GOOD SHEPHERD
STUDENT CAMPUS

PART 1

GOOD SHEPHERD LRD

VOLUME III | EIAR

Appendices

GOOD SHEPHERD LRD

VOLUME III | **Appendices**

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CHAPTER ONE

INTRODUCTION

APPENDIX 1-1 Consultation Responses

McCutcheon Halley
CHARTERED PLANNING CONSULTANTS

APPENDIX 1-1 Consultation Responses

Appendix 1.1

Consultation Responses

As part of the consultation process for this EIAR, letters were sent out via email and post in January 2025 to the following statutory bodies:

- An Taisce
- Bat Conservation Ireland
- Bord Gáis
- Environmental Protection Agency
- ESB
- Fáilte Ireland
- The Health Service Executive (HSE)
- The National Transport Authority (NTA)
- Department of Education
- Department of Housing, Local Government, and Heritage
- Department of Tourism, Culture, Arts, Gaeltacht, Sport & Media
- Geological Survey Ireland
- The Health and Safety Authority (HSA)
- The Heritage Council
- Inland Fisheries Ireland
- Office of Public Works (OPW)
- Transport Infrastructure Ireland (TII)
- Uisce Éireann

An example of the letter sent to the above statutory bodies is provided on the following page.

Responses were received via email from the following bodies:

- Bord Gáis/Gas Networks Ireland
- Geological Survey Ireland
- Inland Fisheries Ireland
- Uisce Éireann
- Transport Infrastructure Ireland
- Department of Housing, Local Government, and Heritage

These responses are provided in the following pages.

Following the response from the Department of Housing, Local Government, and Heritage, a site visit with the NPWS Cork City Conservation Ranger took place Monday 17th February 2025.

«Company_Name»
«Address_1»
«Address_2»
«Address_3_»
«Address_4»
«Address_5»

«Email_»

22 January 2025

Re: Consultation on the preparation of an Environmental Impact Assessment Report for a proposed Student Accommodation Development at The Former Good Shepard Convent, Convent Avenue, Sunday's Well, Cork.

A Chara,

We are acting on behalf of Bellmount Developments Ltd. in the preparation of an Environmental Impact Assessment Report (EIAR) for a proposed Student Accommodation Development at The Former Good Shepard Convent, Convent Avenue, Sunday's Well, Cork.

Research and baseline analysis for the EIAR has commenced and an impact assessment will be carried out following completion of the design of the proposed development.

If you have any comments in relation to the potential environmental impacts of the proposed development, I would be grateful if you would forward them to me as soon as is convenient. The details of the site location, project description, and proposed works are outlined further below.

Proposed Development

Bellmount Developments Ltd are seeking permission for the construction of a proposed Student Accommodation Development comprising the conservation, conversion and extension of the existing former Good Shepard Convent, Home Building, Orphanage Building and Well site to provide 283 no. student accommodation apartments, amenity and commercial uses, the conservation and conversion of the existing gate lodge and bakehouse to provide ancillary services and all associated ancillary development works at The Former Good Shepard Convent, Convent Avenue, Sunday's Well, Cork.

Please find enclosed the draft layout as submitted with the Section 247 pre-planning meeting request to Cork City Council.

Please note that the details provided in the enclosed are subject to change as the scheme progresses and feedback from the council and other statutory consultees are incorporated.

Site Location and Description

The subject site known formerly as the Good Shepard Convent, is located in Sundays Well, Cork City. The subject site is approximately 2.4 km west of Cork City Centre and 1.5km north of UCC main campus. The site is on the north bank of the River Lee in the Sunday Well city area of Cork City.

The site slopes slightly from north to south. The total site area comprises c. 3.41 hectares. The site is bounded by existing residential developments to the north, south and east of the site, with Cork City Gaol bounding the site to the west.

The Good Shepard Convent is registered on the National Inventory of Architectural Heritage (Reg No. 20862019) and is listed as a protected structure (Ref No. PS721).

Figure 1 Site Location

The subject site is primarily zoned ZO 01 'Sustainable Residential Neighbourhoods' in the Cork City Development Plan 2022-2028. A portion of the site to the south and west is within the area zoned ZO 17 'Landscape Preservation Zones'. The site is located with an Architectural Conservation Area (ACA), 'Sundays Well ACA, Sub Area D'.

Figure 2 Location of Site (red star) on Land Use Zoning Map

There have been 10 no. previous planning applications on site. The most recent of which was for the partial demolition, redevelopment and extension of the existing former Good Shepherd Convent, Orphanage and Magdalene home buildings, and the demolition of all ancillary sheds and structures to facilitate a residential development of 234 no. apartments. Cork City Council granted permission for this development under reference 17/37279 in December 2017. This decision was subject to a third-party appeal to An Bord Pleanála who granted permission in September 2018 under ABP 300690. This permission has now expired.

EIAR Structure and Content

The EIAR is divided into three volumes as follows:

- Volume 1: Non-Technical Summary
- Volume 2: Main Environmental Impact Assessment Report
- Volume 3: Appendices

The overall structure of Volume 2 of the EIAR is as follows:

Chapter	Chapter Title
1.	Introduction
2.	Site Location and Project Description
3.	Alternatives Considered
4.	Population and Human Health
5.	Land, Soils, and Geology
6.	Hydrology and Hydrogeology
7.	Air Quality
8.	Climate Change
9.	Noise and Vibration
10.	Landscape and Visual Impact
11.	Waste Management
12.	Material Assets: Traffic and Transport
13.	Material Assets: Service Infrastructure and Utilities
14.	Biodiversity
15.	Archaeology
16.	Built Heritage
17.	Screening for Major Accidents
18.	Significant Interaction of Impacts
19.	Summary of Mitigation Measures and Monitoring

Each chapter is to include the following elements:

- Introduction and Methodology
- Description of the Existing Environment
- Impact Assessment. Each discipline will consider impacts under the following headings:
  - Do-Nothing Scenario
  - Construction Phase
  - Operational Phase

In assessing impacts regard will be had to direct impacts, indirect impacts, and cumulative impacts. Where relevant, reference may also be made to 'synergistic impacts' or 'secondary impacts'. The assessment of impacts will have regard to the EPA guidelines and advice notes for preparing EIAR.

As the EIA progresses any relevant permitted or proposed projects will be included in the assessment.

The EIAR will also consider:

- Mitigation Measures
- Residual Impacts

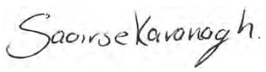
Summary

In summary, this EIAR will consider the potential impact of the proposed development, in combination with the relevant planning applications in the vicinity.

The EIAR is being co-ordinated by McCutcheon Halley Charted Planning Consultants. If you have any comments in relation to the potential environmental impacts of the proposed, I would be grateful if you would forward them to me as soon as is convenient.

You can email any comments to me at skavanagh@mhplanning.ie

Yours sincerely,



Saoirse Kavanagh

McCutcheon Halley

Saoirse Kavanagh

From: DIG <Dig@gasnetworks.ie>
Sent: Thursday 23 January 2025 08:36
To: Saoirse Kavanagh
Subject: RE: EIAR Consultation - Former Good Shepard Convent, Cork
Attachments: Good Shepherd Convent.pdf; Safety Booklet-A5-HSQE-GU-016.pdf

Thank you for your enquiry to the Gas Networks Ireland ***Dial Before You Dig*** service, please find the attached network map for your area of interest.

Gas Networks Ireland has ***Distribution Gas Network*** within your area of interest.

Before you start work, you must have a current gas network map (or maps) for the work location. A current gas network map (or maps) must always be kept on site while work is under way.

Reading your Map

- High pressure transmission gas pipe is shown **Red.**
- Medium pressure distribution gas pipe is shown **Blue.**
- Low Pressure distribution gas pipe is shown **Green.**

The gas network map is indicative only. You must conform to the safety and legal notices printed on the map. For further information on reading this map refer to the ***Safety Information.***

Breaking Ground

- Supervision by Gas Networks Ireland is **not** required when working in the vicinity of Distribution gas pipes (unless noted otherwise). Safe digging practices **must** be followed. All work in the vicinity of a gas transmission pipeline **must** be carried out in compliance with:
    - Health and Safety Authority, ***Code of Practice for Avoiding Danger from Underground Services.***

Critical Activity

Quarrying or blasting must not be carried out within 400 m of the gas network until Gas Networks Ireland has been consulted on **1800 42 77 47**

Aurora Telecom

- Part of the Aurora Telecom Network may be present on your network map. For further information, Aurora can be contacted on **01 892 6166** (Office Hours) or auroralink@gasnetworks.ie.

Service Pipes

- Service pipes feeding individual properties are not generally shown but their presence should always be anticipated. For further information on domestic gas services refer to the ***Safety Information.***

Safety Information

- Before starting work any work in the vicinity of the gas network, please refer to the Gas Networks Ireland safety booklet, ***Safety advice for working in the vicinity of natural gas pipelines***, available at https://www.gasnetworks.ie/home/safety/dial-before-you-dig/

  This booklet contains important safety information, including advice on how to read the gas network maps you have requested.

  If you did not request this map. please contact Customer Service on 1800 42 77 47.

Thank you for your enquiry to Gas Networks Ireland.

T 1800 20 50 50 (Emergency)
T 1800 42 77 47 (Dial Before You Dig enquiries)

E dig@gasnetworks.ie

Gas Networks Ireland Networks Services Centre, St. Margaret's Road, Finglas, D11 Y895
gasnetworks.ie | Find us on Twitter

Useful Publications

- Health and Safety Authority, ***Code of Practice for Avoiding Danger from Underground Services***
- Health and Safety Authority, ***Guide to Safety in Excavations***

Both are available free of charge from: Health and Safety Authority on **0818 289 389**
www.hsa.ie

From: Saoirse Kavanagh <skavanagh@mhplanning.ie>
Sent: Wednesday 22 January 2025 10:11
To: DIG <dig@gasnetworks.ie>
Subject: EIAR Consultation - Former Good Shepard Convent, Cork

REPRODUCED FROM THE ORDNANCE SURVEY BY PERMISSION OF THE GOVERNMENT. LICENCE No. 3-3-34

Important Safety Notice:

Damage to gas pipelines can result in serious injury or death. Gas network information is provided as a general guide. The exact location and depth of medium or low pressure distribution gas pipes must be verified on site by carrying out necessary investigations, including, for example, hand digging trial holes along the route of the pipe.
Service pipes are not generally shown but their presence should always be anticipated.

High pressure transmission pipelines are shown in red. If a transmission pipeline is identified within 10m of any intended excavations then work must not proceed before GNI has been consulted. The true location and depth of a transmission pipeline must be verified on site by a representative of GNI. Contact can be made through 1800 427 747.

All work in the vicinity of the gas network must be completed in accordance with the current edition of the Health & Safety Authority publication, Code of Practice For Avoiding Danger From Underground Services which is available from the Health and Safety Authority (01 614 7000) or can be downloaded at www.hsa.ie.

Legal Notice:

Gas Networks Ireland (GNI) and its affiliates, accept no responsibility for the accuracy of any information contained in this document including data concerning location and technical designation of the gas distribution and transmission network (the Information). The Information should not be relied on for accurate distance or depth of cover measurements.

Any representations and warranties, express or implied, are excluded to the fullest extent permitted by law. No liability shall be accepted for any loss or damage including, without limitation, direct, indirect or consequential loss, arising out of or in connection with the use or re-use of the Information.

- Aurora Telecom Fibre Optic Cable
- Aurora Telecom Duct
- Aurora Telecom Sub-duct
- Aurora Telecom Inserted Gas Pipe

Contact Aurora Telecom on 1800-427-399 or (01)203-0120.

- Transmission Pipe (High Pressure)
- Transmission Pipe (Construction Issue)
- Distribution Pipe (Medium Pressure)
- Distribution Pipe (Low Pressure)
- Service Pipe (Medium Pressure)
- Service Pipe (Low Pressure)
- Strategic Pipe (Medium Pressure)
- Strategic Pipe (Low Pressure)
- Inserted Pipe (Medium Pressure)
- Inserted Pipe (Low Pressure)
- Distribution Pipe (Abandoned)
- CP Cable

.C=?	Cover (depth in meters)		Pressure Monitor
	CP Ground Bed		Protection (Sleeve)
	End Cap		Protection (Slabbing)
	Hot Tap		Reducer
	Installation		Service Terminator
	Valve		Tee
	Mains Verification **		Transition

** Please contact GNI on 1800-427747 for specific information.

Design Department - DUBLIN

Gas Networks Ireland

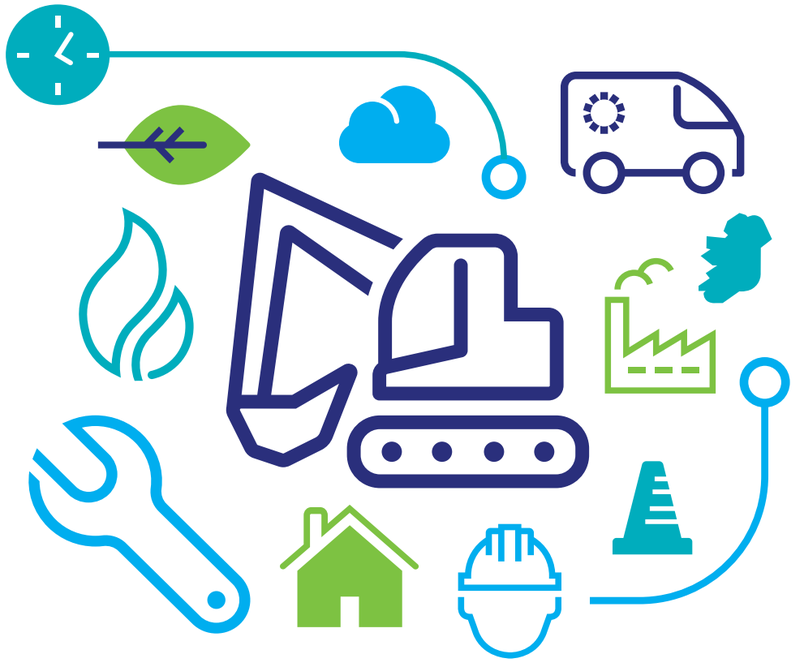
GAS NETWORK INFORMATION

Issue: MH Planning	
Location: Good Shepherd Convent	
Plot Date: 23/01/2025	Contact: S Kavanagh
Plotted by: KOC	Scale: 1:1000

Gas Networks Ireland

Safety advice

for working in the vicinity of natural gas pipelines



Important safety information

DIAL BEFORE YOU DIG
1800 42 77 47
In Emergency call **1800 20 50 50**
Gas Networks Ireland

When planning any excavation works dial
1800 42 77 47
to obtain up to date gas network maps.
Monday to Friday 9am – 5.30pm

Or you can sign up to DBYD online at
gasnetworks.ie/dbyd
and have access to maps 24 hours, 7 days a week
You can also contact us on
dig@gasnetworks.ie

If you have damaged a gas pipe call
1800 20 50 50
immediately, even if you do not suspect that gas is leaking
24 hours, 7 days a week

If you smell gas call
1800 20 50 50
24hr emergency service

Contents

This booklet contains important safety advice.
Please read the following before you start work:

Natural gas **characteristics and behaviour**

Characteristics

Natural gas is:

- a highly flammable gas;
- lighter than air and will rise when released;
- non-toxic (but can suffocate in enclosed or confined spaces); and
- made up mostly of methane and has a smell added for safety purposes.

Behaviour

During an uncontrolled escape, natural gas will behave in the following ways:

- In open excavations, where there is a clear path to the atmosphere, natural gas will rise, dilute and disperse into the air.
- If the path to the atmosphere is blocked, the gas will travel through soil, ducts, drains, sewers and voids. It can also follow the line of other buried utility services. This can lead to gas entering a building or other confined spaces, and may lead to a fire or explosion.

Note: Never cover a damaged gas pipe; or attempt to carry out a repair. Call 1800 20 50 50 immediately.

Risks of **damaging a gas pipe**

The risks of damaging a gas pipe can be classified as:

Highest Risk

Mechanical excavators pose the highest risk and "should not be used within 500 mm of a gas distribution pipe."

(HSA Code of Practice)

Mechanical excavators must not be used within 3 metres of a Transmission pipeline.

(Refer to Code of Practice for Working in the Vicinity of the Transmission Network - AO/PR/127)

High Risk

Hand held power tools should not be used directly over the line of a gas pipe, unless the gas pipe has been positively located by hand and a safe working distance has been established.

Use of handheld power tools is not permitted within 1.5 m of a Transmission pipeline.

(Refer to Code of Practice for Working in the Vicinity of the Transmission Network - AO/PR/127)

Damage to gas pipes from power tools presents a high risk to the operatives involved in the work.

Low Risk

Hand digging using shovels and spades presents the lowest risk of damaging a gas pipe.

This is the method that should be used where the presence of gas pipes is suspected or close to a known gas pipe.

Risks from a **damaged gas pipe**

- Remember when gas escapes, or is released in an uncontrolled way; it can fuel a fire, give rise to an explosive atmosphere or cause asphyxiation.
- If you suspect there is a gas leak, immediately call Gas Networks Ireland's 24hr Emergency Service on **1800 20 50 50**.
- Gas can quickly fill underground cavities and travel into buildings through soil, or following the line of other buried utilities.
- Gas can only burn if exposed to an ignition source:
  - Do not turn electrical switches on or off
  - Do not operate any plant or equipment
  - Do not use naked flames, smoke or vape
  - Do not use mobile phones in the vicinity.
- Move people away from, and upwind of, the affected area.
- If gas has entered a confined space or building:
  - Open doors and windows
  - Turn off the gas supply at the meter
  - Do not expose to an ignition source.

Gas Networks Ireland **transmission network**

Gas Networks Ireland transports gas in Ireland through a network of steel and polyethylene (PE) pipes. The network operates at pressures between 20 mbar and 85 bar and is split between Transmission and Distribution pipelines.

The **Transmission** system is made up of steel pipes and operates from 7 bar to 85 bar.

The **Distribution** system is made up mostly of polyethylene pipes and operates from 20 mbar to 7 bar.

The **network**

The network is made up of three elements:

- Transmission pipes
- Distribution pipes
- Pressure Regulating Installations

Transmission pipes

These are high pressure pipelines that transfer gas across the country. They are constructed from steel, with a black, white, cream, yellow or concrete coating, and may have marker posts at intervals along their length, particularly at field boundaries and road crossings.

If a transmission pipeline is identified near intended excavations then work must not proceed until Gas Networks Ireland Transmission has been consulted on 1800 42 77 47.

Distribution pipes

These are medium or low pressure pipelines within urban areas. They are mainly constructed from Polyethylene (PE) and are predominantly yellow in colour, but may have brown or black stripes. There are two types – Mains and Services.

Mains gas pipes usually run parallel to property in the footpath, grass verge or road and range in size from 63 mm to 400 mm diameter.

Service gas pipes are connected to mains and run to a meter position at the property, and range in size from 20 mm to 63 mm diameter.

Note: There is a limited use of steel pipes in areas like bridges or where only shallow depths can be achieved.

There are still a small number of ductile and cast iron gas mains in use, ranging in size from 3 inch (75 mm) to 24 inch (600 mm) in diameter (these mains are similar in appearance to metal water mains). Steel and PE gas services are run from these metal mains to the meter location at each building.

These ductile and cast iron mains and services have been largely replaced with PE pipes. In urban areas a large number of redundant ductile or cast iron pipes are utilised as carrier pipes for new PE pipelines.

Some Distribution pipelines have been classified as strategic mains due to their pressure, diameter and/ or location and the elevated consequences if they are damaged.

If a Distribution strategic main is identified near an intended excavation then work must not proceed until Gas Networks Ireland has been consulted on 1800 42 77 47.

District Regulating Installation (DRI)

Pressure Regulating Installations

There are two types: Above Ground and Under Ground

Above Ground Installations (AGI) / District Regulating Installations (DRI)

An AGI/DRI is a fenced area containing a visible arrangement of pipework and ancillary equipment and will be clearly marked with Gas Networks Ireland signage. Some DRI's can be housed in a steel unit with no fencing surround.

Under Ground Installations (UGI /DRIug)

Gas Networks Ireland also have underground pressure regulating installations which have metal or concrete cover plates. There will be no visible arrangement of pipework etc, as this will be contained within the chamber.

If an AGI/DRI or UGI/DRIug is identified near intended works, then work must not proceed until Gas Networks Ireland has been consulted on 1800 42 77 47.

Gas Networks Ireland **construction methods**

Gas Networks Ireland use three main construction methods:

‘Dig’ Technique

Open Cut – installing pipe using standard trenching techniques. Pipe is laid with a sand or pea gravel surround and gas marker tape is laid above the sand.

‘No-Dig’ Techniques

Insertion – utilising existing metal gas mains / services as a carrier for new PE pipes. Inserted PE may be a close or loose fit. The carrier pipe is broken out at connection points, i.e. at pipe joints or where a gas service pipe is connected.

Moling/Directional Drilling – installing mains/ services where a ‘moling’ machine drills from one location to another pulling the pipe behind it using “no-dig” technology.

Note: Where pipe has been installed using “no-dig” techniques, the gas pipe will not have sand surround or marker tape.

Gas Networks Ireland construction – **depth of cover**

Typical service arrangement

Service Connection

Purge Point

New Mains – Normally 750 mm in roads and 600 mm in footpaths. (1.1 m in open fields)

New Services – 450 mm rising to 375 mm within 1.5 m of the building line. In some cases these depths are not achievable.

Note:

Older mains and services may have reduced cover.

Services and other connections are taken from the top of the main and will therefore have a reduced depth of cover.

Alteration since original installation – roads, footpaths and grass verges may have been altered since the gas main or service was laid and reduced the depth of cover.

Purge Points and Test Caps – Mains are laid with “purge points” and/or test caps at the ends. These may also rise above the top of the main.

Gas Valve Covers –Gas valves are a key safety component part of the gas network.

Some gas mains and services have valves installed below ground with valve covers marked “GAS”.

Do not cover over or remove gas valve covers.

The risk of a gas valve cover being removed or covered over is particularly high during resurfacing or reinstatement works.

Even shallow excavation techniques such as road planing can damage gas pipelines with reduced cover.

Requesting **Gas Networks Ireland maps**

Gas Networks Ireland operates a **Dial Before You Dig** service to enable those involved in excavations to obtain natural gas network maps prior to starting work.

This service operates from 9am to 5.30pm, Monday to Friday.

Or you can sign up to DBYD online at **gasnetworks.ie/dbyd** and have access to maps 24 hours, 7 days a week.

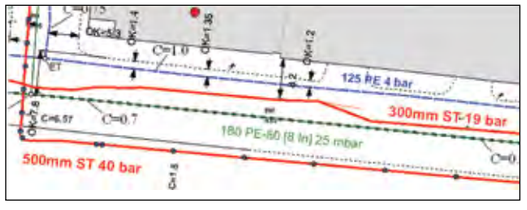
You can also email your enquiry to: **dig@gasnetworks.ie**

Maps will be sent out by post or by email where appropriate. When you contact Gas Networks Ireland to request a map, ensure you give the precise location of the intended works. You may be required to give some information regarding the nature of the planned work, i.e. start date, any high risk activity, etc.

Ensure you have allowed enough time for the maps to be obtained and to organise for the pipe location to be marked out if transmission pipelines are involved.

Note: Typical turnaround for maps is five working days when contact is made through phone or email, however using the online system will allow you instant access to up-to-date maps.

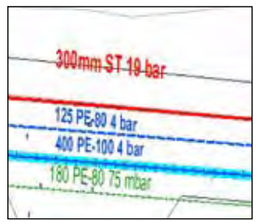
Organisers or planners of any work should ensure that the map is made available to personnel on-site.



Excerpt from a Gas Networks Ireland map.

Reading **Gas Networks Ireland maps**

Note: Natural Gas Network maps will only show mains and not services.
See page 16 for more information on service pipe locations.



The colour coding is as follows:

Red **= Transmission Main***
= 7 to 85 bar.

Blue **= Distribution Medium Pressure**
= 100 mbar to 7 bar.

Blue Buffer **=Distribution strategic main***
= 100 mbar to 7 bar.

Green **= Distribution Low Pressure**
= up to 100 mbar.

Typical AGI

Pressure regulating installations are marked as:

DRI – District Regulating Installation (Above Ground).

DRIug - District Regulating Installation (Under Ground).

UGI – Under Ground Installation.

AGI – Above Ground Installation.

** If you obtain a natural gas network map that shows a **red** Transmission main in the area of the proposed works or a distribution strategic main with a blue buffer, a consultation with Gas Networks Ireland **must** take place **before** starting works. Gas Networks Ireland will advise you on the safety measures required and will arrange for the location of the pipe to be marked out on site.*

Reading **Gas Networks Ireland maps**

Example of a Gas Networks Ireland map

Abbreviations

OK = Kerb, Curb
ORE = Road Edge
ORB = Rail Base
OB = Building
OW = Wall
OF = Fence
ODW = Dividing Wall
OGW = Garden Wall
RD = Road
BR = Branch
RED = Reducer
C = Cover to top of pipe
LH = Left Hand
RH= Right Hand
SWP = Sweep
CNR = Corner
S = South
N = North
E = East
W = West
No. = Number
Ctr = Centre
CL = Centre Line
Trans = Transition
DIV = Dividing
PK = Park
Conn = Connection
Opp = Opposite
Cplg = Coupling
ST = Steel
PE = Polyethylene

Gas **services**

Typical service arrangement

Service riser cover

Natural gas services are not normally identified on network maps, but their presence should be assumed. Services will normally, but not always, run at right angles from the main to the meter point.

To assist in determining the approximate position of gas services ensure you:

- Obtain a natural gas network map to identify the position of the gas main.
- Complete a site survey looking for gas meter boxes/cabinets, house entry points, service risers and gas valve covers.
- Older buildings may have no visible signs of a service, as the service may run directly into the building underground, with the meter fitted internally. In these cases a check should be made inside the building to identify the meter position.

Note: Ensure you utilise safe digging practices to locate the exact position of gas services.

Domestic meter box

Six meter cabinet

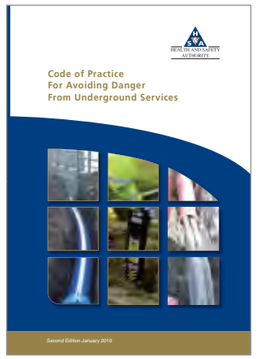
Purpose built multi-meter house (apartment complex).

Safe systems of work

Safe systems of work, as recommended by the Health and Safety Authority (HSA) should be employed on all projects.

Guidance on this can be found in the:

HSA: Code of Practice for Avoiding Danger from Underground Services.



Available from HSA website: **www.hsa.ie**

A safe system of work will include the following elements:

- Planning.
- Obtaining and using utility maps.
- Identifying pipes/services.
- Safe digging practices.
- Explosives must not be used within 30 m of any gas pipe (400 m for Transmission Pipelines), without prior consultation with Gas Networks Ireland.
- Piling, directional drilling or boring must not take place within 15 m of a gas pipe unless Gas Networks Ireland has been consulted.
- Extra care should be exercised when performing 'hot work' (such as welding) where a gaseous atmosphere could exist. If this potential exists Gas Networks Ireland must be consulted.
- Extra care should also be taken when using welding equipment, burners, torches or other heat generating equipment near pipelines (even if there is no potential for a gaseous atmosphere to exist) to ensure that the heat or sparks generated do not lead to the melting of polyethylene pipes or damage to pipeline coatings.

Contact Gas Networks Ireland for general enquiries on: 1800 464 464.

Safe systems of work

Planning

- Early contact should be made with Gas Networks Ireland to obtain a Natural Gas Network map.
  Dial Before You Dig 1800 42 77 47
  or visit **gasnetworks.ie/dbyd**
- Work involving piling, demolition, directional drilling, use of explosives or 'hot works' should be mentioned, as this may necessitate a site visit from Gas Networks Ireland personnel.
- Ensure you have allowed enough time to obtain the maps.

Maps

- Gas Networks Ireland will issue maps as outlined in this booklet. It is imperative that these maps are available for the operatives on-site for the duration of any works.
  The responsible person should ensure that operatives on-site understand the maps.

Identifying Pipes

- Steel, cast iron and ductile iron gas pipes can usually be traced using a conventional pipe/cable locating device set to "R" (Radio) mode.
- Polyethylene mains and services cannot be traced using conventional devices, so it is essential that maps are used and site surveys for meter boxes, valve covers, service risers, reinstatement scarring and other signs are completed.
- During the progress of works ensure no gas valve covers or markers are covered over.
- The position of gas mains and services should be marked out as they are located.

Note: Transmission pipelines pipelines and Distribution strategic mains must be marked out by a Gas Networks Ireland inspector.

Safe systems of work

Safe Digging Practices:

- As per the HSA Code of Practice, gas mains and services should be located by digging trial holes by hand. Mechanical excavators should not be used within 500 mm of any gas main.
  Mechanical excavators MUST NOT be used within 3 m of a Transmission pipeline.
  (Refer to Code of Practice for Working in the Vicinity of the Transmission Network - AO/PR/127)
- Never use hand held power tools directly over gas pipes unless precautions to prevent damage have been made and the pipe has been positively located.
  Use of handheld power tools is not permitted within 1.5 m of a Transmission pipeline.
  (Refer to Code of Practice for Working in the Vicinity of the Transmission Network - AO/PR/127)
- Do not leave a polyethylene gas pipe exposed.
- Provide adequate support for any gas pipe uncovered during the work.
- Report any damage, no matter how minor it may appear, to **1800 20 50 50.**
- If you have any concerns regarding safety around gas pipes contact Gas Networks Ireland for advice on **1800 464 464**.

What to do if a gas pipeline is damaged
(or if you smell gas in the area)

- Do not turn any electrical switches on or off, e.g. ignition switches.
- Do not operate any plant or equipment.
- Move people away from, and upwind of, the affected area. Restrict employee and public access to the affected area.
- Prevent smoking, vaping, the use of naked flames, the use of mobile phones and other ignition sources in the vicinity of the leak.
- Report the leak/damage immediately to:
  Gas Networks Ireland 24hr Emergency Service on 1800 20 50 50.
- Provide accurate information on your location and the nature of the incident.
- Do not attempt to repair the damage.
- Do not cover up a damaged main or service, this may lead to the gas travelling through soil, ducts, sewers, chambers or voids and potentially building up inside a premises or confined space.
- Do not turn off any gas valves in the road or footpath (you may be causing further problems by doing so).
- Assist Gas Networks Ireland emergency personnel as required.
- Remember any damage to gas pipes, even if the pipe does not appear to be leaking, must be reported to Gas Networks Ireland.

If you smell gas call

1800 20 50 50

24hr emergency service

Gas Networks Ireland contacts

The main contact numbers for Gas Networks Ireland are

24hr Emergency Service
1800 20 50 50
24 hours, 7 days a week

Dial Before You Dig
1800 42 77 47
Monday to Friday 9am – 5.30pm

or sign up to DBYD online
gasnetworks.ie/dbyd

General Enquiries
1800 464 464
Monday to Friday 8am – 8pm
Saturday 9am – 5.30pm

gasnetworks.ie

For “Dial Before You Dig” posters or stickers for your workplace call: **1800 464 464**

Other useful publications

HSA: Code of Practice for Avoiding Danger from Underground Services

HSA: Guide to Safety in Excavations

both are available free of charge from:
Health and Safety Authority on **01 614 7000**
www.hsa.ie

ESB Networks: How you can avoid hitting electrical cables when digging and drilling

available free of charge from:
ESB Networks on **1800 372 757**
esb.ie/esbnetworks

Gas Networks Ireland

The main contact details for
Gas Networks Ireland are:

General Enquiries
1800 464 464

Dial Before You Dig
1800 42 77 47

24hr Emergency Service
1800 20 50 50

networksinfo@gasnetworks.ie

gasnetworks.ie

Guideline No: HSQE/GU/016 Rev 2 Date: November 2020

Saoirse Kavanagh

From: Sam Bayley (Housing) <Sam.Bayley@npws.gov.ie>
Sent: Tuesday 11 February 2025 13:03
To: Saoirse Kavanagh
Cc: Stefan Jones (Housing)
Subject: Good Shepard Convent development

Hi Saoirse

I just received your letter about consultation for a proposed development at the Good Shepard Convent. I have had some interest in this property as the Ranger for the area as this is the only known site in the city with nesting Barn Owls, also one of only two sites for nesting Kestrel in the city, as well as Stock Doves, occasional Peregrine and suspected Buzzard. There has also been a large bat roost here for many years. That said, the lack of physical access to the property has meant monitoring has been more than problematic and there could be much more here.

I would therefore suggest that a very thorough ecological survey be conducted by consultants with specific knowledge of these species and their requirements, the significance of retaining all mature trees and the importance of the grassland habitat as feeding areas for the Barn Owls and Kestrels.

As this is a large development plan I have copied in my Regional Ecologist, Stefan Jones, and maybe it would be suitable to have a site visit with you at some point?

Regards

Sam Bayley

Conservation Ranger
Cork City and Surrounds and Irish Cuckoo Tagging Project
National Parks and Wildlife Service
Oak House
Bessboro Road
Mahon
County Cork T12 D6CH

Mobile – 00 353 (0)85 801 3245
Twitter - @SamBayley2

An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage

Follow the Irish tagged Cuckoos migration here - https://www.bto.org/cuckoos

Follow the West Cork Chough nest cameras - https://www.youtube.com/watch?v=yMnvzd356nM

An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications

Geological Survey
Suirbhéireacht Gheolaíochta
Ireland | Éireann

Saoirse Kavanagh
McCutcheon Halley
6 Joyce House
Barrack Square
Ballincollig
Cork, P31 YX97

29 January 2025

Re: Consultation on the preparation of an EIAR for a proposed Student Accommodation Development at The Former Good Shepard Convent, Convent Avenue, Sunday's Well, Cork
Your Ref: n/a
Our Ref: 25/15

Dear Saoirse,

Geological Survey Ireland is the national earth science agency and is a division of the Department of the Environment, Climate and Communications. We provide independent geological information and interpretation and gather various data for that purpose. Please see our website for data availability.

With reference to your email received on the 22 January 2025, concerning the preparation of an EIAR for a proposed Student Accommodation Development at The Former Good Shepard Convent, Convent Avenue, Sunday's Well, Cork, we recommend using our various data sets when conducting the EIAR, SEA, planning and scoping processes for developments, plans and policies. For more detailed information on how to access this data please access 'Data and Maps' Data & Maps (gsi.ie) on our 'Geoscience for planning' webpage. Use of our data or maps should be attributed correctly (please refer to each individual dataset's metadata for correct attribution).

For specific data available for Environmental Assessment and Planning topics please follow this link [Data by Environmental Assessment and Planning Topic (gsi.ie)], where you will find our data arranged by environmental assessment topic as illustrated below:

Land and soils	Water	Climate Change
Soil • Subsoils (Quaternary Geology) • Tellus Geochemistry • Geotechnical *Geology* • Bedrock • Geophysics • Bedrock & Quaternary 3D	*Groundwater* • Aquifers GW vulnerability, GWPSs (GWPPs) *Surface water* • Tellus Geochemistry *Estuarine & marine waters* • Marine and coastal *Flooding* • GWClimate • Karst	*Carbon accounting / Carbon balance* • Geothermal • Carbon capture and storage *Climate change trends* • National coastal change assessment

Cultural Heritage	Material Assets	The Landscape
Archaeology • Cherish *Underwater Archaeology* • Shipwrecks	*Built Services* • Natural resources (Minerals & Aggregates) • Active quarries	*Landscape Appearance & Character* • Physiographic units *Historical landscapes* • Historic mines

Other Relevant Data

An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications

Geological Survey
Suirbhéireacht Gheolaíochta
Ireland | Éireann

Natural (Geo) hazards • Landslide Susceptibility Mapping • Groundwater flooding • Coastal vulnerability • Subsidence • Radon	*Natural heritage* • Geoheritage (County Geological Sites) • Dimension Stone/Stone Built Ireland	

Other Comments
Should development go ahead, all other factors considered, Geological Survey Ireland would much appreciate a copy of reports detailing any site investigations carried out. The data would be redacted for confidentiality and added to Geological Survey Ireland's national database of site investigation boreholes, implemented to provide a better service to the civil engineering sector. Data can be sent to the Geological Mapping Unit, at mailto:GeologicalMappingInfo@gsi.ie.

If we can be of any further help, please do not hesitate to contact me Clare Glanville, or my colleague Trish Smullen at GSIPlanning@gsi.ie.

Yours sincerely,

Dr. Clare Glanville
Senior Geologist
Geoheritage and Planning Programme
Geological Survey Ireland

Trish Smullen
Geologist
Geoheritage and Planning Programme
Geological Survey Ireland

The publicly available data referenced/presented here, should in no way be construed as Geological Survey Ireland support for or objection to the proposed development or plan. The data are made freely available to all and can be used as independent scientific data in assessments, plans or policies. It should be noted that in many cases these data are a baseline or starting point for further site specific assessments.

Geological Survey Ireland, Block 1, Booterstown Hall, Booterstown, Blackrock, Co Dublin, A94 N2R6
Bloc 1, Halla Bhaile an Bhóthair, Baile an Bhóthair, An Charraig Dhubh, Baile Átha Cliath, A94 N2R6
T +353 (0)1 678 2000 **www.gsi.ie** *Fáiltítear roimh comhfhreagras i nGaeilge*

IFI/2016/1-4298

Guidelines on Protection of Fisheries During Construction Works in and Adjacent to Waters

2016

IASCACH INTÍRE ÉIREANN
INLAND FISHERIES IRELAND

GUIDELINES ON PROTECTION OF FISHERIES DURING CONSTRUCTION WORKS IN AND ADJACENT TO WATERS

INLAND FISHERIES IRELAND

2016

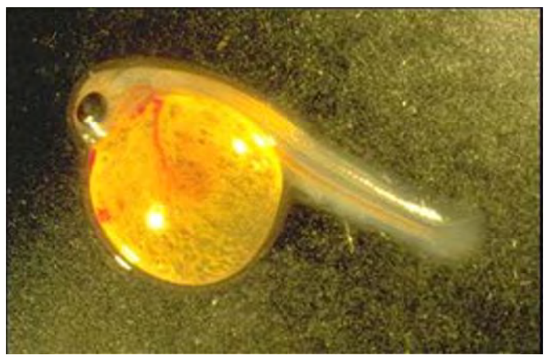
GUIDELINES ON PROTECTION OF FISHERIES DURING CONSTRUCTION WORKS IN AND ADJACENT TO WATERS.

CONTENTS

1. INTRODUCTION.

1.1 Inland Fisheries Ireland (IFI) is responsible for the protection, management and conservation of the inland fisheries resource in Ireland, which includes over 70,000 kilometres of rivers and streams and 144,000 hectares of lakes. The agency is also responsible for sea angling. The waters concerned contain a wide range of fish species, which are particularly sensitive in terms of threats to their physical habitat and to water quality such as arise during construction works in and adjacent to waters.

1.2 IFI policy is aimed at maintaining a sustainable fisheries resource through preserving the productive capacity of fish habitat by avoiding habitat loss, and harmful alteration to habitat. Construction works particularly those entailing the installation of new river and stream crossing structures and the realignment of river channels have the potential to significantly impact both in the short and long term on fisheries resources if they are not carried out in an environmentally sensitive manner.



A brown trout at the alevin stage shortly after hatching. This life stage is very sensitive to pollution and physical disturbance.

1.3 These guidelines identify the main issues of concern in terms of construction impacts and their prevention. They set out *inter alia* requirements in relation to bridges and culverts and the need for such structures to allow for unhindered upstream and downstream movement of fish and aquatic life.

2 OBLIGATIONS ON DEVELOPERS DESIGNERS AND CONTRACTORS TO CONSULT IFI.

2.1 Contact should be made with IFI at the earliest possible stage in the planning and design process where works such as road construction, installation of culverts and bridges, the crossing of rivers/streams with pipelines and works on and in the environs of waters are planned. Such consultation will enable those concerned to comply with the provisions of the Fisheries Acts and Habitats Regulations.

2.2 In addition to the general guidance and requirements detailed herein, there will be design and construction issues specific to individual projects and locations. In such cases IFI will issue detailed operational and construction requirements.

3. THE ISSUES OF CONCERN.

3.1 Damage to the Aquatic and Associated Riparian Habitat, e.g.

- Removal and loss of instream spawning gravels and larger stones.

- Loss of submerged and emergent aquatic vegetation.
- Loss or damage to bankside cover including removal of trees, shrubs and bankside root masses.
- Undesirable changes in watercourse morphology and hydrology.

Drip tray is undersized, dangerously positioned and leaking oil. Unacceptable practice.

3.2 Pollution of Waters.

Pollutant	Examples of Construction Source
Silts and solids.	Earthworks, new drainage networks and instream works.
Cementitious residues.	Bridge, culvert and drainage headwall construction, etc.
Oils and greases. Anti freeze.	Construction plant and equipment.
Wood preservative.	Treatment of new timber fencing.

3.3 Introduction of Non Native Species.

Invasive Species	Construction Source
Plants, algae, fish and shellfish.	Earthmoving equipment, pumps, boats, ropes etc, previously used perhaps unknowingly in waters containing invasive species.
Plants and algae.	Imported materials such as top soil.

Further information on invasive species their impact and control, and on bio-security is available at www.inlandfisheriesireland.ie

It is a serious offence to discharge deleterious matter such as oil contaminated residues to waters.

3.4 Interference with Upstream and Downstream Movement of Aquatic Life.

- Improperly designed or installed temporary and/or permanent watercourse crossing structures. For example, insufficient water depth in culverts, culverts with perched inlets, outfalls and excessive slope.
- Insufficient water depth over bridge aprons/scour slabs.
- Physical alteration of stream channels resulting in:
  - Altered hydraulic characteristics.
  - Changes in stream profile, particularly in width, depth, gradient and current speed.

Temporary crossing impassable to fish life.

4. TIMING OF INSTREAM WORKS.

4.1 There are significant variations in the timing and duration of salmonid (Salmon and Trout) spawning activity throughout the Republic of Ireland. To minimise adverse impacts on the fisheries resource works in rivers, streams, watercourses, lakes, reservoirs and ponds should normally (except in exceptional circumstances and with the agreement of IFI) be carried out during the period July-September.

4.2 The appropriate 'window' for instream works can vary depending on the nature of the fishery resource concerned and the existence of other factors such as catchment or sub catchment specific Bye Laws and Regulations.

5. TEMPORARY CROSSING STRUCTURES ON WATERS.

5.1 All watercourses which have to be traversed during construction projects should be effectively bridged prior to commencement of works. There is sometimes a serious misconception that in installing temporary crossing structures, the only issue is keeping water flowing from above a temporary crossing to below it. Design and choice of temporary crossing structures must provide for passage of fish and macroinvertebrates, the requirement to protect important fish habitats e.g. spawning and over wintering areas, as well as preventing erosion and sedimentation. In certain circumstances, access for angling or commercial fishing purposes may also be required.

Temporary crossing structure. Impassable for aquatic life and emitting silt to waters as construction equipment traverses the crossing. Unacceptable practice.

5.2 No temporary crossing on any watercourse shall be installed without the approval of IFI as regards sizing, location, duration and timing.

The same temporary crossing location as shown on the previous page, but with a laden dumper dislodging and causing loss of cover material to waters.

The inevitable result from the crossing shown above. Continuous silt discharges. Unacceptable practice.

5.3 The preferred option is for clear span 'bridge type' structures on fisheries waters.

5.4 The crossing of watercourses at natural fords is not permitted because of the amount of uncontrolled sedimentation that can be generated.

5.5 The creation of fords on streams and rivers through the introduction of stone is prohibited.

Temporary clear span 'bailey bridge' ensuring free upstream and downstream movement of aquatic life. The streamside fencing should be 5 metres from the watercourse, not immediately alongside as in this photograph.

A clear span temporary crossing capable of carrying heavy axle loadings and long wheel base vehicles.

5.6 Where circumstances such as space or access difficulties preclude use of clear span structures, temporary crossings structures shall:

5.6.1 Comprise one or more metal or concrete pipes, prefabricated culverts or such other material as IFI may permit of minimum diameter 900 mm. Pipes or culverts may be vertically stacked.

5.6.2 Be laid in such manner as to maintain the existing stream profile.

5.6.3 Ensure no significant alteration in current speed or hydraulic characteristics, in particular not result in scouring, deposition or erosion upstream or downstream the temporary crossing location.

5.6.4 Have capacity to convey the full range of flows including flood flows likely to be encountered without the crossing being overtopped.

5.6.5 Be covered with clean inert material such as to allow for the safe crossing of the widest items of plant and equipment without cover material being dislodged and entering waters.

5.7 The approach and departure routes to temporary crossing structures should be designed and installed so that drainage will fall away from the watercourse being crossed. In the event that the fall of ground does not permit sufficient control on drainage, additional earthworks settlement areas shall be provided.

5.8 Temporary crossing structures should be fenced with terram or similar material to prevent wind blow carrying dusts and other potentially polluting matter to waters.

5.9 Side armour (e.g. reinforced concrete traffic barriers) should be provided on temporary crossing structures to ensure machinery cannot drive over its edge, or force the discharge of material from the bridge deck to waters.

5.10 IFI wish to emphasise that site selection for temporary crossings should have regard to all access and construction needs ranging from those of fencing contractors vehicles to the longest wheelbase of multi-axle cranes.

A crossing structure over a designated salmonid water. Note: terram covered fencing, reinforced concrete traffic barriers and fall back from the watercourse.

5.11 It is not permissible, except in exceptional circumstances, to reposition temporary crossing structures where these are not of a clear span type.

6. RIVER AND STREAM PERMANENT CROSSING STRUCTURES.

Is the culvert adequately sized?

6.1 Structures should not damage fish habitat or create blockages to fish and macroinvertebrate passage. Design and choice of structure should be based on its technical

and economic feasibility to pass fish and macroinvertebrates, the requirement to protect important fish habitats e.g. spawning and over-wintering areas, provision in certain areas of angling and commercial fishing access including boat access and prevention of erosion and sedimentation.

6.2 Culverts are the most frequently used river/stream crossing structures and are associated with some of the most common fish passage problems. The culverting of long stretches of fisheries water is extremely undesirable and can result in significant loss of valuable habitat. In the case of crossing structures over fishery waters, the preferred position is for clear span structures (bridges), so as not to interfere in any way with the bed or bank of the watercourses in question.

Excessively wide culverts can result in reduced current speed, ponding, and siltation of instream gravels.

6.3 Bridge foundations should be designed and positioned at least 2.5 metres from the river bank so as not to impact on the riparian habitat.

Excessively long culvert resulting in habitat loss and reduced productivity due to inadequate light penetration.

6.4 Generally, bridges and bottomless culverts are the best option for maintaining natural stream channel characteristics and have the least impact on habitat. However, because of design and load bearing considerations, bottomless culverts may not always be suitable for installation particularly on narrow river channels, as foundations may encroach on the channel itself and possibly result in future scouring or erosion.

6.5 Taking account of recent advances and investigations in the area of climate change and flood studies, designs should be such as to verifiably have carrying capacity for a 1 in 100 year fluvial flood flow whilst maintaining a minimum freeboard of 300 mm.

6.6 The Office of Public Works (OPW) is the lead agency for flood risk management in the Republic of Ireland. Design and capacity of structures must also be in accordance with their requirements. IFI strongly recommends that contact be made with OPW at the earliest stage in the planning and design process. (www.opw.ie)

An embedded box culvert sized to match existing stream profile.

6.7 Clear span designs maintain channel profile, do not alter gradients, readily pass sediment and debris and provide unrestricted passage for all size classes of fish by retaining the natural stream bed and gradient. Water velocity is not changed and they can be designed to maintain the normal stream width. Foundations should be positioned at least 2.5 metres from waters.

6.8 Embedded box and pipe culverts are less preferable to bridges and bottomless culverts. Embedded culverts must maintain the natural channel gradient, width and substrate configuration. They should be buried to a minimum of 500 mm. below the stream bed at the natural gradient. Box and pipe culverts must be sized to maintain the natural stream channel width. The gradient should not exceed 3%. The availability of suitably sized material (depending on hydraulic conditions) to initiate "simulation" of the stream bed is the most preferable approach to establish fish and faunal passage through culverts.

6.9 Culverts should be positioned where the watercourse is straightest and aligned with its bed.

Off-line culvert at construction stage back filled with gravel. The size range and depth of fill required will be site specific.

6.10 In the case of bridges and bottomless culverts, structures should be designed and installed so as to:

6.10.1 Allow for the maintenance of channel profile and existing gradient.

6.10.2 Be capable of passing such debris as might arise during flood flow conditions.

6.10.3 Ensure adequate light penetration to minimise loss in primary productivity.

6.10.4 Not result in damage to the riparian habitat or necessitate construction within 2.5 metres of waters.

6.10.5 Provide at locations specified by IFI, angling access and/or access for commercial fishing purposes.

Box culvert positioned at incorrect level. Upstream fish passage is made difficult. Culvert invert should be 500 mm. below existing bed level and back filled with clean gravel to match the existing stream profile.

6.11 While the preferred option is for bottomless culverts, IFI is prepared in certain circumstances to consider proposals for the installation of box or pipe culverts on fisheries waters. These may be installed subject to structures being sized so as to meet the requirements at 6.10 in terms of channel profile, gradient, flood debris capacity, light, access and:

6.11.1 Be positioned such that both the upstream and downstream invert shall be 500 mm. below the upstream and downstream river bed invert levels respectively.

6.11.2 Never exceed a slope of 5%, in which circumstances baffles generally are required, and preferably not exceed a slope of 3%. As baffles can reduce the hydraulic efficiency of culverts, appropriate capacity provision must be included in the overall design.

6.11.3 In the case of box culverts on angling waters, be 3 meters in height.

The smooth concrete finish is totally unsuitable for fish passage.

6.12 Pipe culverts are not generally considered acceptable on fisheries waters. They are normally only appropriate for use on minor watercourses and drainage ditches where these can be demonstrated as not being significant in terms of fisheries habitat.

Unacceptable culverting practice. These pipes are totally impassable to fish.

6.13 Bank protection works are often required upstream and downstream of new structures, to ensure no undercutting or destabilisation of either the structure or riparian bank areas occurs. In carrying out bank protection works, it is essential that large enough boulders are selected and strategically positioned, to ensure they cannot be undercut. Normally this entails part burying boulders up to one third of their depth below stream bed

level and securing them into their final position. In areas of high water energy, to ensure stability, boulders size should be a minimum of 0.5 ton.

The boulders in these bank protection works are not large enough, not sunken below stream bed level and likely to be undercut and dislodged in a storm event.

Suitably sized rock armour built to high water level at a location influenced by tidal back-up.

6.14 To facilitate revegetation, each course of boulders laid should be back filled with a layer of top soil. Selection of boulders in terms of shape to facilitate their placement and stability is a major consideration. Irregularly shaped boulders are very difficult to work with in terms of building multiple stable courses.

Revegetation of rock armour facilitated by the placing of locally sourced topsoil (to ensure no importation of non local grasses and shrubs) between each layer or course of boulders at installation time.

6.15 The height to which rock armour is built must take account not only of the riparian zone requiring protection, but also in certain circumstances of the need to protect e.g. kingfisher and sand martin habitat. In many instances, one or two layers of armour will be sufficient to protect and stabilise the toe of embankments while allowing nesting.

Visually unsightly stone filled gabion baskets.

6.16 Gabions are not a preferred option when it comes to bank protection. They can easily be vandalised and once the mesh is cut or broken, baskets can collapse. Gabion baskets can be unsightly and it is difficult to successfully

establish and maintain vegetation on side walls. Gabion baskets are normally only acceptable at locations where due to access constraints it is not possible to install rock armour.

7. CONSTRUCTION IMPACTS.

7.1 Uncured concrete can kill fish, plant life and macroinvertebrates by altering the pH of the water. Pre-cast concrete should be used whenever possible, to eliminate the risk to all forms of aquatic life.

7.2 Discharge of silt-laden waters to fisheries streams is of particular concern. Silt can clog fish spawning beds and juvenile fish species are particularly sensitive. Plant and macroinvertebrate communities can literally be blanketed over, and this can lead to loss or degradation of valuable habitat. It is important to incorporate best practices into construction methods to minimise discharges of silt/suspended solids to waters.

Construction sites require careful management. Is this the optimal haul route in terms of impact minimisation?

Silt discharge minimisation by providing retention areas to reduce discharge velocity and allow settlement during rainfall events.

7.3 Discharges of fuels and oils can be directly toxic to aquatic life and at sub lethal levels lead to tainting of fish tissues, rendering fish inedible. Oil films on water can seriously interfere with the diffusion of oxygen from the atmosphere into waters and in extreme cases result in oxygen depletion.

The practical impact of poor silt control.

7.4 IFI require that:

7.4.1 When cast-in-place concrete is required, all work must be done in the dry and effectively isolated from any flowing water (or water that may enter streams and rivers) for a period sufficient to ensure no leachate from the concrete.

Silt control pond. The blue hose conveying pumped silt laden waters has its outlet securely anchored within the stone aggregate thereby dissipating energy, minimising disturbance, and preventing pond contents being disturbed and re-suspended.

Poor work practice. The drip tray is undersized, constructed of too light a material, and accordingly overly flexible, easily damaged, and unlikely to retain oil residues.

7.4.2 No direct discharges be made to waters where there is potential for cement or residues in discharges.

7.4.3 Designated impermeable cement washout areas must be provided.

7.4.4 The pH of any and all discharges made from and during construction works shall be in the range 6.0 - 9.0 units and not alter the pH of any receiving fisheries waters by more than +/- 0.5 pH units.

Silt control pond. Note hose conveying pumped silt laden waters with its outlet positioned within the gravel mound thus ensuring no disturbance of pond contents.

7.4.5 Silt traps/settlement ponds or other forms of containment and treatment shall be constructed at locations that will intercept run-off to streams. Traps shall not be constructed immediately adjacent to natural watercourses. A buffer zone should remain between the silt trap and the watercourse with natural vegetation left intact. Alternatively, imported materials such as terram, straw bales, coarse to fine gravel should be used either separately or in combination as appropriate to remove suspended matter from discharges.

7.4.6 The level of suspended solids in any discharges to fisheries waters as a consequence of construction works shall not exceed 25 mg/l, nor result in the deposition of silts on gravels or any element of the aquatic flora or fauna.

7.4.7 All oils and fuels shall be stored in secure bunded areas and care and attention taken during refuelling and maintenance operations. Particular

attention shall be paid to gradient and ground conditions which could increase the risk of discharge to waters.

7.4.8 Temporary oil interceptor facilities shall be installed and maintained where site works involve the discharge of drainage water to receiving rivers and streams.

7.4.9 There shall be no visible oil film in any discharges from construction works to waters.

7.4.10 That all containment and treatment facilities are regularly inspected and maintained.

7.4.11 Waterproofing and other chemical treatment to structures in close proximity to waters shall be applied by hand.

7.4.12 Hydroseeding shall not be carried out in close proximity to water. These areas shall be seeded by hand.

Terram lined (to prevent erosion) silt control pond outlet channel showing gravel acting as filter medium for silt removal.

8. DUST SUPPRESSION AND WATER ABSTRACTION.

8.1 It is accepted in the interests of protection of terrestrial ecosystems and so as to avoid a wide range of impacts on persons and property, that dust control measures sometimes may be required. This is normally achieved by abstraction from watercourses adjacent to the site of earthworks. In such circumstances it is essential that the aquatic resource is protected and that over-abstraction does not take place especially in low flow summer conditions at locations supporting important fish populations.

Continuous abstraction using submersible pump. No screening in place to prevent the entry of e.g. juvenile fish species to the pump. Unacceptable practice.

8.2 IFI require that:

8.2.1 Water abstraction for dust suppression shall not take place from any water body containing or suspected to contain aquatic invasive species.

8.2.2 Abstraction is confined to only those larger waters identified and agreed as being of sufficient size and volume so as to allow abstraction without adverse impact.

8.2.3 Abstraction points shall be screened so as to ensure that fish and aquatic plants are not removed from waters in the abstraction process.

A screened abstraction point using terram fitted over a fabricated support frame.

9. PLANNING, DESIGN AND CONSTRUCTION ISSUES.

9.1 The preferred position from the fisheries perspective is for clear span river and stream crossing structures thereby allowing for installation/construction without the need to alter or move existing watercourses. In the case of bridges and bottomless culverts, designers should ensure proposals are such that foundations and abutments including wing walls can be constructed without entering on or damaging the riparian zone, or existing channel profile.

9.2 Where on-line construction is proposed or taking place, it may be necessary for IFI, following an assessment of on the ground conditions with the contractors involved, to temporarily remove using electro-fishing equipment, fish from the reaches involved.

9.3 Where on line box or pipe culvert construction is proposed, it will be necessary to install a temporary by-pass channel so as to allow for stream continuity and the normal upstream and downstream movement of fish and aquatic life depending on location and seasonality.

9.4 Temporary long term by-pass channels shall be excavated and sized such as to replicate existing upstream and downstream channel conditions as regards width, depth, gradient and instream materials. Where necessary, rock armouring will be provided. In terms of capacity, by-pass channels shall be sized so as to accommodate such flood event as might reasonably be expected based on examination of hydrometric data and catchment characteristics.

9.5 In newly constructed by-pass channels the process of diverting waters and associated movement of fish stocks may only take place under the direction and supervision of IFI or its agents. Adequate advance notice of all such proposed works shall be given to IFI.

Extreme meanders installed during excavation of a new channel to overcome excessive gradient between the original course of the stream (in the background at tree line) and the point of entry of the newly created channel to a culvert (in foreground under the timber fencing). In this instance there was inadequate provision at the planning and design stage for the necessary land take.

9.6 Where temporary short term by-pass channels are required for a number of days, these shall be excavated and sized such as to accommodate such flood event as might reasonably be expected over the period in question.

9.7 Where a structure installed on line is completed within the period during which instream works normally may be undertaken (July-September), flow may be re-established through the new structure, fish transferred from the temporary by-pass channel back to the original channel, and the by-pass decommissioned immediately on completion of the fish removal with the area levelled and landscaped as appropriate. Such works may only take place following the giving of advance notice to IFI and under its supervision.

9.8 Where a structure installed on line is not completed within the period during which instream works normally may be undertaken, flow may not except in exceptional circumstances be re-established through the new structure until the next approved 'window' for such instream works.

9.9 Where on-line construction is not feasible and a structure is constructed off-line (subject to IFI approval), the course of the existing stream can be altered and new approach/departure channels designed and installed to link into the original stream channel

9.10 IFI require where box and/or pipe culverts are installed off-line on fisheries waters that:

9.10.1 Particular attention shall be given by designers and contractors to survey pre-existing upstream and downstream stream bed levels at appropriate locations, taking account of the requirement to ensure newly installed box or pipe culverts are lain with their invert level 500 mm. below bed level, so that in overall terms the newly created section of stream shall replicate and where appropriate, improve on that which it replaces.

9.10.2 The approach and departure channels for newly installed culverts shall be excavated and sized such as to replicate and be compatible with existing upstream and downstream channel conditions as regards width, depth, gradient and instream materials. Bends and meanders shall be incorporated into the new channel.

9.10.3 The approach and departure channels for newly installed culverts are back filled to a depth of up to 500 mm with clean round gravel in such size range as required where IFI determine that the material in the newly formed channel is unsuitable in terms of fish habitat.

9.11 Where as an <u>exceptional</u> measure consequent on limited land availability or other space constraints a culvert having a gradient greater than 5% is permitted, IFI require as follows:

9.11.1 Water velocity through the culvert should not exceed 1.2m/sec. in the case of salmonid habitat and 0.8 m/sec. in the case of cyprinid habitat.

9.11.2 Baffles should be provided within the culvert structure to locally reduce flow velocity thus aiding fish swimming upstream without undue stress.

9.11.3 The entry and exit points of the structure must be drowned out to a minimum depth of 150 mm. in the case of salmon waters and 100 mm. for trout waters.

9.11.4 Where culvert gradient is too steep to achieve backwatering, the downstream water level should be raised by providing one or more ponding weirs below the culvert outfall. Ponding weirs should have fish notches to facilitate upstream movement and the pools formed by them should provide resting and take-off conditions for fish.

9.12 The fitting of mesh or screens to culverts, albeit with the intention of intercepting instream debris is prohibited.

9.13 Newly constructed river and stream channels shall have banks battered to a finished angle of not greater than 45° on one bank and not greater than 30° on the opposite bank, (to allow for maintenance of a low flow channel, an overflow and a flood flow channel). Banks shall be top soiled and seeded so as to ensure the growth and development of a broad range of local grasses and shrubs thereby facilitating development of stable bank root structures.

Well vegetated newly established river channel, with broadleaves planted to within 5 meters of the overflow channel. The root structures aid bankside stability.

Looking from upstream towards a culvert arrangement. Moderate and flood flows are conveyed in the right hand culvert. Entry to that culvert is dictated by the invert and contour of the right hand portion of the newly created river channel. The left hand bank finished batter angle is approx. 45°. The first portion of the right hand bank to convey the moderate flow is battered to approx. 30°. The extreme right bank area is battered to approx. 45° to convey flood flows.

9.14 Broadleaves shall, where prescribed by IFI, be planted along newly created channels so as to provide a mixture of dapple and shade conditions. Planting shall be a minimum of 5 meters from the watercourse channel.

9.15 In the case of culverts, low flows can be accommodated in an appropriately sized structure, thereby sustaining the fisheries resource. Moderate and flood flows should be directed through a culvert that becomes operable only at a pre-determined discharge level. Moderate and flood flow culverts should be installed such that the culvert empties in its entirety when the flood has passed.

9.16 To aid in the colonisation and development of newly created river channels, it is desirable to transfer established riparian plants, shrubs and trees together with living root structures as well as boulders, stones and gravels from decommissioned to new channels where they can be positioned, inserted and replanted as appropriate.

Newly created channel. The riparian grasses on the right bank have been transferred from the previous course of the now redundant original channel. The root structures stabilise the bank area while the grasses provide a degree of cover and shade and provide habitat for aquatic insects which form part of the food for fish.

9.17 In the case of newly created stream and river channels IFI require that:

9.17.1 Such transfer of riparian plants, trees and instream material(s) as necessary, is carried out under IFI's direct supervision.

9.17.2 Gravels and stones are removed from the dried out river channels and securely stored for re-use in the newly created river channels.

9.18 Stock proof and mammal proof fencing shall not cause an obstruction to fish passage or angling.

9.19 IFI shall be reimbursed the cost of fish removal and replacement operations associated with river and stream diversions and associated works.

10.0 REPAIRS TO EXISTING BRIDGES, CULVERTS AND SCOUR SLABS.

10.1 There are within Ireland very many old stone bridges in need of strengthening and repair works. The most commonly used methods for such works include pressure grouting, guniting and pointing of joints

Grout loss to waters is normally stopped by placing dry cement over the leak, with sand bags on top to restrict grout flow until the leak solidifies. (This photograph was taken after water flow was re-established following solidification of the grout.)

10.2 The concerns as regards sensitivity of aquatic life to pollutants and physical disturbance set out earlier in this document all apply, particularly as regards loss of grout and gunite rebound, both of which are highly alkaline.

Repairs to a single arch bridge and scour slab with stream flow piped from upstream to downstream (foreground) during both grouting and slab repair.

10.3 Grouting is a high risk process, as it is not always possible to pre-determine the route that grout will follow. It may travel through

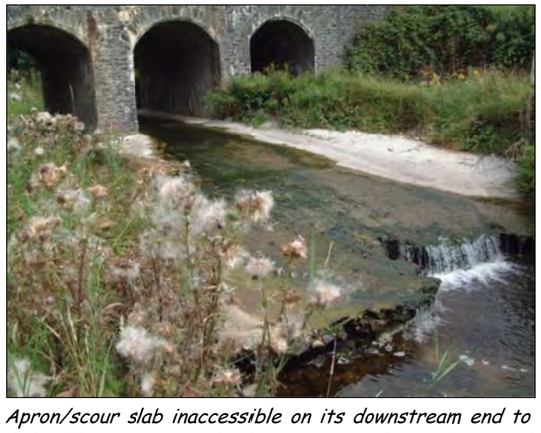
fissures and appear upstream or downstream of the structures under repair, sometimes metres from the location of injection. Particular vigilance is required. During grout injection at least one member of a repair crew should be closely monitoring for grout losses both upstream and downstream of the structure. Portable pH monitoring facilities should always be available and staff trained in its use.

10.4 Where the structure to be grouted comprises a number of arches, water flow should be diverted away from the arch being repaired so as to allow working in the dry. Diversion of water by means of temporary damming should be undertaken. Sand bags in conjunction with e.g. plastic sheeting, marine plywood and other suitable materials may be used. A number of manufacturers provide heavy duty rubber type aqua dams which can readily be deployed, linked together and filled on site with river water thus forming a very effective seal to a bunded area. While such damming and diversion of water as is required will normally be only for a short period, the dam or berm must nonetheless be high enough not to be over topped in the event of a rainfall event and increased water levels.

10.5 Where a single arch structure is under repair, to achieve grouting in the dry, water may be diverted from upstream to downstream by means of a secure flume arrangement, or through piping, or in very limited circumstances, by means of over pumping. Screening to preclude entry of aquatic life to pumps must be carried out.

Gunite rebound on a stream bed where no precautions were taken to prevent its entry to waters. Rebound having a pH >11.5 would have entered the actively flowing stream with dire environmental consequences.

10.6 In all instances of guniting and repair works including repointing and masonry cleaning, the entirety of the area of water over which works are taking place should be protected from gunite rebound, mortar and vegetation loss by installation of a sealed and secure decking which shall extend upstream and downstream the structure concerned so as to ensure no losses to water.



Apron/scour slab inaccessible on its downstream end to fish life because of the extent of perching and impassable due to a combination of excessive water velocity and lack of water depth across its surface.

10.7 Approved forms of scaffolding are required to support decking. It is essential that

the decking completely captures all falling debris and rebound. All materials captured must be removed for safe disposal.

10.8 Repairs to bridge aprons/scour slabs must be undertaken so as to ensure upstream and downstream passage of fish is possible in all flow conditions. Particular care must be exercised to ensure perching does not result where new concrete slabs are poured.

Low level stone weirs installed on a salmonid nursery stream to back water the bridge apron /scour slab originally installed at too high a level.

10.9 Existing stream bed materials (stones and boulders depending on conditions) should be set into new concrete aprons/slabs thereby providing for non uniform baffled flow of varying depth across the structure which will allow for the weakest fish species to swim upstream through the deeper water area.

10.10 Scour slabs should be dished so as to provide a deeper zone and consequently deeper water to facilitate fish passage.

10.11 It is difficult and costly to retrospectively render a poorly installed apron/scour slab passable, especially where it has been installed at too high a level. In some instances the installation of one or more low level weir type structures in the river downstream may assist in back-flooding the apron thereby rendering it passable.

10.12 The installation of baffles can assist where excessive water velocity over an apron/scour slab prohibits free upstream fish movement. Baffles should be positioned so as to reduce velocity and provide temporary rest areas for weaker fish attempting to swim upstream.

Large stone baffles held in position on concrete apron with stainless steel dowel rods drilled into both the apron and stones. (Poor placement of the livestock fencing as shown in the photograph has the potential to cause blockage by catching debris.)

11.0 PIPELINE INSTALLATION.

11.1 In the case of pipeline crossings under fisheries waters, the preferred method is by way of trenchless crossings using techniques such as horizontal directional drilling, auger boring or micro-tunnelling. There are many advantages from use of such methods. Apart from the obvious avoidance of impacts on the fisheries resource, works do not have to be confined to the July-September 'window' period.

11.2 Where circumstances such as site size and contour or the existence of buildings preclude trenchless methodologies, open cut or trench type crossings may be undertaken.

11.3 In the case of trenchless crossing of waters IFI require as follows:

11.3.1 Locations for drill rig positioning and pipeline pull areas shall be chosen or engineered such that the fall is away from the waters in question, thereby facilitating installation of pollution containment and control facilities.

11.3.2 Where drilling fluids are being returned for cleaning and re-use or recirculation through a temporary fluid return line, pneumatic leak testing shall be carried out to confirm the integrity of the return line.

11.3.3 Where circumstances necessitate the running of a return fluid line across the bed of the waters being under bored, the pipeline shall be sunken and weighted down by means of prefabricated concrete collars or by sand bags attached using web construction straps, or such other means as appropriate and securely anchored. Marker buoys and on-land marker posts will be required and all such fluid return pipelines and markers shall not interfere with or constitute a fouling risk to licensed and legally used fishing equipment.

11.3.4 Spent drilling fluids including separated drill materials shall be contained in secure bunded areas for off-site disposal at a licensed disposal facility.

11.4 In the case of open cut or trench type crossing of waters IFI require as follows:

11.4.1 Water shall be diverted from upstream to downstream the pipeline crossing location by means of a secure open flume arrangement, or through piping, or in limited circumstances, by means of over pumping.

11.4.2 Screening to preclude entry to pumps of aquatic life must be carried out.

11.4.3 The waters being crossed shall be effectively dammed both upstream and downstream of the trench location so as to ensure that works are undertaken in the dry.

11.4.4 Where concrete ballast is used to prevent pipelines rising as a result of buoyancy, it should be precast.

11.4.5 Following completion of backfilling, river bed and banks shall be reformed to match their original profile.

11.5 It will normally be necessary to temporarily remove, using electrofishing equipment, fish from the reaches involved.

12. ANGLING AND COMMERCIAL FISHING ACCESS.

12.1 In circumstances where crossings of important angling waters are concerned, it will often be necessary to provide for angling access to and from stretches of water during the construction phase of projects. It is important to note that fishing rights are property rights and that it is a legal right for anglers to access fisheries. Additionally, certain commercial fishing activities may have entry and access requirements. In such site specific circumstances, IFI will issue project and location specific requirements.

A tidal water with access for vehicles and on the opposite side, access for anglers.

12.2 IFI require:

12.2.1 In the case of permanent crossing structures on waters recognised as of angling importance, that a minimum walkway through or under the structure 1.5 meters in width and 2.5 meters in height be provided. The walkway shall be self draining and have a non slip finish.

12.2.2 In the case of a bridge spanning a specific salmon angling site, up to 7 meters clearance above water level and in the case of trout angling, up to 4 metres clearance to allow casting.

13.0 PROVISION OF DOCUMENTS.

13.1 In the case of structures and pipelines crossing waters, IFI shall be provided in Excel spreadsheet format with precise details of all watercourse crossings including seasonal streams. The spreadsheet shall in respect of each watercourse contain:

13.1.1 The number, code or other means of identification of the location.

13.1.2 Easting and northing coordinates (Irish Grid Ref).

13.1.3 Dimensions including width, height, length and gradient of proposed structures and the estimated discharge.

13.1.4 A description of the proposed structure including its shape.

13.2 Contractors/developers shall provide or have provided to IFI:

13.2.1 In the case of road construction, a copy of the Discovery 1:50,000 map(s) showing the proposed road scheme.

13.2.2 In the case of road construction, engineering drawings and OS maps in A3 size showing mainline and side road plans, chainage and profiles for all locations where watercourse crossings and drainage issues arise.

13.2.3 Engineering drawings and OS maps in A3 size of all crossing structures and pipelines in final proposal stage for construction. These shall include dimensions, setting out points, and where necessary gradient expressed as a percentage.

13.2.4 Such other details and method statements as may reasonably be required.

14.0 CONTACT BETWEEN DESIGNERS, DEVELOPERS, CONTRACTORS AND IFI.

14.1 IFI is committed in the national interest to working in a positive and cooperative manner with all relevant parties including representatives of State and public authorities undertaking works in order to ensure that impacts on the fisheries resource are minimised. IFI is obliged to ensure that all structures are designed, installed and maintained so as to ensure the free upstream and downstream movement of aquatic life and the sustainable maintenance of the aquatic and associated riparian zone.

14.2 IFI require that contact be established and maintained between senior representatives of the developer, designer and contractor with responsibility for earthworks, structures and environmental management issues and relevant river basin district personnel in advance of commencement and for the duration of the specified construction project.

14.3 IFI has offices located within each of the River Basin Districts situated wholly or partly in the Republic of Ireland. Contact details and a map showing the locations of IFI's regional offices and areas covered are given in Appendix 1.

14.4 Responsibility for waters in the Republic of Ireland which form parts of the North Western, Neagh Bann and Shannon International River Basin Districts lies with IFI Ballyshannon, IFI Blackrock and IFI Limerick respectively.

APPENDIX 1

CONTACT DETAILS AND LOCATIONS OF IFI REGIONAL OFFICES

Director,
Inland Fisheries Ireland – Dublin,
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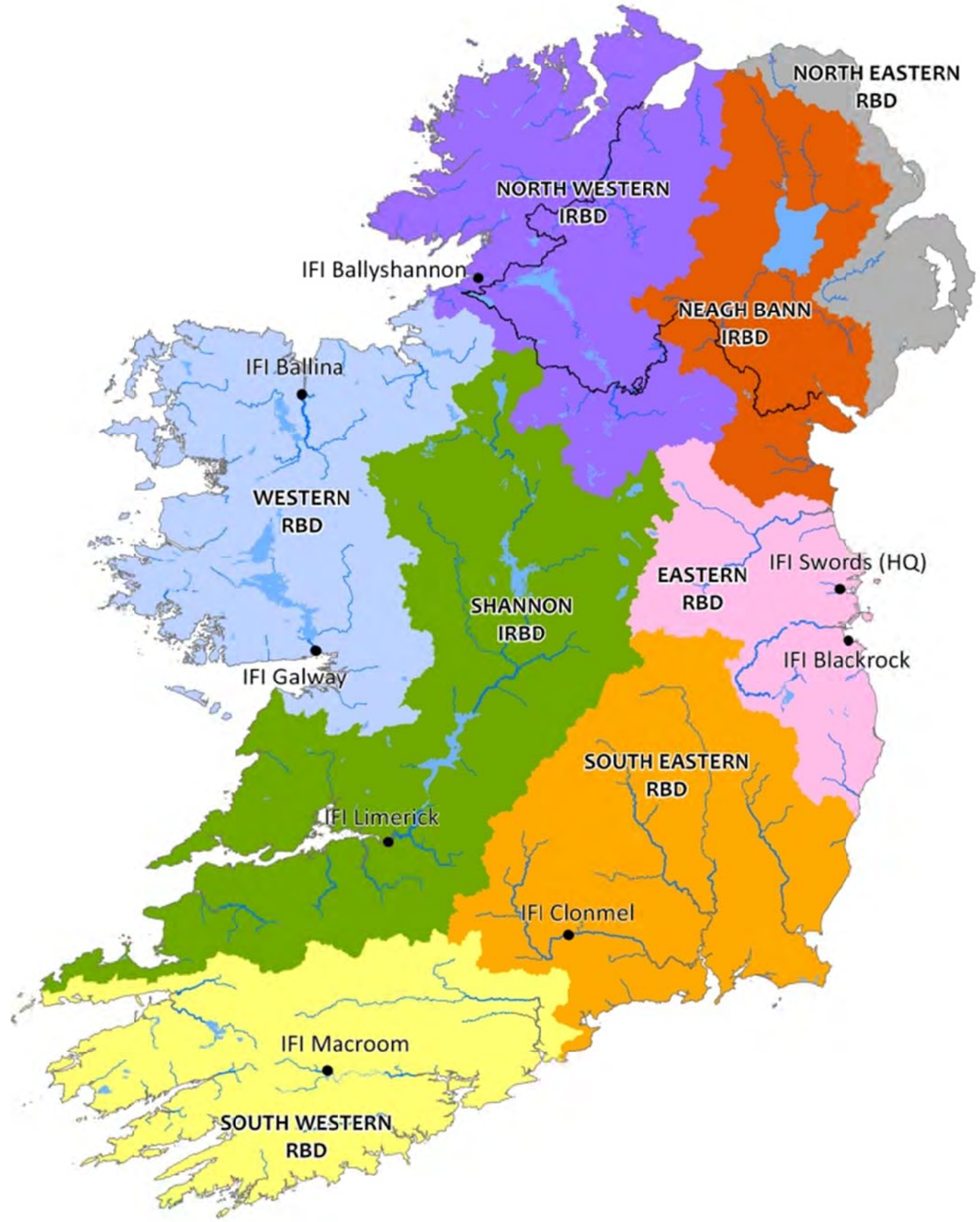

APPENDIX 2

RELEVANT LEGISLATION

The Arterial Drainage Act 1945.

The Fisheries Consolidation Act 1959 (as amended).

The Fisheries (Amendment) Act 1997.

The Inland Fisheries Act 2010.

Council Directive 78/659/EEC on the Quality of Freshwaters Needing Protection or Improvement in Order to Support Fish Life.

The European Communities (Quality of Salmonid Waters) Regulations 1988 (S.I. 293 of 1988).

European Communities (Quality of Shellfish Waters) Regulations 2006 (S.I. 268 of 2006).

European Communities (Quality of Shellfish Waters) (Amendment) Regulations 2009 (S.I. No. 55 of 2009).

The Wildlife Act 1976.

The Wildlife (Amendment) Act 2000.

The Local Government (Water Pollution) Act 1977.

The Local Government (Water Pollution) Amendment) Act 1990.

The Habitats Directive (92/43/EEC).

The European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011).

The Water Framework Directive (2000/60/EC).

The European Communities (Water Policy Regulations 2003 (S.I. 722 of 2003).

The European Communities Environmental Objectives (Surface Waters) Regulations 2009 (S.I. 272 of 2009).

The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009 (S.I. 296 of 2009).

GLOSSARY

Alevin Newly hatched salmon, trout or related fish usually with a yolk sac attached which acts as a primary nutrient source, before it emerges from the spawning gravel to begin swimming freely.

Armouring Lining of watercourse banks with rock or other material to protect from scour.

Apron Erosion protection placed below watercourse bed level in an area of high velocity such as downstream of a bridge or culvert.

Cyprinid Belonging to the largest European freshwater fish family. Common examples in Irish waters include roach, rudd, dace, minnow, gudgeon bream and carp.

Ecosystem Any combination of living and non living components that with a supply of matter and energy is self sustaining over a defined period of time

Electrofishing Fishing with electrical devices based on electro-taxis and electro-narcosis (state of immobility resulting from muscular slackening of fish due to electric current).

Gabions Baskets normally made of woven wire and filled with stone/rock or other hard material generally used to form erosion resistant structures.

Habitat The natural abode of a plant or animal, especially the particular location where it normally grows or lives.

Invasive species Species that have been introduced, generally by human intervention, outside their natural range and whose establishment and spread can threaten native ecosystems

Perched Set at an elevated level, or in a higher position, and in the context of culverts – and scour slabs, the tendency to develop a water fall or cascade due to erosion of a watercourse downstream of a structure.

Riparian The terrestrial aquatic interphase or area immediately alongside the bank of a watercourse.

Salmonids The only two indigenous fishes in the genus Salmo in Ireland - Atlantic salmon (Salmo salar L.) and brown trout (Salmo trutta L.).

Terram A geotextile cloth type permeable material normally made from polypropylene or polyester used in construction as a separation layer.

Toe The point at which the bottom of a bank and the bed of the alongside watercourse intersect.

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Baker, C. O. and Votapka, F. E., 1990. *Fish Passage Through Culverts*. U. S. Department of Transportation, Washington, DC 20590.

FAO, 2008. *Rehabilitation of Inland Fisheries Waters for Fisheries.* FAO Technical Guidelines for Responsible Fisheries. No. 6. FAO, Rome.

O'Grady, M. F., 2006. *Channels & Challenges. Enhancing Salmonid Rivers.* Irish Freshwater Fishes Ecology & Management Series: Number 4, Inland Fisheries Ireland, Dublin.

Murphy, D. F. 2004. *Requirements for the Protection of Fisheries Habitat During Construction and Development Works at River Sites.* Eastern Regional Fisheries Board, Dublin.

National Roads Authority, 2004. *Guidelines for the Assessment of Ecological Impacts of National Road Schemes.* National Roads Authority, Dublin.

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Saoirse Kavanagh

From: Michael McPartland <Michael.McPartland@fisheriesireland.ie>
Sent: Monday 27 January 2025 12:01
To: Saoirse Kavanagh
Subject: FW: EIAR Consultation - Former Good Shepard Convent, Cork
Attachments: IFI.pdf; S247 Site Layout.pdf

Saoirse,

Thank you for your recent email regarding the above-mentioned.
It appears it may be proposed to dispose of septic effluent from the development to the public sewer. IFI would ask that Irish Water signifies there is sufficient capacity in existence so that it does not overload either hydraulically or organically existing treatment facilities or result in polluting matter entering waters. Should this not be the case then please forward proposals for alternative treatment and disposal options.
IFI would ask that there be no interference with, bridging, draining, or culverting of any watercourse its banks or bankside vegetation to facilitate this development, without the prior approval of IFI and that full cognisance is given to IFI "Guidelines on protection of fisheries during construction works in and adjacent to waters"
https://www.fisheriesireland.ie/media/guidelines-on-protection-of-fisheries-during-construction-works-in-and-adjacent-to-waters

Michael Mc Partland
Senior Fisheries Environmental Officer.

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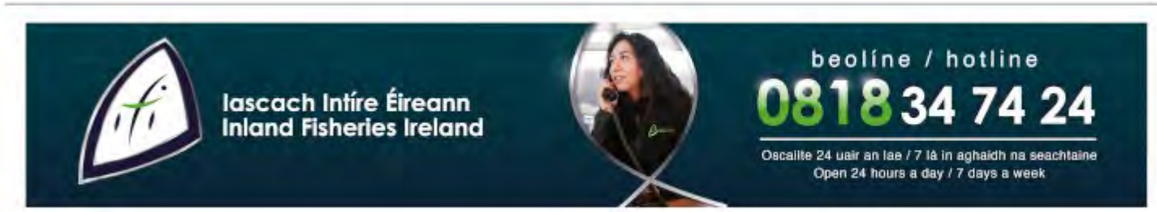

From: Saoirse Kavanagh <skavanagh@mhplanning.ie>
Sent: Wednesday 22 January 2025 12:13
To: info <info@fisheriesireland.ie>
Subject: EIAR Consultation - Former Good Shepard Convent, Cork

A Chara,

We are acting on behalf of Bellmount Developments Ltd. in the preparation of an Environmental Impact Assessment Report (EIAR) for a proposed Student Accommodation Development at The Former Good Shepard Convent, Convent Avenue, Sunday's Well, Cork.

Please see attached letter outlining details of the site location, project description, and proposed works. Please also see attached the site layout as submitted to Cork City Council as part of a pre-planning meeting request.

If you have any comments in relation to the potential environmental impacts of the proposed development, I would be grateful if you would forward them to me as soon as is convenient.

Thanks,
Saoirse

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21st February, 2025

Re: EIAR Scoping Request – Proposed Student Accommodation Development at The Former Good Shepard Convent, Convent Avenue, Sunday's Well, Cork.

A Chara,

Uisce Éireann has received your Environmental Impact Assessment (EIA) scoping request relating to Student Accommodation Development at The Former Good Shepard Convent, Convent Avenue, Sunday's Well, Cork.

It is Uisce Éireann's current policy to maintain safe and secure drinking water supplies and that no development that will impact Drinking Water Source. Uisce Éireann must be satisfied that the proposed development has no impact on drinking water quality and that water sources are adequately protected. It is a requirement of the Water Framework Directive that waters used for the abstraction of drinking water are protected so as to avoid deterioration in quality.

The following aspects of Water Services should also be considered in the scope of an EIA where relevant;

a) Where the development proposal has the potential to impact an Uisce Éireann Drinking Water Source(s), the applicant shall provide details of measures to be taken to ensure that there will be no negative impact to Uisce Éireann's Drinking Water Source(s) during the construction and operational phases of the development. Hydrological / hydrogeological pathways between the applicant's site and receiving waters should be identified as part of the report.

b) Where the development proposes the backfilling of materials, the applicant is required to include a waste sampling strategy to ensure the material is inert.

c) Mitigations should be proposed for any potential negative impacts on any water source(s) which may be in proximity and included in the environmental management plan and incident response.

d) Any and all potential impacts on the nearby public water supply water source(s) are assessed, including any impact on hydrogeology and any groundwater/ surface water interactions.

e) Impacts of the development on the capacity of water services (*i.e. do existing water services have the capacity to cater for the new development*). This is confirmed by Uisce Éireann in the form of a Confirmation of Feasibility (COF). If a development requires a connection to either a public water supply or sewage collection system, the developer is advised to submit a Pre-Connection Enquiry (PCE) enquiry to Uisce Éireann to determine the feasibility of connection to the Uisce Éireann network.

f) The applicant shall identify any upgrading of water services infrastructure that would be required to accommodate the proposed development.

g) In relation to a development that would discharge trade effluent – any upstream treatment or attenuation of discharges required prior to discharging to an Uisce Éireann collection network.

h) In relation to the management of surface water; the potential impact of surface water discharges to combined sewer networks and potential measures to minimise and or / stop surface waters from combined sewers.

i) Any physical impact on Uisce Éireann assets – reservoir, drinking water source, treatment works, pipes, pumping stations, discharges outfalls etc. including any relocation of assets.

j) When considering a development proposal, the applicant is advised to determine the location of public water services assets, possible connection points from the applicant's site / lands to the public network and any drinking water abstraction catchments to ensure these are included and fully assessed in any pre-planning proposals. Details, where known, can be obtained by emailing an Ordnance Survey map identifying the proposed location of the applicant's intended development to datarequests@water.ie

k) Other indicators or methodologies for identifying infrastructure located within the applicant's lands are the presence of registered wayleave agreements, visible manholes, vent stacks, valve chambers, marker posts etc. within the proposed site.

l) Any potential impacts on the assimilative capacity of receiving waters in relation to Uisce Éireann discharge outfalls including changes in dispersion / circulation characterises. Hydrological / hydrogeological pathways between the applicant's site and receiving waters should be identified within the report.

m) Any potential impact on the contributing catchment of water sources either in terms of water abstraction for the development (*and resultant potential impact on the capacity of the source*) or the potential of the development to influence / present a risk to the quality of the water abstracted by Uisce Éireann for public supply should be identified within the report.

n) Where a development proposes to connect to an Uisce Éireann network and that network either abstracts water from or discharges wastewater to a "protected"/ sensitive area, consideration as to whether the integrity of the site / conservation objectives of the site would be compromised should be identified within the report.

o) Uisce Éireann does not permit building over of its assets. As an applicant you are required to;

- survey the site to determine the exact location of the assets. Any trial investigations should be carried out with the agreement and in the presence of Uisce Éireann.
- Provide evidence of separation distances between the existing Uisce Éireann assets and proposed structures, other services, trees, etc. have to be in accordance with the Irish Water Codes of Practice and Standard Details.

p) Where a diversion of Public Infrastructure may be required subject to layout proposal of the development and separation distances, the applicant is required to submit a Diversions Enquiry to diversions@water.ie

q) Mitigation measures in relation to any of the above ensuring a zero risk to any Uisce Éireann drinking water sources (Surface and Ground water).

This is not an exhaustive list.

Please note;

- Where connection(s) to the public network is required as part of the development proposal, applicants are advised to complete the Pre-Connection Enquiry process and have received a Confirmation of Feasibility letter from Uisce Éireann ahead of any planning application.

- Uisce Éireann will not accept new surface water discharges to combined sewer networks.

Queries relating to the terms and observations above should be directed to planning@water.ie

Signed on behalf of Dermot Phelan
Connections and Developer Services

Uisce Éireann is a statutory consultee under the Planning and Development Act 2000 (as amended). Uisce Éireanns job is to deliver the highest quality drinking water to taps every day and ensure that wastewater is properly treated and safely returned to the environment. To ensure the satisfactory completion of a development, any permission, approval, or consent granted pursuant to the Planning and Development Act 2000 (as amended) that requires a new connection(s) to water services should include a condition that requires the applicant or developer to enter into a connection agreement(s) with Uisce Éireann prior to the commencement of development. Any person discharging trade effluent to a sewer, must have a Trade Effluent Licence issued pursuant to section 16 of the Local Government (Water Pollution) Act, 1977 (as amended). Trade effluent is defined in the Local Government (Water Pollution) Act, 1977 (as amended).

Saoirse Kavanagh

From: INFO <Information@tii.ie>
Sent: Wednesday 29 January 2025 15:42
To: Saoirse Kavanagh
Subject: TII Ref: TII25-130130 - EIAR Consultation - Former Good Shepard Convent, Cork

Dear Ms. Kavanagh,

Thank you for your correspondence of 22 January 2025 regarding the above. Transport Infrastructure Ireland's (TII's) position in relation to your enquiry is as follows.

Transport Infrastructure Ireland (TII) wishes to advise that it is not in a position to engage directly with planning applicants with respect to proposed developments. TII will endeavour to consider and respond to planning applications referred to it, given its status and duties as a statutory consultee under the Planning Acts. The approach to be adopted by TII in making such submissions or comments will seek to uphold official policy and guidelines, as outlined in the Section 28 Ministerial Guidelines 'Spatial Planning and National Roads Guidelines for Planning Authorities' (DoECLG, 2012) and TII publications. Regard should also be had to other relevant guidance available at www.TII.ie.

The issuing of this correspondence is provided as best practice guidance only and does not prejudice TII's statutory right to make any observations, requests for further information, objections or appeals, following the examination of any valid planning application referred.

With respect to EIAR scoping issues, the recommendations indicated below provide only general guidance for the preparation of an EIAR, which may affect the national road networks.

The project promoter should have regard, inter alia, to the following:

Having regard to the EPA Guidelines on the information to be contained in Environmental Impact Assessment Reports, 2022 it is recommended as appropriate that the national road and light rail networks are recognised as strategic transport assets under "material assets". EIAR assessment and mitigation should have regard to the following:

- **National Roads:** Official policy for development at or near national roads is set out in in the DoECLG Spatial Planning and National Roads Guidelines for Planning Authorities (2012) available at https://www.gov.ie/en/collection/85b83-planning-guidelines-standards/

- **TII Publications:** In addition, as part of TII's responsibilities for managing and improving the country's national road and light rail networks, the Authority sets development guidance and standards for traffic and road assessments and construction that may be necessary by reason of proposed development location, scale or typology to be prepared to accompany applications for developments or works. Technical guidance and standards are contained in TII Publications, available at https://www.tiipublications.ie/

In addition, the EIAR should have regard to, inter alia, to the following:

National Road Network:

- TII would be specifically concerned as to potential significant impacts the development would have on the national road network (and junctions with national roads), in the proximity of the proposed development.

- Consultations should be had with the relevant Local Authority/National Roads Design Office, with regard to the locations of existing and future national road schemes.

- The EIAR should have regard to any prior Environmental Impact Statement or Assessment Report and all conditions and/or modifications imposed by An Bord Pleanála and the City Council regarding road schemes in the area. The developer should, in particular, have regard to any potential cumulative impacts.

TII Publications:

- It would be important that, where appropriate, subject to meeting the appropriate thresholds and criteria and having regard to best practice, a Traffic and Transport Assessment (TTA) be carried out in accordance with relevant guidelines, noting traffic volumes attending the site and traffic routes to/from the site, with reference to impacts on the national road network and junctions of lower category roads with national roads. In relation to national roads, TII's 'Traffic and Transport Assessment Guidelines' (2014) should be referred to in relation to proposed development, with potential impacts on the national road network. The scheme promoter is also advised to have regard to Section 2.2 of TII's TTA Guidelines, which addresses requirements for sub-threshold TTA.

- The designers are asked to consult TII Publications to determine whether a Road Safety Audit is required.

Construction Management and the National Road Network:

- Any Construction Environmental Management Plan (CEMP) prepared to accompany the EIAR shall demonstrate and ensure any proposed works in the vicinity of the national road network comply with TII Publications requirements and mitigation of potential impact on the national road network.

- Separate structure approvals/permits and other licences and works specific deeds of indemnity may be required in connection with the proposed haul route, including where temporary modification to the road network may be required. Consultation with all relevant local authorities, PPP Companies and MMaRC Contractors, may also be required.

- Any Construction Traffic Management Plan (CTMP) shall demonstrate compliance with TII Publications requirements and include mitigation of potential impact on the national road network.

TII Environmental Assessment Guidance:

- The EIAR should have regard to TII's Environmental Assessment and Construction Guidelines, including the 'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes' (National Road Authority (NRA), 2014).

- The EIAR should consider the European Communities '(Environmental Noise) Regulations 2018' (S.I. No. 549 of 2018)) and, in particular, how the development will affect future action plans by the relevant competent authority. The developer may need to consider the incorporation of noise barriers to reduce noise impacts (see 'Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes' (NRA, 2014)).

- Environmental Impact Assessment shall include provision for travel planning / mobility management planning in the interests of protecting the national roads capacity in the interests of sustainable travel policy.

Transport analysis should also consider:

- A mobility management plan should accompany the transport assessment.
- Modal share targets should be outlined and how any PT modal share is accommodated.
- Measures proposed to reduce car dependency should be outlined.
- Detailed phasing proposals of development with associated transport infrastructure provision is required.
- Consider and address cumulative impacts of other development and impacts on road capacity.
- The traffic and transport assessment should consider all road users.

- Mitigation measures should be aligned with phasing of road infrastructure improvements and required public transport interventions; all clearly outlined.

Notwithstanding, any of the above, the developer should be aware that this list is non-exhaustive, thus site and development specific issues should be addressed in accordance with best practise.

I hope that this information is of assistance to you.

Yours sincerely,

_____
Suzanne Cahill
Regulatory & Administration Executive

From: Saoirse Kavanagh
Sent: Wednesday 22 January 2025 12:14
To: Landuse Planning
Subject: EIAR Consultation - Former Good Shepard Convent, Cork

> You don't often get email from skavanagh@mhplanning.ie. Learn why this is important

CAUTION: This email originated from outside of TII. Do not click links or open attachments unless you recognise the sender and are sure that the content is safe.

A Chara,

We are acting on behalf of Bellmount Developments Ltd. in the preparation of an Environmental Impact Assessment Report (EIAR) for a proposed Student Accommodation Development at The Former Good Shepard Convent, Convent Avenue, Sunday's Well, Cork.

Please see attached letter outlining details of the site location, project description, and proposed works. Please also see attached the site layout as submitted to Cork City Council as part of a pre-planning meeting request.

If you have any comments in relation to the potential environmental impacts of the proposed development, I would be grateful if you would forward them to me as soon as is convenient.

Thanks,
Saoirse

Saoirse Kavanagh
Executive Planning Consultant
McCutcheon Halley
CHARTERED PLANNING CONSULTANTS
Mobile: +353 (0)83 070 1855

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6 Joyce House, Barrack Square,
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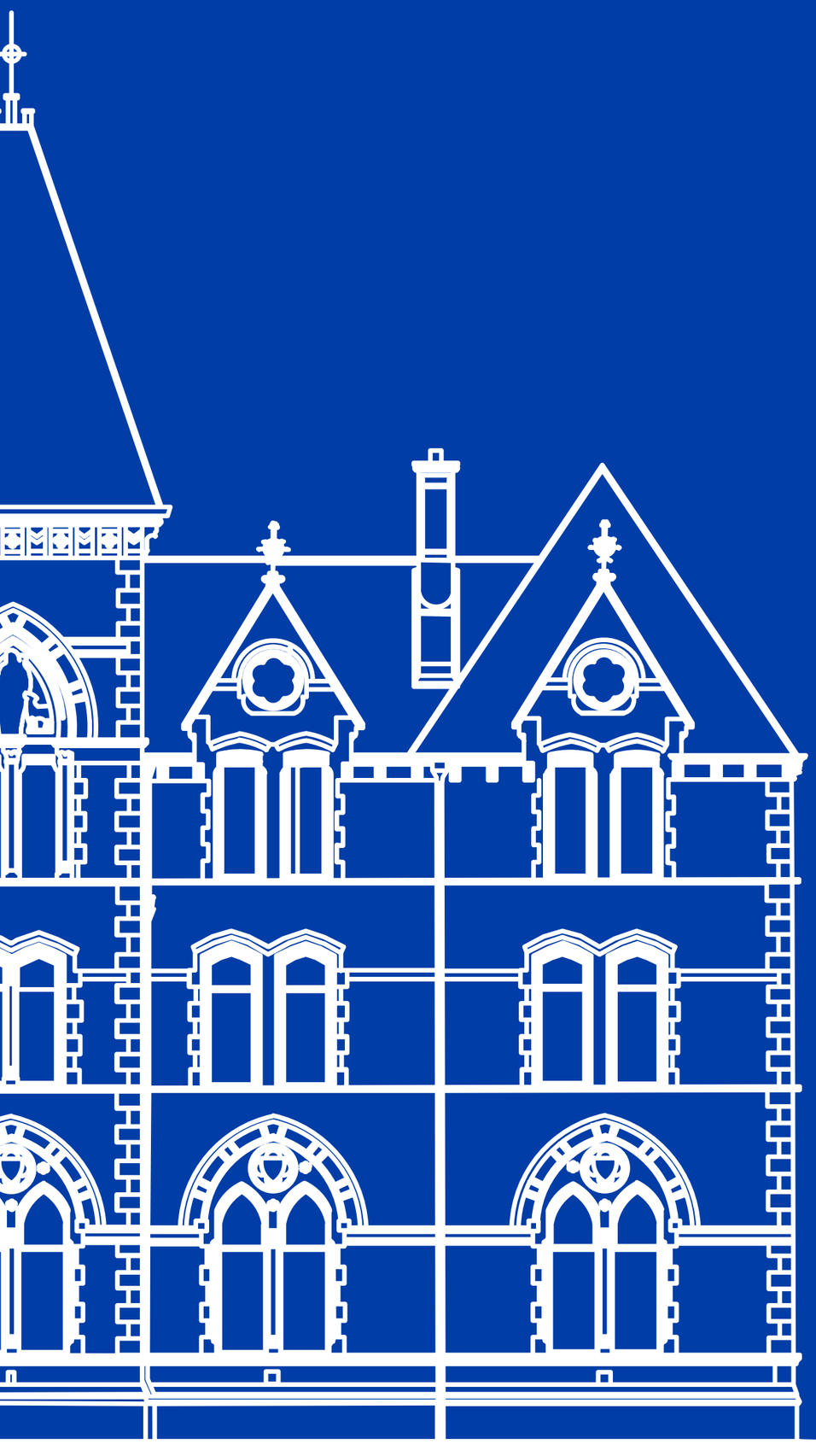
www.mhplanning.ie

In accordance with TII's Right to Disconnect policy, if you are receiving this email outside of normal working hours, I do not expect a response or action outside of your own working hours unless it is clearly noted as requiring urgent attention.



CHAPTER FIVE

LAND, SOILS & GEOLOGY

APPENDIX 5-1 NRA/TII Criteria for Rating the Magnitude and Significance of Soils and Geological Impacts at EIA Stage National Roads Authority

APPENDIX 5-2 Ground Investigations Ireland Ground Investigation Report

McCutcheon Halley
CHARTERED PLANNING CONSULTANTS

APPENDIX 5-1 NRA/TII Criteria for Rating the Magnitude and Significance of Soils and Geological Impacts at EIA Stage National Roads Authority

APPENDIX 6.1

NRA/TII Criteria for Rating the Magnitude and Significance of Soils and Geological Impacts at EIA Stage National Roads Authority.

(NRA/TII, 2009).

Impact Ratings and Assessment Criteria (Soils and Geology)

Table 1 *Criteria for rating site Attributes – Estimation of Importance of Soil and Geology Attributes (NRA)*

Importance	Criteria	Typical Examples
Very High	Attribute has a high quality, significance or value on a regional or national scale Degree or extent of soil contamination is significant on a national or regional scale Volume of peat and/or soft organic soil underlying route is significant on a national or regional scale*	Geological feature rare on a regional or national scale (NHA) Large existing quarry or pit Proven economically extractable mineral resource
High	Attribute has a high quality, significance or value on a local scale. Degree or extent of soil contamination is significant on a local scale. Volume of peat and/or soft organic soil underlying route is significant on a local scale. *	Contaminated soil on site with previous heavy industrial usage Large recent landfill site for mixed wastes Geological feature of high value on a local scale (County Geological Site) Well drained and/or high fertility soils Moderately sized existing quarry or pit Marginally economic extractable mineral resource
Medium	Attribute has a medium quality, significance or value on a local scale Degree or extent of soil contamination is moderate on a local scale Volume of peat and/or soft organic soil underlying route is moderate on a local scale*	Contaminated soil on site with previous light industrial usage Small recent landfill site for mixed wastes Moderately drained and/or moderate fertility soils Small existing quarry or pit Sub-economic extractable mineral resource
Low	Attribute has a low quality, significance or value on a local scale Degree or extent of soil contamination is minor on a local scale. Volume of peat and/or soft organic soil underlying route is small on a local scale*	Large historical and/or recent site for construction and demolition wastes. Small historical and/or recent landfill site for construction and demolition wastes. Poorly drained and/or low fertility soils. Uneconomically extractable mineral resource.

** relative to the total volume of inert soil disposed of and/or recovered*

Source: *Box 4.1: 'Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes' by the National Roads Authority (NRA, 2009)*

Table 2 *Criteria for Rating Impact Significance at EIA Stage - Estimation Of Magnitude of Impact on Soil / Geology Attribute (NRA)*

Magnitude of Impact	Criteria	Typical Examples
Large Adverse	Results in loss of attribute	Loss of high proportion of future quarry or pit reserves Irreversible loss of high proportion of local high fertility soils Removal of entirety of geological heritage feature Requirement to excavate / remediate entire waste site Requirement to excavate and replace high proportion of peat, organic soils and/or soft mineral soils beneath alignment
Moderate Adverse	Results in impact on integrity of attribute or loss of part of attribute	Loss of moderate proportion of future quarry or pit reserves Removal of part of geological heritage feature Irreversible loss of moderate proportion of local high fertility soils Requirement to excavate / remediate significant proportion of waste site Requirement to excavate and replace moderate proportion of peat, organic soils and/or soft mineral soils beneath alignment
Small Adverse	Results in minor impact on integrity of attribute or loss of small part of attribute	Loss of small proportion of future quarry or pit reserves Removal of small part of geological heritage feature Irreversible loss of small proportion of local high fertility soils and/or high proportion of local low fertility soils Requirement to excavate / remediate small proportion of waste site Requirement to excavate and replace small proportion of peat, organic soils and/or soft mineral soils beneath alignment
Negligible	Results in an impact on attribute but of insufficient magnitude to affect either use or integrity	No measurable changes in attributes
Minor Beneficial	Results in minor improvement of attribute quality	Minor enhancement of geological heritage feature
Moderate Beneficial	Results in moderate improvement of attribute quality	Moderate enhancement of geological heritage feature
Major Beneficial	Results in major improvement of attribute quality	Major enhancement of geological heritage feature

Source: *Box 5.1: 'Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes' by the National Roads Authority (NRA, 2009)*

APPENDIX 5-2 Ground Investigations Ireland Ground Investigation Report

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

Catherinestown House,
Hazelhatch Road,
Newcastle,
Co. Dublin.
D22 YD52

Tel: 01 601 5175 / 5176
Email: info@gii.ie
Web: www.gii.ie

Ground Investigations Ireland

The Good Shepard Student Accommodation

MMOS

Ground Investigation Report

October 2024

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DOCUMENT CONTROL SHEET

Project Title	The Good Shepard Student Accommodation
Engineer	MMOS
Project No	14141-09-24
Document Title	Ground Investigation Report

Rev.	Status	Author(s)	Reviewed By	Approved By	Office of Origin	Issue Date
A	Final	D Leavy	S Graydon	S Kealy	Dublin	23 October 2024

www.gii.ie

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CONTENTS

APPENDICES

1.0 Preamble

On the instructions of MMOS Consulting Engineers, a site investigation was carried out by Ground Investigations Ireland Ltd., in October 2024 at the site of the proposed residential development in Cork City.

2.0 Overview

2.1. Background

It is proposed to construct a new residential development with associated services, access roads and car parking at the proposed site. The site is located on the grounds of the exsiting Good Shepard Convent off Convent Avenue, Co. Cork.

2.2. Purpose and Scope

The purpose of the site investigation was to investigate subsurface conditions utilising a variety of investigative methods in accordance with the project specification. The scope of the work undertaken for this project included the following:

- Visit project site to observe existing conditions
- Carry out 5 No. Soakaways to determine a soil infiltration value to BRE digest 365
- Report with recommendations

3.0 Subsurface Exploration

3.1. General

During the ground investigation a programme of intrusive investigation specified by the Consulting Engineer was undertaken to determine the sub surface conditions at the proposed site. Regular sampling and in-situ testing was undertaken in the exploratory holes to facilitate the geotechnical descriptions and to enable laboratory testing to be carried out on the soil samples recovered during excavation and drilling.
The procedures used in this site investigation are in accordance with Eurocode 7 Part 2: Ground Investigation and testing (ISEN 1997 – 2:2007) and B.S. 5930:2015.

3.2. Soakaway Testing

The soakaway testing was carried out in selected trial pits at the locations shown in the exploratory hole location plan in Appendix 1. These pits were carefully excavated and filled with water to assess the infiltration characteristics of the proposed site. The pits were allowed to drain and the drop in water level was recorded over time as required by BRE Digest 365. The pits were logged prior to completing the soakaway test and were backfilled with arising's upon completion. The soakaway test results are provided in Appendix 2 of this Report.

4.0 Ground Conditions

4.1. General

The ground conditions encountered during the investigation are summarised below with reference to insitu and laboratory test results. The full details of the strata encountered during the ground investigation are provided in the exploratory hole logs included in the appendices of this report.

The sequence of strata encountered were consistent across the site and generally comprised;

- Topsoil
- Made Ground
- Cohesive Deposits

TOPSOIL: Topsoil was encountered in all the exploratory holes and was present to a maximum depth of 0.50m BGL.

MADE GROUND: Made Ground deposits were encountered beneath the Topsoil at the location of SA05 and SA06 to a maximum depth of 1.40m BGL. These deposits were described generally as *dark brown* or *brown slightly sandy slightly gravelly CLAY with rare fragments of redbrick and low subangular to subrounded cobble content.*

COHESIVE DEPOSITS: Cohesive deposits were encountered beneath the Made Ground and were described typically as *orangey brown* or *brown slightly sandy slightly gravelly CLAY.* overlying a *Firm orangey brown slightly sandy slightly gravelly CLAY*. The secondary sand and gravel constituents varied across the site and with depth, with granular lenses occasionally present in the glacial till matrix. The strength of the cohesive deposits were typically soft to firm. These deposits had some, occasional or frequent cobble and boulder content, where noted on the exploratory hole logs.

4.2. Groundwater

No groundwater was noted during the investigation however we would point out that these exploratory holes did not remain open for sufficiently long periods of time to establish the hydrogeological regime and groundwater levels would be expected to vary with the time of year, rainfall, nearby construction and other factors.

5.0 Recommendations & Conclusions

5.1. General

The recommendations given and opinions expressed in this report are based on the findings as detailed in the exploratory hole records. Where an opinion is expressed on the material between exploratory hole locations, this is for guidance only and no liability can be accepted for its accuracy. No responsibility can be accepted for conditions which have not been revealed by the exploratory holes. Limited information has been provided at the ground investigation stage and any designs based on the recommendations or conclusions should be completed in accordance with the current design codes, taking into account the variation and the specific details contained within the exploratory hole logs.

5.2. Soakaway Design

At all of the soakaway locations the water level dropped too slowly to allow calculation of 'f' the soil infiltration rate. These locations are therefore not recommended as suitable for soakaway design and construction.

The recommendations provided in this report should be verified in the design of the proposed buildings, using the full details of the loading conditions and taking into consideration the allowable tolerable settlements/movements that the building can accommodate. The founding strata should be inspected and verified by a suitably qualified engineer prior to construction of the building foundations.

APPENDIX 1 - Site Location Plan

www.gii.ie

Soakaways

Client:

MMOS
MURPHY · MATSON · O'SULLIVAN
CONSULTING CIVIL & STRUCTURAL ENGINEERS

Project Code:
14141-09-24

Project Title:
The Good Shepard Student Accommodation

Drawing Title:
Figure 1 Site Location

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental
Ground Investigations Ireland Ltd.
Catherinstown House,
Hazelhatch Road,
Newcastle, Co. Dublin
www.gii.ie 01-6015175/5176

0 10 20 30 40 50 m

Drawn By:	Date:
SK	23-10-2024

APPENDIX 2 – Trial Pit Records

Trial Pit Log

Project Name: The Good Shepard Student Accommodation	Client: MMOS	Date: 10/10/2024
Location: Cork City	Contractor: GII Ltd	Co-ords: E565805.03 N572018.69
Project No. : 14141-09-24	Crew Name:	Equipment:

Location Number	Location Type	Level	Logged By	Scale	Page Number
SA02	TP	38.50m AoD	DL	1:25	Sheet 1 of 1

Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
Depth (m)	Type	Results				
			0.50	38.00		Brown slightly sandy slightly gravelly TOPSOIL.
			1.00	37.50		Soft to firm orangey brown slightly sandy gravelly CLAY with low subangular to subrounded cobble content. Gravel is fine to coarse subangular to subrounded.
			2.40	36.10		Soft orangey brown slightly sandy slightly gravelly CLAY with low subangular to subrounded cobble content. gravel is fine to coarse subangular to subrounded.

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.80	0.60	Stable					

Remarks

Soakaway carried out in trial pit. Trial pit complete at 2.40m BGL. Trial pit backfilled upon completion.

AGS

www.gii.ie

Trial Pit Log

Project Name: The Good Shepard Student Accommodation		Client: MMOS	Date: 10/10/2024
Location: Cork City		Contractor: GII Ltd	Co-ords: E565837.10 N572087.77
Project No. : 14141-09-24		Crew Name:	Equipment:

Location Number	Location Type	Level	Logged By	Scale	Page Number
SA03	TP	47.64m AoD	DL	1:25	Sheet 1 of 1

Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
Depth (m)	Type	Results				
			0.20	47.44		Dark brown slightly sandy slightly gravelly TOPSOIL.
			1.20	46.44		Soft to firm brown slightly sandy slightly gravelly CLAY with low subangular to subrounded cobble content. Gravel is fine to coarse subangular to subrounded.
			2.10	45.54		Soft light brown sandy slightly gravelly CLAY with low subangular to subrounded cobble content. Gravel is fine to coarse subangular to subrounded.
			2.50	45.14		Soft to firm orangey brown slightly sandy slightly gravelly CLAY with low subangular to subrounded cobble content.

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.70	0.60	Stable					

Remarks

Soakaway carried out in trial pit. Trial pit complete at 2.50m BGL. Trial pit backfilled upon completion.

Trial Pit Log

Project Name: The Good Shepard Student Accommodation		Client: MMOS	Date: 11/10/2024
Location: Cork City		Contractor: GII Ltd	Co-ords: E565873.06 N572051.09
Project No. : 14141-09-24		Crew Name:	Equipment:

Location Number	Location Type	Level	Logged By	Scale	Page Number
SA04	TP	41.36m AoD	DL	1:25	Sheet 1 of 1

Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
Depth (m)	Type	Results				
			0.50	40.86		Dark brown slightly sandy slightly gravelly TOPSOIL.
			2.20	39.16		Soft to firm brown slightly sandy gravelly CLAY with low subangular to subrounded cobble content. Gravel is fine to coarse subangular to subrounded .
			2.50	38.86		Soft light brown slightly sandy gravelly CLAY with low subangular to subrounded cobble content.

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.20	0.60	Stable					

Remarks

Soakaway carried out in trial pit. Trial pit complete at 2.50m BGL. Trial pit backfilled upon completion.

Trial Pit Log

Project Name: The Good Shepard Student Accommodation	Client: MMOS	Date: 11/10/2024	
Location: Cork City	Contractor: GII Ltd	Co-ords: E565920.77 N572074.49	
Project No. : 14141-09-24	Crew Name:	Equipment:	

Location Number	Location Type	Level	Logged By	Scale	Page Number
SA05	TP	42.37m AoD	DL	1:25	Sheet 1 of 1

Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
Depth (m)	Type	Results				
			0.20	42.17		Dark brown slightly sandy slightly gravelly TOPSOIL.
						MADE GROUND: Dark brown slightly sandy slightly gravelly CLAY with rare fragments of redbrick and low subangular to subrounded cobble content. Gravel is fine to coarse subangular to subrounded.
			1.40	40.97		Soft orangey brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded.
			2.10	40.27		Soft to firm orangey brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded.
			2.40	39.97		

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
3.00	0.60	Stable					

Remarks

Soakaway carried out in trial pit. Trial pit complete at 2.40m BGL. Trial pit backfilled upon completion.

Trial Pit Log

Project Name: The Good Shepard Student Accommodation	Client: MMOS	Date: 10/10/2024	
Location: Cork City	Contractor: GII Ltd	Co-ords: E565953.64 N572114.13	
Project No. : 14141-09-24	Crew Name:	Equipment:	

Location Number	Location Type	Level	Logged By	Scale	Page Number
SA06	TP	47.46m AoD	DL	1:25	Sheet 1 of 1

Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
Depth (m)	Type	Results				
			0.20	47.26		Dark brown slightly sandy slightly gravelly TOPSOIL.
			0.45	47.01		MADE GROUND: Brown slightly sandy slightly gravelly CLAY with rare fragments of red brick,
			1.50	45.96		Soft to firm brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded.
			1.90	45.56		Firm orangey brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse subangular to subrounded.
			2.50	44.96		Soft orangey brown slightly sandy gravelly CLAY with low subangular to subrounded cobbles. Gravel is fine to coarse subangular to subrounded.

Dimensions		Trench Support and Comment			Pumping Data		
Pit Length	Pit Width	Pit Stability	Shoring Used	Remarks	Date	Rate	Remarks
2.40	0.60	Stable					

Remarks

Soakaway carried out in trial pit. Trial pit complete at 2.50m BGL. Trial pit backfilled upon completion.

APPENDIX 3 – Soakaway Records

GROUND INVESTIGATIONS IRELAND
Geotechnical & Environmental

Catherinestown House,
Hazelhatch Road,
Newcastle,
Co. Dublin.
D22 YD52

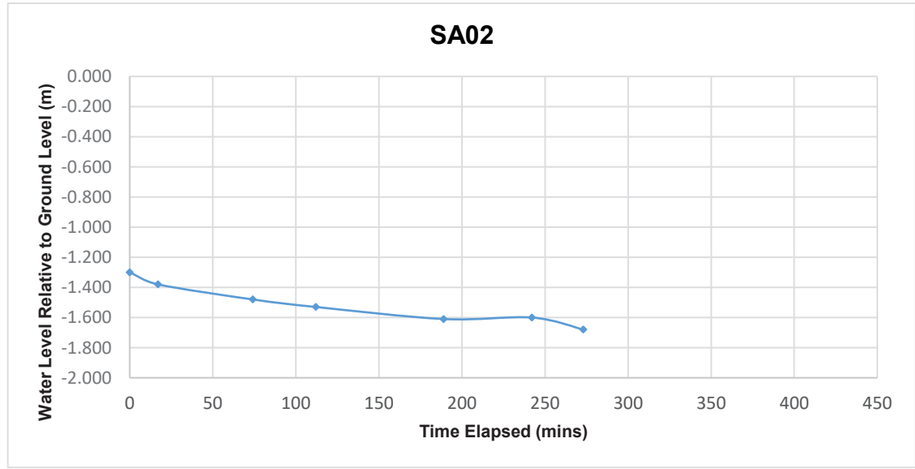
Tel: 01 601 5175 / 5176
Email: info@gii.ie
Web: www.gii.ie

SA02
Soakaway Test to BRE Digest 365
Trial Pit Dimensions: 2.8m x 0.60m x 2.4m (L x W x D)

Date	Time	Water level (m bgl)
10/10/2024	0	-1.300
10/10/2024	17	-1.380
10/10/2024	74	-1.480
10/10/2024	112	-1.530
10/10/2024	189	-1.610
10/10/2024	242	-1.600
10/10/2024	273	-1.680

***Soakaway failed - Pit backfilled**

Start depth	Depth of Pit	Diff	75% full	25%full
1.30	2.400	1.100	1.575	2.125



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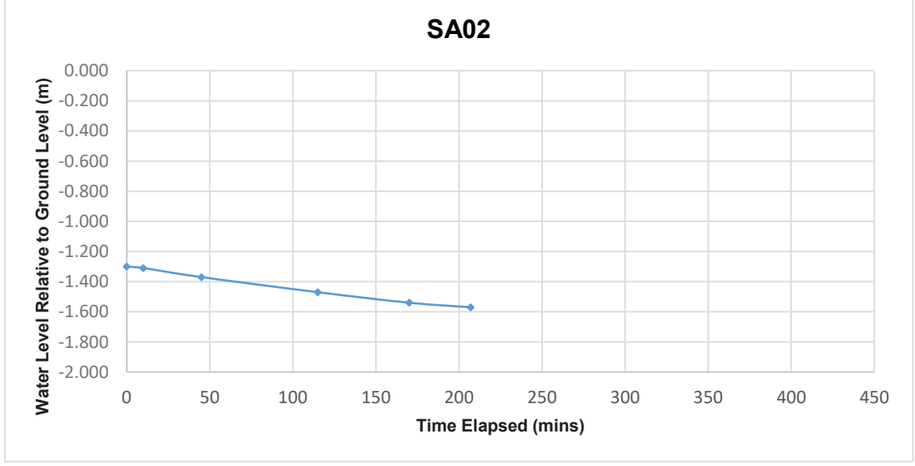
SA03

Soakaway Test to BRE Digest 365
Trial Pit Dimensions: 2.7m x 0.60m x 2.5m (L x W x D)

Date	Time	Water level (m bgl)
10/10/2024	0	-1.300
10/10/2024	10	-1.310
10/10/2024	45	-1.370
10/10/2024	115	-1.470
10/10/2024	170	-1.540
10/10/2024	207	-1.570

***Soakaway failed - Pit backfilled**

Start depth	Depth of Pit	Diff	75% full	25%full
1.30	2.500	1.200	1.6	2.2



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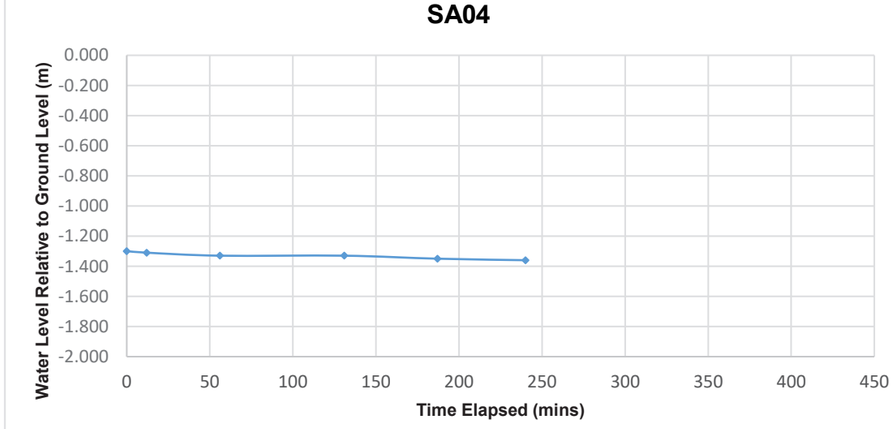
SA04

Soakaway Test to BRE Digest 365
Trial Pit Dimensions: 3.2m x 0.60m x 2.5m (L x W x D)

Date	Time	Water level (m bgl)
11/10/2024	0	-1.300
11/10/2024	12	-1.310
11/10/2024	56	-1.330
11/10/2024	131	-1.330
11/10/2024	187	-1.350
11/10/2024	240	-1.360

***Soakaway failed - Pit backfilled**

Start depth	Depth of Pit	Diff	75% full	25%full
1.30	2.500	1.200	1.6	2.2



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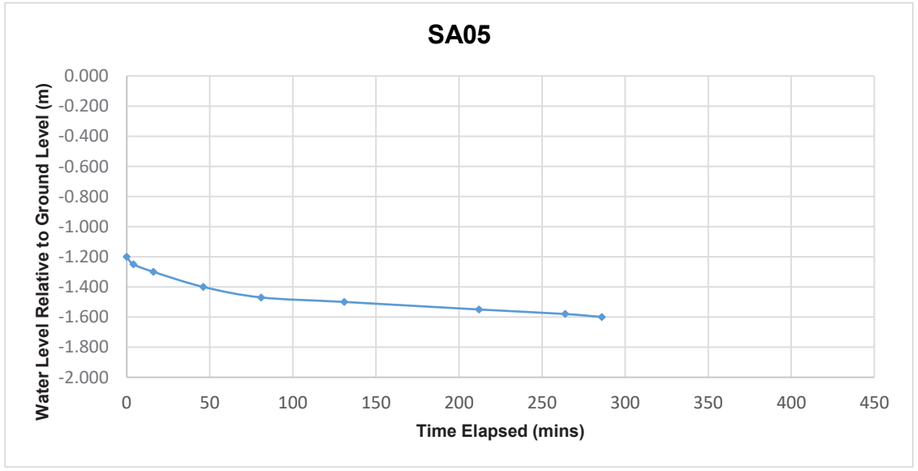
SA05

Soakaway Test to BRE Digest 365
Trial Pit Dimensions: 3.0m x 0.60m x 2.4m (L x W x D)

Date	Time	Water level (m bgl)
11/10/2024	0	-1.200
11/10/2024	4	-1.250
11/10/2024	16	-1.300
11/10/2024	46	-1.400
11/10/2024	81	-1.470
11/10/2024	131	-1.500
11/10/2024	212	-1.550
11/10/2024	264	-1.580
11/10/2024	286	-1.600

***Soakaway failed - Pit backfilled**

Start depth	Depth of Pit	Diff	75% full	25%full
1.20	2.400	1.200	1.5	2.1



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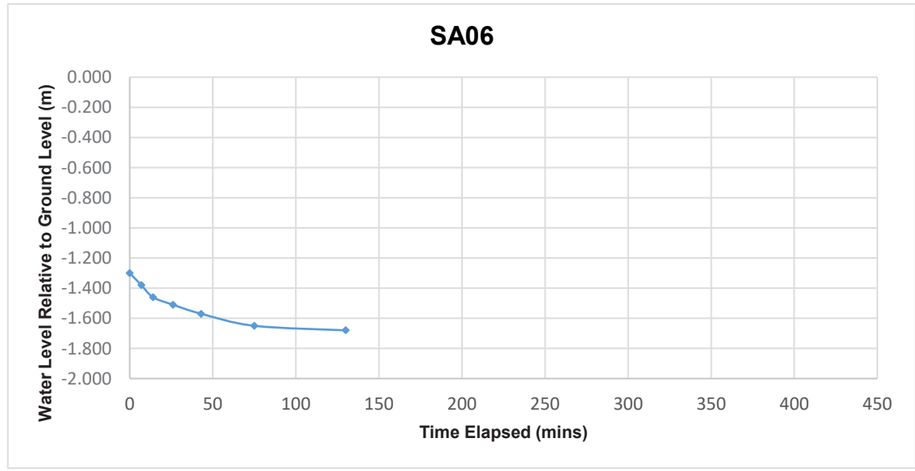
SA06

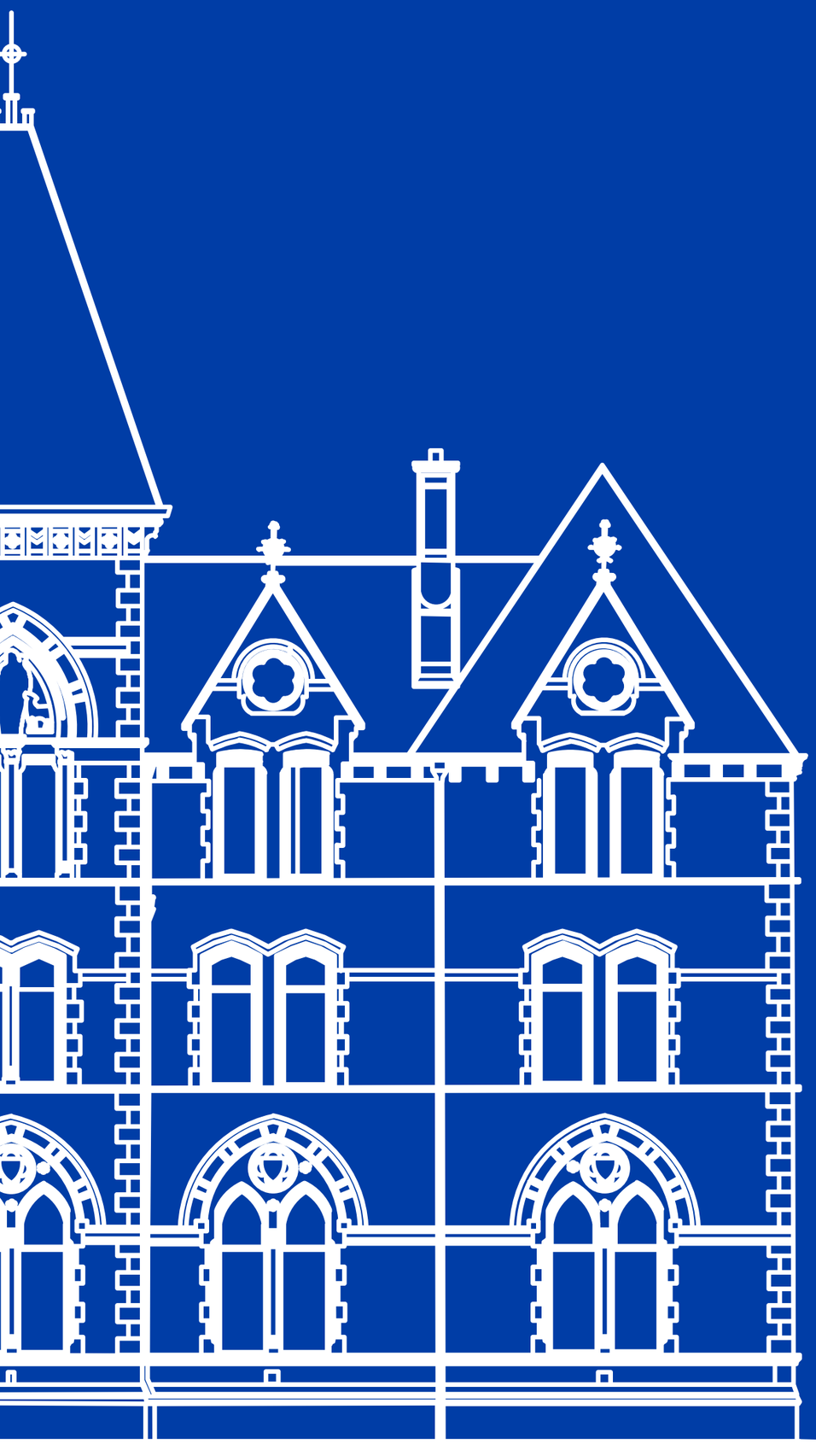
Soakaway Test to BRE Digest 365
Trial Pit Dimensions: 2.4m x 0.60m x 2.5m (L x W x D)

Date	Time	Water level (m bgl)
10/10/2024	0	-1.300
10/10/2024	7	-1.380
10/10/2024	14	-1.460
10/10/2024	26	-1.510
10/10/2024	43	-1.570
10/10/2024	75	-1.650
10/10/2024	130	-1.680

***Soakaway failed - Pit backfilled**

Start depth	Depth of Pit	Diff	75% full	25%full
1.30	2.500	1.200	1.6	2.2





CHAPTER SIX

HYDROLOGY & HYDROGEOLOGY

APPENDIX 6-1 NRA/TII Criteria for Rating the Magnitude and Significance of Hydrological and Hydrogeological Impacts at EIA Stage National Roads Authority

APPENDIX 6-2 NRA/TII Criteria for Rating the Magnitude and Significance of Impacts at EIA Stage National Roads Authority

McCutcheon Halley
CHARTERED PLANNING CONSULTANTS

APPENDIX 6-1 NRA/TII Criteria for Rating the Magnitude and Significance of Hydrological and Hydrogeological Impacts at EIA Stage National Roads Authority

APPENDIX 6.1

NRA/TII Criteria for Rating the Magnitude and Significance of Hydrological and Hydrogeological Impacts at EIA Stage National Roads Authority.

(NRA/TII, 2009).

Table 1 *Criteria for rating Site Attributes - Estimation of Importance of Hydrogeology Attributes (NRA)*

Magnitude of Impact	**Criteria**	**Typical Examples**
Extremely High	Attribute has a high quality or value on an international scale	Groundwater supports river, wetland or surface water body ecosystem protected by EU legislation e.g. SAC or SPA status
Very High	Attribute has a high quality or value on a regional or national scale	Regionally Important Aquifer with multiple well fields Groundwater supports river, wetland or surface water body ecosystem protected by national legislation – NHA status Regionally important potable water source supplying >2500 homes Inner source protection area for
High	Attribute has a high quality or value on a local scale	Regionally Important Aquifer Groundwater provides large proportion of baseflow to local rivers Locally important potable water source supplying >1000 homes Outer source protection area for regionally important water source Inner source protection area for locally important water source
Medium	Attribute has a medium quality or value on a local scale	Locally Important Aquifer Potable water source supplying >50 homes Outer source protection areafor locally important water source
Low	Attribute has a low quality or value on a local scale	Poor Bedrock Aquifer Potable water source supplying <50 homes

Source: *Box 4.3: 'Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes' by the National Roads Authority (NRA, 2009)*

Good Shephard EIAR Chapter 6

Table 2 *Criteria for Rating Impact Significance at EIS Stage – Estimation of Magnitude of Impact on Hydrogeology Attribute (NRA)*

Magnitude of Impact	Criteria	Typical Examples
Large Adverse	Results in loss of attribute and /or quality and integrity of attribute	Removal of large proportion of aquifer. Changes to aquifer or unsaturated zone resulting in extensive change to existing water supply springs and wells, river baseflow or ecosystems. Potential high risk of pollution to groundwater from routine run- off. [1] Calculated risk of serious pollution incident >2% annually. [2]
Moderate Adverse	Results in impact on integrity of attribute or loss of part of attribute	Removal of moderate proportion of aquifer. Changes to aquifer or unsaturated zone resulting in moderate change to existing water supply springs and wells, river baseflow or ecosystems. Potential medium risk of pollution to groundwater from routine run-off. [1] Calculated risk of serious pollution incident >1% annually. [2]
Small Adverse	Results in minor impact on integrity of attribute or loss of small part of attribute	Removal of small proportion of aquifer. Changes to aquifer or unsaturated zone resulting in minor change to water supply springs and wells, river baseflow or ecosystems. Potential low risk of pollution to groundwater from routine run- off. [1] Calculated risk of serious pollution incident >0.5% annually. [2]
Negligible	Results in an impact on attribute but of insufficient magnitude to affect either use or integrity	Calculated risk of serious pollution incident <0.5% annually. [2]

1 *refer to Annex 1, Method C, Annex 1 of HA216/06*

2 *refer to Appendix B3 / Annex 1, Method D, Annex 1 of HA216/06*

Source: *Box 5.3: 'Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes' by the National Roads Authority (NRA, 2009)*

Table 3 *Rating of Significant Environmental Impacts at EIA Stage (NRA)*

Importance of Attribute	**Magnitude of Importance**			
	Negligible	**Small Adverse**	**Moderate Adverse**	**Large Adverse**
Extremely High	Imperceptible	Significant	Profound	Profound
Very High	Imperceptible	Significant/moderate	Profound/Significant	Profound
High	Imperceptible	Moderate/Slight	Significant/moderate	Profound/Significant
Medium	Imperceptible	Slight	Moderate	Significant
Low	Imperceptible	Imperceptible	Slight	Slight/Moderate

Source: *Box 5.4: 'Guidelines on Procedures for Assessment and Treatment of Geology, Hydrology and Hydrogeology for National Road Schemes' by the National Roads Authority (NRA, 2009)*

APPENDIX 6-2 NRA/TII Criteria for Rating the Magnitude and Significance of Impacts at EIA Stage National Roads Authority

APPENDIX 6.2

NRA/TII Criteria for Rating the Magnitude and Significance of Impacts at EIA Stage
National Roads Authority.

(NRA/TII, 2009).

Table 1 *Criteria for Rating Site Attributes – Estimation of Importance of Hydrological Attributes (NRA)*

Importance	Criteria	Typical Examples
Extremely High	Attribute has a high quality or value on an international scale	River, wetland or surface water body ecosystem protected by EU legislation e.g. 'European sites' designated under the Habitats Regulations or 'Salmonid waters' designated pursuant to the European Communities (Quality of Salmonid Waters) Regulations, 1988.
Very High	Attribute has a high quality or value on a regional or national scale	River, wetland or surface water body ecosystem protected by national legislation – NHA status. Regionally important potable water source supplying >2500 homes. Quality Class A (Biotic Index Q4, Q5). Flood plain protecting more than 50 residential or commercial properties from flooding. Nationally important amenity site for wide range of leisure activities.
High	Attribute has a high quality or value on a local scale	Salmon fishery. Locally important potable water source supplying >1000 homes. Quality Class B (Biotic Index Q3-4). Flood plain protecting between 5 and 50 residential or commercial properties from flooding. Locally important amenity site for wide range of leisure activities.
Medium	Attribute has a medium quality or value on a local scale	Coarse fishery. Local potable water source supplying >50 homes. Quality Class C (Biotic Index Q3, Q2- 3). Flood plain protecting between 1 and 5 residential or commercial properties from flooding.
Low	Attribute has a low quality or value on a local scale	Locally important amenity site for small range of leisure activities. Local potable water source supplying <50 homes Quality Class D (Biotic Index Q2, Q1). Flood plain protecting 1 residential or commercial property from flooding. Amenity site used by small numbers of local people.

Good Shephard EIAR Chapter 6

Table 2 *Criteria for Rating Site Attributes – Estimation of Magnitude of Impact on Hydrological Attribute (NRA)*

Magnitude of Impact	Criteria	Typical Examples
Large Adverse	Results in loss of attribute	Loss or extensive change to a waterbody or water dependent habitat. Increase in predicted peak flood level >100mm. Extensive loss of fishery. Calculated risk of serious pollution incident >2% annually. Extensive reduction in amenity value.
Moderate Adverse	Results in impact on integrity of attribute or loss of part of attribute	Increase in predicted peak flood level >50mm. Partial loss of fishery. Calculated risk of serious pollution incident >1% annually. Partial reduction in amenity value.
Small Adverse	Results in minor impact on integrity of attribute or loss of small part of attribute	Increase in predicted peak flood level >10mm. Minor loss of fishery. Calculated risk of serious pollution incident >0.5% annually. Slight reduction in amenity value.
Negligible	Results in an impact on attribute but of insufficient magnitude to affect either use or integrity	Negligible change in predicted peak flood level. Calculated risk of serious pollution incident <0.5% annually.
Minor Beneficial	Results in minor improvement of attribute quality	Reduction in predicted peak flood level >10mm. Calculated reduction in pollution risk of 50% or more where existing risk is <1% annually.
Moderate Beneficial	Results in moderate improvement of attribute quality	Reduction in predicted peak flood level >50mm. Calculated reduction in pollution risk of 50% or more where existing risk is >1% annually.
Major Beneficial	Results in major improvement of attribute quality	Reduction in predicted peak flood level >100mm

Table 3 *Rating of Significant Environmental Impacts at EIS Stage (NRA)*

Importance of Attribute	Magnitude of Importance			
	Negligible	Small Adverse	Moderate Adverse	Large Adverse
Extremely High	Imperceptible	Significant	Profound	Profound
Very High	Imperceptible	Significant/moderate	Profound/Significant	Profound
High	Imperceptible	Moderate/Slight	Significant/moderate	Profound/Significant
Medium	Imperceptible	Slight	Moderate	Significant
Low	Imperceptible	Imperceptible	Slight	Slight/Moderate