

3. Athenry, Co. Galway.

3.1. Summary Details

Athenry is located 22km from Galway City and is considered to have high potential growth as a commuter town serving Galway City. The population of Athenry is currently 4,041 as per the preliminary results of the 2006 Census, this is projected to increase to 6,450 by 2016 (see Appendix A Table 1). It is forecast that up to 1000 new residential connections will be made in Athenry over the next ten years.

There are a number of potential I/C customers existing in Raheen Industrial Estate, Athenry at present. As the IDA are currently promoting this industrial estate there exists substantial potential for increasing the I/C customer base over the next ten years.

Athenry is located 2.5km from the existing Mayo - Galway Natural Gas Transmission pipeline.

3.2. Summary Load Analysis:

Athenry, Co. Galway.

Source: Networks cost estimates report May 2006.

Industrial/ Commercial Load Summary Forecast:

Total EAC 2014	4,117 Mwh	140,495 Therms
Peak Day 2014	25,237 Kwh	861 Therms

New Housing Summary Forecast:

New Housing Load (Therm)	520,000 (year 10)
New Housing Load (Mwh)	15,240 (year 10)

3.3. Solutions:

It would be necessary to construct a new Above Ground Installation (AGI) on the Mayo – Galway pipeline. This AGI would be equipped with pressure reduction facilities to reduce the pressure from 85 to 4 Bar. The AGI would feed the local network comprising of approximately 3.8km of 180mm PE (SDR 11) feeder main (this includes 500m for connection to the AGI) and 4km of 180 & 125 PE (SDR 11) distribution main.

3.4. Cost Estimates:

Athenry, Co. Galway.

Source: Networks cost estimates report May 2006.

Estimated Capital expenditure Costs for feeder and Distribution Mains:

Item	Costs €
<i>Transmission AGI</i>	€1,087,400
<i>Feeder / Distribution Main Construction*</i>	€1,386,018
Total Estimated Costs	€2,473,418

These estimated costs include for the following:

District regulator installations, special engineering difficulties (crossings), archaeological survey, local authority charges, adverse ground conditions, pre-tender investigations, insurance, design, administration, material procurement, construction contracts, call out crew and equipment costs.

* The estimates do not include for:

New housing estate mains, service or meter costs.

Industrial / Commercial mains, service or meter costs.

3.5. Business Modelling:

€m	NPV @ 5.74%
Distribution	
Revenue	2.4
Capex	-2.2
Contributions	0.2
Opex	-0.1
Distribution NPV	0.3
Transmission	
Onshore Revenue	0.7
Entry Revenue	0.4
Capex - AGI	-1.0
Initial Capex - Land & Tee	0.0
Opex	-0.2
Transmission NPV	-0.1
Total NPV	0.2

Connection of Athenry to the network would result in a positive net present value (NPV) of €0.2m and therefore appears to be economic on a stand-alone basis. If the proposed IDA connection goes ahead then the IDA would pay for any incremental costs associated with that connection.



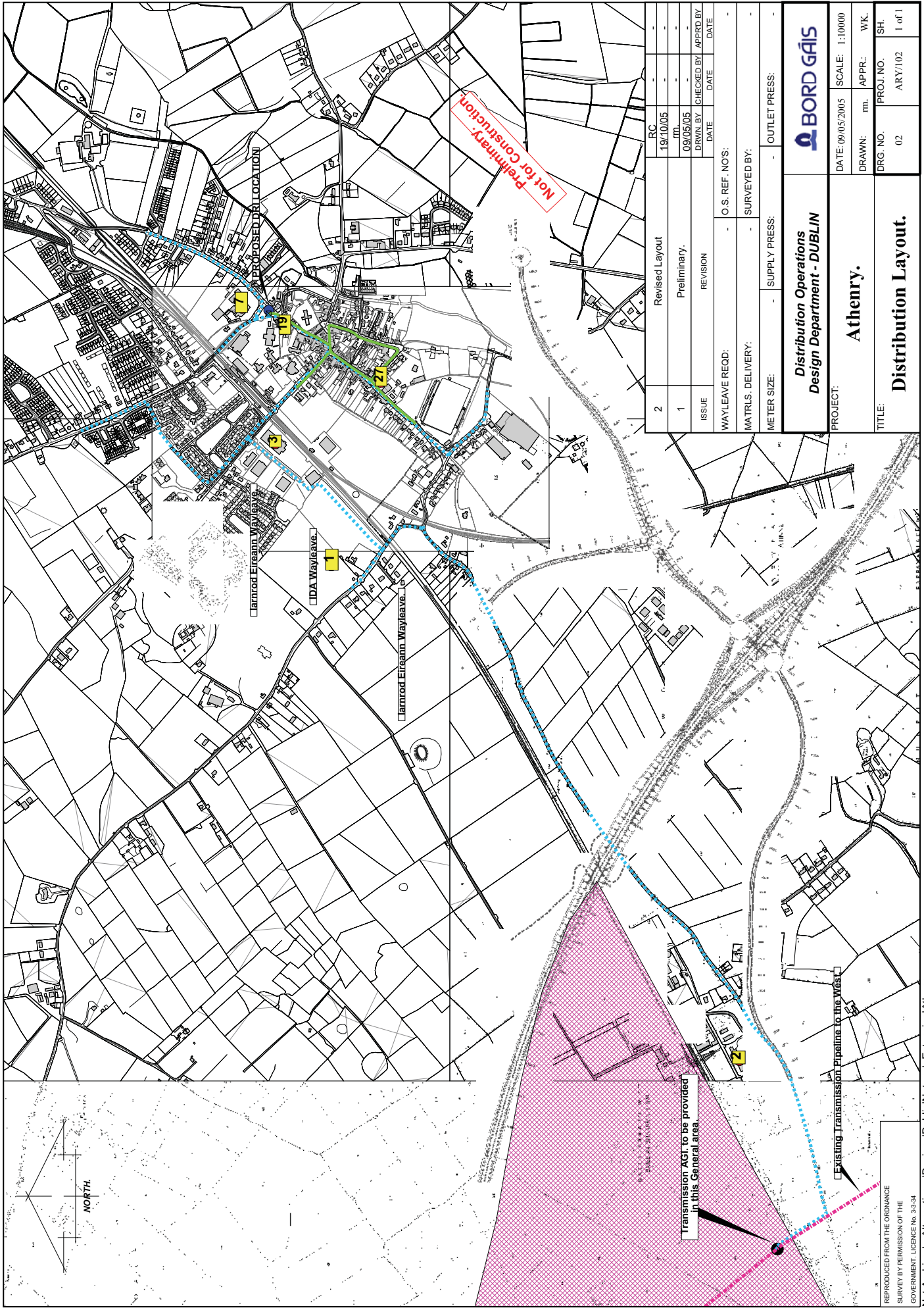
Transmission A.G.I. to be Provided in this Approx. Area.

Proposed Atherry Feeder Main.

Existing Transmission Pipeline.

Distribution Operations Design Department - DUBLIN			
Title / Project : Atherry Feeder Main		Plot Date: 06/04/05	Drawn: E.M.
		Scale: 1:50000	
		Drg. No. SK / 340	

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



2	Revised Layout	RC	19/10/05
1	Preliminary	mm	09/05/05
	REVISION	DRWN BY	CHECKED BY
		DATE	DATE
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MATRLS. DELIVERY:		SURVEYED BY:	
METER SIZE:		SUPPLY PRESS:	
		OUTLET PRESS:	
Distribution Operations Design Department - DUBLIN			
PROJECT:		DATE: 09/05/2005	SCALE: 1:10000
TITLE:		DRAWN: mm	APPR.: WK.
		DRG. NO. 02	PROJ. NO. ARY/102
			SH. 1 of 1

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4. Tuam, Co. Galway.

4.1. Summary Details

Tuam is located 34km from Galway City. The population of Tuam is currently 7,897 as per the preliminary results of the 2006 Census, this is projected to increase to 13,000 by 2016 (see Appendix A Table 1). As a steadily expanding commuter town it is forecast that 1600 new residential connections will be made over the next ten years.

The IDA have attracted a number of multinational companies to Tuam and have established an industrial base which is expected to grow over the next 15 to 20 years.

Tuam is 13.5km from the Corrib Natural Gas Transmission pipeline. The proposed connection point is block valve No. 8511 Beagh More BV station.

4.2. Summary Load Analysis:

Tuam, Co. Galway.

Source: Networks cost estimates report May 2006.

Industrial/Commercial Load Summary Forecast:

Total EAC 2014	8,428 Mwh	287,656 Therms
Peak Day 2014	47,069 Kwh	1,606 Therms

New Housing Summary Forecast:

New Housing Load (Therm)	832,000 (year 10)
New Housing Load (Mwh)	24,384 (year 10)

4.3. Solutions:

It would be necessary to install 85 to 4 Bar pressure reduction facilities at Beaghmore AGI located on the existing Mayo - Galway pipeline. This AGI would feed the local network comprising of approximately 12km of 250mm PE (SDR 11) feeder main and 8.9km of 180 & 125 PE (SDR 11) distribution main.

4.4. Cost Estimates:

Tuam, Co. Galway.

Source: Networks cost estimates report May 2006.

Estimated Capital expenditure Costs for feeder and Distribution Mains:

Item	Costs €
<i>Transmission AGI</i>	€734,000
<i>Mayo- Galway Incremental Cost*</i>	€287,400
<i>Feeder / Distribution Main Construction**</i>	€4,737,554
Total Estimated Costs	€5,758,954

These estimated costs include for the following:

District regulator installations, special engineering difficulties (crossings), archaeological survey, local authority charges, adverse ground conditions, pre-tender investigations, insurance, design, administration, material procurement, construction contracts, call out crew and equipment costs.

* The *Mayo-Galway Incremental Cost* represents a portion of the additional expenditure on the Mayo-Galway Pipeline required to enable the installation of pressure reduction stations for gas supply to towns along the route.

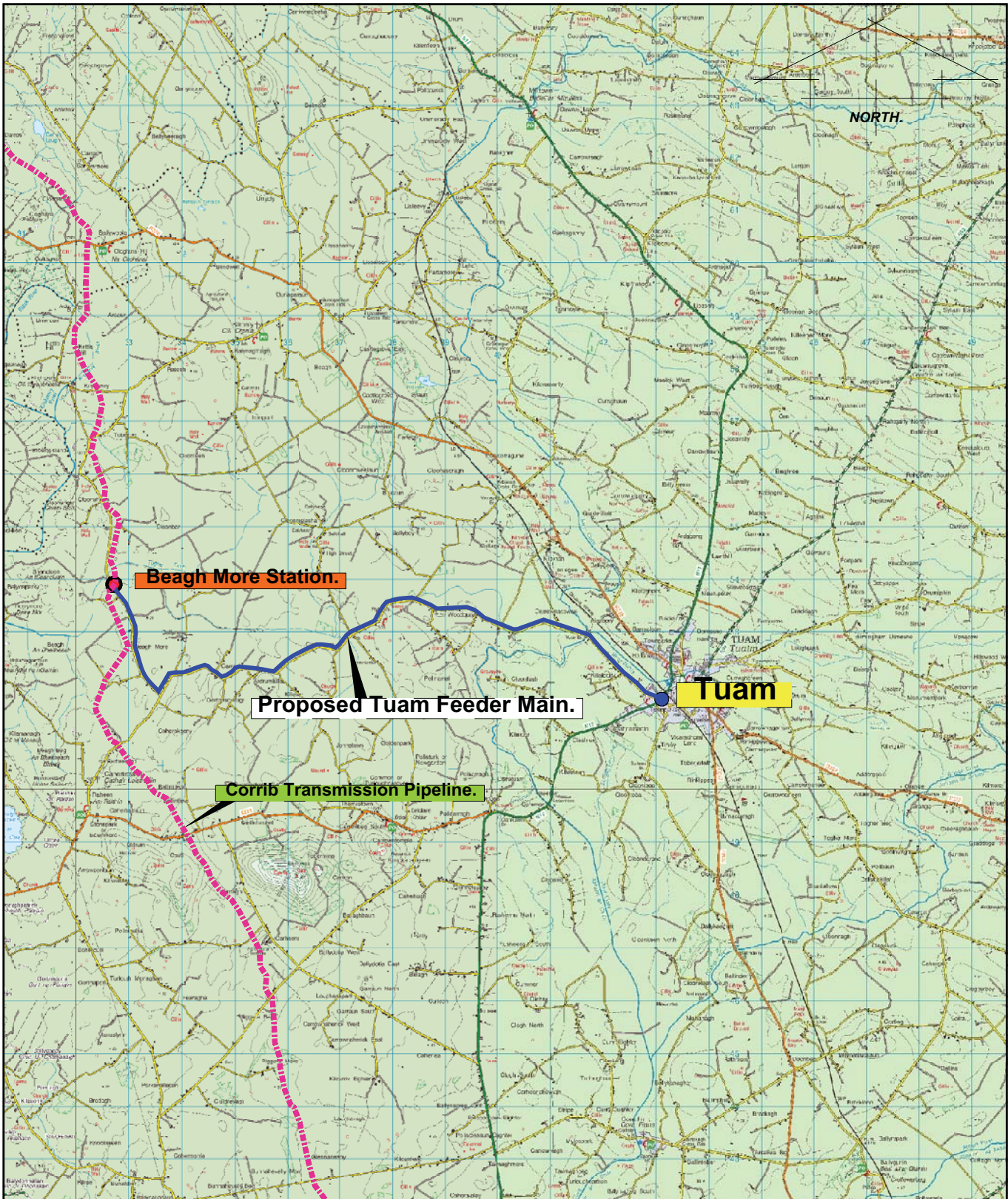
** The estimates do not include for:

New housing estate mains, service or meter costs.
Industrial / Commercial mains, service or meter costs

4.5. Business Modelling:

€m	NPV @ 5.74%
Distribution	
Revenue	4.0
Capex	-5.9
Contributions	0.3
Opex	-0.3
Distribution NPV	-1.8
Transmission	
Onshore Revenue	1.2
Entry Revenue	0.7
Capex - AGI	-0.7
Initial Capex - Land & Tee	-0.3
Opex	-0.2
Transmission NPV	0.7
Total NPV	-1.2

Connection of Tuam to the network would result in a negative net present value (NPV) of €1.2m and therefore appears to be uneconomic on a stand-alone basis.



Beagh More Station.

Proposed Tuam Feeder Main.

Corrib Transmission Pipeline.

Tuam

**Distribution Operations
Design Department - DUBLIN**



Title / Project :

Tuam Feeder Main

Plot Date:

06/04/05

Drawn:

E.M.

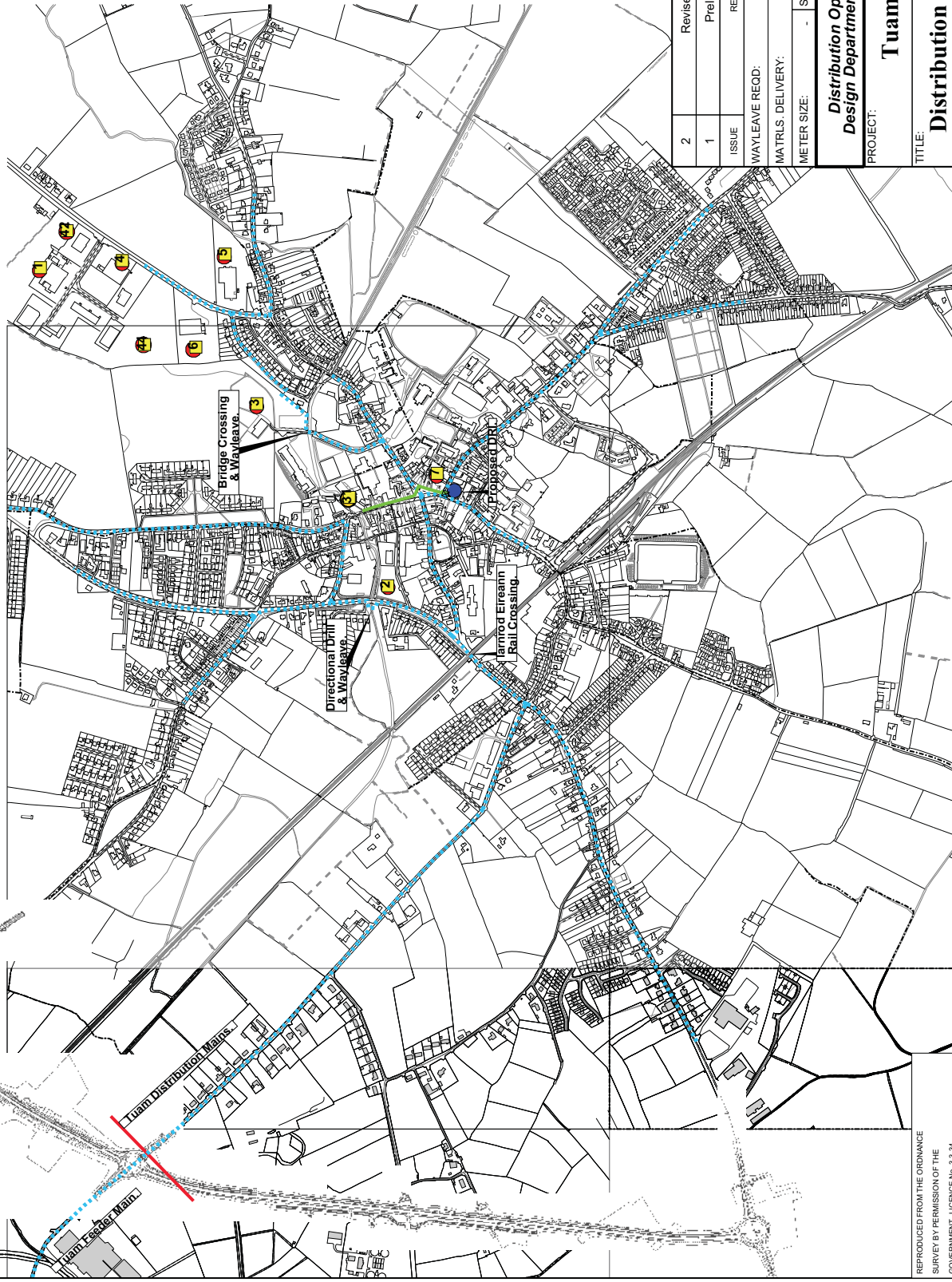
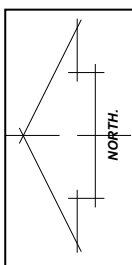
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Drg. No.

SK / 341

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



Preliminary:
Not for construction.

2	Revised Layout.	RC	19/10/05	-	-
1	Preliminary.	mm	05/05/05	-	-
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	MATRLS. DELIVERY:	SURVEYED BY:			
	METER SIZE:	SUPPLY PRESS:	OUTLET PRESS:		
Distribution Operations Design Department - DUBLIN					
BORD GÁIS					
PROJECT:		DATE: 05/05/2005		SCALE: 1:10000	
		DRAWN: mm.	APPR.:	WK.	
TITLE:		DRG. NO. 02	PROJ. NO.	SH.	1 of 1
Distribution Layout.					

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5. Claremorris, Co. Mayo.

5.1. Summary Details

Claremorris is located in South Central Mayo. The population of Claremorris is currently 3,170 as per the preliminary results of the 2006 Census, this is projected to increase to 6,000 by 2016 (see Appendix A Table 1). Claremorris acts as a commuter base for Castlebar and Tuam and it is forecast that 1000 new residential connections will be made over the next ten years.

Claremorris has a small number of Irish companies in the IDA industrial estate. There are approximately 40 acres of services land zoned commercial.

Claremorris is 5km from the proposed Corrib Natural Gas Transmission pipeline. The proposed connection point is block valve No. 8509 Knockroe BV Station.

5.2. Summary Load Analysis:

Claremorris, Co. Mayo.

Source: Networks cost estimates report May 2006.

Industrial / Commercial Load Summary Forecast:

Total EAC 2014	6,074 Mwh	207,313 Therms
Peak Day 2014	37,987 Kwh	1,296 Therms

New Housing Summary Forecast:

New Housing Load (Therm)	520,000 (year 10)
New Housing Load (Mwh)	15,240 (year 10)

5.3. Solutions:

It would be necessary to install 85 to 4 Bar pressure reduction facilities at Knockroe AGI on the existing Mayo – Galway pipeline. This AGI would feed the local network comprising of approximately 5.6km of 180mm PE (SDR 11) feeder main and 5.8km of 180 & 125 PE (SDR 11) distribution main.

5.4. Cost Estimates:

Claremorris, Co. Mayo

Source: Networks cost estimates report May 2006.

Estimated Capital expenditure Costs for feeder and Distribution Mains:

Item	Costs €
Transmission AGI	€734,000
Mayo- Galway Incremental Cost*	€287,400
Feeder / Distribution Main Construction**	€2,123,714
Total Estimated Costs	€3,145,114

These estimated costs include for the following:

District regulator installations, special engineering difficulties (crossings), archaeological survey, local authority charges, adverse ground conditions, pre-tender investigations, insurance, design, administration, material procurement, construction contracts, call out crew and equipment costs.

* The Mayo-Galway Incremental Cost represents a portion of the additional expenditure on the Mayo-Galway Pipeline required to enable the installation of pressure reduction stations for gas supply to towns along the route.

** The estimates do not include for:

New housing estate mains, service or meter costs.
Industrial / Commercial mains, service or meter costs

5.5. Business Modelling:

€m	NPV @ 5.74%
Distribution	
Revenue	2.7
Capex	-2.9
Contributions	0.2
Opex	-0.8
Distribution NPV	-0.8
Transmission	
Onshore Revenue	0.8
Entry Revenue	0.5
Capex - AGI	-0.7
Initial Capex - Land & Tee	-0.3
Opex	-0.2
Transmission NPV	0.1
Total NPV	-0.7

Connection of Claremorris to the network would result in a negative net present value (NPV) of €0.7m and therefore appears to be uneconomic on a stand-alone basis.



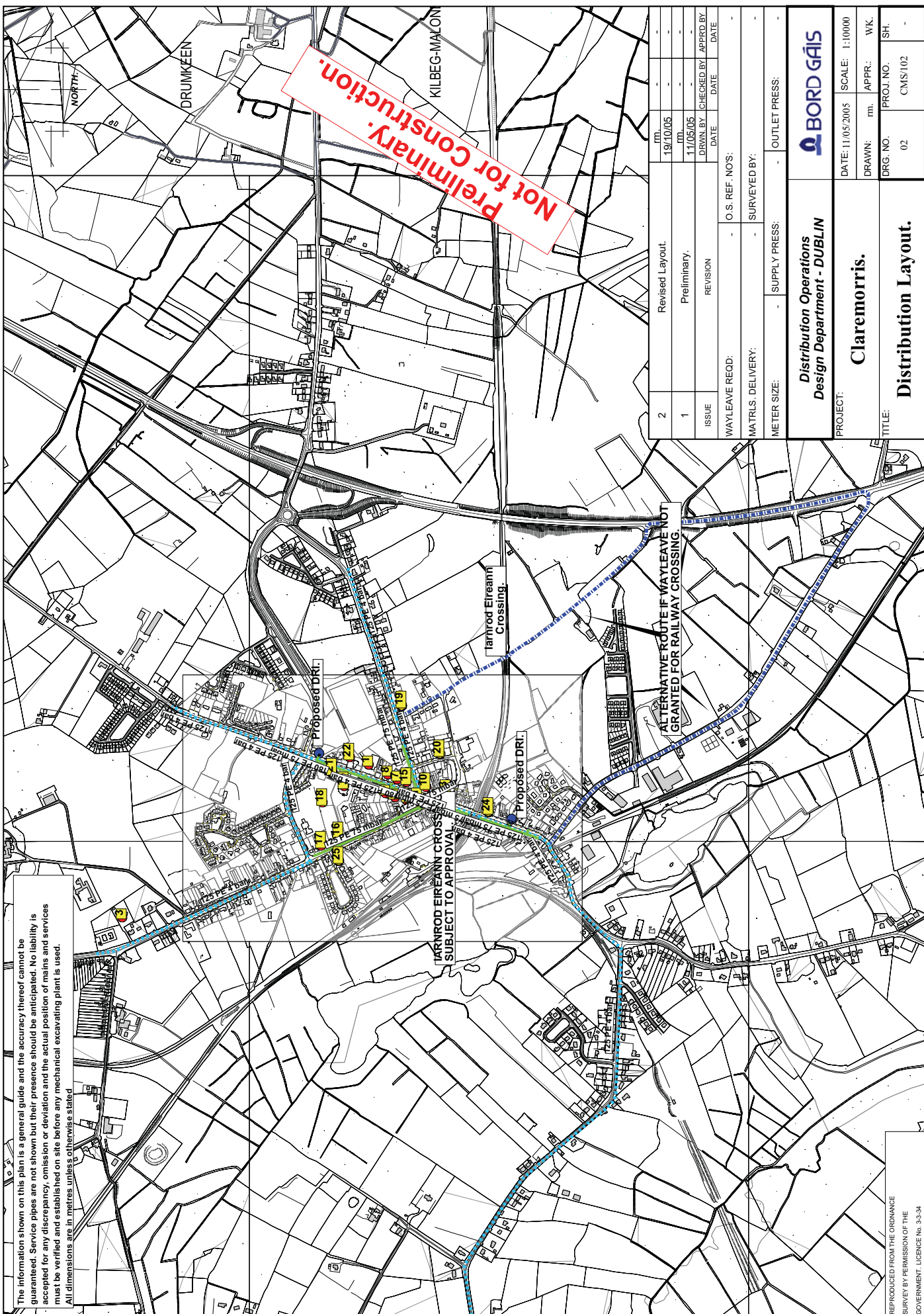
**Distribution Operations
Design Department - DUBLIN**



Title / Project : <p align="center">Claremorris Feeder Main</p>	Plot Date: 06/04/05	Drawn: E.M.
	Scale: 1:50000	
	Drg. No. SK / 342	

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GOVERNMENT. LICENCE No. 3-3-34

The information shown on this plan is a general guide and the accuracy thereof cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability is accepted for any discrepancy, omission or deviation and the actual position of mains and services must be verified and established on site before any mechanical excavating plant is used. All dimensions are in metres unless otherwise stated.



Preliminary.
Not for Construction.

2	Revised Layout.	mm.	19/10/05	-
1	Preliminary.	mm.	11/05/05	-
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DATE	DATE	DATE	DATE	DATE
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MATERIALS DELIVERY:		SURVEYED BY:		
METER SIZE:		SUPPLY PRESS:		
		OUTLET PRESS:		
BORD GÁIS				
Distribution Operations Design Department - DUBLIN				
PROJECT:		DATE: 11.05.2005		
CLAREMORRIS.		SCALE: 1:10000		
DISTRIBUTION LAYOUT.		DRAWN: mm.		
		APPR.: WK.		
		DRG. NO. 02		
		PROJ. NO. CMS/102		
		SH.		

REPRODUCED FROM THE ORDNANCE SURVEY BY PERMISSION OF THE GOVERNMENT LICENCE NO. 3.3.34
Not Archived - Alternative : |Designs|Dublin|Network Extension|Claremorris

6. Westport, Co. Mayo.

6.1. Summary Details

Westport is the third largest town in Co. Mayo and is one of the main tourist centres in the west of Ireland. The population of Westport is currently 6,598 as per the preliminary results of the 2006 Census, this is projected to increase to 8,000 by 2016 (see Appendix A Table 1). Westport has existing housing numbers of approximately 1,800 units. It is forecast that 500 new residential connections will be made over the next ten years.

As Westport is a popular tourist destination there are a number of large and medium sized hotels in the area. A number of IDA backed overseas companies have plans to expand the already established industrial base in the area.

Westport is 22km from the Corrib Natural Gas Transmission pipeline. The proposed connection point is block valve No. 8507 Rockfield installation.

6.2. Summary Load Analysis:

Westport, Co. Mayo.

Source: Networks cost estimates report May 2006.

I/C Load Summary Forecast:

Total EAC 2014	60,523 Mwh	2,065,625 Therms
Peak Day 2014	298,642 Kwh	10,193 Therms

New Housing Summary Forecast:

New Housing Load (Therm)	260,000 (year 10)
New Housing Load (Mwh)	7,620 (year 10)

6.3. Solutions:

It would be necessary to install 85 to 4 Bar pressure reduction facilities at Rockfield AGI on the existing Mayo – Galway pipeline. This AGI would feed the local network comprising of approximately 15.7km of 250mm PE (SDR 11) feeder main and 8km of 180 & 125 PE (SDR 11) distribution main.

6.4. Cost Estimates:

Westport, Co. Mayo.

Source: Networks cost estimates report May 2006.

Estimated Capital expenditure Costs for feeder and Distribution Mains:

Item	Costs €
<i>Transmission AGI</i>	€367,000
<i>Mayo- Galway Incremental Cost*</i>	€143,700
<i>Feeder / Distribution Main Construction**</i>	€4,952,865
Total Estimated Costs	€5,463,565

These estimated costs include for the following:

District regulator installations, special engineering difficulties (crossings), archaeological survey, local authority charges, adverse ground conditions, pre-tender investigations, insurance, design, administration, material procurement, construction contracts, call out crew and equipment costs.

In the estimate, the cost of the Transmission AGI is split evenly between Castlebar and Westport.

* The *Mayo-Galway Incremental Cost* represents a portion of the additional expenditure on the Mayo-Galway Pipeline required to enable the installation of pressure reduction stations for gas supply to towns along the route.

** The estimates do not include for:

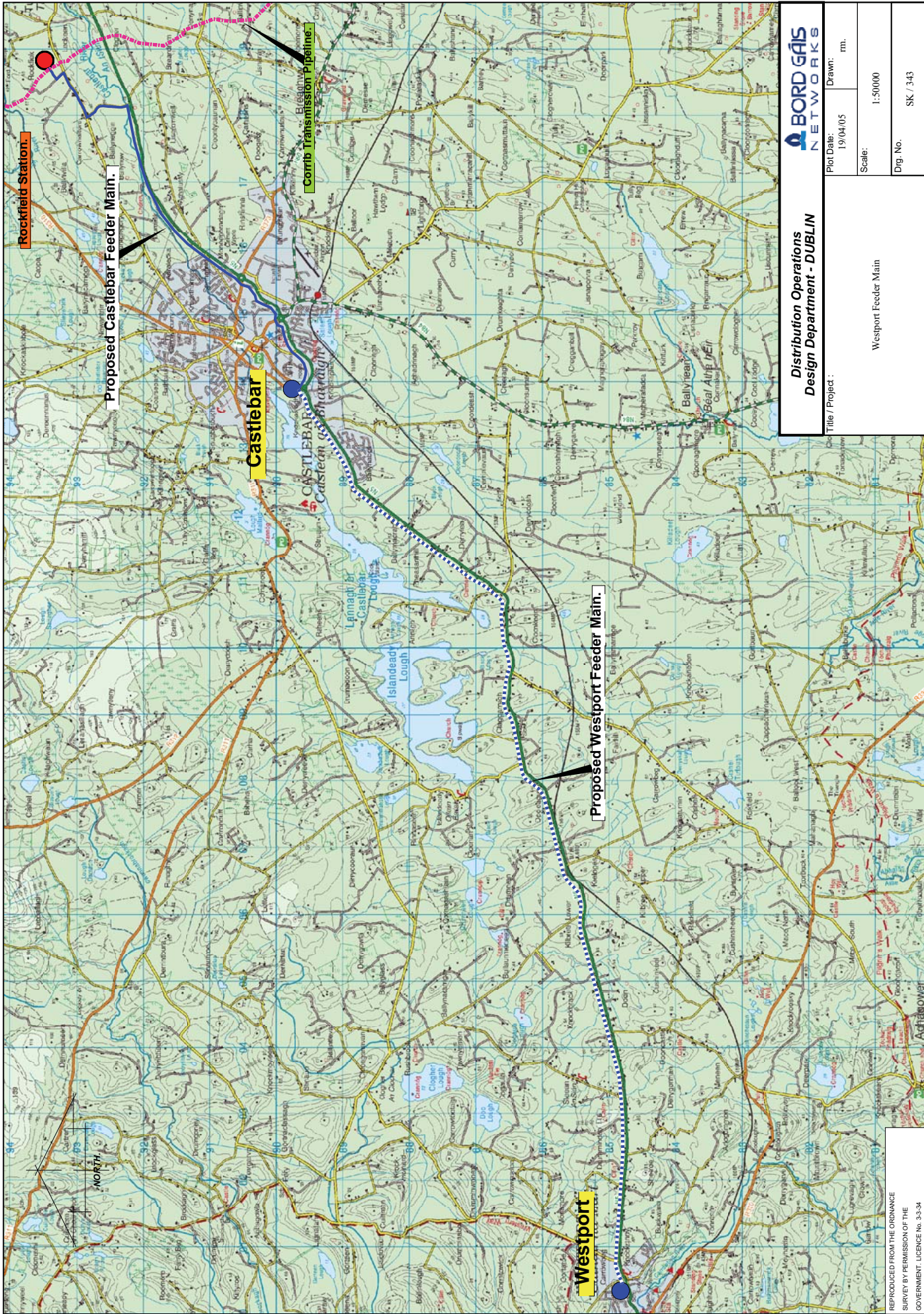
New housing estate mains, service or meter costs.

Industrial / Commercial mains, service or meter costs.

6.5. Business Modelling:

€m	NPV @ 5.74%
Distribution	
Revenue	4.7
Capex	-5.7
Contributions	0.2
Opex	-1.5
Distribution NPV	-2.3
Transmission	
Onshore Revenue	2.0
Entry Revenue	1.1
Capex - AGI	-0.4
Initial Capex - Land & Tee	-0.1
Opex	-0.2
Transmission NPV	2.4
Total NPV	0.2

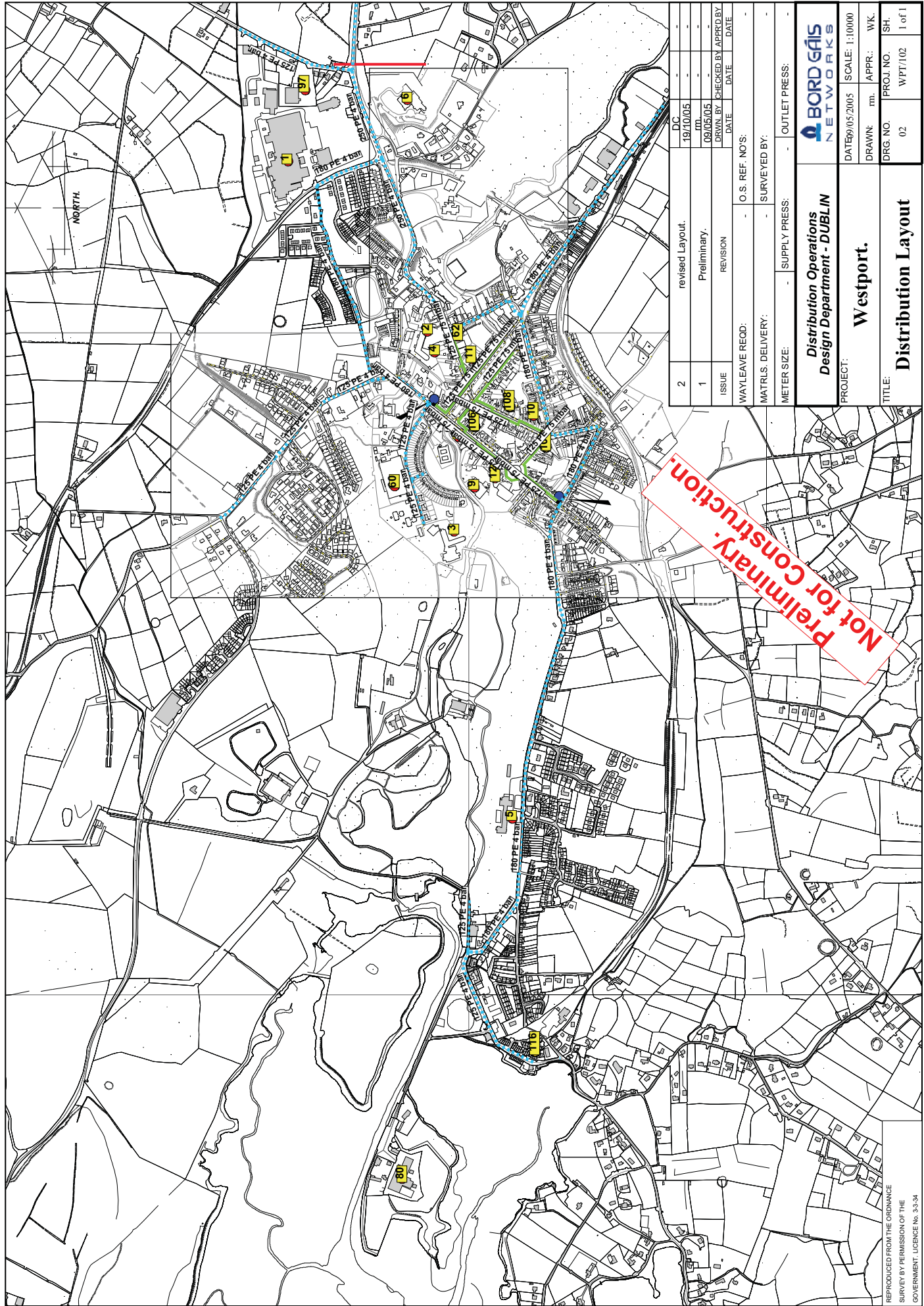
Connection of Westport to the network would result in a positive net present value (NPV) of €0.2m and therefore appears to be economic on a stand-alone basis.



Distribution Operations
Design Department - DUBLIN

Plot Date:	19/04/05	Drawn:	mm.
Scale:	1:50000		
Dwg. No.	SK / 343		
Title / Project :		Westport Feeder Main	

REPRODUCED FROM THE ORDNANCE SURVEY BY PERMISSION OF THE GOVERNMENT LICENCE NO. 3.3.34
 Not Archived - Alternative : |Designs|Dublin|Speculative|Corrib Pipeline|Feeder Mains



2	revised Layout.	DC	19/10/05	-	-
1	Preliminary.	mm	09/05/05	-	-
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MATERLS. DELIVERY:			SURVEYED BY:		
METER SIZE:			SUPPLY PRESS:		
			OUTLET PRESS:		
Distribution Operations Design Department - DUBLIN					
PROJECT: Westport.					
TITLE: Distribution Layout					
DATE: 09/05/2005			SCALE: 1:10000		
DRAWN: mm.		APPR: W.K.		W.K.	
DRG. NO. 02		PROJ. NO. WPT/102		SH. 1 of 1	

Preliminary - Not for Construction.

7. Castlebar, Co. Mayo.

7.1. Summary Details

Castlebar is the largest town in Mayo located centrally in the county. The town is one of the main employment centres of the western region. The population of Castlebar is currently 12,884 as per the preliminary results of the 2006 Census, this is projected to increase to 19,500 by 2016 (see Appendix A Table 1). Due to the rapid increase in population new housing demand will be strong. It is forecast that 2,000 new residential connections will be made over the next ten years.

There are a number of multinationals operating out of Castlebar including Baxter Medical, Volex and APC. The IDA continues to promote Castlebar Business and Technology park providing employment for the growing population and strengthening the industrial base.

Castlebar is 4.7km from the Corrib Natural Gas transmission pipeline. The proposed connection point is block valve No. 8507 Rockfield installation.

7.2. Summary Load Analysis:

Castlebar, Co. Mayo.

Source: Networks cost estimates report May 2006.

Industrial/Commercial Load Summary Forecast:

Total EAC 2014	88,057 Mwh	3,005,366 Therms
Peak Day 2014	418,794 Kwh	14,293 Therms

New Housing Summary Forecast:

New Housing Load (Therm)	1,040,000 (year 10)
New Housing Load (Mwh)	30,480 (year 10)

7.3. Solutions:

It would be necessary to install 85 to 4 Bar pressure reduction facilities at Rockfield AGI on the existing Mayo – Galway pipeline. This AGI would feed the local network comprising of approximately 5km of 315mm PE (SDR 11) feeder main and 15.7km of 180 & 125 PE (SDR 11) distribution main.

7.4. Cost Estimates:

Castlebar, Co. Mayo.

Source: Networks cost estimates report May 2006.

Estimated Capital expenditure Costs for feeder and Distribution Mains:

Item	Costs €
Transmission AGI	€367,000
Mayo- Galway Incremental Cost*	€143,700
Feeder / Distribution Main Construction**	€4,309,610
Total Estimated Costs	€4,820,310

These estimated costs include for the following:

District regulator installations, special engineering difficulties (crossings), archaeological survey, local authority charges, adverse ground conditions, pre-tender investigations, insurance, design, administration, material procurement, construction contracts, call out crew and equipment costs.

In the estimate, the cost of the Transmission AGI is split evenly between Castlebar and Westport.

* The Mayo-Galway Incremental Cost represents a portion of the additional expenditure on the Mayo-Galway Pipeline required to enable the installation of pressure reduction stations for gas supply to towns along the route.

** The estimates do not include for:

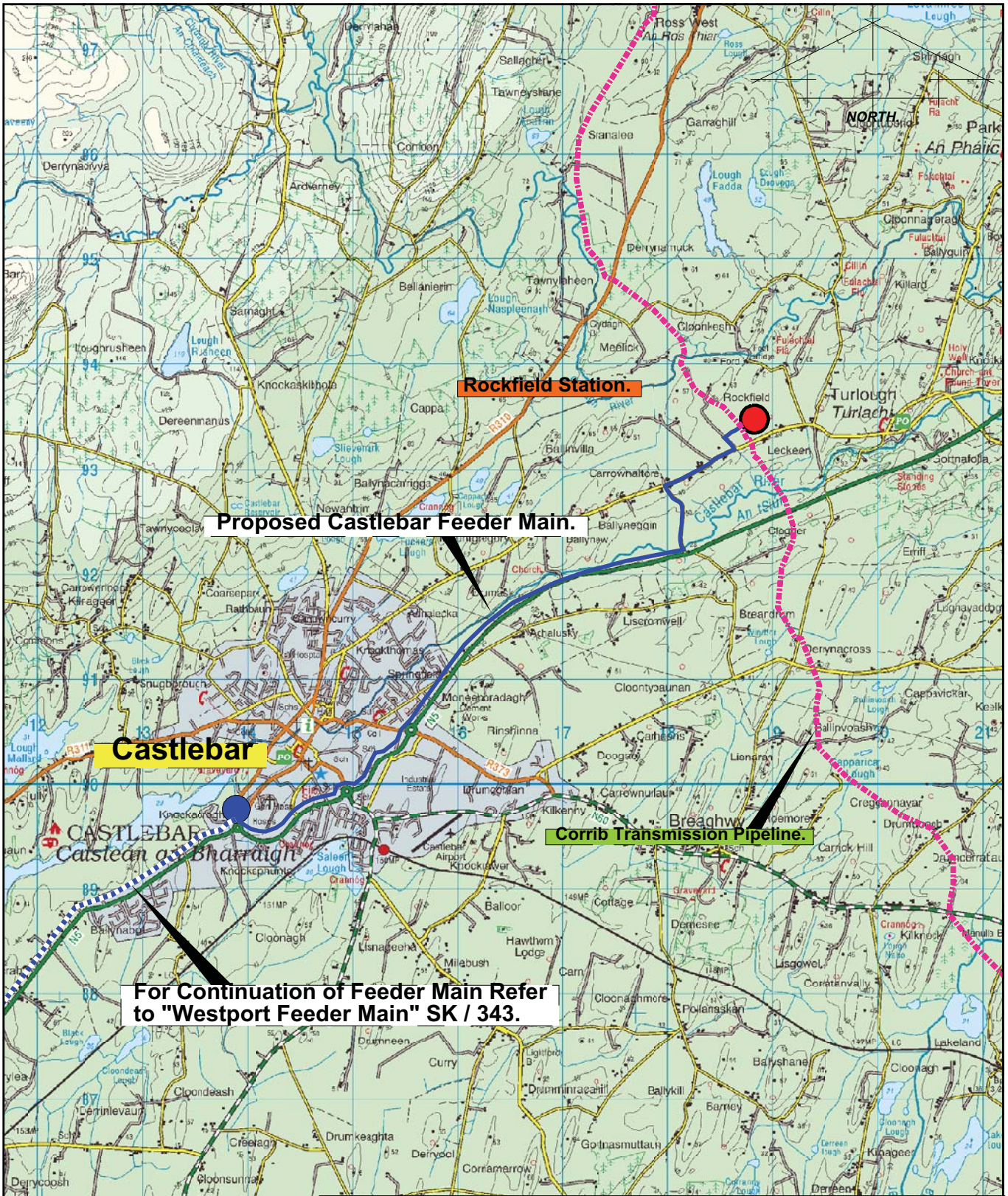
New housing estate mains, service or meter costs.

Industrial / Commercial mains, service or meter costs

7.5. Business Modelling:

€m	NPV @ 5.74%
Distribution	
Revenue	7.1
Capex	-6.1
Contributions	0.4
Opex	-1.3
Distribution NPV	0.1
Transmission	
Onshore Revenue	3.8
Entry Revenue	2.2
Capex - AGI	-0.4
Initial Capex - Land & Tee	-0.1
Opex	-0.2
Transmission NPV	5.3
Total NPV	5.4

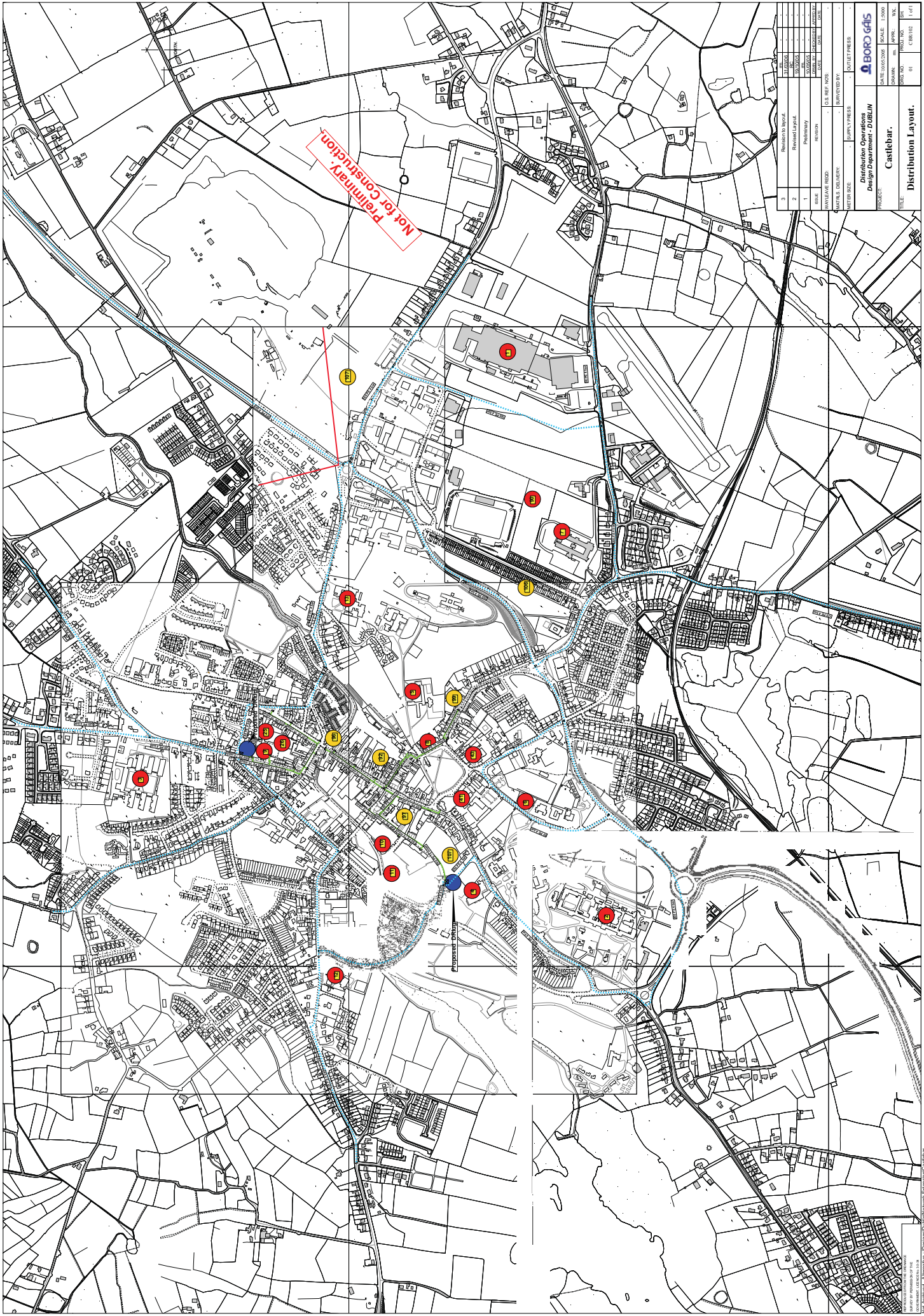
Connection of Castlebar to the network would result in a positive net present value (NPV) of €5.4m and therefore is economic on a stand-alone basis.



For Continuation of Feeder Main Refer to "Westport Feeder Main" SK / 343.

Distribution Operations Design Department - DUBLIN		BORD GÁIS NETWORKS	
Title / Project : Castlebar Feeder Main		Plot Date: 19/04/05	Drawn: E.M.
		Scale: 1:50000	
		Drg. No. SK/343A	

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Not for Construction

3	Revisions to layout	DATE	BY
2	Revised layout	DATE	BY
1	Preparation	DATE	BY
	Approval	DATE	BY
	Final Approval	DATE	BY
	Issue	DATE	BY
	Revised	DATE	BY
	Issued	DATE	BY

WATER & DRAINAGE	DATE	BY
WATER	DATE	BY
DRAINAGE	DATE	BY
WATER	DATE	BY
DRAINAGE	DATE	BY

DATE	SCALE	SCALE
DATE	SCALE	SCALE
DATE	SCALE	SCALE
DATE	SCALE	SCALE
DATE	SCALE	SCALE

PROJECT	CASTLEBAR
TITLE	DISTRIBUTION LAYOUT
DATE	SCALE
SCALE	SCALE
SCALE	SCALE
SCALE	SCALE
SCALE	SCALE