

2 Clogheen Business Park, Blarney Road, Cork, Ireland.

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CONSULTING ENGINEERS

SERVICES REPORT

Including: Proposed Surface Water Discharge Proposed Foul Water Discharge Proposed Water Supply Preliminary Flood Study

Project Reference: Proposed Infill Housing Development At Dr. Patrick O'Sullivan Terrace, Aghada

Client: Cork County Council

Project No.: 600-868

Design By: B.A. & T.A.

Date: Feb. '25 Rev: 0



2 Clogheen Business Park, Blarney Road, Cork,	Project				Job Ref.	
Ireland. I: +353 (0)21 4399799	Proposed Hou	sing at Dr. Patri	600868			
F: +353 (0)21 4399797 E: admin@rka.le	Section	Sheet no./rev				
		Introd	luction			
CONSULTING ENGINEERS	Calc. By	Date	Chck'd by	Date	App'd by	Date
CIVIL STRUCTURAL PROJECT MANAGEMENT	ТА	Feb. '25	BA	Feb. '25		

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SUDS Assessment/Drainage Impact Assessment

The site has been assessed for suitability for applying for SuDS (Sustainable Drainage Systems) measures for the development. The principal outcome of the study found that infiltration measures are suitable for the site.

SuDS measures have been considered as per the table below: -

Measure Considered	Assessment	Adopt
Rainwater Harvesting	Rainwater butts to be installed in the downpipes of the houses	Ν
Green Roof	Due to the nature of the site a green roof would not be practical	Ν
Infiltration Systems	Soakaway proposed at approximately 1.2m depth	Y
Proprietary Treatment Systems	Not suitable due to Site type and scale	N
Filter Strips	Not suitable due to Site type and scale	N
Filter Drains	Not suitable due to Site type and scale	Ν
Swales	Not suitable due to Site type and scale	Ν
Bio- Retention Systems	Not suitable due to Site type and scale	N
Trees	Not extensive due to Site type and scale, some planting will be done on site	Y
Attenuation Storage Tanks	NA- it is not proposed to connect to a storm drain, therefore an attenuated flow is not required	N
Detention Basin	Not suitable due to site type and scale	Ν
Ponds & Wetlands	Not suitable due to site type and scale	N
Pervious Pavements	Not suitable due to scale of the site and the maintenance required	N

The surface water on the site will discharge to a soakaway via an oil interceptor. The soakaway will have a storage volume suitable for the infiltration test results.



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WM11-10 & Paragraph 11.10.4 of Dev't Plan 2022

The following table is to be attached to a Drainage Impact Assessment for small scale development- less than 10 houses.

TABLE 3 CORK COUNTY COUNCIL SUDS SELECTION HIERARCHY SHEET FOR SMALL-SCALE DEVELOPMENT

SuDS Measures	Measures to be used on site	Rational for selecting / not selecting measure including discharge rate applied with supporting calculations
Water butt – 150L capacity or more (based water use demand) with means of overflow	NO	Not suitable for type and scale of development
Permeable paving – consider for all hard-paved areas without heavy traffic	NO	Not suitable for maintenance reasons
Bio-retention planter – disconnect downpipe connection into drains and allow roof runoff into planter with means of overflow	NO	Not suitable for type and scale of development
Green / Blue Roof – requires a minimum substrate depth (growth medium) of at least 80 mm excluding the vegetative map	NO	Not suitable for type and scale of development
Rain garden - disconnect downpipe/RWP into the planted flower bed	NO	Water butt preferred
Soakaway	YES	Ground conditions are suitable for a soakaway on site
Other	Footpaths	Paths around houses will be sloped to drain to green areas

Cork County Council requires a softer engineered or 'nature-based approach' to be used to manage rainfall runoff on the site i.e., to manage and treat surface water above-ground rather than sending rainfall below-ground into drains, pipes, attenuation tanks and other 'hard engineering' solutions. The aim is to maximise the retention and/or infiltration of storm water runoff onsite, minimise discharges to the public drainage system and to limit the discharge rates from the site to greenfield runoff rate or less.

The surface water from roofs will be stored in water butts with overflows. The surface water generated on this development will all be discharged on site, there will be no attenuation tank or discharge to public drainage system. The site has been assessed and is suitable for a soakaway.



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Surface water runoff

Exercise in looking at surface water drainage "effective area" runoff for the site.

Areas to be included in the "effective area" are surface areas of roofs, paths, roads, parking bays, lawns, gardens & green surfaces.

An impermeability factor of 1.0 is used for roofs, 0.9 is used for footpaths and hard standing areas, a factor of 0.2 is used for green areas and open green areas.

245sqm of roofs x 1.0= 245sqm 1550sqm of footpaths and roads x 0.9= 1395sqm 450sqm of green area contributing x 0.2= 90sqm

Overall Effective Runoff = Total Impermeable area = Ap = 1730 m2

Proposed to use Infiltration Pluvial Cube system which consists of modular polypropylene units, low flow maintenance and self-cleaning channels.

Note prior to discharge to the soakaway, the rainwater runoff from the proposed overall development is proposed to go through a hydrocarbon interceptor & silt trap.

Sewers carrying domestic surface water from this proposed housing developments shall have a sewer minimum sewer size of 150mm and the gradients are to achieve self cleansing velocities.

The soakaway design in accordance with BRE365 is as follows: -

Infiltration testing in accordance with BRE365 was carried out by IGSL Geotechnical Ltd. The results of the testing were variable. It is recommended to install a soakaway to approximately 1.2m depth on the western side of the site. The proposed soakaway is designed for a 10yr storm with 10% allowance for climate change. The proposed plan area of the soakaway is 12m x 6m and minimum required depth of the soakaway is 670mm, therefore a 1200mm deep system is selected.

The soil infiltration rate is taken from the site testing in accordance with BRE365 undertaken by IGSL Geotechnical Ltd.

SOAKAWAY DESIGN

In accordance with CIRIA C753 SUDS

Design rainfall intensity

Location of catchment area; Other Impermeable area drained to the system;



Tedds calculation version 2.0.05

A = 1730.0 m²

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RAY KEANE &	& ASSOCIATES		Surfac	e Water Dis	sposal			
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Return peri	od;		Perio	od = 10 yr				
Ratio 60 mi	in to 2 day rain	fall of 5 yr re	turn period;			r = 0.360		
5-year retur	rn period rainfa	ll of 60 minu	tes duration;			M5_60min	= 17.7 mm	า
Increase of	rainfall intensit	ty due to glol	bal warming;			p _{climate} = 10	%	
Soakaway	/ infiltration tr	ench details	S					
Soakaway	type;		Rect	angular				
Width of pit	•		w = 0	6 000 mm				
Length of p	it;		=12	. 000 mm				
Percentage	free volume;		Vfree	= 95 %				
Soil infiltrati	ion rate;		f = 1	1.2 □ 10 ⁻⁶ m/s				
Base area;			$A_b =$	w □ = 7200	0000 mm²			
Perimeter;			P = 2	$2 \Box (w + I) = 3$	6000 mm			
Coefficient	b;		b = F	P □ f / (A _b □ V	/ _{free}) = 0.02 hr	-1		
Table equa	ations (Eq. 25.	4)						
Rainfall inte	ensity;		i = N	10 / D				
Coefficient	a;		a = A	A₀ / P - (A 🗆 i .	/ (P □ f))			
Minimum de	epth required;		H = a	a □ (e ^(-bD) - 1)				
Duration , D (min)	Growth factor Z1	M5 rainfalls (mm)	Growth factor Z2	10 year rainfall, M10 (mm)	Intensity , i (mm/hr)	a (mm)	Mir dept req (mm	h h
5;	0.36;	7.0;	1.18;	8.3;	99.09;	-116095;	205	;

				()			()
5;	0.36;	7.0;	1.18;	8.3;	99.09;	-116095;	205
10;	0.51;	9.9;	1.19;	11.8;	70.88;	-82480;	291
15;	0.62;	12.1;	1.19;	14.4;	57.66;	-66722;	353
30;	0.79;	15.4;	1.20;	18.4;	36.89;	-41969;	443
60;	1.00;	19.5;	1.19;	23.2;	23.19;	-25639;	538
120;	1.22;	23.8;	1.18;	28.1;	14.04;	-14739;	612
240;	1.48;	28.8;	1.18;	34.0;	8.50;	-8131;	662
360;	1.67;	32.5;	1.18;	38.3;	6.38;	-5605;	670
600;	1.90;	37.0;	1.17;	43.4;	4.34;	-3172;	606
1440;	2.42;	47.1;	1.16;	54.8;	2.28;	-721;	288
Minimum d	epth of soaka	wav:	Hmax	= 670 mm			

Minimum depth of soakaway;

$H_{max} = 6/0 \text{ mm}$

 $\label{eq:time_to_empty} Time \ to \ empty \ soakaway \ to \ half \ vol. \ - \ Eq. 24.6(2); \qquad t_{s50} = V_{free} \ \Box \ A_b \ / \ (f \ \Box \ P) \ \Box \ Ln((H_{max} + A_b \ / \ P) \ / \ (H_{max} \ / \ 2 \ + C_{max} \ / \ 2 \ + C_{max} \ / \ 2 \ + C_{max} \ / \ C_{max} \ /$

 $A_b / P)) = 6hr 19min 7s$

PASS - Soakaway discharge time less than or equal to 24 hours



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Design of collection system

The proposed surface water drainage proposal includes a gravity surface water collection system which incorporates an underground drainage pipe network.

All proposed drainage works is designed to comply with and be carried out in accordance with the current edition of the *Recommendations for site development works for Housing Areas* published by the *Department of Environment and Local Government.* Drainage works also shall comply with Irish Water/Local Authority requirements.



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IRISH AGRÉMENT BOARD CERTIFICATE NO. 18/0401 Alderburgh Ltd, Solution House, Dane Street Rochdale, OL11 4EZ Tel: +44(0)1706 374416 Fax: 01706376785 Email: Info@alderburgh.com

CI/SfB (29)

Pluvial Cube Attenuation and Infiltration Systems Stürmen Sie Wasser Leitung System

NSAI Agrément (Irish Agrément Board) is designated by Government to carry out European Technical Approvals.

NSAI Agrément Certificates establish proof that the certified products are 'proper materials' suitable for their intended use under Irish site conditions and in accordance with the Building Regulations 1997 to 2017.



PRODUCT DESCRIPTION:

This Certificate relates to the Pluvial Cube attenuation and infiltration system which comprises of modular polypropylene units which, in conjunction with a satisfactory civil engineering design, will act as either an attenuation or infiltration vessel as part of a sustainable drainage system.

The Pluvial Cube system consists of modular polypropylene units, low flow maintenance and self-cleaning channels.

USE:

The product is used as a subsurface stormwater management system, used for sub-surface water storage or as a soakaway to manage rain water run-off from impermeable surfaces. Subject to site conditions and restraints, the Pluvial Cube system modules can be built up to create the volumetric capacity required for

- Attenuation system
 Infiltration system.
- Or a combined attenuation/infiltration system.

MANUFACTURE AND MARKETING:

The product is manufactured and marketed by:

Alderburgh Ltd. Solution House, Dane Street, Rochdale, OL11 4EZ. Tel: +44(0)1706 374416 Fax: 01706376785 Email:info@alderburgh.com

Readers are advised to check that this Certificate has not been withdrawn or superseded by a later issue by contacting NSAI Agrément, NSAI, Santry, Dublin 9 or online at http://www.nsai.ie



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Part One / Certification



1.1 ASSESSMENT

In the opinion of NSAI Agrément, the Pluvial Cube system, if used in accordance with this Certificate, meets the requirements of the Building Regulations 1997 - 2017 as indicated in Section 1.2 of this Certificate.

1.2 BUILDING REGULATIONS 1997 to 2017

REQUIREMENT:

Part A - Structure

A1 - The Pluvial Cube system, as certified in this Certificate, can be designed to ensure that the combined dead and imposed loads are sustained and transmitted to the ground in compliance with CIRIA C737 Structural and geotechnical design of modular geocellular drainage systems.

Part D - Materials & Workmanship

D3 - The Pluvial Cube system, as certified in this Certificate, is comprised of proper materials fit for their intended use (See Part 4 of this Certificate).

 ${\rm D1}$ – The Pluvial Cube system, as certified in this Certificate, meets the requirements of the building regulations for workmanship.

Part H - Drainage and waste water disposal. H1 - The Pluvial Cube system, as certified in this Certificate, meets the requirements of the building regulations for the adequate disposal of surface water from the building.





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Proposed Foul Wastewater discharge

The new site proposal includes 4 dwellings. Site utility survey shows there is a foul rising main passing in front of the houses, this main discharges to manholes approximately 70m to the south of the site. It is proposed to build a new sewer for approximately 93m through the existing road.

Sewers carrying domestic wastewater from this proposed housing development should be designed to carry a minimum wastewater volume of six times dry weather flows (6DWF).

Dry weather flows (DWF) is taken as 900 litres per dwelling (four persons per house and a per capita wastewater flow of 225 litres per head per day).

Total Dry weather flow (DWF) = $4 \times 900/24/60/60 = 0.0416$ l/s

Foul Pipe Network is designed to carry a minimum wastewater volume of six times dry weather flows (6DWF).

6 DWF = 6 x 0.0416 = 0.25 l/s

Typical Organic Loading :

TABLE 1: INFLOW WASTEWATER
CHARACTERISTICS* FROM EPA STUDY
(DOMESTIC SOURCES)

Parameter	Mean	Standard Deviation
SS	163	136
BOD ₅	168	127
COD	389	310
O-PO4	7.1	4.2
Total-N	40.6	19.0
NH-N	31.5	15.6
NO ₂ -N	0.25	0.41
NO ₂ -N	0.04	0.06
pН	7.5	0.5
Total-coli	1 x 10 ⁸	2 x 10 ⁸
E-coli	4 x 107	5 x 107

* all results in mg/l, except bacterial counts which are expressed in colony forming units, CFU per 100 ml

UNDAR WASTE WATER					
Parameter	Concentration mg/l				
BOD	100 - 300				
COD	250 - 800				
Suspended solids	100 - 350				
Total nitrogen (as N)	20 - 85				
Ammonia (NH ₃ as N)	10 - 30				
Organic phosphorus (as P)	1 - 2				
Inorganic phosphorus (as P)	3 - 10				
Oils, fats and grease	50 - 100				
Total inorganic constituents (Na, Cl, Mg, S, Ca, K, Si, Fe)	100				
Heavy metals (Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn)	<1mg/l each				



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Proposed Water Supply.

The new site proposal includes 4 dwellings. It is proposed to connect to existing watermains in Dr. Patrick O'Sullivan Terrace, the public road on the eastern side of the site.

Please refer to proposed watermain layout.

The water demand includes: Average domestic daily demand in the development is established based on daily per-capita consumption, house occupancy, number of properties. For design purposes the average daily domestic demand is be based on a per-capita consumption of 225 l/person/day and an average occupancy ratio of 4 persons per dwelling.

4 dwellings :4x225x4

Total average daily demand = 3,600 litres

The average day/peak week demand should be taken a 1.25 times the average daily domestic demand. Total average day/peak demand = $3,600 \times 1.25 = 4,500$ litres

The peak demand for sizing of the pipe network will normally be 2.1 times

the average day, peak week demand. Total average day/peak demand = $4,500 \times 2.1 = 9,450$ l/day or 0.11 l/sec



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Preliminary Flood Risk Assessment

The site is not at risk from flooding.

The proposed development is approximately 750m from the sea and the site elevation is approximately 63m OD, hence tidal flooding is not a risk at this site.

Fluvial flooding is not a risk at the site, as there is no river in close proximity to the site, the potential to fluvial flooding is negligible.







NOTES:

All Works & Fittings To Be Carried Out In Accordance With Uisce Eireann Standards.

All Works Outside Site Boundary In Public Area To Be Carried Out By Uisce Eireann.

All Works Within Site Boundary To Be Carried Out By Main Contractor.

New Foul Sewer To Be Encased In 150mm Concrete, Until Cover Is 1200mm.

Allow For Crossing Existing Foul & Storm Sewer Connections.

Allow For Crossing Existing Utility Services.



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NOTES:

All Works Outside Site Boundary In Public Area To Be Carried Out By Main Contractor.

All Works Within Site Boundary To Be Carried Out By Main Contractor.

New Storm Sewer To Be Encased In 150mm Concrete, Until Cover Is 1200mm.

Allow For Crossing Existing Foul & Storm Sewer Connections.

Allow For Crossing Existing Utility Services.

NOTE 'A' - The Bypass Seperator Chosen Is To Be In Accordance With ISEN 858-1 & It's Design Is To Include The Necessary Volume Requirements For:

-Oil Seperation Capacity -Silt Storage Capacity -Oil Storage Volume -Coalescer

The Bypass Seperator Chosen, Which Is To Be Agreed With The Clients Representative, Is To Be Of Roto-Moulded Chamber Construction & Is To Cater For An Impermeable Area Up To 2,700 sq.m².





LEGEND:

_____ | ___ | ____

Proposed 100mmØ HDPE Watermain (Self Lay)

25mm Connection Feed & Boundary Watermeter Box

NOTES:

All Works & Fittings To Be Carried Out In Accordance With Uisce Eireann Standards.

All Works Outside Site Boundary In Public Area To Be Carried Out By Uisce Eireann.

All Works Within Site Boundary To Be Carried Out By Main Contractor.



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	Original Drawing Size A1
	Notes
1. DO NO 2. THIS [RELEV/	T SCALE DRAWING. USE FIGURED DIMENSIONS ONLY. DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER ANT ARCHITECTURAL, MECHANICAL/ELECTRICAL AND
3. FOR A 4. ALL W PARTS GUIDAN USING	ERING DRAWINGS. LL SETTING OUT, REFER TO ARCHITECTS DETAILS. /ORKS CARRIED OUT MUST COMPLY WITH THE RELEVANT OF THE CURRENT BUILDING REGULATIONS AND TECHNICAL ICEDOCUMENTS, ENSURING THE WORKS ARE CARRIED OUT 'PROPER MATERIALS WHICH ARE FIT FOR USE FOR WHICH
5. ALL M THE E	ARE INTENDED AND FOR THE CONDITIONS IN WHICH ARE USED'. ATERIALS USED SHALL BE 'CE' MARKED IN ACCORDANCE WITH J CONSTRUCTION PRODUCT REGULATIONS (CPR) (No.305/2011). TO ANNEX IV OF THE REGULATIONS FOR THE LIST OF
APPLIC 6. THIS E RKA G 7. ENGINE	ABLE PRODUCTS. DRAWING TO BE READ IN CONJUNCTION WITH ENERAL CIVIL & STRUCTURAL SPECIFICATION. ER TO BE INFORMED OF ANY DISCREPANCIES IMMEDIATELY.
8. POSITIO INDICA ESTABI HAND	ONS OF EXISTING MAIN SHOWN ON THIS DRAWING ARE TIVE ONLY. ACTUAL POSITIONS OF PIPEWORK MUST BE LISHED ON SITE BY THE CONTRACTOR BY DUG TRIAL HOLES.
9. RKA C FOR T DRAWII ARE N	ONSULTING ENGINEERS WILL NOT ACCEPT ANY RESPONSIBILITY HE POSITIONAL ACCURACY OF THE PLANT SHOWN ON THIS NG NOR ANY OMMISSION FROM SAME OF SERVICE PIPES WHICH OT SHOWN ON THE PLAN.
10. CONTRA REQUIR EXISTIN 11. CONTR	ACTOR TO ALLOW FOR LOCATING ALL EXISTING MAINS AS ED TO ACCOMMODATE DIVERSION AND/OR REPLACEMENT OF NG SERVICES AS SHOWN ON THIS DRAWING. RACTOR TO ENSURE THAT WATER SUPPLIES ARE MAINTAINED
12. CONTRA SERVIC 13. CONTRA PIPEWO	ACTOR TO ALLOW FOR HAND DIGGING TO LOCATE EXISTING ES AS REQUIRED. ACTOR TO KEEP FULL RECORDS OF POSITIONS OF ALL DRK AND CONNECTIONS AND ON COMPLETION, FULL AS-BUILT
DRAWII 14. LOCATI ALL W EMPLO	NGS TO BE PRODUCED BY THE CONTRACTOR. ON OF PROPOSED PIPEWORK ARE INDICATIVE ONLY. 'ORKS TO BE AGREED WITH UISCE EIREANN AND YERS REPRESENTATIVE.
15. DETAILS TO TH UISCE 16. ALL RO	S OF THE TREATMENT OF ALL EXISTING WATER SERVICES E SITE SHALL BE AGREED WITH EIREANN/ CORK COUNTY COUNCIL WATER DEPT. DAD AND FOOTWAY FITTING COVERS, SHALL BE MARKED TO
17. ALL W PLEASE SERVIC DOCUM	ATERMAINS TO BE LAID TO CURRENT IRISH WATE STANDARDS. E REFER TO UISCE EIREANN CONNECTION AND DEVELOPER ES WATER INFRASTRUCTURE STANDARD DETAILS ENT NUMBER IW-CDS-5020-01 & CODE OF PRACTICE FOR
WATER 18. WORKS FOR SI AND IN	NFRASTRUCTURE DOCUMENT NUMBER IW-CD5-5020-03. TO BE CARRIED OUT IN ACCORDANCE WITH RECOMMENDATIONS TE DEVELOPMENT WORKS FOR HOUSING AREAS NOVEMBER 1998 ACCORDANCE WITH LATEST UISCE EIREANN SPECIFICATIONS
AND S 19. SETTINI 20. SPOT 21. DIMENS	PELIFICATIONS OF ALL UTILITY PROVIDERS. 3 OUT TO BE THE RESPONSIBILITY OF THE CONTRACTOR. LEVELS RELATE TO UNITS IN METRES. IONS ARE IN MILLIMETRES.
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	 2 Clogheen Business Park, Blarney Road, Cork, Ireland. 1: +353 (0)21 4399799 5: +353 (0)21 4399797 6: admin@rka.ie W: www.rka.ie CONSULTING ENGINEERS CIVIL STRUCTURAL PROJECT MANAGEMENT
	Client: CORK COUNTY COUNCIL
	Project : Proposed Infill Housing Development at Dr. Patrick O'Sullivan Terrace, Aghada, Co. Cork.
	Drawing Title : Proposed Watermain Layout
	Designed:BADrawn:TADate:JAN. '25Eng Chk:BADwg. Chk:BAScale:1:200 @ A1Project. No:600868
	Drawing No: 503 Status: Rev: PL



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Notes

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 THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL, MECHANICAL/ELECTRICAL AND ENGINEERING DRAWINGS.
- FOR ALL SETTING OUT, REFER TO ARCHITECTS DETAILS.
 ALL WORKS CARRIED OUT MUST COMPLY WITH THE RELEVANT PARTS OF THE CURRENT BUILDING REGULATIONS AND TECHNICAL GUIDANCEDOCUMENTS, ENSURING THE WORKS ARE CARRIED OUT USING 'PROPER MATERIALS WHICH ARE FIT FOR USE FOR WHICH THEY ARE INTENDED AND FOR THE CONDITIONS IN WHICH THEY ARE USED'.
- ALL MATERIALS USED SHALL BE 'CE' MARKED IN ACCORDANCE WITH THE EU CONSTRUCTION PRODUCT REGULATIONS (CPR) (No.305/2011). REFER TO ANNEX IV OF THE REGULATIONS FOR THE LIST OF APPLICABLE PRODUCTS.
- 6. THIS DRAWING TO BE READ IN CONJUNCTION WITH
- RKA GENERAL CIVIL & STRUCTURAL SPECIFICATION.
 7. ENGINEER TO BE INFORMED OF ANY DISCREPANCIES IMMEDIATELY.
 8. POSITIONS OF EXISTING MAIN SHOWN ON THIS DRAWING ARE INDICATIVE ONLY. ACTUAL POSITIONS OF PIPEWORK MUST BE ESTABLISHED ON SITE BY THE CONTRACTOR BY
- HAND DUG TRIAL HOLES. 9. RKA CONSULTING ENGINEERS WILL NOT ACCEPT ANY RESPONSIBILITY FOR THE POSITIONAL ACCURACY OF THE PLANT SHOWN ON THIS DRAWING NOR ANY OMMISSION FROM SAME OF SERVICE PIPES WHICH
- ARE NOT SHOWN ON THE PLAN. 10. CONTRACTOR TO ALLOW FOR LOCATING ALL EXISTING MAINS AS REQUIRED TO ACCOMMODATE DIVERSION AND/OR REPLACEMENT OF
- EXISTING SERVICES AS SHOWN ON THIS DRAWING. 11. CONTRACTOR TO ENSURE THAT WATER SUPPLIES ARE MAINTAINED TO ALL EXISTING USERS AT ALL TIMES DURING THE CONTRACT.
- CONTRACTOR TO ALLOW FOR HAND DIGGING TO LOCATE EXISTING SERVICES AS REQUIRED.
 CONTRACTOR TO KEEP FULL RECORDS OF POSITIONS OF ALL
- PIPEWORK AND CONNECTIONS AND ON COMPLETION, FULL AS-BUILT DRAWINGS TO BE PRODUCED BY THE CONTRACTOR.
- 14. LOCATION OF PROPOSED PIPEWORK ARE INDICATIVE ONLY. ALL WORKS TO BE AGREED WITH UISCE EIREANN AND EMPLOYERS REPRESENTATIVE.
- 15. DETAILS OF THE TREATMENT OF ALL EXISTING WATER SERVICES TO THE SITE SHALL BE AGREED WITH UISCE EIREANN/ CORK COUNTY COUNCIL WATER DEPT.
- 16. ALL ROAD AND FOOTWAY FITTING COVERS, SHALL BE MARKED TO INDICATE WHAT IS UNDERNEATH.
- 17. ALL WATERMAINS TO BE LAID TO CURRENT IRISH WATE STANDARDS.
 PLEASE REFER TO UISCE EIREANN CONNECTION AND DEVELOPER SERVICES WATER INFRASTRUCTURE STANDARD DETAILS DOCUMENT NUMBER IW-CDS-5020-01 & CODE OF PRACTICE FOR
- WATER INFRASTRUCTURE DOCUMENT NUMBER IW-CD5-5020-03.
 18. WORKS TO BE CARRIED OUT IN ACCORDANCE WITH RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS FOR HOUSING AREAS NOVEMBER 1998 AND IN ACCORDANCE WITH LATEST UISCE EIREANN SPECIFICATIONS
- AND SPECIFICATIONS OF ALL UTILITY PROVIDERS. 19. SETTING OUT TO BE THE RESPONSIBILITY OF THE CONTRACTOR. 20. SPOT LEVELS RELATE TO UNITS IN METRES.
- 21. DIMENSIONS ARE IN MILLIMETRES.

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Drawing Title :								
Filtration Tank Section								
Designed: BA	Drawn:	TA	Date: JAN. '	25				
Eng Chk: BA	Dwg. Chk:	BA	Scale: 1:200	@ A1				
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