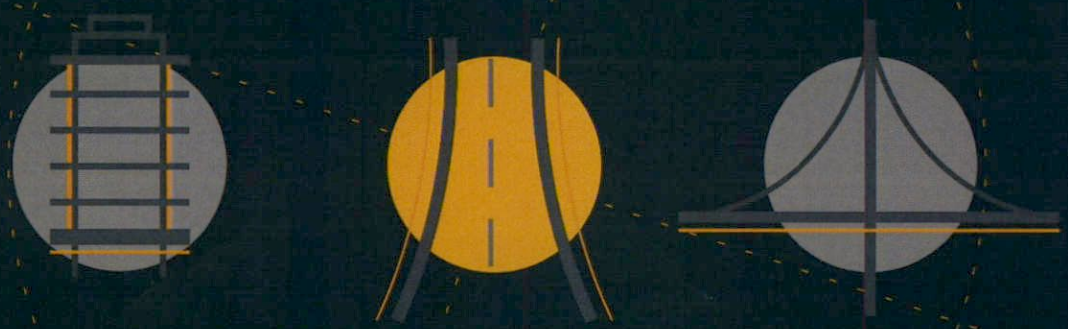
Warehousing / Logistics, Office, and Cafe / Restaurant Development at Calmount Road

Engineers Responce to Clarification of Further Information Request

210175-DBFL-TR-XX-RP-C-0005

TRANSPORTATION



November 2022

DBFL CONSULTING ENGINEERS

Project Title:	**Warehousing / Logistics, Office, and Cafe / Restaurant Development at Calmount Road**		
Document Title:	**Engineers Responce to Clarification of Further Information Request**		
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0	21/11/22	Design Team Review	Vivek Joy	Rory Moynihan	Thomas Jennings
1	22/11/22	Planning	Vivek Joy	Rory Moynihan	Thomas Jennings

CONTENTS

1 INTRODUCTION

1.1 BACKGROUND

DBFL Consulting Engineers (DBFL) have been retained by Blackwin Limited to prepare the necessary engineering response to a Clarification of Further Information Request (CFIR) issued by the South Dublin County Council (SDCC) Planning and Development Department in October 2022 with regard to the subject Warehouse / Logistics / Office and Café development proposals at Calmount Rd and Ballymount Avenue, Dublin 12 (SDCC Plannning Ref no. SD22A/0099).

The proposed development as amended to address the items raised within the SDCC Clarification of Further Information Request consists of the following key elements:

- Construction of 5 no. warehouse / logistics units (Units 1, 2 3, 4 and 6), including ancillary office use and entrance / reception areas, car parking to the front, and rear service yards (GFA 18,002 sq.m);
- Construction of 3 no. 3 storey own-door office buildings (Block 5A, 5B and 5C - a combined GFA of 4,194 sq.m) to the southeast of the site with internal car parking spaces and cycle parking spaces;
- Construction of a café/restaurant unit (GFA of 213 sq.m) located in the southwestern section of the site with outdoor seating, car and bicycle parking spaces
- The development is to be accessed off Ballymount Avenue and Calmount Road and includes for alterations and upgrades to the public footpaths and road. The development provides for internal access roads, circulation areas and footpaths in parallel with comprehensive landscaping and planting, new boundary treatments, lighting, PV panels, green roofs, underground foul and storm water drainage network, including connections to the foul and surface water drainage network on the public roads, attenuation areas and all associated site works and development.

This report should be considered in reference to both (i) the initial applications Traffic and Transportation Assessment (TTA) Report and associated Mobility Management Report, and (ii) DBFL report entitled Engineers Response to Further Information Request (dated September 2022).

A number of amendments to the original scheme proposals have previously been identified to address the planning authorities FIR. Further tweaks to the scheme proposals are now proposed and incorporated into the updated development proposals. In addition to this engineering focused report, the amendments to the subject Calmount Road scheme proposals are highlighted in the following documentation as compiled by the design team as submitted in response to SDCC's CFIR. Accordingly, this report by DBFL should be reviewed in parallel with the following CFIR submitted documentation.

- TOT Architects – Architects Design Statement revised to address the items within the C.F.I (dated November 2022)
- TOT Architects – Drawing 18-42-CFI-171 entitled Proposed Site Plan Clarification of CFI (dated November 2022)
- Murray & Associates Landscape Architects – Drawing 1878-PL-P-00 entitled Landscape Masterplan (dated November 2022)

Furthermore, the following DBFL drawings have been compiled to demonstrate how the scheme proposals have been amended to address the queries raised within the planning authorities CFIR;

- 210175-DBFL-TR-SP-DR-C-1120 entitled ***Potential Future Road Connection to Ballymount Lower***
- 210175-DBFL-TR-SP-DR-C-1121 entitled ***Emerging NTA Core Bus Corridor Works***
- 210175-DBFL-RD-SP-DR-C-1101 - ***Roads Layout Plan***
- 210175-DBFL-SW-SP-DR-C-1300 entitled ***Surface Water Layout Plan***
- 210175-DBFL-FW-SP-DR-C-1302 - ***Foul Sewer Layout Plan***
- 210175-DBFL-WM-SP-DR-C-1001 - ***Watermain Layout Plan***

With the objective of addressing the specific queries raised within the SDCC CFIR the scheme proposals have been amended which includes modifications to the size and configuration of the Unit 2 Warehouse / Logistics building. The associated decrease in Unit 2 floorspace as a result of the changes incorporated as part of the CFI response will result in a small reduction in the quantum of operational traffic generated by the proposed development. Nevertheless, this amendment does not materially impact on the MMP or

TTA (now considered a worst case appraisal) as originally submitted with the planning application.

1.2 STRUCTURE OF REPORT

Following this introduction each of the following report chapters are assigned to responding to the engineering focused queries raised within the SDCC CFIR. Accordingly, the following chapters each address specific query of the CFIR as summarised below;

- Chapter 2 – Comparison of Development Trip Generation
- Chapter 3 – CFIR Item 1
- Chapter 4 – CFIR Item 2
- Chapter 5– In addressing the above CFI queries the scheme proposals have been modified slightly which in turn has necessitated changes to the proposed design / analysis of an element of the developments civil infrastructure. Whilst not specifically requested in the SDCC CFIR these civil engineering focused changes are discussed in Chapter 5.

2 COMPARISON OF DEVELOPMENT TRIP GENERATION

2.1 Introduction

To address the CFIR the scheme proposals have been amended including modifications to the size and configuration of Warehouse / Logistics Unit 2. The associated decrease (c.2,178 sq.m) in Unit 2 floorspace as a result of the changes incorporated as part of the CFIR response will result in a small reduction in the quantum of operational traffic generated by the proposed development. The following section compares the predicted vehicle trip generation from the initial proposal (with total warehouse GFA of 20,158) with the new CFIR proposal (with total warehouse GFA of 17,986 sq.m).

2.2 Vehicle Trip Generation of Previous Proposal

The level of vehicular traffic predicted to be generated by the entire development in previous scheme proposal is summarised in **Table 2-1** below.

Land Use		AM (08:00-09:00)			PM (17:00-18:00)		
	GFA (sq.m)	Inbound	Outbound	Two Way	Inbound	Outbound	Two Way
Warehouse	20,158	19	8	27	8	14	23
Office	4,194	45	6	52	4	34	38
Café	213	14	14	28	14	14	28
Total	**24,565**	**78**	**28**	**107**	**26**	**62**	**89**

Table 2-1: Operational Vehicle Trips from Entire Development as Initially Proposed

2.3 Vehicle Trip Generation of New proposal

The level of vehicular traffic predicted to be generated by the entire development in the updated scheme proposals is summarised in **Table 2-2** below.

Land Use		AM (08:00-09:00)			PM (17:00-18:00)		
	GFA (sq.m)	Inbound	Outbound	Two Way	Inbound	Outbound	Two Way
Warehouse	17,986	17	7	24	7	13	20
Office	4,194	45	6	52	4	34	38
Café	213	14	14	28	14	14	28
Total	**22,393**	**76**	**27**	**104**	**25**	**61**	**86**

Table 2-2: Operational Vehicle trips from Entire Development for Updated CFIR Proposal

2.4 Net Difference of Vehicle Trip Generation

In reference to **Table 2-1** and **Table 2-2** above it can be demonstrated that there is predicted to be a small reduction in vehicle trips generated as a result of the amended scheme proposals. During the peak network periods a total of 3 fewer trips in the AM and 3 fewer trips in the PM peak hour are predicted as a result of reduction in the Unit 2 floor space. This modest decrease in vehicular traffic associated with the amendments to Unit 2 will not materially impact the results / recommendations of the Mobility Management Plan (MMP) or Traffic and Transportation Assessment Report (TTA) as originally submitted with the planning application. In fact the Submitted TTA could now be considered a worst-case appraisal

3 CLARIFICATION OF FURTHER INFORMATION REQUEST ITEM 1

3.1 SDCC CFI Query No. 1

"1. Item 2 Clarification.

The Forward Planning team has expressed concerns regarding the proposed road layout stating that it could be premature and that the applicant should further examine the potential to arrange unit 2 so as not to preclude the future realignment of this road."

3.2 DBFL Response to Item 1

In the above request the planning authority have asked that the design of Unit 2 Warehouse / Logistics facility is revisited to provide flexibility for the potential implementation in the future (by others) of a connecting road to the northwest and aligned between the subject developments north-south spine road, via Crosslands Business Park northwards to the Ballymount Road Lower corridor.

The design team have accommodated this request to provide the necessary flexibility in the development layout by incorporating a number of amendments to the scheme proposals including;

- A reduction in the size of Unit 2 and rearranging its orientation. The main entrance, office accommodation and associated facade treatments have been positioned within the North East corner of the Unit 2 building. In this way the offices will face onto the proposed North-South spine road (in its current configuration) and the service road leading to/from the Unit 2 marshalling yard (potential interim arrangement with future upgrade facilitating its function as a western connection option to Ballymount Road Lower).
- Upgrading the developments internal junction at the northern extent of the developments north-south spine road (previously a three arm mini-roundabout junction proposed as an interim arrangement until such time that the SDCC road objective to Ballymount Road Lower via the Galco lands to the north as per the indicative route detailed in SDCC Development Plan zoning map 5; was delivered in the future by others); to a full 28m ICD continental roundabout with raised central island, associated run over area (to accommodate the swept path requirements of articulated goods vehicles), single lane entries and flexibility to provide a zebra crossing facility on all arms of the new junction arrangement.

- Redesign of the alignment and geometric characteristics of the service road (interim arrangement) leading to/from the rear marshalling yard of Unit 2 and which forms the western arm of the above continental roundabout.

This new layout retains the flexibility to provide not one but two potential options for the future completion of SDCC's roads objective between Calmount Rd and Ballymount Road Lower as illustrated in Figure 3.1. With the new full sized continental roundabout provided in the updated layout, the final connecting road link to Ballymount Road Lower (by others in the future) can be accommodated by the amended scheme proposals by either (or both);

- **Option 1** - Northwards through the Galco lands, in keeping with the SDCC zoning map 5 objective, or
- **Option 2** - Westwards along the northern boundary of the reoriented Unit 2 plot before turning north-westwards to connect to the existing Crosslands Business Park cul de sac.

Figure 3.1 : Alignment Options for SDCC Roads Objective (Calmount Rd and Ballymount Rd Lwr)

The amended scheme proposals compiled in response to the planning authorities CFIR include the implementation of a 105m long service road between the developments north-south spine road (via upgraded continental roundabout junction) to/from Unit 2's rear marshalling yard. The alignment of this east-west Unit 2 service road has specifically been designed to facilitate its potential upgrade and extension north-westwards (to the site boundary) by a further 35m in the

future (by others) thereby delivering a through route to Ballymount Rd Lower via the existing Crosslands Business Park cul-de-sac as illustrated in Figure 3.1 above.

The design of the potential future Option 2 though road connection has been influenced by the geometric characteristics of the existing Crosslands Business Park access road. This existing cul-de-sac, which exhibits industrial road characteristics, currently comprises a 16.5m wide corridor with 1.85m footpaths and 1.90m verges either side of a 9.0m wide carriageway as illustrated in Figure 3.2 below.

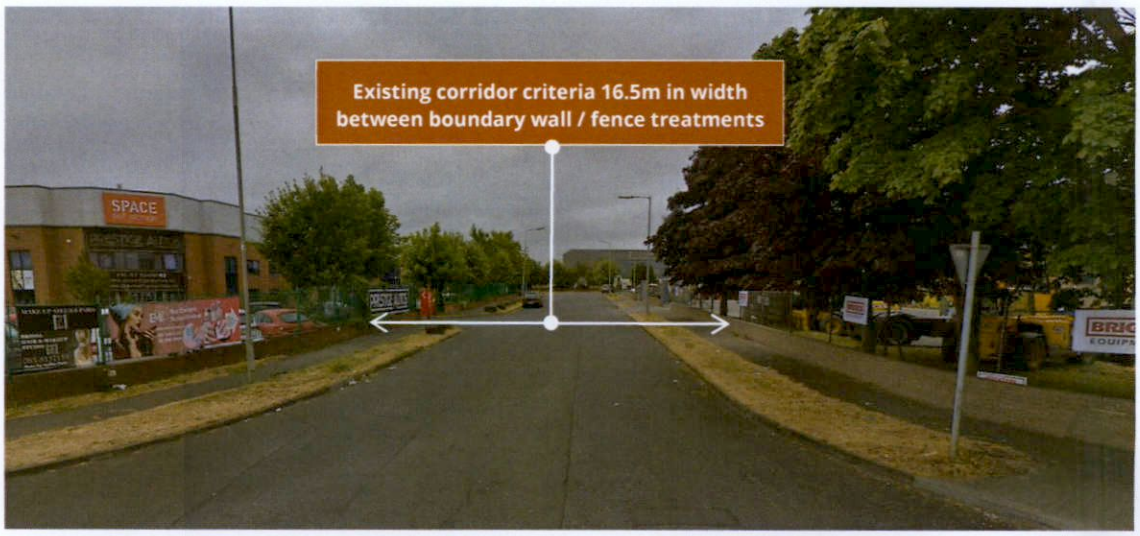


Figure 3.2: Existing Characteristics of Crosslands Business Park Access Road (Cul-De-Sac)

Any future road connection that is to perform the LOCAL street function intended for the SDCC Roads Objective will need to respect best practice design guidance outlined within DMURS. Accordingly, appropriate consideration of the requirements of active travel modes will need to be delivered as part of an integrated component of any future road connection between Calmount Rd and Ballymount Rd Lower. Respecting the design approach adopted for the proposed commercial developments north-south spine road (e.g. the southern portion of a potential future through route) the future upgrading of Crosslands Business Park access road could potentially accommodate the following characteristics;

- Footpath – 1.8m width
- One-way segregated bicycle track – 1.75m width
- Verge 1.2m width
- Carriageway - 7m width
- Verge 1.2m width
- One-way segregated bicycle track – 1.75m width

- Footpath – 1.8m width

Adopting a similar cross section profile as the above potential Crosslands Business Park upgrade (**Option 2 Section A**), the CFIR amendments to the proposed developments layout advocates safeguarding the necessary lands to enable the continuation of the above (Option 2 Section A) road connection a further criteria 140m through the subject commercial development site (Option 2 Section B and Section C) as illustrated in Figure 3.2 below and in DBFL drawing 210175-DBFL-TR-SP-DR-C-1120 entitled Potential Future Road Connection to Ballymount Road Lower.

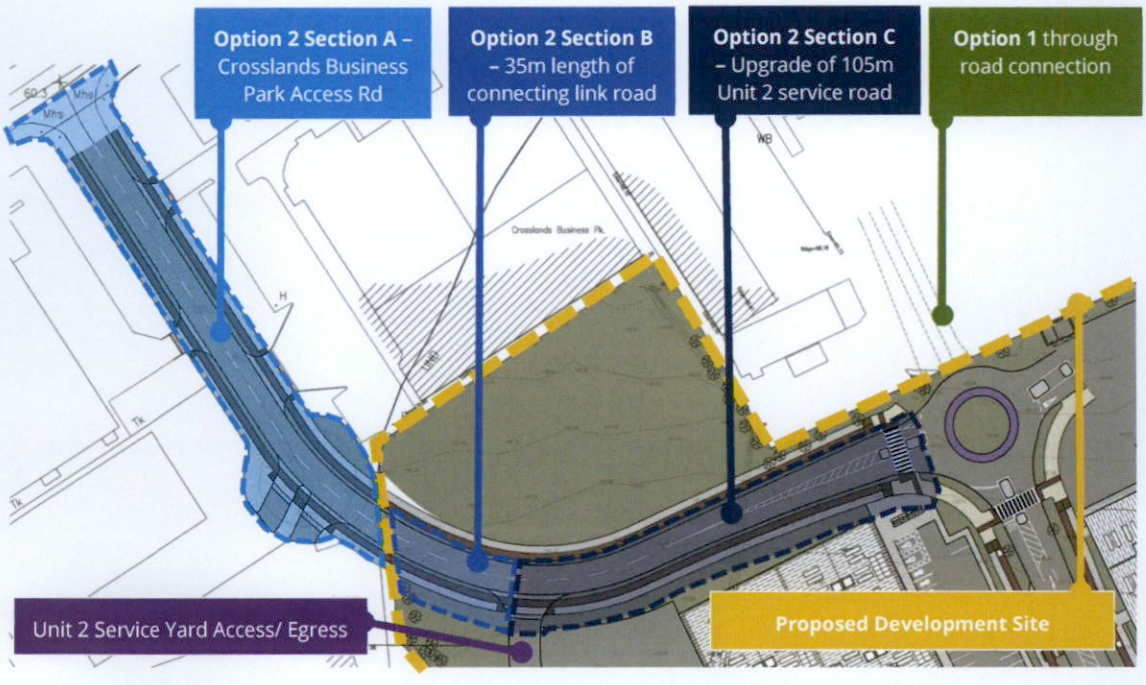


Figure 3.2: Three Number Components of SDCC Roads Objective Option 2 Alignment

The scheme proposals include the implementation of a 105m length of carriageway (Option 2 Section C in Figure 3.2) which in the interim (until such time that the Option 2 alignment of the SDCC Roads Objective is implemented in the future by others) will service only the rear marshalling yard of the Unit 2 warehouse / logistics plot as presented in Figure 3.3. Accordingly, in the interim it is proposed that security gates are implemented on the Unit 2 service road at a location approximately 35m west of the proposed internal full size continental roundabout. The Unit 2 service road at 7.0m in width delivers in part (Option 2 Section C in Figure 3.2) the road carriageway of the potential future through road connection.

With the objective of facilitating the potential future upgrade of the service road (Section C) and its extension north-westwards some 35m (e.g. Section B) in addition to accommodating parallel

verge, segregated cycle track and footpath areas of the Option 2 through road connection, the scheme proposals advocate safeguarding the necessary footprint of adjoining lands to enable both the Section B and Section C of the Option 2 road connections to be delivered in the future. The updated CFIR development proposals safeguard the on-site lands, as located either site of the Unit 2 service road, to enable the Option 2 through road connection to be delivered in the future by others. The extent of the on-site lands safeguarded have been defined as that necessary to enable the following through road characteristics to be delivered in the future as part of the implementation of the Option 2 alignment of the SDCC Roads Objective.

- Footpath – 1.8m width
- One-way segregated bicycle track – 1.75m width
- Verge 1.0m width
- Carriageway - 7m width
- Verge 1.0m width
- One-way segregated bicycle track – 1.75m width
- Footpath – 1.8m width

Figure 3.3: Proposed Unit 2 Service Yard Access Road and Footprint of Potential Future Road Upgrades by Others in the Future

The extent of area being safeguard by the reconfigured Unit 2 building and associated rear service yard provided the opportunity to safeguard the future delivery of the Option 2 through road connection with the geometric characteristics illustrated in Figure 3.4 below.

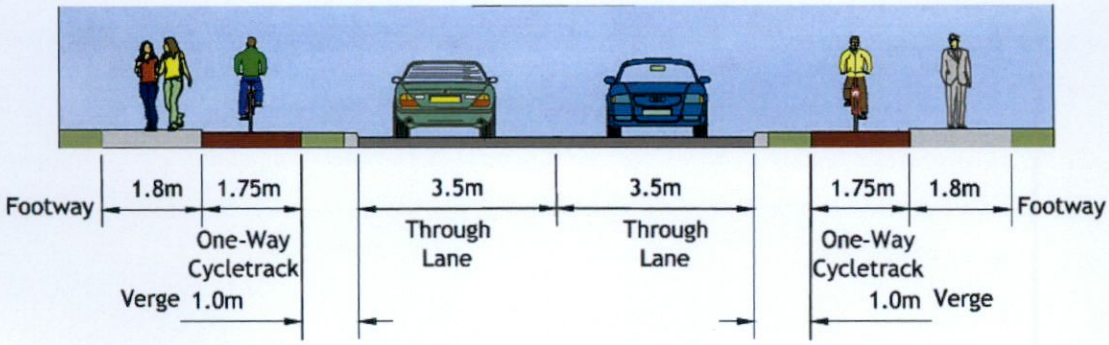


Figure 3.4: Typical Cross Section of Potential Future Option 2 Through Road Connection (Section B and Section C) via the Subject Development Site (Extract of DBFL drawing 210175-DBFL-TR-SP-DR-C-1120)

4 CLARIFICATION OF FURTHER INFORMATION REQUEST ITEM 2

4.1 SDCC CFI Query No. 2

"Clarification of Item 3:

The applicant is requested to provide revised proposals on proposed cycle tracks and proposed shared pedestrian/cycle areas including tactile paving crossing points at the south-east corner of the application site with a view to resolving the interface between the proposed development and the NTA's Greenhills to City Centre Core Bus Corridor particularly the upgrade to the junction between Calmount Road and Ballymount Avenue. The applicant is requested to take the following into consideration:

- *the Emerging Preferred Bus Connects Route*
- *There is a proposed 2-way cycle track indicated on Calmount Road, western side of junction-BusConnects provides a tie-in on western side of junction for single cycle provision either side of road.*

Proposed development north-west cycle track does not match BusConnects proposal where a footpath is proposed at boundary to proposed development.

The applicant is requested to provide a clear copy of the Network Flow Diagrams in Appendix A of the TIA. in order to check the capacity of the straight and left-turn lane approaching the junction from the south in order to ensure that BusConnects proposals will not be compromised."

4.2 DBFL Response to Item 2

The scheme proposals as amended in response to SDCC CFIR Item 2 have been designed to integrate with two infrastructure scenarios as follows;

- **Short Term** – In the unlikely scenario that the construction of the NTA's CBC works at the Calmount Rd / Ballymount Avenue junction is delayed, the scheme proposals have been designed to (i) tie into the existing roundabout layout at this key off-site junction, (ii) design / provide infrastructure that will minimise the extent of works (and subsequently cost) to be subsequently undertaken by the NTA when implementing the CBC works at this off-site junction's, and (iii) implement off-site active travel infrastructure that will form part of the NTA's CBC junction layout thereby minimising the extent of junction infrastructure works

required to be implemented by the NTA. This potential short-term layout is detailed in DBFL drawing 210175-DBFL-RD-SP-DR-C-1101 entitled Roads Layout Plan

- Medium Term – The NTA CBC scheme is implemented and the subject development proposal tie into the CBC infrastructure works. This scenario is detailed in DBFL drawing 210175-DBFL-TR-SP-DR-C-1121 entitled Emerging NTA Core Bus Corridor Works

To enable a response to this item of the CFIR DBFL through SDCC reached out to the NTA and have subsequently been provided with the most up to date details of the CBC scheme works. When providing the CBC details the NTA noted that Tallaght / Clondalkin CBC scheme had yet to be submitted for planning and its details could change both prior to planning submission and as part of any subsequent detail design exercise. The NTA's CBC proposals at the offsite Calmount Road / Ballymount Avenue Junciton are detailed in Figure 4.1 below and DBFL drawing DBFL drawing 210175-DBFL-TR-SP-DR-C-1121 entitled Emerging NTA Core Bus Corridor Works which accompanies this CFI engineer's response.

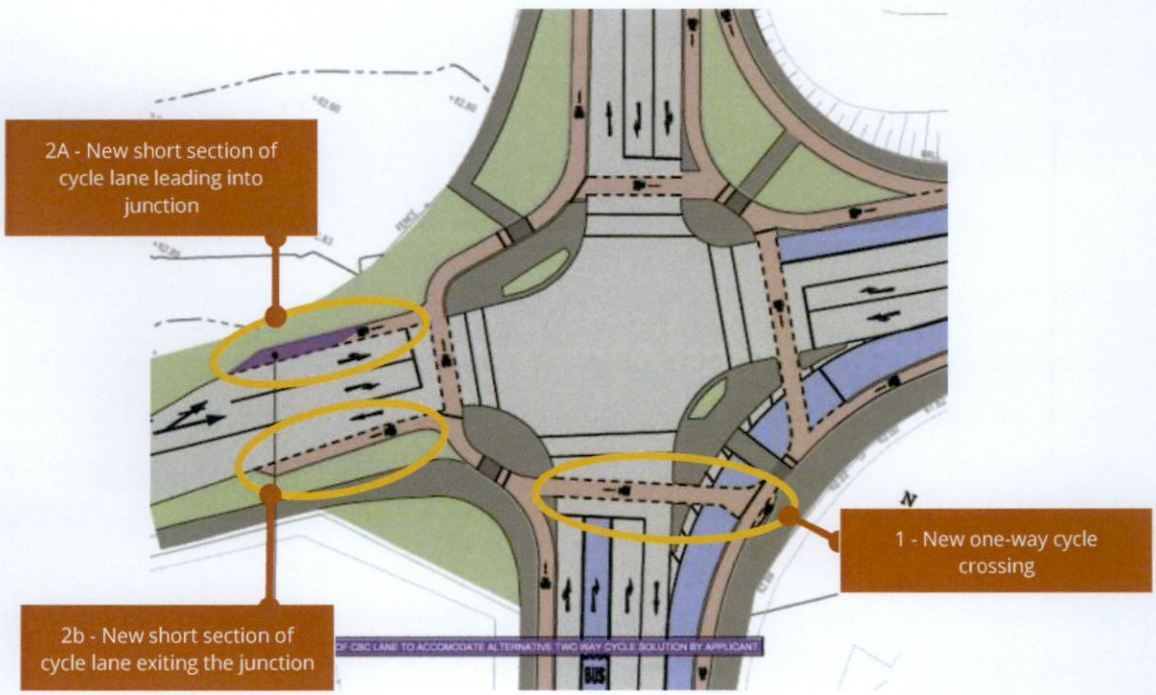


Figure 4.1: NTA's 2022 CBC Proposals at Calmount Rd / Ballymount Avenue Junction

The latest NTA CBC proposals along Calmount Road corridor very much respect the same configuration (conversion of existing roundabout junction to a signal controlled layout) as previously proposed and disseminated during the 2020 public consultation exercise (as

documented in the subject developments original application and subsequent FIR response) with the following two additions noted as also highlighted in Figure 4.1;

1) New westbound cycle crossing provided on the junction's southern arm, and
2) Provision of one-way cycle transfer facilities to enable cyclists enter and exit the junctions segregated cycle tracks when traveling to and from Calmount Road West (western arm of the junction) carriageway.

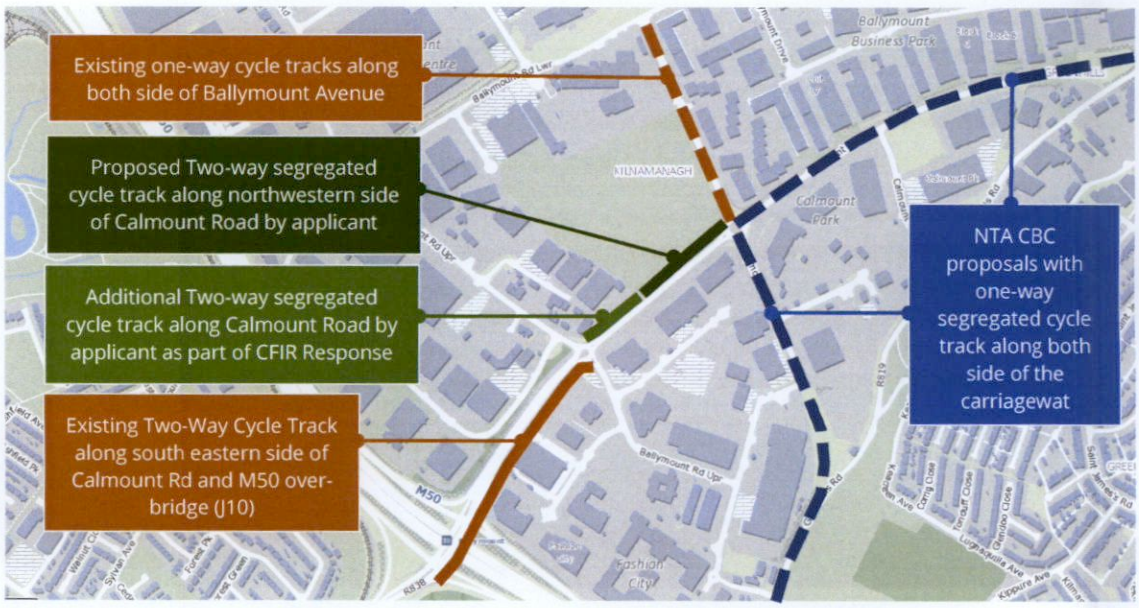


Figure 4.2: Local Off-Site Bicycle Infrastructure (Existing and Proposed by Applicant and CBC)

As detailed in the original planning application and subsequent FIR response there are currently no dedicated cycle facilities along the site frontage on Calmount Rd between Ballymount Avenue and Ballymount Rd Upper. Responding to the existing two-way cycle track (reference Figure 4.2) provided along Calmount Rd (south eastern side only) between Ballymount Rd Upper and the M50 (including the J10 overbridge) the applicant included the implementation of a two-way cycle track (approximately 190m in length) along the north western side of Calmount Rd over the entire length of the subject site frontage.

As part of this CFIR response the applicant is now demonstrating how this two-way cycle track south-eastwards could be extended if considered necessary by the planning authority by a further 110m to connect with the Ballymount Rd Upper / Calmount Rd junction. The updated CFIR scheme proposals for the off-site active travel works along Calmount Road corridor are detailed in Figure 4.3 below and in DBFL drawings 210175-DBFL-RD-SP-DR-C-1101 (potential Short Term scenario e.g. prior to CBC junction works) and 210175-DBFL-TR-SP-DR-C-1121 (medium term scenario with

CBC works implemented). This two-way segregated cycle track would facilitate cyclists traveling to both directions along Calmount Road to gain access to / from;

- The proposed commercial developments (Unit 5 office blocks) public realm plaza area that fronts onto the Calmount Rd / Ballymount Avenue junction (Reference Figure 4.3).
- The road crossing points of the existing Calmount Rd / Ballymount Avenue roundabout junction (whilst minimising works that would need to be removed to accommodate the NTA CBC scheme if the CBC works were implemented after the applicants proposals), and
- The one-way clockwise cycle routes implemented as part of the NTA CBC junction works.

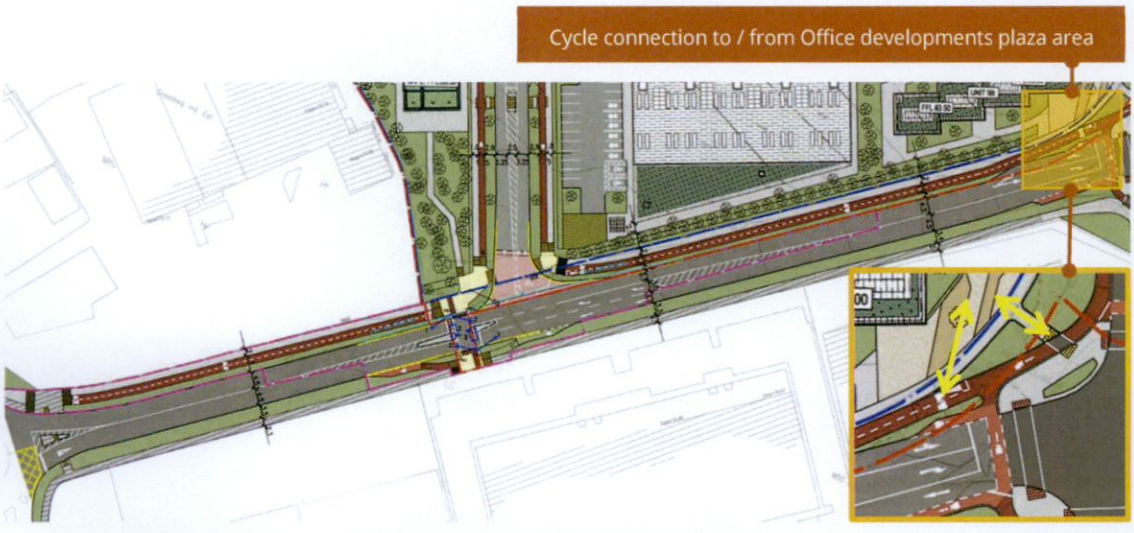


Figure 4.3: Off-Site Bicycle Infrastructure Works by Applicant along Calmount Road (Medium Term Scenario) – Extract of DBFL drawing 210175-DBFL-TR-SP-DR-C-1121

In addition to connecting into the existing on-site Calmount Rd / Ballymount Avenue roundabout junction arrangement (e.g. prior to NTA's CBC works being implemented as illustrated in DBFL drawing 210175-DBFL-RD-SP-DR-C-1101) the proposed development and associated off-site active travel infrastructure works must also integrate with the proposed NTA's CBC scheme proposals in this area. This dual requirement has very much influenced the scheme proposals particularly in regard to;

(i) the extent of the off-site active travel infrastructure being proposed as part of the subject commercial scheme proposals, and

(ii) the need to ensure that the applicant is not proposing new infrastructure works that would subsequently need to be removed (if implemented prior to the CBC works) to accommodate (at an additional cost) the NTA proposals.

In reference to the key off-site Calmount Rd / Ballymount Avenue junction the scheme proposals tie-in with the existing roundabout junction arrangement is detailed in Figure 4.4 below and DBFL drawing 210175-DBFL-RD-SP-DR-C-1101. The proposals tie-in with the NTA CBC design for this junction is presented in Figure 4.5 below and DBFL drawing 210175-DBFL-TR-SP-DR-C-1121.

Figure 4.4: Off-Site Bicycle Infrastructure Works by Applicant Tie-In with Existing Junction Layout
(Extract of DBFL drawing 210175-DBFL-RD-SP-DR-C-1101)

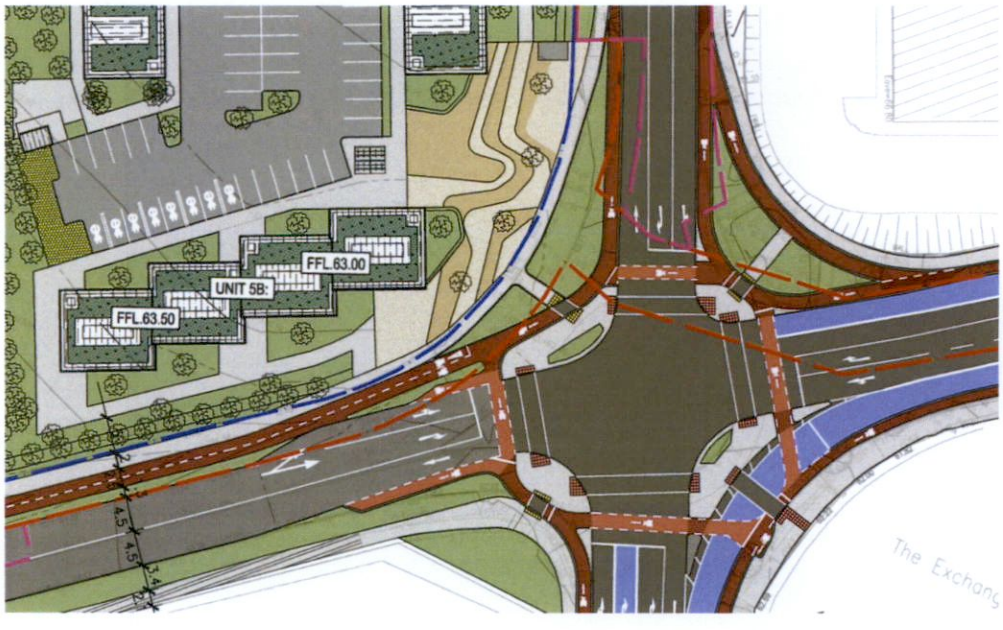


Figure 4.5: Off-Site Bicycle Infrastructure Works by Applicant Tie-In with NTA CBC Junction Layout
(Extract of DBFL drawing 210175-DBFL-TR-SP-DR-C-1121)

To accommodate the proposed NTA CBC junction upgrades in parallel with the proposed new off-site pedestrian footpath and parallel segregated two-way cycle track (along Calmount Rd by the applicant) the design has necessitates encroaching slightly into the subject site. The extent of this set back (amounting to 34m2 in total) into the subject site is illustrated in Figure 4.6 below and DBFL drawing 210175-DBFL-TR-SP-DR-C-1121. It is proposed that this area of the subject site is made available to be adopted by SDCC and incorporated into the extents of the public road network.

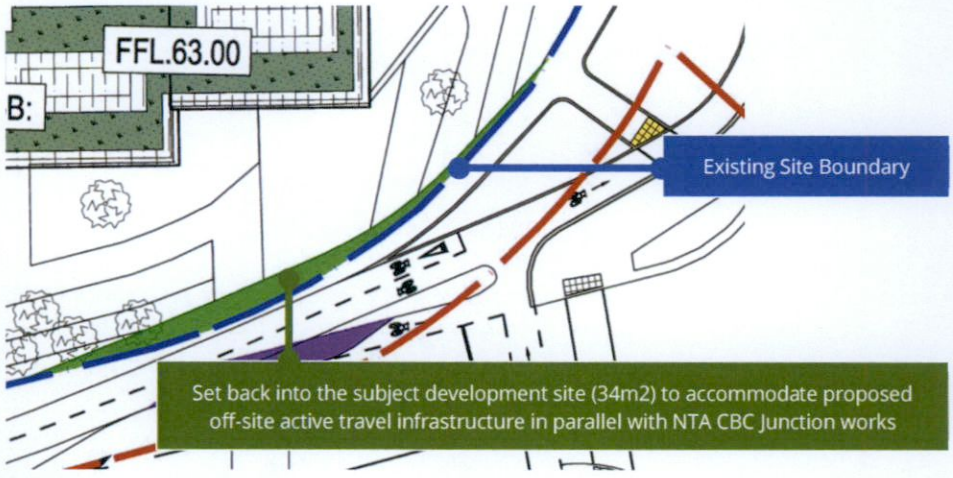


Figure 4.6: Set Back into the Subject Development Site to Accommodate the Off-Site Pedestrian and Bicycle Infrastructure Works by Applicant (Extract of DBFL drawing 210175-DBFL-TR-SP-DR-C-1121)

It is noted that the delivery of the proposed off-site two-way cycle track along the length of Calmount Road between Ballymount Rd Lower (to the south) and Ballymount Avenue (to the north) by the applicant if consider necessary by the planning aufhotity and its successful integration into the NTA proposed CBC junction layout negates the need for the two cycle lane transitions between the junctions clockwise circulating route and the Calmount Road carriageway. Nevertheless, the junction layout presented in DBFL drawing 210175-DBFL-TR-SP-DR-C-1121, which illustrates the coordination between the proposed development works by the applicant and the NTA CBC junction proposals, retains both cycle lane transitions on Calmount Road should either the local roads authority or the NTA wish for them to be retained.

It is noted that the length of the short northeast bound cycle lane leading into the inbound transition on Calmount Road (south western arm of junction) has been shortened by approximately 9-10m (as detailed in Figure 4.7 below and Viewport 2 of DBFL drawing 210175-DBFL-TR-SP-DR-C-1121) to accommodate the applications new 2.0m footpath and 2.5m wide segregated cycle track. With most if not all cyclists utilising the alternative two-way cycle track implemented by the applicant this decrease of the cycle lane is not considered a material impact

to the overall objectives of the off-site active travel infrastructure works as all cyclists users are accommodated for along all travel desire lines in a safe and appropriate manner.

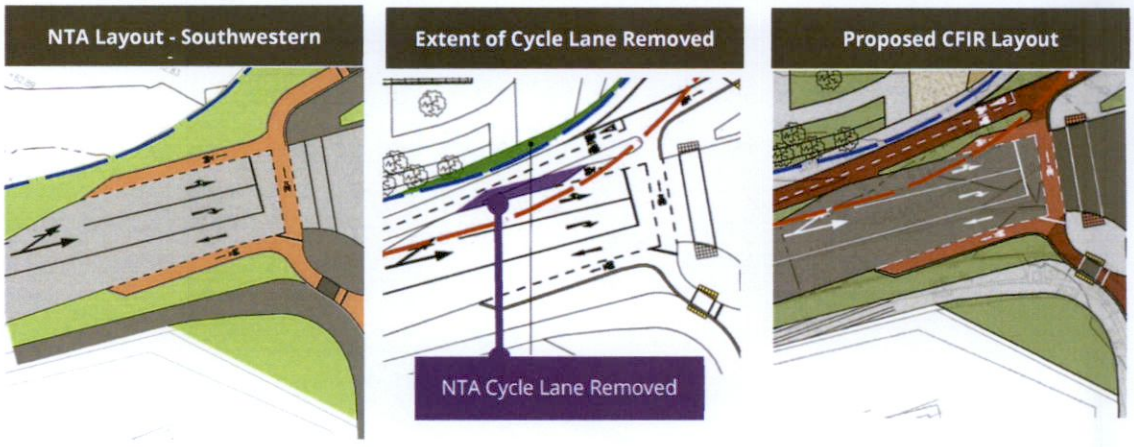


Figure 4.7: Amendment to NTA CBC Cycle Lane on Calmount Rd
(Extract of DBFL drawing 210175-DBFL-TR-SP-DR-C-1121)

In addition to a new footpath along the entire length of Calmount Road (between Ballymount Rd Lwr and Ballymount Avenue) the proposed developments external active travel works included the upgrading of the external public footpath adjoining the development Block 5 (office blocks) plaza area. This upgraded footpath, amounting to 98m2, is included within the NTA CBC junction proposals in this area. Accordingly, with the subject application delivering this section of footpath works (as illustrated in Figure 4.8 below) the development proposals will be implementing a portion of the actual NTA CBC junction works .

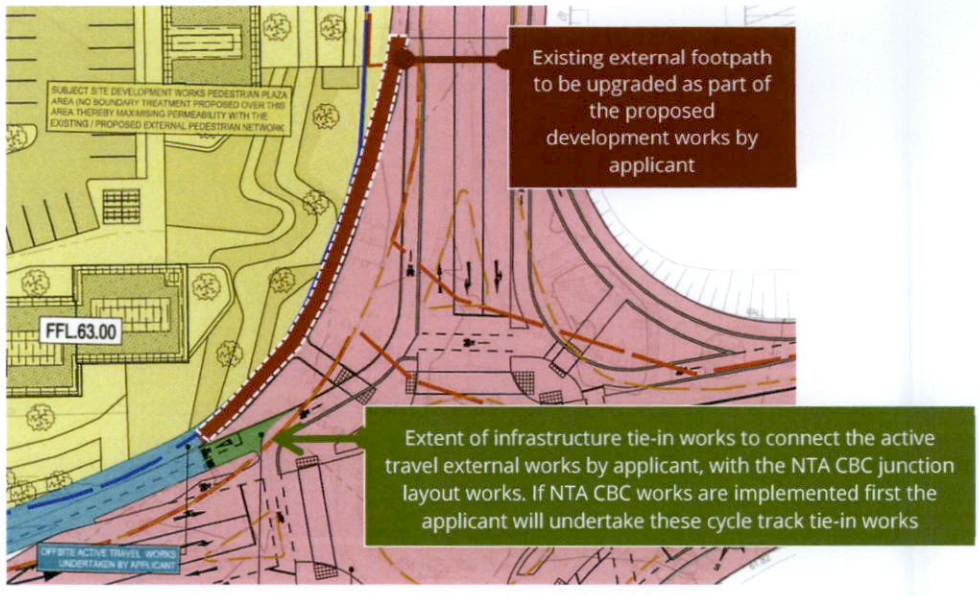


Figure 4.8: Upgrade of Existing External Public Footpath by Applicant Adjoining Plaza Area
(Extract of DBFL drawing 210175-DBFL-TR-SP-DR-C-1121)

The requested Network Flow Diagrams as originally appended to the TTA report are included in Appendix A of this report but printed at A3 size to assist in the review of the presented data. Soft copies of this data can also be provided if required.

Should the planning authority consider it necessary, the final details of the works proposed in the context of the NTA's CBC proposals could be subject to a condition requiring the applicant to liaise with the NTA and submit details to the planning authority for agreement prior to the commencement of development.

5 CIVIL INFRASTRUCTURE CHANGES REQUIRED

5.1 Introduction

The Clarification of Further Information (CFI) request does not specifically relate to any of the civil infrastructure proposals previously submitted regarding foul sewers, watermains or surface water sewers, however given that there have been a number of changes to the overall roads provision layout between the further information planning submission and the revised submission for the clarification of further information, a number of changes have been required to the civil infrastructure design for the three aforementioned services as well as the revision to the roads provision.

Civil infrastructure revisions to accommodate the latest layouts proposed for the roads and Unit 2 have been developed in conjunction with TOT Architects, and landscape architects - Murray & Associates, and incorporate relevant requirements of the recently adopted South Dublin County Development Plan 2022 - 2028.

The approach to the civil infrastructure provision is aligned with the previous proposals for the site, with the majority of changes focussed on accommodating changes to Unit 2 at the north western corner of the site and the redesigned roads access which allows for future site connectivity through future connections to surrounding roads.

Minor variations to the layout of SuDS features (swales) along the public road have also been made to accommodate the revised access points to Unit 2 but do not change the overall strategy for the majority of the site, runoff from these roads will continue to be routed through SuDS features in line with the previously submitted approach. The access road for Unit 2 will be provided with traditional drainage features to allow flexibility of design should the permeability connection to the cul-de-sac at the north west corner come to fruition.

Foul Sewers and Watermain supply for Unit 2 have also been revised to accommodate minor changes in the proposed site layout. Repositioning of hydrants has been required to ensure complete site coverage due to the change in position and orientation of Unit 2. All revisions required are reflected in the latest issue of the drawings submitted as part of the Clarification of Further Information response.

Revised drawings are included as part of the DBFL drawing pack submitted as part of the Clarification of FI response, with the latest proposals for the civil infrastructure reflected for the site:

- Surface Water Layout Plan – 210175-DBFL-SW-SP-DR-C-1300
- Foul Sewer Layout Plan – 210175-DBFL-FW-SP-DR-C-1302
- Watermain Layout Plan – 210175-DBFL-WM-SP-DR-C-1001
- Roads Layout Plan – 210175-DBFL-RD-SP-DR-C-1101

5.2 Unit 2 – Surface Water Network Revisions

Referring to **Figure 5.2** below and the Surface Water Layout Plan (210175-DBFL-SW-SP-DR-C-1300) the most evident change in the layout is the provision of the access road to the north of Unit 2 and the revised orientation and plan layout of Unit 2,

With regards to the collection of surface water runoff for Unit 2, the overall approach as outlined in the previously submitted Engineering Service Report and technical note in response to Further Information is adhered to. Roof runoff is collected via 225mm diameter pipes which convey runoff to the proposed attenuation system in the service yard. On the north side of Unit 2 the roof runoff will discharge to a swale prior to being conveyed to the soakaway/bioretention area in the northwest corner of the unit, in turn discharging to the proposed attenuation system for high precipitation events. On the south side, space for above ground conveyance is limited and as such a piped connection to the attenuation system is required.

For the service yard, the majority of runoff is proposed to be directed to the swales along the western and northern edges of the site which then in turn discharge to the bioretention/soakaway area for further treatment/storage prior to discharge to the attenuation system for high precipitation events. For service yard areas that cannot drain to swales a conventional gully network is proposed.

Permeable pavement is proposed for the parking area to the front of the unit to provide interception and treatment across an area of 826m2. Revised SuDS calculations for changes required across the site are appended and a revised microdrainage model determining the attenuation requirement has been created for Unit 2. The roads catchment and Unit 2 show no flooding is expected in either network for a 1:100 year + 20% climate change event (results also appended).

The SuDS features proposed for the site have been designed alongside Murray & Associates to ensure that compliance is achieved with the SDCC Development Plan in terms of Green

Infrastructure Policy Objectives (please refer to Green Infrastructure report for further details). In a civil engineering context the proposals for the development have been developed to achieve SDCC Policy IE3 : Surface Water and Ground Water, particularly Objectives 2 and 8.

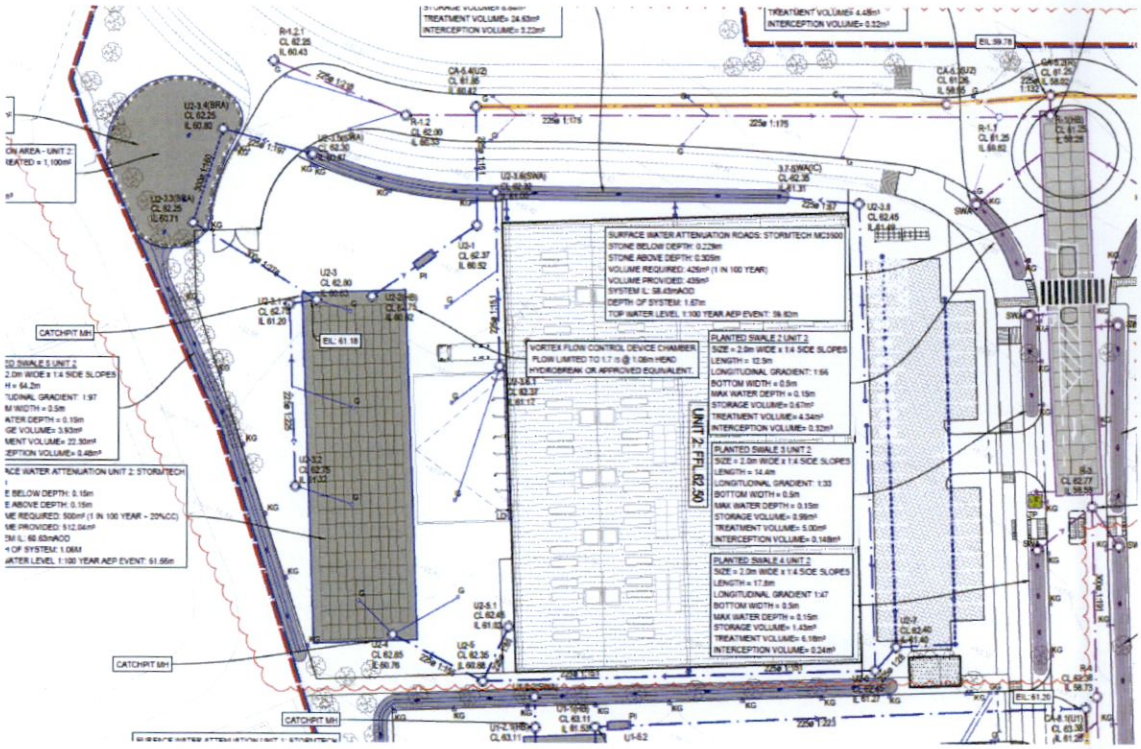


Figure 5.2 – Excerpt from revised surface water layout plan, 210175-DBFL-SW-SP-DR-C-1300

5.3 Unit 2 – Foul Sewer Revisions

Due to the change in layout of Unit 2, a minor revision to the foul sewer network has been required to service this connection. Minor downstream changes to the network have been required to facilitate this change and have been reflected on the revised drawings and microdrainage calculations appended to this report (foul loading for the network remains unchanged). Self-cleansing velocities are maintained across the network and the layout maintains complicity with Irish Water's standard details and Code of Practice. These revisions, and the overall scheme, are in line with SDCC Policy IE2: Water Supply and Wastewater and specifically IE2 Objectives 1, 3, 5, 8, 9 and 10.

Confirmation of feasibility for the proposed site has been received by Irish Water for both the foul sewer loading and watermain demand and is included within Appendix B of this report.

5.4 Internal Roads – Surface Water Network Revisions

As a result of the clarification of further information request a revised roundabout at the northern edge of the site, a number of revised crossings, and an access road to Unit 2 in the north west have been provided for the internal roads layout plan for the development, this has necessitated revisions to the swale layout for these roads. While the position and layout of the swales has changed to accommodate these changes, the overarching approach of draining these roads entirely to SuDS features is maintained.

The access road to Unit 2 (and potentially future through road) will be traditionally drained via road gullies to allow for flexibility in longer term design. This additional road drainage connects to the previously proposed attenuation within the central road and is discharged at a controlled rate to the carrier sewer which in turn discharges offsite. The attenuation system provided for the roads has sufficient capacity to cater for the potential future extension of the roads through to the northern boundary and the associated additional runoff.

The only change to the piped surface water sewer network to be taken in charge by the local authority that has been made is the aforementioned extension of the roads network to the northwest to cater for the revised roads provision. Individual unit networks remain unaltered, except for the revised Unit 2 proposals as discussed above. All individual unit network discharge rates, and the whole development network discharge rate proposed in the earlier planning submission are maintained while incorporating the required changes.

As per the revisions for Unit 2 elaborated on in section 5.2, the revised SuDS proposals are aligned with the SDCC County Development Plan 2022-2028, Policy IE3 and Green Infrastructure Objectives referenced in the Green Infrastructure Report and the Coordinated Design Response Document.

5.5 Watermain Network Revisions

Minor amendments have been made to facilitate the revisions to the site layout, namely the revised position of a hydrant to provide full coverage for Unit 2. The watermain network design maintains complicity with Irish Water's Standard Details and Codes of Practice as per previous planning drawings. Similar to the foul sewer revisions, all watermain revisions have been made in line with the SDCC policies noted in section 5.3.

Appendix A : Network Flow Diagrams (A3 Size)

FOUL SEWERAGE DESIGN

Design Criteria for FOUL

Pipe Sizes STANDARD Manhole Sizes STANDARD

Industrial Flow (l/s/ha)	0.00	Add Flow / Climate Change (%)	10
Industrial Peak Flow Factor	0.00	Minimum Backdrop Height (m)	0.000
Calculation Method	EN 752	Maximum Backdrop Height (m)	0.000
Frequency Factor	0.50	Min Design Depth for Optimisation (m)	0.750
Domestic (l/s/ha)	0.00	Min Vel for Auto Design only (m/s)	0.75
Domestic Peak Flow Factor	6.00	Min Slope for Optimisation (1:X)	500

Designed with Level Inverts

Network Design Table for FOUL

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Units	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
F1.000	25.296	0.420	60.2	0.000	25.4	0.0	0.150	o	150	Pipe/Conduit	
F1.001	31.053	0.270	115.0	0.000	0.0	0.0	0.150	o	150	Pipe/Conduit	
F2.000	27.249	0.730	37.3	0.000	10.6	0.0	0.150	o	150	Pipe/Conduit	
F3.000	14.635	0.250	58.5	0.000	25.4	0.0	0.150	o	150	Pipe/Conduit	
F3.001	18.334	0.140	131.0	0.000	0.0	0.0	0.150	o	150	Pipe/Conduit	
F2.001	31.341	0.220	142.5	0.000	0.0	0.0	0.150	o	150	Pipe/Conduit	
F4.000	25.561	0.610	41.9	0.000	25.4	0.0	0.150	o	150	Pipe/Conduit	
F2.002	41.564	0.280	148.4	0.000	0.0	0.0	0.150	o	150	Pipe/Conduit	
F1.002	49.141	0.270	182.0	0.000	0.0	0.0	0.150	o	150	Pipe/Conduit	
F5.000	30.532	0.500	61.1	0.000	25.4	0.0	0.150	o	150	Pipe/Conduit	
F5.001	17.037	0.120	142.0	0.000	0.0	0.0	0.150	o	150	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Units	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F1.000	60.990	0.000	0.0	25.4	0.3	32	0.99	1.53	27.0	2.8
F1.001	60.570	0.000	0.0	25.4	0.3	38	0.78	1.10	19.4	2.8
F2.000	64.130	0.000	0.0	10.6	0.2	23	1.04	1.96	34.6	1.8
F3.000	63.300	0.000	0.0	25.4	0.3	32	1.01	1.55	27.4	2.8
F3.001	63.050	0.000	0.0	25.4	0.3	40	0.75	1.02	18.1	2.8
F2.001	62.910	0.000	0.0	36.0	0.3	44	0.76	0.98	17.3	3.3
F4.000	63.300	0.000	0.0	25.4	0.3	29	1.14	1.84	32.6	2.8
F2.002	62.690	0.000	0.0	61.4	0.4	51	0.80	0.96	17.0	4.3
F1.002	60.300	0.000	0.0	86.8	0.5	60	0.78	0.86	15.3	5.1
F5.000	60.150	0.000	0.0	25.4	0.3	32	0.99	1.52	26.8	2.8
F5.001	59.650	0.000	0.0	25.4	0.3	40	0.72	0.98	17.4	2.8

Network Design Table for FOUL

PN	Length (m)	Fall (m)	Slope (1:X)	Area (ha)	Units	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
F1.003	81.729	0.390	209.6	0.000	0.0	0.0	0.150	o	150	Pipe/Conduit	
F6.000	45.981	0.770	59.7	0.000	68.8	0.0	0.150	o	150	Pipe/Conduit	
F6.001	11.559	0.080	144.5	0.000	0.0	0.0	0.150	o	150	Pipe/Conduit	
F1.004	37.268	0.160	232.9	0.000	0.0	0.0	0.150	o	150	Pipe/Conduit	
F7.000	28.462	0.470	60.6	0.000	25.4	0.0	0.150	o	150	Pipe/Conduit	
F1.005	76.253	0.330	231.1	0.000	68.8	0.0	0.150	o	150	Pipe/Conduit	
F8.000	34.756	0.580	59.9	0.000	68.8	0.0	0.150	o	150	Pipe/Conduit	
F8.001	25.789	0.170	151.7	0.000	0.0	0.0	0.150	o	150	Pipe/Conduit	
F1.006	17.539	0.080	219.2	0.000	0.0	0.0	0.150	o	225	Pipe/Conduit	
F1.007	30.182	0.140	215.6	0.000	0.0	0.0	0.150	o	225	Pipe/Conduit	
F1.008	52.863	0.240	220.3	0.000	0.0	0.0	0.150	o	225	Pipe/Conduit	
F1.009	24.563	0.110	223.3	0.000	0.0	0.0	0.150	o	225	Pipe/Conduit	

Network Results Table

PN	US/IL (m)	Σ Area (ha)	Σ Base Flow (l/s)	Σ Units	Add Flow (l/s)	P.Dep (mm)	P.Vel (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
F1.003	59.530	0.000	0.0	112.2	0.5	67	0.76	0.80	14.2	5.8
F6.000	61.250	0.000	0.0	68.8	0.4	41	1.15	1.54	27.2	4.6
F6.001	60.480	0.000	0.0	68.8	0.4	53	0.83	0.97	17.2	4.6
F1.004	59.140	0.000	0.0	181.0	0.7	79	0.78	0.76	13.4	7.4
F7.000	59.900	0.000	0.0	25.4	0.3	32	0.99	1.53	27.0	2.8
F1.005	58.980	0.000	0.0	275.2	0.8	91	0.82	0.76	13.5	9.1
F8.000	61.900	0.000	0.0	68.8	0.4	41	1.15	1.53	27.1	4.6
F8.001	61.320	0.000	0.0	68.8	0.4	53	0.81	0.95	16.8	4.6
F1.006	58.650	0.000	0.0	344.0	0.9	77	0.85	1.02	40.5	10.2
F1.007	58.570	0.000	0.0	344.0	0.9	76	0.86	1.03	40.8	10.2
F1.008	58.430	0.000	0.0	344.0	0.9	77	0.85	1.02	40.4	10.2
F1.009	58.190	0.000	0.0	344.0	0.9	77	0.85	1.01	40.1	10.2

Manhole Schedules for FOUL

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
F1	62.350	1.360	Open Manhole	1200	F1.000	60.990	150				
F2	63.000	2.430	Open Manhole	1200	F1.001	60.570	150	F1.000	60.570	150	
F3.3	65.180	1.050	Open Manhole	1200	F2.000	64.130	150				
F3.2.2	64.350	1.050	Open Manhole	1200	F3.000	63.300	150				
F3.2.1	64.350	1.300	Open Manhole	1200	F3.001	63.050	150	F3.000	63.050	150	
F3.2	64.750	1.840	Open Manhole	1200	F2.001	62.910	150	F2.000	63.400	150	490
								F3.001	62.910	150	
F3.1.1	64.350	1.050	Open Manhole	1200	F4.000	63.300	150				
F3.1	64.250	1.560	Open Manhole	1200	F2.002	62.690	150	F2.001	62.690	150	
								F4.000	62.690	150	
F3	64.000	3.700	Open Manhole	1200	F1.002	60.300	150	F1.001	60.300	150	
								F2.002	62.410	150	2110
F4.2	61.200	1.050	Open Manhole	1200	F5.000	60.150	150				
F4.1	61.200	1.550	Open Manhole	1200	F5.001	59.650	150	F5.000	59.650	150	
F4	61.900	2.370	Open Manhole	1200	F1.003	59.530	150	F1.002	60.030	150	500
								F5.001	59.530	150	
F5.2	62.300	1.050	Open Manhole	1200	F6.000	61.250	150				
F5.1	62.280	1.800	Open Manhole	1200	F6.001	60.480	150	F6.000	60.480	150	
F5	62.000	2.860	Open Manhole	1200	F1.004	59.140	150	F1.003	59.140	150	
								F6.001	60.400	150	1260
F6.1	60.950	1.050	Open Manhole	1200	F7.000	59.900	150				
F6	60.900	1.920	Open Manhole	1200	F1.005	58.980	150	F1.004	58.980	150	
								F7.000	59.430	150	450
F7.2	62.950	1.050	Open Manhole	1200	F8.000	61.900	150				
F7.1	62.600	1.280	Open Manhole	1200	F8.001	61.320	150	F8.000	61.320	150	
F7	62.500	3.850	Open Manhole	1200	F1.006	58.650	225	F1.005	58.650	150	
								F8.001	61.150	150	2425
F8	62.100	3.530	Open Manhole	1200	F1.007	58.570	225	F1.006	58.570	225	
F9	61.500	3.070	Open Manhole	1200	F1.008	58.430	225	F1.007	58.430	225	
F10	60.500	2.310	Open Manhole	1200	F1.009	58.190	225	F1.008	58.190	225	
F	0.000		Open Manhole	0		OUTFALL		F1.009	58.080	225	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
F1	709758.075	730405.481	709758.075	730405.481	Required	
F2	709783.329	730406.933	709783.329	730406.933	Required	
F3.3	709803.128	730301.478	709803.128	730301.478	Required	

Manhole Schedules for FOUL

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
F3.2.2	709858.172	730312.295	709858.172	730312.295	Required	
F3.2.1	709844.850	730306.236	709844.850	730306.236	Required	
F3.2	709827.815	730313.014	709827.815	730313.014	Required	
F3.1.1	709791.607	730330.582	709791.607	730330.582	Required	
F3.1	709814.724	730341.490	709814.724	730341.490	Required	
F3	709796.957	730379.030	709796.957	730379.030	Required	
F4.2	709805.993	730402.849	709805.993	730402.849	Required	
F4.1	709833.540	730416.016	709833.540	730416.016	Required	
F4	709841.079	730400.738	709841.079	730400.738	Required	
F5.2	709933.736	730382.494	709933.736	730382.494	Required	
F5.1	709913.582	730423.823	709913.582	730423.823	Required	
F5	709915.152	730435.275	709915.152	730435.275	Required	
F6.1	709921.575	730460.940	709921.575	730460.940	Required	
F6	709948.540	730451.832	709948.540	730451.832	Required	
F7.2	709932.117	730351.111	709932.117	730351.111	Required	
F7.1	709957.882	730374.438	709957.882	730374.438	Required	
F7	709982.081	730383.352	709982.081	730383.352	Required	
F8	709998.878	730378.303	709998.878	730378.303	Required	

Manhole Schedules for FOUL

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
F9	710028.770	730382.477	710028.770	730382.477	Required	
F10	710072.017	730412.878	710072.017	730412.878	Required	
F	710096.580	730412.878			No Entry	

PIPELINE SCHEDULES for FOUL

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F1.000	o	150	F1	62.350	60.990	1.210	Open Manhole	1200
F1.001	o	150	F2	63.000	60.570	2.280	Open Manhole	1200
F2.000	o	150	F3.3	65.180	64.130	0.900	Open Manhole	1200
F3.000	o	150	F3.2.2	64.350	63.300	0.900	Open Manhole	1200
F3.001	o	150	F3.2.1	64.350	63.050	1.150	Open Manhole	1200
F2.001	o	150	F3.2	64.750	62.910	1.690	Open Manhole	1200
F4.000	o	150	F3.1.1	64.350	63.300	0.900	Open Manhole	1200
F2.002	o	150	F3.1	64.250	62.690	1.410	Open Manhole	1200
F1.002	o	150	F3	64.000	60.300	3.550	Open Manhole	1200
F5.000	o	150	F4.2	61.200	60.150	0.900	Open Manhole	1200
F5.001	o	150	F4.1	61.200	59.650	1.400	Open Manhole	1200
F1.003	o	150	F4	61.900	59.530	2.220	Open Manhole	1200
F6.000	o	150	F5.2	62.300	61.250	0.900	Open Manhole	1200
F6.001	o	150	F5.1	62.280	60.480	1.650	Open Manhole	1200
F1.004	o	150	F5	62.000	59.140	2.710	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F1.000	25.296	60.2	F2	63.000	60.570	2.280	Open Manhole	1200
F1.001	31.053	115.0	F3	64.000	60.300	3.550	Open Manhole	1200
F2.000	27.249	37.3	F3.2	64.750	63.400	1.200	Open Manhole	1200
F3.000	14.635	58.5	F3.2.1	64.350	63.050	1.150	Open Manhole	1200
F3.001	18.334	131.0	F3.2	64.750	62.910	1.690	Open Manhole	1200
F2.001	31.341	142.5	F3.1	64.250	62.690	1.410	Open Manhole	1200
F4.000	25.561	41.9	F3.1	64.250	62.690	1.410	Open Manhole	1200
F2.002	41.564	148.4	F3	64.000	62.410	1.440	Open Manhole	1200
F1.002	49.141	182.0	F4	61.900	60.030	1.720	Open Manhole	1200
F5.000	30.532	61.1	F4.1	61.200	59.650	1.400	Open Manhole	1200
F5.001	17.037	142.0	F4	61.900	59.530	2.220	Open Manhole	1200
F1.003	81.729	209.6	F5	62.000	59.140	2.710	Open Manhole	1200
F6.000	45.981	59.7	F5.1	62.280	60.480	1.650	Open Manhole	1200
F6.001	11.559	144.5	F5	62.000	60.400	1.450	Open Manhole	1200
F1.004	37.268	232.9	F6	60.900	58.980	1.770	Open Manhole	1200

PIPELINE SCHEDULES for FOUL

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F7.000	o	150	F6.1	60.950	59.900	0.900	Open Manhole	1200
F1.005	o	150	F6	60.900	58.980	1.770	Open Manhole	1200
F8.000	o	150	F7.2	62.950	61.900	0.900	Open Manhole	1200
F8.001	o	150	F7.1	62.600	61.320	1.130	Open Manhole	1200
F1.006	o	225	F7	62.500	58.650	3.625	Open Manhole	1200
F1.007	o	225	F8	62.100	58.570	3.305	Open Manhole	1200
F1.008	o	225	F9	61.500	58.430	2.845	Open Manhole	1200
F1.009	o	225	F10	60.500	58.190	2.085	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
F7.000	28.462	60.6	F6	60.900	59.430	1.320	Open Manhole	1200
F1.005	76.253	231.1	F7	62.500	58.650	3.700	Open Manhole	1200
F8.000	34.756	59.9	F7.1	62.600	61.320	1.130	Open Manhole	1200
F8.001	25.789	151.7	F7	62.500	61.150	1.200	Open Manhole	1200
F1.006	17.539	219.2	F8	62.100	58.570	3.305	Open Manhole	1200
F1.007	30.182	215.6	F9	61.500	58.430	2.845	Open Manhole	1200
F1.008	52.863	220.3	F10	60.500	58.190	2.085	Open Manhole	1200
F1.009	24.563	223.3	F	0.000	58.080		Open Manhole	0

Free Flowing Outfall Details for FOUL

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
F1.009	F	0.000	58.080	0.000	0	0

Simulation Criteria for FOUL

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
Number of Online Controls 0 Number of Storage Structures 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Return Period (years) 2

Synthetic Rainfall Details

Region	Scotland and Ireland	Cv (Summer)	0.750
M5-60 (mm)	17.500	Cv (Winter)	0.840
Ratio R	0.276	Storm Duration (mins)	30
Profile Type	Summer		

Appendix B : Irish Water Confirmation of Feasibility

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
Cathrach Theas
Cathair Chorcaí

Irish Water
PO Box 448,
South City
Delivery Office,
Cork City.

www.water.ie

CONFIRMATION OF FEASIBILITY

Rory Moynihan

DBFL Consulting Engineers
Ormond House
Ormond Quay Upper
Dublin
D071704

2 November 2022

Our Ref: CDS22007763 Pre-Connection Enquiry
Ballymount Avenue, Ballymount Industrial Estate, Ballymount, Dublin 12

Dear Applicant/Agent,

We have completed the review of the Pre-Connection Enquiry.

Irish Water has reviewed the pre-connection enquiry in relation to a Water & Wastewater connection for a Business Connection of 9 unit(s) at Ballymount Avenue, Ballymount Industrial Estate, Ballymount, Dublin 12, (the **Development)**.

Based upon the details provided we can advise the following regarding connecting to the networks;

• **Water Connection**	- Feasible without infrastructure upgrade by Irish Water. - The exact details of the connection(s) will be confirmed at connection application stage.
• **Wastewater Connection**	- Feasible Subject to upgrades. - Approximately 130m of network extension will be required for the connection to the 300mm sewer on Calmount Road as per the applicant proposal layouts. These extension works are not currently on the Irish Water investment plan therefore, the

applicant will be required to fund these local network upgrades. The fee will be calculated at a connection application stage.

- It is the responsibility of the applicant to verify that a gravity connection is feasible and in line with the Irish Water Codes of Practice with regards minimum allowable gradients.
- An application should be made for a Section 16 Trade Discharge Effluent Licence prior to any development occurring on this site.

This letter does not constitute an offer, in whole or in part, to provide a connection to any Irish Water infrastructure. Before the Development can be connected to our network(s) you must submit a connection application and be granted and sign a connection agreement with Irish Water.

As the network capacity changes constantly, this review is only valid at the time of its completion. As soon as planning permission has been granted for the Development, a completed connection application should be submitted. The connection application is available at www.water.ie/connections/get-connected/

Where can you find more information?

- **Section A -** What is important to know?
- **Section B -** Details of Irish Water's Network(s)

This letter is issued to provide information about the current feasibility of the proposed connection(s) to Irish Water's network(s). This is not a connection offer and capacity in Irish Water's network(s) may only be secured by entering into a connection agreement with Irish Water.

For any further information, visit **www.water.ie/connections**, **email newconnections@water.ie** or contact 1800 278 278.

Yours sincerely,

Yvonne Harris

Yvonne Harris
Head of Customer Operations

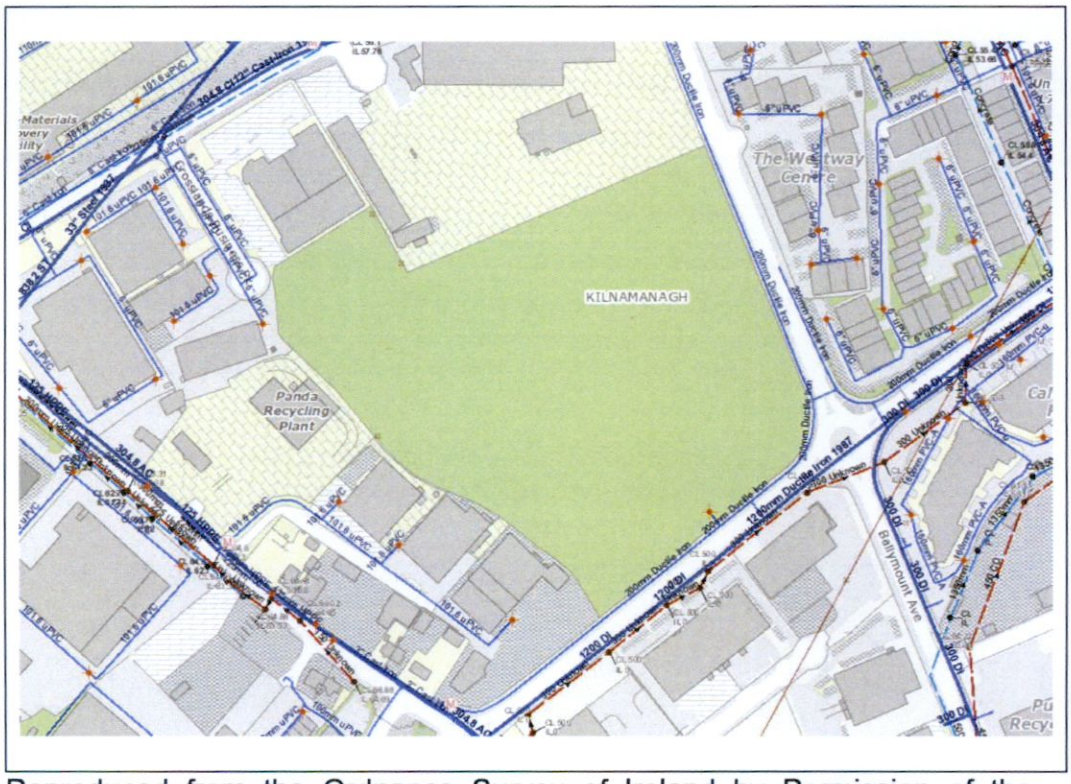
Section A - What is important to know?

What is important to know?	Why is this important?
Do you need a contract to connect?	• Yes, a contract is required to connect. This letter does not constitute a contract or an offer in whole or in part to provide a connection to Irish Water's network(s). • Before the Development can connect to Irish Water's network(s), you must submit a connection application and be granted and sign a connection agreement with Irish Water.
When should I submit a Connection Application?	• A connection application should only be submitted after planning permission has been granted.
Where can I find information on connection charges?	• Irish Water connection charges can be found at: https://www.water.ie/connections/information/charges/
Who will carry out the connection work?	• All works to Irish Water's network(s), including works in the public space, must be carried out by Irish Water*. *Where a Developer has been granted specific permission and has been issued a connection offer for Self-Lay in the Public Road/Area, they may complete the relevant connection works
Fire flow Requirements	• The Confirmation of Feasibility does not extend to fire flow requirements for the Development. Fire flow requirements are a matter for the Developer to determine. • **What to do?** - Contact the relevant Local Fire Authority
Plan for disposal of storm water	• The Confirmation of Feasibility does not extend to the management or disposal of storm water or ground waters. • **What to do?** - Contact the relevant Local Authority to discuss the management or disposal of proposed storm water or ground water discharges.
Where do I find details of Irish Water's network(s)?	• Requests for maps showing Irish Water's network(s) can be submitted to: datarequests@water.ie

What are the design requirements for the connection(s)?	• The design and construction of the Water & Wastewater pipes and related infrastructure to be installed in this Development shall comply with ***the Irish Water Connections and Developer Services Standard Details and Codes of Practice,*** available at www.water.ie/connections
Trade Effluent Licensing	• Any person discharging trade effluent** to a sewer, must have a Trade Effluent Licence issued pursuant to section 16 of the Local Government (Water Pollution) Act, 1977 (as amended). • More information and an application form for a Trade Effluent License can be found at the following link: https://www.water.ie/business/trade-effluent/about/ **trade effluent is defined in the Local Government (Water Pollution) Act, 1977 (as amended)

Section B – Details of Irish Water's Network(s)

The map included below outlines the current Irish Water infrastructure adjacent the Development: To access Irish Water Maps email datarequests@water.ie



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Note: The information provided on the included maps as to the position of Irish Water's underground network(s) is provided as a general guide only. The information is based on the best available information provided by each Local Authority in Ireland to Irish Water.

Whilst every care has been taken in respect of the information on Irish Water's network(s), Irish Water assumes no responsibility for and gives no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided, nor does it accept any liability whatsoever arising from or out of any errors or omissions. This information should not be solely relied upon in the event of excavations or any other works being carried out in the vicinity of Irish Water's underground network(s). The onus is on the parties carrying out excavations or any other works to ensure the exact location of Irish Water's underground network(s) is identified prior to excavations or any other works being carried out. Service connection pipes are not generally shown but their presence should be anticipated.