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DRAINAGE AND WATERMAIN REPORT

For a proposed 4no dwelling development
at No124 Templeville Drive, Templeogue, Dublin 6W

Revision	Description	Made	Approved	Date
0	Final	PC	PC	Dec 2022

Engineering Report for Planning Submission

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1.0 Introduction

Coyle Civil & Structural Consulting Engineers has been engaged by Mr Barry Coleman to carry out an Engineering Services Report for a proposed development at 124 Templeville Drive, Templeogue, Dublin 6W.

This Report, together with its appendices address the proposed infrastructural requirements and will support the Planning Application for the proposed development.

2.0 Site Location

The proposed development consists of 4 no proposed mews style dwelling houses at No 124 Templeville Drive, Templeogue, Dublin 6

Site Location is shown in Figure 2.1, proposed Site Layout is shown in Figure 2.2.

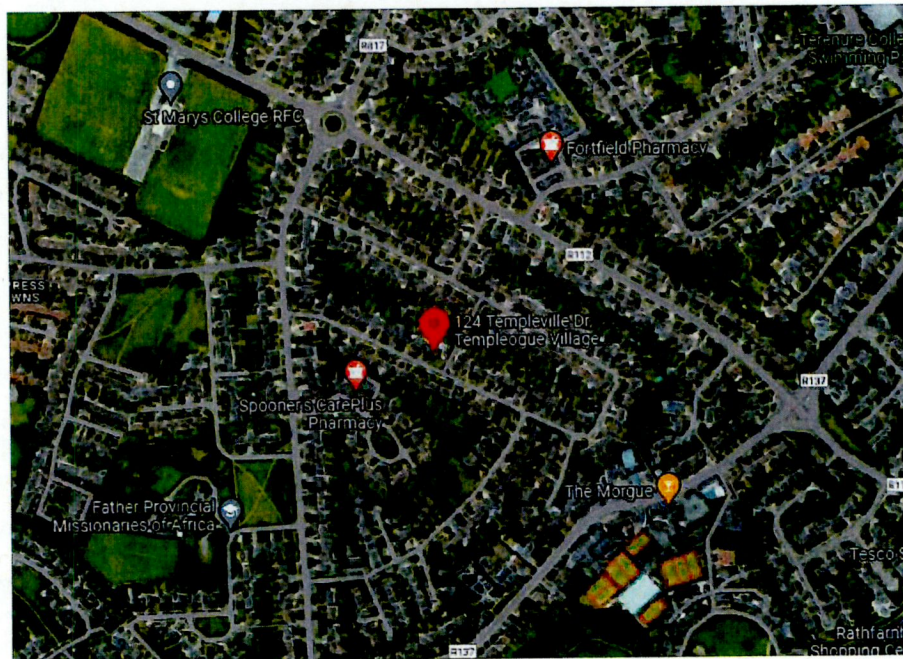


Figure 2.1 – Site Location

3.0 Detail of Proposed Development

3.1 General

The site infrastructure that is proposed as part of the proposed development is outlined hereunder and indicated on Drawing "Site Location Map" in Appendix A

3.2 Proposed Foul Drainage

Currently the existing house on the site is serviced by a 100mm diameter private foul drain, draining to the front of the dwelling into the existing 225mm diameter foul sewer on Templeville Drive.

It is proposed to provide 4no new foul drains to the new dwellings at gradients ranging from 1:40 to 1:60. A single connection point is proposed to the existing foul sewer to the opposite side of Templeville Drive. Refer to drawing C100 in Appendix B for the proposed drainage layout plan.

3.3 Proposed Surface Drainage

3.3.1 Proposed Surface Water Drain Diversion

An existing 450mm diameter **unused** concrete culvert is located along the northern boundary of the subject site. Proposals to divert this culvert for a previous development under permission SD20A/0190 where approved. Appendix G includes correspondence with South Dublin County Council confirming the acceptance of the previous drainage layout.

The current drainage proposal follows for a similar principal of the layout approved under permission SD20A/0190. The proposed layout detail can be seen in Appendix B. A clear wayleave is to be provided to allow for future maintenance. No surcharge is to be placed on the storm drain diversion.

Furthermore, it can be stated that the proposed surcharge capacity / attenuation capacity of the diversion will be marginally improved by the introduction of the four new manholes and the use of equivalent diameter diversion pipework.

It is proposed to divert this unused culvert as shown on the drainage layout plan drawing no. 292-014. A clear wayleave is to be provided allowing the Council unlimited access for future maintenance of the proposed drain. No loading surcharge is to be placed on the storm drain diversion, as demonstrated on the plan drawing.

3.3.2 Proposed Surface Water Drains

Currently the existing house on the site is serviced by a 100mm diameter private surface water (SW) drain, draining to the front of the site into the existing 225mm diameter SW drain on Templeogue Drive.

It is proposed to provide new SW drains to the new dwellings at gradients ranging from 1:25 to 1:60. Refer to drawing no C100 in Appendix B for the proposed drainage layout plan. The following SUD's elements will be included in the drainage design to allow for compliance with the Dublin Regional Drainage Strategy.

- All private car parking is to be constructed from permeable paving, allowing infiltration only.
- The new flat roof to the new dwelling is to be installed with sedum green roof.

It is proposed to attenuate SW flows from the site, within 4no 1.2m diameter circular precast concrete outfall manholes while restricting flows to a maximum of 2 l/s through the use of an orifice plate. Refer to Appendix B for the storm water attenuation details.

3.4 Water Supply

It is proposed to provide 4 new 25mm diameter PE water service connections, inclusive of Irish Water approved boundary boxes and fittings.

The estimated daily domestic demand is 1620 litres (based on 150 l/person/day, with an average occupancy of 2.7 persons per dwelling).

4.0 Summary

The drainage design proposed within this report follows the same principal of a that approved in planning permission SD20A/0190.

The storm drainage layout allows for the SUD's requirements in line with the Dublin Regional Drainage Strategy and the foul sewer and watermain design allow for the requirements of the Irish Water Code of Practice.

APPENDIX A

Existing Irish Water Services

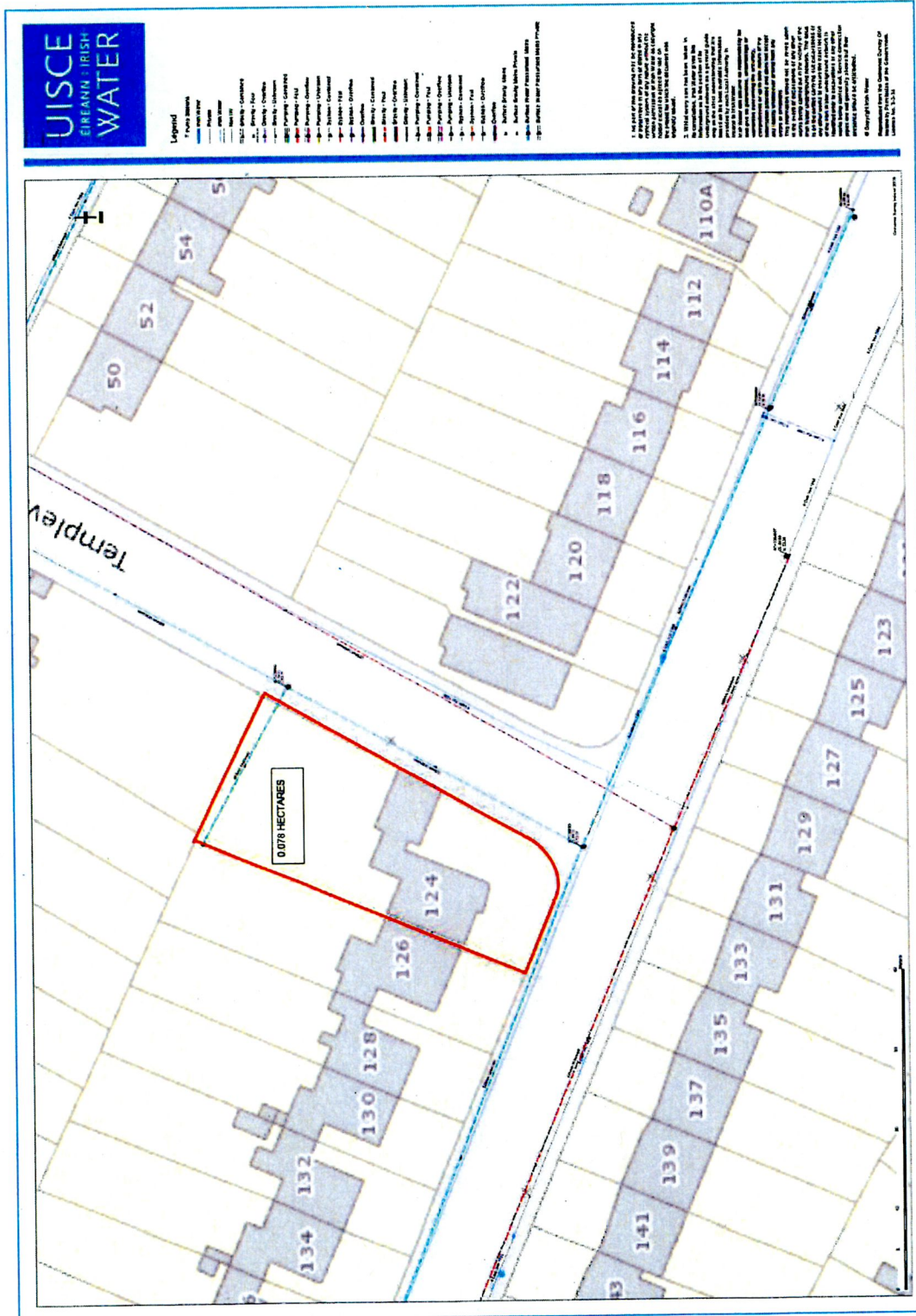


Figure 2.3 – Irish Water Existing Services Layout

APPENDIX B
Storm Water Storage Details



Surface water storage requirements for sites

www.uksuds.com | Storage estimation tool

Calculated by:

Site name:

Site location:

This is an estimation of the storage volume requirements that are needed to meet normal best practice criteria in line with Environment Agency guidance 'Rainfall runoff management for developments', SC030219 (2013), the SuDS Manual C753 (Crist, 2015) and the non-statutory standards for SuDS (Defra, 2015). It is not to be used for detailed design of drainage systems. It is recommended that hydraulic modelling software is used to calculate volume requirements and design details before finalising the design of the drainage scheme.

Site Details

Latitude:

Longitude:

Reference:

Date:

Site characteristics

Total site area (ha):

Significant public open space (ha):

Area positively drained (ha):

Impermeable area (ha):

Percentage of drained area that is impermeable (%):

Impervious area drained via infiltration (ha):

Return period for infiltration system design (year):

Impervious area drained to rainwater harvesting (ha):

Return period for rainwater harvesting system (year):

Compliance factor for rainwater harvesting system (%):

Net site area for storage volume design (ha):

Net impermeable area for storage volume design (ha):

Pervious area contribution to runoff (%):

* where rainwater harvesting or infiltration has been used for managing surface water runoff such that the effective impermeable area is less than 50% of the 'area positively drained', the 'net site area' and the estimates of Q_{BAR} and other flow rates will have been reduced accordingly.

Design criteria

Climate change allowance factor:

Urban creep allowance factor:

Volume control approach:

Interception rainfall depth (mm):

Minimum flow rate (l/s):

Methodology

esti:

Q_{BAR} estimation method:

SPR estimation method:

Soil characteristics

	Default	Edited
SOIL type:	<input type="text" value="2"/>	<input type="text" value="2"/>
SPR:	<input type="text" value="0.3"/>	<input type="text" value="0.3"/>

Hydrological characteristics

	Default	Edited
Rainfall 100 yrs 6 hrs:	<input type="text" value="--"/>	<input type="text" value="75"/>
Rainfall 100 yrs 12 hrs:	<input type="text" value="--"/>	<input type="text" value="93"/>
FEH / FSR conversion factor:	<input type="text" value="1"/>	<input type="text" value="1.27"/>
SAAR (mm):	<input type="text" value="883"/>	<input type="text" value="883"/>
M5-60 Rainfall Depth (mm):	<input type="text" value="14"/>	<input type="text" value="17"/>
'r' Ratio M5-60/M5-2 day:	<input type="text" value="0.3"/>	<input type="text" value="0.3"/>
Hydrological region:	<input type="text" value="12"/>	<input type="text" value="12"/>
Growth curve factor 1 year:	<input type="text" value="0.85"/>	<input type="text" value="0.85"/>
Growth curve factor 10 year:	<input type="text" value="1.72"/>	<input type="text" value="1.72"/>
Growth curve factor 30 year:	<input type="text" value="2.13"/>	<input type="text" value="2.13"/>
Growth curve factor 100 years:	<input type="text" value="2.61"/>	<input type="text" value="2.61"/>
Q_{BAR} for total site area (l/s):	<input type="text" value="0.19"/>	<input type="text" value="0.19"/>
Q_{BAR} for net site area (l/s):	<input type="text" value="0.1"/>	<input type="text" value="0.1"/>

Figure 2.4 Storm Water Storage Requirements



Greenfield runoff rate estimation for sites

www.uksuds.com | Greenfield runoff tool

Calculated by:

Site name:

Site location:

Site Details

Latitude:

Longitude:

Reference:

Date:

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (Ciria, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Runoff estimation approach

Site characteristics

Total site area (ha):

Methodology

Q_{BAR} estimation method:

SPR estimation method:

Soil characteristics

	Default	Edited
SOIL type:	<input type="text" value="2"/>	<input type="text" value="2"/>
HOST class:	<input type="text" value="N/A"/>	<input type="text" value="N/A"/>
SPR/SPRHOST:	<input type="text" value="0.3"/>	<input type="text" value="0.3"/>

Hydrological characteristics

	Default	Edited
SAAR (mm):	<input type="text" value="883"/>	<input type="text" value="883"/>
Hydrological region:	<input type="text" value="12"/>	<input type="text" value="12"/>
Growth curve factor 1 year:	<input type="text" value="0.85"/>	<input type="text" value="0.85"/>
Growth curve factor 30 years:	<input type="text" value="2.13"/>	<input type="text" value="2.13"/>
Growth curve factor 100 years:	<input type="text" value="2.61"/>	<input type="text" value="2.61"/>
Growth curve factor 200 years:	<input type="text" value="2.86"/>	<input type="text" value="2.86"/>

Notes

(1) Is Q_{BAR} < 2.0 l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

(3) Is SPR/SPRHOST ≤ 0.3?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

Greenfield runoff rates	Default	Edited
Q _{BAR} (l/s):	<input type="text" value="0.24"/>	<input type="text" value="0.24"/>
1 in 1 year (l/s):	<input type="text" value="0.2"/>	<input type="text" value="0.2"/>
1 in 30 years (l/s):	<input type="text" value="0.51"/>	<input type="text" value="0.51"/>
1 in 100 year (l/s):	<input type="text" value="0.62"/>	<input type="text" value="0.62"/>
1 in 200 years (l/s):	<input type="text" value="0.68"/>	<input type="text" value="0.68"/>

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

Site discharge rates	Default	Edited	Estimated storage volumes	Default	Edited
1 in 1 year (l/s):	2	2	Attenuation storage 1/100 years (m ³):	0	0
1 in 30 years (l/s):	2	2	Long term storage 1/100 years (m ³):	0	0
1 in 100 year (l/s):	2	2	Total storage 1/100 years (m ³):	0	0

This report was produced using the storage estimation tool developed by HR Wallingford and available at www.uksuds.com. The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at <http://uksuds.com/terms-and-conditions.htm>. The outputs from this tool have been used to estimate storage volume requirements. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, CEH, Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

Met Eireann
Return Period Rainfall Depths for sliding Durations
Irish Grid: Basting: 312905, Northing: 229068,

DURATION	Interval	Years															
		2,	3,	4,	5,	10,	20,	30,	50,	75,	100,	150,	200,	250,	500,		
5 mins	6months, 1year,	2.6,	3.8,	4.4,	5.5,	6.2,	6.7,	8.5,	10.7,	12.1,	14.2,	16.0,	17.5,	19.7,	21.5,	23.0,	N/A
10 mins		3.6,	5.3,	6.2,	7.6,	8.6,	9.4,	11.9,	14.9,	16.9,	19.7,	22.3,	24.3,	27.5,	30.0,	32.1,	N/A
15 mins		4.2,	6.2,	7.3,	8.9,	10.1,	11.0,	14.0,	17.5,	19.9,	23.2,	26.3,	28.6,	32.4,	35.3,	37.7,	N/A
30 mins		5.6,	8.1,	9.4,	11.5,	12.9,	14.1,	17.8,	22.0,	24.9,	28.9,	32.6,	35.4,	39.8,	43.3,	46.2,	N/A
1 hours		7.4,	10.5,	12.2,	14.8,	16.6,	18.0,	22.5,	27.7,	31.1,	36.0,	40.4,	43.8,	49.0,	53.1,	56.6,	N/A
2 hours		9.7,	13.7,	15.9,	19.1,	21.3,	23.0,	28.5,	34.8,	39.0,	44.9,	50.1,	54.1,	60.4,	65.2,	69.3,	N/A
3 hours		11.4,	16.0,	18.5,	22.1,	24.6,	26.5,	32.8,	39.8,	44.5,	51.0,	56.8,	61.3,	68.2,	73.5,	78.0,	N/A
4 hours		12.9,	17.9,	20.6,	24.6,	27.3,	29.4,	36.2,	43.8,	48.8,	55.9,	62.1,	66.9,	74.3,	80.1,	84.8,	N/A
6 hours		15.1,	20.9,	24.0,	28.5,	31.5,	33.9,	41.5,	50.1,	55.7,	63.5,	70.4,	75.8,	83.9,	90.3,	95.5,	N/A
9 hours		17.8,	24.4,	27.9,	33.0,	36.5,	39.1,	47.7,	57.3,	63.5,	72.2,	79.9,	85.8,	94.8,	101.7,	107.5,	N/A
12 hours		20.0,	27.3,	31.1,	36.7,	40.4,	43.3,	52.7,	63.0,	69.8,	79.1,	87.4,	93.7,	103.3,	110.8,	116.9,	N/A
18 hours		23.6,	31.8,	36.2,	42.5,	46.8,	50.0,	60.5,	72.1,	79.6,	90.0,	99.1,	106.1,	116.7,	124.9,	131.6,	N/A
24 hours		26.4,	35.5,	40.3,	47.2,	51.9,	55.4,	66.8,	79.3,	87.3,	98.5,	108.3,	115.8,	127.2,	136.0,	143.2,	168.0
2 days		32.9,	43.3,	48.6,	56.4,	61.5,	65.3,	77.7,	91.1,	99.7,	111.5,	121.8,	129.6,	141.4,	150.4,	157.7,	182.9
3 days		38.1,	49.5,	55.3,	63.7,	69.2,	73.4,	86.6,	100.8,	109.9,	122.2,	132.9,	141.1,	153.3,	162.6,	170.2,	196.1
4 days		42.7,	55.0,	61.2,	70.1,	76.0,	80.4,	94.3,	109.2,	118.7,	131.6,	142.7,	151.2,	163.8,	173.4,	181.2,	207.8
6 days		50.6,	64.5,	71.4,	81.3,	87.7,	92.5,	107.7,	123.8,	134.0,	147.9,	159.7,	168.7,	182.1,	192.2,	200.5,	228.3
8 days		57.7,	72.8,	80.3,	91.0,	97.9,	103.1,	119.4,	136.6,	147.4,	162.0,	174.5,	183.9,	198.0,	208.6,	217.2,	246.2
10 days		64.2,	80.4,	88.4,	99.9,	107.2,	112.7,	129.9,	148.1,	159.4,	174.8,	187.9,	197.7,	212.3,	223.4,	232.3,	262.4
12 days		70.2,	87.5,	96.0,	108.1,	115.8,	121.6,	139.7,	158.7,	170.6,	186.6,	200.2,	210.3,	225.6,	237.0,	246.2,	277.2
16 days		81.4,	100.5,	109.9,	123.2,	131.6,	138.0,	157.6,	178.1,	190.9,	208.0,	222.5,	233.4,	249.6,	261.7,	271.5,	304.2
20 days		91.8,	112.6,	122.7,	137.0,	146.1,	152.9,	173.9,	195.7,	209.3,	227.4,	242.8,	254.3,	271.3,	284.0,	294.3,	328.6
25 days		103.9,	126.6,	137.6,	153.0,	162.8,	170.2,	192.7,	216.0,	230.5,	249.8,	266.1,	278.2,	296.2,	309.6,	320.4,	356.5

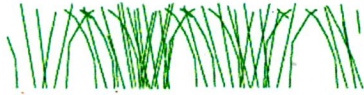
NOTES:
N/A Data not available
These values are derived from a Depth Duration Frequency (DDF) Model
For details refer to:
'Fitzgerald D. L. (2007), Estimates of Point Rainfall Frequencies, Technical Note No. 61, Met Eireann, Dublin',
Available for download at www.met.ie/climate/dataproducts/Estimation-of-Point-Rainfall-Frequencies_TN61.pdf

Figure 2.5 Green Field Runoff Rate

APPENDIX C

Proposed Sedum Green Roof Detail

Legend – Green Roof Build Up.



Precultivated Sedum Blanket.



Extensive Roof Garden Soil Mix 50mm.



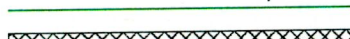
VLF150 Filtration Fleece 1.5mm thick.



DE25 Drainage & Reservoir Layer 25mm.



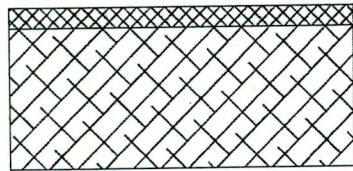
VLU300 Protective / Reservoir Fleece 2.5mm.



4mm Unosint Root Resistant Cap Sheet.



4MM TOP/S Base Sheet.



100mm Paratorch Insulation Board.



2mm Vapobar Vapour Control Layer.

IMPORTANT NOTE.

The combined thickness of all the elements used in the green roof build up, from top of decking to top of soil layer is 215mm.

Sedum plants will typically reach heights of 100 – 150mm.

Figure 2.6 Sedum Green Roof Buildup



Rainwater Attenuation with Moy Materials Ltd. Diadem 150 Extensive Green Roof System.

The ability of the Diadem Extensive Green Roof to absorb rainfall is a function of many dynamic factors, the most important of which are the elements used in the green roof build up and their specific ability to absorb rainfall.

The standard Diadem 150 Extensive Green Roof constructed utilising the Moy Materials Ltd. pre-cultivated Sedum Blanket, has a maximum rainwater retention capacity of 44 litres per M2. Each 1mm of rainfall recorded is the equivalent of 1 litre per M2.

Rainfall Attenuation Capacity of Moy Diadem 150 Extensive Green Roof.

Rainfall Intensity (mm / hour).	Attenuation Time (Minutes).
25	105
75	35

These figures may be augmented by utilising larger capacity reservoir boards, heavier protection and filtration fleeces and deeper zones of growing media.

Maximum Water Storage Capacity Moy Materials Diadem Extensive Green Roof Elements:

• Sedum Blanket 20mm	9	Lt / M2.
• Growing Media 50mm	22.5	Lt / M2.
• VLF200 Filtration Fleece	1.2	Lt / M2.
• DE25 Reservoir & Drainage Board	10	Lt / M2.
• VLU300 Protection Fleece	1.8	Lt / M2.

Unit K, South City Business Park, Whitestown Way, Tallaght, Dublin 24.
Ph. 01 451 9077 Fax. 01 450 0033

E Mail : info@moymaterials.com Website: www.moymaterials.com

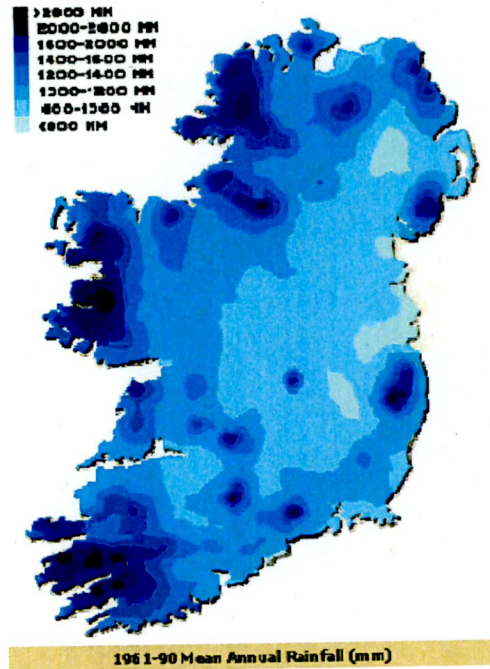
Figure 2.7 Sedum Green Roof Specification

APPENDIX D

Rainfall Amounts

Data on Rainfall

© MET ÉIREANN, Glasnevin Hill, Dublin 9, Ireland.



How Often Does it Rain?

The general impression is that it rains quite a lot of the time in Ireland but in fact two out of three hourly observations will not report any measurable rainfall. The average number of wet days (days with more than 1mm of rain) ranges from about 150 days a year along the east and south-east coasts, to about 225 days a year in parts of the west.

How Heavy is the Rain? Unlike the rain in many other countries, especially in the tropics, average hourly rainfall amounts in Ireland are quite low, ranging from 1 to 2mm. Short-term rates can of course be much higher: for example, an hourly total of 10mm is not uncommon and totals of 15 to 20mm in an hour may be expected to occur once in 5 years. *Hourly totals exceeding 25mm are rare in this country and when they do occur they are usually associated with heavy thunderstorms.*

Rainfall in Ireland - Download ['2008 Summer Rainfall in Ireland'](#) [PDF] Report

Most of the eastern half of the country has between 750 and 1000 millimetres (mm) of rainfall in the year. Rainfall in the west generally averages between 1000 and 1250 mm. In many mountainous districts rainfall exceeds 2000mm per year. The wettest months, in almost all areas are December and January. April is the driest month generally across the country. However, in many southern parts, June is the driest. Hail and snow contribute relatively little to the precipitation measured.

Figure 2.8 Rainfall Rates

APPENDIX E

Proposed Drainage and Watermain Layout

APPENDIX F

**Appraisal of existing 450mm stormwater drain
at the rear of No124 Templeville Drive, Templeogue, Dublin 6W**

**EXISTING 450MM UNUSED CULVERT
APPRAISAL REPORT**

**For a 4no dwelling development
at Templeville Drive, Templeogue, Dublin 6W**

1. Executive Summary

A South Dublin county council unused culvert traverses the rear of No 124 Templeville Drive. The drawing information relating to the culvert is limited on the Irish water services available. It shows the culvert terminating at the inside boundary of No 124/126. See below

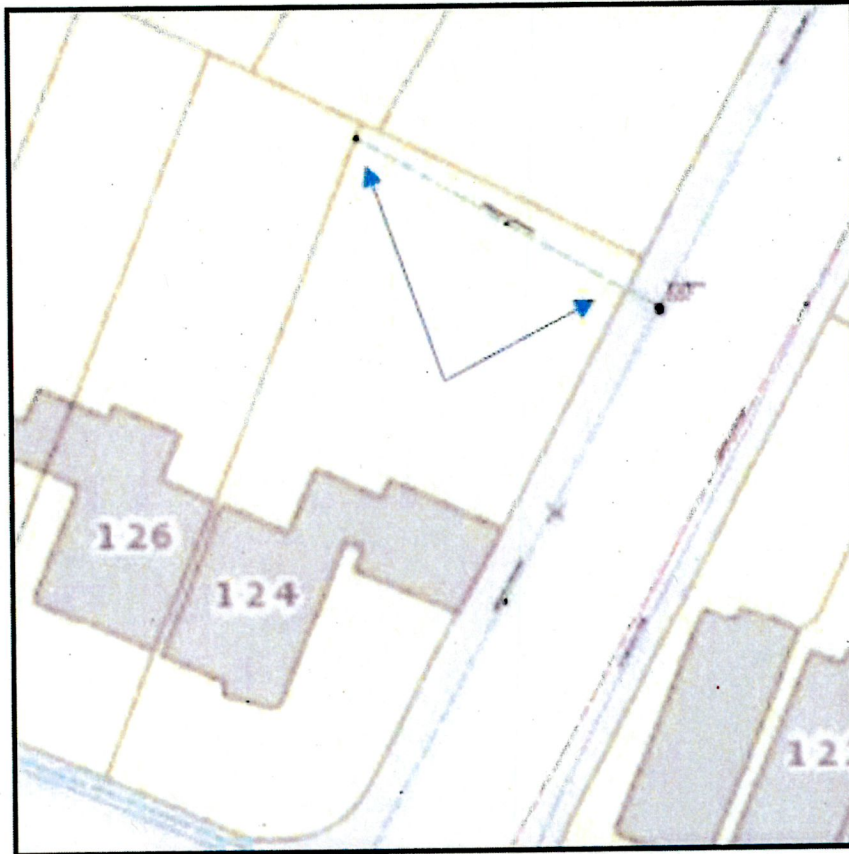


Fig. 1 - Extract from Council record map.

To facilitate the construction of a new dwelling house in the rear of No 124 the diversion of the unused culvert is required. The proposed diversion entails a slight adjustment to the pipe alignment as it enters the site to provide a wayleave for future access for maintenance. (as illustrated below)

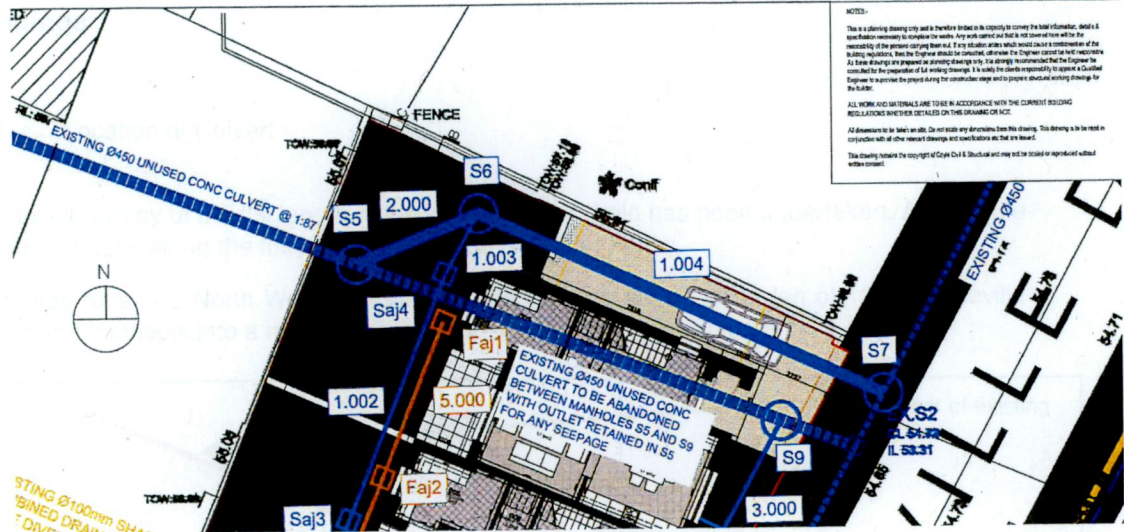


Fig. 2 - Proposed diversion.

A previous application proposed a diversion to the south of the proposed house which entailed a number of bends. The current diversion to the north of the proposal dwelling will have negligible effect to the hydraulic capacity of the drain.

Our assessment of the culvert has shown that it terminates in the middle of a rear garden at 135.5 metres from the connecting manhole on Templeville Drive, it has no incoming connections and has a significant amount of root growth at the base of the pipe. It is very clear that the drain has not been maintained by the council and seems to be only servicing ground water which is infiltrating the culvert through the joints in the concrete pipes.

It is our opinion that the culvert was placed during the construction of the Templeville estate as a temporary measure to accommodate an old agricultural ditch which has now been fully removed.

It is clear from our investigations that the culvert provides no service to the local houses or road surfaces. The culvert may be acting as a DeFacto attenuation device during a surcharging of the network. If this is the case, the proposed diversion of the culvert will not affect the capacity of the culvert as an attenuation device.

Section 7 of the Greater Dublin Regional Code of Practice for Drainage Works sets out clearly the requirements necessary for the diversion of any culvert. Agreement is required from the local authority with the main proviso being no effect to the hydraulic capacity of the culvert or the ability to maintain the pipe. The culvert in question has no connections, no branch connections or the ability to connect to any drain, it terminates in the middle of a garden, is infested with roots and debris, has numerous structures built over or in very close proximity and is not being maintained.

In our opinion the pipe is not providing the normal function of a typical culvert and the size of the pipe does not reflect its true use and is exaggerating its importance.

It is our opinion that the proposed diversion will not affect its hydraulic capacity of the culvert and the provision of an acceptable way leave is being provided.

Given our findings. It is our opinion that the council in this case is being unreasonable in not agreeing to the diversion of the drain to allow the development of badly need housing.



**Fig 6 - Extract from google maps 3D view with the culvert line plotted,
running under existing buildings**

As can be seen in the above aerial view there are a significant number of existing structures over or within a 6 metre wayleave.

2.2 Camera Survey – Observations and Review

1. No sign of any connections into the pipe
2. Significant root growth into the pipe
3. Clearly no maintenance of the pipe occurring
4. Debris noted in the pipe
5. Pipe terminates at 135.5m metres in the middle of a rear garden
6. Only ground water ingress into the pipe



Fig. 7 - Snapshot from Camera Survey at termination.

2.3 Historical Review

We have examined an old OS map for the area and have identified that a now removed agricultural ditch aligns with the pipe. It is our opinion that there is a relationship between the old ditch and the pipe. As noted above there are no connections into the pipe and it terminates in an arbitrary fashion in the middle of a garden. It is our opinion that the pipe was probably installed during the construction of the estate to allow a temporary continuation of the ditch during the construction phasing of the Templeville drive.

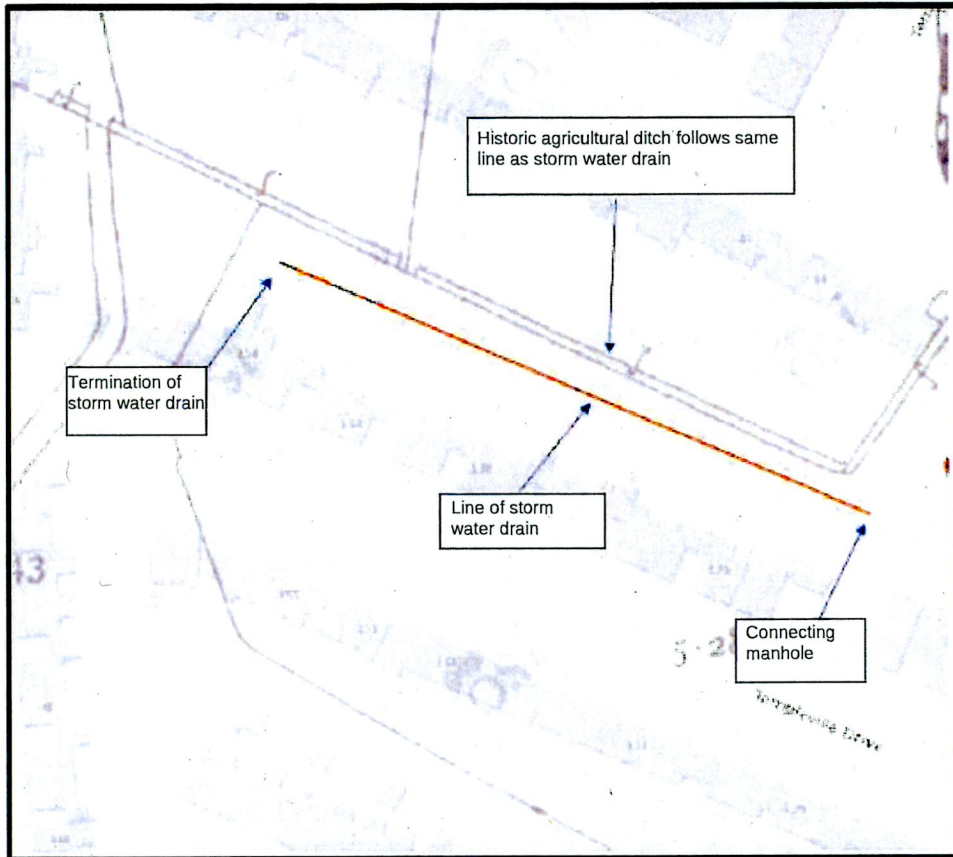


Fig 8. - Overlay of historic OS Map, Current OS Map and alignment of the pipe.

2.4 Camera Survey Snap Shots at Intervals Along the Culvert

The snapshots of the camera survey shows the condition of the pipe at various intervals along its length.



Distance 3.1m Standing water. No connection.



Distance 9.3m Standing water. No connections



Distance 14.5m Standing water. No connections



Distance 19.1m Standing water. No connections



Distance 37.2m

Debris in pipe. No connections



Distance 44.0m.

Standing water, No connections



Distance 27.3m

Debris & standing water. No connections



Distance 33.8m

Debris in pipe. No connections



Distance 37.2m Debris in pipe. No connections



Distance 44.0m. Standing water, No connections



Distance 50.7m

No Connections



Distance 57.0m

No Connections



Distance 62.1m

Extensive roof growth. No Connections



Distance 67.0m

Extensive roof growth. No Connections



Distance 70.6m

Extensive root growth. No Connections



Distance 71.1m

No Connections



Distance 102.1m Extensive root growth. No Connections



Distance 103.8m Extensive root growth. No Connections



Distance 122.8m. Root growth. No Connections



Distance 129.1m No Connections



Distance 131.5m Debris in pipe. No Connections



135m Termination of pipe. Blocked up with brick, block and concrete.

APPENDIX G

Correspondence with SDCC Drainage

From: Ronan Toft <rtoft@SDUBLINCOCO.ie>

Sent: 27 January 2020 14:46

To: ciaran@obaconsulting.ie

Cc: 'alan obaconsulting.ie' <alan@obaconsulting.ie>; Chris Galvin <cgalvin@SDUBLINCOCO.ie>; Brian Harkin <bharkin@SDUBLINCOCO.ie>

Subject: RE: coleman - draft drainage drawings

Hi Ciaran,

Apologies for the delay in getting back to you. Having reviewed this proposal there doesn't appear to be any major objections at this time.

If you are re-submitting can you submit the findings of the CCTV survey you have carried out on the existing 450mm storm sewer and also adhere to the fact that current surcharging / attenuation volumes in the existing 450mm storm sewer won't be adversely affected by the diversion.

Kind regards,

Ronan Toft

Assistant Engineer
Environment, Water and Climate Change
South Dublin County Council
County Hall, Tallaght, Dublin 24 D24 YNN5
| T: +353 1 414 9000 | Ext: 4333
| email rtoft@sdublincoco.ie

<image001.png>

Please consider the Environment before printing this mail.
Smaoinigh ar an timpeallacht sula ndéanann tú an ríomhphost seo a phriontáil.

From: ciaran@obaconsulting.ie

Sent: 17 January 2020 12:04

To: Ronan Toft <rtoft@SDUBLINCOCO.ie>; Chris Galvin <cgalvin@SDUBLINCOCO.ie>

Cc: 'alan obaconsulting.ie' <alan@obaconsulting.ie>

Subject: coleman - draft drainage drawings

Hi Chris, Ronan

Happy new year.

Further to our meeting prior to the Christmas break we now attach as requested an updated drainage drawing with the relocation of the third house to allow a more gentle and shorter diversion of the 450mm pipe in the rear. We have allowed for a 6000mm wayleave. Can you review the proposal and revert with any comments and your earlier convenience.

Also please find attach email memo of meeting notes between Michael McKenna (agent) and Michael McAdam in 2017 regarding the diversion of the sewer

Kindest regards

Ciaran

Ciaran OBrien
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Managing Director

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Is eolas faoi rún an t-eolas atá sa ríomhphost seo agus d'fhéadfadh go mbeadh sé faoi phribhléid ó thaobh an dlí de. Is don té ar seoladh chuige/chuici agus dósan/dise amháin an t-eolas. Ní ceadmhach do dhuine ar bith eile rochtain a bheith aige/aici ar an ríomhphost seo. Murar duit an ríomhphost seo tá nochtadh, cóipeáil, dáileadh ná aon ghníomh eile a dhéanamh nó aon ghníomh eile a fhágáil gan déanamh ar iontaoibh an ríomhphoist seo toirmisce orthu agus d'fhéadfadh siad sin a bheith neamhdhleathach. Má fuair tú an teachtaireacht leictreonach seo trí earráid téigh i dteagmháil, le do thoil, leis an té a sheol í nó le postmaster@sdblincoco.ie. Glanadh an teachtaireacht seo le bogearraí Frithvíreas.

APPENDIX H

Proposed Mircodrainage Detail

Templeville Drive
Pipe Network and Chamber Schedules

Document Ref: Surface and Foul drainage.xlsx

Project: Templeville Drive
 Zone: Surface and Foul Drainage
 Description: As shown
 Network: As shown
 Area:

Schedule Rev.: P0
 Drawing Ref.: P0
 (including rev.)

Issued: MJ
 Checked: MJ
 Approved: PC
 Name: MJ
 Date: 01/12/2022
 Date: 01/12/2022

Network	Pipe Details						Upstream				Downstream				Notes	
	Pipe Ref.	Length (m)	Gradient (1:xxx)	Internal Dia. (mm)	Bedding Type ¹	Chamber Ref.	Chamber Type	Cover Type ⁴	Pipe Invert Level (mAOD)	Cover Level (mAOD)	Pipe Cover Depth (m)	Chamber Ref.	Pipe Invert Level (mAOD)	Cover Level (mAOD)		Pipe Cover Depth (m)
Surface Drainage	1.000	8.678	58.5	100	Type S	Saj1	Access Junction	C1	54.239	55.220	0.881	Saj2	54.091	55.230	1.039	
	1.001	10.093	58.5	100	Type S	Saj2	Access Junction	C1	54.091	55.230	1.039	Saj3	53.919	55.200	1.181	
	1.002	10.095	58.5	100	Type S	Saj3	Access Junction	C1	53.919	55.200	1.181	Saj4	53.747	55.100	1.253	
	1.003	2.627	58.5	100	Type S	Saj4	Access Junction	C1	53.747	55.100	1.253	S6	53.702	55.100	1.298	
	2.000	5.091	25.6	450	Type S	S5	Type C	C1	53.800	55.100	0.850	S6	53.601	55.100	1.049	
	1.004	17.039	407.7	450	Type S	S6	Type C	C1	53.352	55.100	1.288	S7	53.310	54.720	0.960	
	3.000	8.936	58.5	100	Type S	Saj8	Access Junction	C1	53.553	54.850	1.197	S9	53.400	54.900	1.400	
	4.000	14.239	58.5	100	Type S	Saj10	Access Junction	C1	53.850	55.150	1.200	Saj11	53.607	55.100	1.393	
	4.001	2.992	58.5	100	Type S	Saj11	Access Junction	C1	53.607	55.100	1.393	S12	53.555	54.900	1.245	
	5.000	6.409	44.1	100	Type S	Faj1	Access Junction	C1	54.417	55.200	0.683	Faj2	54.271	55.150	0.779	
Foul Drainage	5.001	12.956	44.1	100	Type S	Faj2	Access Junction	C1	54.271	55.150	0.779	Faj5	53.977	55.250	1.173	
	6.000	5.206	44.1	100	Type S	Faj3	Access Junction	C1	54.176	55.150	0.874	Faj4	54.058	55.220	1.062	
	6.001	3.435	42.6	100	Type S	Faj4	Access Junction	C1	54.058	55.220	1.062	Faj5	53.977	55.250	1.173	
	5.002	4.631	42.6	100	Type S	Faj5	Access Junction	C1	53.977	55.250	1.173	Faj6	53.869	55.200	1.231	
	5.003	6.802	42.6	100	Type S	Faj6	Access Junction	C1	53.869	55.200	1.231	F7	53.709	54.900	1.091	
	5.004	11.331	58.4	225	Type S	F7	Type C	C1	53.584	54.900	1.091	F8	53.390	54.820	1.205	

Notes

- All covers to new chambers shall be positioned to be opened and the chamber accessed without obstruction. Chamber covers to be orientated to avoid obstructing access where located in close proximity to a safety barrier, where applicable.
- All man entry chambers shall have access arranged such that the user faces oncoming traffic when entering and exiting.
- Pipe Cover Depth is distance between finished ground surface level and pipe soffit level.



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