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22 November 2021

Christophe Teevan
Cairn Homes
7 Grand Canal,
Grand Canal Street Lower,
Dublin 2
D02KW81

RE: 210026 - Detached House, Main Street, Newcastle
Cairn Homes Properties Ltd

Planning Reference: SD21A/0247

Dear Christophe,

In response to the Request for Further Information for the above referenced site dated 28th October 2021 we set out below our response to the engineering items within same.

The numbering system set out below matches that presented in the Further Information Request.

Further Information Item 4

The Drainage and Water Services Department has requested the following further information: (i) Clarify if a soakaway is proposed. If a soakaway is proposed the Applicant should submit a report showing percolation test results for proposed soakaway as per BRE Digest 365 Standards. If a soakaway is proposed the applicant is requested to submit a drawing showing design details of proposed soakaway as per BRE Digest 365 Standards. (ii) Clarify if surface water attenuation is proposed. If surface water attenuation is proposed the applicant is requested to submit a drawing showing where a flow control device will be located on the surface water network. It should also be demonstrated what surface water restriction is proposed if this method of flow control is proposed and the Applicant should show the overflow connection up to and including the point of connection to the public surface water sewer. The drawing should also include the location of all Aj's, manholes, pipe size, material type and direction of flow. (iii) The applicant is requested to demonstrate the inclusion of water butts in proposed development as part of SuDS (Sustainable Drainage System).

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**Response to Further Information Item 4**

- i. DBFL Consulting Engineers undertook an infiltration tests at the subject site. The infiltration test was undertaken in accordance with BRE Digest 365 and the results are provided in Appendix A. The soakaway test failed in accordance with the BRE Digest 365 as the water level dropped too slowly to record an infiltration rate. Notwithstanding this, some infiltration did occur at the soakaway location albeit at a slow rate.

A soakaway is still proposed in the rear garden for the rear sloping roof which will promote some infiltration and provide storage. A high-level overflow is proposed to the permeable paving at the front of the house and a further high-level overflow is proposed to the public surface water sewer. Permeable paving is proposed for the front driveway. A rainwater butt is also proposed to reduce outflow to the public system.

The proposed soakaway, permeable paving and rainwater butt will ensure that the outflow to the public surface water sewer is minimal and only occurs in high intensity rainfall events.

DBFL drawing 210026-DBFL-CS-SP-DR-C-1250 Site Services Layout shows the design details of the proposed soakaway, rainwater butts and permeable paving.

- ii. It is proposed to attenuate surface water within the curtilage of the proposed dwelling within the permeable paving, rainwater butts and soakaway as shown on drawing 210026-DBFL-CS-SP-DR-C-1250 Site Services Layout. A high-level overflow has been proposed to the public sewer for high intensity rainfall events.

A flow control device is not proposed as the site is for a single private dwelling with a site area of approximately 0.053ha. Based on an allowable outflow of 2l/s/ha this would equate to a flow of 0.1 l/s for the subject site. There are no suitable and maintainable flow control devices available for this flow. As outlined above, a SuDs solution including rainwater butts, a soakaway and permeable paving have been proposed as an alternative and practical solution to reduce outflow to the public surface water sewer. The proposed solution does not include any mechanical parts (unlike a hydrobrake) which are less likely to be maintained when part of a private dwelling.

Surface water collector pipes have been designed in accordance with Part H Building Regulations and the recommendations of the 'Greater Dublin Strategic Drainage Study' (GSDSDS).

See drawing 210026-DBFL-CS-SP-DR-C-1250 Site Services Layout for the location of all A's, manholes, pipe sizes, material type and direction of flow.

- iii. Water butts are proposed to the rear of the house. See drawing 210026-DBFL-CS-SP-DR-C-1250 Site Services Layout.

DBFL Drawing Approval stamp  
Issued by DBFL Consulting Engineers

DBFL No. 2015/0102  
Certificate No. 524872



**Deputies**

Mr. David O'Connell  
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Joseph English  
Paul Fennell  
John Hayes  
Thomas Jennings  
John Keenan  
Robert Kelly  
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Further Information Item 5

The Roads Department has requested the following additional information: (i) The applicant is requested to clearly indicate on a drawing that the existing vehicular access at the north eastern side of the proposed development will be closed, the proposed new vehicular access point shall not exceed a width of 3.5m, that the boundary walls at the vehicular access point shall be limited to a maximum height of 0.9m and any boundary pillars shall be limited to a maximum height of 1.2m, in order to ensure forward visibility for vehicles. (ii) The applicant is requested to provide a Visibility splay demonstrating the sightlines from the proposed vehicular entrance. (iii) The applicant is requested to provide an AutoTRAK/Swept Path Analysis showing vehicular movements entering and exiting the proposed new entrance.

Response to Further Information Item 5

- i. Noted, please find enclosed DBFL drawing number 210026-DBFL-RD-SP-DR-C-1151
ii. Please find enclosed DBFL drawing number 210026-DBFL-RD-SP-DR-C-1151 showing sightlines from the proposed vehicular entrance.
iii. Please find enclosed DBFL drawing number 210026-DBFL-RD-SP-DR-C-1151 showing the vehicle tracking movements of a vehicle entering the proposed access.

Yours sincerely

[Handwritten signature]

Conor O' Loughlin

DBFL CONSULTING ENGINEERS

Enclosed
Drawings as Issue Sheet 210026-isu-P02

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## Appendix A Infiltration Test results

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**Soakaway Test Report to Bre Digest 365**

Project: Newcastle o'callaghans  
 Project Number: 210026  
 Undertaken by: Conor O'Loughlin

Test Number:	TP1
Length (m)	2.8
Width (m)	1.1
Depth (m)	1

Date	Time (minutes)	Water level (m bgl)
15/11/2021	0	-0.510
	5	-0.530
	10	-0.550
	15	-0.560
	20	-0.565
	25	-0.570
	30	-0.574
	35	-0.579
	40	-0.583
	45	-0.587

Depth of Water (Effective Depth) 0.49  
 75% Full (m bgl): 0.63  
 25% Full (m bgl): 0.88  
 75-25Ht 0.25  
 Vp75-25 (m3) 0.75  
 50% Effective depth (m): 0.25  
 ap50 (m2): 4.991  
 Tp75-25 (from Graph) (s) 0

f = Failed m/s  
 f = Failed m/hr

Time @ Tp 75 (From Graph) 0  
 Time @ Tp 25 (From Graph) 0



