Appendix 2B
Scoping Document Responses

Oifig an Aire Post, Fiontar agus Nuálaíochta
Office of the Minister for Jobs, Enterprise and Innovation

Our Ref: **131009/MIN**
Your Ref: **121004**

11 July, 2013

Mr Brian Keville B.Sc. (Env.)
McCarthy Keville O'Sullivan Ltd
Planning & Environmental Consultants
Block 1, G.F.S.C.
Moneenageisha Road
Galway City

Dear Mr Keville,

I wish to acknowledge receipt of your recent letter to the Minister for Jobs, Enterprise and Innovation, Mr Richard Bruton T.D., regarding the Lower Lee (Cork City) Flood Relief Scheme.

I will bring your correspondence to the Minister's attention at the earliest opportunity.

Yours sincerely,

Nodlaig Kelly (Minister's Office)
pp JOHN MAHER
PRIVATE SECRETARY

McCarthy KOS
Received on
12 JUL 2013

Sráid Chill Dara, Baile Átha Cliath 2, Éire • Kildare Street, Dublin 2, Ireland
T: + 353 1 631 2172 / 1890 220 222 • F: + 353 1 631 2815 • www.djei.ie • minister@djei.ie

museum

National Museum of Ireland
Ard-Mhúsaem na hÉireann

T: +353 1 677 7444
F: +353 1 648 6380
E: naturalhistory@museum.ie
W: www.museum.ie

GE/2013/114
Brian Keville
McCarthy Keville O'Sullivan Ltd
Block 1, G.F.S.C.
Moneenageisha Road
Galway

Re: Lower Lee Flood Relief Scheme

Dear Brian,
I am answering your consultation (Ref 121004) on behalf of the National Museum of Ireland, Natural History Division only. We have no specific concerns relating to the area shown on the map other than that wherever possible **any works should avoid impacting on the known caves in the area**. These include Ballincollig and Ovens and Blarney Castle Cave.

As I am also Librarian for the Speleological Union of Ireland, I have that resource which can be consulted if further data is required.

It should be stipulated in the permissions for whatever works do eventually take place that any caves newly exposed by excavation or engineering works are reported and investigated. Caves can be a valuable repository of natural history information as animal bones, organic or glacial sediments, cave geomorphology, groundwater hydrogeology etc. Opportunities to record and collect may be lost if finds are not promptly reported. I can advise on a network of colleagues with appropriate skills in this event.

Your letter was also sent to the Mining Heritage Trust of Ireland. As a Director, I am responding to say we have no specific concerns since there are no known historical mines within the study area.

I expect you have already consulted Dr Sarah Gatley in the Geological Survey of Ireland about potential geological heritage sites within the study area. If you have not done so, I would strongly advise for it.

Matthew A. Parkes.

Matthew Parkes

Natural History Museum

National Museum of Ireland
Natural History
Merrion Street
Dublin 2

Ard-Mhúsaem na hÉireann
Stair an Dúlra
Sráid Mhuirfean
Baile Átha Cliath 2

Brian Keville

From: Eoin McDonnell [Eoin.McDonnell@failteireland.ie]
Sent: 23 July 2013 14:58
To: Brian Keville
Subject: Lower Lee (Cork City) Flood Relief Scheme
Attachments: EIS and Tourism Guidelines 2011.doc; ATT01009.txt; ATT01010.htm

Dear Mr Keville,

I wish to acknowledge receipt of your recent letter to Fáilte Ireland in relation to the Lower Lee (Cork City) Flood Relief Scheme.

I attach a copy of Fáilte Ireland Guidelines for the treatment of tourism in an EIS, which we recommend should be taken into account in preparing the study.

Yours sincerely,

Eoin McDonnell
Projects Officer | Fáilte Ireland | Áras Fáilte | 88-95 Amiens Street | Dublin 1 | Ireland
T: +353 (01) 884 7203 | M: 086 825 4413
W: www.failteireland.ie

The Gathering 2013 - be part of it

Port of Cork Company, Custom House Street, Cork, Ireland • Tel: 353 21 4273125 • Fax: 353 21 4276484
Email: info@portofcork.ie • Web: www.portofcork.ie
Cuideachta Phort Chorcaí, Sráid Teach Custaim, Corcaigh, Eire

PORT of CORK
DEEPWATER MULTI-MODAL PORT

Brian Keville B.Sc. (Env)
McCarthy Keville O'Sullivan Ltd.
Planning & Environmental Consultants
Block 1, G.F.S.C,
Moneenageisha Road,
Galway

23rd July 2013

Re: Lower Lee (Cork City) Flood Relief Scheme (Including Blackpool and Ballyvolane)

Dear Mr. Keville,

I refer to your letter of the 9th July 2013.

Unfortunately I was in Dublin on business on Wednesday 17th July and was thus unable to attend the Public Information Day in City Hall.

The Port of Cork Company actively participated in many workshops and consultations during the preparation of the earlier phase of the CFRAMS and participated in the launch of the draft study. We understand that CFRAMS – as you allude to in your letter – has been revamped and that the mapping from Inniscarra dam right through Cork City to the mouth of the Harbour for the various scenarios has been updated and is now available to you.

In order to inform our better understanding and to enable us to make a more comprehensive input to the process currently underway, we request that the updated study and relevant mapping be made available to key Stakeholders including the Port of Cork Company.

We would like to point out that the map attached to your letter is not current particularly in relation to the extent and labelling of the National Road Network to the south of the City. This may be relevant in the context of the pNHA shown south of Ballintemple and the Additional Study Area identified west of Curraheen.

In relation to particular port issues we note that the eastern River Lee limit of the study area is just upstream of the company's industrial and port facility at Tivoli.

The earlier CFRAMS took account, in an integrated manner, of the totality of port operations including City Quays, Tivoli and other facilities in the Lower Harbour – at Cobh, Marino Point and Ringaskiddy where, in particular, extensive port expansion is envisaged.

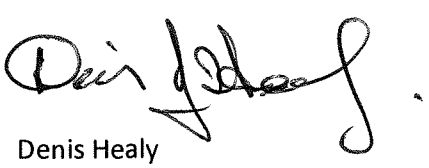
In relation to the section of River Lee forming part of this study and in the context of the list of possible engineering works listed in the attachment to your letter we would like to highlight the following:

1. Dredging/ Sediment management ; The Port maintains the berths and channels to advertised depths and widths in accordance with a Dredging and Dumping permit issued by the EPA,
2. The adjacent quays are generally operational as berths for vessels and for the receipt and handling of cargo,
3. The quays and other port infrastructure have been designed for the activities taking place on them and are limited in terms of loadings, height, future design life etc. Any channel and berth deepening proposals, listed as a possibility on your list, may therefore be problematic and any barriers – either temporary or permanent- would need to have regard to ongoing port operations and cargo handling activities,
4. In the earlier CFRAMS and, under certain worst-case scenarios, tidal barriers were potentially envisaged at Monkstown and Marlogue. We would be interested to learn if this scenario is still actively under consideration and if any changes to these potential solutions have been proposed.

We look forward to the receipt of the requested information and to further engagement on this urgently needed and long awaited project.

Yours Sincerely,

Kind regards,



Denis Healy
Manager Engineering Services

Department of
Agriculture,
Food and the Marine
An Roinn
Talmhaíochta,
Bia agus Mara

23rd July, 2013

Mr. Brian Keville
McCarthy Keville O'Sullivan Ltd
Block 1, G.F.S.C
Moneenageisha Road
Galway
Your Ref: 121004

Re: Lower Lee (Cork City) Flood Relief Scheme (Including Blackpool & Ballyvolane)

Dear Mr. Keville,

I refer to your recent correspondence concerning the above.
The Department of Agriculture, Food and the Marine has no relevant information to offer that would be of assistance in the preparation of the Constraints Study. I would however suggest that your firm consider the likely impacts, if any, of the proposed scheme on the environment and agricultural sector in the locality as part of the Environmental Impact Assessment.

Yours sincerely,

Joan Stone

PP Noel O'Connor
Climate Change Section

McCarthy KOS
Received on
24 JUL 2013

An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine

Eastát Chaisleán Sheonach
Contae Loch Gorman
Éire

Johnstown Castle Estate
Co. Wexford
Ireland

Telephone +353 (0)53 916 3400
Fax +353 (0)53 914 2839
info@agriculture.gov.ie
www.agriculture.gov.ie

south western river basin district

www.swrbd.ie

South Western River Basin District
Cork County Council
Inniscarra
Co. Cork
Ireland

Phone: 021 4532700
Fergal.osullivan@corkcoco.ie

Brian Keville
McCarthy Keville O' Sullivan Ltd.
Planning & Environmental
Consultants.
Block 1, G.F.S.C.
Moneenageisha Road,
Galway.

22nd July 2013

Reference: Lower Lee (Cork City) Flood Relief Scheme (including Blackpool and Ballyvolane)

Your Ref: 121004

Dear Mr. Keville,

Thank you, for your letter dated 9th July 2013.

The South Western River Basin District (SWRBD) management plan was adopted by all Local Authorities in the SWRBD prior to the 30th April 2010, as stipulated in the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003 as amended). The SWRBD plan came into effect on the 15th July 2010.

The South Western River Basin Management Plan (2009-2015) objectives should be considered and integrated as appropriate with the Lower Lee (Cork City) Flood Relief Scheme (including Blackpool and Ballyvolane) (See Section 6 of the SWRBD Plan). The Scheme should comply with the Water Framework Directive.

The main objectives of the **Water Framework Directive** are:

- Prevent deterioration and maintain high status where it already exists
- Protect, enhance and restore all waters with aim to achieve at least good status by 2015
- Ensure waters in protected areas meet requirements
- Progressively reduce chemical pollution

The SWRBD Management plan is available on the website www.wfdireland.ie with all the background documents. (Composite SWRBD Management plan version is available on www.swrbd.ie – this includes Ministerial amendments)

The following sections of the SWRBD plan should be noted:

- Section 4.2.3 of the SWRBD plan refers to **New modifications or sustainable development** and this should be taken into consideration in your development of the proposed Lower Lee (Cork City) Flood Relief Scheme (including Blackpool and Ballyvolane).

- Section 6.1.1 – **Land use planning** - Any potential impacts from future development on waters can be mitigated by properly incorporating the objectives established in this (SWRBD) plan into development plans to ensure sustainable development.

- Please refer to the EPA Website for the latest updated Status in order to establish the water body status.

If you require further information, please don't hesitate to contact me.

Yours Sincerely

Fergal O' Sullivan,
SWRBD Executive Engineer,

cc: File

An tÚdarás um Bóithre Náisiúnta
National Roads Authority

Mr. Brian Keville,

McCarthy Keville O'Sullivan Ltd.,

Planning & Environmental Consultants,

Block 1, G.F.S.C.,

Moneenageisha Road,

Galway.

Teach Naomh Máirtín / Bóthar Waterloo / Baile Átha Cliath 4
St. Martin's House / Waterloo Road / Dublin 4
Teil: / Tel: + 353 1 660 2511 Facs: / Fax: + 353 1 668 0009

Dáta | Date	Ár dTag. | Our Ref.	Bhur dTag. | Your Ref.
19 July 2013	**NRA 13-88210**	**121004**

Re: Lower Lee (Cork City) Flood Relief Scheme (incl. Blackpool and Ballyvolane)

Dear Mr. Keville,

The Authority acknowledges receipt of your correspondence of 9 July, 2013. The Authority endeavours to consider and respond to planning applications and other requests referred to it given its status and duties as a statutory consultee under the Planning Acts. The approach to be adopted by the Authority in making such submissions or comments will seek to uphold official policy and guidelines as outlined in the DoECLG Spatial Planning and National Roads Guidelines for Planning Authorities (2012). Regard should also be had to NRA guidance and other relevant circulars, which are available at www.nra.ie.

The issuing of this correspondence is provided as best practice guidance only and does not prejudice the NRA'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 the Lower Lee Flood Relief Scheme, the recommendations indicated below provide only general guidance in relation to matters which may affect the National Roads Network and may form part of your scoping.

The developer should have regard, *inter alia*, to the following;

- Consultations should be had with the relevant Local Authority/Regional Design Office with regard to locations of existing and future national road schemes in the area. Although some of the national road schemes may currently be suspended pending the availability of funding for further progress, it is considered good practice to address impact or relationship with the relevant national road schemes in EIA. Relevant Schemes may include: M20 Cork to Limerick (Southern Section), N22 Ballyvourney – Macroom – Ballincollig Road Improvement Scheme, N28 Ringaskiddy/Cork, N22/N20/N8 Cork Northern Ring Road and N8/N25 Dunkettle Interchange.

- The developer should assess impacts on existing national roads. The Authority would be specifically concerned as to potential significant impacts development would have on any national roads in the vicinity of proposed works; N20, N22, N40 and potentially, national roads in the urban area, N25, N27, N28 and N71.
- The developer should have regard to any Environmental Impact Statement and all conditions and/or modifications imposed by An Bord Pleanála regarding road schemes in the area. The developer should in particular have regard to any potential cumulative impacts,
- The developer, in conducting Environmental Impact Assessment, should have regard to the NRA DMRB and the NRA Manual of Contract Documents for Road Works,
- The developer, in conducting Environmental Impact Assessment, should have regard to the NRA's Environmental Assessment and Construction Guidelines, including the *Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes* (National Roads Authority, 2006),
- The EIS should consider the Environmental Noise Regulations 2006 (SI 140 of 2006) 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 *Guidelines for the Treatment of Noise and Vibration in National Road Schemes* (1st Rev., National Roads Authority, 2004)),
- It would be important that, where appropriate, subject to meeting the appropriate thresholds and criteria, a Traffic and Transport Assessment be carried out in accordance with relevant guidelines and best practice, 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. The Authority's Traffic and Transport Assessment Guidelines (2007) should be referred to in this regard. Please also have regard to Section 2.2 of the Guidelines which address circumstances where sub-threshold TTA may be required.
- The designers are asked to consult the National Roads Authority's DMRB *Road Safety Audit* (NRA HD 19/12) to determine whether a Road Safety Audit is required,
- In the interests of maintaining the safety and standard of the national road network, the EIS should identify the methods/techniques proposed for any works traversing/in proximity to the national road network, in particular any works that might affect existing structures on the national road network; early consultation with the NRA is recommended.

  (Developers may wish to consult the local planning authority, road authority/County Council or National Road Regional Design Office for the area for assistance on the foregoing matters).

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 the above comments are of use in your scoping process.

Yours sincerely,

pp E. O'Driscoll

Michael McCormack,
Policy Advisor (Planning)

From: Twomey, Mark [Mark.Twomey@agriculture.gov.ie]
Sent: 15 July 2013 12:08
To: Brian Keville
Cc: Redmond, JohnJ (Forest Service)
Subject: Re: Lower Lee (Cork City) Flood Relief Scheme

Dear Brian,

Thank you for your letter which I received last Friday, please note my change of address below. I will comment towards the year end on the scheme when preparation of the EIS begins, as the detailed engineering measures will be available then. A detailed map of Forests within the study area and detailed study area in GIS format may be of assistance in carrying out the Constraints Study. Please contact Frank Barrett at Frank.Barrett@agriculture.gov.ie should you wish to request a copy.

Regards,

Mark Twomey
Forest Service,
Dept. Of Agriculture, Fisheries and the Marine,
Clogheen, Clonakilty, Co.Cork.
023 8836222

From: aindriasmoynihanccc@eircom.net
Sent: 25 July 2013 17:50
To: Brian Keville
Subject: Lower Lee Flood Relief Scheme

Dear Brian,
following up with you on your letter and map outlining the Lower Lee Flood Relief Scheme Ryan-Hanley are examining for the OPW. There is one flood area in Currahen that you should seriously be considering. It was identified on the OPW's flood maps website and is imidiatly adjacent to the Additional Study Area you have identified along the Curraheen river. Just south of the Additional Study Area the river flows north from Balinora and in Curraheen by the grotto it has 2 right angle bends and goes under the road. The OPW have flood records at this point with the flood going into a number of houses east and west of the bridge. This flood point is imidiatly adjacent to your study area and should be considered as part of your work.
Locals are very concerned about flooding at this point and have been in contact with the OPW about doing work. I would be pleased if you would give this area favourable consideration as part of your study and if you would let me know the outcome.
Cllr Aindrias Moynihan

Mr Brian Keville
Mc Carthy Keville O'Sullivan Ltd
Block 1, G.F.S.C.
Moneenageisha Road
Galway.

1 August 2013

RE: Lower Lee (Cork City Flood Relief Scheme)- Constraints Study.

Dear Mr Keville,

I refer to your letter dated 9th July regarding the above-mentioned.

The study area encompasses many salmon and brown trout spawning, nursery and angling waters including the Rivers Lee, Bride, Shournagh, Martin, Blarney and Curragheen. In addition to salmonids, lamprey and eels have been recorded within the constraints study area.

While IFI are fully aware of, and sensitive to, the hardship caused by flooding events any proposed flood alleviation measures must be sustainable and in keeping with the requirements of the Fisheries Acts, Habitats Directive and Water Framework Directive.

In this context IFI feels that the current assessment of flooding events must be a catchment wide process assessing the impact of changes in drainage, development and land use patterns and practices on the response of flows in rivers to rainfall events involved to rainfall events. Likewise potential solutions should consider the catchment in its entirety and not focus solely on the relatively small area set out in the constraints study. Each solution or series of solutions proposed should be considered not alone in financial terms but also in the context of long term sustainability and durability in combination with flood control effectiveness.

More specifically considering the significance of the rivers involved terms of fisheries, the EIS associated with any proposed flood alleviation measures needs to address the following

Assessment of Existing Conditions
The following data is necessary, both within the study area and to the limits of the zone of influence of any proposed works, to assess existing conditions:-

a) Mapping of the range, location and extent of each aquatic habitat type e.g. pools, nursery and spawning areas.

b) Redd counting in the proposed study area and upstream to the limits of the zone of influence of any proposed works be carried out over at least the next 2 years.

c) Mapping of both the extent and nature of bankside vegetation, highlighting in particular all areas subject to river bank erosion at present.

d) A complete stock survey of all fish species.

e) Characterization and quantification of each habitat area, identified in (a), based on its macro invertebrate population.

f) Detailed assessment and characterization of all potentially impacted channels in terms of their surface and sub-surface sedimentology.

Impact Assessment:
The following requirements apply from a fisheries perspective in relation to impact assessment of any proposed works:-

a) Quantification of habitat losses and the impact on both flora and fauna.

b) Impact of any proposed works on fish stock densities for each species.

c) Changes in flow dynamics, the consequent impact on fish migrations and the loss of opportunity for fish movement.

d) Compatibility of any proposed measures with existing legislative requirements.

I would ask that you keep IFI updated as the study progresses. Should you require any clarification please do not hesitate to contact me.

Yours sincerely,

_____.
Michael McPartland
Environmental Officer

Comhairle Cathrach Chorcaí Cork City Council

CITY HALL
CORK

Fón/Tel: 021-4924000
Faics/Fax: 021-4314238
Líonra/Web: www.corkcity.ie Ref

Mr. Brian Keville,
McCarthy Keville O'Sullivan Ltd.,
Planning & Environmental Consultants,
Block 1, G.F.S.C.,
Moneenageisha Road,
Galway.

6th August 2013

Re: Lower Lee (Cork City) Flood Relief Scheme (including Blackpool and Ballyvolane)

Dear Mr. Keville,

I wish to acknowledge receipt of your letter dated 9th July 2013 regarding the above. Please ensure that the material assets of Cork City are included in the preparation of the Environmental Impact Statement for the Lower Lee Flood Relief Scheme.

Yours sincerely,

Tony Brauders,
A/Director of Services,
Strategic Planning & Economic Development.

An Roinn
Ealaíon, Oidhreachta agus Gaeltachta
Department of
Arts, Heritage and the Gaeltacht

Our Ref: **G Pre00247/2013**

06 September 2013

Brian Keville
McCarthy Keville O'Sullivan
Block 1, G.F.S.C., Moneenageisha Road
Galway.

Re: Brian Keville on behalf of the OPW in relation to a proposed flood relief scheme along the Lower Lee valley, Co. Cork.

A Chara,

On behalf of the Department of Arts, Heritage and the Gaeltacht, I refer to the above-proposed development. Outlined below are the observations and recommendations of the Department in relation to archaeology.

Further to your recent submission of Scoping Documents in advance of the preparation of an EIA for the above proposed project, the Department of Arts, Heritage and the Gaeltacht recommends that a detailed archaeological assessment is carried out as part of the Cultural Heritage element of the EIA requirements. The Department awaits the results of the archaeological assessment before commenting further.

The acknowledgement to this letter, any further information and/or the planning authority's decision should ideally be sent to manager.dau@ahg.gov.ie; if this is not possible, correspondence may alternatively be sent to:

The Manager
Development Applications Unit
Department of Arts, Heritage and the Gaeltacht
Newtown Road, Wexford

Finally, the above observations and recommendations are based on the papers submitted to this Department on a pre-planning basis and are made without prejudice to any observations the Minister may make in the context of any consultation arising on foot of any development application referred to the Minister, by the planning authority, in his role as statutory consultee under the Planning and Development Act 2000, as amended.

Is mise, le meas

Patricia O'Leary

Patricia O'Leary
Development Applications Unit
Tel: (053) 911 7482
e manager.dau@ahg.gov.ie

From: Ann Egan [annegan23@gmail.com]
Sent: 23 September 2013 20:36
To: Brian Keville
Subject: Lower Lee flood relief scheme

Dear Mr Keville

Lower Lee flood relief scheme
==========
Your correspondence sent to Cork Historical & Archaeological Society in connection with the above was considered at a meeting of council last week

We do not have any issues at this time

Thank you

Ann Egan
Hon Secretary
Cork Historical & Archaeological Society

Comhairle Contae Chorcaí
Cork County Council

Halla an Chontae,
Corcaigh, Éire. T12 R2NC
Fón: (021) 4276891 • Faics: (021) 4276321
Suíomh Gréasáin: www.corkcoco.ie
County Hall,
Cork, Ireland. T12 R2NC
Tel: (021) 4276891 • Fax: (021) 4276321
Web: www.corkcoco.ie

John Staunton
McCarthy Keville O'Sullivan Ltd.
Planning & Environmental Consultants
Block 1, G.F.S.C.
Moneenageisha Road,
Co. Galway.

7th November, 2016

RE: Lower Lee (Cork City) Drainage Scheme – EIA Scoping

Dear Mr. Staunton,

Mr. Tim Lucey, Chief Executive has asked me to acknowledge receipt of your letter dated 2nd November concerning EIA Scoping for Lower Lee Drainage Scheme.

Yours sincerely,

NICOLA RADLEY
SENIOR EXECUTIVE OFFICER

John Staunton

From: Yvonne Jackson <Yvonne.Jackson@failteireland.ie>
Sent: 04 November 2016 11:22
To: John Staunton
Subject: Re: Lower Lee Drainage Scheme
Attachments: EIS &Tourism Guidelines.pdf

Dear John,

I wish to acknowledge receipt of your recent letter to Fáilte Ireland in relation to the **proposed Drainage Scheme – Lower Lee (Cork City)**
I have attach a copy of the Fáilte Ireland's Guidelines for the treatment of tourism in an EIS, which we recommend should be taken into account in preparing the EIS.

Yours sincerely,

Yvonne

Yvonne Jackson
Investment and Innnovation | Fáilte Ireland | Áras Fáilte | 88/95 Amiens Street | Dublin 1
T: 01 8847224
W: www.failteireland.ie

Fáilte Ireland
National Tourism Development Authority

Guidelines on the treatment of tourism in an Environmental Impact Statement

1. Introduction

Tourism is a significant component of the Irish Economy – estimated to employ approximately 205,000 people – and contributing €6.6 billion in spending to the economy in 2014. The environment is one of the main resources upon which this activity depends – so it is important that the EIS evaluates whether and how the interacting impacts of a project are likely to affect tourism resources.

The purpose of this short note is to provide guidance on how these impacts can be assessed through the existing EIA process. Undertaking an EIA is governed by the EIA Advice Notes published by the EPA. These Advice Notes contain detailed guidance on how to describe and evaluate the effects arising from a range of projects, including tourism projects.

These guidelines were written with the assistance of Conor Skehan, Head of Department of Environment and Planning, Dublin Institute of Technology.

2. Tourism and the Environment

There are two interactions between tourism and the environment.

1. Impacts caused by Tourism Projects
2. Impacts affecting Tourism (e.g. the quality of a destination or a tourism activity)

Impacts caused by Tourism Projects
Tourism projects can give rise to effects on the environment. These are specifically dealt with under a number of Project Types in the Advice Notes, specifically:

12 TOURISM AND LEISURE

a. Ski-runs, ski-lifts and cable-cars where the length would exceed 500 metres and associated developments. Project Type 20

b. Sea water marinas where the number of berths would exceed 300 and fresh water marinas where the number of berths would exceed 100. Project Type 10

c. Holiday villages which would consist of more than 100 holiday homes outside built-up areas; hotel complexes outside built-up areas which would have an area of 20 hectares or more or an accommodation capacity exceeding 300 bedrooms. Project Type 28

d. Permanent camp sites and caravan sites where the number of pitches would be greater than 100. Project Type 28

e. Theme parks occupying an area greater than 5 hectares. Project Type 29

Figure 1 The Advice Notes contain detailed descriptions on how to describe and evaluate the effects arising from a range of tourism projects.

Impacts affecting Tourism

Environmental effects of other projects on tourism are not specifically addressed in the Advice Notes. Taking account of the significance of tourism to the Irish economy a specialist topic of 'Tourism' has been prepared to facilitate a systematic evaluation of effects on this sector within the format laid down for other parts of the Environmental Impact Statement.

It is not intended that the assessment of effects on tourism should become a separate section of the Impact Statement, instead it is intended to become a specialist sub-section of the topic 'Human Beings' which is currently described in Section 2 of the Advice Notes

3. Tourism in the Existing Environment

Introduction

Visitor attitude surveys reveal that the following factors – in order of priority – are the reasons that tourists visit and enjoy Ireland:

- Beautiful scenery
- Friendly & hospitable people
- Safe & Secure
- Easy, relaxed pace of life
- Unspoilt environment
- Nature, wildlife, flora
- Interesting history & culture
- Plenty of things to see and do
- Good range of natural attractions

It is noteworthy that over half of the factors listed are environmental and that all others are related to the way of life of the people. The following describes how these factors are considered within an EIS, set out under EIA topic headings, and how they interact with tourism.

Beautiful scenery
This is covered in the '*Landscape*' Section. Particular attention needs to be paid to effects on views from existing purpose-built tourism facilities, especially hotels, as well as views from touring routes and walking trails. It is important to note that there appears to be evidence that the visitor's expectations of 'beautiful' scenery does not exclude an admiration of new modern developments – such as windfarms – which appear to be seen as indicative of an modern, informed and responsible attitude to the environment.

Friendly & hospitable people
This is not an environmental factor though it is indirectly covered under the '*Human Beings*' section of the EIS. The principal factor is the ratio of visitors to residents. This is of less significance in areas with long-established patterns of tourism.

Safe & Secure
This is not an environmental issue – though some of the factors that are sometimes covered under the heading of '*Human Beings'* – such as social inclusion or poverty – can point to likely effects and interactions.

Easy, relaxed pace of life
This is not an environmental issue though it is partially covered under '*Human Beings'* – see comments above.

Unspoilt environment
This is covered under the sections dealing with '*Landscape*', '*Flora*' and '*Fauna*' and to a lesser extent under emissions to '*Water*' and '*Air*'. In some instances traffic congestion, especially in rural areas, can be an issue, this is usually covered within '*Material Assets'*.

Nature, wildlife, flora
This is principally covered under the headings of '*Flora*' and '*Fauna*' and to a lesser extent by '*Landscape*', '*Water*' and '*Air*'. The principal issues being to avoid any effects that might reduce the health or extent of the habitats. This can occur either directly, by impinging on the site, or indirectly, through emission, that can affect the natural resources, like clean water, which the habitat depends on. It also considers effect on physical access to and visibility of these sites. Occasionally there are concerns about the disturbance or wear and tear of visitor numbers to such sites.

Interesting history & culture
This is principally covered under '*Cultural Heritage*' and, to a lesser extent, under '*Human Beings*'. The principal issues being to avoid damage to sites and structures of cultural, historical, archaeological or architectural significance – and to their contexts or settings. It also considers effect on physical access to and visibility of these sites. Occasionally there are concerns about the wear and tear of visitor numbers to such sites.

Plenty of things to see and do.
This is not an environmental issue though it is partially covered by the '*Human Beings*' section, where the tourism resources of an area are described and assessed.

Good range of natural attractions
This is covered by the '*Landscape*', '*Flora*', '*Fauna*', and '*Cultural Heritage*' sections of the EIS.

4. Project factors affecting Tourism

Introduction
Tourism can be affected both by the structures or emissions of new developments as well as by interactions between new activities and tourism activities – for example the effects of high volumes of heavy goods vehicles passing through hitherto quiet, scenic, rural areas. Tourism can be affected by a number of the characteristics of the new project such as:

- New Developments
- Social Considerations
- Land-uses and Activities

- *New Developments* - will the development stimulate or suppress demand for additional tourism development in the area? If so, what type, how much and where? Marinas, golf courses, other major sporting facilities as well as theme parks and larger conference facilities can all stimulate the emergence of new accommodation, catering and leisure facilities often within an extensive area around a new primary visitor facility. Extensive urbanisation and large scale infrastructure as well as certain processing and extractive industries all have the potential to suppress demand for additional tourism – but usually only in the immediate locality of the new development. It should be noted however, that some types of new or improved large scale infrastructure – such as roads – can improve the visitor experience – by increasing safety and comfort or can convey a sense of environmental responsibility – such as wind turbines.

- *Social Consideration* - will the development change patterns and types of activity and land use? Will it affect the demographics, economy or social dynamics of the locality?

- *Land-use* - will there be severance, loss of rights of way or amenities, conflicts, or other changes likely to ultimately alter the character and use of the tourism resources in the surrounding area?

Existing Tourism
In the area likely to be affected by the proposed development, the following attributes of tourism, or the resources that sustain tourism, should be described under the following headings.

Note that the detailed description and analysis will usually be covered in the section dealing with the relevant environmental topic – such as '*Landscape*'. Only the relevant finding as to the likely significance to, or effect on, tourism needs to be summarised in this section.

Context
Indicate the location of sensitive neighbouring tourism resources that are likely to be directly affected, and other premises which although located elsewhere, may be the subject of secondary impacts such as alteration of traffic flows or increased urban development. The following should be noted in particular:

- Hotels, conference centres, holiday accommodation – including holiday villages, holiday homes, and caravan parks.
- Visitor centres, Interpretive centres and theme parks
- Golf courses, adventure sport centres and other visitor sporting facilities
- Marinas and boating facilities
- Angling facilities
- Equestrian facilities
- Tourism-related specialist retailers and visitor facilities
- Historic and Cultural Sites
- Pedestrian, cycling, equestrian, vehicular and coach touring routes

Indicate the numbers of premises and visitors likely to be directly affected directly and indirectly.
Identify and quantify, where possible, their potential receptors of impacts, noting in particular transient populations, such as drivers, walkers, seasonal and other non-resident groups.

Describe any significant trends evident in the overall growth or decline of these numbers, or of any changes in the proportion of one type of activity relative to any other.

Indicate any commercial tourism activity which likely to be directly affected, with resultant environmental impacts.

Character
Indicate the occupations, activities or interests of principal types of tourism in the area. – Where relevant, describe the specific environmental resources or attributes in the existing environment which each group uses or values; where relevant, indicate the time, duration or seasonality of any of those activities. For example describe the number of guides, boats and anglers who use a salmon fishery and the duration of the salmon season as well as the quantity and type of local accommodation that is believed to be used by the anglers.

Significance
Indicate the significance of the principal tourism assets or activities likely to be affected. Refer to any existing formal or published designation or recognition of such significance. Where possible provide an estimate of the contribution of such

tourism activities to the local economy. For instance refer to the number of annual visitors to a tourism attraction or to the grading of a hotel.

Sensitivity
Describe any significant concerns, fears or opposition to the development known to exist among tourism interests. Identify, where possible, the particular aspect of the development which is of concern, together with the part of the existing tourism resource which may be threatened. For instance describe the extent of a potential visual intrusion onto a site of historic significance which is the main local tourist attraction.

5. Impacts on Tourism

"Do Nothing" Impact;
Describe how trends evident in the existing environment will continue and how these trends will affect tourism.

Predicted impact;

- Describe the location, type, significance, magnitude/extent of the tourism activities or assets that are likely to be affected.

- Describe how the new development will affect the balance between long-established and new dwellers in an area and it's affect on the cultural or linguistic distinctiveness of an area. For example describe the effect of a new multi-national population required for an international call-centre located in a Gaeltacht area.

- Describe how changes in patterns of employment, land use and economic activity arising from the proposed development will affect tourism, for example, illustrating how a new industrial development will diversify local employment opportunities thereby reducing the area's unsustainable over-reliance on seasonal tourism.

- Describe the consequences of change, referring to indirect, secondary and cumulative impacts on tourism; Examples can include describing how the new development may lead to a reduced assimilative capacity for traffic or water during the peak of the tourism season or how new urbanism combined with existing patterns of tourism may lead to unsustainable levels of pedestrian traffic through a sensitive habitat.

- Describe the potential for interaction between changes induced in tourism and other uses that may affect the environment – for instance increasing new tourism-related housing affecting water resources or structures

- Describe the worst case for tourism if all mitigation measures fail.

6. Mitigating adverse impact on Tourism

Describe the mitigation measures proposed to:

- *avoid* sensitive tourism resources – such as views, access, and amenity areas including habitats as well as historical or cultural sites and structures.

- *reduce* the exposure of sensitive resources to excessive environmental burdens arising from the development's emissions or volumes of traffic [pedestrian and vehicular], and/or losses of amenity arising from visually conspicuous elements of the development – for example by prioritizing visual screening of views from a hotel towards a quarry.

- *reduce* the adverse effects to tourism land uses and patterns of activities – especially through interactions arising from significant changes in the intensity of use or contrasts of character or appearance – for example by separating traffic routes for industrial and tourism traffic.

- *remedy* any unavoidable significant residual adverse effects on tourism resources or activities, for example by providing alternative access to tourism amenities – such as waterways or monuments.

John Staunton

From: Manager Dau [mailto:Manager.Dau@ahg.gov.ie]
Sent: 07 November 2016 16:56
To: John Staunton <jstaunton@mccarthykos.ie>
Subject: DAU Ref: G Pre00341/2016 RE: 121004 - Lower Lee (Cork City) Drainage Scheme - Scoping Document

Our Ref: G Pre00341/2016 (Please quote in all related correspondence)

A Chara,

On behalf of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, I acknowledge receipt of your recent consultation.

In the event of observations, you will receive a co-ordinated heritage-related response by email from Development Applications Unit (DAU) on behalf of the Department.

The normal target turnaround for pre-planning and other general consultations is six weeks from date of receipt. In relation to general consultations from public bodies under the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 to 2011, the Department endeavours to meet deadline dates, where requested.

If you have not heard from DAU and wish to receive an update, please telephone the direct line number below or email manager.dau@ahg.gov.ie .

Le meas
Sinéad O' Brien

Development Applications Unit,
Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
Newtown Road,
Wexford,
Y35 AP90
(053) 911 7528

An Roinn Ealaíon, Oidhreachta,
Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta
Department of Arts, Heritage,
Regional, Rural and Gaeltacht Affairs

John Staunton

From: Manager Dau [mailto:Manager.Dau@ahg.gov.ie]
Sent: 09 November 2016 15:17
To: John Staunton <jstaunton@mccarthykos.ie>
Subject: FW: DAU Ref: G Pre00341/2016 RE: 121004 - Lower Lee (Cork City) Drainage Scheme - Scoping Document

DAU Ref: G Pre00341/2016

A Chara,

Attached please find the Nature Conservation observations of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs in connection with the above.

Le meas
Sinéad O' Brien

Development Applications Unit,
Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs,
Newtown Road,
Wexford,
Co. Wexford
Y35 AP90
(053) 911 7528

An Roinn Ealaíon, Oidhreachta,
Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta
Department of Arts, Heritage,
Regional, Rural and Gaeltacht Affairs

An Roinn Ealaíon, Oidhreachta,
Gnóthaí Réigiúnacha, Tuaithe agus Gaeltachta

Department of Arts, Heritage,
Regional, Rural and Gaeltacht Affairs

Our Ref: **G Pre00341/2016** *(Please quote in all related correspondence)*

09 November 2016

Dr. John Staunton B.Sc. (Env.),
Assistant Environmental Scientist,
McCarthy Keville O'Sullivan Ltd.,
Planning & Environmental Consultants,
Block 1, GFSC,
Moneenageisha Road,
Galway

Via email: jstaunton@mccarthykos.ie

Re: EIA Scoping for Lower Lee (Cork City) Drainage Scheme

A Chara,

On behalf of the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs, I refer to correspondence received in connection with the above.

Outlined below are heritage-related observations/recommendations of the Department under the stated heading.

Nature Conservation

The Department refers to your consultation letter of 2nd November 2016 regarding the EIA for the proposed Cork City drainage scheme. In the EIA scoping document forwarded with your letter, Appendices 1-3 were blank. Please forward drawings of the proposed locations of the drainage works to enable the Department to fully respond to your consultation.

The above observations/recommendations are based on the papers submitted to this Department on a pre-planning basis and are made without prejudice to any observations that the Minister may make in the context of any consultation arising on foot of any development application referred to the Minister, by the planning authority, in her role as statutory consultee under the Planning and Development Act, 2000, as amended.

You are requested to send further communications to this Department's Development Applications Unit (DAU) at **manager.dau@ahg.gov.ie** (team monitored); if this is not possible, correspondence may alternatively be sent to:

The Manager
Development Applications Unit (DAU)
Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
Newtown Road
Wexford
Y35 AP90

Is mise, le meas

Sinéad O' Brien
Development Applications Unit
Tel: 053-9117528

John Staunton

From: INFO [mailto:INFO@tii.ie]
Sent: 08 November 2016 09:31
To: John Staunton <jstaunton@mccarthykos.ie>
Subject: RE: 121004 - Lower Lee (Cork City) Drainage Scheme - Scoping Document

Dear Dr. Staunton,

I wish to acknowledge receipt of your email and attached scoping document of 2 November 2016 regarding the above, the contents of which have been noted.

Yours sincerely,

Natasha Crudden
Regulatory & Administration Unit

John Staunton

From: Donncha O'Sullivan <Donncha.OSullivan@gasnetworks.ie>
Sent: 07 November 2016 11:54
To: John Staunton
Cc: James O'Keeffe; 'Dan Hallissey'
Subject: Lower Lee (Cork City) Drainage Scheme - EIA Scoping
Attachments: GNI-DLE-3405.pdf; GNI-DLE-3406.pdf; Code Of Practice 2015.pdf; Safety Advice for Working in the Vicinity of Natural Gas Pipeline.pdf

John,

You recently contacted Gas Networks Ireland and requested information on its infrastructure in the vicinity of your forthcoming works. The Gas Transmission Pipelines in the general area of interest to you are shown, in **RED**, on the drawings attached. Please treat all Gas Networks Ireland Drawings as 'indicative' only.

To verify the *in situ* position of the Gas Transmission Pipeline please contact Dan Hallissey of our Engineers, IPEC, at 021-430 5966, 087-251 2500. All work in the vicinity of a Gas Transmission Pipeline must be completed in compliance with the attached 'Code of Practice 2015'.

The Gas Distribution Network in the vicinity is shown, in **GREEN** and/or in **BLUE** on the drawings attached. Please refer to the attached ***Safety Advice Booklet*** for guidance on working in the vicinity of this infrastructure.

We have no comment to make on the EIA Scoping Document as forwarded.

The attached drawings are General Drawings only. There may be areas of interface identified as your design is progressed. More detailed drawings will be issued to you on request.

Regards,

Donncha

You are reminded that all work in the vicinity of Gas Networks Ireland Pipelines and Installations must be completed in accordance with the current editions of the Health & Safety Authority publications, 'Code of Practice For Avoiding Danger From Underground Services' and 'Guide to Safety in Excavations'. Both of these are available free of charge from the Health and Safety Authority, 1890 28 93 89, or at www.hsa.ie.

Donncha Ó Sullivan BE CEng MIEI
Development Liaison Engineer

Gas Networks Ireland
P.O. Box 51,Gasworks Road, Cork, Ireland

T +353 21 453 4613 | **M** +353 87 982 2437
E donncha.osullivan@gasnetworks.ie

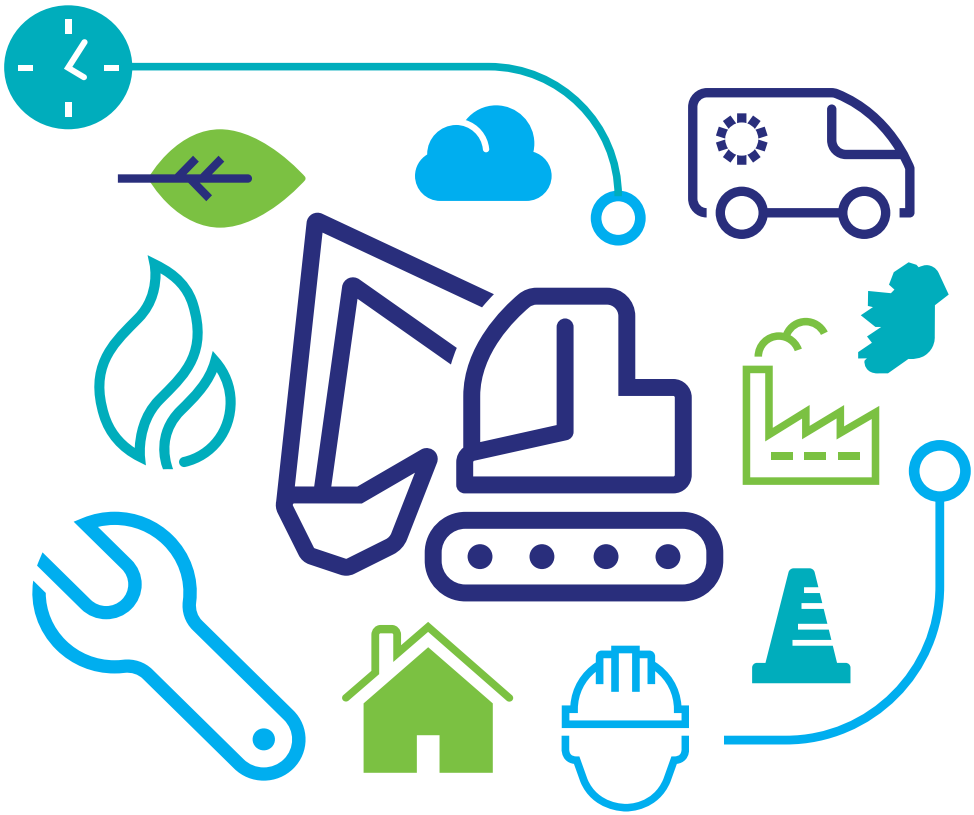
gasnetworks.ie | Find us on Twitter

'

Gas Networks Ireland

Safety advice

for working in the vicinity of natural gas pipelines



Important safety information

When planning any excavation works dial

1850 42 77 47

to obtain up to date gas network maps.

Monday to Friday 9am – 5.30pm

You can also contact us on

dig@gasnetworks.ie

If you have damaged a gas pipe call

1850 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

1850 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;
- nontoxic (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 excavation, 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 main or service; or attempt to carry out a repair. Call 1850 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 Irelands' 24hr Emergency Service on **1850 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 or smoke
  - 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 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 1850 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.

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.

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.

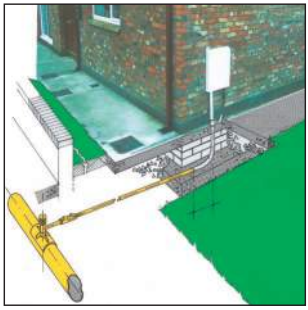
'No-Dig' Techniques

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.

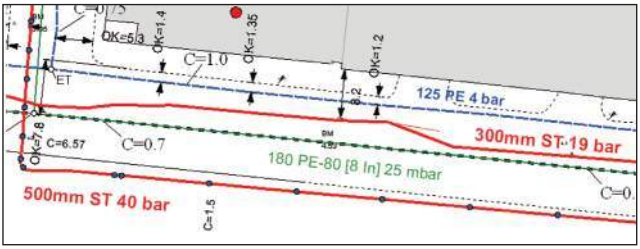
You can also email your enquiry to: **dig@gasnetworks.ie**

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.

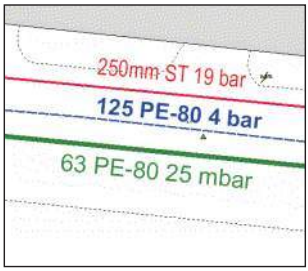
Organisers or planners of any work should ensure that the map is made available to personnel on-site.



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.

Green = Distribution Low Pressure
= up to 100 mbar.

Typical AGI

Pressure regulating installations are marked as:

DRI – District Regulating Installation (Above Ground).

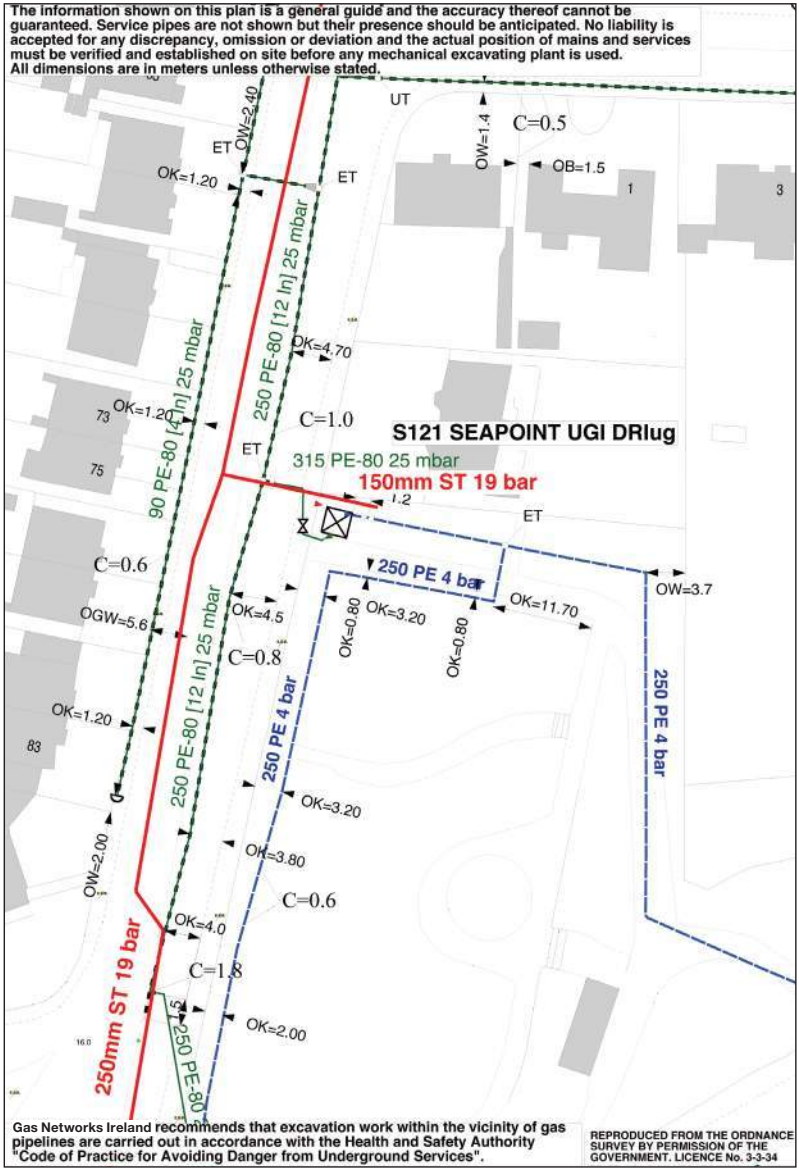
DRIug - District Regulating Installation (Under Ground).

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, 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 exact 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

Gas **services**

Typical service arrangement

Service rise 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).

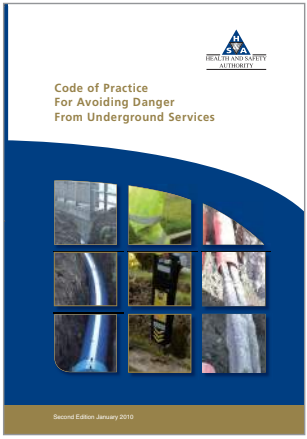
Safe systems of work

Safe systems of work, as recommended by 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:
1850 20 06 94

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 1850 42 77 47
- 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 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 **1850 20 50 50.**
- If you have any concerns regarding safety around gas pipes contact Gas Networks Ireland for advice on **1850 20 06 94**.

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, 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 1850 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

1850 20 50 50

24hr emergency service

Gas Networks Ireland contacts

The main contact numbers for Gas Networks Ireland are

24hr Emergency Service
1850 20 50 50
24 hours, 7 days a week

Dial Before You Dig
1850 42 77 47
Monday to Friday 9am – 5.30pm

General Enquiries
1850 200 694
Monday to Friday 8am – 8pm
Saturday 9am – 5.30pm

gasnetworks.ie

For "Dial Before You Dig" posters or stickers for your workplace call: **1850 20 06 94**

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 **1890 289 389**
www.hsa.ie

ESB Networks: Avoidance of Electrical Hazards When Digging

available free of charge from:
ESB Networks on **1850 37 27 57**
esb.ie/esbnetworks

Gas Networks Ireland

The main contact details for Gas Networks Ireland are:

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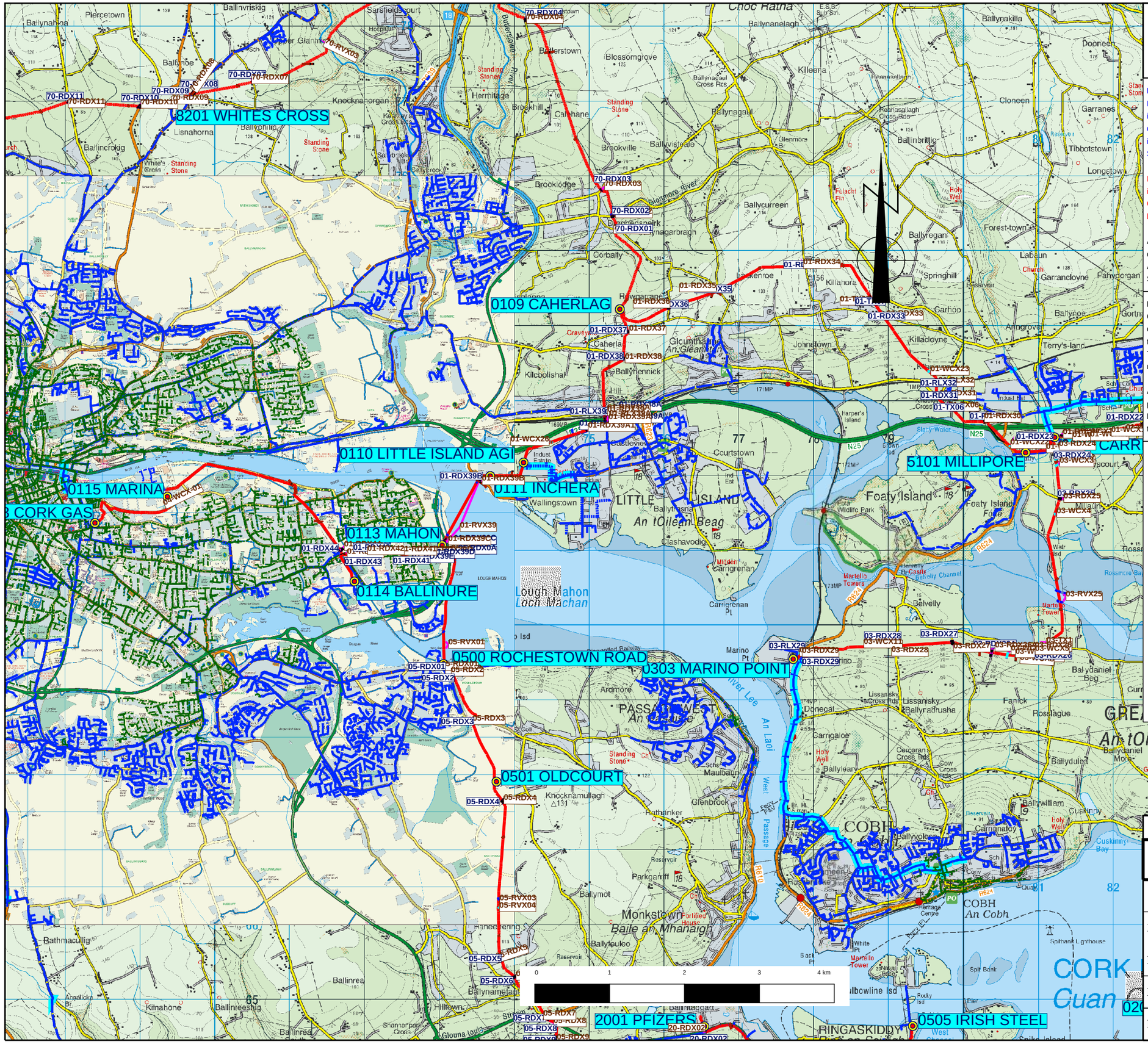
Dial Before You Dig
1850 42 77 47

24hr Emergency Service
1850 20 50 50

networksinfo@gasnetworks.ie

gasnetworks.ie

Guideline No: HSQE/GU/016 Rev 0 Date: June 2016



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 1850 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 (1890 289 389) 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.

Pipelines
- Transmission Pipe (As-laid)
- Transmission Heavy Wall Pipe
- Transmission Pipe (Construction)
- Transmission Pipe (Decommissioned)

Fittings
- Bend
- Cover
- Dome End
- Nitrogen Fill Point
- Pipe Support
- Pipeline Marker Post
- Port
- Protection
- Reducer
- Tee
- Transition
- Valve (Open / Closed)
- Weld

Cathodic Protection
- CP AC Discharge
- CP Anode
- CP Cable
- CP High Voltage Earthing
- CP Insulation Joint
- CP Lug
- CP Transformer Rectifier
- CP Marker

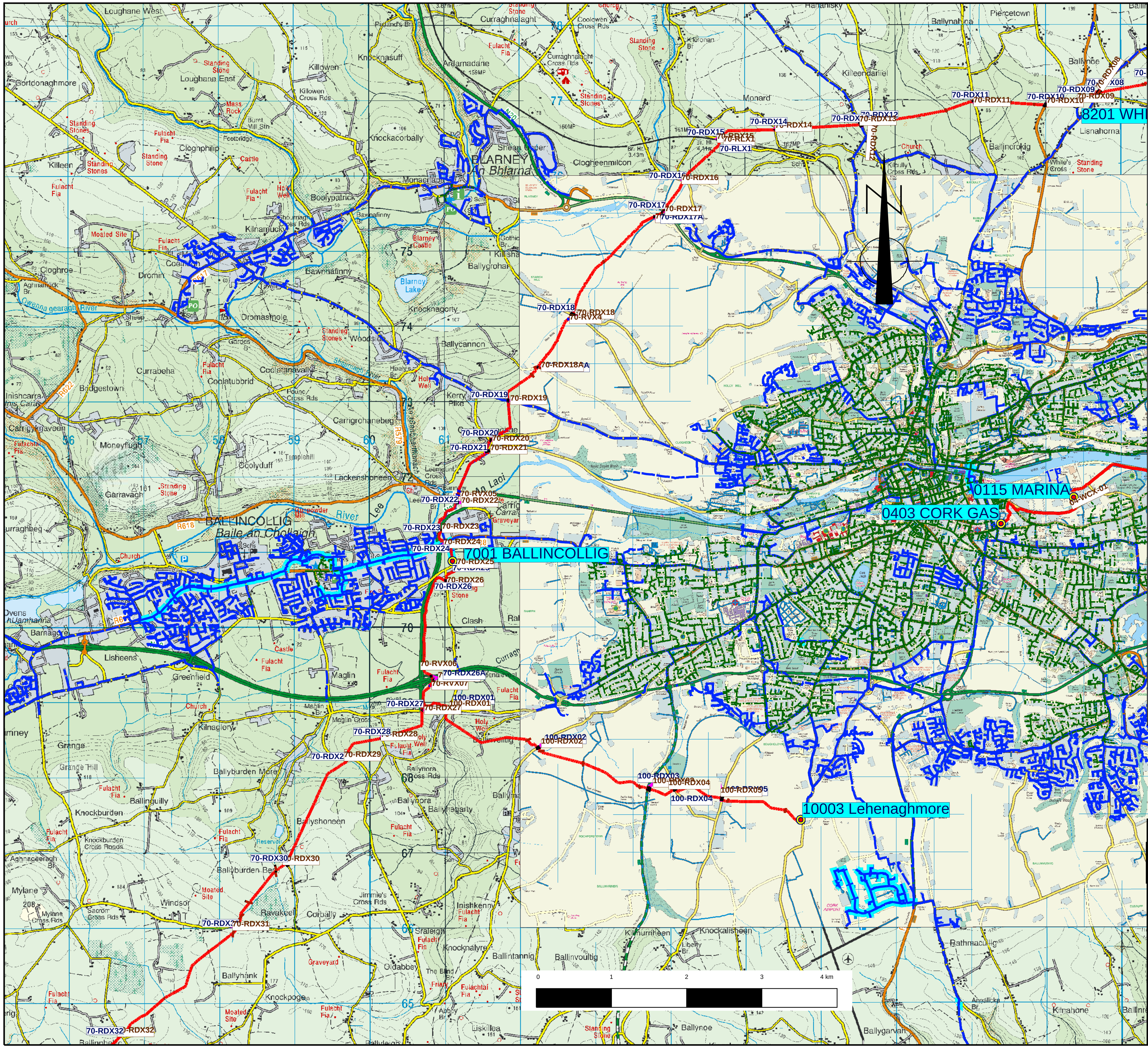
Miscellaneous
- Landowner Boundary
- Townland Boundary
- Crossing Intersection (Road)
- Land Drain
- Electrical Utility
- Water Utility
- Telecom Utility
- Foul Water
- Duct
- Archaeological Site
- Ground Condition
- Installation (Location)
- Installation (Coverage)
- Associated Drawing File
- Associated Drawing File (Bar Chart)
- Customer
- Leak Survey (1 Month)
- Leak Survey (1 Year)
- Incident
- Data Capture Problem Point
- Trigonometric Control Point

Design Department - CORK

Gas Networks Ireland

GAS TRANSMISSION NETWORK INFORMATION

Issue:	MKOS - GNI/DLE/3406		
Location:	Lower Lee		
Plot Date:	07/11/16	Contact:	021-453 4562
Plotted by:	D O'S	Scale:	1:50000



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Design Department - CORK

Gas Networks Ireland

GAS TRANSMISSION NETWORK INFORMATION

Issue:	MKOS - GNI/DLE/3405		
Location:	Lower Lee		
Plot Date:	07/11/16	Contact:	021-453 4562
Plotted by:	D O'S	Scale:	1:50000

gasnetworks.ie

Gas Networks Ireland

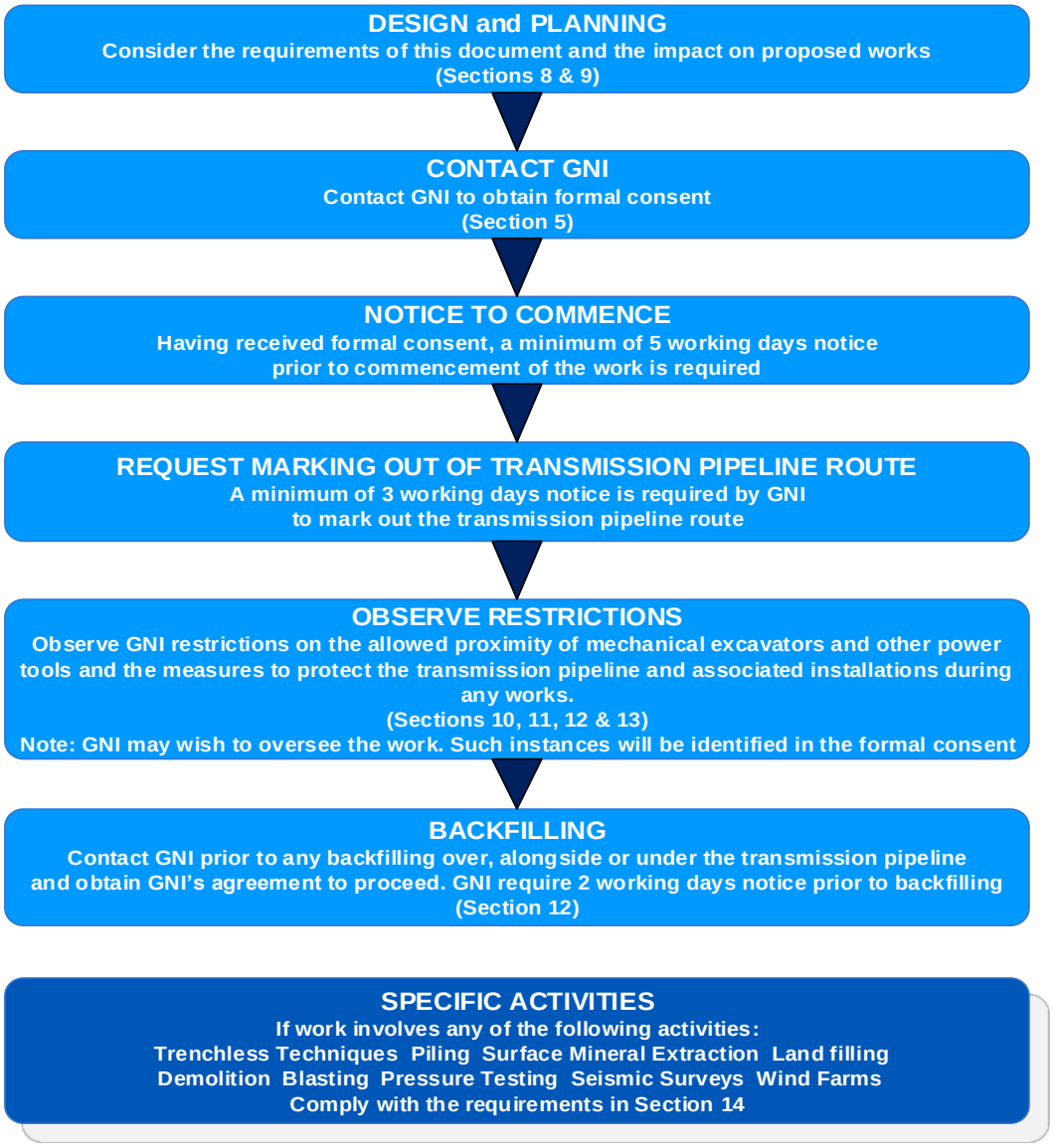
Code of Practice for:

Working in the Vicinity of the Transmission Network

Procedure No: AO/PR/127 Rev 1 Date: October 2015

WHEN CARRYING OUT WORK IN THE VICINITY OF THE TRANMSISSION NETWORK FOLLOW THE FOLLOWING PROCESS

IMPORTANT: Flowchart should be used in conjunction with this Code of Practice and not in isolation. If at any time during the works the transmission network is damaged, even slightly, then observe the precautions in Section 1 of this document.



IF IN DOUBT CONTACT GNI

Foreword

Compliance with this Code of Practice does not confer immunity from prosecution for breach of statutory or other legal obligations.

This code of practice does not cover emergency work or normal agricultural work (as defined below), but it is recommended that in such cases the requirements of the code should be observed as far as possible.

Any damage to a transmission pipeline or its coating can affect its integrity and can result in failure of the transmission pipeline with potentially serious hazardous consequences for individuals located in the vicinity of the transmission pipeline. It is therefore essential that the procedures outlined in this document are complied with when working near the transmission network.

Failure to apply for consent and/or to comply fully with this Code of Practice to the satisfaction of GNI may result in the commencement of legal proceedings by Gas Networks Ireland to stop such works.

Activities associated with working in the vicinity of the transmission network may impact on the safety of the general public, site workers, GNI staff and contractors, and may affect the local environment. All Third Parties working close to the transmission network shall carry out suitable and adequate risk assessments prior to the commencement of work to ensure that all such issues are properly considered and risks mitigated.

Contractors and other users external to GNI should direct their requests for further copies of GNI engineering documents to Gas Networks Ireland.

1 SAFETY PROCEDURE IN THE CASE OF DAMAGE TO THE TRANSMISSION NETWORK

If the GNI transmission network is damaged or leaking, the following precautionary measures shall be taken immediately:

- **In the event of gas leakage do not switch any machinery on or off in the vicinity of the leak.**
- **Prohibit smoking, the use of naked flames, the use of electrical switches, the use of mobile phones and the use of all other ignition sources in the vicinity of the leak/damage.**
- **Evacuate all personnel away from and upwind of the affected area.**
- **Ensure that no one approaches the affected area without the consent of Gas Networks Ireland.**
- **Once clear of the area, report all damage or leakage, however minor it may appear, to the GNI 24hr Emergency Service on 1850 205050.**
- **Do not attempt to repair the damage or stop the leak.**

Note: Any damage to the coating of a GNI transmission pipeline, no matter how apparently insignificant, shall be brought to the attention of GNI in order to carry out repairs. Minor damage to pipe coating and/or ancillary connections brought to the attention of GNI will be repaired free of charge.

2 DEFINITIONS

For the purpose of this Code of Practice the following definitions shall apply:

GNI:
Gas Networks Ireland.

GNI Inspector:
The person appointed from time to time by GNI, to act as the GNI Representative on site, to ensure compliance with this Code of Practice.

Third Party:
The promoter of New Works, the person or persons, firm, company or authority for whom new services or other works are being provided, including their servants, agents and contractors.

Wayleave:
A strip of land, upon and over which GNI has, under the terms of Gas Act (1976 as amended), acquired the rights to lay, construct, inspect, maintain, protect, use, replace, remove or render unusable a main or pipe for the transmission or storage of gas or other materials connected with the exercise and performance of the functions of GNI and all necessary apparatus ancillary thereto. The wayleave can extend up to 9 metres either side of the transmission pipeline.

A GNI wayleave is a legal burden on the title of the property within which it exists and is noted as such on the relevant Land Registry Folio.

Normal Agricultural Works
For the purpose of this Code of Practice, 'Normal Agriculture Works' are such works which do not involve the use of

a) Excavators (tracked or wheeled) irrespective of the proposed excavation depth, or
b) Other mechanical soil penetrating machines such as fence post augers.

Installation
GNI transmission installations are primarily above ground (AGI) with a number below ground (UGI) comprising some or all of the following: Main stream pipework, control pipework, telemetry, instrumentation, boiler houses, analyser kiosks, generators and services.

Hot Works
Hot works is any tool, equipment and/or activity, which produces sparks, fire or has the potential to cause fires or explosions including, but not limited to, electric/battery powered tools, welding, cutting, brazing, soldering, grinding, etc.

3 SCOPE

This Code of Practice sets out the requirements and considerations for the design, construction and maintenance of services and/or structures and other works in the vicinity of existing Gas Networks Ireland (GNI) Gas transmission pipelines and associated Installations located in both Wayleaves and public roadways.

4 PURPOSE

The purpose of this Code of Practice is to:

- Set out considerations for the design, planning and execution of works.
- Advise on the GNI procedures associated with works.
- Identify the measures to be taken to ensure the integrity of the gas network, and
- Assist in ensuring the safety of persons involved in the works.

5 FORMAL CONSENT

5.1 Work shall not be undertaken within a wayleave, installation, or within 3 meters either side of a transmission pipeline in a public roadway **without the prior Formal Consent of Gas Networks Ireland**.

5.2 GNI shall be consulted if work is to be undertaken within 10 meters either side of a transmission pipeline in a public roadway.

5.3 Formal Consent may be issued by GNI following receipt of the following items.

(a) Written agreement to implement the terms & conditions of this Code of Practice and any site specific requirements as advised by GNI.

(b) A method statement detailing the work which will be undertaken and the means of ensuring the integrity of the gas network.

(c) An indemnity as outlined in Section 5.

(d) Evidence of insurance cover to the level required by GNI.

5.4 Formal Consent may, in its simplest form, consist of a valid GNI Permit or a more comprehensive list of conditions.

5.5 Where Formal Consent has been issued, the Third Party shall notify GNI, 5 working days in advance of commencing the works.

6 INDEMNITY

It is an essential part of the granting of Formal Consent in the terms of this document that the Third Party shall indemnify GNI, its servants, agents and contractors against all loss, damage, expense, claims and actions incurred by or brought against GNI, its servants, agents and contractors in consequence of the provision of the new service and any works and activities associated therewith, or ancillary thereto.

7 ROLE OF GNI INSPECTOR

7.1 The primary role of the GNI inspector is to ensure the integrity of the gas network.

7.2 The GNI Inspector has the right to stop any work where in his/her opinion, the actions of the Third Party may adversely affect the integrity of the gas network.

7.3 The GNI Inspector shall inform the person in charge on site of his/her reason for stopping work and afford them the opportunity to address the issue to the satisfaction of the GNI Inspector.

7.4 A 'Corrective Action' shall be issued and recorded against the Third Party if the reason for stopping work is for non conformance to any, some or all of the following:

(a) This Document,

(b) Conditions of the Formal Consent,

(c) Conditions of GNI Permits.

7.5 The GNI Inspector reserves the right to inspect any plant or equipment and/or any or all documentation/certification associated with plant, equipment and/or personnel associated with the work and not permit the use of any such plant, equipment and/or personnel in the works if found to be non compliant.

8 DESIGN CONSIDERATIONS FOR PROPOSED WORKS

8.1 Services Crossing Transmission Pipelines

8.1.1 Where a new service is to cross over the transmission pipeline a clearance distance of 0.6 metres between the crown of the pipeline and underside of the service shall be maintained. If this cannot be achieved the service shall cross under the transmission pipeline with a minimum clearance distance of 0.6 metres.

8.2 Services Parallel to Transmission Pipelines

8.2.1 Pipelines within a wayleave.

No new service shall be laid parallel to the transmission pipeline within a wayleave.

8.2.2 Pipelines within a roadway.

Any new service running parallel to a transmission pipeline in a roadway may, in consultation with GNI, be laid with a minimum horizontal clearance of 1m (5m for High Tension Cables) to the side of the pipeline and may not be above or below a transmission pipeline within that distance.

Under certain circumstances consideration may be given to the relaxation of the above conditions on a case by case basis following prior consultation with GNI Asset Integrity, where the methods and safeguards to be employed have been considered and specified under a Safe Syetm of Work Plan and where the work is supervised by GNI on site.

8.3 Cathodic Protection

Cathodic Protection is applied to GNI's transmission network and is a method of protecting pipelines from corrosion by maintaining an electrical potential difference between the pipeline and anodes placed at strategic points along the pipeline.

Where a new service is to be laid and is to be similarly protected, GNI will need to carry out interaction tests to determine whether its own system is adversely affected. The cost of any mutually agreed remedial action shall be borne by the Third Party.

Should any cathodic protection posts or associated apparatus need moving to facilitate construction operations, reasonable notice shall be given to GNI.

8.4 Installation of Electrical Equipment

Where electrical equipment is being installed close to the transmission network, the effects of a rise of earth potential under fault conditions shall be considered by the third party and a risk assessment shall be submitted to GNI for its approval as part of the Formal Consent process.

8.5 Slabbing and other Protective Measures

8.5.1 Protective measures including the installation of concretes slab protection shall not be installed over or near to the transmission pipeline without the prior written consent of GNI.

8.5.2 Where consent has been given, a GNI Inspector must be present for the entire installation.

8.5.3 The material, composition, dimensions and method of installation of the proposed protective measure shall be agreed with GNI and shall form part of the submission for Formal Consent.

8.6 Changes to Depth of Cover

Any works, which will result in an increase or decrease in the cover of an existing Transmission Pipeline on completion of those works, shall be agreed with GNI in advance.

9 GENERAL CONSIDERATIONS FOR PROPOSED WORKS

9.1 GNI Protective Measures

Where protective measures are required by GNI, work shall not commence until such time as the GNI Inspector is satisfied that those measures meet the requirements of GNI.

9.2 Gaseous Atmospheres

Third Parties shall be mindful of potentially gaseous atmospheres and the generation of sparks, particularly indoors or when a change in wind conditions/direction occurs.

9.3 Inductions

Personnel involved in the works may be required to attend a GNI induction. Such a requirement shall, if required, be identified in the Formal Consent.

9.4 Method Statements

Method statements, where required, shall include risk assessments and be submitted to GNI for review no fewer than 10 working days in advance of commencing works associated with that method statement.

9.5 Identification of Transmission Pipeline Route

9.5.1 Before any work is carried out in the vicinity of existing transmission pipelines, GNI shall, with 3 working days notice, mark/peg out the transmission pipeline route.

9.5.2 The Third Party shall confirm the position of the pipeline before work commences.

9.5.3 A GNI Inspector shall be in attendance for the duration of the excavation of any trial holes necessary to confirm the position of the pipe.

9.6 Handheld Power Assisted Tools

Where the use of handheld power assisted tools is required in the vicinity of the live network, alternatives to electrically/battery powered tools should, in the first instance, be considered. These tools, as with others, by

virtue of their makeup generate a spark when activated/run and as such are in themselves subject to 'Hot Work' permits and associated procedures.

9.7 Hot Work

Hot works shall not take place within an installation, wayleave or within 3 metres either side of a transmission pipeline in a public roadway without the prior written consent of Gas Networks Ireland.

9.8 Induced Voltage

Where high voltage power lines run parallel to a transmission pipeline, there is potential to induce high voltages on the pipeline. To prevent injury, people working on exposed pipe in this area must have suitable protection against electric shock. GNI can provide advice in relation to suitable protection measures and a GNI Inspector must be present when any such work is being performed.

9.9 Construction Traffic

9.9.1 Construction traffic shall not be sited over or moved along or across a transmission pipeline without the prior written approval of GNI.

9.9.2 Construction traffic shall only cross a transmission pipeline at previously agreed and clearly marked crossing lanes.

9.9.3 All crossing lanes shall be fenced on both sides over a width to be specified by GNI. These fences shall be returned along the wayleave on both sides for a distance of 6m away from the crossing.

9.9.4 The crossing lane shall be protected by laying approved sleeper rafts or by protection made from other GNI approved materials, unless otherwise agreed in writing with GNI.

9.9.5 Construction traffic shall be operated at "dead slow" when using crossing lanes.

9.9.6 Suitable warning notices, drawing attention to the danger of not using the crossing, shall be erected and maintained in a clearly legible condition

9.10 Lifting

9.10.1 Any plant and/or equipment involved in lifting shall be certified fit for purpose.

9.10.2 Slewing across an exposed pipe shall not be permitted in any circumstances.

9.11 Storing Materials

9.11.1 Materials, including those excavated or stripped shall not be stored within a wayleave or Installation without the prior written approval of GNI.

9.11.2 Materials, including those excavated or stripped shall not be stored over a transmission pipeline.

9.12 Fires

Fires shall not be permitted within a wayleave or in the vicinity of an installation.

10 PRELIMINARY WORKS

10.1 Demarcation

Where work is being carried out parallel to a transmission pipeline within or immediately adjoining a wayleave, a demarcation line shall be erected, to the satisfaction of GNI, so as to clearly delineate the boundary between

the works site and the wayleave/pipeline

10.2 Surface Stripping

10.2.1 Cultivated/Unmade Ground

Where trial holes have established that sufficient depth of cover exists, light tracked vehicles may strip top soil to a depth of 0.25 metres using a toothless bucket.

10.2.2 Metalled Surfaces

Bituminous or concrete surface layers may be stripped to a depth of 0.3 metres by mechanical means.

Where the bituminous or concrete layer extends below 0.3m, only the use of handheld power assisted tools is permitted, and only in the presence of GNI.

11 EXCAVATIONS

11.1 Plant/Equipment Limitations

The following limitations shall be observed when working in the vicinity of a transmission pipeline.

(a) Hand dig within 1.5 metres of the pipeline.

(b) Handheld power assisted tools permitted beyond 1.5 metres of the pipeline.

(c) Mechanical excavators permitted beyond 3 metres of the pipeline.

(d) The use of 'chain trenchers' is not permitted within 3 metres of the pipeline.

(e) A mechanical excavator may not reach across a pipeline while working, i.e. cab at one side of pipeline with bucket (rock breaker, etc.) on opposite side of pipeline.

(f) A mechanical excavator shall not 'pull' towards the pipeline.

Under certain circumstances consideration may be given to the relaxation of the above conditions on a case by case basis provided that the excavation methods and safeguards to be employed have been considered and specified under a Safe System of Work Plan and the work is approved and supervised by GNI on site.

Factors that should be considered in this determination include, but are not limited to:

Pipeline size, pressure, wall thickness and location.
Excavator size (weight)
Operator competency and experience
Type and width of bucket/attachment (e.g. toothless)
Ground conditions (e.g. rock, soft ground etc.)
Weather conditions
Visibility, particularly of the machine operator
Machine orientation (e.g. working along the axis of the pipe)
Supervision arrangements

Note: Mechanical excavators must never be permitted to work closer than 0.5 meters from the pipeline.

11.2 Exposed Pipeline Protection

11.2.1 Once a pipeline has been exposed, it shall be immediately protected with timber or nylon batons at least 50mm wide and 25mm thick secured to each other with webbing at a distance of no greater than 10mm over the entire exposed area of the pipeline. The method of securing the webbing to batons should be such that any impact would not cause damage to the pipeline coating.

11.2.2 Where heavy gauge trench sheets are used in addition to batons to protect a pipeline, care should be taken while placing the trench sheets that buried stones, debris, etc. are not dislodged against the pipeline.

11.2.3 Depending on the type of work being carried out, ground conditions, etc., GNI may require additional measures.

11.3 Pipeline support

Where it is necessary to excavate below a transmission pipeline, the pipeline shall, during stages of the operation, and for the duration of the works, be supported to the satisfaction of GNI, by means of ratchet straps secured to a steel beam (or GNI approved equivalent) across the pit/trench. On completion, permanent supports shall, if necessary, be constructed to avoid future settlement.

12 BACKFILLING

12.1 The Third Party shall give GNI at least 2 working days notice of their intention to backfill below, above or adjacent to an existing transmission pipeline.

12.2 The Third Party shall afford GNI the opportunity and facility to inspect the coating on the pipeline and/or ancillary connections to the pipeline prior to backfilling.

12.3 A GNI Inspector shall be in attendance to monitor backfill around the pipeline during the whole of the backfilling operations.

Note: Any damage to the coating of a GNI transmission pipeline, no matter how apparently insignificant, shall be brought to the attention of GNI in order to carry out repairs. Minor damage to pipe coating and/or ancillary connections brought to the attention of GNI will be repaired free of charge.

13 ABOVE GROUND INSTALLATIONS

13.1 PPE Requirements

GNIs minimum PPE requirements for working in a live installation are hard hat, safety glasses, safety shoes/boots, gloves and Hi-Viz Jacket/vest. All clothing shall be anti static and flame retardant. Contact GNI Safety Department for information on compliance of PPE.

13.2 Above ground pipework with ancillary connections

Where construction plant and machinery are used in an AGI, all above ground pipework with ancillary control pipework, telemetry and/or instrumentation adjacent to the work, shall be protected on all sides by timber/metal hoarding, secured in place, a minimum of *2* metres from any extremity and extending vertically to the uppermost point of any pipe/equipment. A suitable point of access shall be provided in the hoarding. Where this 2 meter separation distance cannot be physically achieved due to the layout and size an installation, the works may be allowed to proceed but only where suitable precautions have been agreed and implemented to protect all relevant pipework and personnel. The risks and associated mitigating measures shall be idenitifed on the relevant risk assessment and method statement for the proposed works. The relavant details supporting any relaxation of this code of practice shall be recorded on the relevant general works permit or excavation

permit by the permit issuer.

Heras type fencing may be used where a distance of 6m from any extremity can be achieved.

13.3 Above ground pipework without ancillary connections

Where construction plant and machinery are used in an AGI, all above ground pipework which does not have ancillary connections adjacent to the work, shall be protected on all sides by heras type fencing a minimum of 2 metres from any extremity. A suitable point of access shall be provided in the fencing. Where this 2 meter separation distance cannot be physically achieved due to the layout and size an installation, the works may be allowed to proceed but only where suitable precautions have been agreed and implemented to protect all relevant pipework and personnel. The risks and associated mitigating measures shall be idenitifed on the relevant risk assessment and method statement for the proposed works. The relavant details supporting any relaxation of this code of practice shall be recorded on the relevant general works permit or excavation permit by the permit issuer.

13.4 Plant and Machinery

Petrol powered plant, machinery or vehicles shall not be permitted within the confines of an AGI.

13.5 General

This code of practice shall apply to all work carried out within an AGI.

14 SPECIFIC ACTIVITIES

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of the transmission network. Consult GNI if you are intending to undertake one of the listed prescribed activities and/or you require further advice on whether the work that you are intending to undertake has the potential to affect the transmission network.

The table below shows, for some specific activities, the prescribed distances within which GNI shall be consulted.

Activity	Distance within which GNI shall be consulted
Any Excavation Actions	**10 m**
Piling	**15 m**
Surface Mineral Extraction	**100 m**
Land filling	**100 m**
Demolition	**150 m**
Blasting	**400 m**
Wind Farm	**2 times the turbine mast height from the nearest edge of a transmission pipeline**

14.1 Trenchless Techniques

Trenchless techniques must not take place within 10m of the GNI Transmission Network without prior consultation with GNI.

14.2 Piling

Piling shall not be permitted within 15 metres of the transmission network without an assessment of the vibration levels at the pipeline. Contact GNI with regard to peak particle velocity criteria and other precautionary measures.

Where ground conditions are of submerged granular deposits of silt and sand, an assessment of the effect of vibration on settlement and liquefaction at the transmission pipeline shall be made.

14.3 Surface Mineral Extraction

An assessment shall be carried out on the effect of surface mineral extraction activity within 100 metres of the transmission network.

Where the mineral extraction extends up to the transmission pipeline wayleave, a stable slope angle and stand-off distance between the transmission pipeline and slope crest shall be determined by GNI. The wayleave strip should be clearly marked by a suitable permanent boundary such as a post and wire fence, and where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the Third Party. The wayleave and slope needs to be inspected periodically to identify any signs of developing instability. This may include any change of slope profile including bulging, the development of tension cracks on the slope or wayleave, or any changes in drainage around the slope. The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100 metres of the transmission pipeline but do not extend up to the pipeline wayleave boundary, an assessment, by GNI may be made on whether the planned activity could promote instability in the vicinity of the pipeline. This may occur where the transmission pipeline is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives the provisions of section 14.6 apply.

14.4 Land filling

The creation of slopes outside of the wayleave may promote instability within the vicinity of the transmission pipeline. An assessment should therefore be carried out on the effect of any land filling activity within 100 metres of a transmission pipeline. The assessment is particularly important if land filling operations are taking place on a slope in which the pipeline is routed.

14.5 Demolition

Demolition shall not be permitted within 150 metres of a transmission network without an assessment of the vibration levels at the pipeline. Contact GNI with regard to peak particle velocity criteria and other precautionary measures.

Where ground conditions are submerged granular deposits of silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the transmission pipeline shall be made.

14.6 Blasting

Blasting shall not be permitted within 400 metres of a transmission network without consulting GNI and making an assessment of the vibration levels at the pipeline. Contact GNI with regard to peak particle velocity criteria and other precautionary measures.

Where ground conditions are of submerged granular deposits of silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the transmission pipeline shall be made.

14.7 Pressure Testing

Hydraulic or pneumatic testing shall not be permitted within 8m of the transmission network unless precautions have been taken against the effects of a possible burst. These precautions may include the use of pre installation tested pipe, sleeving, barriers, etc., as agreed with GNI.

14.8 Seismic Surveys

GNI shall be advised of any seismic surveying work in the vicinity of a transmission pipeline. Contact GNI with regard to peak particle velocity criteria and other precautionary measures.

14.9 Wind Farm Development

GNI should be consulted if wind turbines are to be sited any closer than 2 times the proposed height of the turbine mast away from the nearest edge of a transmission pipeline or associated installation.

15 REFERENCE DOCUMENTS

IS328: Code of Practice for Gas Transmission Pipelines & Pipeline Installations.