



7	Water supply	44
7.1	Existing Water Supply.....	44
7.2	Watermain Layout Strategy.....	44
7.3	Fire Fighting	44
7.4	Compliance with Irish Water Standards	44
Appendix A :	SURFACE WATER DRAINAGE NETWORK CALCULATIONS	A
Appendix B :	SURFACE WATER DRAINAGE ATTENUATION CALCULATIONS	B
Appendix C :	PERMISSIBLE SITE DISCHARGE AND APPLICABLE MET EIREANN RAINFALL DATA..	C
Appendix D :	FLOOD RISK SUPPORTING DATA.....	D
Appendix E :	EXISTING SERVICES	E
Appendix F :	ROAD SAFETY AUDIT	F
Appendix G :	ROAD QUALITY AUDIT	G

Figures

Figure 1-1:	Report Coverage	7
Figure 1-2:	Site location (indicative red line).....	9
Figure 1-3:	Elevation map.....	10
Figure 1-4:	Extract from Site Investigation Plan	13
Figure 2-1:	CFRAM Fluvial Flood extents records.....	16
Figure 2-2:	Flood extents and historical flood records extracted from OPW (CFRAM).....	17
Figure 2-3:	Sequential Approach mechanism in the Planning process	18
Figure 3-1:	Overview of existing access and linkages.....	20
Figure 3-2:	Overview of road access and active travel links	22
Figure 3-3:	Slí Ógie Uí Dhufaigh street cross section.....	25
Figure 3-4:	Quarry walk road cross section	25



Figure 3-5: Davnets Row shared path cross section.....	26
Figure 3-6: Vehicle Tracking analysis for Monaghan bottlers access and Rooskey avenue.....	28
Figure 3-7: Vehicle Tracking analysis for 90 deg bend and Monaghan Harps GAA access	28
Figure 3-8: Vehicle Tracking analysis for the Civic Offices access	29
Figure 5-1: Blackwater river EPA map.....	32
Figure 5-2: Surface water Catchments	33

Tables

Table 3-1: Sli Ogue Ui Dhufaigh road cross-section elements	25
Table 3-2: Quarry Walk road cross-section elements.....	25
Table 3-3: Davnets Row Path cross-section elements.....	26
Table 3-4: Types of Pedestrian crossings and their location	27
Table 5-1: Impermeability factors	35
Table 5-2: Catchment 1A - Impermeable run-off area	36
Table 5-3: Catchment 1B - Impermeable run-off area	36
Table 5-4: Catchment 1C - Impermeable runoff area	36
Table 5-5: Catchment 2A - Impermeable run-off area	37
Table 5-6: Discharge rates generated by each catchment	40

1 Introduction

1.1 Background

Monaghan County Council (MCC) has commissioned DBFL Consulting Engineers (DBFL) to develop and provide access and active travel infrastructure links as part of the proposed Civic Office project within land known as the Roosky lands, Monaghan Town.

A separate Infrastructure design report prepared by Cora Consulting Engineers is submitted with this application for the proposed Civic office element of this project and it should be read in conjunction with this report, as indicated in Figure 1-1

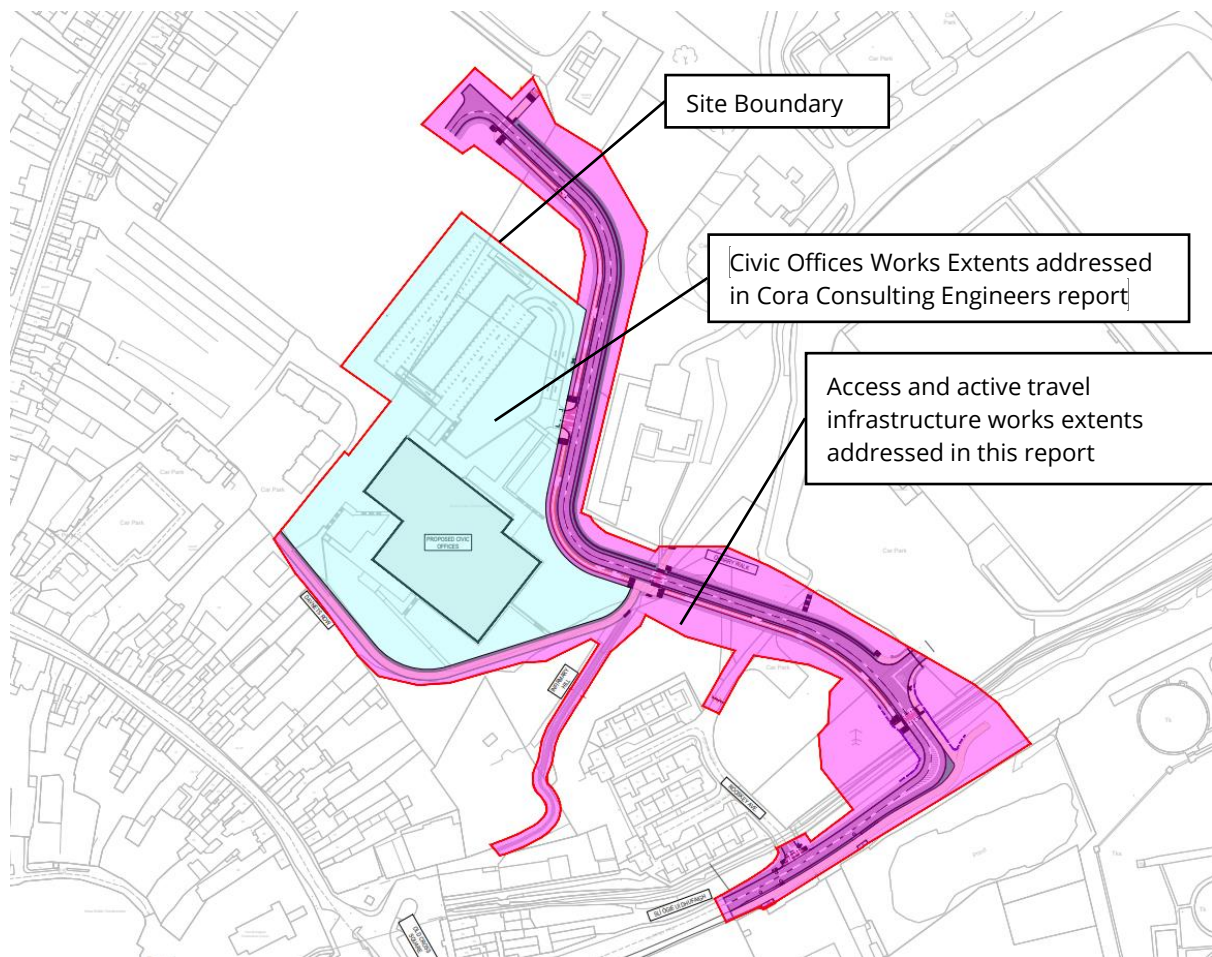


Figure 1-1: Report Coverage

The design as proposed is informed by the Roosky Masterplan.



1.2 Objectives

This report considers the following engineering aspects of the proposed development.

- Preliminary flood risk assessment.
- Road alignment and layout.
- Surface water trunk infrastructure
- Foul sewer trunk infrastructure
- Watermain trunk infrastructure

1.3 Location

The subject site is located in Roosky Lands, north of the existing Ulster Canal greenway route, refer to Figure 1-2. This area is surrounded by the following:

- A portion of the site is located south of the Shambles river and is bounded to the South by residential apartments, industrial buildings and the Monaghan wastewater treatment plant
- The majority of the subject site is bounded to the South by the Shambles River, to the east by Monaghan Harps GAA.
- To the west, the site is bounded by vacant lands designated for future development.
- To the north the site is bounded by Glaslough street and the St. Davnets Hospital.
- Existing boundaries comprise predominantly trees, fencing, hedgerows, boundary/Retaining wall adjacent to the Diamond Apartments.

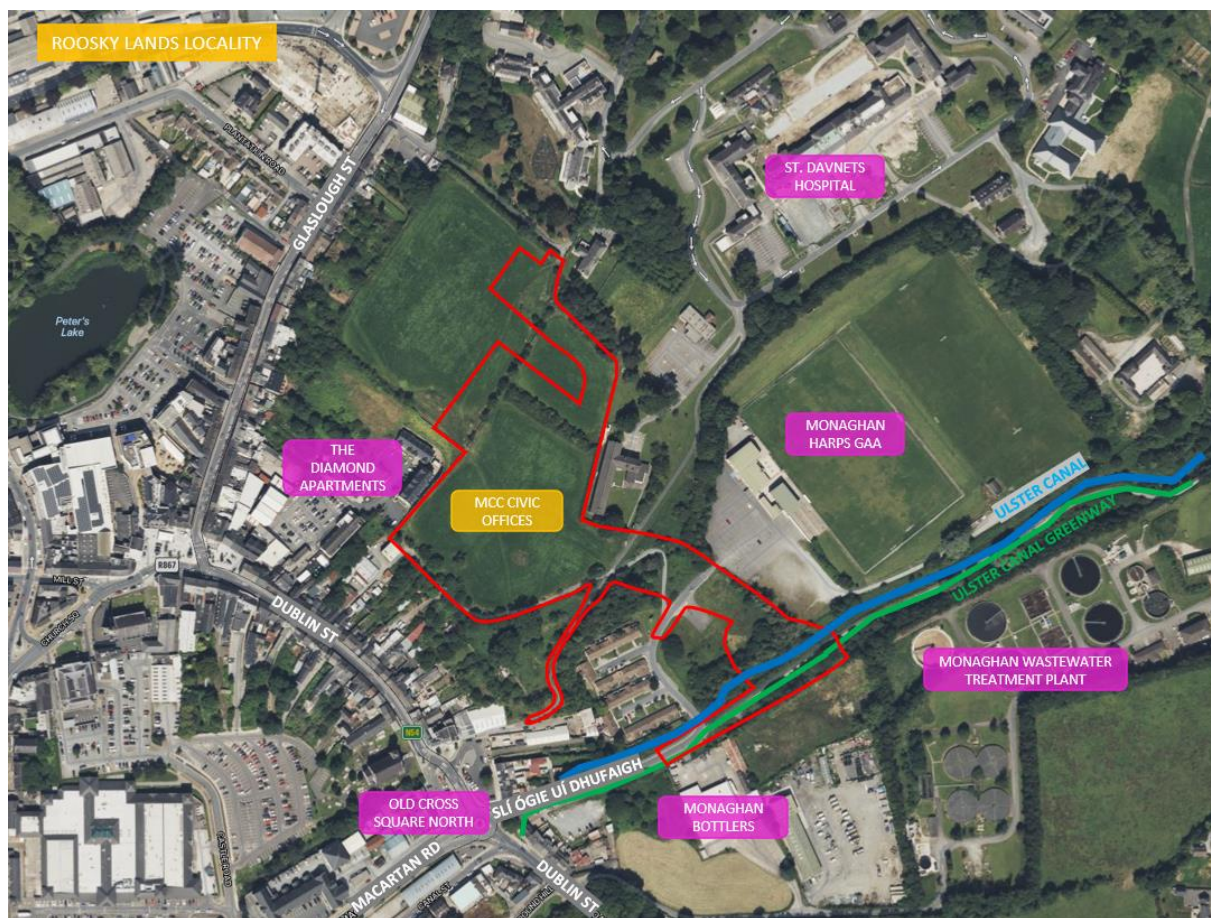


Figure 1-2: Site location (indicative red line)
[Source Bing maps]