



HAYES HIGGINS PARTNERSHIP
CHARTERED ENGINEERS • PROJECT MANAGERS

**Former Ambassador Site,
Kill,
Co. Kildare**

Part 8 Planning Report

Planning Report
Former Ambassador Site, Kill, Co. Kildare



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1.0. Introduction

1.01 The following reports refers engineering items in support of Part 8 application for proposed 33 unit social housing scheme at former Ambassador Hotel Site , Kill, Co. Kildare.

2.0. Wastewater Drainag

2.01 All new wastewater drainage works are to be designed in accordance with: -

- The Discharge Unit Method.
- British Standards Self-Cleansing Velocities & Design Capacities.
- GDSDS Policies.
- Specific Requirements of the Kildare County Council.
- Specific Requirements of Irish Water.

2.02 All sewers will be designed to achieve a self-cleansing velocity of 0.75 meters per second. All foul drainage lines will be designed using the discharge unit method.

2.03 A full Topographical and GPR Survey was carried out to identify all existing services and utilities on the and surrounding site area.

2.04 Having reviewed the connection levels for the existing services, we propose to connect into an existing 300mm diameter sewer located on the L2014 road adjacent to the site. We have confirmed same with Irish Water, who have issued a Confirmation of Feasibility (CDS21006412) in line with the proposal outlined above.

3.0. Surface Water Drainage

3.01 The design of the surface water drainage system will comply with: -

- Greater Dublin Stormwater Management Policies.
- Sustainable Urban Drainage Systems (SUDS) Report Ciria Series C521.
- Guide for Drainage of Development Sites report SR574 by H.R. Wallingford.
- Specific Requirements of Kildare County Council.
- Velocities & Proportional Velocities in the range of 0.75m/s to 3.0m/s.

3.02 A full Topographical and GPR Survey was carried out to identify all existing services and utilities on the and surrounding site area.

3.03 As part of the storm drainage design process we have liaised with Mr David H A Hall, BE, MIEI, Senior Executive Engineer, Water Services Planning, Kildare County Council. It is the Council's request that the surface water system is to be a Natural Base Solution System (NBS).

3.04 We will incorporate a Surface Water Management Plan (SWMP) into the design where water slowly flows from where it falls to a storage area or discharge point through a series of features that help to treat, store, re-use and convey water.

3.05 Within the curtilage of each property, we have a four stage at source sustainable solution incorporating natural based solutions.

For the rear of the roof, the rain water shall discharge directly to a water butt which can be harvested during dryer periods by the tenants. From the water butt there will be an overflow pipe to discharge the remainder of the roof drainage into a soakpit located to the rear of the property.

To the front of the property, the rain water shall discharge initially into a NBS raised house planter located at the front of the house on the perimeter pathway; this shall hold the water and be used as a ponding depth. We have also included an overflow pipe at the base of the planter, which then further discharges via a diffuser box into permeable pavement, which is located between the perimeter pathway and the front boundary line of the property.

3.06 In the common areas we have also included a number of natural based solutions. Along the entrance road, either side of the roadway, a 1.5m swale is included, with landscaped trees and sustainable tree pits in order to absorb the water directly from the road. This removes any water discharging directly to the public network from the entrance roadway. Throughout the remainder of the development, we have agreed with the project architect the following number of sustainable solutions

- All of the car parking and set down shall be detailed in porous pavement in order to allow for infiltration at source.
- Any of the trees that are located within the development shall include sustainable tree pits to absorb the water run off directly from the roadways.
- To the southern part of the site, the roads shall discharge directly to a swale, located adjacent to the road, with the kerb laid flat to allow water run off directly to the swale
- We have also included some bio retention rain gardens located at the corner radii of all of the roads; this also has the benefit of improving sight lines at these corners by including low planting techniques and allowing the rain water from the road to discharge directly to the bio retention areas.
- As the bio retention areas at the corner radii are located in close proximity to the permeable pavements, we have include some substrate land drainage from the permeable pavements in order to supplement the drainage of the bio retention areas.

3.07 In the middle of the site the pedestrian pavement in this area to be set at the same level as the permeable pavement, in order for any water overflow from the permeable pavement to discharge directly to the landscaped areas. In these areas we have also include some land drainage connected to the positive drainage system.

3.08 To the north of the site we have detailed a Bio Detention Area with a storage volume of 45m3 provided planting to architects details.

3.09 The surface water drain from the Bio Detention Area is connected to the existing storm water drain located on the located on the L2014 road adjacent to the site

3.10 To restrict the outflow from the attenuation system a hydrobrake is to be fitted to outflow manhole.

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- 3.11 On the site there is an existing storm drain traversing the site from South to North this is detailed to be grubbed up and diverted this includes locating a section of the diverted storm pipe within the neighbouring Gaa club's land, this has been agreed between the council and the Gaa club, refer to drawing 21KK009 C-025 Diverted Existing Storm Drain Plan.

4.0. Watermain

4.01 The design of the watermain system will comply with: -

- The fire consultant
- The Requirements of the Fire Officer & Fire Certificate.
- County Council Watermain Specification.
- Specific Requirements of Irish Water.

4.02 A full Topographical and GPR Survey was carried out to identify all existing services and utilities on the and surrounding site area.

4.03 A Pre-Application to Irish Water has being made in order to determine the availability, location and adequacy of water supply, and any special requirements that Irish Water may have. Refer to Appendix B for the Confirmation of Feasibility Letter from Irish Water.

4.04 The project will include a new 100mm diameter HDPE fully looped watermain, PE80 SDR11 12.5 laid in accordance with the specific requirements of Irish Water is required to serve the proposed development.

5.0. Transportation

- 5.01. All roads surfaces will be designed for the proposed long term usage. An autotrack design has been carried out on the layout of the roads and set down.
- 5.02. 2HP engaged the services of Road Plan Consulting to carry out a design review of the transportation and analysis of the site layout. We have attached Road Plan Consulting Report including conclusions and recommendations, refer to Appendix C.
- 5.03. The Proposed Layout is designed in accordance DMURS requirement and Site Development Works for turning heads, refer to Drawing 21KK009 C-030 DMURS Layout Plan.

6.0. Safety & Health

- 6.01 The proposed levels will be set in order to comply with the accessibility requirements of Technical Guidance Document M, to ensure the safe mobility of pedestrians and wheelchair users alike.
- 6.02 We have prepared detailed Civil and Structural Designer Risk Assessment's for the Project Supervisor Design Stage (PSDP) in line with the requirements of Safety Health and Welfare at Work (Construction) Regulations 2013.

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APPENDIX A

(Irish Water Infrastructure)

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APPENDIX B

(Irish Water Confirmation Of Feasibility)

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APPENDIX C

(ROAD PLAN TRANSPORT CONSULTANTS DESIGN REVIEW REPORT)

Michael Carr
The Arches,
Gas House Lane,
Kilkenny

07th September 2021

Re: Residential Development; Ambassador Site, Kill, Co. Kildare

Dear Michael,

Roadplan Consulting have been requested by Hayes Higgins Partnership to provide comment in relation to road safety and the impact of traffic for a Part 8 planning application for a proposed residential development at the Ambassador Site, Kill, Co. Kildare.

Kildare County Council have requested that road safety and the impact of traffic arising from the proposed development be addressed as part of the planning application. A letter dated the 19th February 2019 outlines the issues to be addressed and comment in relation to these issues are provided below.

Sight Visibility at Access:

At the proposed access onto the L2014 a sightline of 49m at a 2.4m set-back can be achieved in accordance with the Design Manual for Urban Roads and Streets. Visibility splays are indicated on the site layout drawing.

Traffic Calming Works on the L2014:

A speed ramp is provided on the eastern side of the L2014 which will slow down traffic travelling along the L2014 on approach to the proposed access to the development. A traffic count was carried out as part of the Traffic Impact Assessment Report.

Traffic Impact Assessment:

A Traffic Impact Assessment will be provided at a further date and it will determine the impact that the proposed development will have and the existing road network. The traffic Impact Assessment will be submitted at a later date.

Parking:

Parking is provided in compliance with Chapter 17 of the County Development Plan.

Vulnerable Road Users Facilities:

Footpaths are provided within the proposed development to cater of pedestrian movement. All footpaths are a minimum of 2m wide. A Stage 2 Road Safety Audit will be carried out to

ensure that the desired lines and safety of pedestrians are catered for. The Road Safety Audit will be submitted at a later date.

Estate Road Details:

The proposed estate road is in accordance with the DMURS and a Stage 2 Road Safety Audit will be carried out to ensure roads, footpaths, turning areas and corner radii at junctions are in compliance with the DMURS.

Road Safety Audits:

A Stage 2 Road Safety Audit will be carried out in accordance with the TII GE-STY-01024. The Road Safety Audit will be submitted at a later date.

A Stage 3 Road Safety Audit will be carried out on completion of the development.