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Hutch O'Malley McBeath Consulting Engineers

CIVIL SERVICES REPORT

On behalf of Singland Homes Ltd, at Springfort Meadows, Nenagh, Co. Tipperary

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1. Definitions:

O.S.D.M.	Ordnance Survey Datum Malin (head)	
FFL	Finished floor level	
I.L.	Invert level	
G.L. Ground	dlevel	
На	Hectares	
L/s	Litres per second	
m	Metres	
mm	Millimetres	
m ²	square metres	
m³	cubic metres	
PE	Population Equivalent	
DOE	Department of Environment	
SDWHA	Site development works for housing areas (1998)	
DMURS	Design Manual for Urban Roads and Streets	



1.1 Standards & Guidance

The primary guidance for a development of this nature is the DOE SDWHA document. The age of the document does mean a number of standards quoted have been superseded. Where required the current standards have been consulted.

1.1.1 Roads

Basic design principles are defined in the DMURS and in the DOE SDWHA, however detailed design is dictated by the NRA design manual for roads and bridges. The design of gradients are also heavily influenced by the building regulations part M.

1.1.2 Foul and surface water sewers

The sewer networks have been simulated using loading specified under EN 12056:Part 2 for foul water loadings and using the Modified Rational method. The difficulty in assessing foul sewer total capacities and peak velocities is accommodating the variance between the two; a single house may have a projected peak flow of 1.81/s yet 87 houses have a projected peak of 16.821/s.

2. Introduction

2.1 Site Description

PECEIVED. The development plots are located on the Limerick Road (R445), Springfort Meadows, Nenagh, Co. Tipperary. There are a number of areas.

2.2 **Executive Summary**

Servicing of the site can be achieved in the following manner;

- Tipperary County Council trunk mains for surface water and foul sewerage are located in the public road to the North of the site.
- Access is available throughout the site via a series of existing estate roadways, the surface water and foul water shall travel through the site underneath.
- The estate was taken in charge by Tipperary county council save for a small area between units 24 and 30, hence no design, proposal or approval is required in relation to the primary services as these are assumed to be sufficient and acceptable to the local authority.

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3. SURFACE WATER

3.1 **Brief:**

PECENTED. Provide a sustainable drainage solution, both in terms of discharge rates and long term maintenance.

3.2 Available infrastructure

Existing storm infrastructure serving the Springfort Meadows Estate site is available in the access road (R445) to the proposed site. Existing storm infrastructure is servicing the site as shown on the attached drawings 18068-C32. It is proposed to lay new storm house connection infrastructure as shown on the attached drawing 18068-C02.

3.3 **Appraisal**

A number of key factors were considered in order to define the scope of assessment:

- Development size.
- Available public infrastructure (sewers / waterways).
- Ground conditions.
- Potential levels of site cut/fill.
- Local Authority preferences.

After our initial appraisal the more detailed investigations were undertaken in certain areas this is detailed as following;

3.3.1 Available infrastructure

The public surface water system is located in the public road to the north of the site. It is proposed to connect to the public infrastructure directly for the majority of the units.. The details of house connection points are shown on 18068-C02

3.3.2 **Runoff design**

The connection locations to the main existing trunk sewers shall be coordinated with the original locations as per the Tipperary Co-Co CCTV reports commissioned during the taking in charge once available.

3.3.3 SUDS design

The original estate was granted without SUDS an no additional measures are proposed.

3.4 Conclusion

The proposed surface water system will consist connect to the public surface water system. The proposed storm system is relatively straightforward and was dictated by the

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road layout. A simple layout was chosen with the development being serviced by the existing infrastructure located on the adjoining site. Gradients are as per technical guidance.

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4. FOUL WATER

4.1 Brief:

Assess the layout and site levels to provide an efficient and effective layout.

4.2 Available infrastructure

RECEIVED. 25 07 202. The Existing foul infrastructure serving the Springfort Meadows Estate site is in charge of the local authority. Irish Water confirmed pre-connection feasibility under CDS20007760.

4.3 Appraisal

A number of key factors were considered in order to define the scope of assessment;

- Development size. •
- Available public infrastructure (sewers / waterways).
- Ground conditions.
- Potential levels of site cut/fill.
- Local Authority preferences.
- Environmental impact.

4.4 Conclusion

The proposed foul water system will consist connect to the public foul water system. The proposed foul system is relatively straightforward and was dictated by the road layout. A simple layout was chosen with the development being serviced by the existing infrastructure located on the adjoining site. Gradients are as per technical guidance. Where possible original connections shall be used to limit disruption to existing infrastructure.

5. Potable Water

5.1 Brief:

RECEIVED. Provide for a water main to service the lands and review potential needs to service adjacent lands.

5.2 Conclusion

It is proposed to connect to the public potable water network in accordance with IW requirements. Irish water confirmed feasibility under CDS20007760. Where possible original connections shall be used to limit disruption to existing infrastructure.

6. ROADS

6.1 Brief:

Provide the safest and most efficient layout to service the development. Address road safety issues arising from appraisal of the site and/or concerns of local authority roads engineers or local residents.

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6.2 Appraisal

A number of key factors were considered in order to define the scope of assessment;

- Development size.
- Ground conditions.
- Potential levels of site cut/fill.
- Local Authority preferences.
- Environmental impact.

After our initial appraisal more detailed investigations were undertaken in certain areas this is detailed as following;

6.2.1.i National Cycle Manual (2011)

No cycle paths are proposed on approach to the development.

6.2.2 Traffic Management Guidelines (2003)

No pedestrian or zebra crossings proposed.

6.2.3 Road Construction

The internal roads are existing and any local replacement or repair for services shall be as per purple book requirements

6.3 Conclusion

The existing access road from the taken in charge estate shall be used.