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RE: Clarification of Additional Information Response in relation to Planning Reference SD22A/0286 at Main Street, Newcastle, Dublin:
CAI Item 2 – County Architect's Department – AI Item 2(c), AI Item 4(e), AI Item 14.
CAI Item 3 – Parks Clarification – AI Item 11.
CAI Item 4 – Water Services – AI Item 14(1), Item 14(3), Item 14(4), Item 14(5), Item 14(6).

INTRODUCTION

This clarification of additional information response document has been prepared by Cronin & Sutton Consulting Engineers (CS Consulting) on behalf of the applicant Deane and Deane Ltd in relation to Planning Reference SD22A/0286 at Main Street, Newcastle, Dublin.

This document addresses engineering related items of the request for clarification of additional information issued on the 06th of March 2023 by South Dublin County Council (SDCC) in respect of the above development application.

This response is supplemented by the following accompanying documentation:

- Drawing **NCA-CSC-ZZ-SI-DR-C-0002** (Drainage Layout)
- Drawing **NCA-CSC-ZZ-SI-DR-C-0012** (Typical SuDS Details)
- Drawing **NCA-CSC-ZZ-SI-DR-C-0015** (Swept Path Analysis)
- Drawing **NCA-CSC-ZZ-SI-DR-C-0016** (Proposed Road Layout)

ITEM 2 OF THE REQUEST FOR CLARIFICATION OF ADDITIONAL INFORMATION

The submitted further information has been reviewed by the County Architects Department and clarification on the items is requested.

ITEM 2(c) OF THE REQUEST FOR ADDITIONAL INFORMATION

The applicant is required to update the site layout plan clearly indicating the proposed and existing site levels in this area with details on the proposed boundary treatment. This information is not clear on the documentation provided and is critical to understanding the extent of the proposed development in this area and that the levels of the proposed development correspond with the existing levels of footpaths and carriageway in the Market Square site to facilitate future pedestrian and vehicular connectivity. Clarification on site levels (existing and proposed) is also needed for SDCC Architects' Department to review potential connectivity with the Community Hall site from the north.

IN RESPONSE TO ITEM 2(c) OF THE CAI REQUEST:

Refer to CS Consulting drawing **NCA-CSC-ZZ-SI-DR-C-0016** that has been updated in order to provide clarity in relation to the relationship between the existing and proposed levels where the proposed development site abuts Market Square site and Community Hall site.

ITEM 4(e) OF THE REQUEST FOR ADDITIONAL INFORMATION

The swept path analysis (CS Consulting drawing NCA-CSC-ZZ-SI-DR-C-0016) does not include access to the roadway north of the Community centre, which we expect will be required to facilitate fire tender and refuse vehicles serving the community centre extension in the future and requires clarification by the applicant.

IN RESPONSE TO ITEM 4(e) OF THE CAI REQUEST:

Refer to CS Consulting drawing **NCA-CSC-ZZ-SI-DR-C-0015** that has been updated in order to illustrate satisfactory fire tender and refuse truck vehicular manoeuvres on the roadway north of the Community centre.

ITEM 14 OF THE REQUEST FOR ADDITIONAL INFORMATION

The applicant is required to clarify if a future SW connection for the proposed Community Hall extension (north of the community hall site) has been considered as part of the submission and can be easily accommodated in the future.

IN RESPONSE TO ITEM 14 OF THE CAI REQUEST:

Refer to CS Consulting drawing **NCA-CSC-ZZ-SI-DR-C-0002** that has been updated in order to illustrate potential future foul and surface water drainage connection points from the proposed Community Hall extension.

ITEM 3 OF THE REQUEST FOR CLARIFICATION OF ADDITIONAL INFORMATION

Parks Clarifications:

ITEM 11 OF THE REQUEST FOR ADDITIONAL INFORMATION

The applicant is requested to submit a sustainable drainage system that complies with SDCC SUDs Explanatory Design and Evaluation Guide. makes use of existing hedges and ditches, provides multifunctional benefit, is well integrated into the landscape. The applicant is requested to agree the Suds solutions including alternative source control methods to a petrol interceptor.

IN RESPONSE TO ITEM 11 OF THE CAI REQUEST:

Refer to CS Consulting drawing **NCA-CSC-ZZ-SI-DR-C-0002** and **NCA-CSC-ZZ-SI-DR-C-0012** that have been updated in order to illustrate revised SuDS provision for the proposed development site and an alternative to the petrol interceptor.

ITEM 4 OF THE REQUEST FOR CLARIFICATION OF ADDITIONAL INFORMATION

Water Services:

ITEM 14(1) OF THE REQUEST FOR CLARIFICATION OF ADDITIONAL INFORMATION

The applicant is requested to submit a report including to show site area in Hectares and areas of proposed surface types in m2 such as roofs, green roofs, permeable paving, roads, grass and their respective run-off coefficients. Show in report how much surface water attenuation is provided in m3 and how much is required in m3. Surface water attenuation shall be provided by means of various SuDS (Sustainable Drainage System) features.

IN RESPONSE TO ITEM 14(1) OF THE CAI REQUEST:

Refer to **Appendix A** of this response that includes the breakdown of site areas in Hectares and areas of proposed surface types in m^2 and their respective run-off coefficients. **Appendix A** information also illustrates how much surface water attenuation is provided in m^3 and how much is required in m^3.

ITEM 14(3) OF THE REQUEST FOR CLARIFICATION OF ADDITIONAL INFORMATION

The proposed gradients of the surface water network remain steep and there are little SuDs shown. Under SuDs, surface water should be conveyed across the site above ground to the proposed discharge point. The gradients on SuDs do not allow surface water to convey across the site towards the discharge point.

IN RESPONSE TO ITEM 14(3) OF THE CAI REQUEST:

Refer to CS Consulting drawing **NCA-CSC-ZZ-SI-DR-C-0012** that has been updated in order to illustrate revised surface water drainage design for the previously steep sections of proposed surface water drainage network. This drawing also illustrates revised SuDS provision for the proposed development site.

ITEM 14(4) OF THE REQUEST FOR CLARIFICATION OF ADDITIONAL INFORMATION

The applicant is requested to submit a revised drawings showing surface water network that maximises the use of SuDs. Where pipes are required to convey water, design SuDs in accordance with the SDCC SuDs guide. Submit a drawing/s to show a plan and cross section of all SuDS systems.

IN RESPONSE TO ITEM 14(4) OF THE CAI REQUEST:

Refer to CS Consulting drawings **NCA-CSC-ZZ-SI-DR-C-0002 and NCA-CSC-ZZ-SI-DR-C-0012** that have been updated in order to illustrate revised SuDS provision and SuDS details for the proposed development site.

ITEM 14(5) OF THE REQUEST FOR CLARIFICATION OF ADDITIONAL INFORMATION

The applicant is requested to submit drawings showing dimensions of swale and details of how surface water enters the swale.

IN RESPONSE TO ITEM 14(5) OF THE AI REQUEST:

Refer to CS Consulting drawings **NCA-CSC-ZZ-SI-DR-C-0002 and NCA-CSC-ZZ-SI-DR-C-0012** that have been updated in order to illustrate additional swale details.

ITEM 14(6) OF THE REQUEST FOR CLARIFICATION OF ADDITIONAL INFORMATION

Pipes at SMH06 are very shallow. A minimum cover 1.2m is required. If this is not possible then a minimum cover depth of 0.75m is required with a 150mm concrete surround as per Greater Dublin Regional code of Practice for Drainage Works.

IN RESPONSE TO ITEM 14(6) OF THE AI REQUEST:

Refer to CS Consulting drawing **NCA-CSC-ZZ-SI-DR-C-0002** that has been updated in order to illustrate the pipe sections of the proposed surface water drainage system at SMH06 have a minimum cover of 1.2m.

Slaven Sose
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for Cronin & Sutton Consulting

Appendix A

SITE AREAS, RUN-OFF COEFICIENTS AND STORM WATER ATTENUATION REQUIREMENT/PROVISION SUMMARY

Site Area: 1.2 hectares

Surface Types	**(m2)**	**Run-off Coefficient**
Roads and Paths	3,700	0.90
Roofs and Plot Curtilage	3,400	0.90
Open Space (soft landscape)	5,700	0.15

Surface Water Attenuation Volume required:

551 m³ as calculated by the use of Innovyze/Autodesk Microdrainage drainage design software.

Surface Water Attenuation Volume provided:

Attenuation volume of **523 m³** has been provided within the proposed detention basin and an additional **28 m³** of attenuation volume has been provided within the proposed Stormtech attenuation unit which in summary equates to the required attenuation volume of **551m³**.

It is worth noting that although it has not been quantified, an additional attenuation volume is available within the proposed SUDS elements namely permeable pavement, tree pits, swales and bioretention areas.

It is also worth noting that although not presented as attenuation volume the proposed developments surface water drainage pipes and manholes can attenuate **41 m³** of surface water during the storm event.