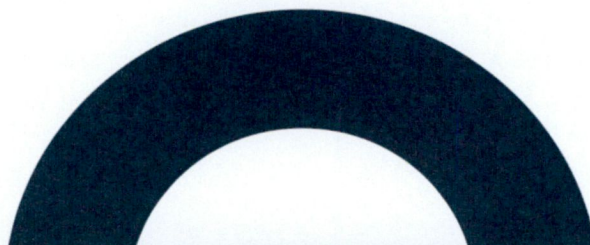
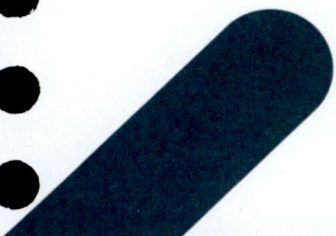
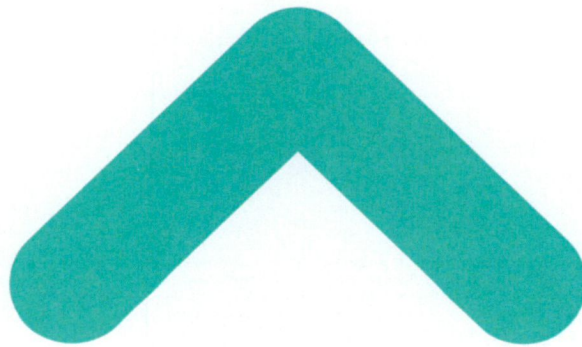




Planning and
Environmental
Consultants

Ecological Impact Assessment Report

Clonburriss Tile 3,
Clonburrus SDZ, Co. Dublin





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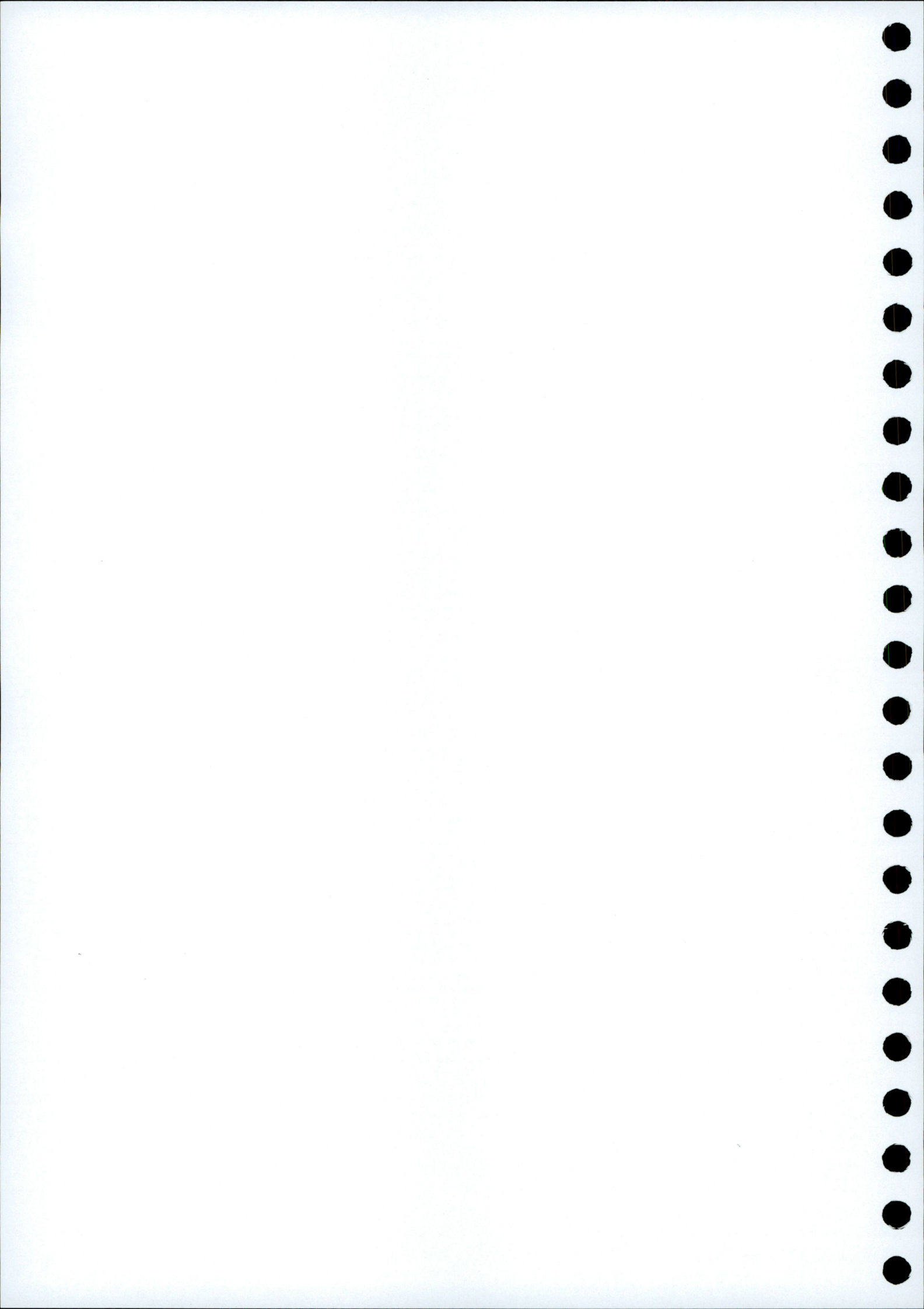
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Appendix 1 Bat Assessment Report

Appendix 2 Wintering Bird Survey Report

Appendix 3 Non-avian Fauna Survey Report

Appendix 4 Landscaping Plan



1.

INTRODUCTION

1.1

Background

MKO has been commissioned by Cairn Homes Properties Ltd., to conduct an Ecological Impact Assessment (EcIA) to inform a planning application for the construction of 157 no. dwellings on a site of c.3.45 hectares in the Clonburris South-West Development Area of the Clonburris Strategic Development Zone (SDZ) Planning Scheme 2019, Clonburris, Co. Dublin.

This EcIA Report includes an accurate description of all aspects of the proposed development during construction, operation, and decommissioning (where relevant). It then provides a comprehensive description of the baseline ecological environment, which is based on an appropriate level of survey work that was carried out in accordance with the most appropriate guidelines and methodologies. The EcIAR then completes a thorough assessment of the impacts of the proposed development on biodiversity. Where likely ecologically significant effects are identified, measures are prescribed to avoid or minimise or compensate for such effects.

1.2

Statement of Authority

This EcIAR has been prepared by Patrick Ellison (B.Sc., M.Sc. ACIEEM). Patrick has over 6 and a half years' professional ecological consultancy experience and is an Associate member of the Chartered Institute of Ecology and Environmental Management. The baseline ecological surveys were undertaken by Patrick Ellison and Par Roberts (B.Sc., MCIEEM). Pat has over 10 years' experience in ecological management and assessment.

Detailed bat surveys and assessment of the site were carried out between 2018 - 2021 within the wider SDZ lands and in June 2022 by Dr Tina Aughney of Bat Eco Services (see Appendix 1 – Bat Assessment). Dr Aughney has worked as a Bat Specialist since 2000 and has undertaken extensive survey work for all Irish bat species including large scale development projects, road schemes, residential developments, wind farm developments and smaller projects in relation to building renovation or habitat enhancement (NPWS licence DER/BAT 2019-138 (Survey licence, expires 29th March 2022)). All analysis and reporting has been completed by Dr Tina Aughney. Data collected and surveying is completed with the assistance of a trained field assistant, Mr. Shaun Boyle (NPWS licence DER/BAT 2021-19 (Survey licence, expires 15th March 2022)).

Wintering bird surveys, barn owl surveys and breeding bird surveys within the Clonburris SDZ lands were carried out by André Robinson (independent ornithologist) and Emmi Virkki for Scott Cawley between 2020 and 2021 (see Appendix 2).

Additional badger/Mammal surveys were carried out within the Clonburris SDZ lands on 16th August 2020 and the 22nd and 23rd of March 2021 by Dr. Chris Smal B. Sc. Ph. D. (MIEEM) (see Appendix 3).

1.3

Relevant Guidance

This report has been prepared in accordance with the European Commission's *Assessment of Plans and Projects Significantly affecting Natura 2000 Sites: Methodological Guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC* (EC, 2001) and *Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC* (EC, 2018) as well as the Department of the Environment's *Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities* (DoEHLG, 2010).

In addition, the guidelines listed below were consulted in the preparation of this document to provide the scope, structure and content of the assessment:

- Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018) (amended 2019).
- Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2022).
- Environmental Impact Assessment of National Road Schemes –A Practical Guide (NRA, 2009).
- Guidelines for assessment of Ecological Impacts of National Road Schemes, (NRA, 2009).
- Environmental Assessment and Construction Guidelines (NRA, 2006).

2.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1

Site Location

The proposed development site is located within the administrative area of South Dublin County Council (SDCC) and is part of the Clonburris Strategic Development Zone (SDZ). The subject site for this phase of the development is situated within in the eastern part of the Clonburris SDZ lands to the south of the Kildare/Cork railway which forms the northern boundary of the site (Grid Reference: O 05795 32595/ITM: X 705736, Y 732619). The Grand Canal runs along the southern boundary of the SDZ lands, approximately 300m to the south of the proposed development site. A network of fields is located on the northern side of the adjacent railway line, whilst the developed areas surrounding the Clonburris site are predominantly residential in nature. The R113 is located c. 280m to the east of the subject site.

The location of the site is shown in Figure 2.1. From this point onwards the development lands within the site boundary as shown in Figure 2.1 shall be referred to as the 'Proposed Development Site' or simply the 'Site'.

2.2

Characteristics of Proposed Development

2.2.1

Development Description

The development will consist of the construction of 157 no. dwellings on a site of c.3.45 hectares in the Clonburris South-West Development Area of the Clonburris Strategic Development Zone (SDZ) Planning Scheme 2019 as follows:

- > 81 no. houses comprising 4 no. 2-bedroom houses, 65 no. 3-bedroom houses and 12 no. 4-bedroom houses (all 2-no. storey with associated private open space and car parking);
- > 76 no. apartment units consisting of 26 no. 1-bedroom and 50 no. 2-bedroom units within Block 1 (4 no. storeys);
- > Vehicular access will be provided from the permitted street under SDZ21A/0022 and the permitted Clonburris Southern Link Street (SDZ20A/0021) and R113 (Fonthill Road) to the east;
- > All ancillary site development works including footpaths, landscaping boundary treatments, public and private open space areas, car parking (170 no. spaces) and bicycle parking (170 no. spaces), single-storey ESB sub-stations, bin and bicycle stores and all ancillary site development/construction works.

The layout plan for the proposed development is provided in Fig 2.2.

2.2.2 Engineering Proposals

As described in the DBFL 'Infrastructure Design Report', the proposed site will utilise trunk infrastructure that was proposed as part of the Clonburris Infrastructure Development for which planning has been granted in August 2021 under planning reference SDZ20A/0021. The CSLS includes trunk road, drainage, watermain and utility infrastructure to serve the Clonburris Strategic Development Zone lands to the south of the Kildare/Cork Railway Line which includes the subject site.

2.2.2.1 Surface Water Drainage

A Surface Water Management Plan (SWMP) has been prepared for the overall Clonburris Strategic Development Zone (SDZ). This SWMP has been agreed with South Dublin County Council, and outlines the details surface water strategy for the overall SDZ lands and the requirements for each individual site within the SDZ, which includes the site of the proposed development. The SWMP includes the strategy for the attenuation design, SUDS features, run-off rates and truck infrastructure layout. The surface water drainage strategy for the proposed development site has been designed in accordance with the approved strategy in the SWMP.

As fully described in the DBFL 'Infrastructure Design Report' for Clonburris T3, the proposed site will *utilise trunk surface water infrastructure proposed as part of the Clonburris Infrastructure Development for which planning was granted under reference SDZ20A/0021. The planning application included trunk surface water sewers and regional attenuation to serve the subject site, this strategic infrastructure aligns with the SWMP proposals and allows for a treatment train of Suds measures within individual sites and within the regional features.*

It is intended that the stormwater run-off generated from the proposed development will be collected in a new gravity sewer and discharged to the regional attenuation systems constructed as part of the CSLS. The subject falls within catchments within the Catchment 4B and will be served by attenuation ATN 07, as shown in Figure 3-2 (of DBFL's Infrastructure Design Report). The regional attenuation systems will consist of modular underground storage with over ground detention basins. Outflow from each attenuation structure within the SDZ limit flow to a rate of 3.1 l/s/ha as detailed in the SWMP for the SDZ.

The proposed development has been coordinated with the Clonburris CSLS application and therefore no significant alterations are proposed to the layout or design of the surface water infrastructure under planning reference SDZ20A/0021.

2.2.2.2 Sustainable urban Drainage System (SUDS)

As described in Section 3.3 of the DBFL 'Infrastructure Design Report' for Clonburris T3: *In accordance with the GDSDS it is proposed to use Sustainable Urban Drainage Systems (SUDS) for managing stormwater for the proposed development. The aim of the SUDS strategy for the site will be to:*

- > *Attenuate storm-water runoff.*
- > *Reduce storm-water runoff.*
- > *Reduce pollution impact.*
- > *Replicate the natural characteristics of rainfall runoff for the site.*
- > *Recharge the groundwater profile*

The proposed layout of the drainage and SUDS is detailed on drawings CLB-T3-94-SW-DTM-DRDBFL-CE-1311. The Surface Water Management Plan (SWMP) agreed with SDCC includes a number of potential SUDs feature to be implemented on individual sites within the SDZ. Those to be

incorporated into the T3 site include swales, bioretention areas/rain gardens, permeable paving, tree pits and green roofs (see Sections 3.3.1 to 3.3.5 of the Infrastructure Design Report).

2.2.2.3 Attenuation

As set out in the SWMP and the Infrastructure Design Report for SDZ20A/0021, attenuation volumes for the SDZ are generally provided on a regional basis (with the exception of urban centre and school sites). The attenuation that will serve the subject site is to be constructed as part of the Clonburris Southern Link Street (CSLS) in advance of the proposed development. See Section 3.4 of the Infrastructure Design Report for further details of how the proposed development complies with the attenuation design.

2.2.2.4 Foul Sewer

As described in Section 4 of the DBFL 'Infrastructure Design Report' for Clonburris T3: *"The existing site is predominantly greenfield and therefore has no foul loading at present. The granted planning application SDZ20A/0021 includes the trunk foul sewers which the subject site will connect into via the adjacent Clonburris 1A development granted under planning reference SDZ21A/0022.*

The overall SDZ site has been divided into 7 separate wastewater catchments (refer to Figure 4.1 of the Infrastructure Design Report). The proposed site will benefit from foul infrastructure proposed as part of the CSLS. Trunk Foul sewer network has been designed as part of the CSLS to serve the subject based on the average net density for the catchment (see Section 4.2 of the Infrastructure Design Report), ranging from the "Low margin" to a "High Margin".

The overall SDZ lands are relatively flat therefore the pumping of wastewater is required. It is proposed that the wastewater generated from the new houses and apartments for this application will be collected by new gravity sewers that discharges to the trunk sewer within the new Link Road. This in turn discharges to a future Irish Water pumping station (Pumping Station #1 as shown in Figure 4.2 of the Planning report) adjacent to the R113 Fonthill Road. This future pumping station and its rising main connection to the existing 9B trunk sewer on Fonthill Road is being delivered by Irish Water as part of the Irish Water Clonburris Local Infrastructure Housing Activation Fund (LIHAF) Scheme. The pump station is currently at planning application stage with SDCC under planning reference SDZ21A/0006."

2.2.2.4.1 Water Supply

As described in Section 5 of the DBFL 'Infrastructure Design Report' for Clonburris T3: *As noted above, the proposed site will utilise trunk watermain infrastructure proposed as part of the Clonburris Infrastructure Development, which was granted permission under planning reference SDZ20A/0021. The planning application includes a 400mm diameter watermain running along the Proposed CSLS at the north of the SDZ.*

As detailed in the Planning report for the proposed development, 'the subject section of the site will connect into the CLSL trunk watermain infrastructure via the Clonburris 1A development granted under planning reference SDZ21A/0022 at two locations. A 125mm watermain loop serving the site is proposed. The 125mm loops within the subject site will then feed smaller 80mm distribution water mains.

The connection to the public water main will include a metered connection with sluice valve arrangement in accordance with the requirements of Irish Water.

Individual houses will have their own connections to the distribution main via service connections and boundary boxes. Individual service boundary boxes will be of the type to suit Irish Water and to facilitate domestic meter installation.

Hydrants are provided for firefighting at locations to ensure that each dwelling is within the required Building Regulations distance of a hydrant.

The development's proposed water-main distribution system is shown on drawings CLB-T3-93SW-DTM-DR-DBFL-CE-1351.

The proposed watermain design and layout is in accordance with the Irish Water Code of Practice for Water Infrastructure and The Irish Water, Water Infrastructure Standard Details.

A confirmation of feasibility for the overall SDZ lands has been received from Irish Water (ref: CDS22004868). The proposed watermain design and layout complies with the Clonburris Water and Wastewater Report as agreed with SDCC and Irish Water. Refer to Appendix B for further details.

2.2.2.4.2 Flood Risk Assessment

As described in Section 3.9 of the DBFL 'Infrastructure Design Report' submitted with this application, 'As part of the Clonburris SDZ Draft Planning Scheme, South Dublin Co Council commissioned a Strategic Flood Risk Assessment SFRA for the lands which was completed by JBA Consulting and is listed as a supporting document to the planning scheme. The subject sites land was accounted for in the Clonburris SDZ Strategic Flood Risk Assessment. It was predicted that the subject site was at low risk of flooding (Flood Zone C) for events up to the Q1000 event. The study also found there is no existing development within the subject site that is at potential risk of flooding. As part of the flood risk assessment, historic and predicted flood risk mapping published by the OPW on the Flood Hazard Mapping Website was reviewed. Historical flood maps/data indicate there are no recorded flood events within the proposed site boundary. There are no recorded recurring flood events within 1km of the proposed site. The first is a recurring flood event at the Cappaghmore Culvert located approximately 500m to the east of the site. The Second is located at the Beech Row Bungalows approximately 380m to the east of the site.

The Eastern CFRAM (Catchment Flood Risk Assessment and Management) study details the predicted risk for a variety of fluvial and coastal flood scenarios. The mapping does not include the watercourse reaches affected by the proposed scheme and only maps downstream flooding. The proposed development is therefore outside of the Q100 and Q1000 flood extents and is therefore in within Flood Zone C (low risk of flooding). The OPW undertook an Irish Coastal Protection Strategy Study (ICPSS) which produced coastal/tidal flood extents maps for the Irish coastline for a 0.5% AEP tidal flood level.

For storms greater than the 1%AEP pluvial event, the development's drainage network design may be exceeded and run-off may flow above ground along the main roads. The development has been designed without low areas/depressions where possible and runoff will generally make its way along the proposed roads south towards the local attenuation pond as shown in Figure 3-6. Apartment block floor levels have been set to make allowance for any possible areas of surface ponding during exceedance events.

Certain portions of Stormwater infrastructure installed as part of the adjacent Clonburris 1A have been upsized so that they are suitable to receive surface water runoff from future development phases, including the subject development.'