ATTACHMENT B.3:

PLANNING DOCUMENTATION

ATTACHMENT B.3.1A:

WATER ROCK PART 8 PLANNING GRANT

MUNICIPAL DISTRICTS OF COBH AND EAST CORK

4/3-1

Resolution under Section 179 of the Planning Act 2000, as amended

Members noted the Part 8 Report for the proposed Water-Rock Urban Expansion Area Infrastructure Works.

Proposed by Councillor Anthony Barry

Seconded by Councillor Susan McCarthy

Resolved:

"Noting that in accordance with Article 83, Part 8 of the Local Government Planning and Development Regulations, 2001 as amended, notice of the proposed development was published, 35 No. entities made submissions in respect of the proposal, approval pursuant to Article 179 of the said Act is given for the following:-

Water-Rock Urban Expansion Area Infrastructure Works

I certify the foregoing to be a true extract from Minutes of proceedings at Council Meeting held on 11th March 2019.

Claire Looney O'Sullivan

CLAIRE LOONEY O'SULLIVAN
A/ SENIOR EXECUTIVE OFFICER

Dated 13th March, 2019

ATTACHMENT B.3.1B:

WATER ROCK PART 8 REPORT OF CHIEF EXECUTIVE

Cork County Council

Housing Infrastructure Implementation Team

Forward and Strategic Planning Directorate

Part 8 Report of Chief Executive

Planning & Development Act 2000 & Regulations 2001 (as amended)

WATER-ROCK URBAN EXPANSION AREA INFRASTRUCTURE WORKS

21 January 2019

Report Complied by	**Contributions From**	**Checked by**
Sharon McDonnell, CCC	John O Callaghan, Atkins	Ross Palmer, CCC
Paul Fitzgerald, CCC	Richard Neuling, Atkins	Donald Cronin, CCC

TABLE OF CONTENTS[1]

[1] Contents in accordance with the requirements of the Planning and Development Act 2000 (as amended) Part 11 S.179(3)b

1 Executive Summary

This report provides an analysis and response to the submissions made to Cork County Council in relation to the Part 8 Planning Application for 'Water-Rock Urban Expansion Area Infrastructure Works'. The submissions have been reviewed by both Cork County Council and Atkins Consulting Engineers. A summary of the submissions and responses can be found in the Appendices. All submissions are available for inspection at Floor 3, County Hall up until the conclusion of the Part 8 process.

35 entities made submissions under the process - 9 from statutory/non-statutory bodies, and 26 from the public. A positive response has been received through both the public consultation event and the submission process. The report concludes that a number of submissions are in support of the proposed development and the majority of submissions request either modifications or clarifications.

The report recommends the following proposed modifications to the application;

Project No. 1 - Services Corridor Link Road

Modification 1:
A section of the Western Loop Road off the Services Corridor Link Road, of approximately 120m2 in length, which will allow access to the proposed school site is included as a modification to the Part 8 proposals. (See Appendix E, Modification 1 Sketch)

Modification 2:
The feeder road on the northern boundary of the Nordic Enterprise Park and on the western side of the crossroads will be moved slightly further north to avoid the existing car parking spaces. (See Appendix E, Modification 2 Sketch)

Project No. 2 - Surface Water Drainage System

Modification 3:
Surface water drainage will be provided as part of the junction upgrade of the Water-Rock Road and the Carrigane Road.

Modification 4:
Surface water drainage to be provided along the existing Water-Rock Road as part of the construction of the upgrade/realignment of the Water-Rock Road.

Project No. 3 - Upgrade of Junction of Cork-Midleton Road and Midleton Northern Relief Road

Modification 5:
Right turn lane from Cork-Midleton Road on to Avoncore Cottages (Kennel Road) to be provided.

Modification 6:
Design of traffic calming measures on the Kennel Road (to be considered for implementation by the Council Area Office).

Project No. 4 - Traffic Management Measures for Water-Rock Road

Modification 7:
No turning head to be provided south of the railway line.

Modification 8:
The section of Water-Rock Road at the railway crossing will be closed to private vehicles by erection of demountable bollards. Use will be restricted to local authority public service vehicles as well as pedestrians and cyclists shown in the Part 8 proposals. It is noted that the section of the public road at the railway crossing will remain public. The Council commit to reviewing the closure with TII during the planning phase of the N25 Upgrade Project.

Project No. 7 - Upgrade/ Realignment of Water-Rock Road

Modification 9:
Southern extent of Water-Rock Road cycle track to terminate at the junction of the Services Corridor Link Road and the Water-Rock Road.

Modification 10:
Proposed footpath to be extended on to Carrigane Road where it will terminate.

Project No. 8 - Wastewater Pumping Station

Modification 11:
The pumping station site will be extended and the access arrangements amended as necessary to provide for Irish Water's turning requirements.

2 Introduction

2.1 Purpose of this Report

This is the Report of the Chief Executive to the Members of the Cobh and East Cork Municipal District Committees which is to be considered at a special meeting on Monday 28th January 2019, whereby a decision will be considered by the Committee as part of the Part 8 Planning Process for the 'Water-Rock Urban Expansion Area Infrastructure Works' proposals. The final decision will be made at a Full Council Meeting on 11th February 2019.

There are 8 key strategic infrastructure projects proposed under the subject Part 8 to address significant public infrastructure requirements for the Water-Rock Urban Expansion Area (UEA) in order to activate major housing development along a rail corridor in Water-Rock, which also include interventions to improve safety, traffic conditions and connectivity for the wider community of Midleton. The necessary infrastructure improvements were informed by the provisions outlined in the *East Cork Municipal District Local Area Plan 2017 (Table 3.3 and 3.4)*.

It is noted that a €5.5 million grant award has been secured by Cork County Council under the Local Infrastructure Housing Activation Fund (LIHAF) towards Phase 1 of the proposals.

2.2 Part 8 Process

Pursuant to the provisions of Part 8 of the Planning and Development Regulations, 2001 (as amended), the Council advertised the Part 8 proposals accordingly:

- 13 site notices were erected on 7th Nov 2018 and maintained at various locations around the Water-Rock area at each project site throughout the submission period for which photographic evidence is available (See Site Notice Appendix A, Section 8.1);
- Cork County Council published a notice of the proposals in the Irish Examiner on Friday 9th Nov 2018;

  The notice advised the public that the drawings were available for inspection in County Hall, Midleton Library, Midleton Area Engineer's Office, the Glanmire Area Engineer's Office and Cobh Library from Friday 9th Nov until Friday 7h December 2018 (a total of 4 weeks display), with a further two weeks for submissions until 1pm Friday 21st December (a total of 6 weeks to make submissions). Alternatively, the Part 8 documents and drawings were made available for inspection on the Cork County Council website (ongoing) at https://www.corkcoco.ie/public-consultation-part-8s and https://www.yourcouncil.ie

- All submissions were available for inspection in County Hall throughout the submission period will continue to be available up until the Part 8 process is concluded. A summary of the submissions is included in Appendix C.

- 13 Statutory Bodies and 15 Non-Statutory Bodies were notified in writing and by email on 9th November 2018, including a link to the relevant documentation, with the timeframe for submissions within the public consultation period (See Appendix B, Section 8.2)
- An internal report was also sought from the Planning Department which is included in this report. (See Sections 4.2)

In addition to the statutory requirements, the Council also engaged with a number of residents & landowners prior to and during the Part 8 process who were likely to be affected by the proposed development. All requests for individual meetings were met by the Council and Design Consultants before relevant submissions were made. A total of 20 individual meetings were held.

The Council and Design Consultants also held a public exhibition of the Part 8 proposals in the Midleton Park Hotel on 15th November 2018 from 12pm to 9pm which had approximately 52 attendees.

2.3 Part 8 Documentation and Conclusions

The following is a list of the documents and drawings which were available to the public throughout the submission period and are still available for viewing on the website:

- Water-Rock Part 8 FAQs
- Site Notice
- Project Locations Map
- Part 8 Planning Application Report
- Report on Screening for Appropriate Assessment
- Appropriate Assessment Screening Determination Report
- Ecological Impact Assessment
- Archaeological and Architectural Heritage Screening and Constraints Study
- Outline Construction Environmental Management Plan
- Environmental Impact Assessment Screening Report
- Environmental Impact Assessment Screening Determination
- Flood Risk Assessment
- Drawings Cover Sheet
- Project No.1 Services Corridor Link Road
- Project No.2 Surface Water Drainage System
- Project No.3 Junction Upgrade of Cork/Midleton Road and Midleton Northern Relief Road
- Project No.4 Traffic Management Measures for Water-Rock Road
- Project No.5 Bridge Over Railway and Extension to Services Corridor Link Road to Access Proposed Railway Stop
- Project No.6 Railway Stop
- Project No.7 Upgrade/Realignment of Water-Rock Road
- Project No.8 Wastewater Pumping Station

- The **Appropriate Assessment Screening Determination Report** determines that having regard to the nature and scale of the development, the nature of the receiving environment and the proximity to the nearest European sites, it is reasonable to conclude that the proposed project poses no likely significant effects on the Great Island Channel SAC and Cork Harbour SPA. Thus, it is recommended that it is not necessary for the proposed project to proceed to Appropriate Assessment.
- The **Flood Risk Assessment** concludes that the infrastructure works are not vulnerable to flooding and do not increase flood risk elsewhere. Implementation of the surface water drainage will act to slightly reduce flows within the Water-Rock stream during flood events.
- The **Ecological Impact Assessment** concludes that taking proposed mitigation measures and compensation into account, the works at the proposed site are not expected to have a residual impact on the surrounding environment, including statutory designated sites.
- The **Environmental Impact Assessment Screening Determination Report** concludes that Cork County Council is satisfied all possible risks of impact on the receiving environment have been identified in the screening report and that no significant environmental impacts are anticipated, once standard industry environmental management systems, in accordance with the proposed standard mitigation measures, are in place. Thus, it is recommended that it is not necessary for the proposed project to proceed to an Environmental Impact Assessment.
- The **Outline Construction Environmental Management Plan** sets out the procedures, standards, work practices and management responsibilities and commitments to avoid, minimise and control adverse environmental impacts associated with the construction of the infrastructure works.
- The **Archaeological and Built Architectural Heritage Screening and Constraints Study** concludes that there are no recorded archaeological sites within the footprint of the development and no protected structures or buildings listed in the NIAH within 600 metres of the proposed work areas, but also outlines appropriate mitigation measures for the proposed development comprising of various pre-development surveys and monitoring programmes.

3 Nature and Extent of Proposed Development

The following is a list of the proposed projects included within the 'Water-Rock UEA Infrastructure Works' proposal:

Project No. 1. Services Corridor Link Road - serviced roadway with footpaths and cycle tracks, public lighting and ancillary mains services within the roadway, connecting the Midleton Northern Relief Road to the Water-Rock Road (L3618);

Project No. 2. Surface Water Drainage System – consisting of gullies, pipes, manholes and underground attenuation tanks for Services Corridor Link Road and upgrade/ realignment of existing Water-Rock Road and provision to accommodate future attenuated flows from the Urban Expansion Area**;**

Project No. 3. Junction Upgrade of Cork/ Midleton Road and Midleton Northern Relief Road - comprising the reconfiguration of: junction layout; traffic signals; traffic markings and permitted movements;

Project No. 4. Traffic Management Measures for Water-Rock Road (L3618) – erection of bollards within the existing Water-Rock public road (L3618) each side of the railway line to close the level crossing to vehicular traffic. Railway level crossing to remain operational and access across the level crossing will be maintained for pedestrians and cyclists;

Project No. 5. Bridge over Railway and Extension to Services Corridor Link Road – new bridge over the Cork to Midleton railway line connecting the Services Corridor Link Road to lands to the south of the railway line and new serviced road corridor with footpaths and cycle tracks to access the proposed railway stop and bridge and ancillary works;

Project No. 6. Railway Stop – new railway stop along the Cork to Midleton railway line consisting of a platform and shelter, drop-off area, cycle parking, disabled parking and access, ticket machines and ancillary works;

Project No. 7 Upgrade/ Realignment of Water-Rock Road (L3618) – upgrade/ realignment between the Carrigane Road and north of the railway line level crossing of Water-Rock Road. This consists of (i) online upgrade of sections of the existing road by widening, re-surfacing and the provision of services and cyclist and pedestrian facilities and ancillary works; (ii) offline realignment of sections of the road through the provision of new serviced road corridor with footpaths and cycle facilities running parallel to the existing road and ancillary works;

Project No. 8 Wastewater Pumping Station – to facilitate the pumping of wastewater from the Urban Expansion Area to the Carrigtwohill Wastewater Treatment Plant with provision for a future connection from other areas. The pumping station will consist of below ground chambers, above ground control building and kiosks located within a fenced and gated compound.

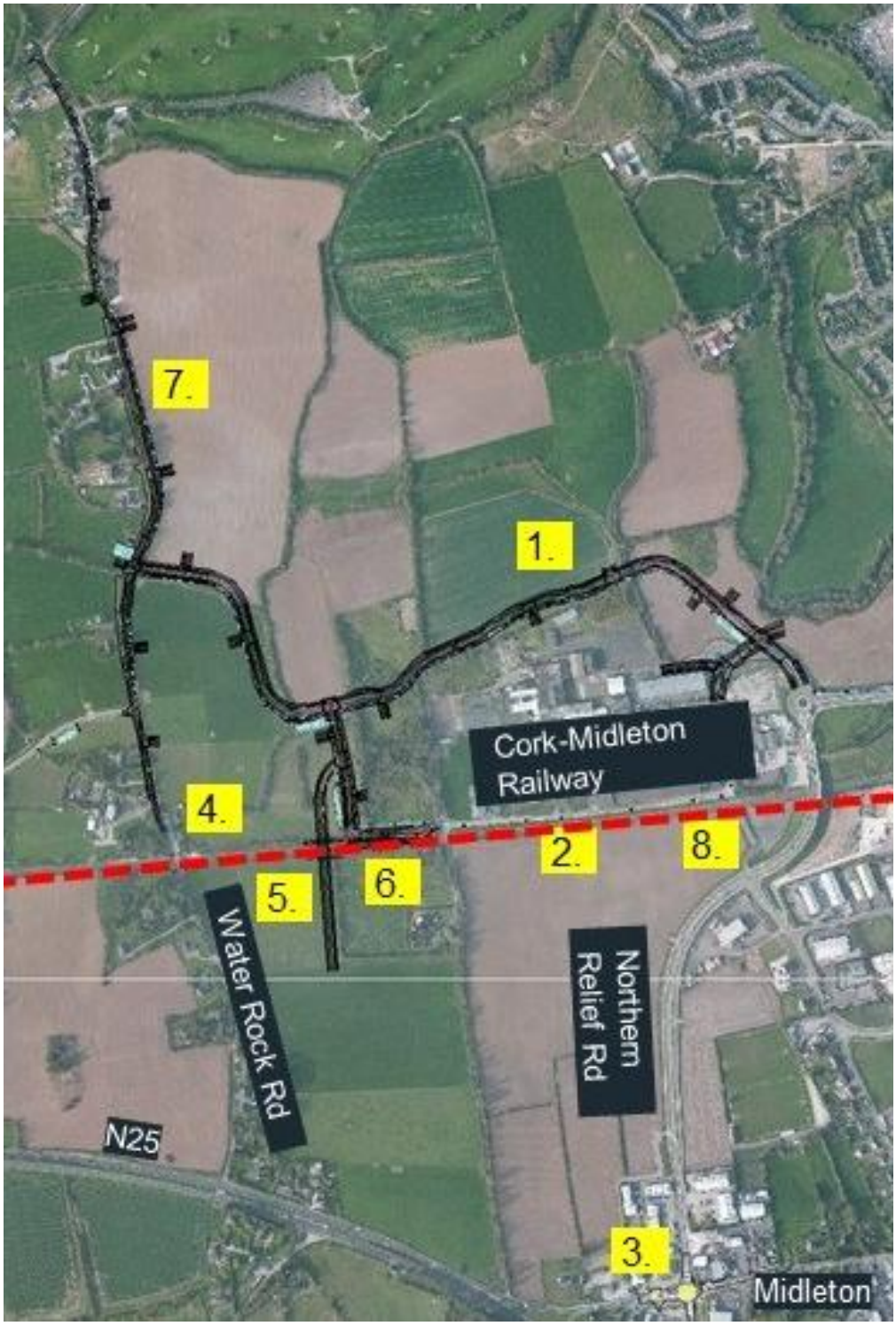


Figure 3-1: Water-Rock UEA Infrastructure Works

4 Planning Context

4.1 Planning Context

The study area is located 23 km east of Cork City adjoining the rail-line on the northern periphery of Midleton town, within the administrative area of Cork County Council. The proposal to facilitate the development of these zoned lands for housing is a long-term objective of successive County Council Plans, including the current East Cork Municipal District Local Area Plan 2017 which contains the specific infrastructure proposals which are the subject of this Part 8 application.

Having regard to compliance with the Local Area Plan, for which the subject infrastructure requirements were informed by a comprehensive Traffic Assessment and Strategic Environmental Assessment process, as well as the development of proposals in accordance with the Design Manual for Urban Roads and Streets and the National Cycle Manual, it is considered that the development is in accordance with the proper planning and sustainable development of the area.

An independent report on compliance of the Part 8 project with relevant planning policy is provided by the Senior Planner responsible for the development management of the Cobh Municipal District Area, including the area which is the subject of this Part 8 proposal (see Section 4.2).

4.2 Planner's Report on Planning Policy Compliance

Water Rock Urban Expansion Area – Infrastructure Works – Part 8

Report on Planning Policy Compliance

January 16th 2019

Introduction

The Part 8 scheme before the Council involves an extensive list of projects designed to improve existing infrastructure and provide for new infrastructure to accommodate future residential development in the Water Rock Urban Expansion Area (UEA). This report considers the Part 8 proposal from a planning policy perspective, i.e. general compliance with the County Development Plan and Local Area Plan policies and objectives.

It is noted that a screening determination for EIA has been completed.

The Proposal

The proposal concerns eight individual projects, namely:

1. **Services Corridor Link Road** - Serviced roadway with footpaths and cycle tracks, public lighting and ancillary mains services within the roadway, connecting the Midleton Northern Relief Road to the Water Rock Road (L3618);

2. **Surface Water Drainage System** – consisting of gullies, pipes, manholes and underground attenuation tanks for Services Corridor Link Road and upgrade/ realignment of existing Water Rock Road and provision to accommodate future attenuated flows from the Urban Expansion Area;

3. **Junction Upgrade of Cork/ Midleton Road and Midleton Northern Relief Road** - comprising the reconfiguration of: junction layout; traffic signals; traffic markings and permitted movements;

4. **Traffic Management Measures for Water Rock Road (L3618)** – Erection of bollards within the existing Water Rock public road (L3618) each side of the railway line to close the level crossing to vehicular traffic. Railway level crossing to remain operational and access across the level crossing will be maintained for pedestrians and cyclists;

5. **Bridge over Railway and Extension to Services Corridor Link Road** – New bridge over the Cork to Midleton railway line connecting the Services Corridor Link Road to lands to the south of the railway line and new serviced road corridor with footpaths and cycle tracks to access the proposed railway stop and bridge and ancillary works;

6. **Railway Stop** – New railway stop along the Cork to Midleton railway line consisting of a platform and shelter, drop-off area, cycle parking, disabled parking and access, ticket machines and ancillary works;

7. **Upgrade/ Realignment of Water Rock Road (L3618)** – Upgrade/ realignment between the Carrigane Road and north of the railway line level crossing of Water Rock Road. This consists of (i) online upgrade of sections of the existing road by widening, re-surfacing and the provision of services and cyclist and pedestrian facilities and ancillary works; (ii) offline realignment of sections of the road through the provision of new serviced road corridor with footpaths and cycle facilities running parallel to the existing road and ancillary works;

8. **Wastewater Pumping Station** – To facilitate the pumping of wastewater from the Urban Expansion Area to the Carrigtwohill Wastewater Treatment Plant with provision for a future connection from other areas. The pumping station will consist of below ground chambers, above ground control building and kiosks located within a fenced and gated compound.

Planning Policy Context

County Development Plan

The Core Strategy of the County Development Plan identifies Midleton as one of nine Metropolitan Town within the Cork Gateway. The strategic aim for the Metropolitan Towns, as set out in Objective CS 3-1 of the Plan is for, *"critical population growth, service and employment centres within the Cork "Gateway", providing high levels of community facilities and amenities with infrastructure capacity highuality and integrated public transport connections should be the location of choice for most people especially those with an urban employment focus."* The Plan requires significant growth for Midleton, with a target growth in population from 12,000 (2011 Census) to c21,500 by 2022. This will require the delivery of 5,243 new residential units.

This location for growth was chosen mainly because of its proximity to the Cork-Midleton rail line. Objective TM 2-5 of the County Plan seeks to encourage greater use of the suburban rail network and identifies the need to secure the delivery of a new station at Waterrock, among other locations within the network. The delivery of these infrastructural improvements is necessary to the achievement of housing development at Waterrock. This will help to satisfy the delivery of housing units in conformity with the Core Strategy of the County Development Plan.

Projects 1 through 4 of this infrastructural package have financial support from government by way of a €5.5m funding award through the Local Infrastructure Housing Activation Fund (LIHAF). The development is therefore in line with national policy in terms of delivering infrastructure to enable housing development.

The various road upgrades proposed provide for pedestrian and cyclist facilities. The County Development Plan sets out detailed Objectives under TM 2-1 (Walking) and TM 2-2 (Cycling) which seek to encourage and promote walking and cycling as important modes of travel. These Objectives reflect national policy as articulated in "Smarter Travel":

Objective TM 2-1: Walking
a) *Encourage and facilitate a safe walking network and a culture of walking where possible and practical.*
b) *Preserve, protect and where possible enhance existing walking routes particularly those providing access to key transport and community infrastructure such as bus stops, rail stations, schools, shops, work places, town and village centres.*
c) *Ensure that all development should be accessible and permeable on foot and that the walking experience should be as safe and pleasant as possible and set within an overall coherent network. The Design Manual for Urban Roads & Streets (DMURS) is a useful guidance tool.*
d) *Local Area Plans will play an important role in implementing Walking Strategies.*

Objective TM 2-2: Cycling
a) *Encourage and facilitate a safe walking and cycling route network and a culture of walking and particularly cycling in the county, as a viable alternative travel choice. Local Area Plans will set out Active Travel Strategies (cycling and walking) for individual towns and their hinterlands.*
b) *Improve the streetscape environment for pedestrians, cyclists and those with special mobility needs while seeking to provide facilities which enhance safety and convenience. The Design Manual for Urban Roads & Streets (DMURS) is a useful guidance tool.*
c) *Ensure that development in urban areas, towns and villages is well located, permeable and prioritises walking, cycling and access to public transport and other important amenities. The Design Manual for Urban Roads & Streets (DMURS) is a useful guidance*

Local Area Plan

The East Cork Municipal District Local Area Plan (MDLAP) 2017 identifies that a significant amount of residential development planned for Midleton will occur at Waterrock, where c2500 units are proposed. The East Cork MDLAP also identifies that a priority for Midleton over the life of the Plan is to optimise the amount of land available for housing development by delivering the infrastructure necessary to facilitate development.

In relation to the individual projects now proposed, these are specifically identified in Tables 3.3 and 3.4 of the East Cork MDLAP as parts of the infrastructural programme necessary to support the residential zonings at Waterrock.

The site of the pumping station is located on lands that are zoned MD-E-02 (Business park for enterprise/industry and non-retail commercial development as part of the Waterrock UEA). It is sited close to the north-east corner of the zoned business park lands and comprises a small portion of the overall zoning. This is necessary infrastructure for future development of the Waterrock area. To realise the zoning objectives for the area, this is vital infrastructure and could be considered to complement the current zoning.

The MDLAP notes the requirement for a WW pumping station in this area and a site selection report has been undertaken on behalf of Irish Water to assess the suitability of sites in the vicinity of the UEA as they have advised that wastewater from the UEA should be pumped to the Carrigtwohill

wastewater treatment plant. The proposed site has been assessed as being the optimum location for the pumping station and will use existing wastewater infrastructure which was installed by Cork CC for future use as part of the re-opening of the Cork-Midleton railway line.

Determination

Having regard to the planning policy context set out above, from a Development Management perspective, I consider this Part 8 proposal as being in compliance with the County Development Plan and Local Area Plan and required also in order to achieve sustainable residential growth in Midleton, a key Metropolitan Cork settlement.

Niall Ó Donnabháin

Senior Planner

5 List of Persons/Bodies who made a Submission

The Part 8 was advertised on 9th Nov 2018 with proposals on display for a minimum 4 weeks and available to view online for the full 6 week submission period and ongoing. The closing date for receipt of submissions was 21th Dec 2018.

13 statutory bodies and 15 non-statutory bodies were notified and their views were sought. See Appendix B, Section 8.2, for the full list of bodies notified.

In total 35 entities made submissions by the closing date including 9 submissions from statutory and non-statutory bodies.

The following table lists the entities that made observations or submissions on the various projects within the submission period.

Table 1: Submissions

See Table overleaf for a list of submissions from the public and statutory/non-statutory bodies by reference number. A tick is used to denote the particular project or projects which are the subject of each submission per entity. The total number of submissions per project is included at the foot of the table.

No.	Ref. No.	Name	Subject of Submission									
			P1	P2	P3	P4	P5	P6	P7	P8	Flood Risk	General/ Other
1	WR32148545[1]	Brian Murphy	✓		✓	✓	✓		✓			✓
2	WR32245244	John Joe Lynch										✓
3	WR32245437	Lisa Lynch				✓						
4	WR32288858	Gas Networks Ireland										✓
5	WR32326673	Cork County Council Drinking Water							✓			
6	WR32351639	Department of Education	✓									
7	WR32580426	Willem de Jong			✓							
8	WR32722442[2]	Con and Teresa Guerin		✓					✓		✓	✓
9	WR32746499	Margaret McDonnell								✓		
10	WR32788741	Tom, Anne and Denis Cleere		✓						✓		
11	WR32845052	Catherine and John E O'Hara	✓	✓		✓			✓		✓	
12	WR32858496	Patrick Colan O'Leary		✓		✓						✓
13	WR32895485[4]	Padraig Dalton and Deirdre Brett	✓			✓						
14	WR33049471	Geological Survey Ireland										✓
15	WR32949023[5]	James and Anne Cronin	✓		✓	✓			✓	✓	✓	✓
16	WR32968450	Michael and Aine O'Keeffe	✓	✓		✓			✓		✓	
17	WR32972022[6]	Gerry and Annette Lane							✓			✓
18	WR32977316	Richard Vickery				✓						
19	WR32980587	OPW		✓					✓		✓	
20	WR32991136	Transport Infrastructure Ireland				✓						✓
21	WR32994633	Dan and Claire O'Brien	✓	✓	✓	✓			✓	✓		
22	WR33049788	Irish Water								✓		✓
23	WR33000917	Water-Rock residents	✓	✓		✓			✓	✓	✓	✓
24	WR33001058	Fergus O'Rourke	✓	✓		✓			✓	✓		✓
25	WR33013747	Jerry O'Keeffe	✓						✓	✓		✓
26	WR33038133	CGI Food Park Limited										✓
27	WR33038261	Paul Moore	✓									✓
28	WR33039909	Southern Fuel and Farm Supplies	✓									

No.	Ref. No.	Name	Subject of Submission									
			P1	P2	P3	P4	P5	P6	P7	P8	Flood Risk	General/ Other
29	WR33050113	Fisheries Ireland								✓		✓
30	WR33050276	Dept. of Culture, Heritage and the Gaeltacht										✓
31	WR33050841[7]	John O'Donnell	✓						✓			✓
32	WR33051283	Colleen and Ernie O'Hara		✓		✓			✓		✓	
33	WR33051913	Miriam and Ultan Savage							✓			✓
34	WR33052110	Valerie Healy	✓						✓			✓
35	WR33052174	Eoin and Eilis O'Donnell							✓			✓
TOTALS			**14**	**10**	**4**	**13**	**1**	**0**	**17**	**9**	**7**	**21**

[1] Includes all other submissions by same party under reference numbers: WR32148661, WR32150583, WR32151220, WR32152528, WR32153740, WR32153996, WR32452496

[2] Includes submission by same party under reference number: WR33051441

[3] Includes submission by same party under reference number: WR33051971

[4] Includes submission by same party under reference number: WR33051671

[5] Includes submission by same party under reference number: WR33052202

[6] Includes submission by same party under reference number: WR33356493

[7] Includes submission by same party under reference number: WR33052223

6 Issues Raised and Chief Executive Response

6.1 Issues and Responses

35 entities made submissions to Cork County Council in relation to the Part 8 Planning Application for the 'Water-Rock Urban Expansion Area Infrastructure Works'. They include submissions from the public, statutory bodies and non-statutory bodies. The submissions have been considered by Cork County Council and are addressed in this report.

Issues in relation to Part 8 projects specifically are responded to and clarified under each project heading below. A technical note addressing the OPW submission is also attached (refer to item 2.6 in Table 1 below and additional info in Appendix D, Section 8.4)

Following on from responses and clarifications relevant to each project below a number of proposed modifications are outlined which will be addressed as part of the detailed design process. The proposed modifications do not result in a change to the conclusions of the EIA or AA screening determinations i.e. the project does not need to proceed to an AA or EIA.

The full list of submissions, including summaries by reference number, is included in Appendix C.

6.1.1 Project No. 1 – Services Corridor Link Road

Issues raised in relation to project no. 1, the services corridor link road, and the Chief Executive's responses are shown in Table 1.

Table 1 – Issues Raised and Chief Executive Responses

No.	Issues Raised and Chief Executive Responses
1.1	Issue Raised The quality of service of the cycle track will be level B at best based on National Cycle Manual (NTA, 2011) and width is insufficient with too many interruptions by junctions. Chief Executive Response The cycle track has been designed to have a quality of service measure of Level B which is suitable based on the existing cycle facilities which the new cycle track will tie into. With reference to Cork County Council's Cork Cycle Network Plan existing cycle facilities in the Midleton Northern Relief Road are Level C. That document notes that it is proposed to upgrade it to at least a quality of service of Level B. Based on the National Transport Authority's National Cycle Manual a 2.25 metre width, which is proposed on both sides of the Services Corridor Link Road, allows basic two way cycling.
1.2	Issue Raised The connection point of the proposed water main in the Services Corridor Link Road to the Irish Water network and the size of the water main in the Services Corridor Link Road are queried. Chief Executive Response A pre-connection enquiry has been made to Irish Water. The response from Irish Water states that to accommodate the first phase of development (up to 1000 houses) a 300mm main must be extended from Midleton. The water main in the Services Corridor Link Road will connect to this extension. The size of the water main in the Services Corridor Link Road will be finalised during detailed design.

No.	Issues Raised and Chief Executive Responses
1.3	Issue Raised The Department of Education has requested a direct access road from the Services Corridor Link Road to the proposed primary school site (MDLAP reference MD-C-01) north of and adjacent to this site. Chief Executive Response It is proposed that the access road to the school site will be from the Loop Road which will run north from its junction with the Services Corridor Link Road and the access road to the railway stop. A section of the future Loop Road, which will allow access to the school site, has been included as a modification to the Part 8 proposals. See attached drawing 5163809-HTR-SK-0200 in Appendix E.
1.4	Issue Raised The Services Corridor Link Road should be commenced on the east side and only progressed to meet housing need in the UEA. Chief Executive Response Cork County Council has received LIHAF funding for construction of the entire length of Services Corridor Link Road. The main project objective is to complete the construction of this link road (subject to land acquisition/funding).
1.5	Issue Raised The junction of the road with the existing Water-Rock Road is at a corner with poor visibility in both directions and a major re-structure of the road is required at this location. Chief Executive Response As part of the construction of the services corridor link road a new junction with the existing Water-Rock Road will be constructed. The junction works will include upgrade works to the existing Water-Rock Road in the vicinity of the junction to eliminate any existing poor visibility issues or road width issues in the vicinity of the junction.
1.6	Issue Raised It is requested that an extension of the spur road at the proposed junction on the eastern section of the road should be included to access further housing development land. Chief Executive Response Provision has been made for access locations to land holdings along the route of the services corridor link road. An extension of the spur road is not required for the Part 8 Infrastructure Works.
1.7	Issue Raised A stronger commitment is sought for the delivery of the Loop Road from the Services Corridor Link Road to the north including a commitment to actively seek funding for this road. Chief Executive Response It is intended that the future Loop Road will be constructed by the Water-Rock UEA developers as part of the development of their lands. Funding for the Loop Road would be a matter for these developers.
1.8	Issue Raised Alternative arrangements for the crossroads junction on the eastern side of the site are proposed to facilitate the future development at the site at the eastern entrance to the Services Corridor Link Road and to avoid potential clashes between residential and

No.	Issues Raised and Chief Executive Responses

commercial traffic and to avoid existing parking spaces;

Chief Executive Response

The feeder road on the western side of the crossroads will be moved further north to avoid the existing car parking spaces as part of a modification to the Part 8 proposals (See Figure 6-1). It is not proposed to modify the junction arrangement otherwise.

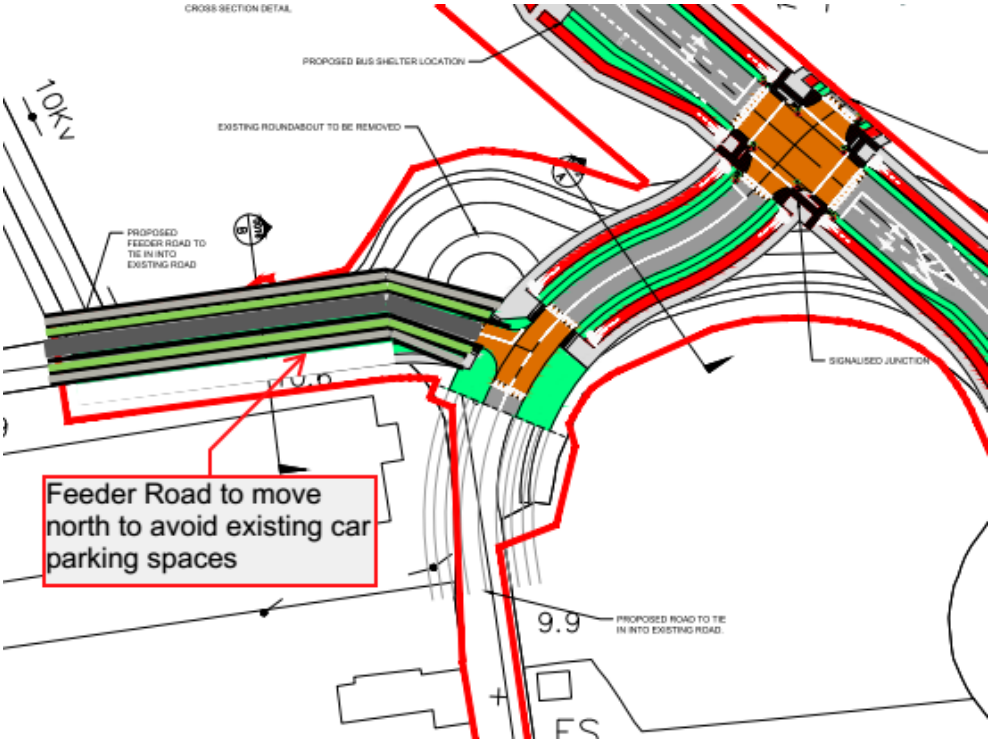


Figure 6-1 – Water-Rock Road Junction 1

The vast majority of the traffic using the proposed junction to the west of the crossroads on the services corridor link road will be HGV traffic accessing the commercial park so this traffic should have priority. This junction will be a raised table junction which will encourage drivers to reduce speed. The majority of pedestrians and cyclists using this junction will not need to cross the road at this point.

Proposals for an alternative access arrangement to the Industrial Estate would need to be the subject of a separate independent planning application.

Proposed Modifications to Project 1

- A section of the Western Loop Road off the Services Corridor Link Road, of approximately 120m2 in length, which will allow access to the proposed school site is included as a modification to the Part 8 proposals. (See Appendix E, Modification 1 Sketch)
- The feeder road on the northern boundary of the Nordic Enterprise Park and on the western side of the crossroads will be moved slightly further north to avoid the existing car parking spaces. (See Appendix E, Modification 2 Sketch)

6.1.2 Project No. 2 – Surface Water Drainage System

Issues raised in relation to project no. 2, the surface water drainage system, and the Chief Executive's responses are shown in Table 2.

Table 2 – Issues Raised and Chief Executive Responses

No.	Issues Raised and Chief Executive Responses
2.1	Issue Raised Concerns are raised that attenuation tanks may cause flooding and it is queried whether the capacity of the surface water network is adequate. Chief Executive Response The detailed design of the attenuation tanks and surface water network will ensure that they will not cause flooding. The attenuation tank and flow control will be maintained by Cork County Council. Catch-pits and trapped gullies are proposed to collect silt and debris and to reduce the risk of blockages. An overflow from the attenuation tank to the Water-Rock Stream will be provided so that water in the tank can be released to the stream in the event of a blockage in the tank.
2.2	Issue Raised Concerns are raised that additional water will be discharged to the Water-Rock stream thereby increasing flood risk. Chief Executive Response There will be a reduced discharge to the Water-Rock stream due to these proposals and the risk of flooding of the Water-Rock Stream will be slightly reduced. The surface water drainage system has been designed so that discharge rates to the Water-Rock Stream will be lower than existing rates. This is due to a reduction in catchment draining to the stream (i.e. over 700 metres of upgraded/ realigned Water-Rock Road will be diverted towards the Owenacurra) and attenuation of previously unattenuated sections of the road.
2.3	Issue Raised Existing flooding issues close to the junction of the Water-Rock Road and Carrigane Road are noted. Chief Executive Response Surface water drainage will be provided as part of the junction upgrade of the Water-Rock Road and the Carrigane Road. This will be included as a modification to the Part 8 proposals.
2.4	Issue Raised The new surface water drainage in the lower part of Water-Rock Road should be installed as soon as possible and the planning proposals fully adhered to. The existing surface water drainage in the area (i.e. the drainage in the road known locally as the Railway Road) should be cleaned Chief Executive Response The surface water drainage in the lower part of Water-Rock Road will be installed as part of the upgrade/ realignment works for the road. A CCTV survey of the existing drainage has been undertaken and is currently being reviewed. This will highlight areas of the existing drainage which require cleaning. An application has been submitted by Irish Rail to have the new section of Railway Road taken in charge. Subject to successful completion of the Taking

No.	Issues Raised and Chief Executive Responses
	In Charge process, Cork County Council will be responsible for maintaining the drainage.
2.5	Issue Raised There is no provision for surface water drainage on the sections of the existing Water-Rock Road, which will become offline and will be used for access to existing houses upon construction of the Water-Rock Road upgrade/ realignment. Chief Executive Response Provision for surface water drainage on the existing Water-Rock Road upon construction of the upgrade will be included as a modification to the Part 8 proposals.
2.6	Issue Raised The OPW submission notes that it does not have any objections to the proposed development. The submission notes that *'it is felt that the Flood Risk Assessment potentially significantly underestimates existing flood risk and it is felt that this matter requires attention before development proceeds'*. The submission includes a number of technical points raised in relation to the flood modelling of the Water-Rock Stream. They also note issues in relation to groundwater, surface water drainage and bridges and culverts. Chief Executive Response Cork County Council has reviewed the technical points raised in the OPW submission and are satisfied that the flood extents as shown in the Flood Risk Assessment is sufficiently accurate for the purposes of the Flood Risk Assessment for the Part 8 infrastructure works. A detailed response to the OPW's submission is included in a Technical Note included in Appendix D. Cork County Council is committed to providing further clarification on the issues raised and to ongoing liaison with the OPW during the detailed design stage of the Part 8 infrastructure works. Cork County Council have commissioned a SuDS Strategy for the Water -UEA which outlines surface water discharge limits which should be applied to different parts of the UEA as part of development management for future development in the UEA. This document has been provided to the OPW subsequent to receipt of their planning submission.

Proposed Modification to Project 2

- Surface water drainage will be provided as part of the junction upgrade of the Water-Rock Road and the Carrigane Road.
- Surface water drainage to be provided along the existing Water-Rock Road as part of the construction of the upgrade/realignment of the Water-Rock Road.

6.1.3 Project No. 3– Upgrade of Junction of Cork-Midleton Road and Midleton Northern Relief Road

Issues raised in relation to project no. 3, the upgrade of the junction of Cork-Midleton Road and the Midleton Northern Relief Road, and the Chief Executive's responses are shown in Table 3.

Table 3 – Issues Raised and Chief Executive Responses

No.	Issues Raised and Chief Executive Responses
3.1	Issue Raised An upgrade of the Midleton Northern Relief Road is suggested to prevent queuing northbound on that road and to prevent traffic from queuing back to the N25 eastbound carriageway. Chief Executive Response The upgrade of the Cork – Midleton Road and Midleton Northern Relief Road junction is proposed to prevent traffic from regularly backing up from this junction as far as the N25 eastbound carriageway. As part of the Water-Rock Strategic Transport Assessment (WRSTA) micro-simulation traffic modelling of this junction has been undertaken. This shows that during phase 1 of the Water-Rock UEA development the junction upgrade will achieve its objective. The upgrade will include the re-allocation of traffic signal times which will be beneficial to all arms of the junction. During detailed design, options for improving the efficiency of the traffic signals will be considered as part of the junction upgrade. Future offsite infrastructure projects will be necessary to mitigate the traffic impacts of further development of the UEA beyond phase 1 in conjunction with development elsewhere in Midleton.
3.2	Issue Raised Concern is raised that not being able to turn right onto the Northern Relief Road coming from Midleton will result in a major accident. Chief Executive Response Traffic surveys were undertaken in 2014 and again in 2018. These surveys show that the right turn movement on to the Midleton Northern Relief Road is a low demand movement e.g. the 2018 survey indicated that the peak hourly demand for this right turn was 24 movements. The prohibition of the right turn will be clearly signed and marked and local road users will quickly become accustomed to the arrangement and use an alternative route to access the Midleton Northern Relief Road e.g. Avoncore Cottages (Kennel Road). A right turn lane from the Cork-Midleton Road on to the Avoncore Cottages is included as a modification to the Part 8 proposals. Further a designed street layout plan of traffic calming measures will be provided for the Kennel Road e.g. revised footpath kerb lines and uncontrolled pedestrian crossings (for consideration and implementation by the area office). A stage 1 road safety audit for the infrastructure works, including the upgrade of the Cork-Midleton Road and Midleton Northern Relief Road junction, has been commissioned by Cork County Council. A stage 2 road safety audit will also be undertaken as part of the detailed design process with further audits to be undertaken following construction. Any issued raised during the road safety audits will be addressed during detailed design.
3.3	Issue Raised The proposed junction upgrade only caters for traffic leaving the N25 to enter Midleton. It does not cater for vehicles travelling from Midleton on to the N25 to Cork. Concern is raised that existing traffic problems at the Baneshane roundabout will be exacerbated.

No.	Issues Raised and Chief Executive Responses
	Chief Executive Response The junction of the N25 and the slip road from the Baneshane roundabout is outside the scope of the infrastructure works project and is the responsibility of the TII. An upgrade of this junction would be a consideration for any future upgrade of the N25. It is noted that traffic modelling of this junction was completed as part of the WRSTA. This included both a local area model and a micro-simulation model. The modelling indicates no requirement to upgrade the Baneshane roundabout as part of Phase 1 of the proposed Water-Rock UEA development.

Proposed Modification to Project 3

- Right turn lane from Cork-Midleton Road on to Avoncore Cottages (Kennel Road) to be provided.
- Design of traffic calming measures on the Kennel Road (to be considered for implementation by the Council Area Office).

6.1.4 Project No. 4– Traffic Management Measures for Water-Rock Road

Issues raised in relation to project no. 4, traffic management measures for Water-Rock Road, and the Chief Executive's responses are shown in Table 4.

Table 4 – Issues Raised and Chief Executive Responses

No.	Issues Raised and Chief Executive Responses
4.1	Issue Raised Concern is raised that the cycle route along the Water-Rock Road will no longer be at grade and instead requires a detour over a railway pass. Chief Executive Response The closure of Water-Rock Road at the railway level crossing is for vehicles only. Pedestrians and cyclists will continue to be able to cross the level crossing as before.
4.2	Issue Raised Concern is raised that the closure of the Water-Rock Road at its junction with the N25, which is described in the East Cork Municipal District Local Area Plan (MDLAP), is not included in the planning application. Chief Executive Response The intention of the closure of the Water-Rock Road and N25 junction as noted in the East Cork MDLAP is to prevent traffic from the Water-Rock UEA from using the junction of the Water-Rock Road and the N25. An options assessment was undertaken including an engineering, environmental and economic assessment of different options for preventing traffic from the Water-Rock UEA from using the junction of the N25 and Water-Rock Road. This assessment determined that the closure of the Water-Rock Road at the level crossing is the optimum solution for achieving the intention of the East Cork MDLAP. The proposal has been presented to the TII who are responsible for the management of the N25. They are satisfied with the proposal.
4.3	Issue Raised Houses south of the Water-Rock Road level crossing will be forced to cross the N25 eastbound carriageway when accessing Water-Rock Road from Midleton. It is suggested that the junction of Water-Rock Road and the N25 is closed instead. Separately it is suggested that the median of the N25 should be closed instead of closing the Water-Rock Road at the level crossing. Chief Executive Response Residents of Water-Rock Road south of the proposed closure will not be forced to cross the N25 eastbound carriageway when accessing Water-Rock Road from Midleton. Alternative access routes to Water-Rock Road will be available e.g. Westbound traffic on the N25 can continue to junction 4 at Carrigtwohill and exit there to double back along the eastbound carriageway to access Water-Rock Road by left turn. Alternatively traffic coming from Midleton can use the Mill Road to access the Carrigane Road and proceed to the N25 eastbound carriageway to access Water-Rock Road by left turn. The N25 is managed by TII. The closure of the Water-Rock Road and the N25 junction or the closure of the N25 median would be a consideration of any future TII upgrade of the N25.
4.4	Issue Raised Another suggestion to avoid the closure of the Water-Rock Road at the level crossing is to not connect the Services Corridor Link Road to Water-Rock Road so that traffic from the

No.	Issues Raised and Chief Executive Responses
	future UEA would not be able to reach the N25/ Water-Rock Road junction. Chief Executive Response This option was reviewed as part of the options assessment of different options for preventing traffic from the Water -Rock UEA from using the junction of the N25 and Water-Rock Road. This option is not compliant with the East Cork MDLAP which shows a link road connecting the Midleton Northern Relief Road to the Water-Rock Road. It would not allow for an alternative route for traffic from the UEA to access the N25 and all traffic would be forced to use the access point from the Midleton Northern Relief Road resulting in increased delays in particular at the Knockgriffin junction.
4.5	Issue Raised Provision of turning head to the south of the proposed closure may encourage longer stays at this location. Conversely a turning head north of the proposed closure is requested separately. Chief Executive Response The proposed turning head south of the closure will be omitted as a modification to Part 8 proposals. No turning head is proposed north of the closure. There are residential properties immediately north of the closure and there is no suitable location for a turning head. In any event the closure will be very well signed and vehicles will have the opportunity to turn at existing and proposed junctions north of the closure.
4.6	Issue Raised Residents of Water-Rock Road have stated that the Water-Rock Road should remain open for all residents of Water-Rock Road. Chief Executive Response The Water-Rock Road will remain open to pedestrian and vehicular traffic following the closure of the level crossing to vehicles. Residents will still be able to make the short journey to other parts of Water-Rock Road by foot or by bicycle. The Part 8 shows the preferred option that has been recommended following a detailed options assessment. This measure is required to avoid increased turning movements at the junction of the Water-Rock Road and N25. Subject to any future upgrade of the N25, the closure of the Water-Rock Road to vehicular traffic at the level crossing could be reviewed and the closure would be reversible.
4.7	Issue Raised Concern is raised that the closure of the Water-Rock Road at the level crossing will result in additional queuing on to the N25 from the Cork-Midleton Road and Midleton Northern Relief Road junction. Chief Executive Response As noted previously the upgrade of the Cork – Midleton Road and Midleton Northern Relief Road junction is proposed to prevent traffic from regularly backing up from this junction as far as the N25 eastbound carriageway. As part of the Water-Rock Strategic Transport Assessment (WRSTA) micro-simulation traffic modelling of this junction was undertaken. This modelling included for the closure of the Water-Rock Road at the level crossing. As previously noted the modelling shows that during phase 1 (1054 housing units, primary school and office, retail and leisure space) of the Water-Rock UEA development the junction upgrade will achieve its objective. Further offsite infrastructure projects will be necessary to mitigate the traffic impacts of further development of the UEA beyond phase 1 in conjunction with development elsewhere in Midleton.

No.	Issues Raised and Chief Executive Responses
4.8	Issue Raised TII note full support for the current proposal and advise that road safety issues be fully investigated and addressed for the existing N25/ Water-Rock Road junction prior to the execution of the Part 8 scheme. Chief Executive Response A road safety audit for the proposed closure of the Water-Rock Road to vehicular traffic will be completed as part of the planning design and again during detailed design. It is not proposed to make any alteration to the existing junction of the N25 and Water-Rock Road as part of the proposals. The management of the N25 is the responsibility of the TII.

Proposed Modifications to Project 4

- No turning heads to be provided south of the railway line as part of a modification to the Part 8 proposals.
- The section of Water-Rock Road at the railway crossing will be closed to private vehicles by erection of demountable bollards. Use will be restricted to local authority public service vehicles as well as pedestrians and cyclists shown in the Part 8 proposals. It is noted that the section of the public road at the railway crossing will remain public. The Council commit to reviewing the closure with TII during the planning phase of the N25 Upgrade Project.

6.1.5 Project No. 5– Bridge over Railway and Extension to Services Corridor Link Road

No issues raised in relation to project no. 5, the bridge over the railway and the extension of the Services Corridor Link Road.

6.1.6 Project No. 6– Railway Stop

No issues raised in relation to project no. 6, the railway stop.

6.1.7 Project No. 7– Upgrade/Realignment of Water-Rock Road

Issues raised in relation to project no. 7, the upgrade/ realignment of Water-Rock Road, and the Chief Executive's responses are shown in Table 5.

Table 5 – Issues Raised and Chief Executive Responses

No.	Issues Raised and Chief Executive Responses
7.1	Issue Raised Concern is raised that the cycle track along Water-Rock Road disappears for the majority of the route and ends suddenly on a footpath. Chief Executive Response A cycle track is proposed along the Water-Rock Road between its proposed junctions with the Services Corridor Link Road and the future Loop Road (East Cork MDLAP reference: MD-U-03). It will tie into the cycling facilities proposed along the Services Corridor Link Road and a future cycle track which will be provided as part of the future Loop Road. To the south of the junction with the services corridor link road a shared facility is appropriate based on anticipated low traffic volumes. The design will be modified so that the southern end of the cycle track terminates at the junction of the Services Corridor Link Road and the Water-Rock Road.
7.2	Issue Raised It is requested that the existing 100mm asbestos water main on L3618-1 Local Road and L7729-1 Local Road should be replaced. Chief Executive Response A new water main is proposed within the Water-Rock Road as part of the upgrade/ realignment of the road. The programme for upgrading/ replacing existing water mains is a matter for Irish Water.
7.3	Issue Raised Concerns are raised about the proposed locations of future estate access roads off Water-Rock Road opposite existing dwellings. Concerns are raised regarding noise and light impacts from future traffic using these junctions. Chief Executive Response It is noted that the lands adjacent to the Water-Rock Road are zoned for housing development in the East Cork MDLAP. The Water-Rock Road will ultimately become an urban road. Due to permeability of road access points, vehicular traffic generated from the UEA at any access points will be low and particularly during off-peak hours. Due to the public lighting and speed control neither headlights nor noise are likely to be a nuisance. The following individual junctions are raised in individual submissions: **1.** Junction 1 travelling south from Carrigane Road: The junction (Figure 6-2) is positioned at its optimum location in terms of sight lines and visibility and no change to the location of this junction is proposed.

No.	Issues Raised and Chief Executive Responses

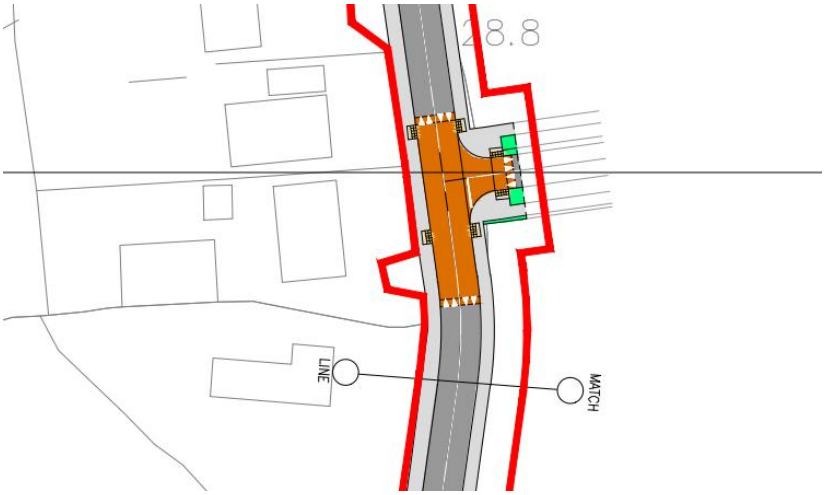


Figure 6-2 - Water-Rock Road Junction 1

2. Junction 4 travelling south from Carrigane Road (Figure 6-3)
   There will be a significant separation distance between this junction and the residential property opposite. There will be approximately 15 metres, comprising of the existing Water-Rock Road and future planting/ verge, between the property boundary and the junction. The existing property is screened by a solid fence and planting. No change to the location of this junction is proposed.

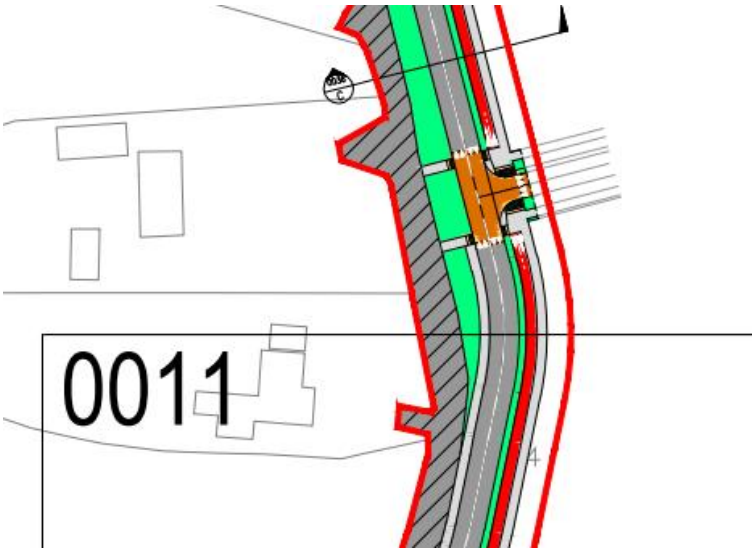


Figure 6-3 - Water-Rock Road Junction 4

3. Junction 6 travelling south from Carrigane Road
   This junction is located at its optimum location in terms of sight lines and visibility and no change to the location of the junction is proposed. The planted area, which will act as

No.	Issues Raised and Chief Executive Responses

a buffer between the Water-Rock Road and the footpath, will be extended so that screened planting can be provided between the junction and the access to the opposite house as shown in Figure 6-4.

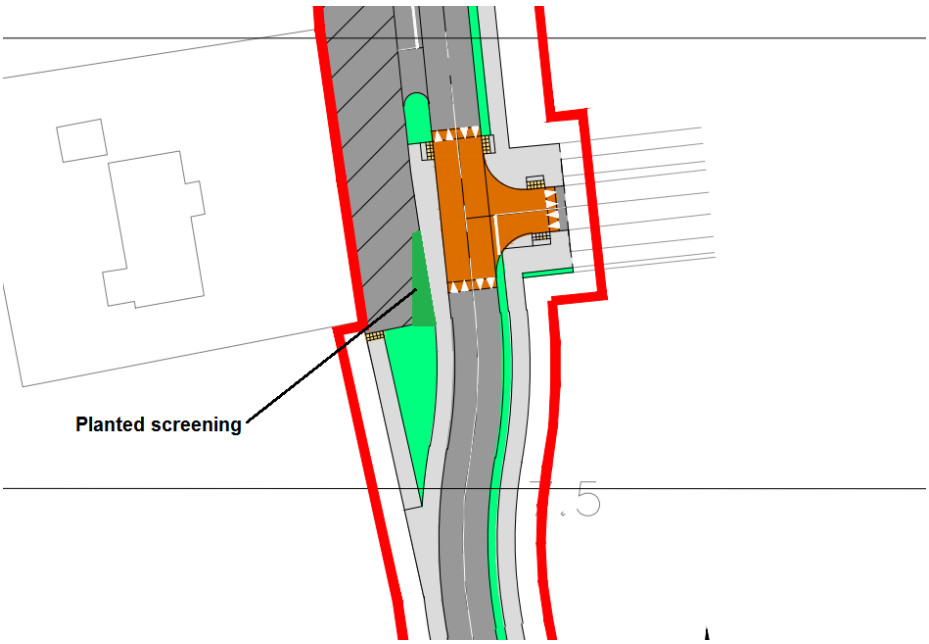


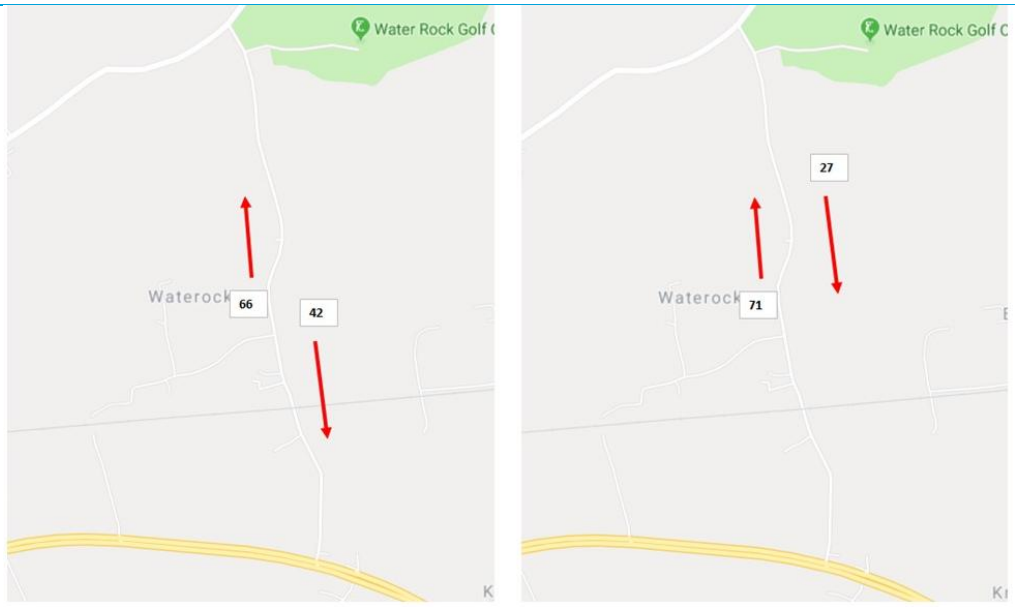
Figure 6-4 – Water-Rock Road Junction 6 to move southwards

4. Junction 8 travelling south from Carrigane Road (Figure 6-5)
This junction is not located directly opposite any property and no change to the location of this junction is proposed.

Figure 6-5 - Water-Rock Road Junction 8

No.	Issues Raised and Chief Executive Responses
7.4	Issue Raised There are an excessive number of new entrances on to Water-Rock Road. Chief Executive Response The number of entrances is not excessive when compared to other similar urban areas. The proposed entrances are necessary to facilitate housing development along Water-Rock Road. These will provide permeability to promote walking and cycling within the UEA and distribute vehicular traffic proportionately.
7.5	Issue Raised Dangerous bends will be retained along Water-Rock Road following its upgrade. Chief Executive Response Deflections of the horizontal alignment within a road are recommended in DMURS as leading to reduced safer vehicular speeds. The Water-Rock Road will be widened to appropriate standard urban road widths along its length between the railway level crossing and the Carrigane Road junction following its upgrade/ realignment. Footways/ verges and a cycle track will be provided. These will improve forward visibility along the road and at junctions. The proposed vertical alignment design ensures satisfactory forward visibility. Horizontal curves are included in the upgraded horizontal alignment to discourage speeding.
7.6	Issue Raised The existing Water-Rock Road does not have sufficient capacity and is unsafe for the increase in traffic from the proposed UEA development. A number of safety concerns are raised including its width, the lack of public lighting and the junction of the Water-Rock Road and the Carrigane Road. It is queried whether traffic studies were undertaken on the Water-Rock Road. It is suggested that the Services Corridor Link Road is not opened up on to the Water-Rock Road or that the Water-Rock Road upgrade is undertaken prior to opening up the Services Corridor Link Road on to Water-Rock Road. Chief Executive Response Results of the traffic impact assessment modelling show that for Phase 1A of the UEA development (i.e. 520 houses) there is no net increase in traffic on the Water-Rock Road. In some sections it is significantly reduced. The Council will commit to a review of the traffic impact on the Water-Rock Road prior to occupation of 520 houses. As noted in the Part 8 Planning Application Report, Cork County Council commissioned the Water-Rock Strategic Transport Assessment (WRSTA) for the Water-Rock UEA. As part of this, traffic surveys were undertaken along the Water-Rock Road. The results of traffic surveys and modelling undertaken for the WRSTA indicate that the Water-Rock Road is currently used as a route for traffic travelling in both directions between the Carrigane Road and the N25. This will no longer be possible following the closure of the road to vehicular traffic at the railway level crossing. Results of the traffic modelling undertaken show that for Phase 1A of the UEA development (i.e. 520 houses), additional traffic using the Water-Rock Road will be offset by the removal of through traffic between the Carrigane Road and the N25. There will be a negligible change in total traffic volumes on the road during peak times. Results from the traffic modelling for the peak AM and PM traffic volumes using Water-Rock Road are shown in Figure 6-6 and Figure 6-7.

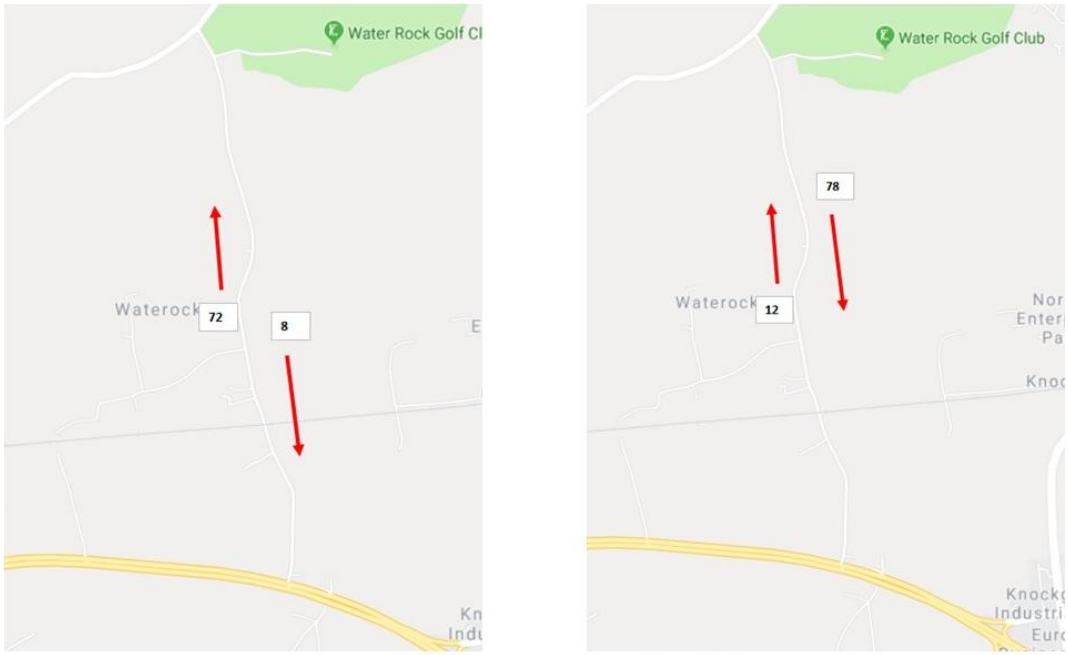
No.	Issues Raised and Chief Executive Responses



No infrastructure works or development at Water Rock – AM Peak Traffic on Water Rock Road

Phase 1A - Infrastructure works in place + 520 houses in Water Rock UEA – AM Peak Traffic

Figure 6-6 - Traffic volumes using Water-Rock Road during AM peak hours - Comparison between base case (No infrastructure works or development at Water-Rock) and Phase 1A development including infrastructure works at Water-Rock



No infrastructure works or development at Water Rock – PM Peak Traffic on Water Rock Road

Phase 1A - Infrastructure works in place + 520 houses in Water Rock UEA – PM Peak Traffic

Figure 6-7 - Traffic volumes using Water-Rock Road during PM peak hours - Comparison between base case (No infrastructure works or development at Water-Rock) and Phase 1A

No.	Issues Raised and Chief Executive Responses
	development including infrastructure works at Water-Rock It is likely that the upgrade of the Water-Rock Road will be programmed for completion prior to completion of Phase 1 (c. 1,000houses). Cork County Council will assess traffic demand on the Water-Rock Road as development at Water-Rock UEA progresses. Ongoing maintenance of the Water-Rock Road, including local widening and re-surfacing where necessary, is the responsibility of the Cork County Council local roads area office and will take place as required separately from the Part 8 infrastructure works.
7.7	Issue Raised Where the existing Water-Rock Road is to be upgraded off-line it is requested that the existing road would become a cul-de-sac. It is also requested that existing boundaries are retained and queried whether the council would be responsible for the upkeep of this road. It is requested that public footpaths do not connect into existing sections of road that become offline following the upgrade/ realignment works. Chief Executive Response The Part 8 proposals include for the existing Water-Rock Road to remain a public road and become a cul-de-sac for local access (subject to completion of the off-line upgrade/ realignment). Existing natural boundaries between the existing road and proposed road will be retained where feasible. Cork County Council will retain responsibility for the maintenance/ upkeep of the existing road following the upgrade/ realignment and the proposed public footpath will connect into this section of public road as per the Part 8 proposals. Public right of way will continue to exist along with open permeability for pedestrians and cyclists.
7.8	Issue Raised It is suggested that the footpath, proposed as part of the upgrade of the Water-Rock Road, is extended on to the Carrigane Road. This would help with visibility splays at the junction of these roads. It would also cater for pedestrians who frequently use the Water-Rock Road and Carrigane Road as part of a local walking route. Chief Executive Response This extension will be provided as a modification to the Part 8 proposals (subject to land acquisition).
7.9	Issue Raised Water-Rock Road Golf Club Representatives/Owners have requested that provision for a new entrance to Water-Rock Golf Club, suitable for future development, would be made as part of the Water-Rock Road upgrade boundary treatment works. The requested location is to the south of the level crossing near the junction with the Carrigane Road. Chief Executive Response A new entrance to the Water-Rock Golf Club will not be provided as part of the Infrastructure Works. This would need to be subject to a separate independent planning application. The proposed upgrade works do not rule out the possibility for a future entrance at the suggested location. Separately the proposal to continue the footpath, proposed as part of the upgrade of the Water-Rock Road, on to the Carrigane Road will improve sight distances at the suggest new entrance location. New boundary treatments would be addressed as part of any future land acquisition by the Council.

No.	Issues Raised and Chief Executive Responses
7.10	Issue Raised Screening should be provided between the 8th green of the Water-Rock Road Golf Club and the upgraded Water-Rock Road which will move the road closer to the green and require the removal of existing screening. Chief Executive Response Noted. The need for replacement screening would be addressed as part of any future land acquisition initiated by the Cork County Council.
7.11	Issue Raised It is suggested that the junction of Water-Rock Road and Carrigane Road should not become a signalised junction because it would cause noise pollution. Chief Executive Response As part of the upgrade of the Water-Rock Road it is necessary to signalise the junction of the Carrigane Road and the Water-Rock Road to cater for the anticipated additional traffic using the junction. The traffic signals will not result in noise pollution.

Proposed Modifications to Project 7

- Southern extent of Water-Rock Road cycle track to terminate at the junction of the Services Corridor Link Road and the Water-Rock Road.
- Proposed footpath to be extended on to Carrigane Road where it will terminate.

6.1.8 Project No. 8– Wastewater Pumping Station

Issues raised in relation to project no. 8, the wastewater pumping station, and the Chief Executive's responses are shown in Table 6.

Table 6 – Issues Raised and Chief Executive Responses

No.	Issues Raised and Chief Executive Responses
8.1	Issue Raised A request has been made to move the proposed pumping station northwards towards the railway line. The request includes a surfaced entrance of 6.5 metre width be provided to access the land to the west of the pumping station from the Midleton Northern Relief Road as well as the provision of a double field gate to replace the existing entrance gate from the Northern Relief Road. It also includes a request for security fencing around the pumping station. Chief Executive Response Access points to lands adjacent to the Midleton Northern Relief Road are outside the scope of the Part 8 planning application and are not required as part of the proposed infrastructure works. Fencing around the pumping station to Irish Water's standard details is proposed as shown in the Part 8 planning drawings.
8.2	Issue Raised It is queried whether the proposed wastewater pipes on Water-Rock Road could be located in the adjacent lands rather than the existing road based on concerns regarding construction traffic, the reinstatement of the road and potential odours from the sewer. Chief Executive Response The location of the rising main is a matter for Irish Water who have indicated their requirement for the rising main to be located within the existing road. We are satisfied that the points raised; construction traffic, the reinstatement of the road and potential odours from the sewer can be adequately addressed.
8.3	Issue Raised It is queried whether any alternative routes for the rising main other than along the Water-Rock Road and Carrigane Road were considered. Chief Executive Response The route of the rising main between the Water-Rock UEA and its outfall point to the Carrigtwohill Wastewater Treatment Plant is the responsibility of Irish Water. The route of the main was chosen following a detailed route selection process which looked at alternative routes such as a route parallel to the Cork-Midleton railway line.
8.4	Issue Raised Irish Water have requested that sufficient space should be provided within the pumping station site to accommodate a turning circle for an 18m3 tankers. They have also requested a site investigation for situations where works would interfere with existing water services. It is noted that connections to Irish Water infrastructure or any alterations to Irish Water infrastructure will require agreement with Irish Water prior to commencement. Chief Executive Response It is proposed to provide the necessary space and to amend the access arrangements to provide for Irish Water's turning requirements. The locations of existing services will be investigated as part of pre-construction site investigations. The necessary approvals will be

No.	Issues Raised and Chief Executive Responses
	sought from Irish Water for any connections to Irish Water infrastructure or any alterations to Irish Water infrastructure.

Proposed Modifications to Project 8

- The pumping station site will be extended and the access arrangements amended as necessary to provide for Irish Water's turning requirements.

6.1.9 General Submissions

General issues raised in relation to the proposed infrastructure works and the Chief Executive's responses are shown in Table 7.

6.1.10 Issues Raised and Chief Executive Response

Table 7 – Issues Raised and Chief Executive Responses

No.	Issues Raised and Chief Executive Responses
Gen.1	Issue Raised A fully segregated cycle track, parallel to the railway line, from Midleton to the west of Carrigtwohill (as described in Cork Cycle Network Plan 2017) is not included in the planning application. The cycle track along the Services Corridor Link Road is not the most direct east to west route for a cycling facility. Chief Executive Response A cycle track parallel to the railway line from Midleton to the west of Carrigtwohill is outside the scope of the Part 8 infrastructure works but allowance has been made for a proposed future facility between Midleton and Carrigtwohill by the inclusion of additional space for a future shared cyclist/ pedestrian route below the proposed railway bridge. It is appropriate to provide a cycling facility adjacent to the Services Corridor Link Road. This will provide access for cyclists to future residential developments along the Services Corridor Link Road as well as to schools, shops and offices, the Midleton Northern Relief Road and the railway stop.
Gen.2	Issue Raised There are inherent conflicts built into the design of the road about whether pedestrians, cyclists or vehicles have right of way and conflicts between various road user types are inherent. Chief Executive Response Numerous junctions are signalised and include signalised pedestrian/ cyclist crossing points. Priority will be clear at these junctions. Raised tables and bends are proposed to influence driver behaviour to reduce speeds at non-signalised junctions and to provide priority for pedestrians and cyclists over vehicles. Road signs and markings will be designed to the appropriate standards (National Cycling Manual and Traffic Signs Manual) during the detailed design phase.
Gen.3	Issue Raised Cycling and pedestrian routes are low quality, discontinuous and circuitous. Chief Executive Response The proposed cycling facilities are high quality and provide connectivity and access to future residential development, the Water-Rock Road, the Midleton Northern Relief Road and the future railway stop. The proposed cycling and pedestrian facilities are high quality and have been designed in accordance with best practice (National Cycling Manual and DMURS).
Gen.4	Issue Raised There is concern that the Water-Rock Road will be used as a rat-run between Midleton and Carrigtwohill following the connection of the Services Corridor Link Road to Water-Rock Road.

No.	Issues Raised and Chief Executive Responses
	Chief Executive Response The Services Corridor Link Road has been designed primarily to provide access to the UEA and includes features to control speed and manage traffic within the UEA. This includes the provision of numerous signalised junctions, raised tables and bends which will prioritise pedestrian/cyclist movement and slow vehicular traffic. This approach will make the Services Corridor Link Road less attractive for through traffic.
Gen.5	Issue Raised Concern is raised that the design is based on a hope that modal shift will occur to more sustainable forms of transport but that it should be based on actual car usage/ reliance. Chief Executive Response The design of the infrastructure does not rely on a modal shift to sustainable modes of transport. As noted in the Part 8 Planning Application Report Cork County Council commissioned the Water-Rock Strategic Transport Assessment (WRSTA) for the Water-Rock UEA. Traffic modelling was undertaken for the WRSTA. The results of the modelling show that infrastructure projects 1, 3, 4 and 6 will allow the development of Phase 1 of the Water-Rock UEA without significant impacts on the local road network. Good quality footpaths and cycle tracks are proposed connecting the Midleton Northern Relief Road with the Water-Rock Road and with the proposed train station. The aim of these is to encourage the use of sustainable modes of transport from an early stage in the development of the UEA. One of the principle drivers for the designating the Water-Rock UEA was its proximity to the railway line and the potential for provision of a new station to encourage more sustainable travel.
Gen.6	Issue Raised Support is requested for any plan to improve access to residential properties on the N25 because access to these properties is very dangerous at present. Chief Executive Response Works to upgrade the N25 and improve access for residents on the N25 are outside the scope of this part 8 application and are a matter for Transport Infrastructure Ireland (TII).
Gen.7	Issue Raised It is proposed to widen the 'hedgy boreen' (a narrow lane between the N25 and the Carrigane Road to the east of Carrigtwohill). It is stated that this lane will be used as an alternative route for traffic travelling between the N25 and the Water-Rock Road. Chief Executive Response An upgrade of the 'hedgy boreen' is not necessary or desirable as part of the Water-Rock UEA Infrastructure Works. Any upgrade is likely to attract additional traffic and increase turning movements at its junction with the N25. An upgrade of this road is outside the scope of this Part 8 application.
Gen.8	Issue Raised Gas Networks Ireland maps for the area and a guide for works in proximity to gas mains are provided Chief Executive Response

No.	Issues Raised and Chief Executive Responses
	Information Noted
Gen.9	Issue Raised Concern is raised about construction traffic using the Water-Rock Road. A request is made for consultation with the Area Engineer prior to the approval of construction traffic. Chief Executive Response The contract documents will require the contractor to prepare a detailed traffic management plan prior to commencement on site. This will need to be approved by the Cork County Council Area Engineer who is familiar with the suitability of roads in the area to accommodate construction traffic. The contract will require the contractor to inform residents of traffic management measures. The contract will also require pre-condition surveys of the road and for the road to be brought back to the original condition following construction. It will also require wheel washing for site and delivery vehicles prior to entering public roads, regular road sweeping and restrictions on hours of use.
Gen.10	Issue Raised Significant flooding of the Water-Rock Stream occurred in 2015/ 2016 and residents of the Water-Rock Road are awaiting a report on this flooding and are concerned that there are no plans to solve this flooding. It is also queried whether a capacity study of the Water-Rock Stream has been undertaken. Concern is also raised about the blocking of the underpass below the railway line next to Water-Rock House as part of the re-opening of the railway line by Irish Rail. Chief Executive Response A flood risk assessment for the proposed infrastructure works has been undertaken. It includes detailed hydraulic modelling of the Water-Rock Stream which was informed by historic flooding events. The modelling is a study of the Water-Rock Stream's capacity to carry flows of various return periods (including 100 year and 1000 year events). The infrastructure works have been designed such that they are not vulnerable to flooding and do not increase flood risk elsewhere. There will be a reduced discharge to the Water-Rock stream due to these proposals and the risk of flooding of the Water-Rock Stream will be slightly decreased. It is noted that the hydraulic model of the Water-Rock Stream includes for the blockage of the underpass below the railway line next to Water-Rock House. It is not an objective of the infrastructure works to reduce flood risk in Midleton. A separate project, the Midleton Flood Relief Scheme (FRS), is being undertaken by the OPW and Cork County Council. This project is assessing flood risk in Midleton including the flooding in 2015/ 2016. The Midleton FRS team have been consulted during the surface water drainage design and ongoing liaison will take place during detailed design.
Gen.11	Issue Raised The proposed link road should not be developed if the railway crossing is not closed to vehicular traffic. It is separately suggested that the Services Corridor Link Road, the surface water drainage and the upgrade of the Cork-Midleton Road/ Midleton Northern Relief Road junction should be completed prior to the closure of the Water-Rock Road to vehicular traffic at the level crossing. Chief Executive Response It is proposed to close the railway level crossing to vehicular traffic when the services corridor link road between Water-Rock Road and the Midleton Northern Relief Road is opened. The surface water drainage for the Services Corridor Link Road will be completed

No.	Issues Raised and Chief Executive Responses
	as part of the construction of the Services Corridor Link Road. It is intended that the Part 8 upgrade of the Cork-Midleton Road/ Midleton Northern Relief Road junction will be undertaken as part of the same construction contract. The requirements for timing of this upgrade will be considered by Cork County Council during detailed design and these requirements will be included in the construction contract.
Gen.12	Issue Raised Geological Survey Ireland (GSI) note that the site is located within an area with High to Extreme Groundwater Vulnerability and this should be taken into account when engaging in planning. Separate submissions query whether the presence of limestone in the area has been sufficiently dealt with in the Flood Risk Assessment and note that sinkholes have been reported in the vicinity of the Water-Rock Stream. It is also noted that site investigations should be undertaken prior to the finalisation of the route of the Water-Rock Road upgrade. Chief Executive Response The information from the GSI is noted. A Hydrogeological Characterisation Report has been undertaken for the proposed infrastructure works and informed the planning process and design. This included geophysical surveys as part of the route/ layout selection process. It is currently proposed to discharge surface water to existing watercourses. The geophysical survey will be supplemented by an intrusive ground investigation prior to detailed design. This will include the route of the proposed Water-Rock Road upgrade/ realignment. Ground conditions and risk associated with them will be taken into account in the detailed design. Any infiltration of surface water would be minimal and subject to detail design.
Gen.13	Issue Raised The provision for a party to apply for a screening determination to An Bord Pleanala within 4 weeks of the date of publication of the notice should have been included on the site notice and newspaper notice. Chief Executive Response The site notice and newspaper notice were in accordance with the applicable regulations current at the time of publication of the Part 8 planning notice.
Gen.14	Issue Raised The Part 8 process is not the correct process for the development. The EcIA, AA screening and EIA screening, should have considered the cumulative impacts of future UEA development. It also states that there are gaps in the EcIA and that no wintering bird surveys or bat roost presence surveys in trees observed as having potential roost features (PRFs) were undertaken Chief Executive Response The Part 8 process is the correct process for a local authority planning infrastructure of the nature included in the Part 8 proposals. Cumulative impacts are considered in the EcIA, AA and the EIA screening and determinations. As noted in the EcIA, information from wintering bird surveys conducted in 2018 in the appropriate season under the Midleton FRS was utilised to inform the assessment. Also noted is a recommendation for inspection of trees with PRFs in advance of

No.	Issues Raised and Chief Executive Responses
	commencement of works onsite. This is more appropriate for bat roosts as their location can change from year to year.
Gen.15	Issue Raised A public lighting plan should have been included with the planning submission. Chief Executive Response Proposals for public lighting are outlined in the Part 8 Planning Application Report. The lighting will be designed to the correct lux levels for the road carriageway, cycle lanes and pedestrian footways. The lighting will be designed in accordance with BS5489:2013 and Cork County Council's Public Lighting Manual, which takes into account traffic safety and light spill.
Gen.16	Issue Raised A number of concerns are raised relating to the future housing development which will occur as part of the Water-Rock UEA development. These include: The sequencing of the Water-Rock UEA development including potential leap frogging; The potential for ghost estates within the Water-Rock UEA in the event of an economic downturn; The effect that the proposed development will have on the levels of amenity and privacy in the Water-Rock area and its effect on property prices; A suggestion for the provision of trees to screen the existing Water-Rock Road from the future housing development; It is requested that in receiving submissions for housing planning applications, cognisance and consideration is given with regards to the positions of green areas, driving avenues and future development of the UEA close to the existing houses. Chief Executive Response Housing development is not proposed as part of the Part 8 for the Water-Rock UEA Infrastructure Works. Future housing development in the Water-Rock UEA will be the subject of future planning applications. Submissions, including those on the above issues, will be possible as part of that future process.
Gen.17	Issue Raised A submission from the Department of Culture, Heritage and the Gaeltacht states that an Underwater Archaeological Impact Assessment should be undertaken if there are any watercourses within the footprint of the proposed development. A separate submission from a member of the public queries whether onsite archaeological excavations should have been undertaken as part of the route selection process. Chief Executive Response Cork County Council have contacted the Department of Culture, Heritage and the Gaeltacht with regards to their submission. They have confirmed that an Underwater Archaeological Impact Assessment is not required in this instance. There are no watercourses within the footprint of the works, apart from a proposed road crossing of a ditch to the east of Water-Rock Road. An archaeological constraints study was conducted by a suitably qualified archaeological consultant, in consultation with Cork County Council's archaeological department, as part of the route/ layout selection process. This study informed the design of the proposed infrastructure. No further pre-planning surveys were identified as being necessary. Extensive archaeological surveys and recording will take place prior to construction.

No.	Issues Raised and Chief Executive Responses
Gen.18	Issue Raised The installation of the rising main in the Carrigane Road should be done at the same time as the construction of the Services Corridor Link Road, the surface water drainage and the upgrade of the Cork-Midleton Road/ Midleton Northern Relief Road junction and prior to the closure of the Water-Rock Road to vehicular traffic at the level crossing. Chief Executive Response The rising main in the Carrigane Road is separate from the Part 8 infrastructure works and is the responsibility of Irish Water. Cork County Council and Irish Water are in regular liaison regarding the proposed works and there will be co-ordination between their respective design teams regarding the timing of roadworks during the construction of their respective infrastructure.
Gen.19	Issue Raised Suitable noise abatement buffer zones are requested between the CGI Industrial Park and the Water-Rock UEA in order to adequately separate the different usage classes. Chief Executive Response This is an issue for the future development in the Water-Rock UEA. It would need to be dealt with as part of the development management process for any future development...
Gen.20	Issue Raised Fisheries Ireland have noted the following: 1. Any new or upgraded watercourse crossings should allow the free passage of fish unless it has been explicitly found that the watercourse has no fisheries potential; 2. All in-stream works should be undertaken between May and September and should not obstruct fish passage during or after construction; 3. A detailed construction method statement should be provided to IFI for any instream works; 4. Contaminated site run-off should be contained so that it cannot cause water pollution; 5. There should be no overflow discharge to waters from the proposed pumping station. Chief Executive Response The above points are noted and will be incorporated into the detailed design, tender documents and construction contract for the proposed infrastructure works. No overflow is proposed to discharge to waters from the proposed pumping station.
Gen.21	Issue Raised It is queried whether the Water-Rock Stream is partially blocked with rubble or rubbish. Chief Executive Response The route of the Water-Rock Stream between the Carrigane Road and the entrance to the underground cave system was walked by Cork County Council and their consultants during the planning design. There was no evidence of rubble or rubbish blocking the stream at that time.

Proposed Modifications

None

6.2 Total Proposed Modifications

As a result of the submissions received the following modifications are to be incorporated:

Project No. 1 - Services Corridor Link Road

Modification 1:
A section of the Western Loop Road off the Services Corridor Link Road, of approximately 120m2 in length, which will allow access to the proposed school site is included as a modification to the Part 8 proposals. (See Appendix E, Modification 1 Sketch)

Modification 2:
The feeder road on the northern boundary of the Nordic Enterprise Park and on the western side of the crossroads will be moved slightly further north to avoid the existing car parking spaces. (See Appendix E, Modification 2 Sketch)

Project No. 2 - Surface Water Drainage System

Modification 3:
Surface water drainage will be provided as part of the junction upgrade of the Water-Rock Road and the Carrigane Road.

Modification 4:
Surface water drainage to be provided along the existing Water-Rock Road as part of the construction of the upgrade/realignment of the Water-Rock Road.

Project No. 3 - Upgrade of Junction of Cork-Midleton Road and Midleton Northern Relief Road

Modification 5:
Right turn lane from Cork-Midleton Road on to Avoncore Cottages (Kennel Road) to be provided.

Modification 6:
Design of traffic calming measures on the Kennel Road (to be considered for implementation by the Council Area Office).

Project No. 4 - Traffic Management Measures for Water-Rock Road

Modification 7:
No turning head to be provided south of the railway line.

Modification 8:
The section of Water-Rock Road at the railway crossing will be closed to private vehicles by erection of demountable bollards. Use will be restricted to local authority public service vehicles as well as pedestrians and cyclists shown in the Part 8 proposals. It is noted that the section of the public road

at the railway crossing will remain public. The Council commit to reviewing the closure with TII during the planning phase of the N25 Upgrade Project.

Project No. 7 - Upgrade/ Realignment of Water-Rock Road

Modification 9:
Southern extent of Water-Rock Road cycle track to terminate at the junction of the Services Corridor Link Road and the Water-Rock Road.

Modification 10:
Proposed footpath to be extended on to Carrigane Road where it will terminate.

Project No. 8 - Wastewater Pumping Station

Modification 11:
The pumping station site will be extended and the access arrangements amended as necessary to provide for Irish Water's turning requirements.

7 Recommendation

The proposals which are the subject of this Part 8 Planning Process provide a unique opportunity to deliver a transformational project that will activate major housing development along a rail corridor in Water-Rock and also include interventions to improve safety traffic conditions and connectivity for the wider community of Midleton.

Having considered the submissions and the internal reports from the Planning Department, I am satisfied that the proposed development, incorporating the recommended modifications in Section 6.2, are in accordance with the proper planning and sustainable development of the area and I recommend to the Members of the Cobh and East Cork Municipal Districts that Cork County Council should proceed accordingly.

Please note that the completion of the project in its entirety may be subject to Compulsory Purchase Order of certain lands.

Signed: Date: 22/01/2019

Declan Daly,

Divisional Manager,

Cork County Council

8 Appendices

Contents

8.1 Appendix A: Site Notice

CORK COUNTY COUNCIL

DEVELOPMENT UNDER SECTION 179 OF THE PLANNING AND DEVELOPMENT ACT, 2000 AND NOTICE PURSUANT TO THE REQUIREMENTS OF PART 8, ARTICLE 81 OF THE PLANNING AND DEVELOPMENT REGULATIONS, 2001 AS AMENDED

Notice is hereby given that Cork County Council proposes to carry out the following development:

Water Rock Urban Expansion Area Infrastructure Works

Location:

The proposed development will be carried out on lands in Water Rock and Knockgriffin to the north west of Midleton between the Midleton Northern Relief Road and Water Rock Road (L3618), along Castle Rock Avenue and at the junction of the Midleton Northern Relief Road and the Cork/ Midleton Road in Midleton.

In the Townlands of: Ostencake, Knockgriffin (Imokilly), Knockgriffin (Barrymore), Water Rock and Curragh.

Nature and Extent of Proposed Development:

The proposed development comprises the following infrastructure projects:

1. **Services Corridor Link Road** - Serviced roadway with footpaths and cycle tracks, public lighting and ancillary mains services within the roadway, connecting the Midleton Northern Relief Road to the Water Rock Road (L3618);

2. **Surface Water Drainage System** – consisting of gullies, pipes, manholes and underground attenuation tanks for Services Corridor Link Road and upgrade/ realignment of existing Water Rock Road and provision to accommodate future attenuated flows from the Urban Expansion Area;

3. **Junction Upgrade of Cork/ Midleton Road and Midleton Northern Relief Road** - comprising the reconfiguration of: junction layout; traffic signals; traffic markings and permitted movements;

4. **Traffic Management Measures for Water Rock Road (L3618)** – Erection of bollards within the existing Water Rock public road (L3618) each side of the railway line to close the level crossing to vehicular traffic. Railway level crossing to remain operational and access across the level crossing will be maintained for pedestrians and cyclists;

5. **Bridge over Railway and Extension to Services Corridor Link Road** – New bridge over the Cork to Midleton railway line connecting the Services Corridor Link Road to lands to the south of the railway line and new serviced road corridor with footpaths and cycle tracks to access the proposed railway stop and bridge and ancillary works;

6. **Railway Stop** – New railway stop along the Cork to Midleton railway line consisting of a platform and shelter, drop-off area, cycle parking, disabled parking and access, ticket machines and ancillary works;

7. **Upgrade/ Realignment of Water Rock Road (L3618)** – Upgrade/ realignment between the Carrigane Road and north of the railway line level crossing of Water Rock Road. This consists of (i) online upgrade of sections of the existing road by widening, re-surfacing and the provision of services and cyclist and pedestrian facilities and ancillary works; (ii) offline realignment of sections of the road through the provision of new serviced road corridor with footpaths and cycle facilities running parallel to the existing road and ancillary works;

8. **Wastewater Pumping Station** – To facilitate the pumping of wastewater from the Urban Expansion Area to the Carrigtwohill Wastewater Treatment Plant with provision for a future connection from other areas. The pumping station will consist of below ground chambers, above ground control building and kiosks located within a fenced and gated compound.

An Environmental Impact Assessment (EIA) screening determination has been made and concludes that there is no real likelihood of significant effects on the environment arising from the proposed development once standard industry environmental management systems are in place and an **EIA is not required**.

Plans and particulars of the proposed development will be available for **inspection and/ or purchase** at a fee of €15 per set from November 9th 2018 up to and including December 7th 2018 as follows:

- Planning Counter, Ground Floor, County Hall, Cork between the hours of 09:00 to 17:00 on each working day;
- Cork County Council Midleton Area Engineer's Office, The Lodge, Youghal Road, Midleton, Co. Cork between the hours of 09:00 to 17:00 on each working day;
- Cork County Council Cobh Area Engineer's Office, Ballinglanna, Cobh, Co. Cork between the hours of 09:00 to 17:00 on each working day;
- Midleton Library, Main Street, Midleton Co. Cork between the hours of 09:30 and 17:30 between Tuesday and Saturday;
- Cobh Library, Arch Building, Casement Square, Cobh, Co. Cork between the hours of 09:30 and 17:30 between Tuesday and Saturday.

Plans and particulars are also available **for inspection and to print** as follows:

- Online via the Cork County Council website: https://www.corkcoco.ie/planning/housing-infrastructure-implementation-team ;

A Public Information Day will be held on the 15th Nov 2018, 12:00 to 21:00 at the Midleton Park Hotel. This is an opportunity to view the plans and discuss these with Council Officials and Design Consultants. This will take place in the Garden Suite of the Midleton Park Hotel.

Submissions and observations with respect to the proposed development may be made on or before 13:00 on Friday December 21st 2018 as follows:

(a) Online on Cork County Council's website at https://www.yourcouncil.ie or

(b) In writing and clearly marked 'Part 8 – Water Rock UEA Infrastructure Works' to Ross Palmer, A/Senior Planner, Housing Infrastructure Implementation Team, Cork County Council, County Hall, Carrigrohane Road, Cork, T12 R2NC

A/Senior Planner

Dated 7th Nov 2018

8.2 Appendix B: List of Statutory and Non-Statutory Bodies Consulted

No	Statutory Bodies	Date Notified	Submission Received
1	Failte Ireland	09.11.18	0
2	An Taisce	09.11.18	0
3	The Heritage Council	09.11.18	0
4	The Minister - Development Applications Unit	09.11.18	21.12.18
5	South Western Regional Fisheries Board	09.11.18	21.12.18
6	Transport Infrastructure Ireland	09.11.18	19.12.18
7	National Transport Authority	09.11.18	0
8	Environmental Protection Agency	09.11.18	0
9	Health Services Executive - Southern Area	09.11.18	0
10	Irish Water	09.11.18	21.12.18
	CCC Drinking Water	09.11.18	20.11.18
11	OPW	09.11.18	19.12.18
12	Arts Council	09.11.18	0
13	Commission for Railway Regulation	09.11.18	0
No	**Non-Statutory Bodies**	**Date Notified**	**Submission Received**
1	Bus Eireann	09.11.18	0
2	Garda Siochanna	09.11.18	0
3	Geological Survey Ireland	09.11.18	21.12.18
4	Birdwatch Ireland	09.11.18	0
5	Southern Regional Assembly	09.11.18	0
6	Department of Education and Skills	09.11.18	21.11.18
7	Irish Farmers Association	09.11.18	0
8	Teagasc	09.11.18	0
9	Waterways Ireland	09.11.18	0
10	National Council for People with Disabilities (NCPD)	09.11.18	0
11	Edcuate Together Mill Road	09.11.18	0
12	Midleton Chamber of Commerce	09.11.18	0
13	Midleton Local Historical Society	09.11.18	0
14	Gas Networks Ireland	09.11.18	19.11.18
15	ESB	09.11.18	0

8.3 Appendix C: Summary of Part 8 Submissions

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
1	Brian Murphy	WR32148545 WR32148661 WR32150583 WR32151220 WR32152528 WR32153740 WR32153996 WR32452496	A fully segregated cycle track, parallel to the railway line, from Midleton to the west of Carrigtwohill (as described in Cork Cycle Network Plan (2017) is not included in the planning application. The cycle track along the Services Corridor Link Road is not the most direct east to west route for a cycling facility and a more appropriate route would be parallel to the railway line. It is stated that the cycle route along the Water-Rock Road will no longer be at grade and instead require a detour over a railway pass. The quality of service measure of the Services Corridor Link Road cycle track would be a Level B at best based on the National Cycle Manual (NTA 2011). It is stated that the 2.25m width is insufficient to allow overtaking or adjacent cycling and that interruptions by junctions are too frequent. It is stated that the cycle track for the Water-Rock Road disappears for the majority of the route. Concern is raised that there are inherent conflicts built into the design about whether pedestrians, cyclists or vehicles have right of way at junctions. Concern is raised that the Services Corridor Link Road and the Water-Rock Road design are not easily legible and conflict between the various road user types are inherent. It is stated that the Water-Rock Road the cycleway ends suddenly on a footpath. Concern is raised that the closure of the Water-Rock Road at its junction with the N25, which is described in the East Cork MDLAP, is not included in the planning application and that the Water-Rock Road will be used by traffic to rat-run between Midleton and Carrigtwohill. It is stated that the design is based on a hope that modal shift will occur and should be based on actual car usage/ reliance. It also states that cycling and pedestrian routes are low quality, discontinuous and circuitous. An upgrade of the Midleton Northern Relief Road is suggested to prevent queuing northbound on that road and to prevent traffic from queuing back to the N25 eastbound carriageway.	General, 1, 3, 4, 5, 7

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
2	John Joe Lynch	WR32245244	The submission requests support for any plan to improve access to residential properties on the N25 because it states that access is very dangerous at present.	General
3	Lisa Lynch	WR32245437	The submission suggests widening of the 'hedgy boreen' (a narrow lane between the N25 and the Carrigane Road to the east of Carrigtwohill). The submission states that this lane will be used as an alternative route for traffic travelling between the N25 and the Water-Rock Road.	4
4	Gas Networks Ireland	WR32288858	The submission provides Gas Network Ireland maps for the area of the infrastructure works and a guide for works in proximity to gas mains.	General
5	Cork County Council Drinking Water	WR32326673	Existing 100mm asbestos watermain on L-3618-1 Local Road and L7729-1 Local Road should be replaced. Details of connection point to Irish Water network requested. No information on the size of the water main below the Services Corridor Link Road is provided.	7
6	Department of Education	WR32351639	This submission states that a direct access road should be provided from the services corridor link road to the proposed school site (MD-C-01).	1
7	Willem de Jong	WR32580426	This submission states that not being able to turn right onto the Northern Relief Road coming from Midleton will result in a major accident.	3
8	Con and Teresa Guerin	WR32722442 WR33051441	There are three main points raised: 1. No construction traffic should use the Water-Rock Road; 2. Concern is raised about an estate entrance opposite their existing entrance because of the potential for noise and light pollution; 3. Concern is raised that the attenuation tanks may cause flooding.	General, 2, 7
9	Margaret McDonnell	WR32746499	The submission suggests that the proposed pumping station should be moved north towards the railway line and that a surfaced entrance of 6.5 metre width be provided to access the land to the west of the pumping station from the Midleton Northern Relief Road. It suggests the provision of a double field gate to replace the existing entrance gate from the Northern Relief Road. It also suggests security fencing for the pumping station to prevent access to adjacent farmland. The submission welcomes the Water-Rock	8

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
			UEA Infrastructure Works development.	
10	Tom, Anne and Denis Cleere	WR32788741	The submission outlines historic flooding events which occurred at Water-Rock House (winter of 2015-2016) and are concerned that there are no plans to solve the flooding problem. The submission raises concerns that proposals will result in additional surface water being discharged to the Water-Rock Stream. The following questions are raised: 1. Are there any plans for our side of the road? 2. Is there any way the river can be slowed down? 3. Why is there more surface water going in to the river? 4. Is the river not over capacity at the moment? 5. If we get flooded is there support from local authorities? A visit from Cork County Council is requested.	2
11	Catherine and John E O'Hara	WR32845052	There are three main points in the submission: 1. An objection is raised to additional water being discharged to the Water-Rock Stream. It also notes that a meaningful report on the 2015 flooding at Water-Rock House is awaited and raises a concern about the blocking of the culvert below the railway as part of the railway line re-opening works; 2. A concern is raised at the excessive number of new entrances on to Water-Rock Road and it is stated that two dangerous bends on Water-Rock Road will be retained following its upgrade; 3. The proposed link road should not be developed if the railway crossing is not closed to vehicular traffic.	1, 2, 4, 7
12	Patrick Conlan O'Leary	WR32858496 WR33051971	Concern is raised that houses south of the Water-Rock Road level crossing will be forced to cross the N25 eastbound carriageway when accessing Water-Rock Road from Midleton. It is proposed that the junction of the Water-Rock Road and the N25 is closed instead. It is queried whether a capacity study of the Water-Rock Stream was carried out and what the results were. It is also queried whether the stream is partially blocked with rubble or rubbish and states that deep sink holes have appeared in the vicinity of the stream.	General, 2, 4

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
13	Padraig Dalton and Deirdre Brett	WR32895485 WR33051671	This submission raises a concern that houses south of the Water-Rock Road level crossing will be forced to cross the N25 eastbound carriageway when accessing Water-Rock Road from Midleton. It is suggested that the junction of the Water-Rock Road and the N25 is closed instead and access to the houses on the N25 would be from the median of the N25. Alternatively it is suggested that the services corridor link road is not connected to Water-Rock Road. Concern is also raised that the proposed turning head creates a risk of longer stays in this location.	1, 4
14	Geological Survey Ireland	WR33049471	Records show that no County Geological Sites (CGS) are located within the vicinity of the development. There is no envisaged impact on the integrity of CGSs by the proposed development. It is noted that the site is located within an area with High to Extreme Groundwater Vulnerability. This should be taken into account when engaging in planning.	General
15	James and Anne Cronin	WR32949023 WR33052202	1. It is stated that the provision for a party to apply for a screening determination to An Bord Pleanala within 4 weeks of the date of publication of the notice should have been included on the site notice. 2. It is stated that the part 8 process is not the correct process for the development. It states that EIA, screening, EcIA and AA Screening should have considered the cumulative impacts of the future UEA development. It also states that there are gaps in the EcIA and that no wintering bird surveys or bat roost presence surveys in trees observed as having potential roost features (PRFs) were undertaken; 3. It is stated that the existing Water-Rock Road does not have sufficient capacity and is unsafe for the increase in traffic from the proposed UEA development. It proposed that the services corridor link road should be commenced on east side and only progressed to meet housing need in the UEA or not opened on to Water-Rock Road until Water-Rock Road is upgraded. This would include the level crossing remaining open until the road was upgraded or carrying out the construction of the Water-Rock Road and the services corridor link road concurrently; 4. Concern is raised that the Water-Rock Road will become a 'rat-run' for traffic travelling to Carrigtwohill; 5. It is requested that the existing Water-Rock Road remains open to all residents of Water-Rock	General, 1, 3, 4, 7, 8

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
			Road and that the Water-Rock Road should not be closed at the level crossing. It is stated that the Water-Rock Road should not be closed at the level crossing until the Water-Rock Road is fully upgraded as the bollards would cause severe disruption for local residents. 6. A turning head is suggested to the north of the railway line as part of the closure of the road at the level crossing to vehicular traffic; 7. It is queried whether any traffic studies were undertaken on the Water-Rock Road; 8. Where the existing Water-Rock Road is to be upgraded off-line the submission requests that the existing road would become a cul-de-sac. It also requests the retention of existing boundaries and queries whether the council would be responsible for the ongoing maintenance of this section of road; 9. It is stated that a public lighting plan should have been included with the planning submission; 10. Concerns are raised regarding the sequencing of the Water-Rock UEA development including the potential leap frogging of undeveloped lands and proposed densities; 11. Concerns are raised about the proximity of the proposed Water-Rock Road junctions to existing dwellings; 12. Concerns are raised about the potential for ghost estates in the event of an economic downturn; 13. The submission states that the presence of limestone in the area is not sufficiently dealt with in the Flood Risk Assessment and queries whether the capacity of the surface water drainage system is adequate. 14. It is queried whether the proposed foul sewer (presumably rising main) on Water-Rock Road could be located in the adjacent lands rather than the existing road. Concerns are raised about potential odours from the sewer. 15. Concerns are raised that the proposed development will reduce the levels of amenity and privacy in the area and reduce property prices. Concerns are raised about the indefinite nature of Part 8 planning permission and its impact on property prices. 16. It states that onsite archaeological excavations should have been undertaken as part of the route selection process. 17. Concern is raised that the closure of the Water-Rock Road at the level crossing will result in	

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
			additional queuing on to the N25 from the Cork-Midleton/ Northern Relief Road junction;	
16	Michael and Aine O'Keeffe	WR32968450	The major concern raised is that the Water-Rock Road, in its existing condition, will not be able to take the volume of traffic from the first stage of development. It is suggested that the new services corridor link road is not connected to the Water-Rock Road until the proposed upgrade of Water-Rock Road is completed. Unspecified concerns are raised about the closure of the Water-Rock Road to vehicular traffic at the level crossing and the surface water drainage. It is noted that during the writing of the submission there is flooding close to the golf course entrance.	1, 2, 4, 7
17	Gerry and Annette Lane	WR32972022 WR33356493	Two concerns are raised as follows: There is an entrance proposed directly across from their houses which will affect the amenity of the dwelling. It is suggested that there were plans to screen the existing Water-Rock Road from the proposed development with trees. There will be extra traffic on the Water-Rock Road	7, General
18	Richard Vickery	WR32977316	Concern is raised that the upgrade of the Cork – Midleton Road and Midleton Northern Relief Road junction only caters for traffic leaving the N25 to enter Midleton and that it does not cater for vehicles travelling from Midleton on to the N25 to Cork. It states that existing traffic problems at the Baneshane roundabout will be exacerbated.	4
19	OPW	WR32980587	The submission raises the following concerns relating to the flood risk assessment: 1. It states that the flood risk assessment does not provide a conclusion in relation to flood risk for low return period events (i.e. 1 year, 5 year, 10 year etc.) and that the reports do not address the additional impact the diversion of flows would have on flood flows in the Owenacurra during lower flood events; 2. It states that overland flood flow paths from the Water-Rock Stream intersect the proposed new SW drainage networks and there is therefore potential that flood waters will be collected and diverted to the Owenacurra by the new SW drainage. It queries whether the 500 litres/ second test sufficiently addresses this; 3. It states that the Consultant to fully satisfy themselves as to the accuracy of the Lee CFRAMS mapping and these maps should not be exclusively be relied upon when defining flood zones as	General, 2, 7

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
			part of the consultants FRA; 4. It queries whether HECRAS model of the Water-Rock Stream underestimates the flood extents by overestimating the capacity of the swallow hole at Water-Rock House. The model assumes a 1.2m diameter culvert. 5. The OPW state that, based on flooding observed in the Water-Rock area between December 15th and 18th, the capacity of the swallow hole is in the order of about 0.3 to 0.5 m^3/s. 6. The OPW state that the flood probability is at odds with the actual flood history at Water-Rock House resulting in further underestimation of flood levels; 7. It queries whether a 95% factor standard error should be used instead of a 68% value since the development is to facilitate residential development; 8. It notes that there is an existing water course centrally located within the UEA which is not addressed in the FRA and it queries the flood zones associated with this water course. It is queried why the culvert of this watercourse is not included in the proposals; 9. It states that levels of the proposed infrastructure are not provided to allow comparison against flood levels and extents; 10. It recommends further sensitivity testing to assess the impact of varying the flood flows and varying control levels at the inlet to the cave system at Water-Rock House; 11. It recommends that designated flood compensation/ flood storage areas are clearly marked and delineated on 'as built' drawings; 12. Ongoing liaison with the Midleton FRS team is recommended to ensure flood mapping is up to date; 13. It recommends groundwater monitoring. The submission also raises concern in relation to the management of surface water run-off as follows (noting that the surface water drainage report was not available to the OPW at the time of writing of their submission): 1. It recommends more stringent surface water management controls than reducing run-off to the 1 in 100 year greenfield run-off rate; 2. It raises concern that the widening of Water-Rock Road and the introduction of a formal drainage	

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
			network will potentially increase flow rates and volume of run-off from the roadway if the correct management measures are not put in place. Lower event flooding events should be considered on this road; 3. SuDS measures are recommended to encourage some infiltration into the ground; 4. It is stated that regional attenuation systems to be taken in charge by the Local Authority are favoured by the OPW and that it is assumed that the attenuation tanks will be taken in charge by the Local Authority and that all future connections to this system are considered and controlled through the planning process; 5. It states that attenuation systems should not be located in flood risk areas; 6. It states that the impact of a surcharged outfall at the Water-Rock Stream and at the Owenacurra River should be considered in the design of the surface water system; 7. It states that an inspection and maintenance regime should be put in place with regard to the proposed surface water drainage network, particularly with regard to elements such as the attenuation facilities and flow control features; 8. It queries whether the likelihood of pluvial flooding in the vicinity of the culverted underpass for the 1000 year flood has been considered in conjunction with the 1000 year flood that gives rise to the need for the proposed culverts and whether this has any effect on the flood level estimation in the area; 9. It queries whether the trenches at each end of the proposed culverts on drawing are to be left open; 10. It queries whether the reference to 10% climate change is correct; 11. It recommends that a surface water strategy is prepared for the whole of the UEA. This would be supported by a surface water management plan for the entire development including a mechanism established for how required management measures will be passed onto private developers. It notes that sequencing and phasing of the overall development needs to consider impacts on water management and flood risk management; 12. It notes that an application under Section 50 of the Arterial Drainage Act 1945 and EU (Assessment	

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
			and Management of Flood Risks) Regulations SI 122 of 2010 is required for any new culvert or bridge or any proposal to replace or alter a bridge or culvert along a watercourse. Bridge details and culvert sizes will be subject to Section 50 consent;	
20	Transport Infrastructure Ireland	WR32991136	TII fully supports the current proposal and advises that a road safety audit be undertaken during design and construction to identify potential hazards to all road users. TII advises that road safety issues should be fully investigated and addressed for the existing N25/ Water-Rock Road junction prior to the execution of the Part 8 scheme.	General, 4
21	Dan and Claire O'Brien	WR32994633	The submission notes that they are fully supportive of the Part 8 planning application and are keen to work with Cork CC to secure its implementation. The submission requests: • A new entrance to Water-Rock Golf Club, suitable for future development, would be facilitated as part of Water-Rock Road upgrade boundary treatment works; • Extension of the proposed footpath on the upgraded Water-Rock Road as far as Carrigane Road; • Site investigations to be undertaken prior to finalisation of route of upgrade of Water-Rock Road; • Project 1 to 3 should be completed prior to the commencement of project number 4; • Irish Water rising main installation on Carrigane Road should be aligned with projects 1 to 3 and completed prior to the commencement of project 4; • Screening between 8th green and upgraded Water-Rock Road to prevent golf balls going out on to the road.	1, 2, 3, 4, 7, 8
22	Irish Water	WR33049788	Submission states that sufficient space should be provided within the pumping station site to accommodate a turning circle for an $18m^3$ tanks. A site investigation is requested for situations where works would interfere with existing water services. Connections to Irish Water infrastructure or any alterations to Irish Water infrastructure will require agreement with Irish Water prior to commencement.	8, General
23	Water-Rock residents	WR33000917	There are six main issues raised in this submission: 5. Water-Rock Road in its present condition is incapable of catering for the increase in traffic which will result from the opening of the services corridor link road. The safety concerns raised are as follows:	1, 2, 4, 7, 8, General

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
			a. The road width is insufficient for two cars to pass in places; b. The road is currently unlit; c. The services corridor link road would attract addition vehicles including large vehicles; d. The existing junction of the Water-Rock Road and Carrigane Road is dangerous; e. The existing road surface is only suitable for small volumes of traffic f. Residents south of the railway crossing would be forced to use the N25/ Water-Rock Road junction The residents state that the link road should remain closed to vehicular access on to Water-Rock Road until Water-Rock Road is upgraded. This would include the postponement of the planned closure of the Water-Rock Road at the level crossing until the upgrade is fully completed. Water-Rock Road residents await a report from Cork County Council explaining the flooding which occurred at Water-Rock in 2015. It is stated that the new surface water drainage in the lower part of Water-Rock Road should be installed as soon as possible and the planning proposals fully adhered to and the existing surface water drainage in the area should be cleaned. The draft submission states that the installation of the foul rising main along the existing Water-Rock Road will cause severe disruption and construction traffic on Water-Rock Road and raises a concern about the condition of the road following installation of the main. It is proposed that the main should be installed along the line of the upgrade/ realignment of Water-Rock Road. It queries whether other routes have been considered and the construction techniques of Irish Water. The draft submission raises concerns that the proposals for new housing estate junctions on Water-Rock Road are shown directly opposite existing properties. This could cause noise and light pollution in the existing properties; The submission notes that there is no provision for surface water drainage on the existing Water-Rock Road upon construction of the Water-Rock Road upgrade; The draft submission raises a concern that there will be a large amount of construction traffic using the Water-Rock Road for both the infrastructure works and the future housing and requests consultation with the Area Engineer before any construction traffic management plans are granted.	

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
24	Fergus O'Rourke	WR33001058	Submission is a copy of WR33000917	1, 2, 4, 7, 8, General
25	Jerry O'Keeffe	WR33013747	There are four main points included in the submission as follows: 6. It is stated that the location where the Services Corridor Link Road meets the Water-Rock Road is at a corner with poor visibility in both directions and a major re-structure of the road is required at this location. 7. It is stated that a repair/ upgrade of the Water-Rock Road should be undertaken well before the construction of new roads etc. 8. It is stated that the route of the FW rising main along the Water-Rock Road and on to Carrigtwohill (via the Carrigane Road) will cause severe disruption to the Water-Rock Road, businesses and local residents. 9. It is stated that the junction of the Water-Rock Road and Carrigane Road should not become a signalised junction because it would cause noise pollution.	1, 7, 8, General
26	CGI Food Park Limited	WR33038133	Suitable noise abatement buffer zones are requested between the CGI Industrial Park and the Water-Rock UEA in order to adequately separate the different usage classes.	General
27	Paul Moore	WR33038261	The submission requests the following: 10. An extension of the spur road at the proposed junction on the eastern section of the Services Corridor Link Road to be included in the proposals as a modification; 11. A stronger commitment to the delivery of the Loop Road from the Services Corridor Link Road to the north including a commitment to actively seek funding for this road.	1, General
28	Southern Fuel and Farm Supplies	WR33039909	Submission raises concern that the proposed crossroads junction at the eastern side of the Services Corridor Link Road and the junction to the west of this will lead to traffic safety concerns between residential traffic and vulnerable road users. The provision of a western arm to access the Southern Fuels site is proposed as an alternative access. It is suggested that the feeder road running westwards from the crossroads should be moved further north to avoid a clash with existing parking spaces. Prior the provision of the new entrance the feeder road would provide access to the residential and industrial area but it is suggested that the priority is changed to give priority to the access to the residential development.	1

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
29	Fisheries Ireland	WR33050113	The submission contains the following comments: 6. Any new or upgraded watercourse crossings should allow the free passage of fish unless it has been explicitly found that the watercourse has no fisheries potential; 7. All in-stream works should be undertaken between May and September and should not obstruct fish passage during or after construction; 8. A detailed construction method statement should be provided to IFI for any instream works; 9. Contaminated site run-off should be contained so that it cannot cause water pollution; 10. There should be no overflow discharge to waters from the proposed pumping station.	General, 8
30	Dept. of Culture Heritage and the Gaeltacht	WR33050276	The submission states that an Underwater Archaeological Impact Assessment should be undertaken if there are any watercourses within the footprint of the proposed infrastructural works.	General
31	John O'Donnell	WR33050841 WR33052223	It is requested that the proposed junction to access future development to the east of Water-Rock Road, located opposite his entrance, is moved south of the existing entrance. Opposition to any construction traffic using the road during the construction phases of the proposed development is noted. It is stated that the services corridor link road or any 'slip roads' should not be opened up on to Water-Rock Road until the Water-Rock Road is upgraded.	1, 7, General
32	Colleen and Ernie O'Hara	WR33051283	The submission notes the following: 1. Concern is noted at the proposed attenuation tank which discharges to the Water-Rock Stream in light of recent flooding; 2. It suggests a reduction in the number of entrances on the eastern side of Water-Rock Road; 3. It states that the dangerous bends on Water-Rock Road are still shown on the proposed plans; 4. It states that the railway crossing should not be closed to vehicular traffic but that the median of the N25 needs to be closed for safety reasons.	2, 4, 7
33	Miriam and Ultan Savage	WR33051913	Concern is raised at the large amount of construction traffic which will use the Water-Rock Road. It requests that the Water-Rock Road should not be used by construction traffic at all. It also states that the	General, 7

No.	Interested Party	Submission No.	Summary of Issues Raised	Project No.
			Water-Rock Road would not be able to accommodate increased traffic streams following development. Finally it requests that in receiving submissions for housing planning applications, cognisance and consideration is given with regards to the positions of green areas, driving avenues and houses close to their house.	
34	Valerie Healy	WR33052110	The submission notes support for the upgrade and development in the area but raises a concern that the existing Water-Rock Road would be unsuitable for the increase in traffic following the connection of the services corridor link road to the Water-Rock Road.	1, 7, General
35	Eoin and Eilis O'Donnell	WR33052174	The submission notes support for the upgrade of the road network but raises concern about the existing Water-Rock Road being used by HGVs and construction traffic. It also states that entrances from the new road should not be located directly in front of existing dwellings.	7, General

Please note that all 35 submissions have been available throughout the submission period for inspection at County Hall and will continue to be available for inspection by the public at Floor 3, Planning Department, County Hall up until conclusion of the Part 8 process.

8.4 Appendix D: Response to OPW Submission

SNC·LAVALIN ATKINS Member of the SNC-Lavalin Group

Technical Note

Project:	Water Rock UEA Infrastructure Works		
Subject:	Response to Part 8 Submission from OPW Rev 3		
Author:	JO'C/ PAC	Atkins No.:	5163809DG0154
Date:	January 18th 2018	Icepac No.:	-
		Project No.:	5163809
Distribution:	Donald Cronin Paul Fitzgerald Sharon McDonnell Ross Palmer	Representing:	Cork County Council Cork County Council Cork County Council Cork County Council

1. Introduction

The OPW made a submission (Cork CC reference WR32980587) to Cork County Council on Cork County Council's Part 8 Planning Application for Water Rock Urban Expansion Area Infrastructure Works. In the submission the OPW confirm that it has no objection to the proposals.

Atkins and Cork County Council have consulted with the Midleton Flood Relief Scheme during the planning stage of the UEA Infrastructure Works and shared information and collaborated with them on design matters. The Council has committed to further collaboration through the detailed design stage to ensure that the most current available flood related information informs the detailed design. Issues raised in the OPW submission are addressed in Sections 2 to 5 of this document.

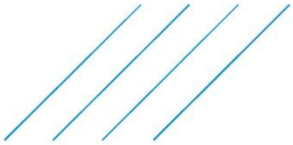
2. Fluvial and Groundwater

OPW issues and Atkins responses to fluvial and groundwater issues are shown in Table 1.

Table 1 - Fluvial and Groundwater Issues and Responses

Ref.	Issue and Response
2.1.2	Issue Raised It is stated that the flood risk assessment does not provide a conclusion in relation to flood risk for low return period events (i.e. 1 year, 5 year, 10 year etc.) and that the reports do not address the additional impact the diversion of 500l/s would have on flood flows in the Owenacurra during lower flood events. **Atkins Response** **It is noted that the 500l/s tested in the modelling undertaken by Arup was an over-estimate of the proposed flow diversion to the Owenacurra at the time of**

ATKINS
Member of the SNC-Lavalin Group



	modelling because the surface water drainage design had not been completed at that time. The surface water drainage design has since been completed and the maximum discharge to the Owenacurra for all events up to the 1 in 100 year flood event including a 10% allowance for climate change will be 229l/s. There is a reduction of flow to the Owenacurra for higher return period events because discharge from most of the catchment areas discharging to the Owenacurra will be limited to QBAR. The increase of 107l/s for the 1 in 1 year event is far less than the 500l/s checked in the Arup model. Cork County Council are satisfied that it is likely to have a negligible impact on water levels in the Owenacurra.
	Issue Raised It is stated that overland flood flow paths from the Water Rock Stream intersect the proposed new SW drainage networks and there is therefore potential that flood waters will be collected and diverted to the Owenacurra by the new SW drainage. It queries whether the 500 litres/ second test sufficiently addresses this; **Atkins Response** **The flood waters will not be collected and diverted to the Owenacurra by the new surface water drainage and there is no requirement for the 500 litres/ second test to assess this. The proposed surface water drainage within the overland flow flood path will be sealed i.e. sealed manhole covers. All proposed gullies are outside of the overland flow flood path. It is noted that the existing destination for overland flow from the Water Rock Stream is to the Owenacurra River.**
2.1.3	Issue Raised It is stated that the Consultant should fully satisfy themselves as to the accuracy of the Lee CFRAMS mapping and these maps should not be exclusively be relied upon when defining flood zones as part of the consultants FRA; **Atkins Response** **The consultant is satisfied as to the accuracy of the Lee CFRAMS flood maps used in the FRA. It is noted that flood modelling of the Water Rock Stream, which discharges to the Owenacurra, has been undertaken as part of the Flood Risk Assessment.** **The FRA notes that the January 2018 revision of the LeeCFRAMS maps represent the current best estimate of flood extents for the Owenacurra River in the vicinity of the UEA and that further detailed assessment of flows and flood levels in the Owenacurra River is ongoing as part of the Midleton Flood Relief Scheme.** **The FRA recommends that the status of the LeeCFRAMS maps and output from the Midleton Flood Relief Scheme are checked during detailed design of the Water Rock UEA Infrastructure Works to ensure that the detailed design uses the most up-to-date information available.** **It is therefore recognised that a flood assessment of the Owenacurra is ongoing as part of the MFRS which may lead to some revision of flood extents which will be taken into account in the detailed design but at this stage any changes are very unlikely to affect the proposed infrastructure works as set out in the Part 8 planning submission.**
	Issue Raised It is queried whether HECRAS model of the Water Rock Stream used in the Flood Risk Assessment underestimates the flood extents by overestimating the capacity of the swallow hole at Water Rock House. The model assumes a 1.2m diameter culvert. **Atkins Response** **Atkins are satisfied that the flood extents, developed from modelling for the purposes of the flood risk assessment for the proposed infrastructure works, are suitably accurate for this purpose.** **The OPW description of the downstream boundary does not accurately describe that used and presented within the FRA.**

SNC·LAVALIN ATKINS Member of the SNC-Lavalin Group

	Section 7.5 of the FRA notes that "The cave entrance comprises 3nr visible separate, irregular shaped opes. It is noted that further openings to the cave system may be present although not visible ..... the cave system is modelled as a single culvert *with downstream water level representing groundwater conditions.*" **The OPW comment applies only to the initial part of the model calibration (observed sub-event 1 of 6) with the lowest return period (2yr event compared with maximum 250yr event for observed sub-events 4 and 5).** **For sub-event 1 the culvert entrance is calibrated to surcharge frequently which, based on historic reports, is understood to be due to high flows only so groundwater levels have not been applied to this sub-event.** **It should be noted that the observed surcharging of the cave entrance for sub-event 1 can be achieved using any number of combinations of culvert size, length, roughness and groundwater levels. The combination chosen therefore is based on the size of the cave openings, namely the 1.2m diameter culvert derives from the physical size of the existing 3nr cave openings.** **The internal dimensions of the cave system are unknown so the hydraulic operation is estimated by varying the culvert length and roughness until the observed frequency of surcharge is achieved.** **Notwithstanding the above, Section 7.6 of the FRA concurs with the OPW observation that flood extents for low return periods may be underestimated but notes that this is considered acceptable given the purpose of the FRA.** **Section 7.6 states "It is considered possible that the model results for the low return period events (2yr and 10year) may be slightly underestimating the flood extent immediately upstream of the cave system. However the primary use of the model is intended to be for estimating flood extents for the extreme events (>100years) and the flood extents for the observed larger return periods Sub-events (>50years) appear reasonable so the calibration is considered to be satisfactory.** **The model calibration is therefore considered to be reasonable for the purpose of the FRA for the Water Rock UEA Infrastructure Works."**
	Issue Raised It is stated by the OPW that, based on flooding observed in the Water Rock area between December 15th and 18th, the capacity of the swallow hole is in the order of about 0.3 to 0.5 m^3/s. **Atkins Response** **It is unclear if this comment is referring to the 'capacity' of the swallow hole or the observed flow through the swallow hole. The information referred to has not yet been made available and rainfall data for those dates is not yet publicly available so cannot be reviewed.** **However, it is understood that there was no overtopping of the channel upstream of the cave entrance and so this is likely to represent a low return period event (<2years).**
	Issue Raised The OPW state that the flood probability is at odds with the actual flood history at Water Rock House resulting in further underestimation of flood levels. **Atkins Response** **We are satisfied that the flood history used for the model calibration is similar to that summarised in OPW's submission. We are satisfied that the flood extents produced for purpose of the flood risk assessment for the Water Rock UEA Infrastructure Works is suitably accurate for this purpose.**

The model response for 4 of the 6 historical sub-events described by the OPW is entirely consistent with first hand observations made at the time. Insufficient information was available to attempt a detailed calibration for the other 2 sub-events although the events were considered as part of the calibration process.

The FRA results are suitable for predicting the flood extent for the higher return period calibration events which are relevant to the proposed Infrastructure Works (December 29th and 31st) and are sufficiently accurate for the lower return period events to estimate the impact of the proposed Infrastructure Works on the existing flood risk, particularly at Water Rock House.

This is considered to be acceptable for the purpose of the FRA for the proposed Infrastructure Works although it is acknowledged that further refinement for the low return period events may be desirable if the model is to be used to identify a solution to the existing flood risk at Water Rock House. However that is not the purpose of this model, which was developed for the purpose of the FRA for the proposed Infrastructure Works.

The flood history used for the model calibration is detailed in Section 7 of the FRA and is similar to that summarised in the OPW comments as outlined below.

<u>1995 event:</u>

This is included as sub-event 1 described in the Section 7.3 of the FRA which notes that rainfall data indicates a low return period event (1yr).

This is clearly inconsistent with the observed level of flooding so it was concluded that insufficient information is available to determine the flood mechanism that led to the observed flooding.

Further, the 1995 topographical layout of the area is unknown although substantial earthworks have been undertaken since then.

No attempt could therefore be made to use the observed flood levels as part of the model calibration although the event was included to estimate frequency of surcharge of the cave system.

<u>December 2015 event:</u>

The December 2015 event is divided into 4 sub-events described in the Section 7.3 of the FRA.

The available rainfall data indicates that these sub-events are a combination of groundwater-only and groundwater + fluvial events ranging from 50year return period to 250year return period. These sub-events record the development of the flood as it progressively flooded the gardens, house and then overtopped the road to flood properties opposite. These events are considered of primary importance in estimating the flood extents and frequency associated with the proposed Infrastructure Works.

Sub-events 2 and 5 are groundwater-only events and matched against the recorded rainfall data. These events therefore match the levels of flooding observed in December 2015 and are used to calibrate the groundwater + fluvial sub-events 3 and 4 as noted below.

A detailed first-hand account of this event is presented in FRA Section 7.2 and is consistent with the model calibration results.

For example, the account notes flooding of the interior of the house to c. 40cm at 21:20 on 29th December 2015, increasing and overtopping the road in the following days. Note the precise location of the flood depth is not given so the actual flood level can only be estimated.

This is sub-event 3 of the model calibration which indicates the onset of flooding and predicts flooding of the house to a depth of 250mm with no overtopping of the road at this time. This is entirely consistent with the observations recorded in the first-hand account.

Further, the account notes that flooding overtopped the road on the 30th December to reach the properties opposite.

This is sub-event 4 in the model calibration which gives predicted flooding of the house to a depth of 900mm which again is entirely consistent with the observations and OPW comment.

<u>February 2016 event:</u>
This is included as sub-event 6 described in the Section 7.3 of the FRA. The first-hand account is ambiguous regarding the extent or level of flooding and so it was understood that this event did not result in flooding of the house.

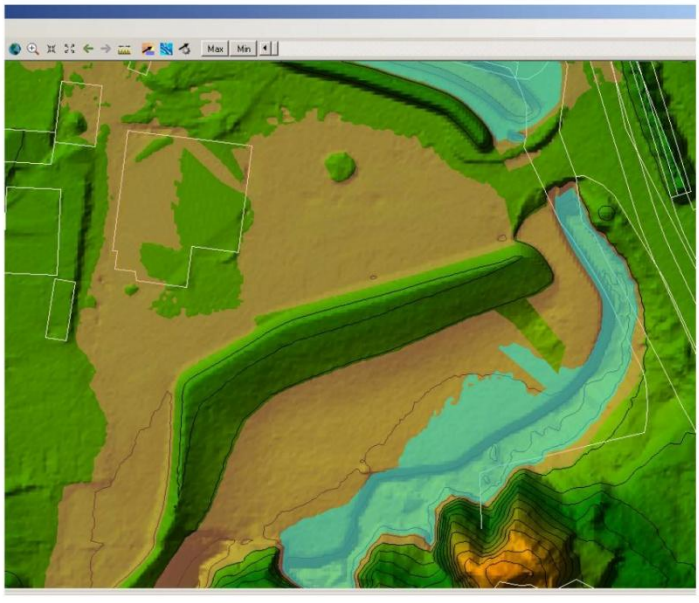
The short term rainfall data indicates a low return period event (~10yr) and there is no indication of a significant long term (i.e. groundwater) event.

A 10year return period fluvial only event excluding climate change and high groundwater levels is inconsistent with the level of flooding noted in the OPW comment as noted in the figure below. It is therefore probable that a further unknown factor, such as groundwater levels and/or partial blockage upstream of Water Rock House contributed to the flood event.

Insufficient information is therefore available to determine the flood mechanism and return period that led to the observed flooding.

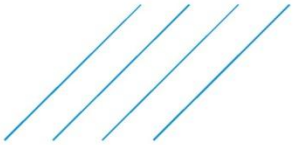
<u>Out of Bank Flood Frequency:</u>
The OPW comment regarding flooding to the edge of grass indicates that this has occurred each approximately 7years. The FRA Figures 9.1 (Excl CC) and 9.4 (Incl CC) present the model flood extent for the 10year event Excluding Climate Change (in blue) and Including Climate Change (in brown) respectively.

This indicates out of bank flooding of the grass that does not threaten the building when excluding Climate Change but extends to threaten the building when Climate Change is taken into account. For clarity these results are re-presented below and are entirely consistent with the OPW comment notwithstanding that the 'Excl CC' (blue) scenario may be considered to be slightly underestimating the flood extent as noted previously.



Issue Raised

ATKINS
Member of the SNC-Lavalin Group



It is queried whether a 95% factor standard error should be used instead of a 68% value since the development is to facilitate residential development;

Atkins Response

The estimation of 'actual' flows is required as part of the FRA in order to achieve a realistic model calibration. During the Assessment process the FSE was therefore considered to be a variable to be adjusted as part of the calibration. The 68% FSE was therefore determined as part of the overall calibration and results in the realistic calibration discussed above. This figure is therefore considered to provide a suitable estimation of the 'actual' flow.

Note that in specifying the capacity of the proposed culverts beneath the extension to the Services Corridor Link Road, the FRA Section 14.2 Recommendation (iv) states they should be designed for the 1000year return period flow of 2.8m3/s including Climate Change.

This is a substantially higher return period than the 100year or 200year figures normally used for culvert design. Further, it includes a factor of safety (~20%) by ignoring the attenuating effect as flows spill overland towards the SCLR and is therefore considered entirely appropriate for the proposed scheme.

It should be further noted that, broadly, the 95%ile FSE results are expected to result in a flow that would exceed the 'actual' flow in 95% of applications. It is therefore not an appropriate assumption for use as part of the model calibration as it 'almost certainly' over estimates the flows.

Issue Raised

The OPW notes that there is an existing water course centrally located within the UEA which is not addressed in the FRA and it queries the flood zones associated with this water course. It is queried why the culvert of this watercourse is not included in the proposals.

Atkins Response

The channel upstream of the Services Corridor Link Road is steep and any potential flood zones would be confined to the channel. The contributing catchment is considered to be small and the flows observed in this watercourse are not substantial and not perennial. The channel dries out at times.

The culvert of the watercourse is included in the proposals. The FRA Section 14.2 Recommendation (xii) specifies the provision of the culvert referred to in the OPW comment and references the watercourse of concern, namely "The local drain is to be culverted where it crosses the proposed access road".

Issue Raised

It is stated that levels of the proposed infrastructure are not provided to allow comparison against flood levels and extents.

Atkins Response

We have not provided long sections of the proposed roads, bridges etc. because this is not a planning requirement. We are satisfied that the levels of this infrastructure are well above the flood levels and are not at risk of flooding. Long-sections of the proposed infrastructure will be finalised during the detailed design and can be provided to the OPW for comparison with the flood levels as part of the detailed design process.

Issue Raised

Further sensitivity testing is recommended to assess the impact of varying the flood flows and varying control levels at the inlet to the cave system at Water Rock House.

Atkins Response

As noted above the calibration achieved is consistent with observed flooding and further sensitivity testing is therefore not considered to be necessary. The

	modelling undertaken and the outputs are considered to be appropriate and suitable for their intended purpose.
	Issue Raised It is recommended that designated flood compensation/ flood storage areas are clearly marked and delineated on 'as built' drawings. **Atkins Response** **Infrastructure (within the Part 8 proposals), that is designed to avoid any increase in flood risk will be clearly outlined on as- built drawings prior to handover/transfer to the Council Roads Area Office. The design approach/understanding and maintenance requirements will also be included.**
	Issue Raised Ongoing liaison with the Midleton FRS team is recommended to ensure flood mapping is up to date. **Atkins Response** **The Council has committed to using the most up to date information available to inform the detail design of the infrastructure.. The requirement for ongoing liaison with the MFRS is noted in the FRA e.g. Section 14.2 Recommendation (xv) *"The proposed Water Rock UEA Infrastructure Works is based on the most up-to-date information currently available including preliminary technical information provided by the Midleton Flood Relief Scheme project and the January 2018 revision of the LeeCFRAMS flood maps. The status of these projects should be checked at detailed design stage to ensure that the design continues to utilise the most up-to-date information available".***
2.2	Issue Raised Groundwater monitoring is recommended. **Atkins Response** **An intrusive ground investigation will be undertaken following the planning process. Groundwater monitoring will be included as part of that ground investigation.**

3. Surface Water Management

OPW issues and Atkins responses to fluvial and groundwater issues are shown in Table 2.

Table 2 – Surface Water Management Issues and Responses

Ref.	Issue and Response
2.3.1	Issue Raised It is recommended by the OPW that more stringent surface water management controls are applied than reducing run-off to the 1 in 100 year greenfield run-off rate. **Atkins Response** **More stringent surface water management controls are proposed than reducing the run-off to the 1 in 100 year greenfield run-off rate. Discharge to the Owenacurra will be limited to QBAR where this is practicable based on minimum practical diameters for flow control devices. This is achievable for the majority of the UEA. Only where this is not practicable will the 1 in 100 year greenfield run-off rate be applied. The OPW should refer to the surface water report for the Water Rock UEA that it recently received from Cork County Council.**

	The area of the UEA which will discharge to the Water Rock Stream will be limited to QBAR. For the small section of upgrade of the Water Rock Road which will discharge to the Water Rock Stream it is not practicable to discharge at QBAR. This section of the road currently discharges to the stream unattenuated either overland or via existing drainage. It is proposed to provide attenuation as part of the proposals to upgrade this section of the road. The overall discharge rates to the Water Rock Stream will be lower than existing rates. This is due to the reduction in catchment draining to the stream and the attenuation of the surface water from previously unattenuated sections of Water Rock Road.
2.3.2	Issue Raised Concern is raised that the widening of Water Rock Road and the introduction of a formal drainage network will potentially increase flow rates and volume of run-off from the roadway if the correct management measures are not put in place. Lower event flooding events should be considered on this road; **Atkins Response** **The section of Water Rock Road which is to be upgraded/ realigned is currently within the catchment of the Water Rock Stream. As part of the upgrade works surface water drainage will be provided. This will include attenuation and flow control. The majority of the surface water on Water Rock Road will drain to the Owenacurra via a new drainage network and so will be diverted away from the Water Rock Stream.** **As noted above surface water from a small section of the Water Rock Road will continue to discharge to the Water Rock Stream This section of the road currently discharges to the stream unattenuated either overland or via existing drainage. It is proposed to provide attenuation as part of the proposals to upgrade this section of the road. The overall discharge rates to the Water Rock Stream will be lower than existing rates. This is due to the reduction in catchment draining to the stream and the attenuation of the surface water from previously unattenuated sections of Water Rock Road.**
2.3.3	Issue Raised SuDS measures are recommended to encourage infiltration into the ground. **Atkins Response** **As noted in the surface water drainage report the use of infiltration is not considered suitable for surface water drainage included in the Part 8 proposals. This is due to the risk associated with the presence of karst limestone conditions underlying the Water Rock UEA. SuDS measures which may be suitable for the future housing development in the UEA have been outlined in the surface water drainage report. This includes the use of infiltration methods in areas where ground investigations conclude that this is suitable.**
2.3.4	Issue Raised Regional attenuation systems to be taken in charge by the Local Authority are favoured by the OPW and that it is assumed that the attenuation tanks will be taken in charge by the Local Authority and that all future connections to this system are considered and controlled through the planning process. **Atkins Response** **This is noted. It is proposed that the attenuation tanks will be taken in charge by the Local Authority. All future connections to this system will need to be considered and controlled through the planning process. A SuDS strategy for the Water Rock UEA has been produced as part of the surface water drainage report. This outlines discharge limits which should be applied to different parts of the UEA as part of the future planning process.**
2.3.5	Issue Raised

	Attenuation systems should not be located in flood risk areas. **Atkins Response** **It is not proposed to locate attenuation tanks in locations which are at risk of flooding.**
2.3.6	Issue Raised The impact of a surcharged outfall at the Water Rock Stream and at the Owenacurra River should be considered in the design of the surface water system **Atkins Response** **Surcharged outfalls have been considered as follows:** **1. Water Rock Stream – Attenuation Tank 5 – Outfall 1** **The proposed invert level of the outfall is 11.800mAOD. This is above the 1 in 1000 year + climate change flood level at this location. It was therefore considered that this outfall is not at risk of surcharging.** **2. Water Rock Stream – Oversized Pipe – Outfall 2** **The proposed invert level of the outfall is below the 1 in 100 year + climate change flood level in this location. This is necessary due to topographical constraints. An overflow from the flow control manhole will be provided as part of the detailed design in order to mitigate flood risk from the proposed surface water drainage.** **3. Owenacurra – Existing 1050mm outfall** **The 1 in 100 year flood level at the location of this outfall is 7.785mAOD based on information obtained from Arup in May 2018. As part of the Windes Microdrainage model for the surface water drainage network a surcharged outfall of the existing 1050mm outfall was modelled. The model shows that there is sufficient capacity in the proposed and existing network in the event of the outfall being surcharged at the 1 in 100 year flood level for storm events up to a 1 in 100 year event including a 10% allowance for climate change.**
2.3.7	Issue Raised An inspection and maintenance regime should be put in place with regard to the proposed surface water drainage network, particularly with regard to elements such as the attenuation facilities and flow control features. **Atkins Response** **The surface water drainage network will be maintained by Cork County Council Roads Area Office. Regular inspections will form part of the maintenance regime.. Once future roads and drainage within the UEA are taken in charge by Cork County Council these will also be maintained by Cork County Council Roads Area Office..**
2.3.8	Issue Raised It is queried whether the likelihood of pluvial flooding in the vicinity of the culverted underpass for the 1000 year flood has been considered in conjunction with the 1000 year flood that gives rise to the need for the proposed culverts and whether this has any effect on the flood level estimation in the area. **Atkins Response** **Pluvial flood risk has been considered in the FRA e.g. as part of the Precautionary Approach in Section 10.5 and measures have been proposed to maximise storage available for pluvial or flood mitigation measures.** **Also note that the potential pluvial flooding will reduce as development progresses and runoff from the existing catchment lands is incorporated in the proposed surface water drainage system which will include SuDS.**

2.3.9	Issue Raised It is queried whether the trenches at each end of the proposed culverts are to be left open. **Atkins Response** **It is proposed that these trenches will be kept open. They will be secured with suitable security fencing.**
2.3.10	Issue Raised It is queried whether the reference to 10% climate change is correct. **Atkins Response** **The reference to 10% climate change is correct. It is noted in the Greater Dublin Strategic Drainage Study that a factor of 1.1 should be applied to drainage design to allow for a 10% increase in rainfall depth due to climate change. This factor has been included in the Windes Microdrainage model.**

4. Future Development and Infill Development

OPW issues and Atkins responses to future development and infill development are shown in Table 3.

Table 3 – Surface Water Management Issues and Responses

Ref.	Issue and Response
2.4	Issue Raised It is recommended that a surface water strategy is prepared for the whole of the UEA. This would be supported by a surface water management plan for the entire development including a mechanism established for how required management measures will be passed onto private developers. It notes that sequencing and phasing of the overall development needs to consider impacts on water management and flood risk management; **Atkins Response** **A SuDS strategy has been prepared on behalf of Cork County Council for the Water Rock UEA. This includes an assessment of the SuDS possibilities that could be used for future UEA development and recommendations on discharge limits which should be applied to future UEA development.** **Flood risk assessments will need to be provided as part of the planning process for future development within the Water Rock UEA.**

5. New Bridges and Culverts

OPW issues and Atkins responses to future development and infill development are shown in Table 4.

Table 4 – Surface Water Management Issues and Responses

Ref.	Issue and Response
2.5	Issue Raised

SNC·LAVALIN ATKINS Member of the SNC-Lavalin Group

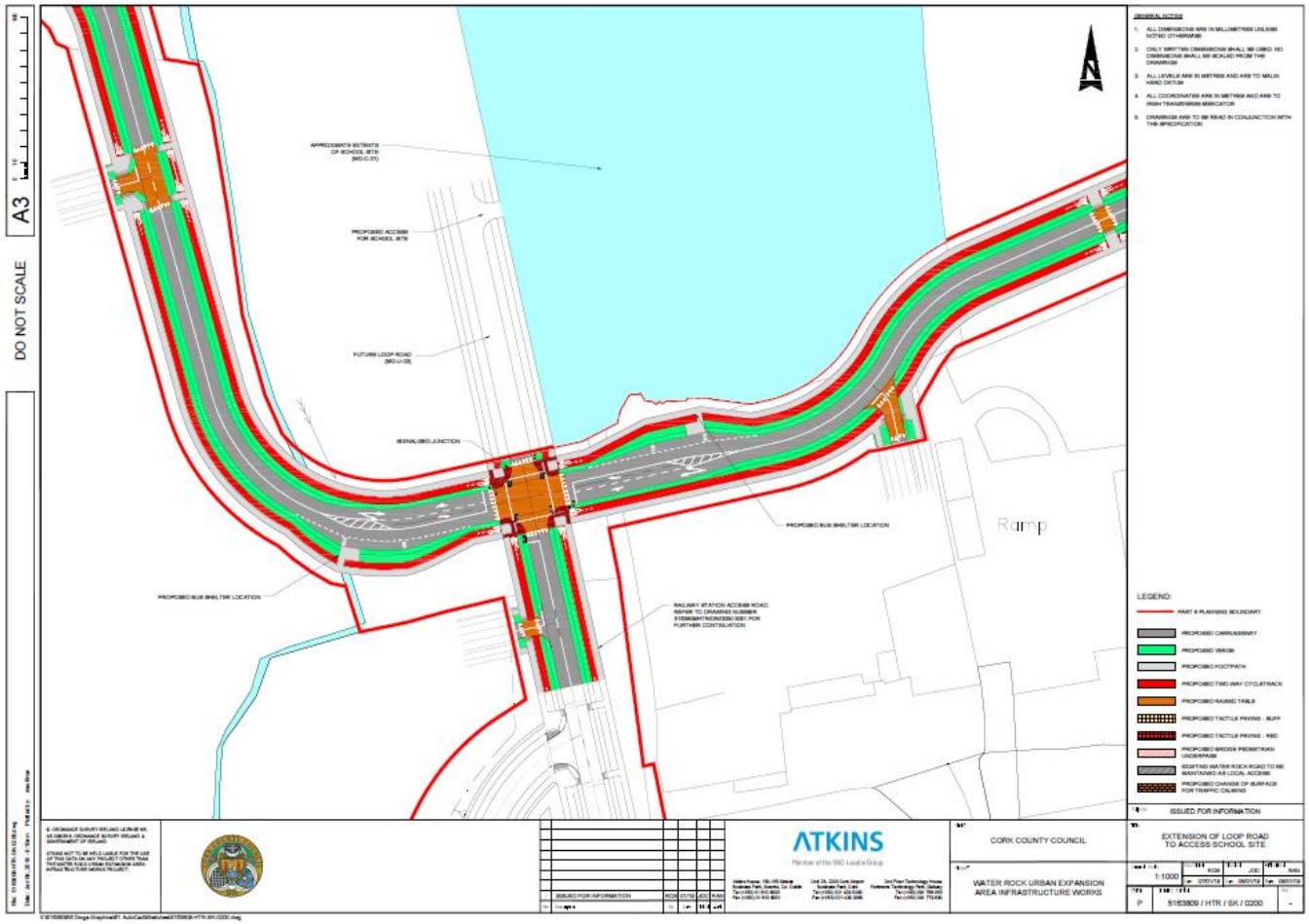
It is noted by the OPW that an application under Section 50 of the Arterial Drainage Act 1945 and EU (Assessment and Management of Flood Risks) Regulations SI 122 of 2010 is required for any new culvert or bridge or any proposal to replace or alter a bridge or culvert along a watercourse. Bridge details and culvert sizes will be subject to Section 50 consent

Atkins Response

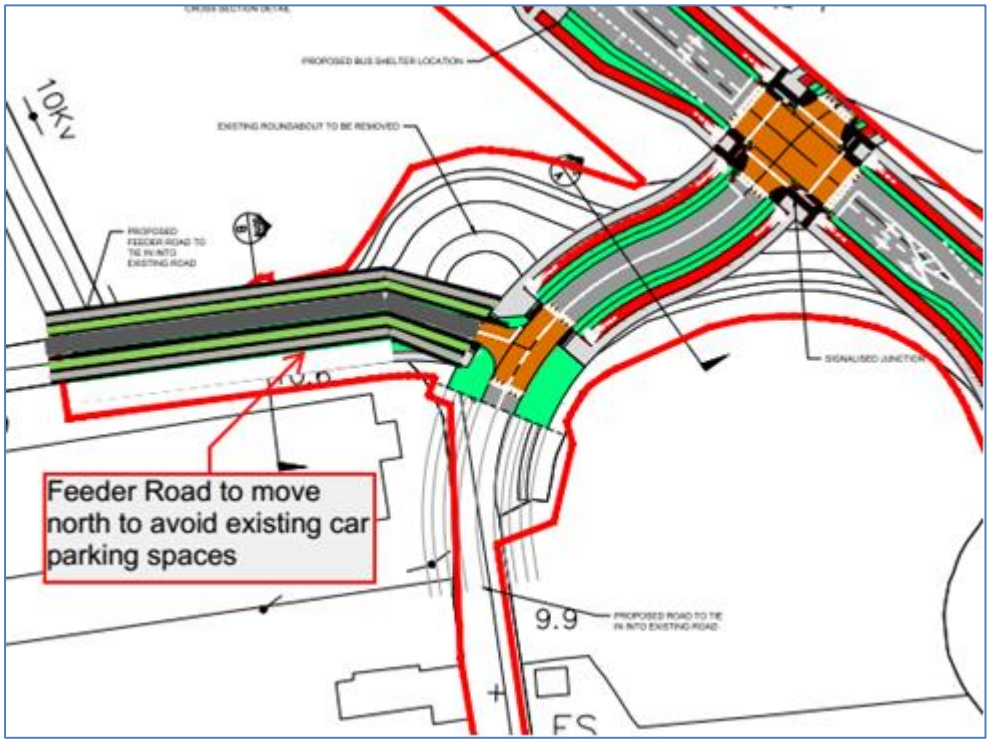
This is understood. The required Section 50 consent applications will be made in due course (subject to planning).

8.5 Appendix E: Proposed Modification Sketches

Modification 1: A section of the Western Loop Road off the Services Corridor Link Road, of approximately 120m2 in length, which will allow access to the proposed school site.



Modification 2: The feeder road on the northern boundary of the Nordic Enterprise Park and on the western side of the crossroads will be moved slightly further north to avoid the existing car parking spaces.



ATTACHMENT B.3.2:

MIDLETON NORTH PUMPING STATION & NETWORK PLANNER'S REPORT

APPLICATION NO.	22/05032
APPLICANT	Irish Water
DESCRIPTION	The midleton north wastewater pumping station and network, which will consist of: 1) a new wastewater pumping station with below ground wet well and chambers, 2 no. above ground kiosks, vent stack (c.6.2m in height), telemetry pole (c. 6m in height), boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road, including new gates, to facilitate vehicular and pedestrian access; (2) the construction of a below ground pipeline (c. 650m long) connecting the proposed wastewater pumping station to the previously approved Water-Rock pumping station (consented as per section 179 of the planning and development act, 2000, as amended(Water-Rock UEA Infrastructure Works); (3) the construction of c. 30m of an underground pipeline to connect the existing foul network on the mill road to the proposed foul pumping station; and (4) all associated site development, landscaping and site excavation works above and below ground, including the demolition of the existing boundary wall, fence and gates along the mill road, on lands to the west of Mill Road, and part of Mill Road, the Owenacurra River, and the northern Relief Road, in the townlands of Townparks, Broomfield West, and Knockgriffin (imokilly) Midleton, Co.Cork. A Natura Impact Statement (NIS) will be submitted to the planning authority with the application.
LOCATION	Lands to the west of the Mill Road and part of Mill Road, The Owenacurra River,and the Northern Relief Road, townlands Townparks, Broomfield West & Knockgriffin (Imokilly), Midleton, Co. Cork.
DECISION DUE DATE	30/06/2022

1. Site Notice and Date of Inspection
I inspected the site on the- on inspection the site notice(s) were in place and legible

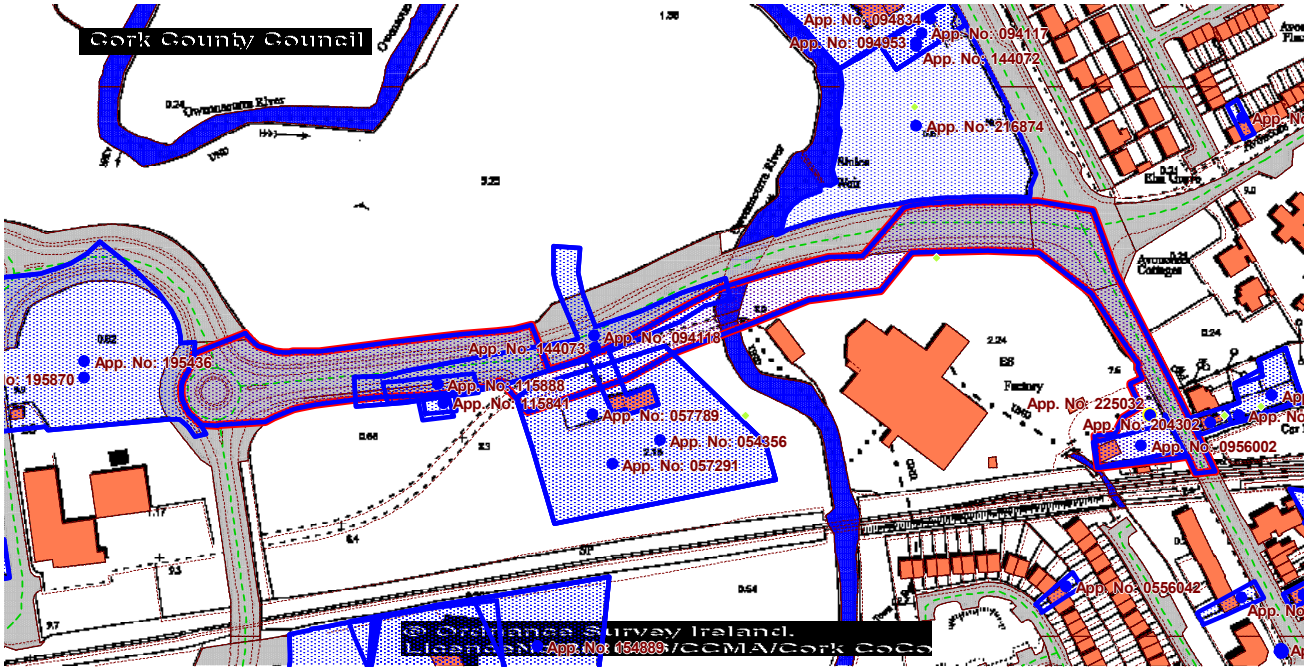
2. Site Description

The site of the proposed development is located on the Northern end of Midleton town close to the rail line/ Northern relief road. The site shape (1.73ha) essentially follows the alignment of the Midleton Northern relief road, and in particular the section between Mill road to the East and the Waterrock roundabout located to the West. The central section of the overall site however diverts onto private land (zoned X-01) and crosses under the Owenacurra river. In addition, the location of the proposed pumping station is also located on these same zoned lands albeit in the SE corner of same. There is an existing gated access to the site on the Mill road end

Please note CCC is the owner of the lands. Applicant has provided the necessary consents to apply

Mill road access point

3. History



Pumping station site area
09/56002- Permission granted to Blackpool developments Ltd for Permission for a junction and entrance from Mill Road to lands West of Mill Road and South of the Northern Relief Road Phase 1

Central section (X-01 lands)

09/4118- Permission granted to Blackpool developments for Construction of entrances to lands at Knockgriffin, development will consist of new junction and entrances to land north and south of the Northern Relief Road, (Phase 1), consequent road realignment works and the partial demolition of a steel framed shed with the existing ESB substation remaining in place and associated site works and services

05/4356 – John Garde - Construction of a temporary materials recovery and transfer facility, ancillary accommodation and associated site works – permission refused

05/7291 – incomplete application

05/7789 – John Garde Construction of temporary materials recovery and transfer facility for a period of three years with 2 no. portacabins for use as canteen/toilet and office and associated site works – permission refused.

95/1268 – Universal Foods – permission granted to construct an effluent treatment plant.

Please note that the site links to an area of land adjacent Waterrock Roundabout where CCC resolved to approve a part 8 application for the water rock urban expansion area infrastructure enabling works (11th March 2019).

4. Proposed Development (including supporting material)

The Midleton north wastewater pumping station and network, which will consist of: 1) a new wastewater pumping station with below ground wet well and chambers, 2 no. above ground kiosks, vent stack (c.6.2m in height), telemetry pole (c. 6m in height), boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road, including new gates, to facilitate vehicular and pedestrian access; (2) the construction of a below ground pipeline (c. 650m long) connecting the proposed wastewater pumping station to the previously approved Water-Rock pumping station (consented as per section 179 of the planning and development act, 2000, as amended(Water-Rock UEA Infrastructure Works); (3) the construction of c. 30m of an underground pipeline to connect the existing foul network on the mill road to the proposed foul pumping station; and (4) all associated site development, landscaping and site excavation works above and below ground, including the demolition of the existing boundary wall, fence and

gates along the mill road, on lands to the west of Mill Road, and part of Mill Road, the Owenacurra River, and the northern Relief Road, in the townlands of Townparks, Broomfield West, and Knockgriffin (imokilly) Midleton, Co.Cork. A Natura Impact Statement (NIS) will be submitted to the planning authority with the application

5. Pre-Planning
Yes- IW discussed this proposal with the planning section on the 8/2/2021

6. AA Checklist Option

A NIS has been submitted- file referred to the ecology section for review

7. EIS

Schedule 5 of the Planning and Development Regulations, 2001 outlines projects for which an EIA is mandatory

Pipelines
Part 1, Class 16
Pipelines with a Diameter of more than 800mm and a length of more than 40km

The proposal does not exceed either of these thresholds

Urban Development

Part 2, Class 10
Infrastructure Projects

(iv) Urban development which would involve an area greater than 2hectares in the case of a business district, 10 hectares in the case of other parts of a built up area and 20ha elsewhere

The subject proposal comprises approx.. 1.7ha of land and is not deemed to be within a "business district". The 10ha threshold that is applicable has not been breached

Part 2, Class 13 deals with extensions to existing projects. Having considered same, the proposal does not breach the thresholds outlined in the section

While the project does not trigger a mandatory EIAR as per the categories outlined above, the proposal also needs to be considered in the context of "sub threshold" EIAR utilising the criteria listed under schedule 7. Having considered the nature of the proposal and the criteria listed under this schedule, I would satisfied that the proposal does not trigger requirement for sub threshold EIA

8. Policy Context

National Planning Framework

Notes that investment in water services infrastructure is crucial to the delivery of the National Development Plan (NSO- Pg 9)

Regional Spatial and Economic Strategy for Southern region

Section 7.3- notes that a pump station and rising main solution to Carrigtwohil WWTP is identifies as an infrastructure priority for Midelton

Cork County Development Plan 2022 (Midleton)

General Objectives

3.3.9 The planning strategy for Midleton as set out in the Core Strategy in Volume One of this plan, provides for the population of the town to grow to 19,423 persons up to 2028. This represents a growth of 6,927 persons on the Census 2016 population of 12,496. In order to accommodate this level of population growth, an additional 2,647 units need to be provided in Midleton up to 2028 with 2,347 housing units delivered on residential zoned land and the balance of 300 units delivered within the built footprint of the town.

MD GO 01
Plan for development to enable Midleton to achieve its target population of 19,423. Provide a balance between the provision of housing and employment

uses in the town, to support Midleton's development as an integrated live/work destination.

MD GO 03

In order to secure the sustainable population growth and supporting development proposed in GO-01, appropriate and sustainable water and waste water infrastructure that will secure the objectives of the relevant River Basin Management Plan and the Great Island Channel Cork Harbour Special Area of Conservation, and Cork Harbour Special Protection Area, must be provided and be operational in advance of the commencement of any discharges from the development. Waste water infrastructure must be capable of treating discharges to ensure that water quality in the receiving water does not fall below legally required levels

Site Zoning
Part of the site falls within lands zoned X-01

MD X-01

Mixed use residential and office development. Provision may also be made for small scale retail units at ground floor level, with office and/residential uses at upper floor levels appropriate to a mixed use urban neighbourhood. Pedestrian and cyclist linkages shall be provided along the Owenacurra River. Proposals should include protection of the River Corridor and should explore linking the site with Green Infrastructure sites to the north and south of the site, perhaps include on site surface water attenuation / flood risk management measures.

9. Internal Consultants
Flood engineer- has requested F.I
Environment officer- no objection
Area engineer- no objection
Water services engineer- no objection

10. External Consultants

Gas networks Ireland- no comments
Inland Fisheries-no objection provide correct operational procedures re: watercourses are followed
Iarnrod Eirinn- has outlined elements to be controlled relative to the safe operation of the railway
Dept of Housing, local government and culture- has requested that the measures in the NIS are applied. The verges alongside the side should also be carefully monitored

11. Public Submissions

One public submission received from the owner of a piece of the overall site area
-Submission requests that due consideration be given to this plot (does not appear to be reflected in the drawings lodged
-Requests that flood relief measures not impacted
-Consideration be given to the overall development potential of the lands
-Consider impacts on historic mill race

12. Public Representative Submissions

None received

13. Assessment and Conclusion

The applicant (IW) is seeking permission for a Midleton north wastewater pumping station and network, which will consist of: 1) a new wastewater pumping station with below ground wet well and chambers, 2 no. above ground kiosks, vent stack (c.6.2m in height), telemetry pole (c. 6m in height), boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road, including new gates, to facilitate vehicular and pedestrian access; (2) the construction of a below ground pipeline (c. 650m long) connecting the proposed wastewater pumping station to the previously approved Water-Rock pumping station (consented as per section 179 of the planning and development act, 2000, as amended(Water-Rock UEA Infrastructure Works); (3) the construction of c. 30m of an underground pipeline to connect the existing foul network on the mill road to the proposed foul pumping station; and (4) all associated site development, landscaping and site excavation works above and below ground, including the demolition of the existing boundary wall, fence and gates along the mill road, on lands to the west of Mill Road, and part of Mill Road, the Owenacurra River, and the northern Relief Road, in the townlands of Townparks, Broomfield West, and Knockgriffin (Imokilly) Midleton, Co.Cork. A Natura Impact Statement (NIS) will be submitted to the planning authority with the application

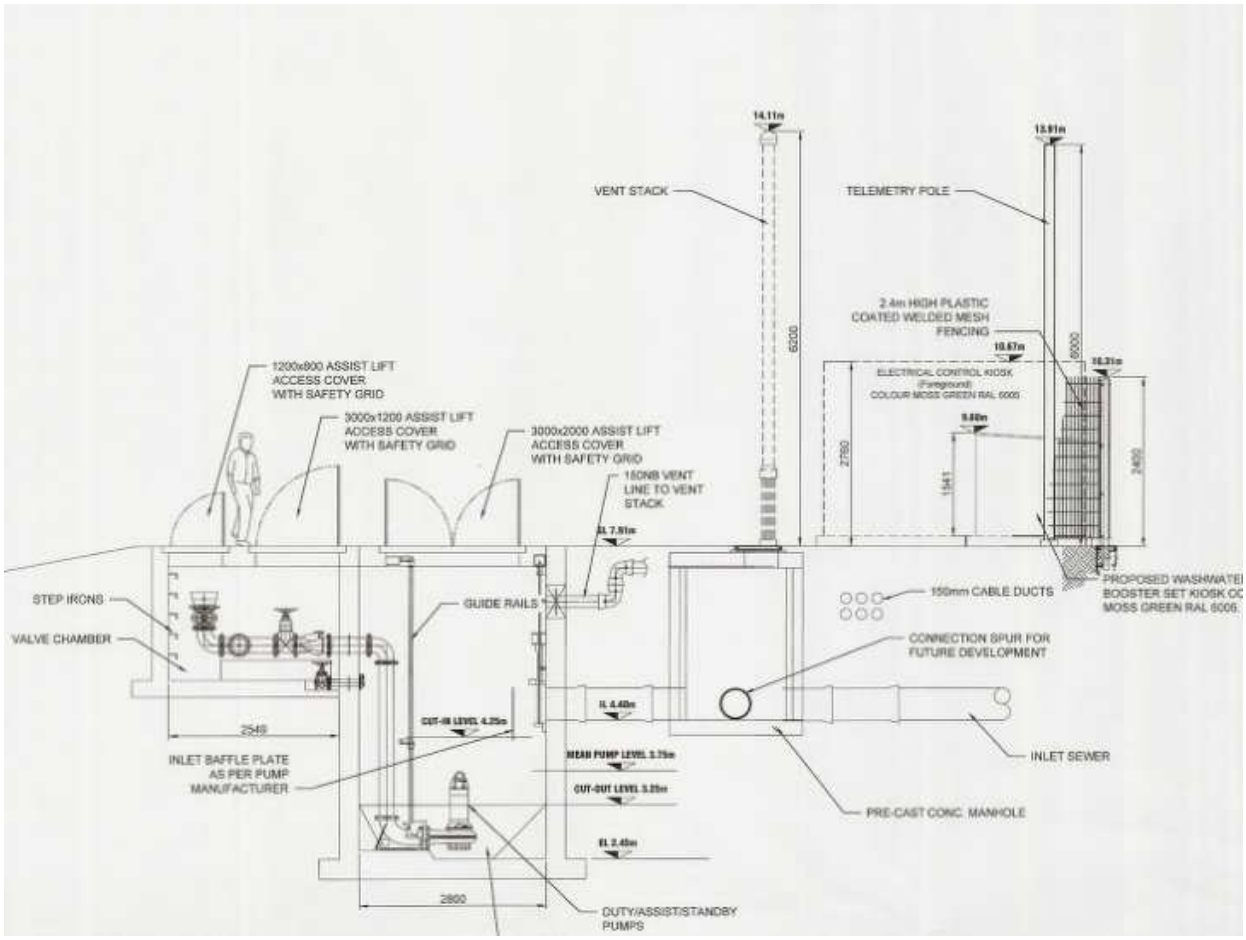
Principle of the Proposal
Having regard to both National and local policy where infrastructural upgrades are identified as crucial elements towards achieving the overall growth levels set out in the various plans, I would be satisfied that the subject development (which seeks to help deliver badly needed infrastructure upgrade) adheres to the aims/ objectives of National and local policy

Design/ Layout/ Scheme particulars

There are two main elements to the scheme

1- A new pumping station located adjacent Mill road and directly accessible from same. The pumping station will be located within a small compound in the SE corner of the wider X-02 lands. There is an existing gated entrance to these lands which is proposed to be modified to cater for the subject development. This requires the removal of the existing wall and fence.

   The main elements associated with the pump station will be underground however there will be two vent stacks above ground (6.2m in height), a telemetery pole (6m) and an electrical control kiosk (1.5m high). The site will be enclosed by **2.4m high mesh fence.**

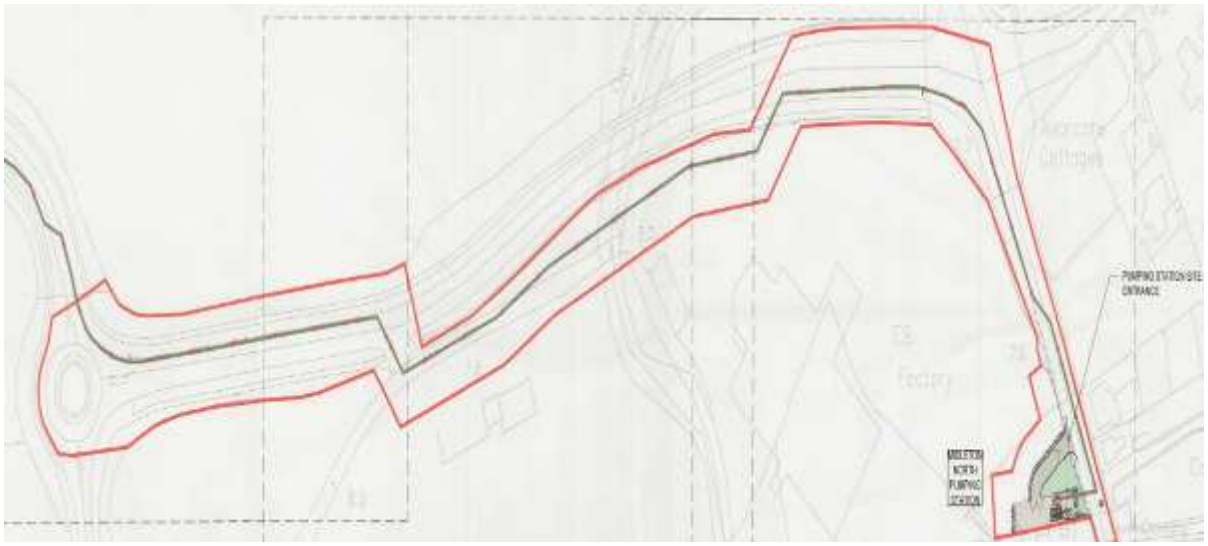


Pumping station

2- 650m new pipework

Extending from the site of the PS will be the associated pipe network. This pipework will all be underground along/adjacent the public road but will also require an underground crossing of the Owenacurra river. The pipe route diverts away from the public road onto the X-01 lands to facilitate the under-river crossing. Under- river crossing will be carried out using trenchless drilling and 500mm diameter sleeves. This will be positioned approx. 3m below the river. The area engineer has commented that this diversion off the main road is preferable as the works will not impact on the bridge structure in place on the Owenacurra river

Once construction is completed, the pipework will not be visible. The pipeline will connect to the start point of the new infrastructure consented under part 8 to serve the waterrock UEA. In addition, 30m if below ground pipeline is required to connect existing foul sewer on the mill road to the proposed PS



Pipeline route

Consented Part 8 infrastructure works

Main Impacts:

Visual Impact

The overall site area is in an urban area where the majority of the propsoal will run underground. Any above ground elements are relatively minor. In the main, I would be satisfied that the visual impacts associated with the proposal are likely to be of limited consequence. One area that is of concern visually however is the boundary treatments, particularly the interface with the Mill road. An appealing robust stone wall is proposed to be removed here and replaced with a much lower order 2.4m high mesh fence. The mill road is a primary arterial route serving the town and much work has been done by the MD in recent years to improve all major approaches to the town (this has been also noted in the area engineers report). This boundary will need to be revised to a solid stone/ masonry structure of improved aesthetic. Revisions will be required

Traffic Impacts

The applicant has submitted a traffic management plan outlining how the proposed build out is to be managed relative to the public roads. Area engineer has indicted no overall objection to this element

The PS site requires modifications to the existing access point and the removal of the existing walls/ fence. The area engineer has indicated no overall objection vis a vis traffic safety at this location. Elements of same can also be regulated via the traffic management plan

Cycling Route Impact

CCC recently resolved to approve a part 8 application for a new cycle network extending from Ballinacurra to the Midleton train station. The route is proposed to run alongside the subject site area. It is noted in documents lodged that same has been acknowledged and indicated that co-ordination will be in place re: construction. As noted, the pipeline is underground thus once in place should not impact on the cycle route. The cycle route has not yet commenced construction.

Flooding

The works cross lands that are identified as being susceptible to flood risk as per the provisions of the County Development Plan. It is noted that the applicant has submitted a FRA prepared by Atkins Consultants. In addition, please note a wider flood relief scheme (FRS) is being prepared by CCC for

Midleton town and the proposed site also interacts with elements of this scheme

Accordingly the file has been referred to the SE/E involved in the FRS (see report attached to appendix A). This report identifies the interactions/ impacts of the propsoal with the FRS. Ultimately F.I is required to address several issues of conflict/ concern

Impact on X-01 lands
An issue that merits consideration is the potential impact of the works on the X-01 lands. As noted, these lands are zoned for mixed use development consisting of residential/office and some retail. While the propsoied infrastructure works will help enable future development, to date, no development proposal or indeed masterplan for the site has been put forward. The public submission received also notes this concern

The PS is located in the SE corner of the overall X-01 lands. Given this peripheral location, it is difficult to see how this would impact any future development prospects as it could be designed around with relative ease. The boundary treatment however is of concern. Much like the Mill road issue, the 2.4m mesh fence at this location is not ideal given that same may in time be highly visible relative to a larger mixed use development. Improved treatment of same will be required

The greater concern is the pipeline diversion along the central section of the site. This will obviously require a long term wayleave/ access provision for potential maintenance. This would require a set back by any potential buildings. To fully determine this impact, it would be useful to know the full extent of way leave width that would be required and the area of land likely to be de facto sterilised.

Tie in with Waterrock UEA part 8 consent
The file has been referred to the Housing Infrastructure Implementation Team. I do not have HIIT report at time of adjudication however I have discussed the propsoal with Michael Purdon. While the proposed IW pipeline terminates at the boundary of the approved part 8 development land, the specific pipeline envisaged under the part 8 scheme runs approx. 30m to the North of the IW termination point. As such there appears to be a potentially unconnected element to this scheme. HIIT report to further comment on this issue

AA/ Ecology

File has been referred to ecology section however no report received at time of adjudication

Conclusion

I recommend to case planner that further Information is sought

Flood Risk

1. Details of the interaction with the existing culverted Mill Race
2. Section 5.5 suggests that the proposed access road could possibly flood and impede access to the site for maintenance staff and emergency generating equipment. It is unclear from this SSFRA how frequent such flooding might be, how long the duration would be, what measures will be put in place to minimise this risk, or what impact such restricted access would have on the operation of the pumping station. Please provide details in this regard.
3. The SSFRA concludes that proposed discharge for storm water drainage should be designed in accordance with best practice, to include natural treatment of surface water prior to discharge and control using SuDS. Please provide details of the proposed natural treatment of surface water discharge and SuDS proposals for the development.
4. DEPTH OF RIVER CROSSING
5. Please provide details of a preliminary Flood Awareness Plan and/or Emergency Response Plan for the proposed development. This can be in form of a proposed table of contents for the developed plan(s).

Boundary Treatment

The Pumping station site requires modifications to the existing access point and the removal of the existing walls/ fence. The existing boundary wall is a solid stone structure. The proposed replacement is a significant downgrade (a 2.4m mesh style fence). The mill road is a primary arterial route serving the town and much work has been done by the Municipal District in recent years to improve all major approaches to the town. In this context the proposed

boundary treatment would not be acceptable. This boundary will need to be revised to a solid stone/ masonry structure of improved aesthetic. Please submit revised proposals in this regard

In considering boundary treatment please be aware that Iarnrod Eirinn has outlined that the planting of trees directly beside the proposed fence line on the Mill Road may impede the view of the red flashing level crossing signals to vehicle traffic approaching the CCTV railway level crossing which is adjacent the site. Existing vegetation already in place and impeding this signal should also be removed. This could be considered as part of revised boundary treatment detail

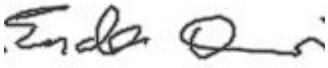
Impact on X-01 lands

The proposed pumping station (PS) is located in the SE corner of the overall X-01 lands. Given that these lands are zoned to support a potential larger scale mixed use development, the PS site may in time be highly visible from any future scheme. In this regard the internal boundary treatment however is also of concern and the, the 2.4m mesh fence at this location is not ideal. Improved treatment of same will be required. Please submit revised proposals in this regard

It is also noted that the proposed pipelines diverts onto the X-01 lands to accommodate the river crossing. While this is preferable to culverting the road bridge structure, the strip of land will require a long term wayleave/ access provision for potential maintenance. This will impact on any future development proposals for the X-01 lands and will require a set back by any potential buildings. To fully determine this impact, please clarify the full extent of way leave width that would be required and the area of land likely to be de facto sterilised.

HIIT Point?
While the proposed IW pipeline terminates at the boundary of the approved part 8 development land, the specific pipeline envisaged under the part 8 scheme runs approx. 30m to the North of the IW termination point. As such there appears to be a potentially unconnected element to this scheme. Please clarify this issue. You may need to discuss this element with the Housing Infrastructure Implementation Team (HIIT)

Defer Application



Enda Quinn
Executive Planner
24/06/2022

APPLICATION NO. 22/05032

APPLICANT: - Irish Water

DESCRIPTION: - The midleton north wastewater pumping station and network, which will consist of: 1) a new wastewater pumping station with below ground wet well and chambers, 2 no. above ground kiosks, vent stack (c.6.2m in height), telemetry pole (c. 6m in height), boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road, including new gates, to facilitate vehicular and pedestrian access; (2) the construction of a below ground pipeline (c. 650m long) connecting the proposed wastewater pumping station to the previously approved Water-Rock pumping station (consented as per section 179 of the planning and development act, 2000, as amended(Water-Rock UEA Infrastructure Works); (3) the construction of c. 30m of an underground pipeline to connect the existing foul network on the mill road to the proposed foul pumping station; and (4) all associated site development, landscaping and site excavation works above and below ground, including the demolition of the existing boundary wall, fence and gates along the mill road, on lands to the west of Mill Road, and part of Mill Road, the Owenacurra River, and the northern Relief Road, in the townlands of Townparks, Broomfield West, and Knockgriffin (imokilly) Midleton, Co.Cork. A Natura Impact Statement (NIS) will be submitted to the planning authority with the application.

LOCATION: - Lands to the west of the Mill Road and part of Mill Road, The Owenacurra River,and the Northern Relief Road, townlands Townparks, Broomfield West & Knockgriffin (Imokilly), Midleton, Co. Cork.

DECISION DUE DATE: 30/06/2022

Assessment

The report of the Area Planner which should be read in conjunction with this report is noted and endorsed. I inspected the site as part of my assessment of the application on the 29/06/22. Following review of the application documentation, 3rd party submission, internal technical reports and external body submissions received the key issues for consideration pertaining to this application are set out below.

Development Proposal

Permission is sought by Irish Water for the construction of the Midleton north wastewater pumping station and network, which will consist of:

> 1) a new wastewater pumping station with below ground wet well and chambers, 2 no. above ground kiosks, vent stack (c.6.2m in height), telemetry pole (c. 6m in height), boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road, including new gates, to facilitate vehicular and pedestrian access;
>
> (2) the construction of a below ground pipeline (c. 650m long) connecting the proposed wastewater pumping station to the previously approved Water-Rock pumping station (consented as per section 179 of the planning and development act, 2000, as amended (Water-Rock UEA Infrastructure Works);

(3) the construction of c. 30m of an underground pipeline to connect the existing foul network on the mill road to the proposed foul pumping station; and

(4) all associated site development, landscaping and site excavation works above and below ground, including the demolition of the existing boundary wall, fence and gates along the mill road, on lands to the west of Mill Road, and part of Mill Road, the Owenacurra River, and the northern Relief Road, in the townlands of Townparks, Broomfield West, and Knockgriffin (imokilly) Midleton, Co.Cork.

At present the existing WWTP serving the settlement of Midleton is at capacity and in need of upgrade. The subject development proposal effectively relates to enabling infrastructure to address this deficit and to unlock development and envisaged growth targets for Midleton.

The main elements of the development relate to a proposed new underground pumping station and enclosed compound with overground elements along Mill road, 650m of underground pipework along the Northern Relief Road (part of which crosses under the Oweracurra River) to connect into the permitted Waterrock UAE and 30m of underground pipework to connect into the existing public foul sewer network on the Mill road.

Policy Considerations

The subject site is located within the designated settlement boundary of Midleton which is designated as a "Metropolitan Town' within Metropolitan Cork under the Cork County Development Plan (2022). Midleton has been identified as a growth centre within the east Cork rail corridor in the Development Plan. Given the nature of the development as enabling public service infrastructure I am satisfied that the proposal is consistent with relevant national and local policy.

It is noted that part of the site overlaps with the X-01 lands identified in the CCDP (2022) for mixed use development incorporating residential/office and some retail. It is important to ensure that appropriate wayleaves and buffer zones over the proposed service pipework and pumping station are in place to ensure adequate buffer zones are established for necessary maintenance purposes. To future proof any necessary separation distance requirements for forthcoming development proposals the applicant shall be requested to consider this issue and clarify the extent of wayleave width that would be required over the proposed services/pipework.

Flood Risk

As part of the site crosses lands identified as being susceptible to flooding a site specific FRA has been submitted with the application. It sets out recommendations to be taken into account at design/construction stage. Also of relevance is proposed wider floor relief works proposed in the area as part of the Midleton Flood Relief scheme.

The application and SSFRA has been assessed by the SEE of the Coastal and Flood Project section. It is reported that the proposed development interacts directly with the Midleton Flood Relief scheme and the SSFRA has been cross checked against a high level checklist which has identified a number of outstanding issues. Deferral is recommended for additional information to be provided with the SSFRA in relation to details of interaction with an existing culverted Mill Race, proposals to mitigate flooding of the

access road, details of natural treatment of surfacewater and SuDS proposals, a preliminary Flood Awareness Plan and Flood Emergency Response Plan.

Interaction with Waterrock UAE and the existing Public Sewer Network

As part of development works it is proposed to connect into the permitted Waterrock UAE pumping station with the outlined pipework positioned adjacent to the approved Part 8 lands. The service pipework position as per the approved Part 8 is adjacent to the proposed Irish Water service pipes (see Figure 1 below). Specific details relating to provision a necessary link are required and the applicant shall be requested to engage with HIIT in this issue.

It is recommended that further information be sought to clarify how IW propose to cater for the foul sewer rising main downstream of the red line boundary and to provide details on the design capacity and quantity of additional flows into the proposed sewers within the LIHAF works as appropriate.

AA and Ecology

An AA Screening Report, Natura Impact Statement (NIS), Site Specific Flood Risk Assessment and Invasive Species Management Plan have been submitted as part of the application documentation. The Ecology Officer has identified the key issues for consideration as potential indirect impacts on Natura 2000 sites, the potential spread of invasive species and potential impact to high value species/habitats and loss of trees. Further information is recommended with regard to potential measures to prevent water quality impacts to the Oweracurra during potential flood events at construction stage, potential water quality impacts from the adjacent Mill race at construction/operational stage, a CEMP and EcIA to include a full survey of protected species and / or for any habitats of high natural value, pollinator management areas and proposals for invasive species management.

It is noted that the submission returned form the DHLGH (Development Applications Unit) has commented that it is unclear whether the new pipeline will impact on grass verges on the Northern Relief Road which have been managed to provide areas of wild flowers and Bee Orchids and that clarification of this issue is required. Cork County Council have been actively promoting the management of roadside verges along the R630 and Northern Relief road as part of the Midleton Pollinator Plan. The AE has also requested that the applicant be requested to consider the positioning of a 170m section of the rising main at the back of the northern footpath having regard to existing services and the Bee Orchid population known to be prevalent in the narrow verge between the cycle track and road carriageway. These elements shall be included in the deferral request.

Boundary Treatment and Landscaping

As part of development works it is proposed to remove the existing stone wall/fencing directly north of the Level Crossing (see Appendix A). A 2.4m high welded mesh fencing and entrance gate is planned to replace this boundary. The proposed replacement boundary is considered to represent a considerable downgrade on the existing boundary from a visual perspective. This is a relatively prominent site on a primary arterial route serving the town.

As noted by the Area Planner/Area Engineer there has been considerable work carried out by the MD on all main approach roads to the town and it is important to ensure that this standard is maintained. The

concerns expressed in the 3rd party submission on file regarding the outlined form of boundary treatment are also noted. Accordingly, revisions to the proposed form of boundary treatment in front of the pumping station compound are required.

It is noted that the submission returned from Iarnród Eireann has expressed some concern about landscaping proposals potentially impinging on views of the Level Crossing signals which are presently impacted by existing vegetation. The applicant shall be advised of same as part of the deferral request.

As reported by the Ecology Officer it is proposed to remove some existing trees as part of development works and limited detail has been provided on same or in respect to landscaping. Further details on this issue are required in the form of a Tree Survey and detailed landscaping plan for the development. Landscaping proposals may assist with the visual integration of the revised form of boundary treatment around the pumping station compound.

Access Arrangements

The proposed pumping station compound is located directly north of a Level crossing close to Midleton Train station. A dedicated entrance to the pumping station compound is proposed south of an existing disused entrance. Entrance sightlines of 45m in both directions have been indicated on a site layout drawing submitted. The main access requirements for the development would relate to maintenance purposes with "*minimal traffic*" indicated in Section 5 of the application form. The AE has no objection to the proposed access arrangements or construction stage Traffic Management Plan submitted.

EIAR

Having reviewed the development proposal against the relevant mandatory EIA thresholds as set out under Schedule 5 of the Planning and Development Regulations (2001, as amended) and outlined in the Area Planners report I am satisfied that a mandatory EIA is not required. I am also satisfied that a sub-thresfold EIA is not required having regard to criteria set out under Schedule 7 of the Planning and Development Regulations (2001, as amended).

Conclusion

This application relates to a proposed upgrade to Midleton north wastewater network. To enable a full assessment of the development proposal further information is required in relation to interaction with an adjacent Mill race, flood/surfacewater details, boundary treatment, interaction with Water-rock UAE and public service network, potential wayleave requirements on the X-01 lands, Ecology and landscaping.

Recommendation

Deferral be sought for the following.

Flood Risk

CCC has no objection in principle to the proposed development. However, further information is required in relation to potential interaction between the proposed works and adjacent Mill Race. In this regard the following FI items (1-4) are required:

1. Details of the interaction with the existing culverted Mill Race.
2. Section 5.5 suggests that the proposed access road could possibly flood and impede access to the site for maintenance staff and emergency generating equipment. It is unclear from this SSFRA how frequent such flooding might be, how long the duration would be, what measures will be put in place to minimise this risk, or what impact such restricted access would have on the operation of the pumping station. Please provide details in this regard.
3. The SSFRA concludes that proposed discharge for storm water drainage should be designed in accordance with best practice, to include natural treatment of surface water prior to discharge and control using SuDS. Please provide details of the proposed natural treatment of surface water discharge and SuDS proposals for the development.
4. A preliminary Flood Awareness Plan and Flood Emergency Response Plan should be provided as part of the FI response.

As part of your FI response the following additional items should also be addressed.

Boundary Treatment

The Pumping station site requires modifications to the existing access point and the removal of the existing walls/ fence. The existing boundary wall is a solid stone structure. The proposed replacement is a significant downgrade (a 2.4m mesh style fence). The mill road is a primary arterial route serving the town and much work has been done by the Municipal District in recent years to improve all major approaches to the town. In this context the proposed boundary treatment would not be acceptable. This boundary will need to be revised to improve form (e.g. a solid stone/ masonry structure or similar suitable substitute) of improved aesthetic. Please submit revised proposals in this regard.

In considering boundary treatment please be aware that Iarnród Eireann has outlined that the planting of trees directly beside the proposed fence line on the Mill Road may impede the view of the red flashing level crossing signals to vehicle traffic approaching the CCTV railway level crossing which is adjacent the site. Existing vegetation already in place and impeding this signal should also be removed. This should be considered as part of revised boundary treatment detail proposals.

Interaction with Water-rock UAE and Public Service Network

As part of development works it is proposed to connect into the permitted Waterrock UAE pumping station with the proposed pipework positioned adjacent to the approved Part 8 lands. Specific details relating to the provision of a necessary link are required. Specifically, further information is required as follows:

1) How is the IW foul sewer rising main discharge to be catered for downstream of the red line boundary?

2) Subject to item 1 above, you are requested to provide further information to show the design capacity and agreed quantity of additional flows into the proposed sewers within the LIHAF works (as appropriate).

You are advised to discuss this element of the deferral request with the Housing Infrastructure Implementation Team (HIIT) prior to formulating a formal response.

Impact on X-01 lands

The proposed pumping station (PS) is located in the SE corner of the overall X-01 lands. Given that these lands are zoned to support a potential larger scale mixed use development, the PS site may in time be highly visible from any future scheme. In this regard the internal boundary treatment however is also of concern and the, the 2.4m mesh fence at this location is not ideal. Improved treatment of same will be required. Please submit revised proposals in this regard

It is also noted that the proposed pipelines diverts onto the X-01 lands to accommodate the river crossing. While this is preferable to culverting the road bridge structure, the strip of land will require a long term wayleave/ access provision for potential maintenance. This will impact on any future development proposals for the X-01 lands and will require a set back by any potential buildings. To fully determine this impact, please clarify the full extent of way leave width that would be required and the area of land likely to be de facto sterilised.

Ecology

1. European Sites: As part of the assessment on European Sites, the applicant shall be requested to consider and submit a response to the following items:
   a) According to the report of the Floods Office it is questioned whether the site will be defended when works commence on site. The applicant is requested to confirm what measures are proposed to prevent water quality impacts to the Owenacurra watercourse during times of flood during the construction phase of the development.
   b) It is noted that the Mill race is located c. 5m to the west of the pumping station site. The applicant is requested to consider potential for water quality impacts to this watercourse associated with construction and operational phases of the development having regard to hydrological linkages between this watercourse and the Cork Harbour SPA and Great Island Channel SAC.
   c) A Construction Environmental Management Plan in respect of the proposed works which details mitigation measures as proposed and also includes a CEMP drawing which identifies the location of silt fencing, contractors' compound, stockpiling areas and building materials. The applicant shall ensure that the contractor's compound, building materials and contractors compound are all located outside of the flood zone.

2. Ecological Impact Assessment: The works area comprises of semi natural habitats which have the potential to support habitats and species of high natural value. You are requested to submit an Ecological Impact Assessment Report which shall support to principle of Biodiversity Net Gain in

accordance with Cork County Development 2022 Objective BE 15 – 6. This assessment shall include;

a) A description of the habitats and species occurring at the site including the pumping station site, and an assessment of possible implications of what is proposed for protected species and / or for any habitats of high natural value identified to be occurring within the zone of influence of the proposed works area. Consideration shall be specifically given to the presence and potential impact to Otter associated with works proposed along the Owenacurra and impacts, pollinator managed areas along the Northern Relief Road and tree and habitat loss within the Pumping Station site. Full details of the duration and noise and vibration levels associated with these works shall be considered.

b) Consideration shall be given to the potential presence of plants listed on the Flora (Protection) Order 2015 and Irish Red List and consideration shall also be given to potential impact to pollinator management areas along the northern Relief Road where Bee Orchid is known to be present in high numbers. Further details are required in this regard as follows:

   i) The applicant is requested to clarify whether or not proposed works will impact on grass verges along the Northern Relief road

   ii) Measures shall be implemented to protect this species as part of the works outside the verges or alternatively if works are proposed within the verges measures to mitigate potential impacts shall be provided

   iii) The proposed rising main route exits private lands at chainage 480m, crosses the relief road transversely to the centre of the eastbound carriageway, and then runs westwards for 170m along said carriageway centre to the existing roundabout on the relief road. Ideally this 170m section of rising main would be laid off the road carriageway at the back of the northern footpath while having regard to existing services and the Bee Orchid population, which are known and documented by the area office to be predominantly prevalent in the narrow verge between the cycle track and the road carriageway. The applicant is requested to give due consideration to a route off the metalled carriageway due to the excellent road surface of the relatively recently constructed Midleton Northern relied road

   You are requested to contact the Ecology Office in Cork County Council to discuss this point on 021 4285949.

c) The survey shall consider the presence of Buddleja davidii within the pumping station site and measures proposed to manage and prevent the spread of this invasive species.

d) Provide details of ecological survey methods and techniques used for habitats and species surveys completed for this project. Detailed results shall also be submitted.

e) The EcIA should be prepared to accord with CIEEM Guidelines and provide details of ecological survey methods and techniques used for habitats and species surveys completed for this project. Relevant experience of consultant ecologists should also be cited within the report.

3. Tree Survey and Landscaping Plan: A number of trees and scrub habitat is proposed to be lost as part of the proposed development. The applicant shall be requested to review proposals to retain existing trees and habitats of high natural value on site. The applicant is requested to submit a tree survey and landscape plan for the proposed development which supports the principle of Biodiversity Net Gain in line with CDP Objective BE 15 – 6.

3.1 The Tree Survey shall include the following details:

a) Identify the age, species and condition of all trees within the site.

b) A site layout plan, identifying all the trees on the site.

c) Identify which trees are required to be removed to facilitate the development.

d) The tree protection measures which will be implemented on the site to protect the trees for retention.

3.2 The applicant is requested to submit a landscaping plan in respect of the proposed development. As part of this proposal all mature tree groups on site shall be retained and it is desirable that the plan will reflect the principle of biodiversity net gain. The landscaping plan shall include the following;

a) Planting schedule to include proposed species mix for treelines, groups of trees, native hedgerows, hedges, shrubs and open areas;

b) For hedgerows and new treelines/groups of trees – details of numbers of trees as well as specimen age and class, stem and type to be planted;

c) Provide detailed proposals for ongoing management and maintenance of new hedgerow and tree planting and implementation timeframes;

d) Provide details of measures to be put in place to protect existing mature trees which are identified to be retained within the scheme, during the construction phase. Details of any compensatory planting on the site.

e) This plan shall specify that all tree removal and ground clearance works shall be timed to take place outside the bird nesting season.

Appendix A: Site Photographs


PRIVATE
NO ENTRY

Conclusion

Defer Application

Conditions/Reasons

_____

John Lalor
Senior Executive Planner
30/06/2022

APPLICATION NO.	05032/22
APPLICANT	Irish Water
DESCRIPTION	The midleton north wastewater pumping station and network, which will consist of: 1) a new wastewater pumping station with below ground wet well and chambers, 2 no. above ground kiosks, vent stack (c.6.2m in height), telemetry pole (c. 6m in height), boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road, including new gates, to facilitate vehicular and pedestrian access; (2) the construction of a below ground pipeline (c. 650m long) connecting the proposed wastewater pumping station to the previously approved Water-Rock pumping station (consented as per section 179 of the planning and development act, 2000, as amended(Water-Rock UEA Infrastructure Works); (3) the construction of c. 30m of an underground pipeline to connect the existing foul network on the mill road to the proposed foul pumping station; and (4) all associated site development, landscaping and site excavation works above and below ground, including the demolition of the existing boundary wall, fence and gates along the mill road, on lands to the west of Mill Road, and part of Mill Road, the Owenacurra River, and the northern Relief Road, in the townlands of Townparks, Broomfield West, and Knockgriffin (imokilly) Midleton, Co.Cork. A Natura Impact Statement (NIS) will be submitted to the planning authority with the application.
LOCATION	Lands to the west of the Mill Road and part of Mill Road, The Owenacurra River,and the Northern Relief Road, townlands Townparks, Broomfield West & Knockgriffin (Imokilly), Midleton, Co. Cork.
DUE DATE	13/02/2023

Response to registered letter received on the 09/12/2022. I carried out an additional site inspection on the 23/01/23 as part of my assessment of the response/application (see Appendix A). The response to the items requested are discussed individually below.

Flood Risk

Cork County Council has no objection in principle to the proposed development. However, further information is required in relation to potential interaction between the proposed works and adjacent Mill Race. In this regard the following FI items (1-4) are required:

An updated Flood Risk Assessment (dated: November 2022) has been provided as part of the response.

1. *Details of the interaction with the existing culverted Mill Race.*

The indicative location of the Mill Race (obtained from historical mapping) has been indicated relative to the proposed wastewater pumping station boundary situated approximately 10m west of same. A survey of the existing Mill Race levels has been carried out and it is planned to run the proposed rising main above the Mill Race to avoid any impact. Confirmation has been provided that required IW separation distances will be maintained and a reinforced concrete slab is proposed as an additional protection measure for the rising main.

The SEE, Coastal and Flood Projects (CFP) notes there will be no direct interaction with the Mill Race (rising main will pass above same) and reports that the details provided are satisfactory.

2. *Section 5.5 suggests that the proposed access road could possibly flood and impede access to the site for maintenance staff and emergency generating equipment. It is unclear from this SSFRA how frequent such flooding might be, how long the duration would be, what measures will be put in place to minimise this risk, or what impact such restricted access would have on the operation of the pumping station. Please provide details in this regard.*

The SSFRA initially submitted identified a potential flood risk to the internal access road. The response submitted states that the access road will begin to flood at a flood event with an AEP of between 10% and 1% (i.e. somewhere between the 1:10 and 1:100 year return periods) and identifies a maximum flood depth of 800mm at the lowest point of the access road raising to 105mm at the pumping station compound. Reference is made to forthcoming improvements arising from the upcoming Midleton FRS and interim proposed measures including a Flood Awareness Plan and Flood Emergency Plan.

The SEE (CFP) has not raised any issues with this element of the response subject to compliance with attached recommended conditions including requirements for the project design and an updated Flood Evacuation Plan to take account of the Midleton FRS and implementation of Flood Awareness/Emergency Response Plans.

3. *The SSFRA concludes that proposed discharge for storm water drainage should be designed in accordance with best practice, to include natural treatment of surface water prior to discharge and control using SuDS. Please provide details of the proposed natural treatment of surface water discharge and SuDS proposals for the development.*

The applicants have outlined proposed drainage arrangements consisting of a drainage areas either side of the internal access road which is to be graded to allow for falls towards same. A drainage channel is proposed across the site entrance with outfall to an on-site soakaway. An impermeable surface is proposed within the site compound with an indicated gravel soakaway discharge point for compound drainage.

The details submitted are deemed to be acceptable by the SEE (CFP) and AE.

4. *A preliminary Flood Awareness Plan and Flood Emergency Response Plan should be provided as part of the Further Information response.*

A Preliminary Flood Awareness Plan and Flood Emergency Response Plan has been prepared and submitted in response. It is stated that a full plan will be developed for the site in conjunction with the detailed design post planning approval.

The SEE (CFP) finds the response submitted to be acceptable with a condition recommended requiring the implementation of Flood Awareness and Flood Emergency Response plans.

Other Issues
As reported by the SEE (CFP) the Flood Evacuation Plan will need to be updated to take account of flood extent mapping prepared as part of the Midleton FRS. Furthermore, the location of the proposed main site compound at the Water-Rock pumping station site appears to fall within Flood Zone A as per the CCDP (2022) Flood Zone mapping. It is recommended that the applicant engage with CCC in relation to the compound positioning and any necessary flood protection measures. Appropriate conditions taking account of these issues shall be attached.

Boundary Treatment

The Pumping station site requires modifications to the existing access point and the removal of the existing walls/ fence. The existing boundary wall is a solid stone structure. The proposed replacement is a significant downgrade (a 2.4m mesh style fence). The mill road is a primary arterial route serving the town and much work has been done by the Municipal District in recent years to improve all major approaches to the town. In this context the proposed boundary treatment would not be acceptable. This boundary will need to be revised to improve form (e.g. a solid stone/ masonry structure or similar suitable substitute) of improved aesthetic. Please submit revised proposals in this regard.

In considering boundary treatment please be aware that Iarnród Eireann has outlined that the planting of trees directly beside the proposed fence line on the Mill Road may impede the view of the red flashing level crossing signals to vehicle traffic approaching the CCTV railway level crossing which is adjacent the site. Existing vegetation already in place and impeding this signal should also be removed. This should be considered as part of revised boundary treatment detail proposals.

Revised front boundary details have been proposed in the response to address the Planning Authority's concerns regarding boundary form aesthetics at this prominent location. This takes the form of a 1m high stone/block wall with attached 1.35m high overhead railing, stonework pillars and a 1.8m high wall at the northern end adjacent to the existing entrance. Confirmation has been provided that the setback wall will be designed to ensure it does not impinge on the visibility of the level crossing with existing vegetation that it is impinging on visibility to be removed. As part of works it is proposed to remove all existing tree/shrub vegetation (Tree Survey provided) around the proposed compound site and new planting proposals have been outlined in a Landscape Master Plan drawing submitted. A Junction Visibility Long section drawing has been provided

depicting proposed sightlines from the pumping station entrance. The AE has not raised any issued with the response in relation to boundary treatment aesthetics or from a road safety perspective.

In effect the applicant proposed to set back the existing frontage and replace it with a similar boundary form i.e. mixture of stone wall and railing. The existing trees along the frontage are not considered to be of any particular merit and the removal of same to achieve the indicated sightlines and improve visibility for vehicles approaching the adjacent level crossing is considered to be acceptable. New planting proposals around the perimeter of the compound and adjacent to the site entrance have been outlined in the Landscape Masterplan drawing submitted. It is proposed to provide fencing along the internal access road and around the pumping station compound.

The revised boundary treatment form and landscaping proposals as outlined represent a considerable improvement on original proposals and are considered to be acceptable subject to the application of condition requiring the re-use of existing stone in the construction of the new boundary (unless otherwise agreed with the Planning Authority) and implementation of landscaping proposals as outlined. A condition shall also be applied requiring the agreement of the final form of internal fencing.

Interaction with Water-rock UAE and Public Service Network

As part of development works it is proposed to connect into the permitted Water-rock UAE pumping station with the proposed pipework positioned adjacent to the approved Part 8 lands. Specific details relating to the provision of a necessary link are required. Specifically, further information is required as follows:

1) *How is the IW foul sewer rising main discharge to be catered for downstream of the red line boundary?*

Details of the wider foul sewer pipe network have been outlined referring to a new proposed gravity sewer line to run between the two existing roundabouts on the Northern Relief Road and southwards to the Water-rock wastewater pumping station.

Following issue of the FI request the applicant has engaged with the HIIT team who are satisfied with the proposed pipe route from a technical perspective. The HIIT report does however highlight that part of the pipeline route from chainage 629m to FM07 lies outside the red line site boundary. Following discussion with the EE (HIIT) it is my understanding that this link up point to FM07 (which ultimately connects to the Water-Rock pumping station – received Part 8 approval and under construction) falls within public lands in CCC ownership which will ultimately be subsumed into the approved/proposed LIHAF road as part of the UAE site. Conditions in relation to coordination of works (i..e LIHAF works) shall be applied as recommended by the HIIT section.

2) *Subject to item 1 above, you are requested to provide further information to show the design capacity and agreed quantity of additional flows into the proposed sewers within the LIHAF works (as appropriate).*

You are advised to discuss this element of the deferral request with the Housing Infrastructure Implementation Team (HIIT), email : Michael.purdon@corkcoco.ie, prior to formulating a formal response.

It is stated in response that as the foul sewer lines from the proposed IW pumping station and the Water-rock UAE will be laid in the same road it has been agreed that one common gravity sewer to accept flows from both will be installed with connections from the railway crossing to the Water-Rock PS to be delivered by IW. Design capacity details have been provided.

Commenting on the response and details submitted in response the report returned from the HIIT team are satisfied there is adequate design capacity for the for the flows of both the UAE and the proposed pumping station.

Impact on X-01 lands

The proposed pumping station (PS) is located in the SE corner of the overall X-01 lands. Given that these lands are zoned to support a potential larger scale mixed use development, the PS site may in time be highly visible from any future scheme. In this regard the internal boundary treatment however is also of concern and the 2.4m mesh fence at this location is not ideal. Improved treatment of same will be required. Please submit revised proposals in this regard.

It is also noted that the proposed pipelines diverts onto the X-01 lands to accommodate the river crossing. While this is preferable to culverting the road bridge structure, the strip of land will require a long term wayleave/ access provision for potential maintenance. This will impact on any future development proposals for the X-01 lands and will require a set back by any potential buildings. To fully determine this impact, please clarify the full extent of way leave width that would be required and the area of land likely to be de facto sterilised.

The response sets out that the development proposal is consistent with the zoning objective/delivery of X-01 lands, refers to its position in the SE corner of the land block minimising its visual impact and outlines planting proposals to screen the compound. Details of a 10m wayleave acquired as part of the CPO process (situated as close to the Northern Relief Road as possible) have been provided with reference made to IW separation distance requirements and depicted on a layout drawings as illustrated in

Figure 1 below. A temporary adjacent working area (during construction works only) has also been outlined.

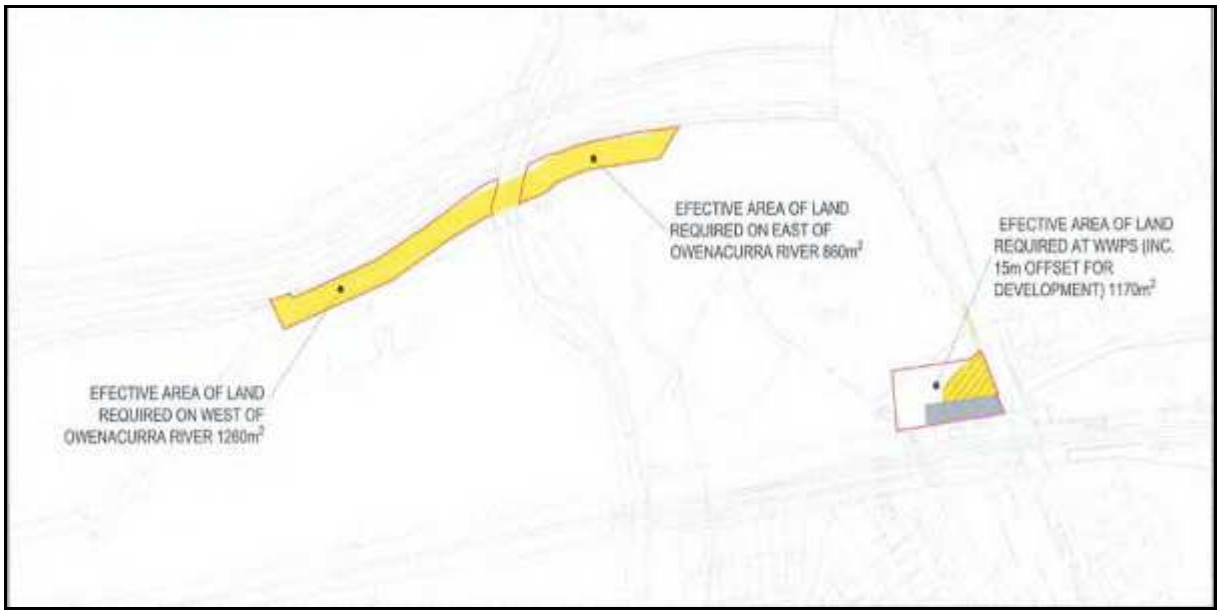


Figure 1: Extract of effective area of lands sterilised in MD-X-01 as per FI response

Having regard to the positioning of the compound in the SE corner of the X-01 block (and mainly with an existing residential zoning) and the indicated positioning of the wayleave adjacent to the Norther Ring Road it is considered that the proposed facilitating infrastructure will not unduly impinge on the delivery of development on the X-01 lands subject to the provision of appropriate landscaping/boundary treatment around the compound.

Ecology

1. ***European Sites:*** *As part of the assessment on European Sites, the applicant shall be requested to consider and submit a response to the following items:*

    a) *According to the report of the Floods Office it is questioned whether the site will be defended when works commence on site. The applicant is requested to confirm what measures are proposed to prevent water quality impacts to the Owenacurra watercourse during times of flood during the construction phase of the development.*

Protective measures (including excavation management, silt barriers, storage of materials at the Water-Rock pumping station site, etc.) to prevent water quality impacts at construction stage are outlined in section 5 of the CEMP submitted and the Flood Evacuation Plan.

b) *It is noted that the Mill race is located c. 5m to the west of the pumping station site. The applicant is requested to consider potential for water quality impacts to this watercourse associated with construction and operational phases of the development having regard to hydrological linkages between this watercourse and the Cork Harbour SPA and Great Island Channel SAC.*

Design specification and levels of the proposed pipeline crossing over the Mill Race have been outlined. Reference is made to construction techniques and a proposed double silt/security fence to be erected at construction stage. With regard to operational stage it is stated that the proposed pumping station has been designed as a fully sealed unit with no risk of any interaction with the Mill Race.

c) *A Construction Environmental Management Plan in respect of the proposed works which details mitigation measures as proposed and also includes a CEMP drawing which identifies the location of silt fencing, contractors' compound, stockpiling areas and building materials. The applicant shall ensure that the contractor's compound, building materials and contractors compound are all located outside of the flood zone.*

A CEMP has been prepared and submitted in response outlining construction management and mitigation measures including the locations of proposed silt fencing adjacent to the new compound, Mill Race, the Owenacurra River and the Northern Relief Road. A Flood Evacuation Plan has been included as an Appendix of the CEMP. The response also acknowledges that the proposed compound is located within the 1% AEP flood zone and proposed to keep the main construction vehicles, plant, equipment and materials at the main compound within the Water-Rock pumping station site minimising the need for the storage of same within the subject site compound. As reported by the SEE (CFP) the Water-Rock pumping station site is located within an identified Flood Zone as per the CCDP (2022) flood extent mapping and the applicant shall be required by condition to engage with CCC in relation to the compound positioning and any necessary flood protection measures.

Ecology Response Overview

Overall, the Ecology Officer is satisfied that the details submitted are acceptable subject to attachment of conditions of planning which shall ensure that development is carried out in accordance with the CEMP and Flood Evacuation Plan.

2. ***Ecological Impact Assessment:*** *The works area comprises of semi natural habitats which have the potential to support habitats and species of high natural value. You are requested to submit an Ecological Impact Assessment Report which shall support to principle of Biodiversity*

Net Gain in accordance with Cork County Development 2022 Objective BE 15 – 6. This assessment shall include;

An EcIA has been prepared and submitted in response and outlines measures to address net biodiversity gain including new landscaping proposals to offset the proposed removal of existing trees/vegetation as part of development works.

a) *A description of the habitats and species occurring at the site including the pumping station site, and an assessment of possible implications of what is proposed for protected species and / or for any habitats of high natural value identified to be occurring within the zone of influence of the proposed works area. Consideration shall be specifically given to the presence and potential impact to Otter associated with works proposed along the Owenacurra and impacts, pollinator managed areas along the Northern Relief Road and tree and habitat loss within the Pumping Station site. Full details of the duration and noise and vibration levels associated with these works shall be considered.*

The EcIA submitted considers potential construction/operational stage impacts associated with the development proposal. The estimated construction duration is seven month and it is contended that construction will not give rise to significant negative impacts on any habitats/species within the identified zone of influence.

b) *Consideration shall be given to the potential presence of plants listed on the Flora (Protection) Order 2015 and Irish Red List and consideration shall also be given to potential impact to pollinator management areas along the northern Relief Road where Bee Orchid is known to be present in high numbers. Further details are required in this regard as follows:*
   - i) *The applicant is requested to clarify whether or not proposed works will impact on grass verges along the Northern Relief road*
   - ii) *Measures shall be implemented to protect this species as part of the works outside the verges or alternatively if works are proposed within the verges measures to mitigate potential impacts shall be provided*
   - iii) *The proposed rising main route exits private lands at chainage 480m, crosses the relief road transversely to the centre of the eastbound carriageway, and then runs westwards for 170m along said carriageway centre to the existing roundabout on the relief road. Ideally this 170m section of rising main would be laid off the road carriageway at the back of the northern footpath while having regard to existing services and the*

Bee Orchid population, which are known and documented by the area office to be predominantly prevalent in the narrow verge between the cycle track and the road carriageway. The applicant is requested to give due consideration to a route off the metalled carriageway due to the excellent road surface of the relatively recently constructed Midleton Northern relied road

You are requested to contact the Ecology Office in Cork County Council to discuss this point on 021 4285949.

The Midleton Pollinator Plan (February 2020) has identified measures to support pollinators and biodiversity in the town including the protection of the rare Bee Orchid plant and managing roadside verges as meadows with revised mowing approaches outlined in the plan. Following issuing of the FI request a dedicated Bee Orchid survey was carried out the 6th July 2022 with some populations of Bee Orchid identified and indicated in the Botantical Report included as an appendix of the EcIA.

The route of the proposed pipeline generally avoids most Bee Orchid locations and proposes fencing off/signposting of verge areas at construction stage and references interaction with measures outlined in the Midleton Pollinator Plan post construction. Where the route transverses existing Bee Orchid species (i.e. Ch. 247m to Ch 253, Ch 258 to 458 and Ch. 488 to 629) mitigation measures are set out including storage and translocation of species.

c) *The survey shall consider the presence of Buddleja davidii within the pumping station site and measures proposed to manage and prevent the spread of this invasive species.*

Protective measures to manage Butterfly Bush and other invasive species as set out in the EcIA.

d) *Provide details of ecological survey methods and techniques used for habitats and species surveys completed for this project. Detailed results shall also be submitted.*

Methodology details provided as requested.

e) *The EcIA should be prepared to accord with CIEEM Guidelines and provide details of ecological survey methods and techniques used for habitats and species surveys completed for this project. Relevant experience of consultant ecologists should also be cited within the report.*

Details of methodology and technical expertise provided as requested.

Ecological Impact Assessment Overview

The EcIA ultimately concludes subject to the implementation of the proposed mitigation measures the proposed development will not give rise to any significant effects on the ecology of the receiving environment and will be aligned with the principle of Biodiversity Net Gain.

The applicant's consultant ecologist met with the CCC's reporting Ecologist on the 22/11/2022 to discuss requirements in advance of submission of the formal response. The Ecologist finds the details submitted in response in the EcIA including proposed protective/mitigation measures as they relate to the Midleton Pollinator Plan and Invasive Species Management to be acceptable subject to compliance with attached recommended conditions.

3. *Tree Survey and Landscaping Plan: A number of trees and scrub habitat is proposed to be lost as part of the proposed development. The applicant shall be requested to review proposals to retain existing trees and habitats of high natural value on site. The applicant is requested to submit a tree survey and landscape plan for the proposed development which supports the principle of Biodiversity Net Gain in line with CDP Objective BE 15 – 6.*

3.1 The Tree Survey shall include the following details:

a) *Identify the age, species and condition of all trees within the site.*

b) *A site layout plan, identifying all the trees on the site.*

c) *Identify which trees are required to be removed to facilitate the development.*

d) *The tree protection measures which will be implemented on the site to protect the trees for retention.*

3.2 The applicant is requested to submit a landscaping plan in respect of the proposed development. As part of this proposal all mature tree groups on site shall be

retained and it is desirable that the plan will reflect the principle of biodiversity net gain. The landscaping plan shall include the following;

a) Planting schedule to include proposed species mix for treelines, groups of trees, native hedgerows, hedges, shrubs and open areas;

b) For hedgerows and new treelines/groups of trees – details of numbers of trees as well as specimen age and class, stem and type to be planted;

c) Provide detailed proposals for ongoing management and maintenance of new hedgerow and tree planting and implementation timeframes;

d) Provide details of measures to be put in place to protect existing mature trees which are identified to be retained within the scheme, during the construction phase. Details of any compensatory planting on the site.

e) This plan shall specify that all tree removal and ground clearance works shall be timed to take place outside the bird nesting season.

A Tree Survey and Arboricultural Assessment incorporating a Tree Retention and Removal plan have been submitted in response in conjunction with new landscaping proposals. A large group of existing trees at the northern end of the site are outlined for retention with associated protective measures outlined. It is proposed to remove all existing trees/vegetation (Tree Survey provided) around the proposed pumping station compound and along the road frontage at this location. New native planting proposals around the perimeter of the compound and along part of the roadside boundary have been outlined in the Landscape Masterplan drawing submitted. Reference is made to CPO processes regarding implementation of landscaping on lands currently outside IW's ownership. Confirmation has been provided that any tree removal/ground clearance works will take place outside the bird nesting season.

The landscaping removal and planting proposals as outlined are noted. As set out above, the existing trees along the compound frontage are not considered to be of any particular merit and the removal of same to achieve the indicated sightlines and improve visibility for vehicles approaching the adjacent level crossing is considered to be acceptable. The new planting proposals incorporate native planting inset from the front stone wall/fence boundary and screen planting around the pumping station compound in addition to some new hedgerow planting on the northern boundary of the western section of the Northern Relief road.

I concur with the Ecologist that the proposals submitted are acceptable. The landscaping/ boundary treatment proposals as outlined are considered to provide sufficient

segregation/screening from the adjoining X-01 lands. Conditions shall be applied requiring the implementation of landscaping to the satisfaction of the Planning Authority and requiring final details of internal boundary treatment to be agreed.

Habitats Directive Conclusion

Having had regard to the Natura Impact Statement, the preliminary CEMP, FI response submitted the reporting Ecologist is satisfied that the proposed development does not pose a risk of causing adverse effects or cumulative or in-combination effects on the integrity of Cork Harbour SPA or the Great Island Channel SAC or to any Natura 2000 site subject to the implementation of the attached conditions of planning.

Conclusion

This application relates to a proposed upgrade to the Midleton wastewater network to address existing deficiencies which is critical for servicing the settlement and the future delivery of residential development within the Urban Expansion Area (UAE). The subject application pertains to the proposed construction of a new pumping station and rising main to serve north Midleton to connect into the nearby Water-Rock pumping station serving the UAE which will ultimately discharge untreated sewage effluent to Carrigtohill WWTP.

The response submitted satisfactorily addresses the details requested and any outstanding issues can be dealt with by condition. The proposed development is now considered to be acceptable subject to compliance with attached recommended conditions.

Development Contributions

To be added by the Case Planner as set out below.

GENERAL CONTRIBUTIONS:

The indicated proposed floor area of above ground structures (i.e. Electrical Control/Wash Water Kiosks) is 7.542m². As such development contributions (general or supplementary) are not applicable as they fall below the minimum charge of €200 set out in MO 189/2009 (i.e. 7.542m² X €16.32 Other non-residential = €123.08).

SPECIAL CONTRIBUTIONS:

The HIIT team have recommended the application of special contributions towards design and construction stage costs of water services upgrades (network extensions) benefitting the development as set out below.

1. A special development contribution of **€89,813** should be levied on the Applicant/Developer for the planning design of the new Water-Rock pumping station, site investigation works and design capacity assessments undertaken by the Planning Authority and benefitting this development/Developer (on behalf of Irish Water during the period from 2018 to 2022).

   Cost Breakdown:
   Planning design of Water Rock Pumping Station €24,545 (Incl. VAT)
   Site Investigation Works, €58,568 (Incl. VAT)
   Design Capacity Assessments €6,500 (Incl. VAT)

2. A special development contribution of **€220,052** should be levied on the Applicant/Developer for the costs incurred for increasing the design flow capacity of various sections of wastewater/water pipework within the Water-Rock LIHAF works contract as requested/required by Applicant/Developer benefitting this development/Developer.

   Cost Breakdown:
   Cost of increasing foul sewer capacity required is €102,615.79 (plus vat) = €116,469 (in vat)
   Cost of Watermain fittings required is €72,000 (plus vat) = €81,720 (in vat)
   Associated Consulting Engineers Fee is €17,775 (plus vat) = €21,863 (in vat)
   Total including vat = **€220,052**

Appendix A: Site Photographs (23/01/23)

Conclusion
Grant

Conditions/Reasons

No.	Condition	Reason
1	The proposed development shall be carried out in accordance with plans and particulars lodged with the Planning Authority on the 06/05/2022, 23/06/2022 and as amended and further detailed on	In the interests of clarity.

	the 09/12/2022, save where amended by the terms and conditions herein.	
2	Boundary form/finishes shall be as per the revised details submitted on the 09/12/2022, save where amended by the conditions herein. Stone from the existing roadside boundary wall shall be re-used in the construction of the new front boundary wall unless otherwise agreed in writing with the Planning Authority.	In the interests of orderly development and visual amenity.
3	Prior to the commencement of development final details of the proposed internal fencing form, height and finish around the pumping station intneral access road and compound shall be submitted to and agreed in writing with the Planning Authority.	In the interests of orderly development and visual amenity.
4	Environmental protection measures set out within the Natura Impact Statement received by the Planning Authority on 06/05/2022 and the Ecological Impact Assessment recived on 09/12/2022 shall be implemented and adhered to in full unless where otherwise updated by the conditions of planning attached herein.	To ensure there will be no adverse effects on the integrity of any Natura 2000 site.
5	All works on site shall be implemented in accordance with a Construction Environmental Management Plan, which shall be based on the Outline CEMP and shall include all measure proposed within the Ecological Impact Assessment and Natura Impact Statement submitted with the planning documentation and conditions of planning attached herein. The plan shall be prepared by a qualified and experienced person, and shall accord with recognised standard best practice - CIRIA Guidance No C532 - Control of Water Pollution From Construction Sites. All works on site shall be implemented in accordance with the	To ensure the protection of ecological receptors.

	final plan which shall be agreed with teh planning authority in advance of commencement of development. It shall be the responsibility of the project manager to ensure the implementation of these measures.	
6	In advance of commencement of development, a pre-development Bee Orchid Survey shall be carried out with translocation sites and methods agreed in full with the Planning Authority.	To protect biodiversity.
7	All works shall be supervised by an on-site clerk of works who will report on compliance with the relevant mitigation measures. The clerk of works shall be empowered to halt works where he/she considers that the continuation of the works is likely to result in a significant pollution incident. In the event of a water pollution incident, or of damage a key environmental receptor, these reports will be made available to the relevant statutory authorities, and on-site works will cease until authorized to continue by the planning authority. A compliance monitoring report, prepared by the clerk of works will be submitted to the planning authority at the end of the main construction period.	To ensure the protection of ecological receptors and to ensure there will be no adverse effects on any Natura 2000 site(s).
8	Landscaping of the site shall be in accordance with the Landscape Plan as recieved by the planning authority on 09/12/2022. All tree planting shall semi mature. The This plan shall be implemented in full under the supervision of an appropriately qualified and experienced tree specialist within the first year following completion of the development. Any trees that die or are removed within three years of planting shall be replaced in the first planting season thereafter.	To ensure the protection of biodiversity generally.
9	Any cutting of trees, hedgerows and	To minimise risks to breeding birds.

	vegetation on site should only be undertaken outside of the bird breeding season. The Bird breeding season takes place between March 1st and August 31st.	
10	Entrance recess between public footpath edge and entrance gate shall be set level with public footpath surface edge to the Planning Authority's satisfaction and shall not extend beyond footpath surface edge.	In the interests of road safety.
11	Footpath at entrance shall be dished to the satisfaction of the Planning Authority.	To ensure satisfactory access to the site.
12	Gates shall open inwards.	In the interests of road safety.
13	Sight distance of 45 m to the North and 45 m to the South shall be provided from centre point of entrance 2.4 m back from public road edge. No vegetation or structure shall exceed 1m in height within the sight distance triangle.	To provide proper sight distance for emerging traffic in the interests of road safety.
14	Vegetation or any structure shall not exceed 1m in height within the sight distance triangle.	To provide proper sight distance for emerging traffic in the interests of road safety.
15	Area between footpath and new boundary treatment shall be set level with the adjoining footpath and surfaced to the satisfaction of the Planning Authority.	In the interests of road safety.
16	Any utility poles currently within the roadside boundary set back required by other conditions of this schedule shall be repositioned behind the new boundary, and any surface chambers or manholes within it shall be repositioned in a location or at a level to be agreed with in writing Planning Authority. The applicant shall be responsible for the costs of relocating these facilities, for notifying the relevant statutory undertakers, for obtaining any necessary licenses, and for notifying the Planning Authority of the revised locations of such utilities, prior to commencement of development, or, at the discretion of the Planning Authority, within such further period or periods of time as it may nominate in writing.	To protect existing utility infrastructure.

17	No dust, mud or debris from the site shall be carried onto or deposited on the public road/footpath. Public roads and footpaths in the vicinity of the site shall be maintained in a tidy condition by the developer during the construction phase.	To protect the amenities of the area and in the interests of road safety.
18	Surface water shall not be permitted to flow onto the public road from the site.	To prevent the flooding of the public road.
19	The proposed development shall be designed to take account of the future Midleton FRS and shall be compatible with such future development. The applicant shall liaise with Cork County Council's Coastal and Flood projects department in this regard.	To allow for the future construction of the Midleton Flood Relief Scheme, in order to mitigate flood risk
20	Due to the residual risk of flooding the following shall put in place, kept up to date and implemented • Flood Awareness Plan • Flood Emergency Response Plan	To mitigate flood risk
21	The Flood Evacuation Plan included as Appendix 3 of the CEMP shall be updated to take account of the flood extent mapping produced by the Midleton Flood Relief Scheme – available on www.midletonfrs.ie, and as used in the Cork County Development Plan (2022). Prior to the commencement of development an updated Plan and revised associated details shall be submitted to and agreed in writing with the Planning Authority.	To mitigate flood risk.
22	The applicant shall engage with CCC in relation to the proposed 'main' compound at the Water-Rock pumping station site referred to in Section 8 of the Flood Evacuation Plan, and in particular in relation to flood protection measures which may be required at this location.	To mitigate flood risk.
23	There shall be no interfering with, bridging, piping, draining, or culverting of the Owenacurra River or any watercourse, its banks or bankside vegetation to facilitate this development without the prior approval of the Inland Fisheries	To safeguard the amenities, prevent pollution and/or erosion.

	Ireland and the Planning Authority.	
24	The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including hours of working, noise, dust and water management measures, and off-site disposal of construction/demolition waste.	To safeguard the amenities of the area.
25	The Applicant shall provide appropriate staff welfare facilities including hand and eye washing and clothes changing facilities, to provide for the safety and welfare of staff and/or visitors during the operation of this development. Details of these facilities to be agreed with the Planning Authority prior to development commencing.	To provide welfare facilities for staff during the operation phase of this development.
26	Storm water overflows shall be in compliance with the criteria for storm water overflows, as set out in Procedures and Criteria in Relation to Storm Water Overflows (DoE,1995) and any other guidance as may be specified by the competent authority.	To limit water pollution.
27	In respect of coordinating the works with the LIHAF infrastructure works (currently ongoing): - Prior to commencement of development, the Applicant/Developer shall prepare and submit a comprehensive programme for the proposed works within the LIHAF road/works contract area. The Applicant/Developer shall finalise this programme to the satisfaction of the Planning Authority. - After completion of the relevant works within the footprint of the LIHAF road/works contract area by the Applicant/Developer, the Applicant/Developer shall not	In the interest of orderly development.

	be permitted access to these works until after the LIHAF works are complete and the road has been opened as a public road unless otherwise agreed with the Planning Authority. - After completion of the relevant works within the footprint of the LIHAF works contract area, the Applicant/Developer shall complete CCTV survey of the relevant constructed pipeline and carry out any repairs arising to the satisfaction of the planning authority.	
28	The Developer/Applicant shall not be permitted open a trench in the finished LIHAF roadway under this planning permission.	In the interest of orderly development.
29	The Developer/Applicant shall notify the planning authority 7 days prior to the commencement of the discharge of wastewater flows into the proposed sewer network.	In the interest of orderly development.
30	The Applicant/Developer shall provide/erect and maintain and/or remove the temporary boundary fencing to its development/works/site as required/agreed by HIIT and to the satisfaction of the Planning Authority.	In the interest of orderly development
31	The Developer/Applicant shall not undertake its works between the roundabout of the Northern Relief Road and roundabout with Nordic Enterprise Park until the Bee Orchid plant identified in this area has been translocated.	In the interest of orderly development and protecting the environment.
32	The Applicant/Developer shall erect/reinstate all existing fencing that is removed during the works and this shall be undertaken in accordance with the specification of the Planning Authority and to its satisfaction.	In the interest of orderly development.
33	The Applicant/Developer shall provide CCTV recordings and associated report of the constructed foul infrastructure within the footprint of the LIHAF roadway/work contract area to the	In the interest of orderly development.

	Planning Authority within 7 days of completion.	
34	The Applicant/Developer shall construct the foul sewer infrastructure along the agreed route and at the correct cover and invert levels to the satisfaction of the Planning Authority.	In the interest of orderly development.
35	The Applicant/Developer shall upsize the proposed gravity foul sewer downstream of the Air Valve as far as the Water Rock Pumping Station to cater for the wastewater design flows from the Water-Rock UEA (i.e., future design flow within the proposed LIHAF foul sewer network) to the satisfaction of the Planning Authority and at the Applicant/Developer's expense.	In the interest of orderly development.
36	The Applicant/Developer shall carry out all trench backfilling and reinstatement to be in accordance with the Guidelines for Managing Openings in Public Roads, Guidelines for the Opening, Backfilling and Reinstatement of Openings in Public Roads (purple book) and to the agreement and satisfaction of the Planning Authority.	In the interest of orderly development.
37	The manhole covers and frames used on the foul sewers shall be to the satisfaction of the Planning Authority. The developer shall use D400 ductile iron heavy duty covers and frames unless otherwise agreed with the Planning Authority.	In the interest of orderly development.
38	Any damage to the existing roads, footpaths, and services, (including the LIHAF roadway/services) resulting during the construction of this development shall be at the expense of and repaired by the Applicant/Developer to the satisfaction of the Planning Authority.	In the interest of orderly development.
39	The Applicant/Developer shall submit to the Planning Authority, as required by the Planning Authority, accurate as-built record drawings, in hard copy and electronically, to scale of 1/500 of the	To provide an accurate record of the development for future maintenance.

	roadways/services within 2 weeks of substantial completion within the UEA lands: - Foul sewers including pipe sizes, pipe depths and location of manholes and services.	
40	The existing pallisade boundary fence with the railway line shall be preserved in situ unless otherwise agreed in writing with Iarnród Éireann.	In the interests of orderly development.
41	Any excavations which infringe upon the railway Track Support Zone will require permission and approval from the relevant Senior Track and Structures Engineer.	In the interest of orderly development and to protect the integrity of the adjacent railway line.
42	No additional liquid, either surfacewater or effluent shall be discharged to, or allowed to seep onto the railway property, or into railway drains and ditches.	In the interests of orderly devleopment and to protect the integrity of the adjacent railway line.
43	Lights from the proposed development, either during the construction phase or when the development is completed, should not cause glare or in any way impair the vision of train drivers or personnel operating on track machines.	In the interests or orderly development and safety.
44	No overhang of any part of the development over the adjacent railway property is allowed.	In the interests of orderly development and to preserve the integrity of the adjacent railway line.
45	Before any development commences, or, at the discretion of the Planning Authority, within such further period or periods of time as it may nominate in writing, the developer shall provide, to the satisfaction of the Planning Authority, security for the provision and satisfactory completion of the following: • The Irish Water works that are proposed within the footprint of the LIHAF works/roadway are completed to the satisfaction of the Planning Authority • The existing roadside fencing erected by the Planning Authority	To ensure that these parts of the development are constructed and completed to a satisfactory standard.

	(that must be removed by IW) is replaced afterwards by IW to the satisfaction of the Planning Authority • The timeline for delivery of these works is to the satisfaction of the Planning Authority. The security shall be a Bond in a form and amount approved by the Planning Authority and provided by a Bank or Insurance Company acceptable to the Planning Authority.	

John Lalor
09/02/2023

APPLICATION NO.	05032/22
APPLICANT	Irish Water
DESCRIPTION	The midleton north wastewater pumping station and network, which will consist of: 1) a new wastewater pumping station with below ground wet well and chambers, 2 no. above ground kiosks, vent stack (c.6.2m in height), telemetry pole (c. 6m in height), boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road, including new gates, to facilitate vehicular and pedestrian access; (2) the construction of a below ground pipeline (c. 650m long) connecting the proposed wastewater pumping station to the previously approved Water-Rock pumping station (consented as per section 179 of the planning and development act, 2000, as amended(Water-Rock UEA Infrastructure Works); (3) the construction of c. 30m of an underground pipeline to connect the existing foul network on the mill road to the proposed foul pumping station; and (4) all associated site development, landscaping and site excavation works above and below ground, including the demolition of the existing boundary wall, fence and gates along the mill road, on lands to the west of Mill Road, and part of Mill Road, the Owenacurra River, and the northern Relief Road, in the townlands of Townparks, Broomfield West, and Knockgriffin (imokilly) Midleton, Co.Cork. A Natura Impact Statement (NIS) will be submitted to the planning authority with the application.
LOCATION	Lands to the west of the Mill Road and part of Mill Road, The Owenacurra River,and the Northern Relief Road, townlands Townparks, Broomfield West & Knockgriffin (Imokilly), Midleton, Co. Cork.
DUE DATE	13/02/2023

The report of the Executive Planner is noted and endorsed.

The application had been deferred for a number of issues under the following headings:
Flood risk; boundary treatment; interaction with Water rock Urban Expansion Area & public service network; impact on X-01 lands; Ecological issues; and tree survey/landscaping.

The applicant's response addresses the items raised. And the internal reports all recommend permission subject to conditions.

With regard to flooding, details are submitted of the interaction of the development with the former mill race which is culverted under the relief road and within c10m of the site boundary. Clarity is provided in relation to the SSFRA. The site is to be defended in the Midleton Flood Relief Scheme. An updated report is received from the Flood Projects Team. The outstanding issues raised in the RFI are addressed satisfactorily. This relates to a flood awareness & emergency plan and surface water drainage details including the use of SuDS proposals.

In relation to boundary treatment, a modified treatment to Mill Rd is proposed, to include a stone wall with railing on top. This is satisfactory and it is appropriate that the existing stone be used where possible. A landscape plan is also proposed which is satisfactory. The applicant also states that they will ensure no impact on the visibility of the level crossing signals on the Mill Rd. The landscape

plan shows the removal of existing trees at the Mill Rd frontage close to the level crossing. They are not of significant value and their removal is acceptable in visual terms.

In terms of interaction with the Water rock UEA, details are provided of how the foul sewer rising main discharge is catered for downstream, together with details of design capacity and quantity of additional flows into the sewers within the LIHAF works. A report is received from the HIIT team recommending permission subject to conditions. This includes substantial special contributions associated with the pump station at Water rock and pipe network within the LIHAF works contract. The contributions amount to €89,813 for the planning/design of the Water rock pump station and €220,052 for increasing the design/flow capacity within the pipe network of the LIHAF works. The subject proposal links to and benefits from these works.

In relation to the visual impact of the pump station on the X-01 lands and the need for appropriate boundary treatment, a landscape master plan for the site is submitted. This is satisfactory, as it provides for screen planting of the boundaries of the pump station. Also, details of wayleaves and effectively sterilised land within the X-01 lands are provided. It is stated that the necessary lands need to facilitate the scheme were obtained using the CPO process. The affected lands will not significantly impede the achievement of the X-01 Objective. It is also relevant that the use proposed is necessary to realise the growth Objective in the CDP for the settlement.

With regard to Ecological impacts, further details are submitted as requested. An updated report is received from the Ecology Office. In relation to potential water quality impacts during construction, the proposal is considered acceptable subject to implementation of the submitted CEMP and Flood Evacuation Plan. An Appropriate Assessment is completed based on the submitted NIS, CEMP and further information response. The Ecology Unit is satisfied that the development will not impact the integrity of any Natura site. An Ecological Impact Assessment is submitted, which is considered acceptable subject to implementation of mitigation measures.

Conclusion

Grant Application

ATTACHMENT B.3.3:

MIDLETON NORTH PUMPING STATION & NETWORK CONDITIONAL GRANT OF PLANNING

CORK COUNTY COUNCIL
PLANNING & DEVELOPMENT ACTS 2000 – 2010 AS AMENDED
NOTIFICATION OF DECISION TO GRANT Permission

Reference No. in Planning Register **22/05032**

Irish Water
C/O Andrew Millar
Atkins, 2nd Floor
Technology House
Parkmore Technology Park
Co. Galway

In pursuance of the powers conferred upon them by the above mentioned Act and for the reason set out in the First Schedule hereto, the Council of the County of Cork has by Order dated **13/02/2023** decided to GRANT **Permission** for the development of land namely:

The Midleton North Wastewater Pumping Station and Network, which will consist of: 1) a new wastewater pumping station with below ground wet well and chambers, 2 no. above ground kiosks, vent stack (c.6.2m in height), telemetry pole (c. 6m in height), boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road, including new gates, to facilitate vehicular and pedestrian access; (2) the construction of a below ground pipeline (c. 650m long) connecting the proposed wastewater pumping station to the previously approved Water-Rock Pumping Station (consented as per Section 179 of the Planning and Development Act, 2000, as amended (Water-Rock UEA Infrastructure Works); (3) the construction of c. 30m of an underground pipeline to connect the existing foul network on the mill road to the proposed foul pumping station; and (4) all associated site development, landscaping and site excavation works above and below ground, including the demolition of the existing boundary wall, fence and gates along the mill road, on lands to the west of Mill Road, and part of Mill Road, the Owenacurra River, and the northern Relief Road, in the townlands of Townparks, Broomfield West, and Knockgriffin (imokilly) Midleton, Co. Cork. A Natura Impact Statement (NIS) will be submitted to the planning authority with the application.

At: Lands to the west of the Mill Road and part of, Mill Road, The Owenacurra River,and the Northern, Relief Road, townlands Townparks, Broomfield West & Knockgriffin (Imokilly), Midleton, Co. Cork.

In accordance with the plans and particulars submitted by the applicant

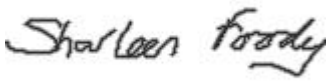
On: 06/05/2022, as amended on 23/06/2022 and 09/12/2022

And subject to the conditions (46no.) set out in Column 1 of the Second Schedule attached hereto. The reasons for the imposition of the said conditions are set out in Column 2 of the schedule.

An appeal against a decision of the Planning Authority may be made to An Bord Pleanála by any authorised person before the EXPIRATION of the period of FOUR WEEKS beginning on the day of the giving (i.e. Date of Order) of the decision of the Planning Authority. (SEE NOTES ATTACHED).

If there is no appeal against the said decision on expiration of the period, a grant of Permission in accordance with the decision shall be issued as soon as may be, but not earlier than 3 working days after the expiration of the period for the making of an appeal to An Bord Pleanála. It should be noted that until a grant of Permission has been issued the development in question is NOT AUTHORISED.

Signed on behalf of the said Council



Sharleen Foody
Administrative Officer

Date: 13/02/2023

SEE NOTES ATTACHED

Please note that pursuant to S.34(3) of the Act, the Planning Authority has had regard to submissions or observations received in accordance with these Regulations.

In accordance with Article 20, site notice shall be removed on receipt of this notification.

FIRST SCHEDULE

Planning Ref. No. 22/05032

Having regard to the location of the site within the settlement and the requirement to provide enhanced waste water infrastructure to support development within Midleton in line with the Core Strategy of the County Development Plan, it is considered that subject to compliance with the conditions set out in the Second Schedule, the proposed development accords with the proper planning and sustainable development of the area.

SECOND SCHEDULE

No.	Condition	Reason
1	The proposed development shall be carried out in accordance with plans and particulars lodged with the Planning Authority on 06/05/2022, 23/06/2022 and as amended and further detailed on the 09/12/2022, save where amended by the terms and conditions herein.	In the interests of clarity.
2	Boundary form/finishes shall be as per the revised details submitted on the 09/12/2022, save where amended by the conditions herein. Stone from the existing roadside boundary wall shall be re-used in the construction of the new front boundary wall unless otherwise agreed in writing with the Planning Authority.	In the interests of orderly development and visual amenity.
3	Prior to the commencement of development final details of the proposed internal fencing form, height and finish around the pumping station intneral access road and compound shall be submitted to and agreed in writing with the Planning Authority.	In the interests of orderly development and visual amenity.
4	Environmental protection measures set out within the Natura Impact Statement received by the Planning Authority on 06/05/2022 and the Ecological Impact Assessment recived on 09/12/2022 shall be implemented and adhered to in full unless where otherwise updated by the conditions of planning attached herein.	To ensure there will be no adverse effects on the integrity of any Natura 2000 site.
5	All works on site shall be implemented in accordance with a Construction Environmental Management Plan, which shall be based on the Outline CEMP and shall include all measure proposed within the Ecological Impact Assessment and Natura Impact Statement submitted with the planning documentation and conditions of planning attached herein. The plan shall be prepared by a qualified and experienced person, and shall accord with recognised standard best practice - CIRIA Guidance No C532 - Control of Water Pollution From Construction Sites. All works on site shall be implemented in accordance with the final plan which shall be agreed with teh planning authority in advance of	To ensure the protection of ecological receptors.

	commencement of development. It shall be the responsibility of the project manager to ensure the implementation of these measures.	
6	In advance of commencement of development, a pre-development Bee Orchid Survey shall be carried out with translocation sites and methods agreed in full with the Planning Authority.	To protect biodiversity.
7	All works shall be supervised by an on-site clerk of works who will report on compliance with the relevant mitigation measures. The clerk of works shall be empowered to halt works where he/she considers that the continuation of the works is likely to result in a significant pollution incident. In the event of a water pollution incident, or of damage a key environmental receptor, these reports will be made available to the relevant statutory authorities, and on-site works will cease until authorized to continue by the planning authority. A compliance monitoring report, prepared by the clerk of works will be submitted to the planning authority at the end of the main construction period.	To ensure the protection of ecological receptors and to ensure there will be no adverse effects on any Natura 2000 site(s).
8	Landscaping of the site shall be in accordance with the Landscape Plan as recieved by the planning authority on 09/12/2022. All tree planting shall be of semi mature trees. The plan shall be implemented in full under the supervision of an appropriately qualified and experienced tree specialist within the first year following completion of the development. Any trees that die or are removed within three years of planting shall be replaced in the first planting season thereafter.	To ensure the protection of biodiversity generally.
9	Any cutting of trees, hedgerows and vegetation on site should only be undertaken outside of the bird breeding season. The Bird breeding season takes place between March 1st and August 31st.	To minimise risks to breeding birds.
10	Entrance recess between public footpath edge and entrance gate shall be set level with public footpath surface edge to the Planning Authority's satisfaction and shall not extend beyond footpath surface edge.	In the interests of road safety.
11	Footpath at entrance shall be dished to the satisfaction of the Planning	To ensure satisfactory access to the site.

	Authority.	
12	Gates shall open inwards.	In the interests of road safety.
13	Sight distance of 45m to the North and 45m to the South shall be provided from centre point of entrance 2.4m back from public road edge. No vegetation or structure shall exceed 1m in height within the sight distance triangle.	To provide proper sight distance for emerging traffic in the interests of road safety.
14	Vegetation or any structure shall not exceed 1m in height within the sight distance triangle.	To provide proper sight distance for emerging traffic in the interests of road safety.
15	Area between footpath and new boundary treatment shall be set level with the adjoining footpath and surfaced to the satisfaction of the Planning Authority.	In the interests of road safety.
16	Any utility poles currently within the roadside boundary set back required by other conditions of this schedule shall be repositioned behind the new boundary, and any surface chambers or manholes within it shall be repositioned in a location or at a level to be agreed with in writing with the Planning Authority. The applicant shall be responsible for the costs of relocating these facilities, for notifying the relevant statutory undertakers, for obtaining any necessary licenses, and for notifying the Planning Authority of the revised locations of such utilities, prior to commencement of development, or, at the discretion of the Planning Authority, within such further period or periods of time as it may nominate in writing.	To protect existing utility infrastructure.
17	No dust, mud or debris from the site shall be carried onto or deposited on the public road/footpath. Public roads and footpaths in the vicinity of the site shall be maintained in a tidy condition by the developer during the construction phase.	To protect the amenities of the area and in the interests of road safety.
18	Surface water shall not be permitted to flow onto the public road from the site.	To prevent the flooding of the public road.
19	The proposed development shall be designed to take account of the future Midleton FRS and shall be compatible with such future development. The applicant shall liaise with Cork County Council's Coastal and Flood projects department in this regard.	To allow for the future construction of the Midleton Flood Relief Scheme, in order to mitigate flood risk
20	Due to the residual risk of flooding the following shall put in place, kept up to date and implemented: • Flood Awareness Plan • Flood Emergency Response Plan	To mitigate flood risk

21	The Flood Evacuation Plan included as Appendix 3 of the CEMP shall be updated to take account of the flood extent mapping produced by the Midleton Flood Relief Scheme – available on www.midletonfrs.ie, and as used in the Cork County Development Plan (2022). Prior to the commencement of development an updated Plan and revised associated details shall be submitted to and agreed in writing with the Planning Authority.	To mitigate flood risk.
22	The applicant shall engage with CCC in relation to the proposed 'main' compound at the Water-Rock pumping station site referred to in Section 8 of the Flood Evacuation Plan, and in particular in relation to flood protection measures which may be required at this location.	To mitigate flood risk.
23	There shall be no interfering with, bridging, piping, draining, or culverting of the Owenacurra River or any watercourse, its banks or bankside vegetation to facilitate this development without the prior approval of the Inland Fisheries Ireland and the Planning Authority.	To safeguard the amenities, prevent pollution and/or erosion.
24	The construction of the development shall be managed in accordance with a Construction Management Plan, which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including hours of working, noise, dust and water management measures, and off-site disposal of construction/demolition waste.	To safeguard the amenities of the area.
25	The Applicant shall provide appropriate staff welfare facilities including hand and eye washing and clothes changing facilities, to provide for the safety and welfare of staff and/or visitors during the operation of this development. Details of these facilities to be agreed with the Planning Authority prior to development commencing.	To provide welfare facilities for staff during the operation phase of this development.
26	Storm water overflows shall be in compliance with the criteria for storm water overflows, as set out in Procedures and Criteria in Relation to Storm Water Overflows (DoE,1995) and any other guidance as may be specified by the competent authority.	To limit water pollution.
27	In respect of coordinating the works with the LIHAF infrastructure works	In the interest of orderly development.

	(currently ongoing): - Prior to commencement of development, the Applicant/Developer shall prepare and submit a comprehensive programme for the proposed works within the LIHAF road/works contract area. The Applicant/Developer shall finalise this programme to the satisfaction of the Planning Authority. - After completion of the relevant works within the footprint of the LIHAF road/works contract area by the Applicant/Developer, the Applicant/Developer shall not be permitted access to these works until after the LIHAF works are complete and the road has been opened as a public road unless otherwise agreed with the Planning Authority. - After completion of the relevant works within the footprint of the LIHAF works contract area, the Applicant/Developer shall complete CCTV survey of the relevant constructed pipeline and carry out any repairs arising to the satisfaction of the planning authority.	
28	The Developer/Applicant shall not be permitted open a trench in the finished LIHAF roadway under this planning permission.	In the interest of orderly development.
29	The Developer/Applicant shall notify the planning authority 7 days prior to the commencement of the discharge of wastewater flows into the proposed sewer network.	In the interest of orderly development.
30	The Applicant/Developer shall provide/erect and maintain and/or remove the temporary boundary fencing to its development/works/site as required/agreed by HIIT and to the satisfaction of the Planning Authority.	In the interest of orderly development
31	The Developer/Applicant shall not undertake its works between the roundabout of the Northern Relief Road and roundabout with Nordic Enterprise Park until the Bee Orchid plant identified in this area has been translocated.	In the interest of orderly development and protecting the environment.
32	The Applicant/Developer shall erect/reinstate all existing fencing that is removed during the works and this shall be undertaken in accordance with the specification of the Planning Authority and to its satisfaction.	In the interest of orderly development.

33	The Applicant/Developer shall provide CCTV recordings and associated report of the constructed foul infrastructure within the footprint of the LIHAF roadway/work contract area to the Planning Authority within 7 days of completion.	In the interest of orderly development.
34	The Applicant/Developer shall construct the foul sewer infrastructure along the agreed route and at the correct cover and invert levels to the satisfaction of the Planning Authority.	In the interest of orderly development.
35	The Applicant/Developer shall upsize the proposed gravity foul sewer downstream of the Air Valve as far as the Water Rock Pumping Station to cater for the wastewater design flows from the Water-Rock UEA (i.e., future design flow within the proposed LIHAF foul sewer network) to the satisfaction of the Planning Authority and at the Applicant/Developer's expense.	In the interest of orderly development.
36	The Applicant/Developer shall carry out all trench backfilling and reinstatement to be in accordance with the Guidelines for Managing Openings in Public Roads, Guidelines for the Opening, Backfilling and Reinstatement of Openings in Public Roads (purple book) and to the agreement and satisfaction of the Planning Authority.	In the interest of orderly development.
37	The manhole covers and frames used on the foul sewers shall be to the satisfaction of the Planning Authority. The developer shall use D400 ductile iron heavy duty covers and frames unless otherwise agreed with the Planning Authority.	In the interest of orderly development.
38	Any damage to the existing roads, footpaths, and services, (including the LIHAF roadway/services) resulting during the construction of this development shall be at the expense of and repaired by the Applicant/Developer to the satisfaction of the Planning Authority.	In the interest of orderly development.
39	The Applicant/Developer shall submit to the Planning Authority, as required by the Planning Authority, accurate as-built record drawings, in hard copy and electronically, to scale of 1/500 of the roadways/services within 2 weeks of substantial completion within the UEA lands: - Foul sewers including pipe sizes, pipe depths and location of manholes and services.	To provide an accurate record of the development for future maintenance.

40	The existing pallisade boundary fence with the railway line shall be preserved in situ unless otherwise agreed in writing with Iarnród Éireann.	In the interests of orderly development.
41	Any excavations which infringe upon the railway Track Support Zone will require permission and approval from the relevant Senior Track and Structures Engineer.	In the interest of orderly development and to protect the integrity of the adjacent railway line.
42	No additional liquid, either surfacewater or effluent shall be discharged to, or allowed to seep onto the railway property, or into railway drains and ditches.	In the interests of orderly devleopment and to protect the integrity of the adjacent railway line.
43	Lights from the proposed development, either during the construction phase or when the development is completed, should not cause glare or in any way impair the vision of train drivers or personnel operating on track machines.	In the interests or orderly development and safety.
44	No overhang of any part of the development over the adjacent railway property is allowed.	In the interests of orderly development and to preserve the integrity of the adjacent railway line.
45	Before any development commences, or, at the discretion of the Planning Authority, within such further period or periods of time as it may nominate in writing, the developer shall provide, to the satisfaction of the Planning Authority, security for the provision and satisfactory completion of the following: • The Irish Water works that are proposed within the footprint of the LIHAF works/roadway are completed to the satisfaction of the Planning Authority • The existing roadside fencing erected by the Planning Authority (that must be removed by IW) is replaced afterwards by IW to the satisfaction of the Planning Authority • The timeline for delivery of these works is to the satisfaction of the Planning Authority. The security shall be a Bond in a form and amount approved by the Planning Authority and provided by a Bank or Insurance Company acceptable to the Planning Authority.	To ensure that these parts of the development are constructed and completed to a satisfactory standard.
46	At least one month before commencing development or at the	It is considered appropriate that the developer should contribute towards

	discretion of the Planning Authority within such further period or periods of time as it may nominate in writing, the developer shall pay a special contribution of €309865.00 to Cork County Council, updated monthly in accordance with the Consumer Price Index from the date of grant of permission to the date of payment, in respect of specific exceptional costs not covered in the Council's General Contributions Scheme, incurred in respect of works for the provision of planning/design of the new Water-Rock pumping station, site investigation works and design capacity assessments; and increasing the design flow capacity of various sections of wastewater/water pipework within the Water-Rock LIHAF works contract .	these specific exceptional costs, for works benefiting the proposed development.

ATTACHMENT B.3.4:

NOTICE OF APPEAL TO AN BORD PLEANÁLA

5

Our Case Number: ABP-316013-23

Planning Authority Reference Number: 225032

An Bord Pleanála

Cork County Council
Planning Department
County Hall
Carrigrohane Road
Cork
Co. Cork

225032-16/03/2023-Notification of Receipt of Further Appeal

Date: 15 March 2023

Re: Construction of wastewater pumping station and associated works
Lands to the west of the Mill Road and part of, Mill Road, The Owenacurra River,and the Northern, Relief Road, townlands Townparks, Broomfield West, & Knockgriffin (Imokilly), Midleton, Co. Cork.

Dear Sir / Madam,

Enclosed is a copy of a further appeal under the Planning and Development Act, 2000, (as amended).

As you are aware, the planning authority's decision in the matter is already the subject of an appeal to the Board. Under section 129 of the Planning and Development Act, 2000, (as amended), as a party to the appeal you may make submissions or observations in relation to the enclosed appeal(s) in writing to the Board within 4 weeks beginning on the date of this letter.

Any submissions or observations received by the Board outside of that period shall not be considered and where none have been validly received, the Board may determine the appeal without further notice to you. Please quote the above appeal reference number in any further correspondence.

Yours faithfully,

Alice-Faye Staunton
Administrative Assistant
Direct Line: 01-873-7136

BP06

Planning Department
16 MAR 2023
Cork Co...
Co...

Teil	Tel	(01) 858 8100
Glao Áitiúil	LoCall	1800 275 175
Facs	Fax	(01) 872 2684
Láithreán Gréasáin	Website	www.pleanala.ie
Ríomhphost	Email	bord@pleanala.ie

64 Sráid Maoilbhríde
Baile Átha Cliath 1
D01 V902

64 Marlborough Street
Dublin 1
D01 V902

Comhairle Chontae Chorcaí
Cork County Council

Head Office: County Hall, Cork

Tom Phillips
Suite 437 + 455,
No.1 Horgan's Quay
Waterfront Sq.,
Cork City, T23 PPT8

09/06/2022

Tom Phillips & Associates
Action:
Date Rec'd: 7 JUN 2022
Project Ref & Planner:

AN BORD PLEANÁLA
LDG- 061789-23
ABP-
13 MAR 2023
Fee: €220 Type: CHQ
Time: 5:14 By: Hand

APPLICANT: Irish Water

DEVELOPMENT: The midleton north wastewater pumping station and network, which will consist of: 1) a new wastewater pumping station with below ground wet well and chambers, 2 no. above ground kiosks, vent stack (c.6.2m in height), telemetry pole (c. 6m in height), boundary fencing, retaining wall, and modifications to an existing entrance from Mill Road, including new gates, to facilitate vehicular and pedestrian access; (2) the construction of a below ground pipeline (c. 650m long) connecting the proposed wastewater pumping station to the previously approved Water-Rock pumping station (consented as per section 179 of the planning and development act, 2000, as amended(Water-Rock UEA Infrastructure Works); (3) the construction of c. 30m of an underground pipeline to connect the existing foul network on the mill road to the proposed foul pumping station; and (4) all associated site development, landscaping and site excavation works above and below ground, including the demolition of the existing boundary wall, fence and gates along the mill road, on lands to the west of Mill Road, and part of Mill Road, the Owenacurra River, and the northern Relief Road, in the townlands of Townparks, Broomfield West, and Knockgriffin (imokilly) Midleton, Co.Cork. A Natura Impact Statement (NIS) will be submitted to the planning authority with the application.

AT: Lands to the west of the Mill Road and part of Mill Road, The Owenacurra River,and the Northern Relief Road, townlands Townparks, Broomfield West & Knockgriffin (Imokilly), Midleton, Co. Cork.

Planning Department
16 MAR 2023
Cork County Council
County Hall
Cork

FOR: Permission

PLANNING REGISTRATION NO: 22/5032

A Chara,

I wish to acknowledge receipt of your online submission/observation on 09/06/2022 concerningthis application. I wish to confirm that your submission/observation has been received within the period of five weeks beginning on the date of registration of the application and is therefore considered a valid submission/observation.

Comhairle Chontae Chorcaí
Cork County Council

Head Office: County Hall, Cork

Copies of site map/plans and particulars submitted in connection with the application will be available for inspection at this department during office hours (9.00 a.m. to 4.00 p.m., Monday to Friday) until the application, or any appeal thereon, is finally determined. The applicant shall be given your name and content of the submission/observation should it be requested.

Your submission will form part of the documentation available for inspection by the public. You will be notified when a decision is made on the application.

This document should be retained. If you wish to appeal such decision a copy of this acknowledgement together with the attached official document must accompany your appeal to An Bord Pleanála.

CORK COUNTY COUNCIL
PLANNING DEPARTMENT
County Hall, Carrigrohane Road,
Cork.

Comhairle Chontae Chorcaí
Cork County Council

Head Office: County Hall. Cork

Form no. 3 Articles 28 and 35

ACKNOWLEDGEMENT OF RECEIPT OF SUBMISSION OR OBSERVATION ON A PLANNING APPLICATION

THIS IS AN IMPORTANT DOCUMENT

KEEP THIS DOCUMENT SAFELY. YOU WILL BE REQUIRED TO PRODUCE THIS ACKNOWLEDGEMENT TO AN BORD PLEANÁLA IF YOU WISH TO APPEAL THE DECISION OF THE PLANNING AUTHORITY. IT IS THE ONLY FORM OF EVIDENCE WHICH WILL BE ACCEPTED BY AN BORD PLEANÁLA THAT A SUBMISSION OR OBSERVATION HAS BEEN MADE TO THE PLANNING AUTHORITY ON THE PLANNING APPLICATION.

PLANNING AUTHORITY NAME **Cork County Council**

PLANNING APPLICATION REFERENCE NO. **22/5032**

A submission/observation, in writing, has been received via our online system, from:

Tom Phillips
Suite 437 + 455,
No.1 Horgan's Quay
Waterfront Sq.,
Cork City, T23 PPT8

Planning Department
16 MAR 2023
Cork County Council

ON 09/06/2022 in relation to the above planning application.

The appropriate fee of €20.00 has been paid.

The submission/observation is in accordance with the appropriate provisions of the Planning and Development Regulations, 2001, as amended, and will be taken into account by the Planning Authority in its determination of the planning application.

County Hall, Carrigrohane Road,
Cork.

CORK COUNTY COUNCIL
PLANNING DEPARTMENT
ONLINE SUBMISSIONS SYSTEM

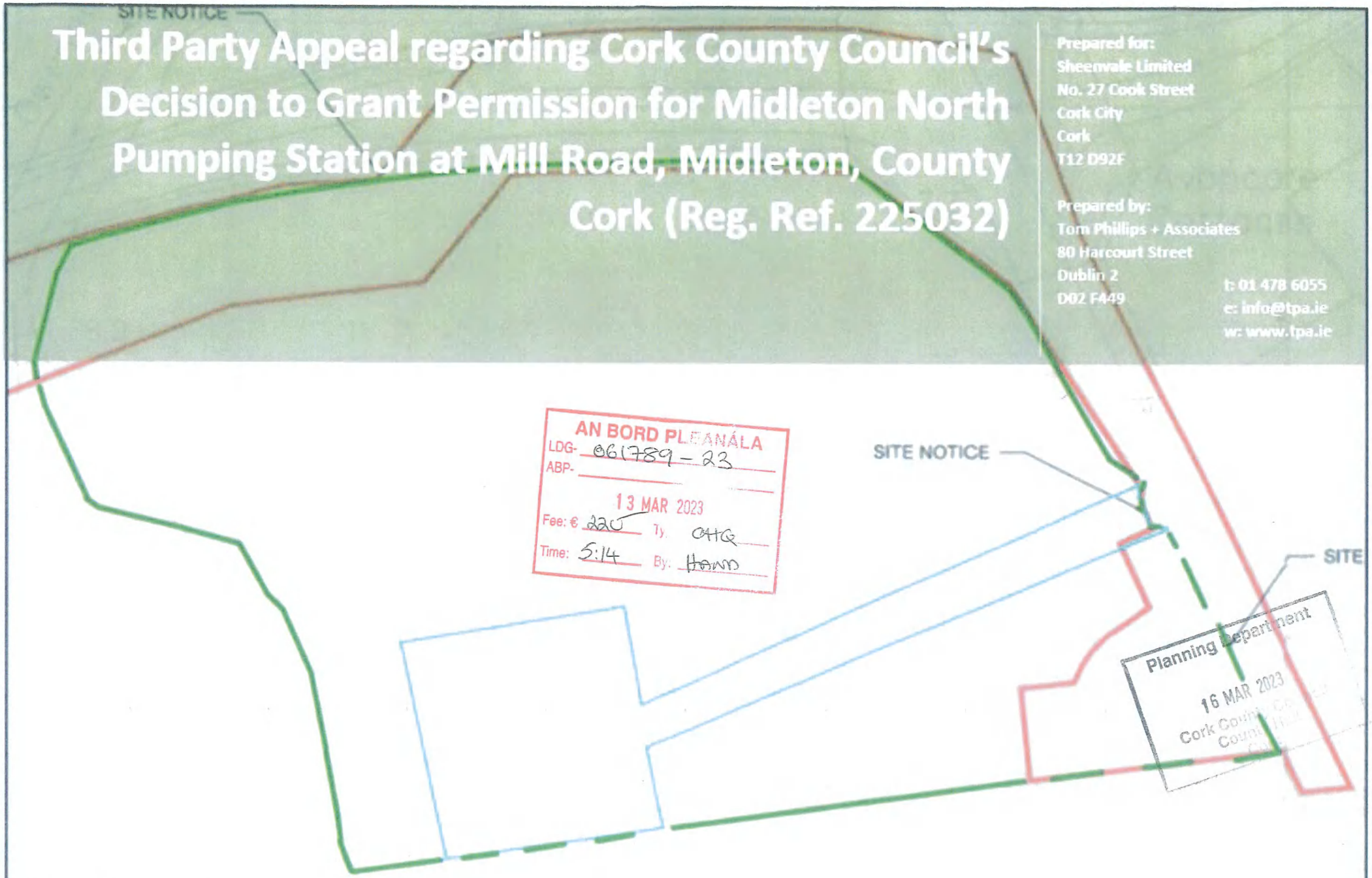
Date: **09/06/2022**

Third Party Appeal regarding Cork County Council's Decision to Grant Permission for Midleton North Pumping Station at Mill Road, Midleton, County Cork (Reg. Ref. 225032)

Prepared for:
Sheenvale Limited
No. 27 Cook Street
Cork City
Cork
T12 D92F

Prepared by:
Tom Phillips + Associates
80 Harcourt Street
Dublin 2
D02 F449

t: 01 478 6055
e: info@tpa.ie
w: www.tpa.ie



TOM PHILLIPS + ASSOCIATES
PLANNING FOR THE FUTURE

Date: Monday, 13 March 2023

Contents

The Secretary
An Bord Pleanála
64 Marlborough Street
Dublin 1
D01 V902

Monday, 13 March 2023
[By hand.]

CORK COUNTY COUNCIL PLANNING FILE REG. REF. 225032 – THIRD PARTY APPEAL

Dear Sir / Madam

RE: CONSIDERATIONS REGARDING CORK COUNTY COUNCIL'S DECISION TO GRANT PERMISSION AND CERTAIN ATTACHED CONDITIONS FOR MIDLETON NORTH PUMPING STATION AT MILL ROAD, MIDLETON, COUNTY CORK

1.0 INTRODUCTION

1.1 The Third Party Appeal

Sheenvale Limited[1] has retained Tom Phillips + Associates[2] to submit a Third-Party Appeal on Cork County Council's *Notification of Decision to Grant Permission* for Irish Water's Application for the development of the Midleton North Pumping Station (Reg. Ref. 225032) located on the south-east corner of the Sheenvale Limited lands at Townparks and Broomfield West, Midleton, County Cork.

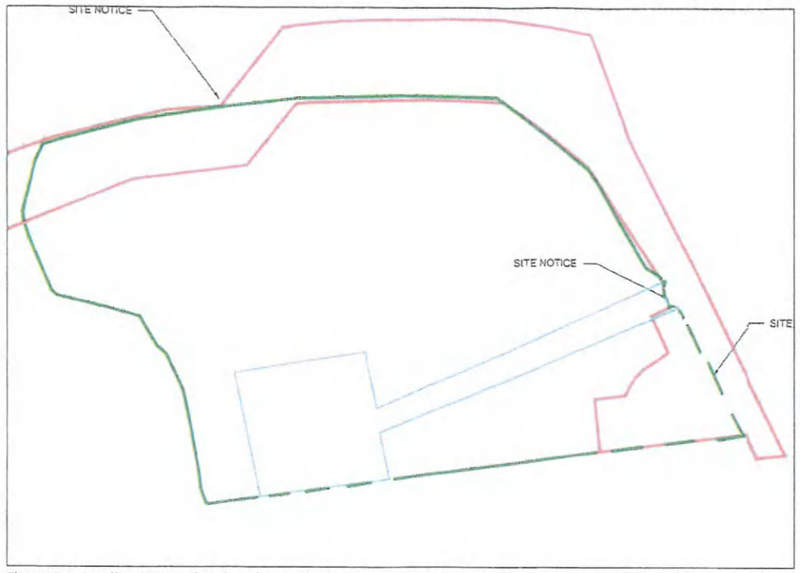
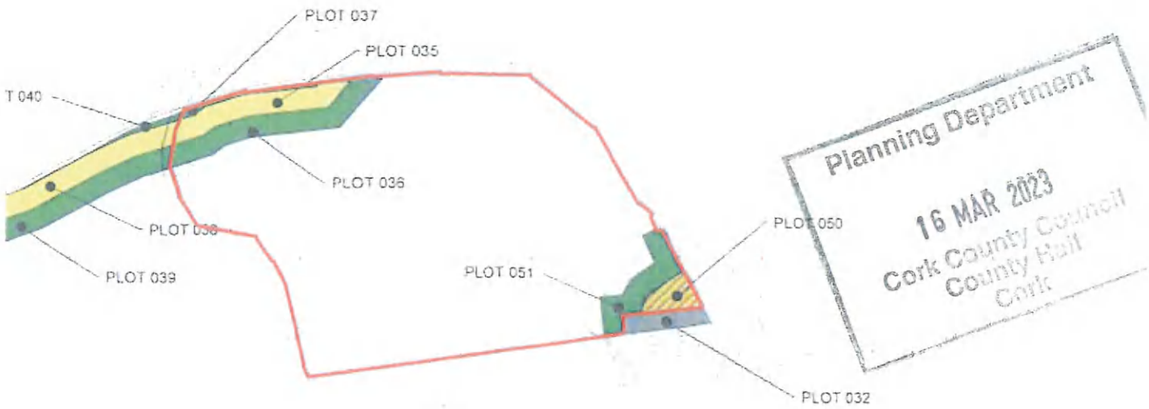


Figure 1.1: Satellite image showing Sheenvale Limited lands at Townparks and Broomfield West, Mill Road, Midleton, County Cork – indicated approx. by the green line boundary. (Source: Google Maps, annotated by Tom Phillips + Associates, March, 2023.)



Figures 1.2: Lands owned by our Client indicated approximately by red line boundary at Townparks, Mill Road, Midleton, County Cork and red line boundary repeated with location of Plots 035, 036, 037, 050, and 051. (Source Figure 1.2: Drawing No. IW/10028315/CPO/04 Rev. A.)

[1] No. 27 Cook Street, Cork, T12 D92F.

[2] 80 Harcourt Street, Dublin 2, D02 F449.

We welcome the proposal to improve the supply and treatment of water in Midleton and our Client wishes to acknowledge support for the proposal in principle. However, we would appreciate if the Board could take the issues outlined in Section 2 into consideration.

In summary, the overall lands are subject to three land takes by two state bodies – one land take permanent; two temporary.

The State bodies – Uisce Éireann (formerly Irish Water) and Coras Iompair Éireann – have not consulted, with the result that each seeks an entrance beside the other onto the public road that materially affects the short term development potential of the Sheenvale Limited Lands

1.2 Recap of events to date

Tom Phillips + Associates lodged an Observation on Thursday, 9 June 2022 (see Appendix A).

Cork County Council issued a *Request for Further Information* (RFI) dated 30 June 2022.

Irish Water (now Uisce Éireann) responded to that RFI on Friday, 9 December 2022

Cork County Council issued a *Notification of Decision to Grant Permission* (Decision made on Monday, 13 February 2023) with 46 No. conditions attached (see Appendix B).

We enclose the fee for an Appeal to An Bord Pleanála is €220.00 together with a copy of the Cork County Council acknowledgement letter dated 9 June 2022

1.3 Review of the Cork County Council Decision on Reg. Ref. 225032

We conducted a review of the Cork Co's. Co's. *Notification of Decision to Grant Permission* (Decision made on Monday, 13 February 2023). The *Notification of Decision to Grant of Permission* came with 46 No. Conditions attached.

We have identified 8 No. Conditions out of the total 46 No. that we now consider are of direct interest to Sheenvale Limited. These are:

1. Condition No. 2 – Boundary Treatment of the Pumping Station Site;
2. Condition No. 3 – Boundary Treatment of the Pumping Station Site;
3. Condition No. 8 – Landscaping of the Pumping Station Site;
4. Condition No. 16 – Repositioning of Utility Poles behind Boundary Wall;
5. Condition No. 17 – Maintenance of the Public Footpaths and Roads;
6. Condition No. 19 – Midleton Flood Relief Scheme (FRS);
7. Condition No. 23 – No interference with any Watercourse; and
8. Condition No. 32 – Boundary Treatment.

1.4 Summary of the 5 No. Grounds of Appeal to Cork County Council dated 9 June 2022

Tom Phillips + Associates previously submitted an Observation to Cork County Council relating to Reg. Ref. 225032 on behalf of the Client noting the following 5 No. concerns:

1. The effect of the proposed development on our Client's residual lands.
2. The accuracy of the zoning assumptions made in the Agents' Coakley O'Neill *Planning Report* of 4 May 2022 versus the subsequent plan (not known at the Agents' time of writing).
3. That the Application documentation reflects the most up-to-date Flood Risk Assessment.
4. That the Application documentation pays due regard to the historic mill race.
5. That the proposed fencing is appropriate given the balance of the lands to be developed.

1.5 What has changed since the Tom Phillips + Associates Appeal dated 9 June 2022?

Since the submission of our Client's Observation (dated 9 June 2022) on the Irish Water (Uisce Éireann) Application (Reg. Ref. 225032) we note that a Strategic Infrastructure Development (SID) proposal involving our Client's land has been registered with An Bord Pleanála. (ABP Reg. Ref. 315087.)

A brief timeline is presented below:

- 7 June 2022: Submission of Iarnród Éireann Observation on the proposed Irish Water Midleton North Pumping Station by Mr. Andrew A. Wilson of CIÉ (Limerick Junction) by email.
- 9 June 2022: Submission of Sheenvale Limited Observation to Cork Co. Co. on the proposed Irish Water Pumping Station by hand.
- 30 June 2022: A *Request for Further Information* was issued by Cork County Council in relation to the Midleton North Pumping Station.

- 8 November 2022: Submission of Coras Iompair Éireann's (CIÉ) Railway Order and accompanying documents to the SID Section of An Bord Pleanála (Reg. Ref. 315087).

- 9 December 2022: Submission of *Response to Request for Further Information* from Irish Water to Cork County Council in relation to the Midleton North Pumping Station (Reg. Ref. 255032). This submission included, *inter alia,* a revised landscaping plan.

- 12 January 2023: Submission of Sheenvale Limited Observation on the Coras Iompair Éireann proposed Railway Order. We have enquired, and note, that no receipt of observation on behalf of nor from Irish Water has been received by An Bord Pleanála.

- 10 February 2023: Submission of Iarnród Éireann Observation on the proposed Irish Water Midleton North Pumping Station by Mr Andrew A. Wilson (Limerick Junction) by email. We note this does not acknowledge the proposed CIÉ application that impacts the same site.

- 13 February 2023: *Notification of Decision to Grant Permission* subject to 46 No. conditions is issued by Cork County Council in relation to the proposed Midleton North Pumping Station (Reg. Ref. 225032).

This timeline suggests that no communication has occurred between the two State Bodies in relation to the respective Applications or in relation to our Client's land.

1.5.1 What are the key changes that have occurred since 9 June 2022

The 1. No. key changes have occurred since 9 June 2022 are:

1. The submission of the Glounthaune-Midleton Twin Track Railway Order (ABP Reg. Ref. 315087), which is classified as a SID by An Bord Pleanála. That Application, if successful, would result in a large site compound on the south-west of our Client's land until 2026 (as stated in the Environmental Impact Assessment Report (EIAR), pp. '6-18'.) Railway Order dated November 2022) and will permanently affect the southern boundary of our Client's land.

   The resultant impact being that Coras Iompair Éireann development freezes of another significant portion of our Client's land.

2.0 APPEALANT'S KEY CAUSES FOR CONCERN

Our Client is supportive in principle of both IW/ UÉ and IR/ CIÉ projects that develop and improve the infrastructure of Midleton and the wider County of Cork. However, we have 3 No. key causes for concern:

1. Our Client is concerned about the disjointed planning outcomes that could arise due to a lack of communication between UÉ (IW) and CIÉ particularly given the proximity to the busy Midleton crossroads.

   In the two Observations submitted by CIÉ to Cork Council in relation to the UÉ (IW) Application (Reg. Ref. 225032), dated 7 June 2022 and 10 February 2023 respectively, we note no mention of the proposed Railway (Glounthaune to Midleton Twin Track) Order 2022 extension project even following its lodgement with An Bord Pleanála on 8 November 2022.

   Similarly, we note no receipt of observation from UÉ in relation to the proposed Railway (Glounthaune to Midleton Twin Track) Order 2022 (ABP Reg. Ref. 315087) despite the two bodies effectively sharing the same site during construction.

2. Our Client is concerned about the implications of two potential site entrances (and subsequent routes through the site) along the narrow and already constrained eastern boundary adjoining the R626 (Mill Road).

   The UÉ project impacts the Upper Mill Road (R626) in a number of ways, which include, *inter alia*, traffic volumes (no estimations presented in Planning Documentation), traffic management parameters (i.e. the partial immobilisation of parts of the road due to construction managed by signalling and traffic lights) and periodic 24 hour works. (Source: Midleton North Pumping Station and Network: Design Process Traffic Management Plan, prepared by Atkins on behalf of Irish Water, March 2022.)

   Furthermore, the CIÉ proposal identifies the Upper Mill Road (R626) as one of several sections of road where the increase in the percentage of HGV traffic percentage increase is significant. (Source: Cork Area Commuter Rail Glounthaune – Midleton Twin Track Environmental Impact Assessment Report Volume 2 prepared by Mott Macdonald in November 2022.) This suggest large traffic volumes along Mill Road during the construction phase, should the Application be successful.

   Our Client is concerned that having two separate site entrances and subsequently routes through the Sheenvale Limited land will seriously injure the ability to use the land during development and thereafter.

   A shared site entrance will mitigate potential traffic issues on the Mill Road. The Section of Mill Road adjoining the Sheenvale lands (which is subject to the UÉ application site and are proposed CIÉ site compounds) is restrained/ constricted by the four-way traffic junction. (with the Northern Relief Road and the Railway Crossing.)

   Furthermore, a shared site entrance will reduce the amount of dirt spread by vehicles associated with construction. This issue is already identified by Condition No. 17 of *the Notification of Decision to Grant Permission* (dated 13 February 2023) Cork Co. Co. Reg. Ref. 255032. Requiring that UÉ maintain the surrounding environment and prevent it from being affected by construction dirt.

   We are happy to facilitate a conversation between UÉ and IÉ to discuss the feasibility of a shared site entrance and route for both set of works. Our Client is willing to facilitate discussions following the RFI response received from UÉ seeking to engage with the landowner to determine bilaterally a detailed landscaping element of the lands at Townparks and Broomfield West.

3.0 CONCLUSION

To recap, our Client is supportive in principle of the UÉ application (Reg. Ref. 225032), however requests any impact be as minimal as possible by way of design and condition.

Through communication between CIÉ and UÉ we believe disjointed planning outcomes can be avoided.

Furthermore, the sharing of a site entrance between the applications (ABP Reg. Ref. 315087 and Cork Co. Co. Reg. Ref. 225032, respectively) retains the development potential of the land and could mitigate, *inter alia*, traffic issues.

Yours faithfully

Tom Phillips
Managing Director
Tom Phillips + Associates

Encl.

ATTACHMENT B.3.5:

SECTION 5 EXEMPTED DEVELOPMENT LETTER FOR WATER ROCK TO CARRIGTWOHILL PIPELINE

Irish Water,
C/O Andrew Millar,
Atkins,
2nd Floor Technology House,
Parkmore Technology Par,
Galway.

16th September, 2021

REF: D/231/21
LOCATION: Waterrock – Carrigtwohill, Co. Cork

RE: DECLARATION OF EXEMPTED DEVELOPMENT UNDER SECTION 5 OF THE PLANNING & DEVELOPMENT ACT 2000

Dear Sir,

On the basis of the information and plans submitted by you on the 1st June & 30th August, 2021 the Planning Authority having considered whether or not the carrying out of the proposed Waterrock to Carrigtwohill rising main constitutes development, and if said works constitutes development, whether or not said works constitutes exempted development under the provisions of Class 58 of the Planning and Development Regulations, 2001 (as amended) has declared that it is **exempted development.**

Reason for Decision

The Planning Authority in considering this referral had particular regard to:

- Class 58 of the Planning and Development Regulations 2001 (as amended)
- Article 9(vii) of the Planning and Development Regulations 2001 (as amended)

And Whereas Cork County Council has concluded that –

- The carrying out of the proposed Waterrock to Carrigtwohill rising main can be deemed to constitute "development" for the purposes of the Act but to constitute "exempted development" as per the provisions of Class 58 of the Planning and Development Regulations 2001 (as amended).

And Now therefore the Planning Authority hereby decides that

The proposed Waterrock – Carrigtwohill rising main **is development and is exempted development.**

NOTE: You are advised to adhere to the mitigation detail submitted as part of Archaeological response received by the Planning Authority on 30th August, 2021.

This exemption does NOT itself empower a person to carry out a development unless that person is legally entitled to do so.

Please note that under Section 5 Subsection 3(a) where a declaration is issued under this section, any person issued with a declaration under subsection 2(a) may, on payment to the Board of such fee as may be prescribed, refer a declaration for review by the Board within 4 weeks of the date of the issuing of the declaration.

Yours faithfully,

_____
KEVIN O' REGAN
SENIOR EXECUTIVE OFFICER
PLANNING DEPARTMENT

In order to process your query, it may be necessary for Cork County Council to collect Personal information from you. Such information will be processed in line with our privacy statement which is available to view at https://www.corkcoco.ie/privacy-statement-cork-county-council

ATTACHMENT B.3.6a:

An Bord Pleanála

PLANNING AND DEVELOPMENT ACTS 2000 to 2009

Cork County Council

APPLICATION by Cork County Council for approval under section 226 of the Planning and Development Act 2000, as amended in accordance with plans and particulars, including an environmental impact statement, lodged with the Board on the 7th day of July, 2008.

PROPOSED DEVELOPMENT: Construction of an extension to an existing wastewater treatment plant at Carrigtohill, County Cork.

DECISION

GRANT approval for the above proposed development in accordance with the said plans and particulars based on the reasons and considerations under and subject to the conditions set out below.

MATTERS CONSIDERED

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.

REASONS AND CONSIDERATIONS

Having considered the submissions and observations made in respect of the proposed development and the Inspector's Report thereon and having regard to

(a) the existing use of portion of the site as a waste water treatment plant and the need to expand the treatment capacity,

(b) the current Cork County Development Plan, the Cork Area Strategic Plan and Special Local Area Plan for Carrigtohill (September 2005),

(c) the requirements of the Urban Wastewater Treatment Directive (91/271/EEC),

(d) the Cork County Sludge Management Plan,

(e) the mitigation measures proposed in the Environmental Impact Statement,

(f) the requirement for a discharge authorisation under the Waste Water Discharge Regulations, 2007

it is considered that, subject to the conditions set out below, the expansion of the wastewater treatment capacity at the Carrigtohill Wastewater Treatment Works would not have significant adverse effects on the environment and would be in accordance with the proper planning and sustainable development of the area.

CONDITIONS

1. Phase two of the proposed works shall be excluded from this approval in order to allow for further assessment of the environmental impacts when phase one (45,000 population equivalent plant capacity) is in operation.

Reason: To protect the aquatic environment and having regard to the letter of the 27th of November, 2009 from the local authority's consulting engineer.

2. Storm tanks with a minimum capacity to ensure compliance with the requirements of the DEHLG publication "Procedures and Criteria in relation to Storm Water Overflows" (1995) shall be installed.

Reason: To protect the aquatic environment.

3. A suitably qualified Archaeologist shall be engaged to carry out monitoring on the pipeline route during excavation.

Reason: To ensure that all archaeologically important items are located and evaluated.

4. The treatment of any watercourses running through the development site shall be agreed with Inland Fisheries Ireland prior to the commencement of construction.

Reason: In the interests of protecting aquatic ecology.

5. A comprehensive Construction Environmental Management Plan shall be prepared prior to commencement of construction in consultation with the Department of Environment, Heritage and Local Government (National Parks and Wildlife Service). This shall include the detailed method statement for the laying of the outfall pipeline as referred to in the last paragraph of the conclusions in the report by the Environmental Consultants submitted to An Bord Pleanála on the 25th day of February, 2010.

Reason: In the interests of protecting habitats.

6. The height of the tallest building shall not exceed 15 metres above existing ground level.

Reason: In the interest of visual amenity.

_____

Member of An Bord Pleanála
duly authorised to authenticate
the seal of the Board.

Dated this day of 2010.

ATTACHMENT B.3.6b:

CARRIGTWOHILL WWTP EXPANSION INSPECTORS REPORT

An Bord Pleanála

Inspector's Report

Board Reference:	04.YA0006
Proposed Development:	Proposed Wastewater Treatment Plant at Carrigtohill, County Cork
Local Authority:	Cork County Council
Inspector:	Daniel O'Connor

PROPOSED WASTE WATER TREATMENT EXTENSION

CARRIGTOHILL SEWERAGE SCHEME

CONTENTS

1.0 STATUTORY REQUIREMENTS

Cork County Council, by letter of 4th July 2008, applied to An Bord Pleanála for approval for the construction of a wastewater treatment plant at Carrigtohill and enclosed three copies of the Environmental Impact Statement. The application was made under Section 226 of the Planning and Development Act 2000 and in accordance with Regulation 118 of the Planning and Development Regulations 2001, Part 10. A copy of the notice published in the Irish Examiner of 20th June 2008 was included with the application.

It is stated that copies of the Environmental Impact Statement were sent in accordance with Section 226 of the Planning and Development Act 2000 (as amended) to the following prescribed bodies on the 26th June 2008: -

- Development Applications Unit (DAU) of the DoEHLG.
- Department of Transport.
- Department of Agriculture, Fisheries and Food (DAFF).
- South-Western Regional Fisheries Board.
- HSE.
- Failte Ireland.
- Environmental Protection Agency.
- Minister for Communications, Energy and Natural Resources.
- The Arts Council.
- National Trust for Ireland.
- Heritage Council.

The requirements of Section 121 of the Planning and Development Regulations (SI 600 of 2001) appeared to have been complied with in relation to the notification of the prescribed bodies.

I carried out a site inspection on 22nd September 2008.

1.1 Responses

Responses were received from the following: -

(a) Development Applications Unit of the DoEHLG.

This response was dated 31st July 2008 and deals with nature conservation, archaeological and architectural recommendations.
In relation to nature conservation, the response notes that part of the proposed treatment works, together with most of the proposed outfall pipeline and the diffuser are located within Great Island Channel candidate SAC (cSAC 1058) which was designated for mudflats and sand-flats and Atlantic salt meadow which are habitats listed in Annex I of the Habitats Directive. The response also notes that the area is located within the Cork Harbour SPA which is designated for species listed in Annex I of the Birds Directive. It states that in addition, the proposed WWTW is located within the Great Island Channel proposed National Heritage Area and maintenance of the conservation value of the site is an objective of the Cork County Development Plan.

The response states that the option of discharging into part of Cork Harbour which is not part of the European site has not been specifically addressed in the EIS, and in particular, the option which would result in discharge to undesignated waters, namely Option 1 has not been fully assessed in environment rather than cost terms.

The DEHLG response states that according to the EIS, it was not likely to have a direct adverse affect on the cSAC. It states however that during construction, the development has potential to indirectly adversely affect the adjacent Slatty Pond mudflats. The response states that the NPWS does not have the resources to attend to the post-planning details of pollution control which should be standard best practice for construction works. The submission notes the statement in the EIS on Page 121 that the low-diversity of species might reflect toxic impacts in the past. It states that an assessment of the effects of tidal re-suspension of potentially toxic heavy metals or organic compounds due to the pipeline mudflat excavation is not given.

The response requested further information to be submitted to the DoEHLG in respect of the following: -

- An assessment of alternative no. 1 which was the piping via the Old Youghal to Carrigrennan WWTP in terms of effects on European Sites.

- An assessment of the adverse effects, if any, of the tidal re-suspension of any potentially toxic heavy metals or organic compounds as a result of the excavation and backfill of the pipeline, based on an analysis of mudflat samples.

- Details of construction works, pollution control procedures and the timing of the works, mitigation measures with a reassessment of the likely affects on the cSAC and SPA.

In relation to archaeological recommendations, the submission notes that mitigation has been identified in the cultural heritage section of the EIS.

The submission recommends that the assessment of the application should take impact on architectural heritage into account.

(b) Submission of the South-Western Regional Fisheries Board – letter dated 24th July 2008.

The submission of SWRFB is that all future works should be shown to be compatible with existing legislation and the principal of sustainability. It notes the proposal to culvert and divert existing on-site streams to facilitate the construction of the new wastewater treatment plant. (Reference Page 53 of the EIS). The submission states that no details are provided as to the habitat value of the streams or their flow characteristics or their role as a linkage to upstream watercourses. The submission states that the SWRFB has a no-net loss policy with respect to the loss of aquatic habitat. It states the Board appreciates the importance of the proposed development, but the potential for a substantial and permanent loss of habitat exists. The Board feels that a detailed study of the habitat value of the affected streams is necessary.

The Board submitted that should permission be granted for the proposed development, a condition should apply as follows:

"The total loss to or impact on fisheries resulting from the works will be quantified within a six month period and appropriate counter-balancing measures will be agreed between the applicant and the South-Western Regional Fisheries Board so that a no-net loss to fisheries occurs as a result of the development. The agreement should be finalised within a 18-month period."

(c) Response of Environmental Protection Agency – reply of 17th December 2008.

The Board sought the observations of the EPA in relation to Regulation 44 of the Wastewater Discharge (Authorisation) Regulations 2007 (No. 7684 of 2007). The EPA response referred to the application on 14th December 2007 by Cork County Council for a discharge Authorisation for Carrigtohill (Ref D0044-01).

Reference to the application on the EPA website does not indicate the Agency views on the application but third party submissions with some quoted responses from the Local Authority would appear to indicate severe difficulties with regular storm overflows and a suggestion that storm overflows quoted in the EIS are seriously understated.

This issue is referred to in the section on Assessment in sections 4.1 and 4.11.

2.0 PROPOSED DEVELOPMENT

2.1 The proposal is to extend the wastewater treatment works at Carrigtohill, County Cork. The proposal involves building effectively an entirely new works to the west of the existing construction which was installed in stages and is currently rated at 8,500 p.e.

The existing loading on the plant is given as 12,000 p.e. and the rated capacity of the proposed works is 45,000 for Stage 1 and 62.000 p.e. for Stage 2.

It is proposed to construct a 1,200 millimetre diameter outfall pipe from the works beyond the discharge point of the existing works to a location in Slatty Waters approximately 800 metres into the channel.

2.2 Construction Details

The EIS gives an indicative layout for the works which includes a covered inlet building of 12 metres in height and 4 SBR tanks for the Phase 1 proposal with associated aeration tanks with stormwater tanks and sludge treatment facilities. (Best illustrated on Figure 11.2 of the EIS).

The proposal is to use Carrigtohill WWTW as a sludge satellite centre.

The outfall pipe, which varies between 1,200 and 1,500 millimetres diameter would discharge at North Point in Slatty Water.

2.3 Design Loadings

The Phase 1 capacity is given as 45,000 p.e. and the Phase 2 at 62,000 p.e. The difference is the allowance for AMGEN which was allocated 54 hectares in February 2006. The catchment assigned in total is 638 hectares and the domestic volume is estimated at 18,434 p.e.

The EIS states that the new WWTP standards would be satisfactory for the Phase 1 situation, but that lower values for BOD and nitrogen would be required for the Phase 2 situation.

The EIS calculates the BOD loading and estimates that this would be 253 kgs/day for Phase 1 and that de-watered sludge would be estimated at 5,749 m^3 per annum. It states the aeration basins would be approximately 20 metres by 40 metres and would be 4.7 metres deep and that the sludge dewatering building would have an associated sludge holding tank of 500 m^3 capacity.

2.4 Alternatives Considered

In relation to alternatives, the EIS notes that a DBO Contract is proposed and therefore the tenderers would be free to offer different processes. However, the indicative layout shows an SBR process. It refers to the Cork Sludge

Management Plan in relation to sludge and notes that the Middleton Works is the hub centre and that provision would be made for accepting and de-watering of imported liquid sludges at Carrigtohill.

The main consideration of alternatives relates to the treatment plant location and this primarily involves whether to treat the effluent at Carrigtohill or to pump it to the larger Carrigrennan WWTW on Little Island.

In relation to the Carrigrennan alternative, three options are outlined for rising mains and these are illustrated in Figure 4.1 of the EIS. The first option would involve using the N25 and would be 6 kilometres in length and would have difficulties in relation to foreshore licence requirements and difficulties with restrictions on using the road corridor as it is a national route. The second option would involve a longer route around the edge of Fota Island and crossing to Carrigrennan from the Marino area. This is stated in the EIS to be the most favoured of the pipeline routes. The third option would involve going along the north of Fota Island and would be 5 kilometres in length. The conclusion in the EIS was that this route was not satisfactory for a pipeline.

The EIS compares the cost estimates to the option of treating at Carrigtohill and concludes that a wastewater treatment plant at Carrigtohill was the most economically advantageous option. It also states that there would be strong strategic reasons for developing a plant at Carrigtohill which would allow the retention of any available capacity at Carrigrennan for Cork City, including areas which have no alternative treatment possibilities.

The conclusion in the EIS is that the alternative of transferring raw sewage to Carrigrennan would offer no significant environmental benefit over the proposed expansion of the plant at Carrigtohill. It also states that the expansion of the plant with the relocation of the outfall to North Point has the least environmental impact of all the alternatives considered and that such expansion could be accommodated at the site without causing undue negative environmental impacts. (It is noted that the EIS does not elaborate on the environmental aspects of the choice and this is commented upon by one of the submissions received).

2.5 Procurement

The proposal is to construct the works using the design, build and operate procedure. However, in the indicative layout, the impacts are evaluated on an SBR process.

2.6 Phasing

The Phase 1 works is given as 45,000 p.e. and the Phase 2 works which would include the major Amgen site would be 62,000 p.e. A comment in the EIS is that if the Amgen site were to require to be developed earlier, that an interim

solution might be required. This is difficult to envisage being capable of being provided as the population equivalent ascribed to Amgen is of a size that would appear to require EIA in its own right as it exceeds 15,000 p.e.

2.7 Development Plan

In Section 5.2.13 of the Development Plan it is included as an objective to carry out a major upgrade of the existing treatment works in a number of locations, including in Carrigtohill. Objectives INF2-5 which refers to sewerage infrastructure needs and INF2-6 which refers to sludge management plan are noted as relevant.

In relation to water quality, Objective ENV1-1 refers to the River Basin Management Plan and states that Cork County Council in partnership with other local authorities would prepare River Basin Management Plans in accordance with the EU Water Framework Directive. Objective ENV2-5 refers to the objective to maintain the conservation value of NHAs and ENV2-6 has the objective to maintain the conservation value of cSAC's, while ENV2-7 has the objective of maintaining the conservation value of SPAs.

Chapter 10 of the Development Plan states that three special local area plans would be completed and one of these includes the Carrigtohill area. Objective LAP 4-2 relates to Carrigtohill where it states it is an objective to carry out a special Local Area Plan to assess the capacity of certain areas in Carrigtohill to accommodate the level of development envisaged by the Cork Area Strategic Plan, having regard in particular to the proximity of the rail line and town centre traffic conditions.

3.0 IMPACTS IDENTIFIED

The impacts as identified in the EIS are follows:

- Water, both surface and groundwater.
- Impacts on air, including noise, odour, aerosols and light.
- Impacts on soils.
- Ecological impacts.
- Socio-economic impacts.
- Material assets.
- Visual impact.
- Cultural heritage.
- Interactions and long-term impacts.

3.1 Impacts relating to Water

The discharge point for the effluent in Slatty Water Estuary (North Point) forms part of SAC No. 1058 known as the Great Island Channel. The existing outfall is at the eastern extremity of Slatty Water, while the proposed outfall at North Point is 800 metres west north-west of that point. The total length of Slatty Water from east to west to the Cobh Railway Line is given as 2,950 metres and is tidal. The EIS states there is a low level of freshwater discharge into Slatty Waters and the main body is saline and tidal. It notes that the dilution and mixing of the water is provided entirely by the ebb and flow of the tides in the vicinity of Harper's Island. The existing discharge to Slatty Water has been in place since 1985 and the indications are that the plant is operating above its capacity and that the effluent does not meet required standards.

Slatty Waters has been designated as sensitive and this indicates a requirement for phosphorous at 2mg/l and for nitrogen at 15mg/l. It is noted that there are no designated bathing areas in the estuary.

The EIS states the model runs indicate an average concentration at the outfall point of 3.13mg/l for 45,000 p.e. It notes that for a Phase 2 development, the concentration of BOD would need to reduce in the effluent from 25 – 20 mg/l. It states that the modelling indicated a peak at Bellevelly Bridge for the combined discharges from Carrigrennan and Carrigtohill of 11 mpn/100mls.

The EIS predicts that the standard of treatment of the wastewater would be substantially improved and that the relocation of the outfall would improve dispersion of the final effluent in Slatty Water. It predicts there would be an elimination of storm water overflows from the WWTW except during exceptionally adverse weather conditions. It is concluded in the EIS that the potential impact of the proposed works on the area is wholly positive.

In relation to groundwater, the karstified nature of the local geology is noted and the importance of preventing sewage entering the groundwater is also noted. The EIS states that in relation to impacts on groundwater, that proper construction and water tightness of pipes would ensure no negative impact on the water quality of the groundwater.

The 2007 Wastewater Discharge (Authorisation) Regulations (SI No.684 of 2007) are relevant to this application and the Local Authority is required to comply with the Regulations with particular reference to Regulation 5, while the Board may not in accordance with Regulation 41(1)(b) subject any permission to conditions which are for the purposes of controlling the wastewater discharge.

However Regulation 42 relates to the transitional period where there is no certificate issued by the EPA The issues are considered in the Assessment section (4.0) of this report.

3.2 Impacts on Air

In relation to **noise,** it is noted that the nearest residences are 230 metres to the west and 250 metres to the south-west of the plant. It states that the two locations of highest ambient noise were due to the proximity of traffic on the R624. The EIS selects a level of 35 dBA for nighttime and 45 dBA for daytime at any house. It states that the noise levels at the plant are likely not to give rise to noise-related complaints.

The EIS states that no malodours could be detected during a site visit in February 2007 from the existing treatment plant. In relation to predicted **odours,** the EIS states a modelling exercise was carried out and this would have been on an indicative design as the DBO contract would contain performance specifications. The EIS lists the various likely odour generators and states that for Phase 1, the 98 percentile odour concentrations would be less than 0.5 odour units/m^3 at 100 metres from the site boundary. It states this compares with an odour concentration of 5 odour units/m^3 which is used as a criterion for determining possible nuisance complaints.

In relation to **aerosols,** it states that aerosols would only present a potential health hazards to anybody within 20 metres of the operations. The EIS states the predicted impact of aerosols to be minimal.

With respect to **light,** the proposal is to provide lighting to illuminate all of the treatment units and access roads and states that any negative impact would be minimised by mitigation. The EIS predicts that there are no climatic affects in the region which would require any special measures to be taken during the design of the project.

The European Communities (Waste Water Treatment) (Prevention of Odours and Noise) Regulations (SI No. 787 of 2005) refer to the responsibilities of

operators of wastewater treatment plants to avoid causing nuisance through odours and noise. There is no provision for control and monitoring of these emissions by the EPA so they will be considered in the chapter on Assessment.

3.3 Impact on Soils

The EIS indicates that soft peats and silts overlie sands and gravels with layers of clays and silts in the vicinity of the plant. It states that construction would constitute the main impact and that it was anticipated that ground levels would be raised prior to the construction due to the high water table. It states that the predicted impact of the proposal would be minimal and that no monitoring of the soil on the site would be required.

3.4 Ecological Impacts

The habitat map which is contained in Appendix C of the EIS indicates the following habitats: -

- Riparian Woodland – WN5
- Marsh CM1/immature woodland – WS2
- Reed and large sedge swamp – FS1
- Amenity grassland – GA2
- Drainage ditch – FW4
- Tree line – WL4

The prediction is that the wet-woodland area (WS2) would be affected by the provision of the new plant and would potentially support a variety of relatively common countryside birds. The EIS states the designation of the site is of local value and the impact of its removal is considered to be of high significance.

In relation to mammals, it states there is no evidence to suggest that otters breed within the area. The prediction is that with mitigation in place, the long-term impact of the proposal would be negligible.

In relation to **aquatic habitats**, the SAC status of the Cork Harbour, Great Island Channel is noted as is the SPA designation. The EIS refers to a number of studies that have been previously carried out and that water quality deterioration has been noted. It states that following the commissioning of Carrigrennan Plant, it was expected that water quality would significantly improve.

The EIS states that on the upper shore, there are **small amounts of algae**. It states the mudflats which are exposed at low tide have a black anoxic layer close to the surface and this it is stated could reflect past toxic impacts or high levels of nutrient enrichment.

It notes that the potential impact is to increase the total nutrient loading over time, despite the improved treatment standard. The prediction is that nutrient levels should remain within parameters set by the EPA for sensitive estuarine and coastal waters. The EIS proposes mitigation measures including: -

- Avoidance of the wintering period for the outfall pipeline construction.
- Reuse of dredged sediments within Slatty Water to prevent them from drying out.
- Containment of silt arising from the treatment plant during the development of the site.
- Monitoring of nutrient levels, macro invertebrates and wintering birds.

The EIS states there would be localised disturbance in the mudflats during construction, but the affected area should recolonise relatively quickly.

3.5 Socio-Economic Impacts

A growth rate of approximately 20% per annum between 2002 and 2006 is recorded for Carrigtohill. It states that current planning permissions include a development for 1,600 dwellings. It states the Cork Area Strategic Plan (CASP) considered Carrigtohill to be one of the significant growth potential areas. It states that arising from that, a special Local Area Plan (SLAP) increased the zoning from 584 – 638 hectares. It states this gives the final design population as 18,433 direct residential with 2,787 p.e. for institutional and 24,008 for industrial wastewater p.e. excluding the 17,777 p.e. for Amgen.

The prediction is that the wastewater treatment plant would enable the sustainable development of Carrigtohill Town and its environs. It states that the plant would have a power requirement of less than 500 kW and that a stand-by generator would be provided in the case of power failure.

In relation to **Transport and Communications,** the prediction would be that there would be two one-way trips per working day for sludge. It states also that the long-term impact of the proposal on local traffic would be low.

3.6 Material Assets

The prediction in the EIS is that the final effluent standards would be consistent with the dual targets of complying with the regulations and operating within the assimilative capacity of Slatty Waters. It notes that most of the existing structures and buildings would be expected to be demolished after completion of the new works.

3.7 Visual Impact

The EIS describes the character of the area as being mixed with industrial and commercial developments to the north and east, agriculture and open water to the south and Slatty Waters and the N25 to the west.

The EIS states that the most likely external finish on the works would be a combination of high quality cladding and plaster block work. Three photomontages are given of the plant and Figure 11.1 gives sections through the site based on the indicative design. Embankments varying between 2 and 6 metres in width and between 1.5 and 2.0 metres in height are proposed above the raised ground level. While the perspective views appear to indicate a height of up to 15 metres, the height of the building is given in Chapter 3 of the EIS as being 12 metres. The EIS predicts that given the topography of the site, the impact of the embankment and combination with screening would reduce the visibility of the site from all sides, but that the taller buildings would remain visible from surrounding areas.

3.8 Cultural Heritage

The specialist study in Appendix D of the EIS states there are 52 recorded monuments surrounding the proposed development area and that there would be a direct impact on two recorded archaeological monuments in the vicinity of the development, but this would be minimal due to previous development in those areas. A further specialist report in Appendix D states that the outfall pipeline is not located within a zone of any recorded archaeological sites, but that there are three known sites in the environs including evidence of prehistoric settlement.

The EIS states that as the mudflats are exposed at low tide, it would be possible that formerly unrecorded sites, including archaeological material could be uncovered during disturbance in the vicinity of the pipeline. Mitigation measures are stated to include: -

- Walking of Slatty Water estuary at low tide with non-intrusive inspection of the inter-tidal zone and riverbed.

- Metal detection survey of the area to be undertaken.

- Qualified archaeologist to require a license for work to be issued by the DoEHLG.

- Provision to be made to facilitate excavation or recording of archaeological material that may be uncovered.

- The prediction in the EIS is that subject to the mitigation strategy as proposed, the development would not have any impact on the archaeology of the area.

3.9 Interactions and Long-Term Impacts

In the EIS a brief summary of the impacts are given: -

- Enhanced water quality and reduce public health risk arising from movement of the outfall point.

- Facility would significantly enhance the town's ability to attract industrial and residential developments.

- Noise and odour impacts kept within the works boundary.

- Visual impact would be minimised.

- Natural habitat disruption would be temporary.

- Limited increase in traffic in construction period.

The EIS states that it had demonstrated that the works would have a positive impact on the environment and that mitigation measures would confine impacts to accepted limits and that the mitigated impacts would not produce a cumulative impact of any greater significance.

4.0 ASSESSMENT

The assessment examines the various impacts identified in the EIS. As the proposal is for an expansion of the treatment works, certain impacts would be less significant than for a greenfield location. The issues examined include the following: -

- Impacts on water, with particular reference to the assimilative capacity of Slatty Water.
- Impact on designated areas.
- Cultural heritage impacts.
- Landscape and visual impacts.
- Socio-economic and material assets.
- Odour, noise and climate.
- Soils.
- Traffic.
- Interactions.

4.1 Impacts on Water

The environmental impact statement indicates there would be an improvement in relation to impacts on the receiving water arising from the operation of the new works and the alteration of the discharge point. However, it also acknowledges that the nutrient loading on the receiving waters would increase with an expanded works. It is noted that the current loading on the plant is estimated to be approaching 12,000 p.e. and that the Phase 1 proposal would represent an almost 4-fold increase in loading of the works. It is accepted that the new outfall point, located 800 metres further into the estuary would improve the position regarding impact on receiving waters.

The modelling exercise is noted and also the stated need to reduce nitrogen and BOD concentrations in the Phase 2 effluent in order to achieve satisfactory dilutions. It is considered that the case for any further expansion beyond Phase 1 would need to be made in more detail before being approved. Therefore it is considered that any approval should be restricted to the Phase 1 works or 45,000 p.e.

The tidal nature of the estuary is noted and based on the Environmental Impact Statement and the modelling exercise carried out, it is considered that as far as

assimilative capacity is concerned, the proposed discharge would not result in significant impacts on the water environment.

The consideration of alternatives has a bearing on a number of items and in relation to the impact on Slatty Water Estuary in isolation, the transfer of the raw sewage in operating conditions to Carrigrennan would result in an overall improvement. However the loading arising from the town of Carrigtohill if treated in Carrigrennan would need to be discharged into Cork Harbour so that the loading on the main channel would be increased. Consideration would need to be given to storm conditions where there would be a need to have storm tanks in Carrigtohill and given that the Slatty Water Estuary is designated as sensitive water, it would be probable that provision for pumping flows of 6 times dry weather flow (dwf) or more might require to be provided.

The Wastewater Discharge Regulations (SI 684 of 2007) require the Water Services Authority to obtain a certificate from the EPA. (see Regulation 41) and dates are set out for applications to be made for a licence in the case of existing waste water treatment plants. Cork County Council applied for a discharge licence in respect of the extended works on 14 Dec 2007 and the reference number indicated in the EPA website is D0044-01.

Examination of correspondence on the EPA website relating to licence application D0044-01 suggests that there is considerably more flow passing through the existing works and it is not clear if that is a result of storm flows or an underestimate of the total foul flows to the works. In either event it would appear to reinforce the choice of Tullagreen as the appropriate treatment location as it would be more effective to provide extra storm storage at the site rather than have to provide additional pumping if the Carrigrenan option were chosen.

Regulation 42 refers to a transitional period and this applies in the case of this application. Therefore conditions are recommended relating to the control of waste water discharged. It is noted that the EIS specifies levels for BOD, COD, suspended solids, Nitrogen and Phosphorus and these comply with the UWWT Regulations and the Phosphorus Regulations and are considered appropriate. A condition is also recommended in relation to storm tanks although the appropriate size could only be determined after consideration of the works required in relation to storm overflows on the system which would be addressed as part of the WWDA licence procedure and for which no direct conditions would appear to be applicable under the transition arrangements.

It is considered that the current proposal relating to the Phase 1 proposal is satisfactory and would not give rise to significant adverse affects when compared with the option of pumping to the Carrigrennan Plant. It is considered that the Phase 2 proposals could impact on water quality and a condition is recommended to limit the approval to the phase 1 population equivalent

4.2 Designated Areas

The designated areas include the Great Island Channel SAC Site 001058, NHA and SPA. The current discharge from Carrigtohill WWTW is to the cSAC at a point where dilution would not be considered favourable. (cSAC Sitecode 001058 –Great Island Channel) The proposed extended outfall pipe is considered to be a significant improvement as regards location.

The modelling exercise carried out covers both a stand alone proposal and the combination with the larger Cork City Plant in Carrigrennan and examines parameters including BOD, coliforms, Ammonia, Phosphorus and Nitrogen.
It is noted that the Annex I habitats listed in sitecode 001058 for Great Island Channel cSAC are *sheltered tidal sand and mudflats and Atlantic salt meadows.*

Having regard to the improved dilution and mixing available at the proposed outfall at North Point over the existing outfall at Slatty Bridge, the improved quality of effluent and the results of the modelling exercise carried out, it is considered that the effect of the proposed discharge up to 45,000 p.e. to the specified standards in combination with the Carrigrennan discharge would not be likely to have significant environmental effect. Therefore in accordance with Article 6(3) of the habitats Directive there is not a requirement to carry out appropriate assessment in this instance.

The levels of the various discharge parameters would be subject to any condition in a certificate of discharge granted by EPA as noted in para.4.1 above. Regulation 42 applies in this instance.

4.3 Ecological Impacts

The impacts as described include the direct impact of the construction of the wastewater treatment plant on an enlarged site and the potential impacts on the mudflats within Slatty Waters.

It is considered that the impacts on the ecology, both flora and fauna at the extended treatment works would be acceptable and the issue of the closing in of one drainage ditch is referred to later when considering the submission of the SWRFB.

In relation to the mudflats, and noting the comment of the DoEHLG in relation to the disturbance, it is considered that the mitigation measures put forward by the applicants, subject to condition, are satisfactory. (see 4.11 (b) below)

4.4 Impacts on Air including Odour, Climate and Noise

As the proposed procurement method is by DBO, the estimation of impacts in relation to odour and to noise is based on an indicative layout and a presumption that standards can be set which would give rise to acceptable noise and odour levels. The levels specified in the EIS for both odour and

noise are considered satisfactory and if they are achieved, it is considered there would be no significant adverse impacts on the environment arising.

The requirements of SI No. 787 of 2005 are noted and a condition regarding odour is recommended. As the noise levels are clearly specified in the EIS, it is not considered necessary to recommend a condition in that regard.

In relation to climate, it is considered that the works would not contribute significantly to any climatic affect.

4.5 Cultural Heritage Impacts

The report on cultural heritage is concentrated on archaeological impacts and the prediction is that there would be no significant impacts on any recorded monument. Given the mitigation measures proposed for the site in relation to removal of topsoil and also in relation to the walkover survey and metal detection on the pipeline route, it is considered that with mitigation, there would not be significant impacts on the environment. Particular note is taken of the area of the mudflats and a condition is recommended in relation to l monitoring which is intended to address issues raised by DEHLG.

4.6 Landscape and Visual Impacts

From an assessment point of view, the use of DBO Contract Procurement makes matters difficult in relation to evaluating landscape and visual impacts. The landscape and visual chapter in the EIS does not refer to the height of buildings as the section through the works is not dimensioned. The only reference in the EIS to building heights is in the project description which states that the height of the intake building would be 12 metres. In view of the fact that the ground level is likely to be increased by a matter of 1 to 2 metres, the effects could therefore be that the inlet building could be as much as 14 – 15 metres height above existing ground level. While not stated specifically in the EIS, it would appear that the inlet building is the highest building proposed and therefore it would appear that the proposal is for buildings not exceeding 15 metres above existing ground level.

At 15 metres, this building would be noticeably higher than the average building in a standard industrial estate and would, as stated in the EIS, be visible above the proposed planting. However the proposed site location, and the potential for screening at the site, together with the proximity of industrial type buildings is considered acceptable. The photomontages given in the EIS indicate an acceptable situation. It is therefore considered that from a landscape and visual aspect, the proposed development would not have significant adverse impacts.

4.7 Socio-Economic Impacts

The EIS prediction is that the expansion of the WWTW would facilitate ongoing industrial, commercial and residential development and would be

beneficial. While the provision of a wastewater treatment works is considered as a necessary requirement for treating sewage effluent, it would not appear to have a positive impact on a socio-economic basis. The economics of the particular plant may be relevant to be considered under this heading.

The examination of alternatives which would involve pumping all of the effluent to Carrigrennan would have a long-term additional pumping cost which would not be incurred with the works in Carrigtohill. It might be possible that economies of scale would indicate that the treatment process could be carried out more expeditiously and efficiently at Carrigrennan, but there would be a need to pump storm flows of 6 times dwf during storm events also. It would appear therefore that the option of locating the treatment plant at Carrigtohill is more economical from an pumping point of view.

It is also noted in the EIS that the allocated capacity for parts of Cork City which could not be catered for otherwise, needs to be reserved at Carrigrennan. Therefore the strategic reason for locating the plant at Carrigtohill is accepted and it is considered that the impacts in relation to the overall sewage disposal regime in the Cork area would be improved by the separate treatment of Carrigtohill from the Carrigrennan catchment.

4.8 Impact on soils

Based on the Environmental Impact Statement and the information supplied, it is considered that there would not be significant adverse impacts on soils.

4.9 Water Framework Directive

The interaction of the proposed discharge and of the existing plant discharge should be considered in the context of the Draft River Basin Management Plan for the South West River Basin District published on 22 December 2008. Other discharges and abstractions, both municipal and industrial are relevant to the Management Plan which is to be finalised following the period of consultation which extends to June 2009. It is considered that while the proposals should ideally be in accordance with an overall plan, that the issues regarding choice of outfall location and choice of location for the extended WWTP have been set out in sufficient detail to be satisfied that the proposals should fit in with the requirements of a River Basin Management Plan and there would be no advantage in awaiting the publication of the Management Plan before assessing the application

4.10 Material Assets including Traffic

The impacts in relation to material assets are considered to be neutral and the traffic impacts are very small. It is considered that neither impact would be regarded as significant.

4.11 Interactions

From the examination of the documents supplied, it is not considered that any interactions would give rise to any cumulative significant impact.

4.12 Submissions

(a) South Western Regional Fisheries Board
The SWRFB notes the proposal to pipe the stream running north-south through site. Consultation with the Fisheries Board is requested to assess the best way to minimise impact. The action recommended by the Fisheries Board is considered reasonable and a condition is recommended in this regard.

(b) Department of Environment, Heritage and Local Government.
The submission from the Development applications Unit states the option of discharging into part of Cork Harbour which is not a European Site had not been specifically addressed in the EIS and the option of discharging to Carrigrenan WWTW had not been fully assessed in environmental, rather than cost terms. It is considered that while the conclusions reached in the EIS mainly refer to cost the environmental aspects are established in the EIS. The fact that an overloaded works currently discharges to an inferior outfall location than that proposed is noted.

While the total loading would be greater, the modelling exercise carried out indicates an acceptable level of impact at the phase 1 or 45,000 p.e level. The energy costs of transferring to Carrigrenan would likely be greater and there would appear to be a need for stormwater tanks on the Carrigtohill sewerage system with a pumping requirement in excess of 3 times dwf if the Carrigrenan option were chosen.

The EIS indicates (p83) that the Fota Bridge area, which is in the SAC, is impacted on a rising tide by the discharge from Carrigrenan although the discharge point is outside the SAC and also that the Carrigtohill proposed discharge would impact on a falling tide and that the impacts were not cumulative.

It is considered that adequate examination of alternatives from an environmental perspective has been carried out.

The submission also raises the question of possible re-suspension of potentially toxic heavy metals or organic compounds as a result of excavation and backfill of the pipeline. The note in the EIS which gives rise to the concern would appear to be a reference to low species diversity and attributing this fact to possible previous toxic influences or high nutrients. It would appear that examination and testing of the excavated material from the mudfdlats would indicate its suitability for re-use or the need for its removal.

It also states that insufficient details of construction works pollution control are given in the EIS. In this regard it is noted that surface water pipeline construction into Slatty Waters was being carried out in Autumn 2008 and that the laying of a foul sewer effluent pipeline would have the same impact as the construction operation would be similar. Sampling of the mudflats has been carried out and referred to in the EIS. It is considered that a Construction Environmental Impact Plan should be prepared to address the issue and ensure that consultation with the DEHLG is carried out prior to construction.

It is considered that the archaeological comments of DEHLG are adequately addressed in the Mitigation measures in the EIS. While the EIS does not specifically have a reference to architectural issues, this would appear to be covered in the context of Cultural Heritage in chapter 10 of the EIS and also in Appendix D in the references to historical features.

(c) Environmental Protection Agency

While the EPA reply does not comment on the application, it refers to the Discharge Licence application D0044-01. From an examination of the available literature and submissions it would appear that there is a difficulty with overflows in the existing plant. These overflows may arise from normal overloading or from misconnected stormwater flows. The EIS refers to the treatment plant and outfall and does not supply information on overflows in the system, but this aspect of the system is a central part of the WWDA licencing. Accordingly a condition is recommended which seeks to ensure that the necessary storm water works are constructed arising from any approval under this process.

5.0 CONCLUSION

A major issue is the choice of alternatives and it is considered that the examination of alternatives has been appropriately carried out and the chosen scheme, namely expanding the treatment capacity at Carrigtohill and re-locating the outfall point is acceptable and would not give rise to significant impacts on the Environment. It is also considered that the development would be in accordance with the proper planning and sustainable development of the area. Regulation 42 of the Wastewater Discharge Regulations (2007) applies. The quality standards proposed in the EIS are considered appropriate.

The use of DBO procurement means that the estimation of impacts relating to noise and odour must be carried out based on the assumption that chosen emission rates are achievable although the technology has not been determined. Visual impacts are similarly difficult to accurately predict under DBO but in this instance, based on the location of the plant and the information given in the EIS including photomontages, it is considered that the development would not have a significant adverse visual impact.

6.0 RECOMMENDATION

I recommend approval by An Bord Pleanála, subject to the conditions outlined below, of the construction of a wastewater treatment works at Tullagreen, Carigtohill, Co Cork and the construction of a new outfall pipeline to a location known as North Point in Slatty Water Estuary, Co Cork.

Reasons and Considerations

Having regard to the following :-

- The existing use of portion of the site
- The Cork County Development Plan 2003,
- Cork Area Strategic Plan
- Special Local Area Plan for Carrigtohill (September 2005)
- The requirements of the Urban Wastewater Treatment Directive (91/271/EEC)
- Cork County Sludge Management Plan
- Mitigation Measures proposed in the Environmental Impact Statement

It is considered that the expansion of the wastewater treatment capacity at the Carrigtohill Wastewater Treatment Works will not have significant adverse effects on the environment and would be in accordance with the proper planning and sustainable development of the area.

Conditions

1 Phase two of the proposed works shall be excluded from this approval in order to allow for further assessment of the environmental impacts when phase one (45,000 p.e. plant capacity) is in operation.

Reason: To protect the aquatic environment

2. The following effluent discharge standards shall be achieved

Biochemical Oxygen Demand	25 mg / l	on a 95 percentile basis
Chemical Oxygen Demand	125 mg /l	on a 95 percentile basis
Suspended Solids	35 mg / l	
Total Nitrogen	15 mg / l	
Total phosphorus	1 mg / l (as P)	

Reason: To protect the aquatic environment

3. An odour limit of 3.0 Odour Units per cubic metre shall be achieved on a 98 percentile basis at the site boundaries.

Reason: To mitigate odour impacts

4. Storm tanks with a minimum capacity to ensure compliance with the requirements of the DEHLG publication "Procedures and Criteria in relation to Storm Water Overflows" (1995) shall be installed.

Reason: To protect the aquatic environment.

5. A suitably qualified Archaeologist shall be engaged to carry out monitoring on the pipeline route during excavation.

Reason: To ensure that all archaeologically important items are located and evaluated.

6. The treatment of any watercourses running through the development site shall be agreed prior to construction with the South Western Regional Fisheries Board.

Reason: In the interests of protecting aquatic ecology.

7. A comprehensive Construction Environmental Management Plan shall be prepared prior to commencement of construction. The details of reinstatement of excavated materials on the pipeline route shall be agreed with the Department of Environment, Heritage and Local Government (Parks and Wildlife Service).

Reason: In the interests of protecting habitats.

8. The height of the tallest building shall not exceed 15 metres above existing ground level.

Reason: In the interests of visual amenity.

_____

D.G. O'Connor
Engineer Gd I

20th January 2009.

APPENDIX 1

ENVIRONMENTAL IMPACT STATEMENT

The Environmental Impact Statement is in one bound volume and comprises the following: -

- Non-Technical Summary – 25 pages of text.
- Main EIS – 140 pages.
- Appendices.

1.0 Non-Technical Summary

The NTS states that Cork County Council proposes to extend the existing wastewater treatment works at Carrigtohill. It states the existing plant is located at Tullagreen to the south of Carrigtohill and has a design capacity of 8,500 p.e. It states the current load is estimated to be 12,000 p.e. and reflects a doubling of the population of Carrigtohill in the last four years. It states that the plant capacity would need to be increased 45,000 p.e. for Phase 1 and 62,000 p.e. for Phase 2 to cater for the longer term development of the town.

The NTS states the wastewater would be treated to a high standard to the meet the requirements of the UWWT Directive, the Phosphorous Regulations (SI No. 254 of 1998) and the requirements arising from the designation as sensitive water in a report from EPA. It states the effluent would be discharged via an outfall pipe at North Point, approximately 800 metres west of the existing outfall point.

The NTS refers to the need for additional wastewater treatment capacity and refers to the Urban Wastewater Treatment Directive which requires populations greater than 10,000 to be subject to secondary treatment by the 31st December 2005. It states the regulations require the total phosphorous concentration in the treated effluent should not exceed to 2mg/l. It notes the current design capacity is 8,500 p.e. and that the medium requirement would be for 45,000 p.e. and a long-term for 62,000 p.e. It states the wastewater treatment plants would treat flows arising to a tertiary standard, including phosphorous removal. It states that a much higher effluent standard is required as part of the upgrading process.

The location of the existing plant is indicated in Figure 1.1a. It notes the existing plant configuration which includes grit removal and a square aeration tank from where the effluent flows to a secondary clarifier. It notes that leachate from a landfill is tankered to the site and pumped into an oxidation ditch. The EIS refers to a picket fence thickener and belt press which are used to de-water sludge before removing it to the Rossmore Landfill.

The NTS outlines a typical design which would include preliminary treatment, secondary treatment involving SBR units which would include nitrogen removal. The indicative layout includes 12 rapid sand filters of 4 metres diameter with a filter bed height of 2 metres. It notes that sludge de-watering would be carried out and equipment would include a 15 x 30 metre building, 500 m^3 storage capacity sludge holding tank and a buffer tank of 500 m^3 storage.

The NTS states the final works layout could not be specified as the process of procurement is by design build and operate.

On Page 10, the NTS describes the various stages of a typical wastewater treatment plant and states that under the proposed indicative design, the treated wastewater would be discharged to Slatty Waters via an 800 metre long outfall pipe. The NTS repeats that the layout on which the EIS is based is indicative only and that contractor could put forward alternatives based on variations in the secondary or tertiary treatment process. On Page 8 of the NTS, it is noted that the available site is limited in area and that the footprint of SBR tanks are substantially smaller than that of conventional activated sludge system.

The NTS states that alternative designs and layout would be only considered if the impacts were equal to those outlined in the EIS with positive impacts of greater significance and negative impacts of lesser significance.

The NTS refers to alternative treatment processes and includes a number of technologies including the use of reed beds. It notes that the very high space requirement for reed beds means that the process can be discounted as an alternative to the indicative design described.

The NTS states that an alternative considered was to transfer the sewage to Carrigrenan and treat it at that location. It looked at two different sub options which were to use the existing WWTP in Carrigrenan or construct a new Phase at Carrigrenan. It looks at different routes along the N25, the Old Youghal Road and through Fota Island. It states the preferred route is via the Old Youghal Road via Glounthane. It states that based on the whole life costs for both alternatives, the option to construct the WWTP at Carrigtohill offered better value for money.

The impacts are described as follows: -

- **Water: -** The existing treatment works discharges into Slatty Waters which forms the divide between Fota Island and the mainland to the west of Carrigtohill. It states the body of water is approximately 150 – 250 metres in width and 2,950 metres in length from Slatty Bridge to the railway bridge near Harper's Island. It states the main body of water is saline and tidal and the dilution in mixing of the water is provided entirely by the ebb and flow of the tides.

Table 1.1 gives the design standards for the effluent which for Phase 2 is 20mg/l for BOD with 25mg/l in Phase 1. A lower standard to nitrogen in Phase 2 at 10mg/l is proposed, while suspended solids at 35 and phosphorous at 1mg/l are same for both Phases 1 and 2.

It is stated the new discharge point would result in increased dispersion of the effluent and nutrient levels should remain within the parameters set by the EPA for Estuarine and Coastal Waters.

- **Air: -** The WWTP site is approximately 230 metres from the nearest residential unit and it is stated that any potential impacts on the local community would be mitigated to an acceptable level.

- **Noise: -** The noise study identified the dominant noise in the area as from the N25 and R624 roads. Noise level criteria at the nearest house were set at 50 dBA in daytime and 35 dBA at nighttime.

- **Odour: -** The NTS states that the probable impacts of odour were assessed based on the indicative design. Prediction is that the level could be kept below that which was perceptible provided mitigation measures were put in place.

- **Aerosols:** - Indicated that the requirement would be for fine bubble diffused air systems or surface aerators with additional measures to prevent the production of aerosols.

- **Light:** - Positioning of lighting columns to be carefully chosen and screening with trees and shrubs would be used to minimise over-spill of light outside the site boundary.

- **Climate:** - Predicted that there would be no affects on climate resulting from the new works.

- **Soils:** - Groundwater observations were between 0.2 metres to 2.8 metres below ground level and probably tidal in the area. Ground investigation indicated variable deposits of medium dense sands and gravels. It is anticipated that piled foundations would be required to support certain units. It also states that anchors may be required to hold down tanks against flotation when empty.

- **Land-based Habitats: -** Predicted that the temporary disruption to bird activity during construction could be offset by landscaping.

- **Aquatic Habitats: -** Slatty Water is a small tidal inlet and does not have significant value in terms of larger and more commercial fish species. The NTS states that it supports mullet, bass, flounder, common eel, gobies and blenny species.

- **Socio-Economic Impacts: -** The NTS states the upgrading of the works would be a major part of infrastructure and an essential driver of growth in the region.

- **Transport and Communications: -** Predicted that there would not be a significant traffic effect.

- **Sludge, Screenings and Grit Disposal: -** Provision to be made for accepting and de-watering imported liquid sludges from small wastewater treatment plants to minimise transportation costs to the hub centre in Middleton.

- **Material Assets: -** The site is already owned by Cork County Council.

- **Visual Impacts: -** The general character of the area is stated to be mixed with industrial and commercial developments to the north and the east and agricultural and open water to the south with Slatty Waters and the N25 to the west.

  Tanks are expected to be no more than 5.0 metres above existing ground levels with some preliminary treatment buildings up to 15 metres in height. The NTS states that it is expected that the taller buildings would remain visible because of the general topography of the area. It states that with proper care and maintenance that plant, shrubs and trees would become more established and enhances the visual appearance of the area generally.

- **Cultural Heritage: -** The NTS states the impact of the proposed outfall pipeline on the archaeological landscape of the area was assessed and it notes three recorded monuments surrounding the proposed development area. It states the existing WWTP and the proposed area was originally a boggy greenfield site.

- **Recommendations/Summary: -** The NTS states the upgrading of the sewage treatment works at Carrigtohill would improve the standard of treatment and allow greater dispersion of the treated wastewater. It states that failure to provide a suitable treatment facility would restrict growth in the town and in the county as a whole. It recommends that Cork County Council should be proceed with the proposal to upgrade the works as outlined and it should be located on land adjacent to the existing WWTP.

2.0 MAIN VOLUME OF EIS – INTRODUCTION

The EIS stresses the principle of sustainability and states that the proposed upgrading of the wastewater treatment works at Carrigtohill is a necessary step in the development of the area and the provision of the infrastructure required to achieve growth on a sustainable basis. It refers to the various statutory

instruments relating to Planning and Development and Environment Impact Assessment. It notes the EIS was prepared by T. J. O'Connor & Associates in conjunction with DHV Water (BV) with input from specialist consultants: -

- Bord na Mona – noise study.
- Envirocon Limited – odour study.
- Dixon – Brosnan Limited – flora and fauna studies.
- Archaeological Services Unit.
- Harbour Modelling – HMRC.

3.0 DESCRIPTION OF THE PROPOSED WORKS

The proposed works is described in Chapter 3 of the EIS from pages 29 – 64.

By way introduction, it is stated that the current resident population in Carrigtohill is given as 2,782 persons in the most recent census. It refers to a commitment to re-open the Cork – Middleton Rail Service and to the zoning of 90 hectares including 60 hectares outside the current development boundary. It states the Carrigtohill catchment serviced area is 554 hectares, but refers to changes made in 2005 and 2006 which added 40 hectares in 2005 and a further 54 hectares in December 2006 to accommodate the AMGEN Development. It shows the development boundary in Figure 3.2.

The history of the wastewater treatment plant is given which commenced with a preliminary report in 1976. The existing design capacity is stated to be 8,500 p.e. It notes that the village and surrounding area are at a low level relative to sea level and that the existing collection system is a partially combined system. It states that using the information available regarding zoning, that the population of a fully developed catchment would be in the region of 18,433 persons, while the population equivalent of the area of the special local area plan would be 45,000. It refers to Amgen, a multinational pharmaceutical company with proposals to construct the facility with a potential for 2,000 new jobs and would have a final process effluent discharge of 4,000 m^3/day. It states that this would bring the population equivalent to 62,000 by 2030. Figure 3.1 gives the location of the existing works.

The EIS refers to the options of pumping wastewater to the Carrigrenan WWTP in Little Island or to construct a complete new works at Carrigtohill. It refers to Section 4 of the EIS for further consideration of the options.

Section 3.2 describes the Carrigtohill Main Drainage Scheme with pumping stations referred to as the town pumping station on the Old Cobh Road and the IDA pumping station at the east of the main entrance to the IDA Development. It notes that areas not connected to the existing foul system

include a business park located to the south of the Old Youghal Carpet Site, the area north of the railway line, houses to the south of a junction of Main Street and the road north to Wyse's Bridge. Commercial units to the east of Main Street are also not connected and the areas involved use septic tanks to treat the effluent.

The existing wastewater treatment plant dates back to 1978 and is described as being on a raised site south of the town with access from the Old Cobh Road from Slatty Bridge. It states the plant was originally designed to cater for population equivalent of 5,000 and included an oxidation ditch as the main treatment process. It states that in 1990, it was extended to give a capacity of 8,500 p.e. and the additions included a secondary settlement tank and the conversion a balancing tank to aeration tank. It notes that storage tanks were added on the western side to store leachate from the landfill site and Rossmore. Figure 3.5a indicates the layout of the existing plant with the provisional upgrade indicated.

The EIS describes the operation of the existing plant, including the liquid stream and the sludge stream. It notes that in relation to odour, a low level was present at the inlet works and the sludge de-watering building on a previous study.

The EIS states that dry weather flow is of the order of 725m^3/day with storm flow rates recorded up to 4,400 recorded. It states that the large storm flows are due in part to surface water draining from an older section of the Carrigtohill Bypass (N25). It states the typical flow rates from the IDA Industrial Estate are 330m^3/day without flows from the plant given as 837m^3/day. It states that typical overflows are 53m^3/day. The EIS gives details of influent concentrations as measured in Table 3.1.

Section 3.4.1 of the EIS refers to historic of population trends and states that the Carrigtohill DED would be expected to be 4,4000 by the year 2020. Table 3.2 sets out the population of Carrigtohill village and the DED comparing with Cork County and the State from 1971 – 2002.

The EIS comments that when the improvements in transport infrastructure are completed, it was expected that Carrigtohill would have a rapid population growth over the next 20 years. It refers to the Cork Area Strategic Plan (CASP) which considers the Carrigtohill area to be an area with significant growth potential for both residential and industrial/enterprise developments.

Table 3.3 gives details of the breakdown on households and population for the DED and the town and Table 3.4 gives details of commercial discharges. Table 3.5 gives details of institutional wastewater and notes that over 33.9% of the entire development area has been zoned as industrial. The pumping stations are indicated in photographs 3.7 and 3.8. Table 3.6 details industrial wastewater and estimates 5,268m^3/day for additional industry outside the development lands with a further 4,000m^3 designated to the Amgen site. It

states that the additional hydraulic loading for industry would be an equivalent of 17,778 p.e. and the industrial flow would be 9,270m^3/day.

Table 3.7 gives details of effluent concentrations for 2006 and 2007 and this indicates average concentrations for 2007 of 31mg/l for BOD with suspended solids at 187mg/l. It is noted that the maximum concentration of suspended solids is given as 72 for the year 2007 which indicates a typographical error in relation to the average concentration.

Table 3.8 gives the summary of current loadings and Table 3.9 estimates typical effluent characteristics.

Future flows and loads are described in Section 3.5 and reference is made to the CASP which put forward the concept of Metropolitan Cork. It states the design residential figure could be based on the CASP recommendations or the 2003 Cork County Development Plan as amended by the Special Local Area Plan for Carrigtohill of September 2005. It states most of the proposed residential lands zoned in 2003 are being currently developed, so that a large percentage of the projected population of 18,433 could be reached in the short to medium term.

In calculating future commercial loads, the EIS states that a typical ratio would be 1 p.e. commercial to 5 p.e. domestic. It refers to the maximum growth scenario and quotes a domestic population of 4,147 p.e. This would appear to be a typographical error, as Table 3.11 gives the domestic volume as 4,147 m^3/day and the p.e. is 18,434. This raises questions about the estimate for commercial wastewater as the figure of 276 m^3/day given in Table 3.11 appears to be low in the context of the ratio quoted. (However, in the context of the overall volumes, this potential discrepancy is not considered significant).

The EIS states that there would be no significant increase in institutional load and in relation to industrial loads, it separates the allowance for the additional 54 hectares set aside as part of the Amgen Complex in February 2006.

Table 3.10 gives the estimated wastewater flow rates and Table 3.11 gives the design loadings. This indicates that with the Amgen site included, the population equivalent would be 62,073 of which the Amgen site would account for 17,778. It states that the design p.e. would arise from an area of the catchment of 638 hectares.

Section 3.6 describes the site for the proposed works and refers to the high tension power cables passing over the western side of the existing site. It notes also that a gas main passes adjacent to the eastern boundary of the site. It states that the local authority owns land immediately adjacent to the western boundary of the existing site which could be used for the extension.

The EIS states that it could be concluded that the treatment plant site would be within the floodplain when global warming issues are taken into account. It

states that the increasing of the ground level and the construction of an embankment around the site including the enclosing of one of the streams flowing through the site are possible options.

The EIS states that the proposal is to construct a plant with a capacity of 45,000 p.e. and that additional SBR capacity for a Phase 2 development would be constructed adjacent to the Phase 1 tanks to bring the capacity of 62,000 p.e. It states the reasons for constructing the plant adjacent to the existing one include the ability to use some of the assets on the current site, that wastewater treatment is already an established land use with sewage routed to the site and the strategic reasons for developing a separate wastewater treatment plant. It also notes that Carrigtohill WWTW would be used as a sludge satellite centre and also for treating leachate from the Rossmore Landfill Site. It notes also that long rising mains would be required if an alternative site were to be used.

Table 3.12 sets out the proposed discharge standards which indicate a reduction of BOD and nitrogen for Phase 2 against the Phase 1 values, while values for suspended solids and phosphorous are the same for both Phases. It states that satisfactory dispersion qualities have been demonstrated at North Point by the hydrodynamic model. It notes that the UWWTP sets the standard of 2 mg/l for phosphorous in the final effluent, but that would be excessive in terms of the resulting concentration within the receiving water and a concentration of 1 mg/l was taken for both the neap and spring tide cycles. The EIS states that taking a discharge of 1 mg/l of phosphorous, the average concentration in the receiving water would be 0.031 mg/l at spring tide, but 0.078 at neap tide. It notes that the recommended value is 0.06 mg/l and that as a result of dispersion; the level in the receiving waters would reduce to 0.029 mg/l before the water reached Harper's Island which is approximately 900 metres downstream of the outfall point. The EIS notes that the phosphorous discharge from the proposed works would be less that 3% of the total phosphorous in Lough Mahon. It states that the cost of providing phosphorous removal below 1 mg/l rises disproportionately when compared to the benefits in terms of the usage of resources.

Section 3.7.3 describes the BOD levels and states that at the final design capacity, a discharge standard of 20 mg/l would be required to given a concentration of 2.03 mg/l in the receiving water.

The requirement to achieve standards in excess of those required by the UWWTD is noted and draws attention to the level of dilution available at the outfall.

Section 3.8 refers to the treatment processes and operation and notes that if a DBO contract were used, the contractor could specify which plant was chosen to meet the performance specification. It indicates an indicative layout which would include preliminary treatment, secondary treatment and tertiary treatment. It notes that the construction of SBR's is proposed for the secondary treatment as the footprint is substantially smaller than that of a conventional activated sludge system. It notes however that the successful

tenderer would be free to propose a traditional aeration process as an alternative. The EIS states that the Phase 1 dimensions of the aeration basins would be approximately 20 metres by 40 metres and would be 4.7 metres deep. In relation to tertiary treatment, the EIS states that nitrogen removal is envisaged for the SBR's. It states that phosphorous would be chemically removed in 12 rapid sand filters which would be 8 filters for Phase 1 and 4 for Phase 2. It states that the dimensions to filters would be 4 metres diameter with a filter bed height of 2 metres.

In relation to sludge storage, the EIS envisages a sludge dewatering building, sludge holding tanks and a buffer tank of 500 m^3 capacity.

The EIS states that in the event of an inordinate delay in the construction of the treatment plant, it may be necessary to implement interim measures to cater for the discharges from the Amgen site. It gives an indicative detail in Figure 3.5 (a) which is in the EIS immediately after Page 35.

The buildings required would include an administration building, a building to house the air compression units and a storage building. The EIS refers to safety and security and the provisions that would require to be made. It notes that at detailed design stage, a HAZOP analysis should be carried out with all parties including the end user being present.

The EIS describes the outfall in Section 3.8.3 and states it would be between 1,200 and 1,500 millimetres in diameter. It states it would cross the R624 regional road just to the north of Slatty Bridge. It states that as per Figure 3.10, it would follow a direct route along the mudflats of the Slatty Estuary to a discharge point adjacent to North Point. It refers to Tables 3.8 and 3.11 for design loads and these appear earlier in the EIS on Pages 48 and 60 respectively.

Table 3.13 sets out the proposed treatment effluent discharge standards and it is noted that this table is the repeat of Table 3.12. It is also noted that Table 3.16 gives the same data and it is not clear why the same table appears to be reproduced three times.

The EIS states that the BOD loading on Phase 1 would be 253 kg/d and on Phase 2 it would be 279 kg/d. It refers to odours and states that the odour levels of the boundary of the site would not exceed 1.5 odour units on a 98 percentile basis. De-watered sludge for further treatment is estimated at 5,749 m^3 for Phase 1 and 7,920 m^3 for Phase 2 for one year. It states that screenings and grit removal would involve small quantities and states that it would typically be 1to 2 domestic wheelie bins per week each.

In relation to construction on Page 62 of the EIS, it notes that the existing WWTP would be demolished when Phase 1 of the new works was completed.

The EIS states that the existing treatment plant is overloaded and that an increase in treatment capacity is required to provide for the sustainable

development of the town. It states that the expansion of the treatment plant is the most appropriate means of providing the necessary increase in treatment and this would include any possible interim upgrade of the treatment plant. It states that in the event of an interim upgrade being required, it would be provided by installation of a package plant at the existing treatment plant. This results from the proposals for the Amgen site.

The EIS states that as a DBO form of procurement may be used, it would not be possible to set out the precise layout of the plant, but the final design would have to comply with the EIS in terms of effluent discharge standards, odour, noise, visual impacts etc.

(It is noted that the p.e. for the Amgen site is 17,778 so that a package plant for the site, if required, would appear to have to comply with the consent requirements for a plant of over 15,000 p.e.).

4.0 ALTERNATIVES CONSIDERED

4.1 Alternative Treatment: -

The EIS refers to secondary and tertiary treatment and states there are variations available depending on particular situations. It lists a number of possibilities and states that under a DBO contract, tenderers would be free to offer different processes. It states that the main alternative to filtration with coagulation as proposed in the indicative design would be membrane treatment or via constructed wetlands. It states that owing to limitations with respect to the size of the site be constructed wetland could not be considered as they would typically require 1 square metres per population equivalent for effluent polishing.

4.2 Sludge De-Watering Processes: -

The EIS draws attention to the Cork Sludge Management Plan which designates the Middleton WWTW as the hub centre for the treatment of wastewater sludges. It states that provision would be made for accepting and de-watering of imported liquid sludges from a number of small wastewater treatment plants near Carrigtohill to minimise transportation costs to the hub centre in Middleton.

4.3 Alternative Treatment Plant Locations: -

The EIS repeats the advantages of the use of the existing site for a WWTW which are set out in Section 3. It also lists the disadvantage which includes the low available dilution at the existing outfall pipe and the requirement to extend the outfall. The alternatives considered included the transfer of sewage from Carrigtohill to the WWTW at Carrigrennan.

The EIS describes the Carrigrennan WWTW and notes that it discharges treated effluent at Marino Point and this is indicated on Figure 4.1. It notes that the design capacity is 413,000 p.e. and is currently treating a load of 313,000 p.e. but is hydraulically overloaded. It notes that the plant configuration includes Sequenced Batch Reactors (SBR) and final sedimentation.

The EIS states that the complete capacity of the Carrigrennan Plant is reserved for domestic and industrial loads within the catchment of the plant. It notes that areas to be served by Carrigrennan have no alternative treatment possibilities and it also notes that the River Basin Management Plan which is currently being drafted and may place limits on the expansion of the plants at Ballincollig and Blarney. It notes also there is a proposed new town to the north of the city at Monard which would have approximately 15,000 p.e. wastewater arising.

The EIS states that two options had been considered namely the treatment of the wastewater from Carrigtohill in the existing plant at Carrigrennan and the construction of a new phase at Carrigrennan to cater for the wastewater from Carrigtohill.

Routes for a pipeline to Carrigrennan were investigated, including along the new route of the N25, the old Youghal Road and through Fota Island.

Route 1 along the N25 would be 6 kilometres in length and approximately 525 millimetres in diameter. It notes the foreshore license might be required from the Department of the Marine and it notes that the NRA have indicated that the route would not be available due to plans to upgrade the N25 to motorway status in the future.

The second route is along the old Youghal Road to Glounthane and this is the one which is most favoured.

The third route through Fota Island would be 5 kilometres in length and would require a 450 millimetre diameter pipeline. Difficulties are envisaged in relation to construction of this route and it is noted that there would still be a difficulty in crossing the channel between Fota Island and Little Island. The EIS concludes that the route through Fota Island is not suitable for a pipeline. It states that the preferred route would be via Glounthane and while it is the longest route, it would cause the least impact.

The EIS states that cost estimates were produced to compare the option of upgrading the WWTP at Carrigtohill to the option of treating at Carrigrennan. It states that based on whole life costs for both alternatives, the option to construct the WWTW at Carrigtohill offered better value for money. (No details are given in relation to the cost estimates). Section 4.3.2 describes alternative outfall locations and states that relocating the outfall beyond North Point would not result in an increase in dispersion of significance to justify the additional costs.

The conclusions of this particular section of the EIS states that there are strong strategic reasons for developing a separate wastewater treatment plant at Carrigtohill. It states that it would allow the retention of any available capacity at Carrigrennan for Cork City and the areas to the north and west of the city where there is no alternative treatment route. It states the development of a wastewater treatment plant at Carrigtohill is the most economically advantageous option. It notes that the proposal to use the plant at Carrigtohill at a sludge satellite centre and this would reduce the cost of transfer to Middleton which is the sludge hub centre.

The EIS states the alternative of transferring raw sewage to Carrigrennan offers no significant environmental benefit over the proposed expansion of the plant at Carrigtohill. It states that relocating the final effluent outfall to North Point offers better dispersal than the existing outfall location, but extending it beyond that would offer limited environmental benefit. It concludes that the expansion of the existing plant with the relocation of the outfall to North Point has the least environmental impact of all the alternatives considered and such expansion could be accommodated at the site without causing undue negative environmental impacts.

5.0 IMPACTS RELATING TO WATER: - (EIS, PAGES 73 – 88)

The EIS refers to Slatty Waters as the name given to the estuary at the eastern side of the upper Cork Harbour. It defines the boundaries of the water body from the sluice gates at Slatty Bridge past Fota Island to the northern channel. It states the waterbody is 150 to 250 metres wide and 2,950 metres long from Slatty Bridge to the railway bridge near Harper's Island. It states there is a low level of freshwater discharge into Slatty Waters with the main body of water being saline and tidal. It states the only exit/entry point for the saline water is at the west end of Slatty Waters adjacent to Harper's Island and the dilution and mixing of the water is provided entirely by the ebb and flow of the tides.

It notes that the Slatty Water Estuary forms part of the SAC No. 1058 known as the Great Island Channel. It states that a description of the SAC is included in Appendix N (Appendices A – D are only included in the documentation).

Shellfish farming is noted in the North Channel east of Belvelly Channel, close to Middleton. It notes that the North Channel is separated from Slatty Waters by Fota Island.

Section 5.1.1 of the EIS refers to the receiving environment and commences with the receiving water quality. It states that since 1985, the wastewater plant at Carrigtohill has discharged treated effluent to the head of the Slatty Water Estuary via the existing outfall and that the loading on the existing plant exceeds the design capacity. It refers to the new treatment plant constructed at Carrigrennan on Little Island.

Previous water quality studies are referred to from 1989 to 1996. It states the reports concluded the water quality particularly in the upper reaches of the harbour had deteriorated over time. It states the areas which suffered most were the Inure Estuary and these had low dissolved oxygen, high BOD, phosphorous, ammonia and nitrate. It states that PSP (paralytic shellfish poisoning) has been recorded in Cork Harbour (Marine Institute 1999).

Section 5.1.1.3 refers to modelling of the harbour. The EIS states that the study involved modelling of the hydrodynamic and water quality conditions prevalent in Cork Harbour and in particular as a result of proposed discharges from the Carrigtohill and Carrigrennan outfalls. It outlines the development of the model including setting up a numerical model with the input of the bathymetry and the land boundaries. This is shown in Figure 5.2. The EIS states the model was calibrated by running the same simulation until it is satisfactorily reproduced field conditions.

The EIS states that in the Cork Main Drainage Preliminary Report, the peak BOD was predicted at the outfall to be 0.33 mg/l. It notes that the overflows from the Carrigtohill plant for collection network have not been modelled. It states that a full description of the model including the bathymetry study is included in Appendix N. *(Only Appendices A – E are included in the EIS*).

Table 5.1 sets out the Urban Wastewater Treatment Directive Discharge Standards and it states that the output of the model should determine whether more stringent removal should be necessary for organic substances and nutrients.

Section 5.1.2 is titled "The Characteristics of the Proposal". It refers to the Urban Wastewater Treatment Regulations, Bathing Water Regulations and the Dangerous Substances Directive. Table 5.3 sets out the additional standards arising from the designation of Slatty Waters as sensitive and this indicates a requirement for phosphorous at 2 mg/l and nitrogen at 15 mg/l.

In relation to the Bathing Water Regulations, the EIS notes there are no designated bathing areas in the estuary. It notes the problem with sailing due to the emergence of mudflats and it states the proposal is that the Bathing Water Regulations would be met where there was sufficient water over the course of the full tidal cycle for the safe passage of small sailing boats. The location indicated is the channel between Little Island and Fota Island. It notes that this is referred to as the main channel in the output tables. (In Appendix E which gives details of the modelling, there is no reference to a main channel, but there is one to a mid channel).

In relation to Shellfish Waters Regulations, the EIS states the North Channel is separated from Slatty Waters by Fota Island and the indications for Weir Island which is between the shellfish beds and Belvelly is 0 MPN/100 mls. It states the figures indicate that shellfish farmers operating to the east of Belvelly Channel should have no grounds for concern about discharges from Carrigtohill.

The EIS refers to the Local Government Water Pollution Act 1977 and states that only the Phosphorous Regulations of 1998 are relevant. (*There would appear to be a typographical error in this section as the paragraph refers to a "wide ranging directive", while the heading of the paragraph relates to the Water Pollution Act).*

In relation to the Water Framework Directive, the EIS states the EPA has carried out extensive research on Irish Estuarine and Coastal Waters resulting in the publication of a report entitled "An Assessment of the Trophic Status of Estuaries and Bays in Ireland". It states that Cork Harbour area was one of the waterbodies investigated and gives the criteria for eutrophication. It notes the Lee Estuary/Lough Mahon area was designated as a sensitive water and it notes the standards for phosphorous at 2 mg/l and of nitrogen at 15 mg/l.

The EIS examines the effects of the discharge and states that the volume of water discharging from the Slatty Waters channel is miniscule compared with the volume within Lough Mahon. It notes the very low level of freshwater discharge into Slatty Waters and the dilution being provided entirely by the ebb and flow of the tides.

In relation to **BOD,** the model runs indicate an average concentration at the outfall point of 3.13 mg/l for 45,000 p.e. At the final design capacity of 62,000 p.e. the EIS states the discharge standard of 25 mg/l for BOD would result in a concentration of 4.46 mg/l in the receiving water and therefore a level of 20 mg/l for BOD was selected for Phase 2. Similarly the standard for discharge for nitrogen is reduced for Phase 2 from 15 to 10 mg/l.

For phosphate, the EIS concludes that a concentration of 1 mg/l would be required, although the UWWTD sets the standard of 2 mg/l for the final effluent. This is because of the requirement to reach a value of 0.06 mg/l when the water reaches Harper's Island which is approximately 900 metres downstream of the outfall point. It states that the mass of phosphorous to be discharged is small when compared with the mass of water in Lough Mahon and it states that it would contribute less than 3% of the total phosphorous in Lough Mahon. The EIS states that the cost of providing phosphorous removal below 1 mg/l rises disproportionately when compared to the benefits.

The EIS states the model estimates for peak coliform counts at Blackrock is 10 MPN/100 mls, assuming there are no sources at the River Lee and at the nearest source is at Carrigrennan WWTP. The EIS notes that the corresponding figure stated in the Cork main drainage preliminary report was 0 MPN/100 mls. The EIS states that the discharges from Carrigtohill and Carrigrennan are not accumulative to a significant extent at any location at any time. It states the two both affect the water quality at the Fota Bridge region, but at different stages of the tide. It states that the effects of either one is dominant at a time depending on the stage of the tide. It states that when the tide is rising, the effluent from Carrigrennan is dominant and when the tide is falling, the effluent from Carrigtohill is dominant.

The EIS states that modelling indicated in expected peak at Belvelly Bridge of 11 MPN/100 mls for the combined discharges. It states the corresponding figure for Weir Island is 1 MPN/100 mls. The EIS states that when Carrigtohill discharge only is run, the count at Belvelly is 0 MPN/100 mls.

Table 5.4 gives the proposed discharge standards for Phase 1 and Phase 2 and this table is the same as Table 3.12 on Page 54, 3.13 on Page 61 and Table 3.16 on Page 64.

Section 5.1.3 describes the potential impact of the proposal. The EIS states that the standard of treatment of the wastewater would be substantially improved and the relocation of the outfall would improve dispersion of the discharged final effluent in Slatty Waters. It states that there would be elimination of stormwater overflows from the WWTW, except during exceptionally adverse weather conditions and the receiving water would meet the requirements of the EPA "Assessment of the Trophic Status of Estuaries and Bays in Ireland Report". The EIS also states that the upgraded works would satisfy all the local authority complications under the UWWT Regulations and the Phosphorous Regulations. The EIS concludes that the potential impact of the proposed works on the area is wholly positive.

In Section 5.1.5 the predicted impacts of the proposal are described as being the same as the potential impact.

Section 5.2 refers to groundwater and it states that Carrigtohill is on a relatively low-lying coastal land with elevations between 5 and 15 mOD. It states the catchment to the north of the town rises steeply to approximately 90 mOD. It notes that the karstified nature of the local geology is evident in the large underground fishers and caves which are particularly to the east of the town towards Middleton. The EIS notes that given the karstified nature of the ground, it is important sewage does not enter the groundwater. The EIS states that in relation to impacts on groundwater that proper construction and water-tightness of the pipes would ensure no negative impact on the water quality of groundwater.

6.0 IMPACTS ON AIR: - (EIS PAGES 88 – 111)

The EIS deals with issues relating to noise, odour, aerosols and light.

Section 6.2 deals with noise and notes that road noise dominates the noise environment in the area. It states the nearest residences are 230 metres to the west and 250 metres south-west of the plant. It states the two locations of the highest ambient noise levels due to the proximity to the traffic on the R624. Table 6.1 gives the noise levels recorded by day with the L_{aeq} of the two residences at 80 and 64 respectively, while the L_{aeq} at the treatment plant at Tullagreen range between 57 and 61 dBA.

The EIS describes typical elements of a treatment works and notes that the layout drawings are taken as indicative only, as the proposal is to be a design and build contract. It lists all the requirements for enclosing plant and sets out the potential impact of the proposal. It selects a level of 35 dBA L_{aeq} for nighttime and 45 dBA for daytime at any house. The EIS states that external noise levels of 35 and 50 L_{aeq} at the plant are chosen and that no noise-related complaints are considered likely. The mitigation measures listed in Section 6.2.4 include attenuation, monitoring and screening, all of which are dependent on the chosen design.

The EIS deals with construction noise and states that a daytime limit of 65 – 70 $L_{aeq\ 12\ hour}$ would be considered reasonable for construction work.

The EIS refers to odour in Section 6.3 and states there are no significant industrial emissions within the locality of the treatment plant site. The EIS states that overall the air quality in the locality is good with levels of air pollutants in the area substantially below the national air quality standards. Parameters referred to include nitrogen dioxide, carbon monoxide, benzene and PM_{10}.

The EIS states that **no malodours could be detected** during the site visit in February 2007 near the site boundary of the existing treatment plant. Figure 6.1 gives the hourly wind direction at Cork Airport and Roche's Point and states that the prevailing wind direction is from a south-westerly direction. The EIS refers to the long-term incidence of winds and notes that the greatest potential for odorous emissions is during summer months with dry weather conditions and high temperatures. It states those weather conditions could also be associated with low-flow sewage conditions from the surrounding area.

The EIS describes the characteristics of sewage and the odours arising in Section 6.3.2. It states that under a DBO contract, this would contain performance specifications which would include odour control. It refers to the specialist assessment of odour potential and notes that the indicative design includes an inlet works screening which would be covered or housed and provided with odour control equipment.

The EIS states that stormwater tanks are unlikely to be a significant source of odour due to the infrequent nature of their use. It states that under normal conditions, aeration tanks should not be a significant source of odour and that odours from secondary settlement tanks would not normally be detectable beyond a few metres from the tank. The EIS states the sludge treatment system would be designed to prevent the escape of malodours to the atmosphere.

Section 6.3.3 discusses the potential impact of the proposal and states that the results of the odour impact modelling indicate 99.5 and 98 percentile odour concentrations in the locality which would be between 0.25 and 1 odour unit per m^3 at the adjoining receptors. Figures 6.2 – 6.5 give the predicted

maximum of 98 and 99.5 percentile odour concentrations for the two phases of the works.

The EIS states that an odour concentration greater than 5 ou/m^3 is used as a criterion for determining possible nuisance complaints. It states that EPA Publication of 2002 proposed a more stringent condition for pig production units of 3 ou/m^3 for 98 percentile of predicted hourly concentrations. It also refers to a target value of 1.5 ou/m^3.

The EIS refers to a Phase 2 design scenario and states that the short-term odour concentrations would be 0.25 – 0.6 ou/m^3 at the nearest houses as per figure 6.4. It states the analysis of the modelled odour impact due to emissions suggested that the potential for significant malodours to be detected beyond the boundary of the plant would be very low. It states that based on that, the predicted 98 percentile odour value should not exceed 1.5 ou/m^3 at the site boundary as 0.25 ou/m^3 at the nearest sensitive receptor. It lists mitigation measures relating to the type of plant and equipment to be used and states that under DBO, tenderers would be required to provide performance guarantees with respect to odours from their particular design.

Section 6.3.5 refers to predicted impact of the proposal and states that the predicted 98 percentile odour concentrations are less than 0.50 ou/m^3 beyond approximately 100 metres from the site boundary. It states that for Phase 2 or final design stage with all six SBR units in operations the predicted short-term 99.5 percentile odour levels are predicted to be less than 0.5 ou/m^3 at the nearest housing.

Section 6.4 refers to aerosols and states that the areas of concern are the potential use of surface aerators. It states that aerosols introduced into the air at the aeration tanks or through the use of effluent as wash water should only present a potential public health hazard to anyone within 20 metres of those operations. It states that even then the risk is very small as there is little evidence that aerosols affect plant operatives at existing treatment works. The EIS states the predicted impact of aerosols at the proposed treatment works is deemed to be minimal due to the rapid evaporation and consequently the inability of the micro organisms to survive.

Section 6.5 refers to light. It states there is no street lighting to the west, south or east of the site. It states it is proposed to provide lighting to illuminate all of the treatment units and access roads and notes that excessive light levels could be a source of nuisance and could cause the treatment works to become a prominent feature in the landscape at night. It states that lighting fixtures should be directed inwards so as to minimise any overspill and at night the full lighting would only be used in operation if the plant is manned or if the alarm system is activated. It states the screening of the works would help shield the light spread outside the site.

It states that any negative impact will be minimised by mitigation as outlined in Section 6.5.4 of the EIS.

Section 6.6 deals with climate and states that there are no climatic effects in the region that will require any special measures to be taken during the design, construction and operation of the project. It states that mitigation measures can be taken to avoid any changes to the climate or contribution to climate change arising from the works.

7.0 SOILS: - (EIS PAGES 112 – 115)

The EIS describes the receiving environment and states that the town is underlain by Waulsortian limestone and the existence of caves in the area demonstrates the karstified nature of the ground. It refers to an abandoned quarry to the north of the Rockland and Castleview estates. The EIS states the groundwater level at the proposed plant site is at the existing ground level during winter and slightly lower during summer months. Drawing No. 7.1 gives indication of the geological formation and Figure 7.2 gives the location of the boreholes which include two on the site of the existing works. Table 7.1 gives a summary of the ground conditions which indicates soft peats and silts which overlie sands and gravels with lairs of clays and silts.

The EIS states the main impact in relation to soils would be the construction of process tanks and foundations for new buildings. It states that it is anticipated that the ground levels of the treatment plant would be raised prior to construction due to the high watertable. It notes that any tanks placed within or below the watertable would be required to have an adequate factor of safety against flotation when empty. The EIS states that the predicted impact of the proposal would be minimal, that no monitoring of the soil on site would be required and that reinstatement of topsoil would be carried out as part of the landscaping of the site.

8.0 ECOLOGICAL IMPACTS: - (EIS PAGES 116 – 122)

The EIS refers to a specialist report which is contained in Appendix C and D. Describing the receiving environment, the EIS notes that the area to the east of the plant has been stripped of its vegetation and is of minimal ecological value at the present time. It states that to the west of the existing plant, the land contains a mixture of wet woodland with reed beds associated with the watercourse / lake along the southern boundary of the site. It notes the minor road which runs along the northern boundary of the site.

The EIS states the **habitats** are listed in Figure 8.1. Figure 8.1 does not appear to be in this part of the EIS, but the habitat types as identified can be found on a table in the specialist report (Dixon, Brosnan) on Page 7. The survey area is divided into the following habitats: -

- Riparian woodland (WN5).
- Marsh (CM1) /immature woodland (WS2).

- Reed and large sedge swamp (FS1).
- Amenity grassland (GA2).
- Drainage ditch (FW4).

It is also noted that the reference to Appendix D on Page 116 of the EIS would appear to refer to the archaeological report in the appendices and it is presumed that the reference should be to Appendix C.

The EIS states that the wet/woodland area would be affected by the provision of the new treatment plant and is unlikely to support rare or uncommon bird species but would potentially support a variety of relatively common countryside birds. It states the lagoon and reed bed fringe and the agricultural land at the edge of the lake are utilised by a number of species. The EIS states that the WWTW would be confined to the proposed site and would result in the complete removal of the habitat located to the west of the existing site. It states there would be no direct impact on the brackish lake (Slatty Pond). It states that it would be expected at Willow/Alder woodland would continue to colonise the area to the west of the existing site. It states the designation of the site is of local value and the impact of its removal is not considered to be of high significance.

The EIS makes reference to noise impacts during construction and states there is no evidence to suggest that otters breed within the area. It states that the removal of vegetation would result in a net loss of habitat within the woodland/scrub/marsh habitat located to the west of the site and it was not expected that the development will significantly impact on reed bed habitats.

Section 8.1.4 refers to mitigation measures and includes the following: -

- Removal of reed beds which fringe the Brackish Lake to a minimum.
- Prevention of incidental damage by machinery by fencing of area earmarked for retention.
- Consultation to be undertaken with National Parks and Wildlife Service with regard to the nature proposed works along on the boundary with the cSAC, SPA and pNHA.
- Essential that all construction staff be notified of the boundaries of the designated areas and the made aware that no construction waste of any kind to be deposited in the protected areas.
- Construction and Demolition Waste Management Plan to be developed.
- Removal of hedgerows during the peak-breeding season should be avoided between March and June.
- Recommended that final landscape plans were designed in consultation with a qualified ecologist.

The EIS states that with mitigation in place, the long-term impact of the proposal would be negligible.

Section 8.2 deals with **aquatic habitats** and reference is again made to Appendix C for further details. The EIS states the area of Cork Harbour into which the treated wastewater would be discharged is a candidate Special Area of Conservation (Great Island Channel, Site 1058) and is part of the Special Protected Area (Cork Harbour 4030). The EIS states that Cork Harbour is an internationally important wetland site supporting in excess of 20,000 wintering waterfowl for which it is amongst the top five sites in the country.

The proposal is stated to discharge to a small creek at the low water mark to the west of Slatty Bridge. The EIS refers to a number of studies that have been previously carried out on water quality in Cork Harbour and deterioration in water quality has been recorded in the past. It states that following the completion of the Cork main drainage scheme, wastewater from Cork City is treated to a high standard and discharged at Carrigrennan on Little Island and the new facility is expected to significantly improve water quality.

The EIS states that estuaries differ from other coastal inlets in that seawater is measurably diluted by inputs of freshwater and the mixing of two very different water masses gives rise to complex sedimentological and biological processes and patterns. It states that on the upper shore, there are small amounts of algae.

The EIS refers to the mudflats which are exposed at low tide and states that these are typically productive environments characterised by high biomass, but relatively low species diversity. The EIS states that observations on the samples indicate the surface of the mud was brown, but a black anoxic layer was recorded close to the surface. It states the only species recorded was king ragworm. It states the low diversity of species may reflect toxic impacts in the past or high levels of nutrient enrichment. It states the nutrient levels may be elevated due to the discharge of effluent from the existing outfall that does not meet the required standard for nitrogen and phosphorous and is discharged at a point of comparatively low dispersal. The EIS states that the Slatty Water does not have significant value in terms of commercial fish species. It states that the only species noted in the absence of dedicated fish surveys were mullet.

Section 8.2.3 refers to the potential impact of the proposal which would be to increase the total nutrient loading over time despite the improved treatment standard. It states that the nutrient levels should remain within parameters set by the EPA for sensitive estuarine and coastal waters. It states that if the proposed extension to the WWTW did not take place, the quality of the final effluent would deteriorate as the region grew. It describes this as a substantial negative affect on the river.

The EIS sets out mitigation measures which include: -

- Avoidance of the wintering period for the installation of the outfall pipeline in the mudflats.

- Reuse of dredged sediments within Slatty Waters to prevent drying out.
- Containment of silt arising from the treatment plant during the development of the site.
- Monitoring of nutrient levels, macro invertebrates and wintering birds should be carried out.

The EIS describes the predicted impact of the proposal and state there would be localised disturbance in the mud flats during construction, but the affected area should recolonise relatively quickly.

9.0 SOCIO-ECONOMIC IMPACTS: - (EIS PAGES 123 – 129)

Section 9.1 deals with industrial and residential development and notes that Carrigtohill grew at a rate of approximately 20% per annum between 2002 and 2006. It refers to current planning permissions which are stated to include development by Gable Holdings Limited for 1,600 dwellings. The Cork Area Strategic Plan (CASP) is stated to consider the Carrigtohill area to be one with significant growth potential for both residential and industrial /enterprise developments. It states that arising from this, the Special Local Area Plan (SLAP) for Carrigtohill increased the zoning to 584 hectares and with the Amgen site included this rises to 638 hectares. The estimated final design population is given as 18,433 direct residential population with 2,787 institutional and commercial p.e. with 24,008 industrial wastewater p.e. and 17,777 p.e. for Amgen.

The EIS states the existing plant is overloaded and would not be able to cope with additional loads and the proposed extension of the plant is essential for the development to take place on a sustainable basis. Figure 9.4 shows the area covered by the SLAP Plan of 2006. The EIS states that the upgrading of the wastewater treatment plant would enable the sustainable development of Carrigtohill Town and its environs.

The EIS considers **power and water supply** in Section 9.2 and states that both the plant and the extension have a power requirement of less than 500 kW and for that reason a low-tension transformer station is installed to supply electricity to the works. It states a stand-by generator is to be provided in case of power failure. The EIS states there would be no impact on the local environment.

Section 9.3 deals with **transport and communications** and Table 9.1 sets out the expected number of vehicle movements which would include transporting of dewatered sludge for treatment or reuse and transfer of screenings and grit to landfill. The estimation is that there would be 548 movements per annum which would average two one-way trips per working day. It states the development would have a very low impact on traffic levels in Carrigtohill generally. Mitigation measures are set to include a temporary wheelwash or

washing facilities and it is stated that the long-term impact of the proposal on the local traffic would be low.

10.0 MATERIAL ASSETS: - (EIS, PAGE 130)

In relation to the assimilative capacity of Slatty Waters, the EIS states that the final effluent standards are consistent with the dual targets of complying with the regulations and operating within the assimilative capacity of Slatty Waters. It notes that the proposed site is owned by Cork County Council and it states that the plant would have the capacity to treat wastewater arising from 45,000 p.e. but the layout of the works would be planned to accommodate a future expansion to 62,000 p.e. It notes that most of the existing structures and buildings would be expected to be demolished after completion of the new works.

11.0 VISUAL IMPACT: - (EIS, PAGES 131 – 135)

The EIS describes the topography and location and gives the boundaries as being Slatty Pond to the south, Slatty Waters to the west and open agricultural land to the east. It states the existing plant is screened by existing hedging on all sides. The character of the area is described as mixed with industrial and commercial developments to the north and east of the site, agricultural and open water to the south and Slatty Waters and the N25 to the west.

The EIS states the layout of the site will be dictated to a large extent by the functional requirements of the treatment works and that the most likely external finish would be a combination of high quality cladding and plaster block work. Figure 11.1 gives sections through the site based on the indicative design. There are three photomontages given of the plant with two from the west and one from the south. The locations of the photographs are given in Figure 11.2. There does not appear to be any indication of the height of the tallest buildings. Mitigation measures are said to include landscaping to the north, west and southern boundaries with embankments varying between 2 and 6 metes in width and between 1.5 and 2 metres in height which are above the raised ground level. (From the perspective views, the height of the building would appear to be approximately 15 metres at the highest point).

Table 11.1 indicates the species to be included in planting on landscaped embankments. It states that given the topography of the site, the impact of the embankment and combination with screening will reduce the visibility of the site from all sides. It states however that the taller building would remain visible from surrounding areas.

12.0 CULTURAL HERITAGE (EIS PAGES 136 – 140)

The EIS refers to Appendix D which is the specialist report on archaeology.

It states the existing WWTW and the proposed area of development was originally a boggy greenfield site. It states the proposed development would not have any visual impact on the known archaeological sites in the environs in the townland of Tullagreen, Carrigtohill, County Cork. It states the proposed outfall pipeline route is not located within the zone of any recorded archaeological sites, but there are three known sites in the environs including evidence for pre-historic settlement. It states that as the mudflats are exposed at low tide, it would be possible that formerly unrecorded sites including archaeological material could be uncovered during disturbance of the environs of the pipeline.

The EIS states that the impact of the proposed outfall pipeline and the archaeological landscape of the area was assessed using all the available documentary and cartographic sources. It states that the area would be subject to an archaeological walkover and metal detection survey at low tide or a dive survey if required.

Section 12.4 refers to mitigation measures: -

- Slatty Water Estuary to be walks at low tide and a non-intrusive inspection carried out of the inter-tidal zone and riverbed.

- Metal detection survey of the area to be undertaken.

- The archaeologist will require a license for the work to be issued by the DoEHLG.

- Provision to be made to facilitate any excavation or recording of archaeological material that may be uncovered during the developmental works.

The EIS states the subject to the mitigation strategy is proposed, the proposed development would not have any impact on the archaeology of the area.

13.0 SUMMARY OF LONG-TERM IMPACTS AND INTERACTIONS: - (EIS PAGES 139 and 140)

This section gives a brief summary of the impacts of the proposal: -

- Movement of the outfall point resulting in enhanced water quality and reduced public health risk.

- Provision of a facility which would significantly enhance the town's ability to attract and cater for industrial, residential and other developments in the town and its environs.

- Works would be designed to modern standards with mitigation measures to reduce noise and light levels and keep discernable odours within the works boundary.

- Landscaping and other measures would minimise visual impact of the works on the local environment.

- Disruption of the natural habitat to be temporary in nature.

- Limited increase in traffic during construction period.

Section 13.2 describes interactions and states that the EIS would have demonstrated that the works would have a positive impact on the environment. It states that the mitigation measures identified would confine impacts to accepted limits and when considered together, it states there are no foreseeable circumstances in which the mitigated impacts can combine to produce accumulative impact of any greater significance.

10.0 APPENDICES

There are four appendices included in the report as follows: -

- Appendix A – Report on potential noise impact.

- Appendix B – Study on air quality impact.

- Appendix C – Report on the flora and fauna (also included within Appendix C is a baseline spring bird survey at Slatty Bridge mudflat, County Cork).

- Appendix D – Archaeological Study.

- Appendix E – Harbour modelling.

14.1 Appendix A – Report on Potential Noise Impact

This report is by Mr. Craig Mallinson and consists of 13 pages of text.

The appendix details the likely location of noise sources and it notes that the plant would be designed to meet the requirements of the Urban Wastewater Directive and would comprise primary, secondary and tertiary treatment, including nutrient removal. It notes the current noise environment and sets out the methodology used for the baseline study. Tables 3.1 and 2 give measurements at five locations for day and nighttime situations. In Section 3.2, the results are discussed and the dominant noise sources are traffic on adjacent roads and the operation of the existing WWTP. The report refers to the construction phase and the operational phase and states that the operational noise levels would not be expected to cause any impact on nearby sensitive receptors and the overall impact was expected to be minimal.

In relation to construction measures, the report lists generic issues such as proper training and maintenance, control of on-site activities, selection of plant and erection of barriers around noisy items. In relation to the operational phase, practical measures are included in the list of mitigation measures.

14.2 Appendix B – Study on Air Quality Impact

This report is prepared by Mr. Michael L. Bailey of Envirocon Limited and the report comprises a total of 20 pages of which 12 pages are text and the remaining consists of graphs and figures.

The report describes the existing environment and notes that the daily concentrations of sulphur dioxide are less than 20% of the limit value specified in the NAQS Regulations. It states no malodours could be detected during the site visit in February 2007 near the site boundary.

The report describes the general climatology and the prevailing winds in the area. It gives a description of odour emissions from wastewater treatment plants in general and notes the low nuisance threshold for some odours.

The report notes that the construction contract is a Design/Build/Operate (BDO). It lists the requirement of the design of a new treatment works with reference to inlet works, stormwater holding tanks, sludge treatment and secondary treatment. It notes that the secondary treatment would be provided by SBR process.

The report states that the inlet buildings would be 17 metres by 10 metres in dimension and it states that the stormwater holding tank would have flows in excess of 3 DWF in an open rectangular tank. The size of this tank is not specified.

In relation to the secondary treatment, the report states that this would be four rectangular tanks with an estimated dimension of 14 x 34 metres. The report states that the SBR tank involves periods of aeration and no aeration and that the aeration equipment supplies air into the tank over a shorter period compared to the subsurface aeration.

The report estimates the dimensions of the sludge treatment building to be approximately 15 metres by 10 metres and states that the odour control units would have a very high removal efficiency rate.

Section 14.0 of the report deals with the odour impact of the works and refers to the prediction modelling carried out. It outlines the assumptions made in relation to the surface area and the height of the treatment units and gives emission rates which would be applied to the odour control units.

The results of the odour dispersion model are described and the 99.5 percentile value which would be exceeded for 0.5% of the time or 45 hours a year is estimated at below 0.25 odour units/m^3. The predicted 99.5 percentile concentrations at the Millipore Plant to the north-west of the site are predicted to between 0.5 and 1 odour unit/m^3. It describes the odour unit levels for the 98 percentile and states a target value of 1.5 odour units/m^3 is proposed and this is for the Phase 1 development. It states that for Phase 2, the 99.5 percentile level is predicted to be between 0.25 and 0.6 odour unit/m^3. The contours of predicted odour levels are given in Tables 4, 5, 6 and 7 of the report.

The report describes odour control measures which include housing of inlet works, covering of skips, venting of odorous emissions to atmosphere and the use of odour control units operating with removal efficiencies of over 95%.

The conclusion of the report is that the design and operation of the upgrading extension of the wastewater treatment plant would minimise the potential for malodours to be detected beyond the site boundary. It states that no significant impact on the ambient air quality of the area is predicted due to odour emissions from the plant.

14.3 Appendix C – Report on Flora and Fauna

This report has 21 pages and it is noted that page 2 is not in either of the copies of the EIS available.

On page 3 of the report surrounding landscape is described and the proposed pipeline route. Paragraph 4 describes the marine ecology and notes that core samples were taken at low tide using a standard corer. It states that the mudflats were typically productive environments and the only species recorded was king ragworm. It states the low diversity may be indicative of habitat deterioration. In relation to fish, it notes that Slatty Water is a small tidal inlet and does not have significant value in terms of the larger and more

commercial fish species. Figure 1 is the habitat map which indicates the designations of amenity grassland, immature woodland and scrub, reed and large sedge swamp, riparian woodland, marsh and drainage ditches. The different designations are described in the following paragraphs and it is noted that in fact the report does not include any even numbered pages.

Mammals are described on page 9 and reference is made to otters, seals and bats. On page 11, Section 8 gives the impact of the proposed development on the flora and fauna and this is described on Table 1 which includes the description of the habitat and species, the relative habitat value, the comments and the impacts.

Mitigation measures are described on page 17. Included in the mitigation, it is recommended that detailed monitoring of nutrient levels, macro invertebrates and wintering birds be carried out. It states that initially accurate baseline winter data should be obtained with surveys repeated every two years until four years after the plant reaches its full capacity. The report states that a feasible, scope should be provided within the design of the treatment plant to upgrade the works and/or move the discharge point should survey results indicate that important bird populations are being adversely affected.

Other mitigation measures include the fencing of habitats earmarked for retention and preparation of a construction and demolition waste management plan.

The report also gives details of the Great Island Channel, Site Code 001058.

14.4 Baseline Spring Bird Surveys at Slatty Bridge Mudflat County Cork

This report is reduced on behalf of T. J. O'Connor's by Mick Mackey. The report consists of pages nos. 23 – 33, but omits the even numbered pages. Page 25 gives a survey of tidal area around the site and Table 2.1 shows the total numbers of wildfowl, waders and gulls recorded at the study site in April 2007. The report on page 27 describes the species and notes that Cork Harbour holds the largest flocks of wintering black-tailed godwits in Ireland and these are the most numerous species observed during the April site assessments. It states that the high tide survey report of 75 roosting in the company of oyster catchers on a rocky bank on the north-western end of the site and the lower number noted during high tides indicated that the black-tailed godwit are using roosting sites outside the study area.

The conclusions on page 29 were that the mudflat may support greater number of birds outside of the April period. It states that most terrestrial species recorded in small numbers and it refers to other reports which detail the detrimental impacts of human activities on estuaries. It states the main potential impacts from the instalment of a wastewater outflow pipeline would be reclamation, disturbance and subsequent pollution and enrichment.

14.5 Appendix D – Archaeological Study

Appendix D contains a report entitled preliminary archaeological impact assessment which is dated July 2004 and this is followed by a further report which is undated, but appears to be the final archaeological report.

In the preliminary report, the study methodology is outlined and the archaeological and historical background of the area is described. It states there are ten fulachta fiadh within the study area and these are listed in the report. It states there are 14 ringforts in the environs of the proposed development with a further six possible examples. It states that the categories of enclosures and earthworks are possible linked to ringforts and there are six of those types of monument within the environs of the study area. It refers to Barry's Court Castle which is located to the south of the Carrigtohill Town.

In relation to impacts, the summary states there are 52 recorded monuments surrounding the proposed development area and it states there would be possibly previously unrecorded monuments uncovered during topsoil stripping. It sets out preliminary mitigation measures which are repeated in the final version of the report. Other than that in the preliminary report, specific mention is made of a shell midden (RMP CO 075 – 068) and a linear earthwork which should specifically be monitored to record any archaeological deposits and to recover any artefacts. In the summary to the preliminary report, it is stated that the direct impact on the two recorded archaeological monuments within the vicinity of the development may be minimal due to previous development in those areas.

The second report within Appendix D also sets out the study methodology, and describes the receiving environment. Section 5 of the report gives the archaeological and historical background of the area and also describes Barry's Court Castle and Fota House.

Section 6 of the report states that the proposed outfall pipeline route is not located within the zone of any recorded archaeological sites, but there are three known sites in the environs including evidence for pre-historic settlement.

Section 7 gives mitigation strategies as follows: -

- Slatty Water Estuary should be walked at low tide and a non-intrusive inspection should be carried out of the inter-tidal zone.

- Metal detection survey of the area must be undertaken.

- Archaeologist would require a licence for the work and the licence to be issued by the DoEHLG. It also states that the archaeologist should be empowered to halt the development if buried archaeological features or finds are uncovered.

  (It is noted that the preliminary strategies refer more specifically to the collection system for the drainage works while the second report appears to specifically refer to the outfall pipeline).

Section 8 is titled non-technical summary and it states that while there is no direct impact on the record archaeological monuments within the vicinity of the development area, as yet unknown archaeological monuments in the development zone may be impacted upon. This conclusion is similar to that given in the preliminary archaeological report.

Appendix 1 is an extract from the archaeological inventory of County Cork and refers to an enclosure at Killacloyne, a country house at Tullagreen and an occupation site on Fota Island. Figure 1 shows the site location and Figure 2 is the extract from the RMP Map. Figure 3 is the proposed development area of the outfall pipeline and Figure 4 is the map of RMP site north of the pipeline route.

14.6 Appendix E – Harbour Modelling

This appendix consists of a number of tables which give estimated concentrations for phosphorous, BOD, nitrogen, ammonia, dissolved oxygen, suspended solids and faecal coliforms. The tables indicate the concentrations at neap and spring tide conditions under various tidal conditions.