

South Dublin County Council
Land Use, Planning & Transportation Dept
County Hall
Tallaght
Dublin 24
D24 A3XC

2nd February 2023
T-PR
PROJECT NO. B981



RE: RESPONSE TO CIVIL ENGINEERING ITEMS RAISED IN THE REQUEST FOR FURTHER INFORMATION IN RELATION TO PROPOSED TRANSITIONAL CARE FACILITY, COOKSTOWN INDUSTRIAL ESTATE (PLANNING REFERENCE: SD22A/0361)

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Dear Sir/Madam,

OCSC are preparing this response in relation to the Request for Further Information (RFI) issued by South Dublin County Council (SDCC) regarding the proposed Transitional Care Facility at Unit 21, First Avenue, Cookstown Industrial Estate, Dublin 24 (Planning Reference: SD22A/0361).

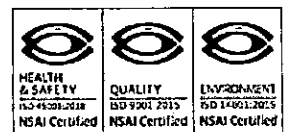
This response specifically addresses the civil engineering items raised in the RFI with other items raised addresses under separate cover by other members of the design team.

RFI Item 4 – Car Parking and Set Down Areas

“The applicant is proposing to remove a significant amount of existing green infrastructure around the immediate site boundaries, including trees and grass verges. The Planning Authority does not support the removal of such an excess of green infrastructure, in particular the removal of the grass verge to provide set down and drop off bays serving the development, outside the ownership boundary of the applicant, and without a suitable replacement/mitigation plan. The use of parts of South Dublin County Council lands on First Avenue and Cookstown Road for set down and drop off bays would undermine the future delivery of a quality public realm in this part of Cookstown, and there would be a concern about how these bays would be used in the interim while Cookstown functions as an industrial estate, with HGV traffic. Any parking and set-down areas connected with the proposals should be provided within the landholding and should not rely on the lands outside the control of the applicant.”

Response

The proposed parking and set down bays on Cookstown Estate Road are intended as a benefit to the public realm to provide a formal area for set down and servicing related to the ground floor commercial uses proposed. This is intended to offset the potential for unauthorised parking on the public road as people seek to make short duration stops when passing by the site to avail of



Civil | Structural | Mechanical | Electrical | Sustainability | Environmental

O'Connor Sutton Cronin & Associates Limited – Registered in Ireland No. 138329

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Associate Directors: Shaun Doody | Eddie Lyons | Paul McSteen

Associates: Derek Contolly | Ian Crehan | Andrew Gross | Cathal Crowe | Paul Devine | Seamus Doyle | Mark Hogan | Mark Kieran |

Vernon McAllorum | John McGill | Niell McMenamin | Gavin Mullins | Patrick Reggatt | Colin Wilson

these uses. Notwithstanding this, in order to address the concerns raised by the local authority, the number of set down bays has been reduced to 1 no. with the design of same according with the Traffic Signs Manual and sufficient to cater for cars and anticipated small servicing vehicles associated with the ground floor uses.

These parking spaces have not been included in the parking allocation for the proposed development and would instead be offered for taking in charge by SDCC which would in turn allow suitable control mechanisms to be put in place to prevent inappropriate use. Car parking allocated to the proposed development uses is contained within the site along with 2 no. proposed servicing bays on the internal road as shown in the revised architectural plans submitted under separate cover.

The proposed footpath and cycle track arrangement along Cookstown Road has been revised to allow for the provision of a soft landscaping verge similar to that in place at present and as shown in the revised landscape layouts submitted under separate cover.

The proposed loading bay on First Avenue along the northern site boundary has been strategically proposed based on the Transitional Care Facility (TCF) design layout and servicing needs. The bay is located in close proximity to the TCF service access and internal service areas which are specifically designed to be remote from the main access to avoid conflict with entry/exit given the sensitive nature of the use. Removing the servicing bay from this location would have a significant impact on the TCF and require an overhaul of the layout to a less efficient and appropriate design. However, in order to address the concerns raised by SDCC, the length of the proposed bay has been reduced to the minimum extent that will facilitate use by a rigid servicing vehicle. The additional space has been utilised to provide increased soft landscaping in this area as highlighted in the revised landscape layouts submitted under separate cover.

Please refer to the following updated OCSC Drawings:

- B981-OCSC-XX-XX-DR-C-0111 (Proposed Road Layout)
- B981-OCSC-XX-XX-DR-C-0123 (Swept Path Analysis – Loading Bay)

With respect to the removal of the grass verges along the boundaries, please refer to the cover letters provided by Brock McClure and Áit Landscape. Details relating to the Applicant's ownership are also set out in Brock McClure's cover letter.

RFI Item 5 – Car and Bicycle Parking

"The applicant has stated 17 no. car parking spaces would be provided to serve the facility, with 26 no. bicycle parking spaces. It is not considered that sufficient detail in relation to likely traffic movements and visitor requirements

has been provided. In addition, the impact of the future residential development and the additional demands on parking at the site are not considered to have been fully considered. The applicant is requested to submit revised information addressing these concerns and updating the layout and parking proposals as necessary. The applicant shall submit a revised layout of not less than 1:200 scale showing the location and number of parking spaces to be provided for staff, residents and visitors at the care facility. Please refer to Table 12.25: Maximum Parking Rates (Non-Residential)– from the SDCC County Development Plan 2022-2028. In addressing these concerns, the applicant should ensure that the developable site area accommodates all the requirements of the site in terms of parking and visitor drop off areas.”

Response

The operation and details of the TCF are set out in detail in response RFI Item 2 which is submitted under separate cover in correspondence provided by Brock McClure. In relation to transportation, the TCF is an interim facility where patients are brought discharged from a healthcare facility to continue their rehabilitation until they are in a position to move home or onto another facility. It is estimated that patients will on average stay for approximately 30 days but 28 no. beds are also allocated for long term care which have an associated expected duration of stay of approximately 3.5 years.

There are expected to be up to 130 staff employed at the site which will be broken across 3 main shifts to limit the maximum population on-site at a given time. This will include night shifts. Visiting will be permitted at the development.

Taking the above into consideration, the TCF will in principle operate, from a transportation perspective, in a very similar manner to a traditional nursing home with patients based at the facility for a relatively long period of time. Staff are expected to primarily travel via sustainable means to the site given its highly accessible nature and proximity to Tallaght residential areas. Consideration will be given to those working anti-social hours and extended shift times with regard to parking allocation.

Patients will travel to the facility by car or ambulance. Based on the durations of stay outlined earlier, this will equate to 103 no. bedspaces generating approximately 2 patient trips per month (1 no. arrival and 1 no. departure) and the remaining 28 no. bedspaces generating a similar level of trips but over a period of years. Patients are not expected to generate any long term parking requirements.

Visiting will occur in a manner very similar to a traditional nursing home, taking place in evenings and at weekends and not coinciding with peak traffic periods.

Taking the above into consideration, the transportation characteristics of the proposed TCF relative to a traditional nursing home are considered negligible. On that basis, the parking requirements associated with the TCF are deemed

comparable to that of a nursing home and the relevant standards from Table 12.25 of the Development Plan are applicable. This is in line with the following statement from Section 12.7.4 of the Development Plan:

"For any commercial use not specified within Table 12.25 the default parking rate will be calculated based on those of a comparable use and / or determined as part of a Transport and Traffic Assessment."

The development site is located in Zone 2 given its proximity to the nearby Luas Red Line stop which has an associated rate as follows:

- 1 no. car parking space per 8 residents;
- 1 no. cycle parking space per 5 staff (long term);
- 1 no. cycle parking space per 10 residents (short stay).

Based on 131 no. bedspaces in the TCF, this equates to an allowance for 17 no. car spaces. Allowing for a conservative maximum on-site population at one time of 65 no. staff and a peak 131 no. patients, this equates to a cycle parking requirement of 26 no. cycle spaces. All spaces referenced are contained within the site layout and away from the public road. Please refer to the architectural layouts submitted under separate cover indicating the location of all parking spaces proposed.

The Development Plan does not include specific requirement to divide the usage of spaces proposed. As noted, patients will not have long term parking requirements meaning the provided spaces will be used for staff and visitors. It is expected that the spaces will be split relatively evenly between these parties, with staff parking prioritised for those working anti-social hours and long shift times. Some flexibility is considered beneficial to allow for dual usage of spaces between staff and visitors, particularly for night shifts which don't coincide with peak traffic periods and where there is no visiting demand.

RFI Item 7 – Previous Reasons for Refusal

"The site layout does not address previous reasons for refusal relating to the dominance of surface car parking, and there is a concern about the location of car parking along the southern boundary of the site, potentially impacting the development potential of the site to the south, and the delivery of a tertiary route at this location. The applicant is requested to address these concerns with a revised layout, minimising the impact of surface level car parking and protecting the tertiary route through the development."

Response

The previous reasons for refusal from SDCC as they relate to engineering issues are summarised as follows:

- Inadequate connectivity to the nearby Luas Red Line and Town Centre;

- No provision for cyclist on Cookstown Estate Road;
- Lack of confirmation of feasibility with respect to wastewater drainage and water supply from Irish Water;
- Inadequate information with respect to provision of SuDS features.

An Board Pleanála subsequently issue refused planning permission at appeal stage, with the reasons relating to engineering issues summarised as follows:

- Inadequate connectivity for pedestrians and cyclists to the nearby Luas Red Line and Town Centre;
- Concern with respect of the capability of the local wastewater drainage network to accommodate the development.

In terms of connectivity and cyclist infrastructure, the current development proposals include extensive interim upgrades of the links towards both the Luas and Town Centre for cyclists and pedestrians including dedicated pedestrian facilities to and from the site. This is particularly relevant to addressing the Boards concerns which focussed on a lack of specific pedestrian crossing upgrades included as part of the works in the previous application which have been included now and which will facilitate the safe movement of pedestrians and cyclists to and from the development.

The proposals for off road cycle infrastructure along the development boundary with Cookstown Estate Road have been further refined as shown in the revised road layout drawing submitted with this response. It provides a clear design for these facilities and includes segregated spaces in accordance with the Design Manual for Urban Roads and Streets (DMURS) and the National Cycle Manual (NCM) which transition to a shared space facility in the northern corner to provide flexibility in the use of public realm space.

The concerns relating to waste water and water supply network feasibility have been clearly addressed as part of this application and as set out in the Engineering Services Report and associated drawings. A Confirmation of Feasibility has been issued by Irish Water which indicates no issue with water supply connection feasibility. It has also outlined a suitable strategy for waste water drainage at the site which has been incorporated into the proposed design in the form of a temporary on-site pump station with associated 24-hour storage to appropriately limit the discharge rates to a suitable level.

Taking the above into consideration, the previous engineering reasons for refusal from both SDCC and the Board are considered to be addressed in full as part of the current application.

With respect to the dominance of car parking, the refused development proposed a total of 42 no. surface car parking spaces which has been significantly reduced by 24% to 32 no. spaces. The design of on-street parking is in accordance with the guidance set out in DMURS Section 4.4.9 through the following design features:

- Reduced parking rates where densities are high;
- Perpendicular spaces proposed on the internal local street where vehicles volumes and speeds will be low;
- Bays of parking spaces limited to 6 perpendicular spaces with landscaping features provided between them;
- Perpendicular parking limited to on-side of the street in each location provided to avoid dominating the streetscape.

The development potential of the site to the south is not considered to be materially impacted by the proposed layout. This site enjoys frontage onto Cookstown Estate Road and Second Avenue which are considered far more appropriate in terms of facilitating access to this site and any access via a road along its northern boundary with the development site would be far more circuitous and inefficient, unnecessarily increasing vehicles movements on local access roads.

RFI Item 8 – Pedestrian, Cyclist and Public Realm Upgrades

"The Planning Authority is in the process of putting together a design study to assess the link along First Avenue to Belgard Luas, and along Belgard Road. This study will be looking at active travel, public realm, planting, SUDS and drainage as well as the management of HGV movement in advance of preparing a strategy for the area. The applicant is proposing interim measures to serve the development. The Planning Authority is concerned about the appropriateness of these interim measures for a development of this type and scale at this location. The applicant is therefore requested to progress road design proposals for the public road bounding the site and between the site and the Belgard Luas. The applicant should submit a revised layout of not less than 1:200 scale, showing Cycle/Pedestrian link upgrades designed to the standards set out in DMURS, and The National Cycle Manual, and meeting more general public realm aspirations set out in the LAP. These proposals must align with the outcome of the design study to ensure that all works are consistent and do not affect the future upgrade potential of First Avenue. In advance of the design study being complete, the Planning Authority has concerns that the works may be premature pending the outcome of the study and implementation of upgraded infrastructure. The identification of physical infrastructure requirements of the CTC sub-neighbourhood for its development and the more generalised phasing requirements set out in the Local Area Plan are relevant in this regard."

Response

The potential to upgrade a full section of Cookstown Estate Road to the Luas as suggested, across its full cross section and incorporating a series of detailed design measures as outlined was considered in some detail as part of this response. A number of key constraints were encountered as a result including:

- The proposed design of these upgrades is cognisant of the wider LAP development proposals for the area which will ultimately see all bordering sites along these links developed at some point in the future, changing the nature of the environment significantly. The details of these developments are unknown at present and as a result, the design proposals set out as part of this development are mindful not to be in any way detrimental or prohibitive for future development potential locally;
- Any proposals must also maintain access to the existing developments along these links which remain operational;
- There are extensive proposals for the upgrade of infrastructure within Tallaght as part of the South Dublin Active Travel programme. This includes a scheme from Tallaght to Clondalkin to be delivered over the next 5 years. Notwithstanding this, the full upgrade of all local road infrastructure is expected to be delivered in line with the realisation of the LAP proposals and development of adjacent sites in line with Figure 3.7 of the Local Area Plan;
- The cost of a full cross sectional upgrade to the road infrastructure in this area relative to the scale of development proposed is disproportional and would render the proposed development unviable.

Taking the above into consideration, it is considered that the proposed interim solution is the most appropriate to include as part of this application to ensure it can function on a standalone basis but does not act as a barrier to existing and future development. These interim measures will works provide an improvement on the current infrastructure for pedestrians/ cyclists and connect to the wider transport network, both existing and proposed. Such future potential development would also include a more significant upgrade of the road in question. It is also noted that the SDCC proposal in the RFI item would not provide any improved connectivity to the Town Centre which is considered to be a key pedestrian and cyclist desire line as highlighted by An Bord Pleanála in its assessment of the previous development.

SDCC's proposals for localised, more significant upgrades are noted and the Applicant is happy to work with SDCC in this regard to ensure the optimal design solution is achieved.

RFI Item 9 – Road Safety Audit

“The applicant is requested to submit a Road Safety Audit.”

Response

A Road Safety Audit has been carried out and the design amended accordingly based on the relatively minor issues highlighted. Please refer to the completed Road Safety Audit Report and Feedback Form submitted with this response and the following revised OCSC Drawings:

- B981-OCSC-XX-XX-DR-C-0111 (Proposed Road Layout Sheet 1 of 6);

- B981-OCSC-XX-XX-DR-C-0112 (Proposed Road Layout Sheet 2 of 6);
- B981-OCSC-XX-XX-DR-C-0113 (Proposed Road Layout Sheet 3 of 6);
- B981-OCSC-XX-XX-DR-C-0114 (Proposed Road Layout Sheet 4 of 6);
- B981-OCSC-XX-XX-DR-C-0115 (Proposed Road Layout Sheet 5 of 6);
- B981-OCSC-XX-XX-DR-C-0116 (Proposed Road Layout Sheet 6 of 6).

RFI Item 10 – Internal Road Layout.

“The applicant is requested to submit:

- a. a layout of not less than 1:200 scale showing a revised internal road layout with a two-way system along with a vehicular link road running along the Northern boundary of the Park.*
- b. a layout of not less than 1:200 scale showing a Pedestrian Crossing with tactile paving and dropped kerb located between southern internal footpath and the Pocket Park.”*

Response

The proposed one-way system has been incorporated to reduce the dominance of road space and minimise the unnecessary vehicle movements throughout the site. Widening of the road to facilitate a 2-way system would have a detrimental effect on the development layout and reduce the space available for landscaping while also impacting on the structures layout which would reduce the scale, efficiencies and viability of development. The one-way system combined with lower car parking rates reduces car dominance, promotes a pedestrian friendly environment and elevates the quality of the public realm leading to the pocket park. This arrangement is considered appropriate and is commensurate with DMURS Standards and those outlined in the Local Area Plan and Development Plan. There is no tangible and obvious benefit to the provision of a two-way road.

With respect to the accessibility of the public park, it is noted that the section in the southeast corner of the development is just one portion of an overall park to be developed in conjunction with the adjacent sites. This will provide multiple access routes to the park area facilitating access from all directions.

A pedestrian crossing with drop kerbs and tactile paving has been included as requested as shown in the revised OCSC Drawing B981-OCSC-XX-XX-DR-C-0111 (Proposed Road Layout) submitted with this response.

RFI Item 12 – Sustainable Urban Drainage Systems

“The applicant is requested to submit the following in terms of SUDS:

- *A drawing to show how surface water shall be attenuated to greenfield runoff rates.*

- *Submit a drawing to show what SuDS (Sustainable Drainage Systems) are proposed. Examples of SuDS include permeable paving, filter drain, bio-retention tree pits, rains gardens, swales or other such SuDS.*
- *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.*
- *Additional 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 provide the following:

- Demonstrate how the proposed natural SUDS features will be incorporated and work within the drainage design for the proposed development.*
- Tree pits incorporating SUDS features should include a deep cellular water storage/attenuation area below the surface which acts as a soak away allowing surface water to infiltrate into the ground.*
- It is unclear how much attenuation in total is provided by the proposed bioretention tree pits for the development. The applicant shall submit a report and drawing showing how much surface water attenuation in m³ is provided for the 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.*
- Underground attenuation tanks are only permitted in exceptional circumstances and where all other natural SUDS measures have been utilised. If all other methods have been utilised and it is demonstrated that underground attenuation is required, it cannot be proposed under public open space areas and such areas will not be taken in charge by Public Realm. SUDS measures are only accepted as an element of public opens space where they are natural in form and integrate well into the open space landscape supporting a wider amenity and biodiversity function."*

Extensive SuDS measures were incorporated into the submitted drainage design. However, in line with the requests set out in this FI Item, additional measures have been incorporated. SuDS measures now incorporated include:

- Green roofs;
- Tree pits throughout the site;
- Swales;
- Rain gardens;
- Pervious paving.

The revised design is considered to have maximised the provision of SuDS measures when considering the constrained, brownfield nature of the site with limited green space and the desire to avoid attenuation measure in public open space areas, particularly those to be taken in charge by SDCC.

Please refer to the updated Engineering Services Report submitted as part of this application which includes all of the detail referenced including the SuDS Management Plan details. Also refer to OCSC Drawing B981-OCSC-XX-XX-DR-C-0505 for further details of the updated surface water drainage design incorporating the requested items. An updated tree pit detail can be seen in OCSC Drawing B981-OCSC-XX-XX-DR-C-0535.

With respect to the need for underground attenuation systems, it is noted that the site investigation reports including soakaway tests which concluded:

The test result reflects a very low infiltration rate of "**F**" = **0.000033 metres / minute**. This low permeability is quite typical of the regional boulder clay.

The sub soils will be unsuitable for dispersion of storm or surface water in conventional soakaways and the use of the local authority drainage system is recommended.

The full site investigation report has been appended to the revised Engineering Services Report submitted as part of this response. As noted, the results indicate that infiltration will not be feasible at the site meaning underground storage is required. Notwithstanding this, the extensive SuDS measures proposed will provide notable benefit with respect to source control and water cleansing. The underground storage measures are not proposed under public open space areas or such areas proposed to be taken in charge by SDCC.

We trust the above is in order and addresses all relevant civil engineering items raised, however, should you have any queries please do not hesitate to contact the undersigned.

Yours sincerely,



Patrick Raggett B.E., CEng MIEI, MCIHT
Chartered Civil Engineer
For O'Connor Sutton Cronin

Enc.

- Updated Engineering Services Report;
- OCSC Drawing B981-OCSC-XX-XX-DR-C-0111 (Proposed Road Layout Sheet 1 of 6);
- OCSC Drawing B981-OCSC-XX-XX-DR-C-0112 (Proposed Road Layout Sheet 2 of 6);
- OCSC Drawing B981-OCSC-XX-XX-DR-C-0113 (Proposed Road Layout Sheet 3 of 6);
- OCSC Drawing B981-OCSC-XX-XX-DR-C-0114 (Proposed Road Layout Sheet 4 of 6);
- OCSC Drawing B981-OCSC-XX-XX-DR-C-0115 (Proposed Road Layout Sheet 5 of 6);
- OCSC Drawing B981-OCSC-XX-XX-DR-C-0116 (Proposed Road Layout Sheet 6 of 6);
- OCSC Drawing B981-OCSC-XX-XX-DR-C-0123 (Swept Path Analysis – Loading Bay);
- OCSC Drawing B981-OCSC-XX-XX-DR-C-0505 (Drainage Network Design Layout);
- OCSC Drawing B981-OCSC-XX-XX-DR-C-0535 (Drainage Details Sheet 5 Of 6);
- Road Safety Audit.