DESIGN NOTE

SUBJECT: SuDS (Planning Condition no. 10)

PROJECT: 18-20 Elsworthy Road **PROJECT No:** 17587

PLANNING REF: 2014/5413/P **DATE:** 20 March 2019

1 BACKGROUND

1.1 SCOPE OF DESIGN NOTE

1.1.1 This note has been prepared as an update to the previously approved Engenuiti Design Note dated 01 July 2016, which submitted in response to Condition 10 of the above-named project.

1.1.2 Much of the information within the original Design Note remains applicable, so this document will reference only the sections which have been affected by the development of the design since Tender Stage.

2 POST TENDER DESIGN STRATEGY

2.1 RUN-OFF RATE SUMMARY TABLE

2.1.1 The proposed discharge rate to the public sewer has not changed from the originally approved Engenuiti submission – 5.3 l/s.

2.1.2 The changes outlined in the Design Note issued on 2 July 2018 was solely in relation to alterations to the catchment area of the green roofs and water butts, and some rationalisation of the below ground attenuation storage system.

2.1.3 For clarity, and as requested, the following table summarises the existing run-off rates, post-development run-off rates, and the proposed discharge rate to the public sewer. Two columns, outlining the percentage betterment for post vs pre-development, and proposed vs pre-development, have also been included.

Rainfall event	Existing discharge rate (l/s)	Post development run-off rate (l/s)	Betterment (exg – post development	Proposed discharge rate (l/s)	Betterment (exg – proposed)
1 in 1 year	6.2	5.3	14.5%	5.3	14.5%
1 in 30 year	15.2	11.1	26.9%	5.3	65.1%
1 in 100 year	19.6	14.4	26.5%	5.3	72.9%
1 in 100 year (+30%)	25.1	18.7	25.5%	5.3	78.9%

2.2 GREENFIELD RATE

2.2.1 The greenfield rate for each connection point is 0.1 l/s (Q_{BAR}). As mentioned in 2.1.1, the proposed discharge rates for the site were previously approved in response to the Engenuiti Design Note dated 1 July 2016.

2.2.2 The basis of their strategy was to reduce run-off rates by 50%, in line with section 11.5 of CPG3, and the planning consultation response which preceded the submission.

2.2.3 Given the small site area, and Q_{BAR} of 0.1 l/s, it is not practical to restrict proposed run-off to greenfield rate. In order to restrict the discharge rate to 5.3 l/s, the flow is controlled using an orifice plate with a diameter of 42mm. To reduce this diameter further would create a significant risk blockage.

2.2.4 Whist the proposed discharge rate offers a 14.5% betterment of the 1 year RP, for all rainfall events greater than 1 in 20, a 50% betterment is achieved.

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For and on behalf of Taylor and Boyd LLP