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26 July 2023

South Dublin City Council
County Hall, Tallaght
Dublin 24
D24 A3XC

RE: Development within the Townlands of Cappagh, Clonburris Little Kishoge, Co. Dublin REG. REF. SDZ22A/0017

Dear Sir/Madam

In response to a Planning Permission Grant issued for the subject development, please find below and enclosed our response to compliance Condition 11 related to the Civil Engineering design. Note that where relevant, additional information may be provided elsewhere by other members of the design team.

Item no. 11 SuDS

- a) Prior to commencement of development, the applicant shall submit a drawing and report to show what the discharge rate in litres/second is from proposed site. The applicant shall show how and where discharge rate of surface water is proposed for the development.
- b) Prior to commencement of development, the applicant shall submit a revised drawing showing the surface water layout that includes the location and method of discharge rate from proposed site. Show what the discharge rate for proposed site is. The applicant shall show on the drawing what surface water attenuation is provided in m3 and where surface water attenuation is provided.
- c) Prior to the commencement of development, the applicant shall provide a revised layout / landscaping plan that indicated additional e SuDS (Sustainable Drainage Systems) in proposed development such as a Green Roof, Swales, permeable paving and other such SuDS. Examples of SuDS can be found in the SDCC SuDS Guide at: [sdcc-sustainable-drainage-explanatory-design-and-evaluation-guide.pdf](#). The applicant shall provide additional details including details of filter strips, road edge detail showing how water accesses the swales/tree pits and bioretention areas, further



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detail on Tree pits. The applicant shall also demonstrate the amenity and biodiversity value of SuDS measures.

- d) The applicant shall contact water services and the Public Realm Department in SDCC to discuss above issues before resubmitting above documents and drawing. REASON: In the interests of public health, the proper planning and sustainable development of the area and in order to ensure adequate water supply and drainage provision

DBFL Response

- a) As shown on drawing CLB-T3-94-SW-DTM-DR-DBFL-CE-1311 submitted for the Further Information request and attached in Appendix A of this compliance response, surface water from the subject site discharges into the adjacent Clonburris T1 surface water sewer network. Refer to **Figure 1** below which shows an extract from the drainage layout and the exact location where surface water discharges from the subject site.

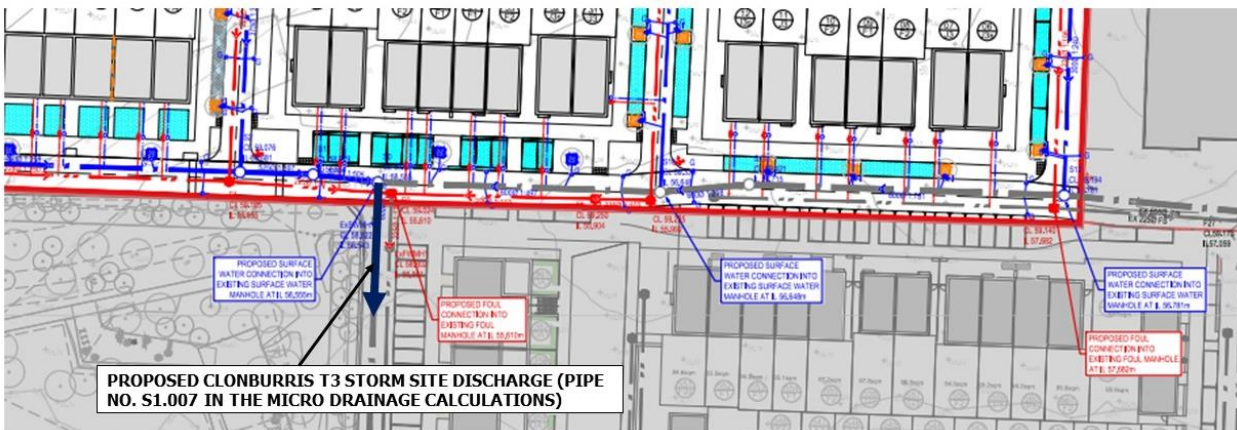


Figure 1 - Clonburris T3 Surface Water Discharge Location

As included in Appendix B of the Infrastructure Design Report, the surface water discharge from the proposed development has been calculated using the Micro Drainage Network Analysis software. Refer to figure 2 for an extract from the surface water sewer network analysis. The site discharge during the critical storm (including additional 20% for climate change) is 450.2l/s.



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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Event	Duration (mins)	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m ³)
S4.002	S10-2	15 minute 100 year Winter I+20%	15	59.017	58.111	0.478	0.000
S4.003	S10-1	15 minute 100 year Winter I+20%	15	59.814	58.012	0.461	0.000
S6.000	S12-3	15 minute 100 year Winter I+20%	15	59.300	57.986	-0.064	0.000
S6.001	S12-2	15 minute 100 year Winter I+20%	15	59.353	57.822	-0.058	0.000
S6.002	S12-1	15 minute 100 year Winter I+20%	15	59.463	57.668	0.096	0.000
S7.000	S13	15 minute 100 year Winter I+20%	15	59.227	57.409	-0.067	0.000
S6.003	S12	15 minute 100 year Winter I+20%	15	59.136	57.409	0.028	0.000
S6.004	S11	15 minute 100 year Winter I+20%	15	59.420	57.389	0.055	0.000
S4.004	S10	15 minute 100 year Winter I+20%	15	59.336	57.367	0.119	0.000
S1.007	SExMH	15 minute 100 year Winter I+20%	15	59.056	57.310	0.153	0.000

PN	US/MH Name	Flow / Overflow Cap. (l/s)	Maximum Vol (m ³)	Pipe Flow (l/s)	Status
S4.002	S10-2	1.05	1.480	77.9	SURCHARGED
S4.003	S10-1	1.43	1.707	98.5	SURCHARGED
S6.000	S12-3	0.85	0.177	31.7	OK
S6.001	S12-2	0.73	0.642	58.1	OK
S6.002	S12-1	1.21	3.280	78.9	SURCHARGED
S7.000	S13	0.01	0.933	3.3	OK
S6.003	S12	0.32	11.477	66.7	SURCHARGED
S6.004	S11	0.36	9.911	97.7	SURCHARGED
S4.004	S10	0.73	14.353	203.8	SURCHARGED
S1.007	SExMH	2.12	15.949	450.2	SURCHARGED

PROPOSED CLONBURRIS T3 STORM SITE DISCHARGE

Figure 2 - Clonburriss T3 Surface Water Discharge Rate

b) As detailed in the information submitted for planning, there is no detention basin included in this application as the subject development falls within surface water sub-catchment 4B of the Clonburriss SDZ to be attenuated regionally (ATN07) as required by the Clonburriss SDZ. The regional attenuation basin ATN07 will be provided within the permitted adjacent Clonburriss Joint Infrastructure Works (planning ref SDZ20A/0021).

A comparison between the discharge allowed for from the proposed development to be attenuated within the separately permitted regional attenuation basin ATN 07 and the actual discharge is provided in section 3.4.1 of the Infrastructure Design Report.



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This shows that 1.87ha of impermeable area contribution from this sub-catchment (4B) has been assumed for regional attenuation sizing and only 1.815ha is proposed from the subject development, which means the development is well within the designed limits.

- c) Green roofs, swales, SuDS tree pits and bio-retention areas/rain gardens are provided as part of a suite of proposed SuDS measures shown on drawings CLB-T3-94-SW-DTM-DR-DBFL-CE-1321 and CLB-T3-94-SW-DTM-DR-DBFL-CE-1311 attached in Appendix A of this compliance response. The functioning of these SuDS elements are also described in section 3.3 of the Infrastructure Design Report as well as an evaluation against Water Quality, Biodiversity and Amenity.

The Landscape Masterplan 22234-1-100 and SuDS Layout 22234-1-108 is enclosed as part of this compliance submission showing where SuDS features have been proposed.

- d) DBFL met with Brian Harkin from SDCC Drainage on 20/06/2023 to discuss drainage related compliance conditions for the subject development. Responses to all drainage related compliance conditions are as agreed with SDCC drainage.

Yours sincerely

Dieter Bester
Chartered Engineer
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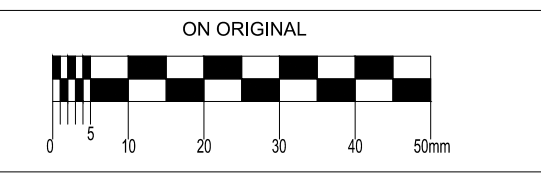
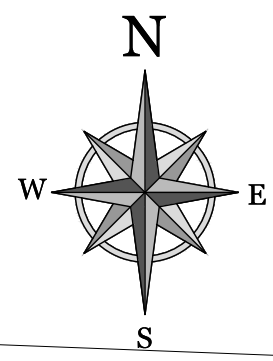
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Appendix A

DBFL Consulting Engineers Limited
trading as DBFL Consulting Engineers

VAT. No. IE6355828Q
Company No. 335828





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- NOTES:
1. ALL DRAWINGS TO BE CHECKED BY CONTRACTOR ON SITE AND ENGINEER INFORMED OF DISCREPANCIES BEFORE WORK COMMENCES.
 2. ALL LEVELS ARE IN METRES AND ARE RELATED TO ORDNANCE DATUM.
 3. CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF PAVEMENT LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORKS ON SITE.
 4. ALL NEW FOUL SEWER INFRASTRUCTURE SHALL BE LAID IN ACCORDANCE WITH IRISH WATER WASTEWATER INFRASTRUCTURE STANDARD DETAILS CONSTRUCTION REQUIREMENTS FOR SELF-LAY DEVELOPMENTS DECEMBER 2017 (REVISION 63) DOCUMENT: IW-COS-6309-01.
 5. ALL FOUL SEWERS TO BE UPVC WITH IS EN 1401 2009/2012 UNLESS INDICATED OTHERWISE.
 6. THIS DRAWING IS FOR PLANNING PURPOSES ONLY.
 7. MANHOLE COVER LEVELS ARE TO CONFORM WITH FINISHED ROAD AND PATH LEVELS.
 8. WHERE COVER TO PIPE IS LESS THAN 1200mm (ROAD/PATH/VERGE) OR 900mm (OPEN SPACE) SURROUND PIPE IN MINIMUM 150mm CONCRETE AS STD-WW-06.
 9. WHERE INDICATED ALL DISTANCES FROM DIVERTED SEWER TO ADJACENT STRUCTURES ARE TO CENTRELINE OF NEW SEWER.
 10. ALL NEW MANHOLES TO BE TO STD-WW-10 UNO.

- LEGEND
- SITE BOUNDARY
 - CHANGE IN BUILDING FLOOR LEVELS
 - PROPOSED PERMEABLE PAVING
 - GREEN ROOF
 - BIORETENTION AREA / RAIN GARDEN
 - EXISTING FOUL SEWER
 - PROPOSED UPVC FOUL DRAINAGE
 - PROPOSED FOUL WATER INSPECTION CHAMBER (STD-WW-13) AND HOUSE DRAIN
 - EXISTING SURFACE WATER SEWER
 - PROPOSED UPVC SURFACE WATER SEWER
 - PROPOSED SURFACE WATER INSPECTION CHAMBER AND 150mmØ UPVC HOUSE DRAIN
 - PROPOSED GULLY
 - PROPOSED SURFACE WATER DRAIN MANHOLE
 - KERB INLET
 - S/D/S TREE PIT (TYPE 1 - GULLY CONNECTION)
 - S/D/S TREE PIT (TYPE 2 - DIRECT DISCHARGE)
 - PROPOSED FILTER DRAIN
 - PROPOSED ACO DRAIN
 - PROPOSED SWALE WITH GRATED MANHOLE COVER (BRIO BY EJ OSA)



LINK ROAD AND BRIDGE SUBJECT TO SEPARATE CONTRACT.

DEVELOPMENT SUBJECT TO SEPARATE PLANNING APPLICATION

PROPOSED SURFACE WATER CONNECTION INTO EXISTING SURFACE WATER MANHOLE AT IL 56.555m

PROPOSED FOUL CONNECTION INTO EXISTING FOUL MANHOLE AT IL 55.610m

PROPOSED SURFACE WATER CONNECTION INTO EXISTING SURFACE WATER MANHOLE AT IL 56.648m

PROPOSED SURFACE WATER CONNECTION INTO EXISTING SURFACE WATER MANHOLE AT IL 56.787m

PROPOSED FOUL CONNECTION INTO EXISTING FOUL MANHOLE AT IL 57.682m

rev	date	description	by	chkd.
4	12-04-23	ISSUED FOR FURTHER INFORMATION	RMC	DCB
3	25-11-22	ISSUED FOR PLANNING	DKE	DCB
2	04-11-22	ISSUED FOR PLANNING	DKE	DCB
1	21-10-22	FINAL PLANNING DRAFT	BS	DCB
0	10-10-22	ISSUED FOR PLANNING	BS	DCB

purpose	acceptance
P1 - INFORMATION	S - ISSUED

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project ref.
CLONBURRIS TILE 3

drawing title
DRAINAGE LAYOUT

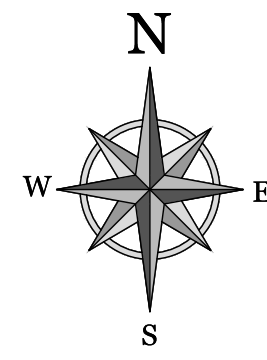
client
CAIRN HOMES PROPERTIES LTD

designed by	author	scale	sheet size
DCB	BS	1:500	A1

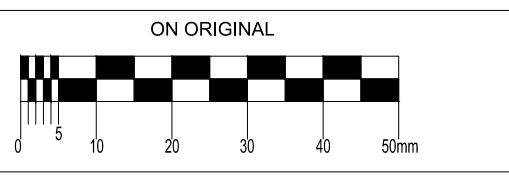
drawing no. CLB-T3-94-SW-DTM-DR-DBFL-CE-1311

revision 4

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No CYAL50276985
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GOVERNMENT OF IRELAND



CATCHMENT CHARACTERISTICS			
SURFACE TYPE	GROSS AREA (ha)	RUNOFF CO-EFFICIENT	IMPERMEABLE AREA (ha)
ROOFS	0.508	0.95	0.482
GREEN ROOFS	0.098	0.80	0.079
HARD SURFACING (ROADS, FOOTPATHS)	0.941	1.00	0.941
PERMEABLE PAVING	0.204	0.70	0.143
PUBLIC OPEN SPACE (SOFT LANDSCAPING)	1.699	0.10	0.170
TOTAL	3.450		1.815



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NOTES:

LEGEND	
	SITE BOUNDARY
	HARD LANDSCAPING (ROADS, FOOTPATHS)
	PERMEABLE PAVING
	PUBLIC OPEN SPACE (SOFT LANDSCAPING)
	GREEN ROOFS
	ROOFS
	PROPOSED SWALE. REFER TO DRAINAGE LAYOUT (DRAWING CLB-T3-94-SW-DTM-DR-DBFL-CE-1311) FOR DETAILS



rev	date	description	by	chkd.
4	12-04-23	ISSUED FOR PLANNING	RMC	DCB
3	25-11-22	ISSUED FOR PLANNING	DKE	DCB
2	04-11-22	ISSUED FOR PLANNING	DKE	DCB
1	21-10-22	FINAL PLANNING DRAFT	BS	DCB
0	10-10-22	ISSUED FOR PLANNING	BS	DCB

purpose P1 - INFORMATION acceptance S - ISSUED



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project ref. CLONBURRIS TILE 3
 drawing title SURFACE WATER CATCHMENT PLAN
 client CAIRN HOMES PROPERTIES LTD

designed by	author	scale	sheet size
DCB	BS	1:500	A1
drawing no.	revision		
CLB-T3-94-SW-DTM-DR-DBFL-CE-1321	4		

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