

CS CONSULTING
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DUBLIN
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Request For Further Information

Proposed Cemetery Development

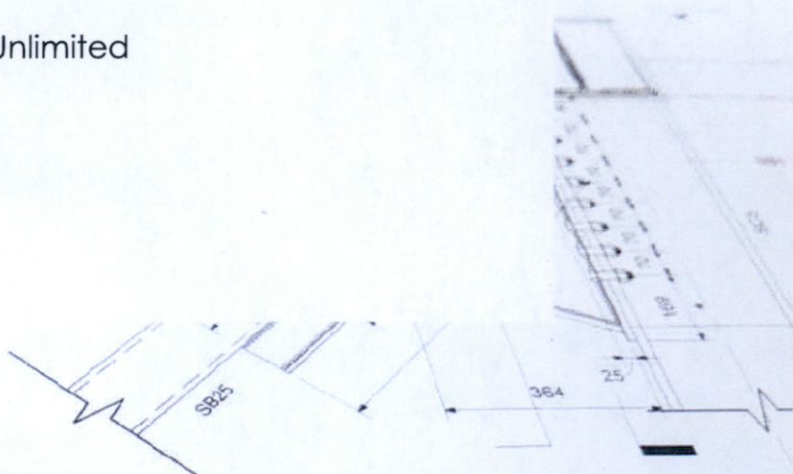
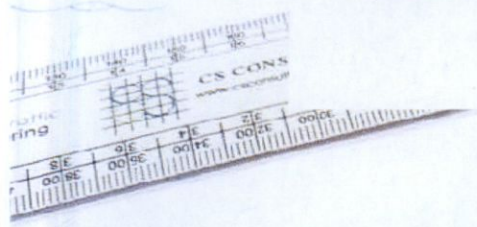
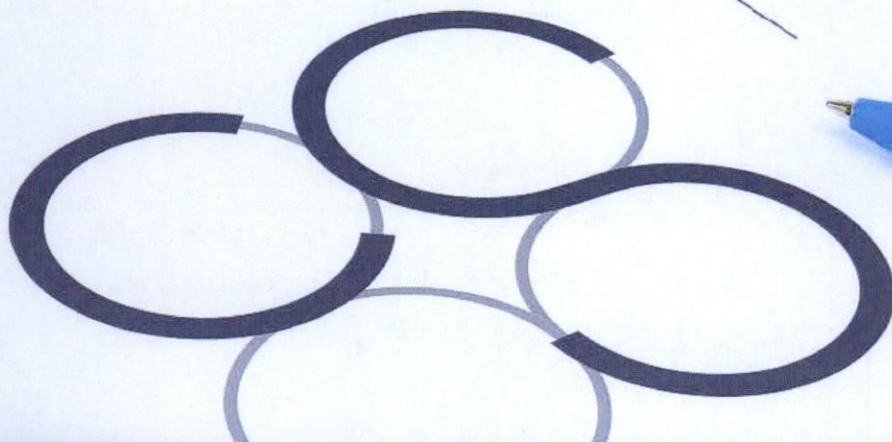
City West, Saggart, County Dublin.

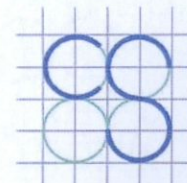
Planning Ref: SD22A/0457

Client: Cape Wrath Hotel Unlimited

Job No. T058

July 2023





REQUEST FOR FURTHER INFORMATION

PROPOSED CEMETERY DEVELOPMENT, CITY WEST, SAGGART, COUNTY DUBLIN.

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Appendix A: South Dublin County Council & Irish Water Records

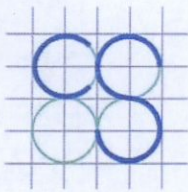
Appendix B: Attenuation Calculation

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BS 1192 FIELD **T058-CSC-ZZ-XX-RP-C-0002-P1 Engineering Services Report**

Job Ref.	Author	Reviewed By	Authorised By	Issue Date	Rev. No.
T058	RFM	GL	DR	30.06.2023	0



1.0 INTRODUCTION

Cronin & Sutton Consulting Engineers (CS Consulting) have been commissioned to prepare an Engineering Services Report to accompany a planning application for a proposed cemetery at City West Saggart, County Dublin.

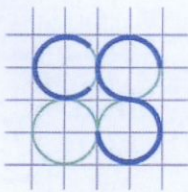
Following submission of the application the Local Authority issued a request for further information for the planning submission, (planning ref: SD22A/0457).

This submission forms part of a wider submission from the applicant's design team. As such this submission address **Items 7, 8, 11 & 14** only.

2.0 LOCAL AUTHORITY ITEM 7 REQUEST

Roads, Access and Traffic Safety

- A.** *The applicant/developer is requested to submit accurate plans demonstrating the provision of a visibility splay of 2.0m x 90m in both directions from the entrance. Sightlines should be shown to the near side edge of the road to the right hand side of entrance and to the centreline of the road to the left hand side of the entrance (when exiting).*
- B.** *The applicant is requested to clarify the proposed access arrangements for existing entrance gate connecting the central access road to the N7.*
- C.** *The applicant is requested to clarify the rational for the 6.5m wide perimeter access road and accompanying cycle lane and footpath which continues from the 2 no proposed access points to the existing access road which runs parallel to the N7.*
- D.** *The applicant is requested to submit a Mobility Management Plan detailing the predicted number of visitors travelling to and from the site by public transport or active travel and any measures to be put in place to promote the use of sustainable transport.*
- E.** *The applicant is requested to submit a revised car parking layout showing a reduction in the number of car parking spaces, taking into account visitors travelling by sustainable transport modes. i. 20% of the spaces shall be Electric Vehicle Charging spaces. ii. 5% of the spaces shall be for mobility impaired users.*
- F.** *The applicant/developer should submit a revised Transportation Assessment which analyses how local traffic will be affected if the Garter Lane/Fortunestown Lane junction upgrades are not implemented. Clarification should also be given on how the visitor traffic to/from the cemetery was calculated, noting discrepancies in the figures given in the Transport Assessment and the Verde*



Environmental Assessment. Data on daily and yearly funeral numbers should be clearly shown and justified based on similar developments.

RESPONSE

A – Refer to Drawing **CTW-CSC-ZZ-XX-DR-C-0105 Proposed Road Layout_RevA** for details indicating the revised sightlines requirement.

B - Refer to the submission from NRB Consulting Engineers which discusses this item.

C - Refer to Drawing **CTW-CSC-ZZ-XX-DR-C-0105 Proposed Road Layout_RevA** for details indicating the revised road layout and the omission of the perimeter road.

D - Refer to the submission from NRB Consulting Engineers which discusses this item.

E - Refer to Drawing **CTW-CSC-ZZ-XX-DR-C-0105 Proposed Road Layout_RevA** for details indicating the carparking arrangement, which indicates electric charging points and car spaces for immobility impaired users.

F – Refer to the submission from NRB Consulting Engineers which discusses this item.

3.0 LOCAL AUTHORITY ITEM 8 REQUEST

Watercourses

- A. *Proposed 900mm culvert pipe for watercourse is too small. Redesign the channel with a box culvert of suitable size instead of a 900mm pipe. Ensure that each end of such a culvert has SuDS (Sustainable Drainage Systems) friendly wing walls such as green walls or equivalent.*
- B. *Submit a drawing in plan and cross-sectional view showing revised culvert design.*
- C. *Clarify in a letter or report if a Section 50 from OPW is required or not to develop proposed culvert at watercourse. If consent is required, this must be provided for.*

RESPONSE

- A. A revised design for the proposed culvert to the existing stream has been developed. Refer to drawing **CTW-CSC-ZZ-XX-DR-C-0102 Proposed Stormwater Layout_RevA** for details of same. This includes for wing walls as noted.
- B. Refer to drawing **CTW-CSC-ZZ-XX-DR-C-0102 Proposed Stormwater Layout_RevA** for details of same.
- C. It is the understanding of CS Consulting that an OPW Section 50 application is not required as the proposed works takes place within private property. However should the proposed scheme receive planning permission, and the OPW require a section 50 Application to be submitted, the Applicant has confirmed that it will be made to the OPW to ensure that all regulatory procedures are followed.

4.0 LOCAL AUTHORITY ITEM 11 REQUEST

Sustainable Drainage Systems

A. The applicant should demonstrate compliance with the SDCC SUDS Design Guide 2022, and Policies GI3, GI4, GI5, IE3, SM2, SM7, and sections 4.3.1, 12.7.6, 12.11.1, and 12.11.3. of the South Dublin County Development Plan 2022 - 2028 in relation to sustainable drainage systems.

B. In relation to SUDs, the applicant is requested to submit plans showing how surface water shall be attenuated to greenfield run off rates and showing what SuDS (Sustainable Drainage Systems) are proposed.

C. SUDs Management - The applicant is requested to submit a comprehensive SUDS Management Plan to demonstrate that the proposed SUDS features have reduced the rate of run off into the existing surface water drainage network. A maintenance plan should also be included as a demonstration of how the system will function following implementation.

D. Natural SUDS features should be incorporated into the proposed drainage system for the development such as bio-retention/constructed tree pits, permeable paving, green roofs, filtration planting, filter strip etc. In addition, the applicant should demonstrate how the proposed natural SUDS features will be incorporated and work within the drainage design for the proposed development. The applicant is requested to refer to the recently published 'SDCC Sustainable Drainage Explanatory, Design and Evaluation Guide 2022' for acceptable SUDS tree pit details.

E. The applicant is requested to submit a report to show surface water attenuation calculations for proposed development. Show on a report and drawing what surface water attenuation capacity each SuDS (Sustainable Drainage System) system has in m³. Show in report what surface water attenuation capacity is required for proposed development. Show what different surface types, areas in

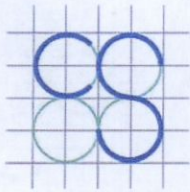
m² are proposed such as, green roofs, permeable paving, buildings, roads and their respective run off coefficients. Submit a drawing showing the treatment train of SuDS and proposed natural flow controls for each SuDS system.

RESPONSE

Sustainable Urban Drainage Systems

The proposed scheme has taken the position of incorporating a full suite of sustainable drainage systems. Notably:

- i) The proposed roads will have a drain at either side to allow storm water generated on the roads surface to percolate back into the subsoil and to allow for groundwater recharging.
- ii) The local access internal roads will have a porous surface to allow rainwater generated on the road to percolate through the surface and recharge the groundwater table.
- iii) Carparking areas within the proposed developed will have permeable paving type surfacing. This will allow surface water generated to drain directly into the subsoils and again to aid in the re-charge of the ground water table.
- iv) The limited hard surfacing located around the main building will drain into the existing lined pond. From here a limited discharge rate, set at 2.0l/sec, will allow storm water to drain into the existing surface water course running through the site.
- v) The relatively small building footprint means that it is not practical to incorporate a green roof system into the current scheme.



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Refer to CS Consulting drawings **CTW-CSC-ZZ-XX-DR-C-0102 Proposed Stormwater Layout_RevA** & **CTW-CSC-ZZ-XX-DR-C-0105 Proposed Road Layout_RevA** for drainage layouts and drawing **CTW-CSC-ZZ-XX-DR-C-0106 Standard Details** for the various road / carparking make ups.

As the proposed surfaces will allow direct discharge into the groundwater table the requirement to develop storage calculations or runoff coefficients is not applicable.

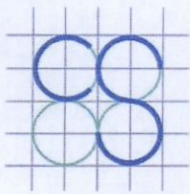
5.0 LOCAL AUTHORITY ITEM 14 REQUEST

Hydrogeology

- (i) *Additional information about the lake on site is requested. Is it constructed/natural? If constructed, details of how it is fed, lined and its capacity are requested.*
- (ii) *The applicant is requested to provide a site drawing that overlays the interment locations with ground water depths.*
- (iii) *Provide details on the number of traditional interments per plot (stacking), if this varies across the proposed cemetery, a site drawing showing this is requested.*
- (iv) *It is noted that the proposed southwest of the site (approximately 1/3 of the site) has no ground investigation information, the applicant is requested to provide ground investigation information for same or justify the omission.*
- (v) *It is requested the applicant ensure the site boundary display in drawing 1872_PL-P_00 corresponds with Figure 7.1 of the Environmental and Hydrogeological Assessment Report.*
- (vi) *The applicant is requested to demonstrate consultation with Inland Fisheries Ireland on surface water quality issues and incorporate any recommendations of IFI, given the nature of the proposed use.*

RESPONSE

- (i) The existing lake is a feature from the sites original use as a part of the golf course. The lake is lined and does not allow retained water to re-charge the ground water table. It is proposed to allow storm water from the hard landscaping and new building to discharge into the pond. A controlled discharge rate set at a high level in the pond will allow storm flows of 2.0l/sec to be discharged should this function be required.



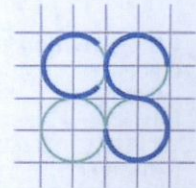
- (ii) Refer To **Appendix A** for response from Verde – Environmental Consultants.

- (iii) It is proposed to provide three coffins per plot across the site.

- (iv) Refer To **Appendix A** for response from Verde – Environmental Consultants.

- (v) Refer To **Appendix A** for response from Verde – Environmental Consultants.

- (vi) CS Consulting have had discussions with Inland Fishers Ireland and have taken on their views regarding the provision of a box culvert to bridge the existing water course. Inland Fishers Ireland also provided guidance to follow as works will take place in and adjacent to water bodies, notable their publication: GUIDELINES ON PROTECTION OF FISHERIES DURING CONSTRUCTION WORKS IN AND ADJACENT TO WATERS



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APPENDIX A

Submission From Verde Environmental Consultants In Support Of
This Further Information Request.

Mr. Robert Fitzmaurice,
CS Consulting Group,
19-22 Dame Street,
Dublin 2,
D02 E267

Date: 13th July 2023

Verde Ref: 53811

RE: REQUEST FOR FURTHER INFORMATION IN RELATION TO PROPOSED CEMETERY DEVELOPMENT AT CITYWEST, CO. DUBLIN

Dear Robert,

Verde Environmental Consultants (Verde) were commissioned by Cape Wrath Ltd. to conduct an Environmental and Hydrogeological Assessment Report for the proposed cemetery site in Citywest Co. Dublin. This included intrusive site investigation, soil and groundwater sampling and detailed risk assessments.

Following the submission of planning application to South Dublin County Council (SDCC) in December 2022 under register number **SD22A/0457** a request for further information was issued in February 2023. Verde have been requested to reply to a number of queries in relation to Item 14: Hydrogeology of the further information request. The queries and responses are presented below.

(ii) The applicant is requested to provide a site drawing that overlays the interment locations with ground water depths

Groundwater levels illustrated on attached figure.

Continuous groundwater level monitoring was undertaken in well MW101 by installation of a data logger. Graph 1 attached shows water levels from 26th May 2022 to 15th February 2023 showing a slight increase in water levels during the winter months as expected.

(iii) Provide details on the number of traditional interments per plot (stacking), if this varies across the proposed cemetery, a site drawing showing this is requested.

Verde's risk assessment assumes the following in relation to stacking per plot:

Each plot is designed to hold up to three coffins stacked one on top of each other with a thin layer of soil between each. It is expected that multiple burials within a plot will be family members. There is no minimum or maximum time required between successive burials within each plot. To initially assess contaminant release it has been assumed that on average there could be two burials in the same plot within the ten year release period within which some contaminants show variations in release rate. The additional burial is assumed to occur on Year 6 i.e. halfway through the ten year period. It is considered that applying three coffins to all plots within the ten year would be overly conservative and that, given the relatively large total number of burials, these instances would be offset by plots where fewer than two coffins are interred over the ten year period.



(iv) It is noted that the proposed southwest of the site (approximately 1/3 of the site) has no ground investigation information, the applicant is requested to provide ground investigation information for same or justify the omission.

The site investigations conducted by Verde Environmental Consultants across the site were designed to cover a large area of the site. Due to the soft ground conditions during the investigation times the heavy plant could not enter certain areas of the site. There was also a concern about live electrical services below the site limiting the site investigation locations. Given the widespread investigation and the largely similar stratigraphic logs the material to the south west can be reasonably inferred from the other investigation locations.

(v) It is requested the applicant ensure the site boundary display in drawing 1872_PL-P_00 corresponds with Figure 7.1 of the Environmental and Hydrogeological Assessment Report.

Figure 7.1 from Verde Environmental and Hydrogeological Assessment Report is presented below as provided by CS Consulting. The site boundary is correct as per drawing 1872_PL-P_01.

Figure 7.1 Proposed Site Layout



Figure supplied by CS Consulting Group Ltd

Jacqui O'Shea

Jacqui O'Shea
Senior Environmental Scientist

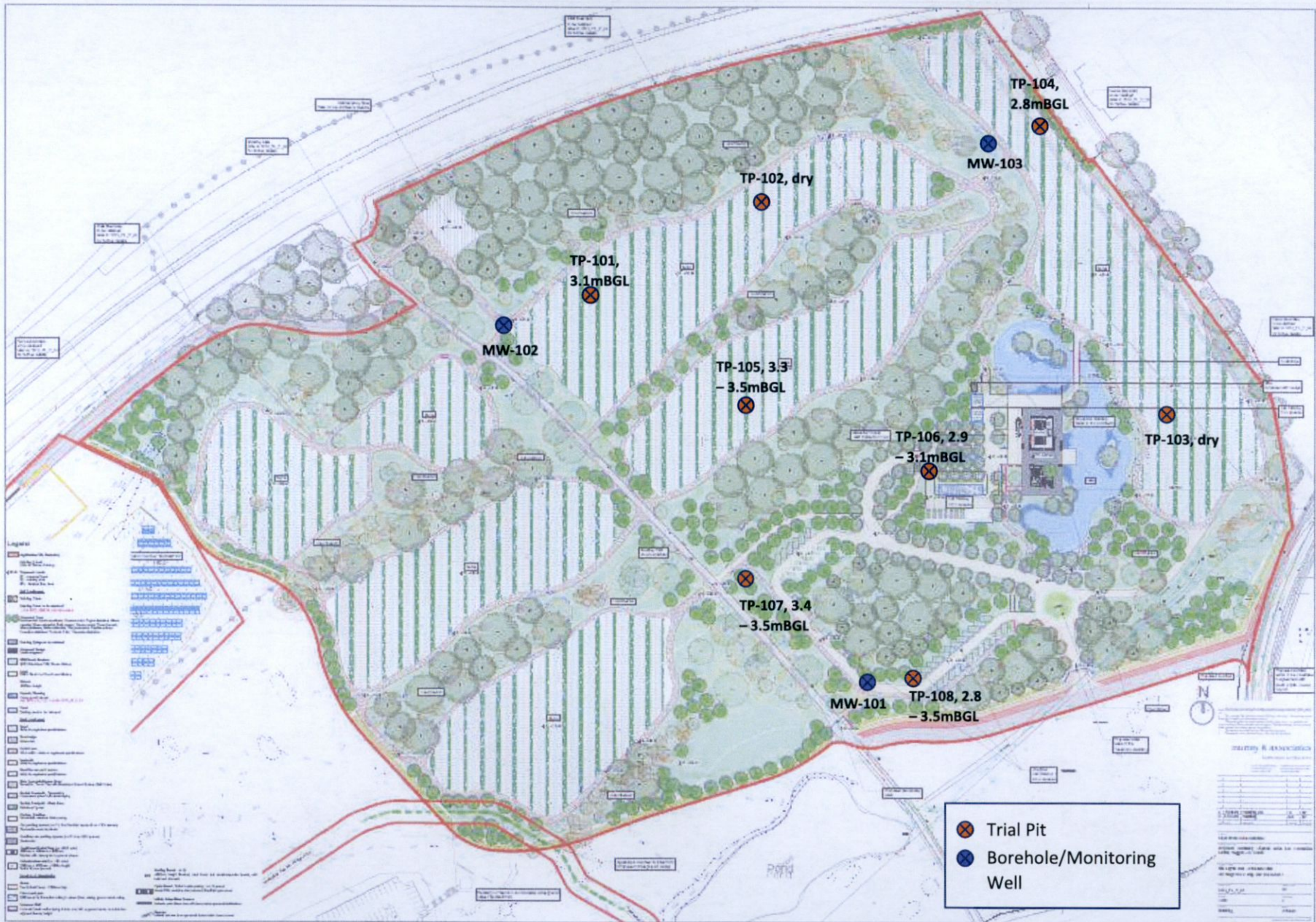
Kevin Cleary

Kevin Cleary
Managing Director



ATTACHMENT A

Figure showing Perched Water Levels





ATTACHMENT B

Graph 1: Water Levels from MW101

MW101 - Groundwater Levels (mOD) - 26th May 2022 to 15th February 2023

