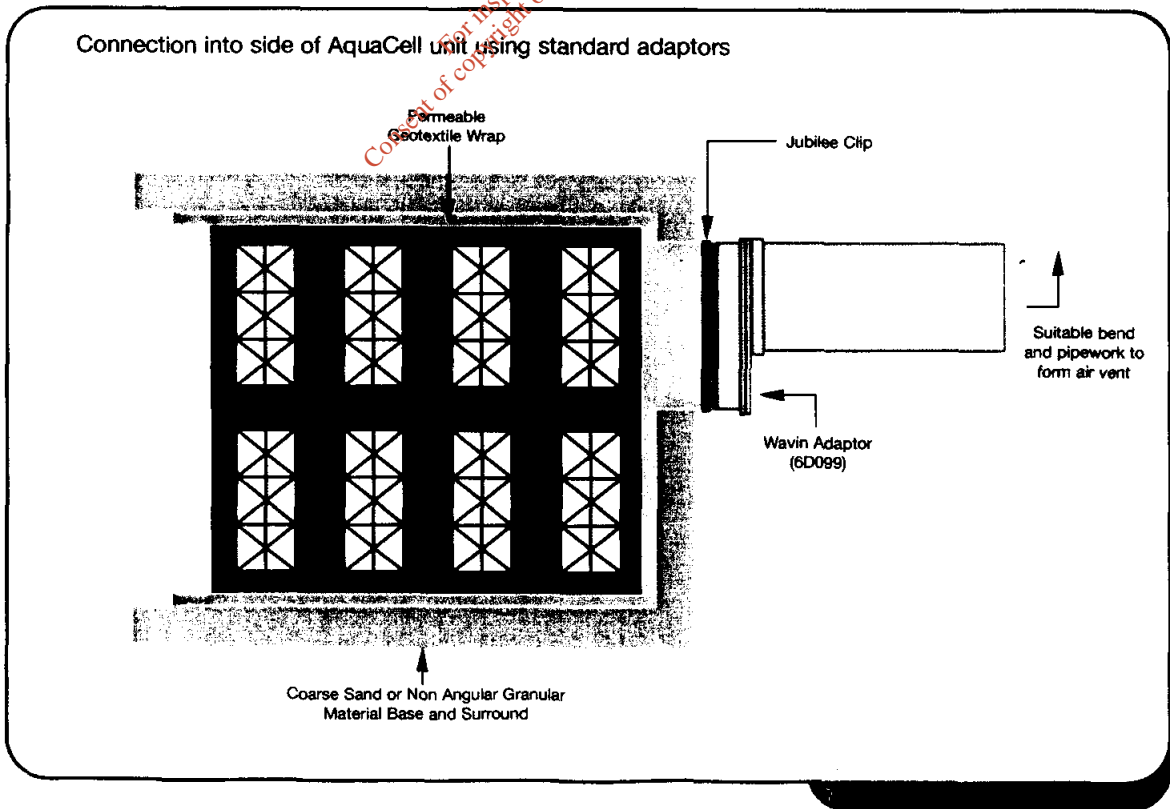
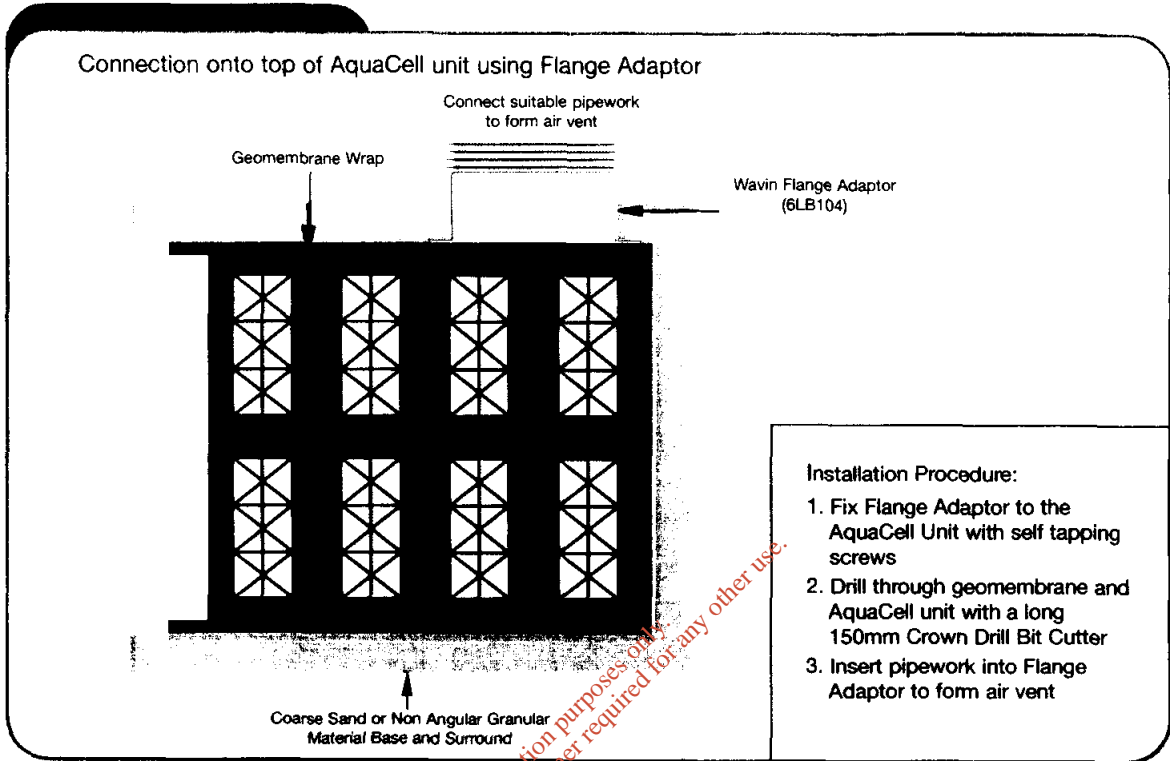


Installation Procedure:

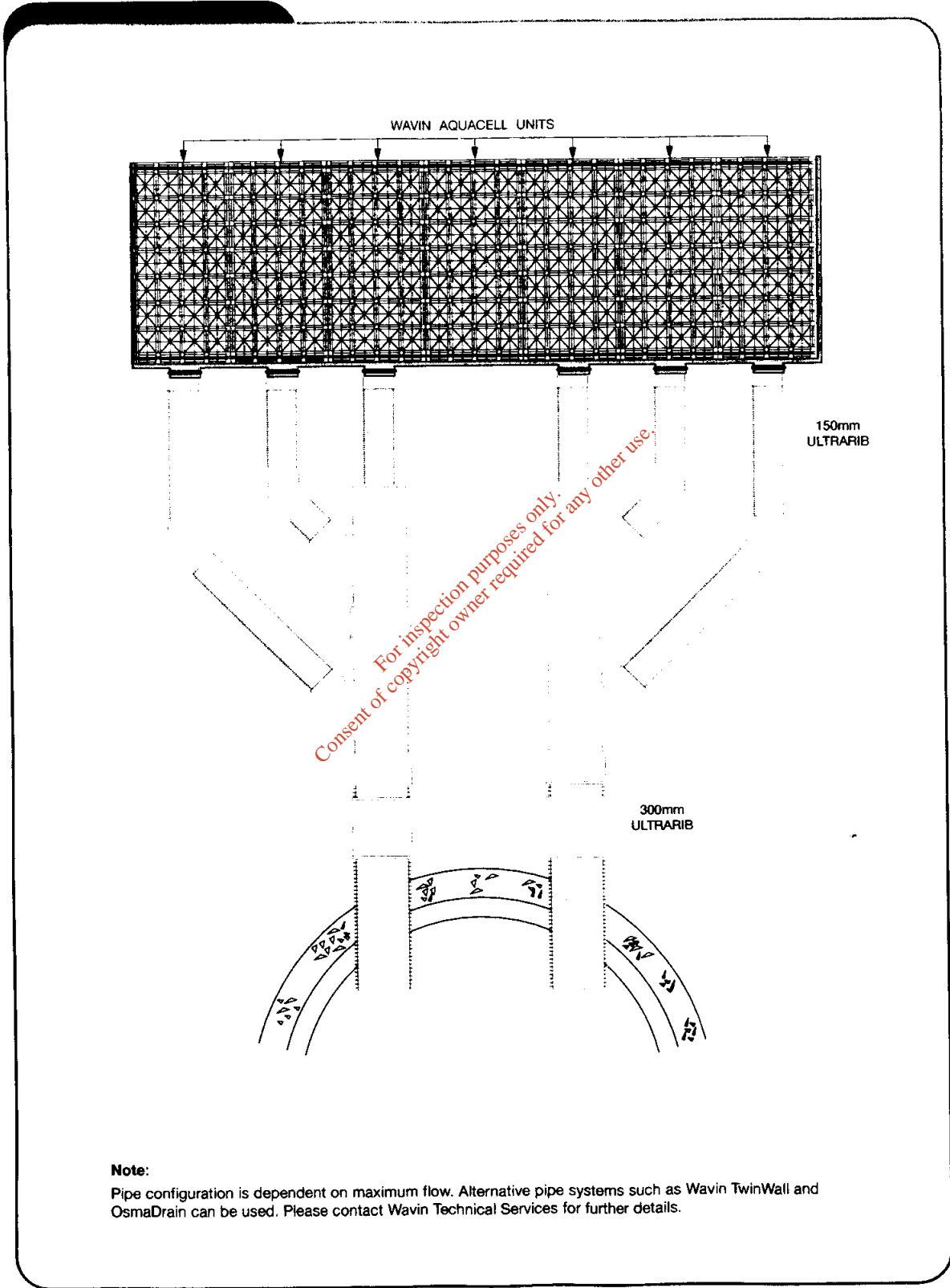
1. Fix Flange Adaptor to the AquaCell unit with self tapping screws
2. Drill through geomembrane and AquaCell unit with a long 150mm Crown Drill Bit Cutter
3. Insert pipework into Flange Adaptor

Typical Air Vent Connections

Note: It is recommended that all connections and air vent installations in storage applications (using geomembrane) are made using a Flange Adaptor. Adhesive or double sided tape should be used between the geomembrane and the flange plate to ensure a watertight seal.



Typical Manifold Configuration



Note:

Pipe configuration is dependent on maximum flow. Alternative pipe systems such as Wavin TwinWall and OsmaDrain can be used. Please contact Wavin Technical Services for further details.