

Site Suitability Assessment Report for an On-Site Waste Water Treatment System

For: Donegal County Council

Proposal: Development of New Housing Development (Phase 2) at Mulroy View, Tamney, Co. Donegal - including the decommissioning of existing Wastewater Treatment System and the installation of new suitable Effluent Treatment System with associated facilities and site works.

Prepared by: Ciaran Moy

Date: April 2023

Proposed Wastewater Loading Calculations

Proposed Additional Development

Classification	No.	Persons Per Dwelling	Total Number of Persons	Hydraulic		Organic Loading		Hydraulic		Organic	
				Loading Rate l/dwt/person	Rate BOD5 g/day/person	Rate BOD5 g/day/person	Loading rate l/ day	Loading rate BOD5 g/day	Loading rate BOD5 g/day		
4 Bedroom	2		6	12	150	60	1800	720			
3 Bedroom	2		5	10	150	60	1500	600			
2 Bedroom	2		4	8	150	60	1200	480			
1 Bedroom	4		4	16	150	60	2400	960			
Subtotal			46				6900	2760			

Existing Mulroy View Housing Development

Classification	No.	Persons Per Dwelling	Total Number of Persons	Hydraulic		Organic Loading		Hydraulic		Organic	
				Loading Rate l/dwt/person	Rate BOD5 g/day/person	Rate BOD5 g/day/person	Loading rate l/ day	Loading rate BOD5 g/day	Loading rate BOD5 g/day		
3 Bedroom	5		5	25	150	60	3750	1500			
2 Bedroom	5		4	20	150	60	3000	1200			
Subtotal			45				6750	2700			
Total							13650	5460			

Based on the above - a max of 91PE has been established to serve both the existing & additional development being proposed

APPENDIX A: SITE CHARACTERISATION FORM

File Reference:

1.0 GENERAL DETAILS (From planning application)

Prefix: First Name: Surname:

Address: Site Location and Townland:

Number of Bedrooms: Maximum Number of Residents:

Comments on population equivalent

Proposed Water Supply:

Mains Private Well/Borehole Group Well/Borehole

2.0 GENERAL DETAILS (From planning application)

Soil Type, (Specify Type):

Subsoil, (Specify Type):

Bedrock Type:

Aquifer Category: Regionally Important Locally Important Poor

Vulnerability: Extreme High Moderate Low

Groundwater Body: Status:

Name of Public/Group Scheme Water Supply within 1 km:

Source Protection Area: ZOC SI SO Groundwater Protection Response:

Presence of Significant Sites (Archaeological, Natural & Historical):

Past experience in the area:

Comments:

(Integrate the information above in order to comment on: the potential suitability of the site, potential targets at risk, and/or any potential site restrictions).

The groundwater protection response R1 states that the location of a wastewater treatment system on this site is acceptable, subject to normal good practice (i.e. systems selection, construction, construction, operation and maintenance) in accordance with EPA CoP(2021). Given that the aquifer is locally important, there will be a possibility of an hydraulic issue on site and both groundwater and surface water are potential targets at risk and both will therefore have to be protected. Upon a thorough examination, there does not appear to be any live domestic wells in the immediate vicinity of the proposed percolation field. The scope of the site would indicate at this stage that all minimum separation distances can be achieved in accordance with EPA COP (2021). There are no other site restrictions at this point and this site is potentially suitable for the satisfactory treatment and disposal of wastewater.

Note: Only information available at the desk study stage should be used in this section.

3.0 ON-SITE ASSESSMENT

3.1 Visual Assessment

Landscape Position: Convex Slope of Hillside

Slope: Steep (>1:5) Shallow (1:5-1:20) Relatively Flat (<1:20)

Slope Comment

Surface Features within a minimum of 250m (Distance To Features Should Be Noted In Metres)

Houses:

Existing Mulroy View Housing Development on site with other dwellings to the East.

Existing Land Use:

Residential/ Agricultural

Vegetation Indicators:

Grassland with some Rush outcrop noted

Groundwater Flow Direction: North Westerly

Ground Condition:

Firm although soft in places in particular near existing WWTS as set out in Appendix 1

Site Boundaries:

PW Fencing & Planting

3.0 ON-SITE ASSESSMENT

3.1 Visual Assessment (contd.)

Roads:

Site is served by existing County Road fronting site

Outcrops (Bedrock And/Or Subsoil):

Some Rush Outcrop noted - See Appendix 1

Surface Water Ponding:

Some noted

Lakes:

N/A

Beaches/Shellfish Areas:

Bay area in immediate vicinity and bounds landholding to the West

Wetlands:

N/A

Karst Features:

N/A

Watercourses/Streams:⁴

Bay area in immediate vicinity and bounds landholding to the West

⁴Note and record water level

3.0 ON-SITE ASSESSMENT

3.1 Visual Assessment (contd.)

Drainage Ditches:*

Sheoughs along road and also U/G through site - Upgrade Required as evidence to suggest same is badly impeded

Springs:*

N/A

Wells:*

N/A

Comments:

(Integrate the information above in order to comment on: the potential suitability of the site, potential targets at risk, the suitability of the site to treat the wastewater and the location of the proposed system within the site).

Proposal allows for additional dwellings to be constructed in an extension to existing Mulroy View Housing Development. Existing WWTS in place with proposal incorporating the decommission of same to allow for the additional dwellings with new replacement WWTS being required to serve both the existing & proposed additional dwellings. In total, 26 dwellings to be provided for in a range of 1, 2, 3 & 4 bedroom properties. Ground conditions in the proposed new percolation field are predominantly firm & solid underfoot although some surface ponding noted in parts through site & in particular near existing WWTS. Existing drainage in place appears impeded although there is scope for upgrade & improvement when required. While percolation rates are expected to be reasonable, the trial hole investigation and percolation tests will provide further information in this regard. The topography & general scope of the site will prove favorable in the removal of wastewater provided provision is made for discharge of surface water to existing & new watercourses serving site. It is imperative that appropriate steps are taken during and post construction that all surface water is diverted beyond any new percolation facility to be provided on this site. No wells are at risk from an on-site system at this location. The proposed site design as per layout attached also means all minimum separating distances can be adhered to at this site in accordance with EPA stipulations. As such, site is potentially suitable for an on-site WWTS.

*Note and record water level

3.2 Trial Hole (should be a minimum of 2.1m deep (3m for regionally important aquifers))

To avoid any accidental damage, a trial hole assessment or percolation tests should not be undertaken in areas which are at or adjacent to significant sites, (e.g. NHAs, SACs, SPAs, and/or Archaeological etc.), without prior advice from National Parks and Wildlife Service or the Heritage Service.

Depth of trial hole (m):

Depth from ground surface to bedrock (m) (if present):

Depth from ground surface to water table (m) (if present):

Depth of water ingress:

Rock type (if present):

Date and time of excavation:

Date and time of examination:

Depth of
Surface and
Subsurface
Percolation
Tests

Soil/Subsoil
Texture &
Classification**

Plasticity and
dilatancy***

Soil
Structure

Density/
Compactness

Colour****

Preferential
flowpaths

0.1 m	<input type="checkbox"/>	Gravelly SILT/CLAY (with some small cobbles and silt)	Threads 3,2,1 Ribbons 85-95 (Average)	Structureless	Soft	Dark Brown	
0.2 m	<input type="checkbox"/>						
0.3 m	<input type="checkbox"/>						
0.4 m	<input type="checkbox"/>						
0.5 m	<input type="checkbox"/>						
0.6 m	<input type="checkbox"/>	Gravelly SILT/CLAY (with stoney gravel and small cobbles in places)	Threads 2,2,2 Ribbons 70-90 average	Structureless	Soft	Grey Brown with Tan in Parts	
0.7 m	<input type="checkbox"/>						
0.8 m	<input type="checkbox"/>						
0.9 m	<input type="checkbox"/>						
1.0 m	<input type="checkbox"/>						
1.1 m	<input type="checkbox"/>	Water Table Gravelly Till & Silt Daub	Water Table	Water Table	Water Table Crumb	Water Table Grey Brown with Blue & Tan	Water Table
1.2 m	<input type="checkbox"/>						
1.3 m	<input type="checkbox"/>						
1.4 m	<input type="checkbox"/>						
1.5 m	<input type="checkbox"/>						
1.6 m	<input type="checkbox"/>	Base of Hole	Base of Hole	Base of Hole	Base of Hole	Base of Hole	Base of Hole
1.7 m	<input type="checkbox"/>						
1.8 m	<input type="checkbox"/>						
1.9 m	<input type="checkbox"/>						
2.0 m	<input type="checkbox"/>						
2.1 m	<input type="checkbox"/>						
2.2 m	<input type="checkbox"/>						
2.3 m	<input type="checkbox"/>						
2.4 m	<input type="checkbox"/>						
2.5 m	<input type="checkbox"/>						
2.6 m	<input type="checkbox"/>						
2.7 m	<input type="checkbox"/>						
2.8 m	<input type="checkbox"/>						
2.9 m	<input type="checkbox"/>						
3.0 m	<input type="checkbox"/>						
3.1 m	<input type="checkbox"/>						
3.2 m	<input type="checkbox"/>						
3.3 m	<input type="checkbox"/>						
3.4 m	<input type="checkbox"/>						
3.5 m	<input type="checkbox"/>						

Likely Subsurface Percolation Value:

Likely Surface Percolation Value:

Note: *Depth of percolation test holes should be indicated on log above. (Enter Surface or Subsurface at depths as appropriate).

** See Appendix E for BS 5930 classification.

*** 3 samples to be tested for each horizon and results should be entered above for each horizon.

**** All signs of mottling should be recorded.

3.2 Trial Hole (contd.) Evaluation:

Bedrock was not encountered at location of TH examination. The water table was met at 1.70m BGL after in excess of 48hrs of Trial Hole being open. Iron pan or significant mottling was not observed. The presence of rootlets, small gravelly extract and stoney fragments to 1.5m BGL should enhance and therefore provide good percolating qualities. From the above, it is considered that there is no major hydraulic issue with this site as possibly suggested previously. Groundwater is therefore the potential target at risk on this site. The scope and topography of the site does prove favorable however while the SSPT & SPT exams will provide further information in this regard.

3.3(a) Subsurface Percolation Test for Subsoil

Step 1: Test Hole Preparation

Percolation Test Hole

	1	2	3
Depth from ground surface to top of hole (mm) (A)	400	400	400
Depth from ground surface to base of hole (mm) (B)	800	800	800
Depth of hole (mm) [B - A]	400	400	400
Dimensions of hole [length x breadth (mm)]	400 x 400	400 x 400	400 x 400

Step 2: Pre-Soaking Test Holes

Pre-soak start	Date	03-Apr-2023	03-Apr-2023	03-Apr-2023
	Time	10:20	10:20	10:20
2nd pre-soak start	Date			
	Time			

Each hole should be pre-soaked twice before the test is carried out.

Step 3: Measuring T_{100}

Percolation Test Hole No.

	1	2	3
Date of test	05-04-2023	05-04-2023	05-04-2023
Time filled to 400 mm	08:05	08:05	08:05
Time water level at 300 mm	11:35	11:50	11:55
Time (min.) to drop 100 mm (T_{100})	210.00	225.00	230.00
Average T_{100}			221.67

If $T_{100} > 480$ minutes then Subsurface Percolation value >120 – site unsuitable for discharge to ground

If $T_{100} \leq 210$ minutes then go to Step 4;

If $T_{100} > 210$ minutes then go to Step 5;

Step 4: Standard Method (where $T_{300} \leq 210$ minutes)

Percolation Test Hole	1			2			3		
Fill no.	Start Time (at 300 mm)	Finish Time (at 200 mm)	Δt (min)	Start Time (at 300 mm)	Finish Time (at 200 mm)	Δt (min)	Start Time (at 300 mm)	Finish Time (at 200 mm)	Δt (min)
1			0.00			0.00			0.00
2			0.00			0.00			0.00
3			0.00			0.00			0.00
Average Δt Value			0.00			0.00			0.00
	Average $\Delta t/4 =$ [Hole No.1] <input type="text" value="0.00"/> (t ₁)			Average $\Delta t/4 =$ [Hole No.2] <input type="text" value="0.00"/> (t ₂)			Average $\Delta t/4 =$ [Hole No.3] <input type="text" value="0.00"/> (t ₃)		

Result of Test: Subsurface Percolation Value = (min/25 mm)

Comments:

This process tests the suitability of the subsoil beneath the invert of the proposed percolation pipes/ polishing filter distribution system to hydraulically transmit treated effluent. Given that adequate area is available, the result of T as above would indicate that it is suitable for the development of either a conventional septic tank system or a secondary treatment system with discharge to groundwater (See Appendix 5).

Step 5: Modified Method (where $T_{300} > 210$ minutes)

Percolation Test Hole No.	1					
Fall of water in hole (mm)	Time Factor = T_1	Start Time h:mm	Finish Time h:mm	Time of fall (mins) = T_2	$K_{10} = T_1 / T_2$	T-Value = $4.45 / K_{10}$
300 - 250	8.1	11:35	13:25	110.00	0.07	60.43
250 - 200	9.7	13:25	15:35	130.00	0.07	59.64
200 - 150	11.9	15:35	17:35	120.00	0.10	44.87
150 - 100	14.1	17:35	19:35	120.00	0.12	37.87
Average	T-Value	T-Value Hole 1 = (T ₁)				<input type="text" value="50.70"/>

Percolation Test Hole No.	3					
Fall of water in hole (mm)	Time Factor = T_1	Start Time h:mm	Finish Time h:mm	Time of fall (mins) = T_2	$K_{10} = T_1 / T_2$	T-Value = $4.45 / K_{10}$
300 - 250	8.1	11:55	13:40	105.00	0.08	57.69
250 - 200	9.7	13:40	15:30	110.00	0.09	50.46
200 - 150	11.9	15:30	17:35	125.00	0.10	46.74
150 - 100	14.1	17:25	19:20	115.00	0.12	36.29
Average	T-Value	T-Value Hole 3 = (T ₃)				<input type="text" value="47.80"/>

Percolation Test Hole No.	2					
Fall of water in hole (mm)	Time Factor = T_1	Start Time h:mm	Finish Time h:mm	Time of fall (mins) = T_2	$K_{10} = T_1 / T_2$	T-Value = $4.45 / K_{10}$
300 - 250	8.1	11:50	13:45	115.00	0.07	63.18
250 - 200	9.7	13:45	15:40	115.00	0.08	52.76
200 - 150	11.9	15:40	17:35	115.00	0.10	43.00
150 - 100	14.1	17:35	19:30	115.00	0.12	36.29
Average	T-Value	T-Value Hole 2 = (T ₂)				<input type="text" value="48.81"/>

Result of Test: Subsurface Percolation Value =

(min/25 mm)

Comments:

Note: Average taken for Fill 150-100 based on 3 previous fills carried out due to falling light on dates of assessment. All test holes checked the following morning & all test water had percolated for each of the sub-surface test pits.

3.3(b) Surface Percolation Test for Soil

Step 1: Test Hole Preparation

Percolation Test Hole	1	2	3
Depth from ground surface to top of hole (mm)	0	0	0
Depth from ground surface to base of hole (mm)	400	400	400
Depth of hole (mm)	400	400	400
Dimensions of hole [length x breadth (mm)]	400 x 400	400 x 400	400 x 400

Step 2: Pre-Soaking Test Holes

Pre-soak start	Date	03-Apr-2023	03-Apr-2023	03-Apr-2023
	Time	10:15	10:15	10:15
2nd pre-soak start	Date			
	Time			

Each hole should be pre-soaked twice before the test is carried out.

Step 3: Measuring T_{100}

Percolation Test Hole No.	1	2	3
Date of test	05-Apr-23	05-Apr-23	05-Apr-2023
Time filled to 400 mm	08:10	08:10	08:10
Time water level at 300 mm	11:40	11:45	11:35
Time to drop 100 mm (T_{100})	210.00	215.00	205.00
Average T_{100}			210.00

If $T_{100} > 480$ minutes then Surface Percolation value >90 – site unsuitable for discharge to ground

If $T_{100} \leq 210$ minutes then go to Step 4;

If $T_{100} > 210$ minutes then go to Step 5;

Step 4: Standard Method (where $T_{100} \leq 210$ minutes)

Percolation Test Hole	1			2			3		
Fill no.	Start Time (at 300 mm)	Finish Time (at 200 mm)	ΔT (min)	Start Time (at 300 mm)	Finish Time (at 200 mm)	ΔT (min)	Start Time (at 300 mm)	Finish Time (at 200 mm)	ΔT (min)
1			0.00			0.00			0.00
2			0.00			0.00			0.00
3			0.00			0.00			0.00
Average ΔT Value			0.00			0.00			0.00
	Average $\Delta T/4 =$ [Hole No.1] <input type="text" value="0.00"/> (T_1)			Average $\Delta T/4 =$ [Hole No.2] <input type="text" value="0.00"/> (T_2)			Average $\Delta T/4 =$ [Hole No.3] <input type="text" value="0.00"/> (T_3)		

Result of Test: Surface Percolation Value = (min/25 mm)

Comments:

A P-test is carried out at ground level to establish a percolation value for soils that are being considered for use in either constructing a mounded percolation system or for use in polishing filters. The result of P for this site indicates favourable conditions for same if necessary (See Appendix 5).

Step 5: Modified Method (where $T_{100} > 210$ minutes)

Percolation Test Hole No.	1					
Fall of water in hole (mm)	Time Factor $= T_1$	Start Time hh:mm	Finish Time hh:mm	Time of fall (mins) $= T_2$	$K_s = T_1 / T_2$	T-Value $= 4.45 / K_s$
300 - 250	8.1	11:40	13:30	110.00	0.07	60.43
250 - 200	9.7	13:30	15:20	110.00	0.09	50.46
200 - 150	11.9	15:20	17:10	110.00	0.11	41.13
150 - 100	14.1	17:10	19:00	110.00	0.13	34.72
Average	T-Value	T-Value Hole 1 = (T_1)				<input type="text" value="46.69"/>

Percolation Test Hole No.	3					
Fall of water in hole (mm)	Time Factor $= T_1$	Start Time hh:mm	Finish Time hh:mm	Time of fall (mins) $= T_2$	$K_s = T_1 / T_2$	T-Value $= 4.45 / K_s$
300 - 250	8.1	11:35	13:40	125.00	0.06	68.67
250 - 200	9.7	13:40	16:00	140.00	0.07	64.23
200 - 150	11.9	16:00	18:05	125.00	0.10	46.74
150 - 100	14.1	18:05	20:15	130.00	0.11	41.03
Average	T-Value	T-Value Hole 3 = (T_3)				<input type="text" value="55.17"/>

Percolation Test Hole No.	2					
Fall of water in hole (mm)	Time Factor $= T_1$	Start Time hh:mm	Finish Time hh:mm	Time of fall (mins) $= T_2$	$K_s = T_1 / T_2$	T-Value $= 4.45 / K_s$
300 - 250	8.1	11:45	13:55	130.00	0.06	71.42
250 - 200	9.7	13:55	16:10	135.00	0.07	61.93
200 - 150	11.9	16:10	18:30	140.00	0.09	52.35
150 - 100	14.1	18:30	20:45	135.00	0.10	42.61
Average	T-Value	T-Value Hole 2 = (T_2)				<input type="text" value="57.08"/>

Result of Test: Surface Percolation Value =

(min/25 mm)

Comments:

Note: Average taken for fill 150-100 based on 3 previous fills.

4.0 CONCLUSION of SITE CHARACTERISATION

Integrate the information from the desk study and on-site assessment (i.e. visual assessment, trial hole and percolation tests) above and conclude the type of system(s) that is (are) appropriate. This information is also used to choose the optimum final disposal route of the treated wastewater.

Slope of proposed infiltration / treatment area:

Are all minimum separation distances met?

Depth of unsaturated soil and/or subsoil beneath invert of gravel (or drip tubing in the case of drip dispersal system)

Percolation test result: Surface:

Sub-surface:

Not Suitable for Development

Suitable for Development

Identify all suitable options

1. Septic tank system (septic tank and percolation area) (Chapter 7)
2. Secondary Treatment System (Chapters 8 and 9) and soil polishing filter (Section 10.1)
3. Tertiary Treatment System and Infiltration / treatment area (Section 10.2)

Discharge Route¹

Groundwater via existing watercourses (to be upgraded)

5.0 SELECTED DWWTS

Propose to install:

and discharge to:

Invert level of the trench/bed gravel or drip tubing (m)

Site Specific Conditions (e.g. special works, site improvement works testing etc.)

Taking the scale of proposal in addition to considering the subsoil characteristics, propose to decommission existing WWTS serving the existing development & install a new packaged WWTS along with an associated packaged Tertiary Sand Filter and underlying soil polishing filter considered to be the most suitable option to serve proposal given the characteristics encountered & the sensitivity presenting. Treated effluent from the recommended WWTS (3rd Chamber) should be directed by gravity flow to a Stilling Chamber and in turn pumped onto a partially raised 228sqm sand polishing filter (0.9m total depth) at the location proposed on the lower lying lands given the loadings in accordance with EPA CoP guidelines. Invert level of same to be 0.3m above existing GL given the characteristics of the site, the recorded water table and also the requirement for an additional soil polishing filter underneath. As a further mitigation measure, in-situ soils encountered 0-0.80m BGL, to be stockpiled and used/ employed underneath sand infiltration layer being proposed. Provision should be made for discharge of surface water beyond the percolation facility via upgraded land drainage plan. Further land drains to be created up gradient of the proposed new percolation facility in order to protect the area from surface water run-off from higher ground around the landholding. New drainage network to be diverted beyond any percolation facility being proposed as indicated. Minimum separation distances as set out in EPA CoP should be adhered to in full.

¹ A discharge of sewage effluent to "waters" (definition includes any or any part of any river, stream, lake, canal, reservoir, aquifer, pond, watercourse or other inland waters, whether natural or artificial) will require a licence under the Water Pollution Acts 1977-90. Refer to Section 2.4.

6.0 TREATMENT SYSTEM DETAILS

SYSTEM TYPE: Septic Tank Systems (Chapter 7)

Tank Capacity (m ³)	<input type="text"/>	Percolation Area	<input type="text"/>	Mounded Percolation Area	<input type="text"/>
		No. of Trenches	<input type="text"/>	No. of Trenches	<input type="text"/>
		Length of Trenches (m)	<input type="text"/>	Length of Trenches (m)	<input type="text"/>
		Invert Level (m)	<input type="text"/>	Invert Level (m)	<input type="text"/>

SYSTEM TYPE: Secondary Treatment System (Chapters 8 and 9) and polishing filter (Section 10.1)

Secondary Treatment Systems receiving septic tank effluent (Chapter 8)

Media Type	Area (m ²)*	Depth of Filter	Invert Level
Sand/Soil	<input type="text"/>	<input type="text"/>	<input type="text"/>
Soil	<input type="text"/>	<input type="text"/>	<input type="text"/>
Constructed Wetland	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>

Packaged Secondary Treatment Systems receiving raw wastewater (Chapter 9)

Type	<input type="text" value="Mechanical Aeration"/>
Capacity PE	<input type="text" value="91"/>
Sizing of Primary Compartment	<input type="text"/> m ³

Polishing Filter*: (Section 10.1)

Surface Area (m ²)*	<input type="text"/>	Option 3 - Gravity Discharge Trench length (m)	<input type="text"/>
Option 1 - Direct Discharge Surface area (m ²)	<input type="text"/>	Option 4 - Low Pressure Pipe Distribution Trench length (m)	<input type="text"/>
Option 2 - Pumped Discharge Surface area (m ²)	<input type="text" value="228.00"/>	Option 5 - Drip Dispersal Surface area (m ²)	<input type="text"/>

SYSTEM TYPE: Tertiary Treatment System and infiltration / treatment area (Section 10.2)

Identify purpose of tertiary treatment

Provide performance information demonstrating system will provide required treatment levels

Provide design information

DISCHARGE ROUTE:

Groundwater	<input checked="" type="checkbox"/>	Hydraulic Loading Rate * (l/m ² .d)	<input type="text" value="60.00"/>	Surface area (m ²)	<input type="text" value="228.00"/>
Surface Water **	<input type="checkbox"/>	Discharge Rate (m ³ /hr)	<input type="text"/>		

* Hydraulic loading rate is determined by the percolation rate of subsoil

** Water Pollution Act discharge licence required

6.0 TREATMENT SYSTEM DETAILS

QUALITY ASSURANCE:

Installation & Commissioning

All works in relation to the proposed decommission/ installation should be carried out by a suitably qualified engineer.

On-going Maintenance

System should be maintained as per Manufacturers Specifications & client should enter into a minimum 5 year Maintenance Agreement with an approved and licensed company to ensure the satisfactory operation of the DWWTS being proposed.

7.0 SITE ASSESSOR DETAILS

Company:

Prefix: First Name: Surname:

Address:

Qualifications/Experience:

Date of Report:

Phone: E-mail:

Indemnity Insurance Number:

Signature: *Ciaran Moy*

Appendix 1
General Site Information



Revisions

Rev	Date	Details
X	XX/XX/XX	

Donegal County Council
Architects Office



DCC File 07491 83863 DCC Ref: 07491 70911

Sketch Design

Project:
Proposed Housing Development at
Mully Vies (Phase 2),
Tannery,
Co. Donegal

Drawing Title:

Site Location

Drawing No: **PL01**

Date: February 2023 Scale: 1:1000 @ A1

Checked By: [Signature] Job No: 105_1332
DCC

Site Boundary
 SCC Land Ownership

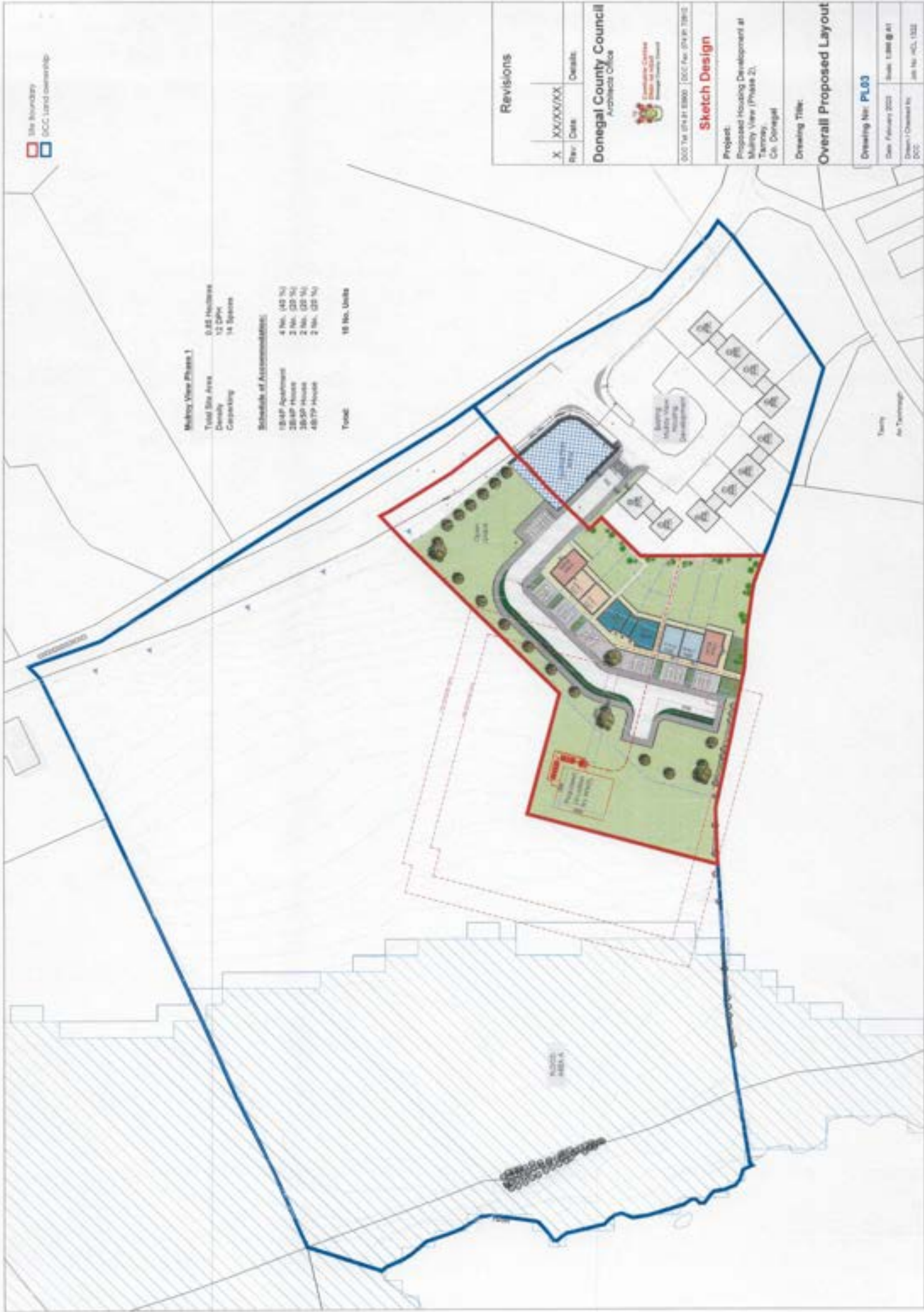
Mulroy View Phase 1

Total Site Area: 0.85 Hectares
 Density: 12 DPH
 Capacity: 14 Spores

Schedule of Accommodations:

18AP Apartments	4 No. (45 %)
18AP Homes	3 No. (23 %)
18AP Homes	2 No. (15 %)
18AP Homes	2 No. (15 %)
18TP Homes	2 No. (15 %)

Total: 10 No. Units



Revisions	
Rev.	Date
X	XXXX/XX/XX
Details:	

Donegal County Council
 Architects Office



000 T4 07491 8900 | 000 T4 07491 3902

Sketch Design

Project:
 Proposed Housing Development at
 Mulroy View (Phase 2),
 Tannery,
 Co. Donegal

Drawing Title:
Overall Proposed Layout

Drawing No: **PL03**

Date: February 2020 | Scale: 1:200 @ A1
 Design Checked by: [Signature] | Job No: 402, 1332
 DCC

Tannery
 At Tannery



View of Site/ Location of proposed additional Dwellings



Existing Mulroy View Housing Development adjacent



Location of existing Percolation Facility on site & associated WWTs Control Cabinet



Existing Percolation Field (U/G)



Intensive Surface Ponding noted in vicinity of existing Treatment Facility



Approx. Location of Proposed New Percolation Facility



Rush Outcrop noted in vicinity of Site with Massmount Bay bounding landholding to the West

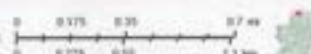
Appendix 2
Geological Information

- IE_GSI_Quaternary_Sediments_50K_1...
- SYMBOLOLOGY**
- A. Alluvium
 - BkPL Blanket Peat
 - GMp Gravel derived from Metasedimentary rocks
 - Rck. Bedrock outcrop or outcrop
 - Tlsp. Till derived from Metasedimentary rocks
 - TQu. Till derived from quartzites
 - Water



Scale: 1:25,000

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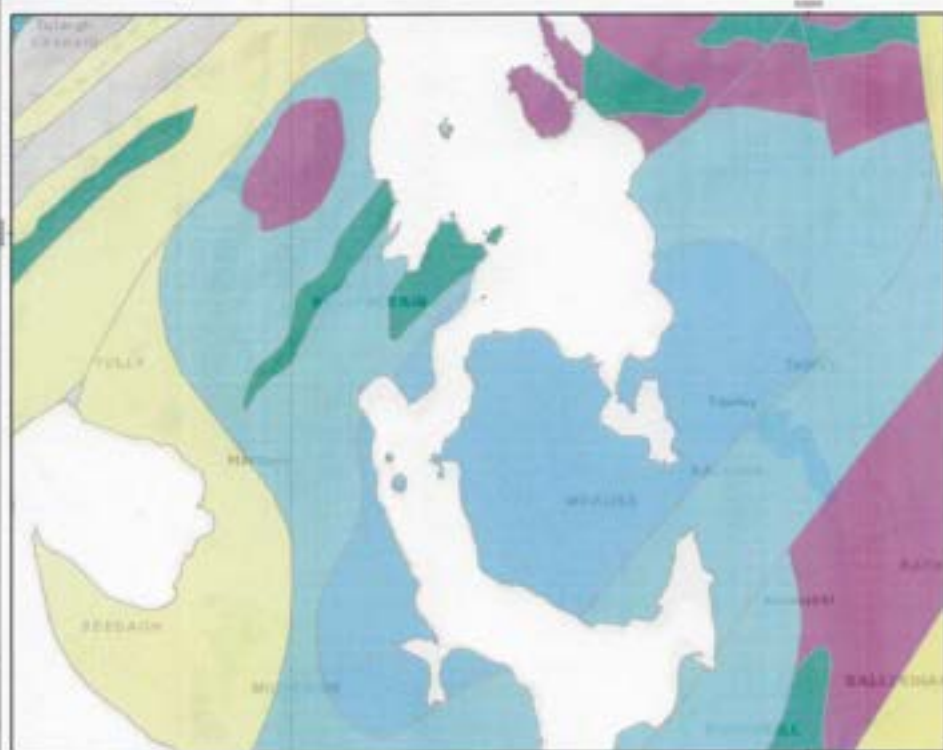


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- Allen Limestones Formation
- Ards Pelite Formation
- Ards Quartzite Formation
- Glencolumbkille Limestones Formation
- Glencolumbkille Pelite Formation
- Metadiorite
- Post Ardgary Formation
- Slieve Tolly Quartzite Formation



Scale: 1:25,000

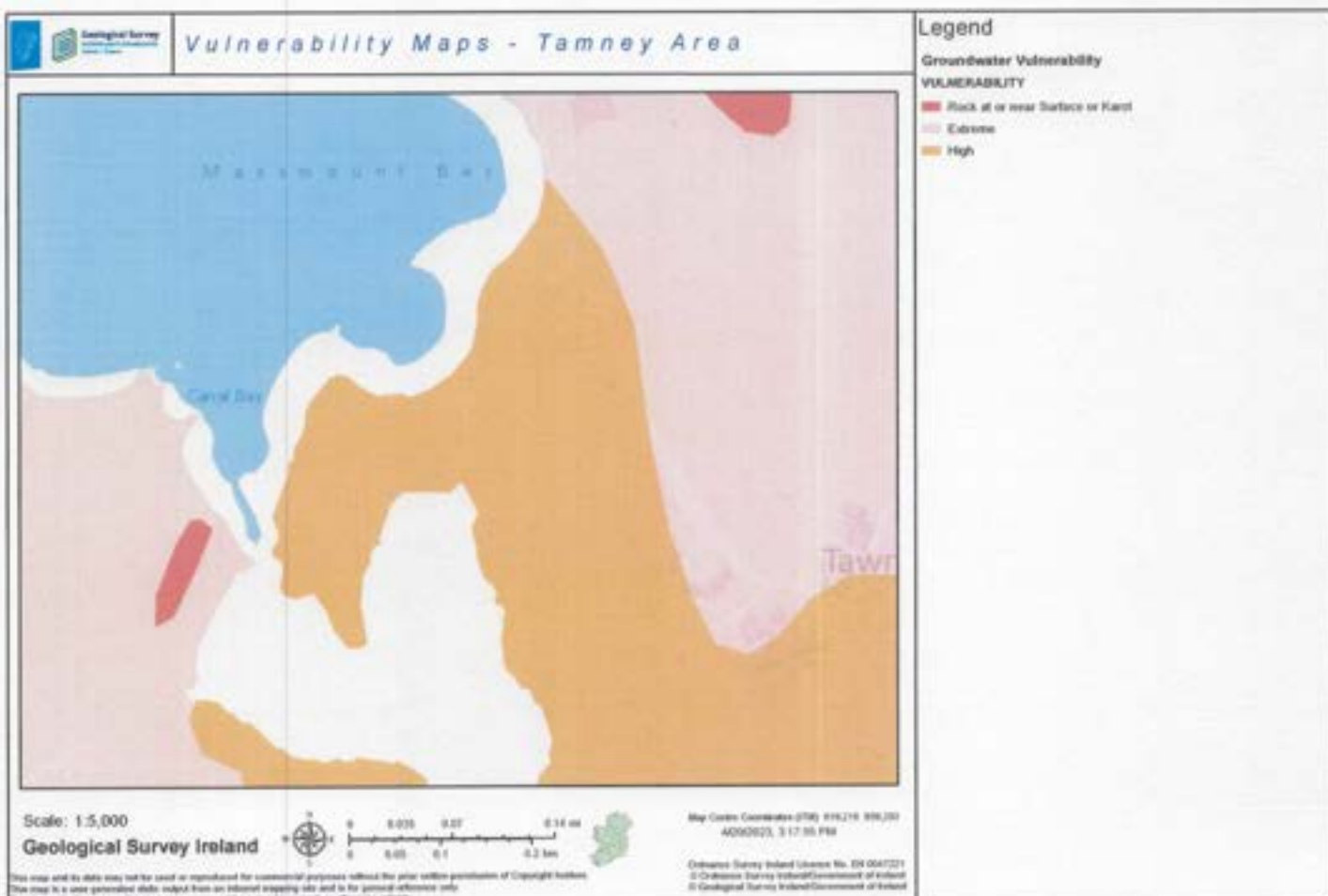
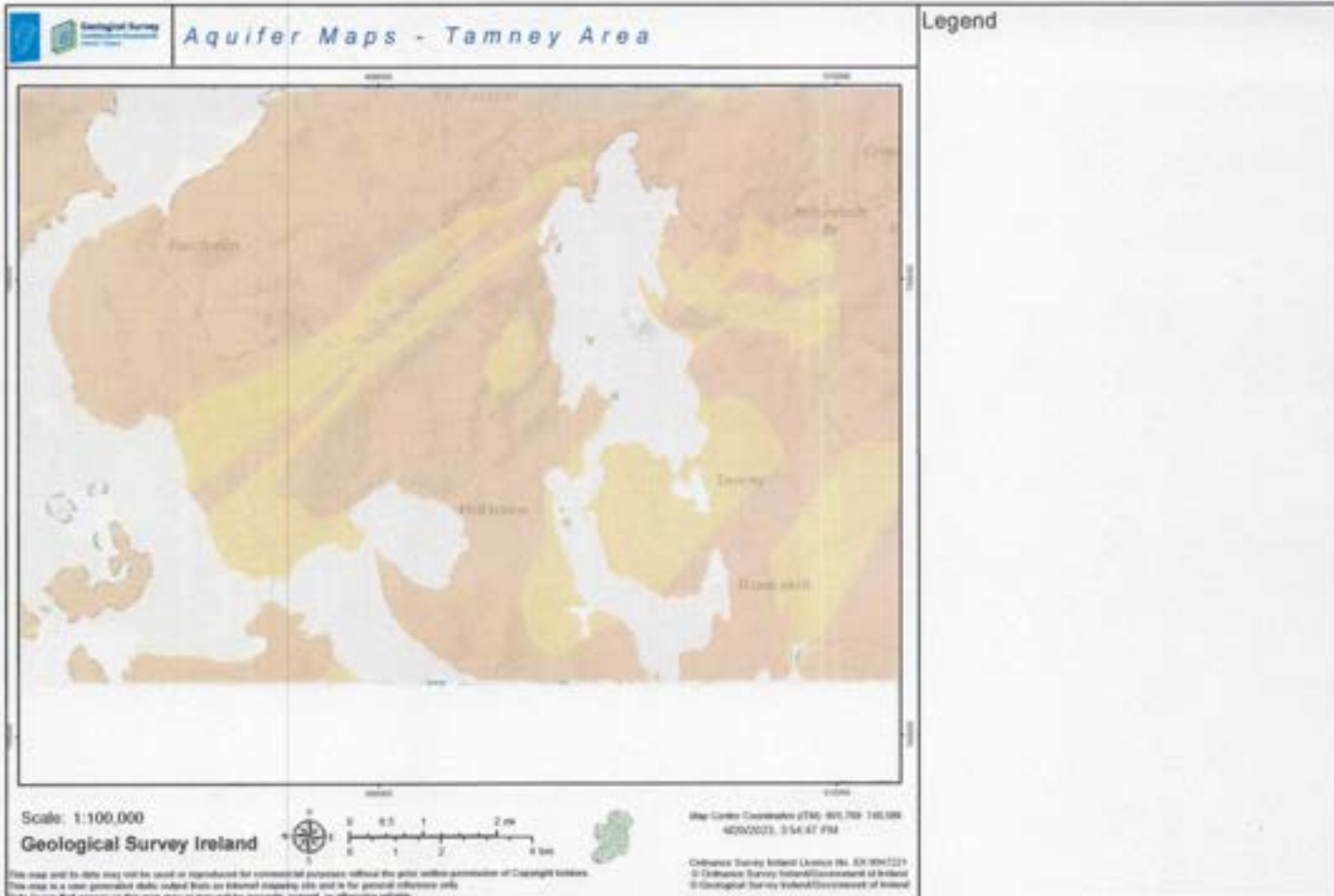
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Appendix 3
Trial Hole Examination



Trial Hole being Excavated



Excavated Material – Horizon A, B & C



Trial Hole after Excavation



Soil Profile



Trial Hole after >48 Hours

Appendix 4

T & P Test Examinations



Pre-Soaking of T1



T1 after 210 minutes



Pre-Soaking of P1



P1 after 210 minutes



Pre-Soaking of P3



P3 after 205 minutes

Appendix 5
Recommendations

RECOMMENDATIONS & LAND DRAINAGE PROGRAMME

Any existing Sanitary Arrangement be decommissioned & New Wastewater Treatment Unit to be Installed - PE 91 Minimum Persons as detailed

New 228 Sqm Sand Polishing Filter to be constructed in area indicated and to be installed with pipework @ existing 0.3m above existing GL in the location proposed with surrounding lands being landscaped accordingly

Existing land drains to be upgraded & New Land Drains to be excavated as indicated. Same to be piped and backfilled with clean graded stone to enhance site drainage but also to protect any treatment facility from Surface Water Run-off from higher grounds & adjoining lands as indicated.



Revisions	
Rev	Details
X	XXXXXXXX

Donegal County Council
Architects Office

Sketch Design

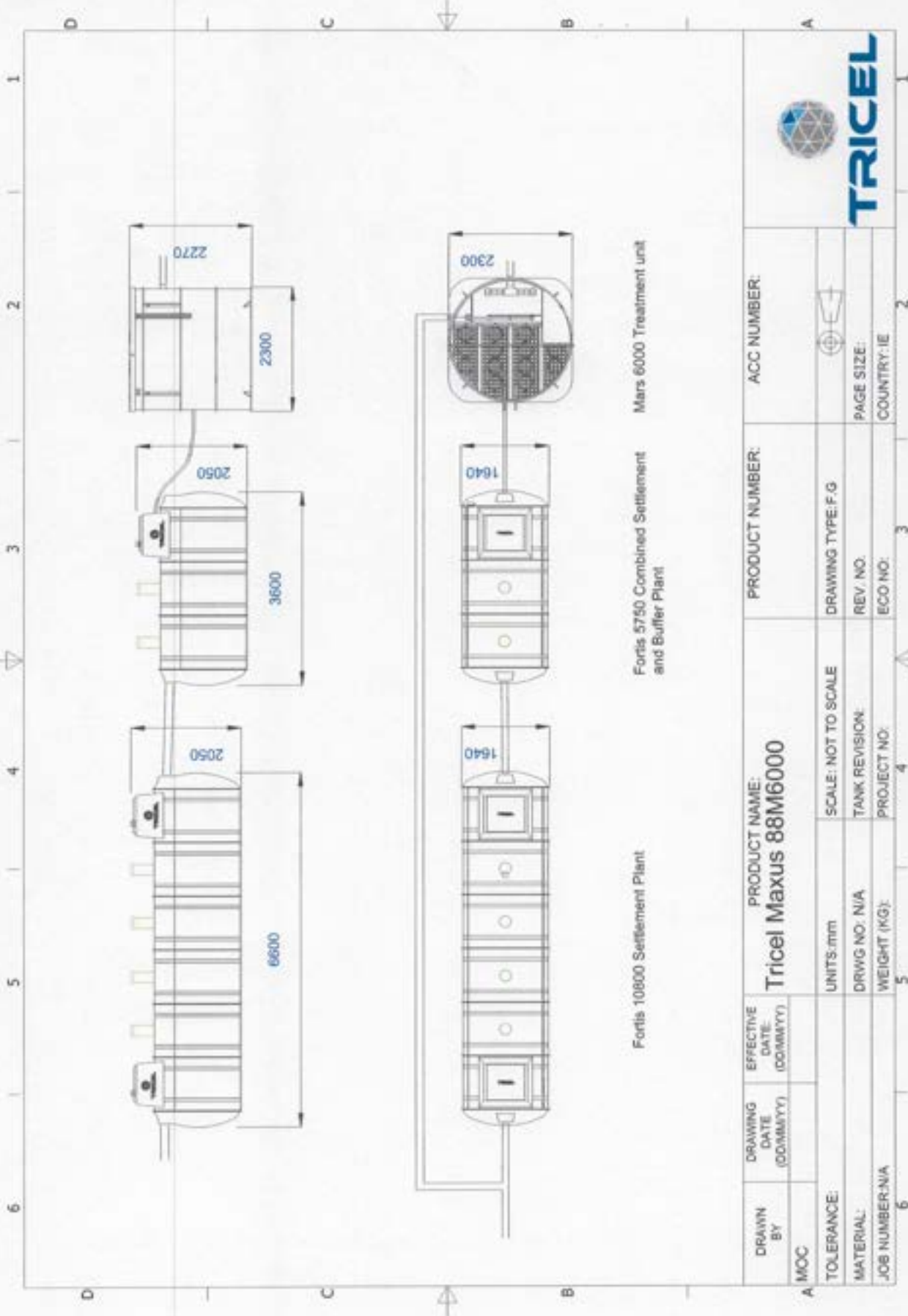
Project: Proposed Housing Development at Mulroy View (Phase 2), Terenure, Co. Donegal

Drawing Title: **Proposed Site Layout**

Drawing No: **PL - 04**

Date: February 2023
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Checked/Checked by: [Signature]
Date: 14/02/2023

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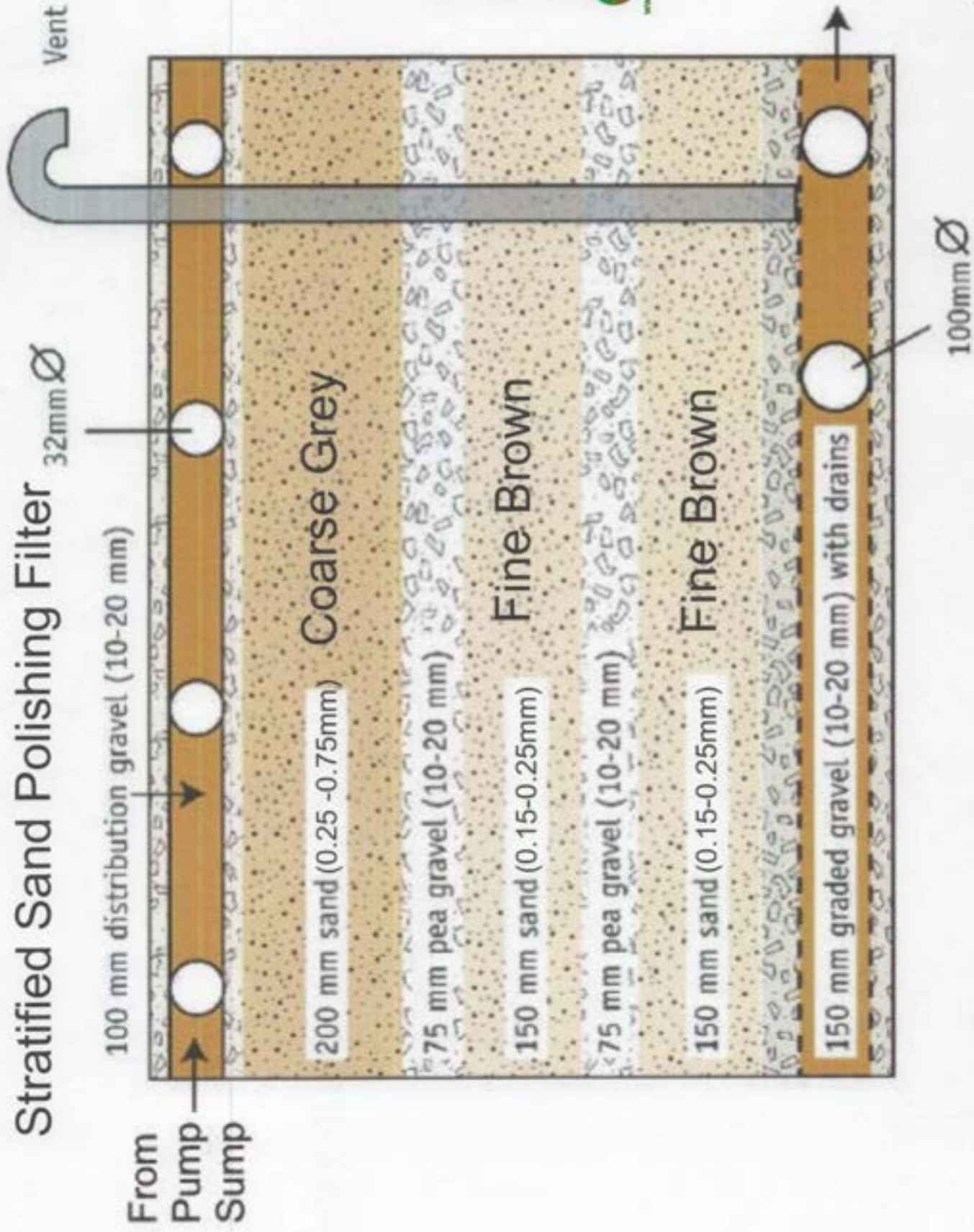


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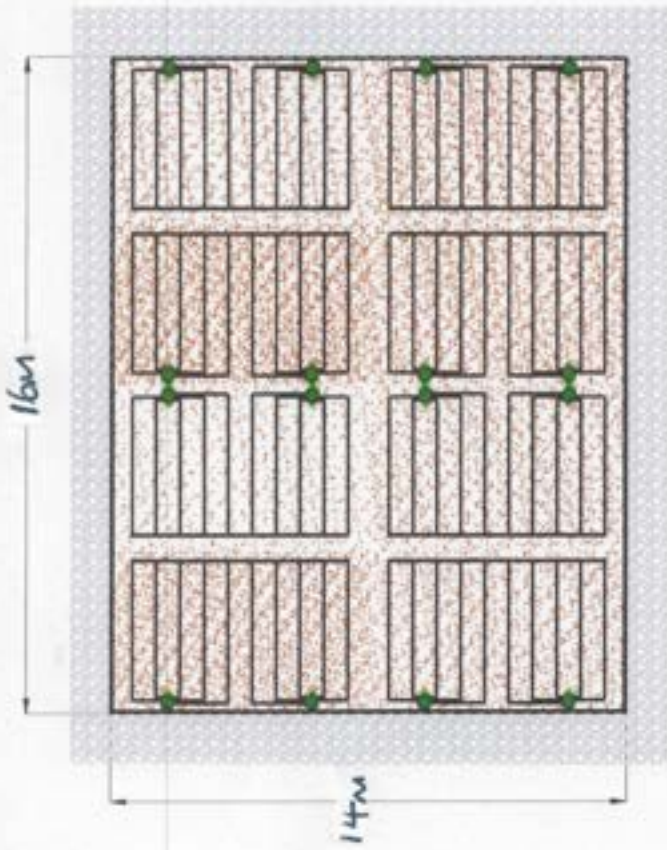
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Stratified Sand Polishing Filter 32mm Ø



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0863524736
septech
Wastewater Services
www.septech.ie

SALES SPECIFICATION



DRAWN: JC		DATE: 31/08/2021	PRODUCT NAME: SANDCEL 12000L		WEIGHT:	SCALE: NOT TO SCALE	PART NO.:	SIZE: N/A
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