

3. Group 2: Mountmellick, Mountrath, Abbeyleix, Co. Laois, and Monasterevin, Co. Kildare.

3.1. Mountmellick, Co. Laois

3.1.1. Summary Details:

Mountmellick is located 11km from the regional hub town of Portlaoise. The population of Mountmellick is currently 2,872 as per the results of the 2006 Census. This is projected to increase to 4,540 by 2018 (see Appendix B). It is forecast that up to 500 houses will be connected in Mountmellick over the next ten years. The projected figure is based on housing completion figures, census population report, Laois housing strategy and Laois County Development Plan.

The main employer in the town is St. Vincent’s Hospital. Another significant I/C load in the town is Standex Ireland Ltd. It is expected that with population growth at least a proportional increase in I/C customers will develop.

Mountmellick is situated 7km from the existing Portarlinton feeder main.

3.1.2. Summary Load Analysis:

Mountmellick, Co. Laois.

Source: Networks cost estimates report June 2007

Industrial/Commercial Load Summary Forecast:

Total EAC 2014	6,639 MWh	226,600 Therms
Peak Day 2014	37,958 kWh	1,295 Therms

New Housing Summary Forecast:

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

3.1.3. Solutions:

The most economic option for supplying Mountmellick town is by installing a 250mm PE100 SDR17 feeder main from Portlaoise (6.8 km approx). A reinforcement of the Portlaoise network is also required as a result of the connection of Mountmellick to this network, the costs of which have been included in the analysis.

3.1.4. Cost Estimates:

Mountmellick, Co. Laois

Source: Networks cost estimates report July 2007.

Estimated Capital expenditure Costs for feeder and Distribution Mains:

	Costs €
<i>Transmission AGI Upgrade</i>	€0
<i>Feeder / Distribution Main Construction</i>	€4,672,175
Total Estimated Costs	€4,672,175

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 and construction contracts.

The estimates do not include for:

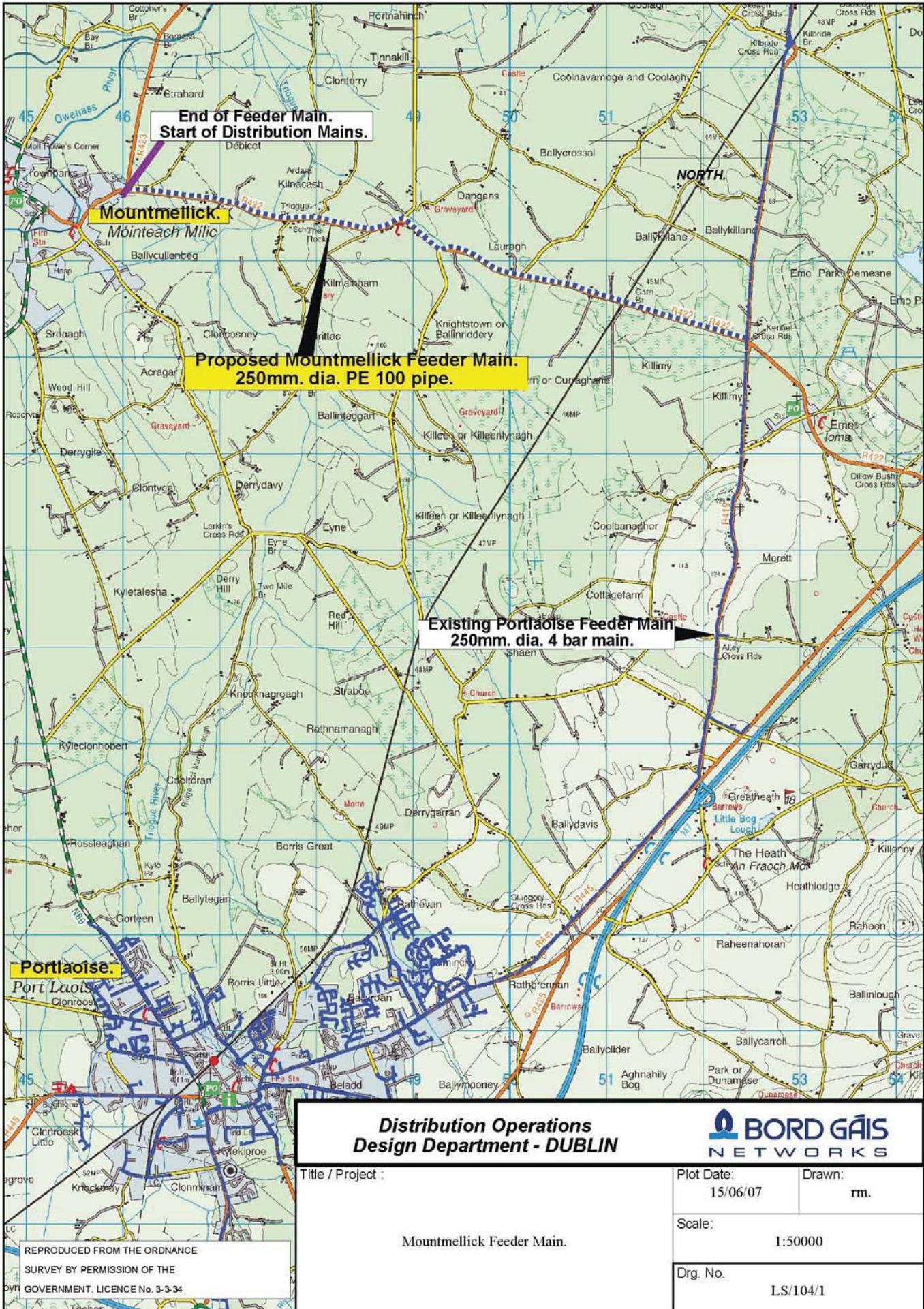
New housing estate mains, service or meter costs.
Industrial / Commercial mains, service or meter costs

3.1.5. Business Modelling:

€m	NPV @ 5.2%
DISTRIBUTION	
Distribution Revenue	1.71
Capex	-5.05
Contributions	0.10
Opex	-0.17
Distribution Total	-3.41
TRANSMISSION	
Onshore Revenue	0.44
Entry Revenue	0.31
Capex - AGI	0.00
Opex	0.00
Transmission Total	0.75
NPV TOTAL	-2.66

3.1.6. Results:

Connection of Mountmellick to the network results in a negative net present value (NPV) of €2.66m and therefore connection of this town is uneconomic on a stand-alone basis.



Distribution Operations Design Department - DUBLIN		BORD GÁIS NETWORKS	
Title / Project :		Plot Date:	Drawn:
Mountmellick Feeder Main.		15/06/07	rm.
		Scale:	1:50000
		Drg. No.	LS/104/1

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GOVERNMENT. LICENCE No. 3-3-34

3.2. Mountrath, Co. Laois

3.2.1. Summary Details:

Mountrath is located 14km to the West of Portlaoise on the main Dublin to Limerick (N7) route and is considered to have population growth potential as a commuter town serving Dublin city and the regional hub town of Portlaoise.

The population of Mountrath is currently 1,435 as per the results of the 2006 Census. This is projected to increase to 3,103 by 2018 (see Appendix B). It is forecast that up to 500 houses will be connected in Mountrath over the next ten years. The projected figure is based on housing completion figures, census population report, Laois housing strategy and Laois County Development Plan.

There are four medium IC loads in Mountrath, including Sheerins Timber Products, two schools and McGraths Dry Cleaners. It is expected that with population growth at least a proportional increase in I/C customers will develop.

Mountrath town is located 12km from the existing Portlaoise Distribution network.

3.2.2. Summary Load Analysis:

Mountrath, Co. Laois

Source: Networks cost estimates report June 2007

Industrial/Commercial Load Summary Forecast:

Total EAC 2015	1,508 MWh	51,462 Therms
Peak Day 2015	10,220 kWh	349 Therms

New Housing Summary Forecast:

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

3.2.3. Solutions:

The most economic option for supplying Mountrath town is by installing a 250mm PE100 SDR17 feeder main from Portlaoise (12.4 km approx). A reinforcement of the Portlaoise network is also required as a result of the connection of Mountrath to this network, the costs of which have been included in the analysis.

3.2.4. Cost Estimates:

Mountrath, Co. Laois

Source: Networks cost estimates report July 2007.

Estimated Capital expenditure Costs for feeder and Distribution Mains:

	Costs €
<i>Transmission AGI Upgrade</i>	€0
<i>Feeder / Distribution Main Construction</i>	€4,210,310
Total Estimated Costs	€4,210,310

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 and construction contracts.

The estimates do not include for:

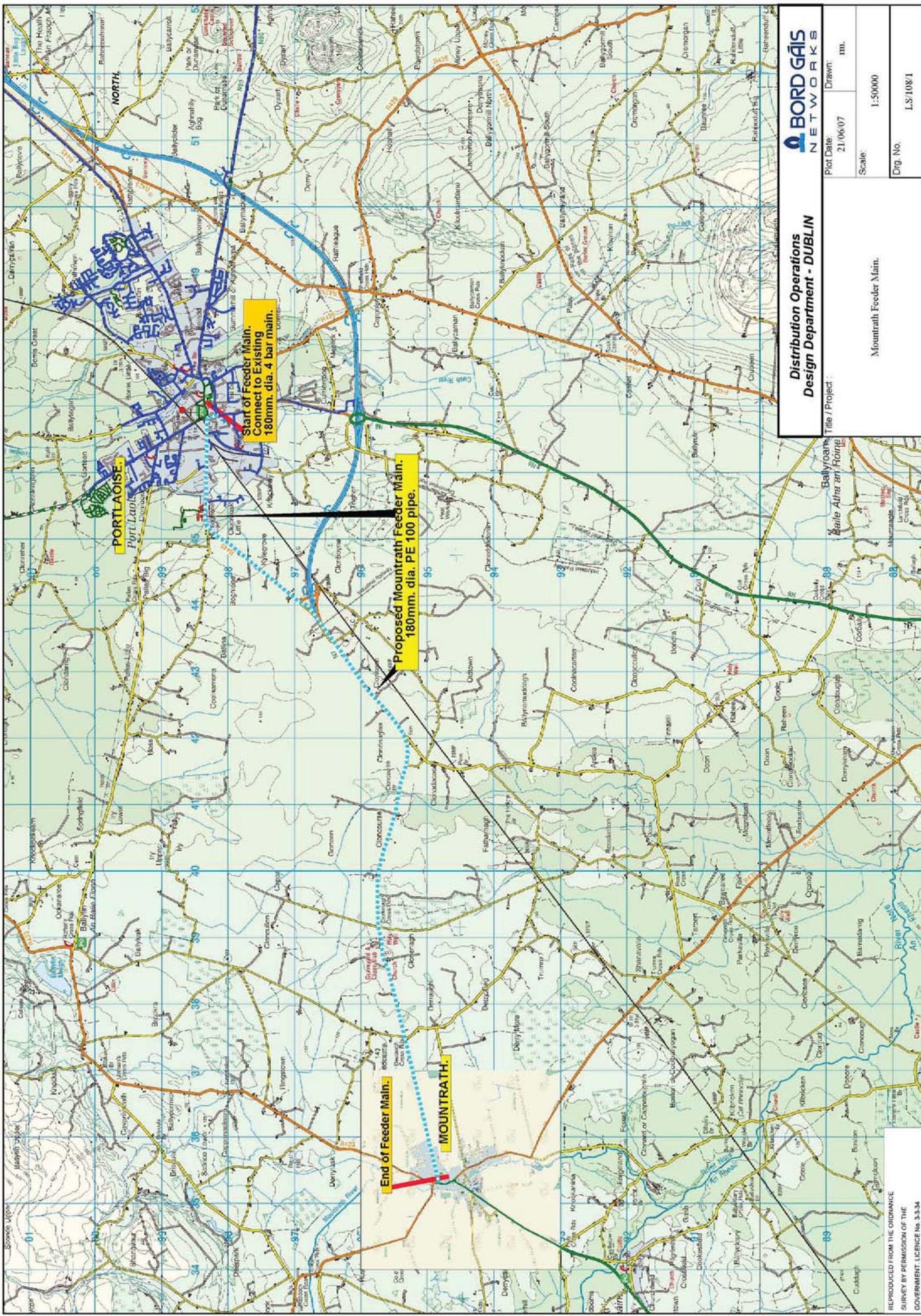
New housing estate mains, service or meter costs.
Industrial / Commercial mains, service or meter costs

3.2.5. Business Modelling:

€m	NPV @ 5.2%
DISTRIBUTION	
Distribution Revenue	1.20
Capex	-4.58
Contributions	0.10
Opex	-0.24
Distribution Total	-3.53
TRANSMISSION	
Onshore Revenue	0.29
Entry Revenue	0.20
Capex - AGI	0.00
Opex	0.00
Transmission Total	0.50
NPV TOTAL	-3.03

3.2.6. Results:

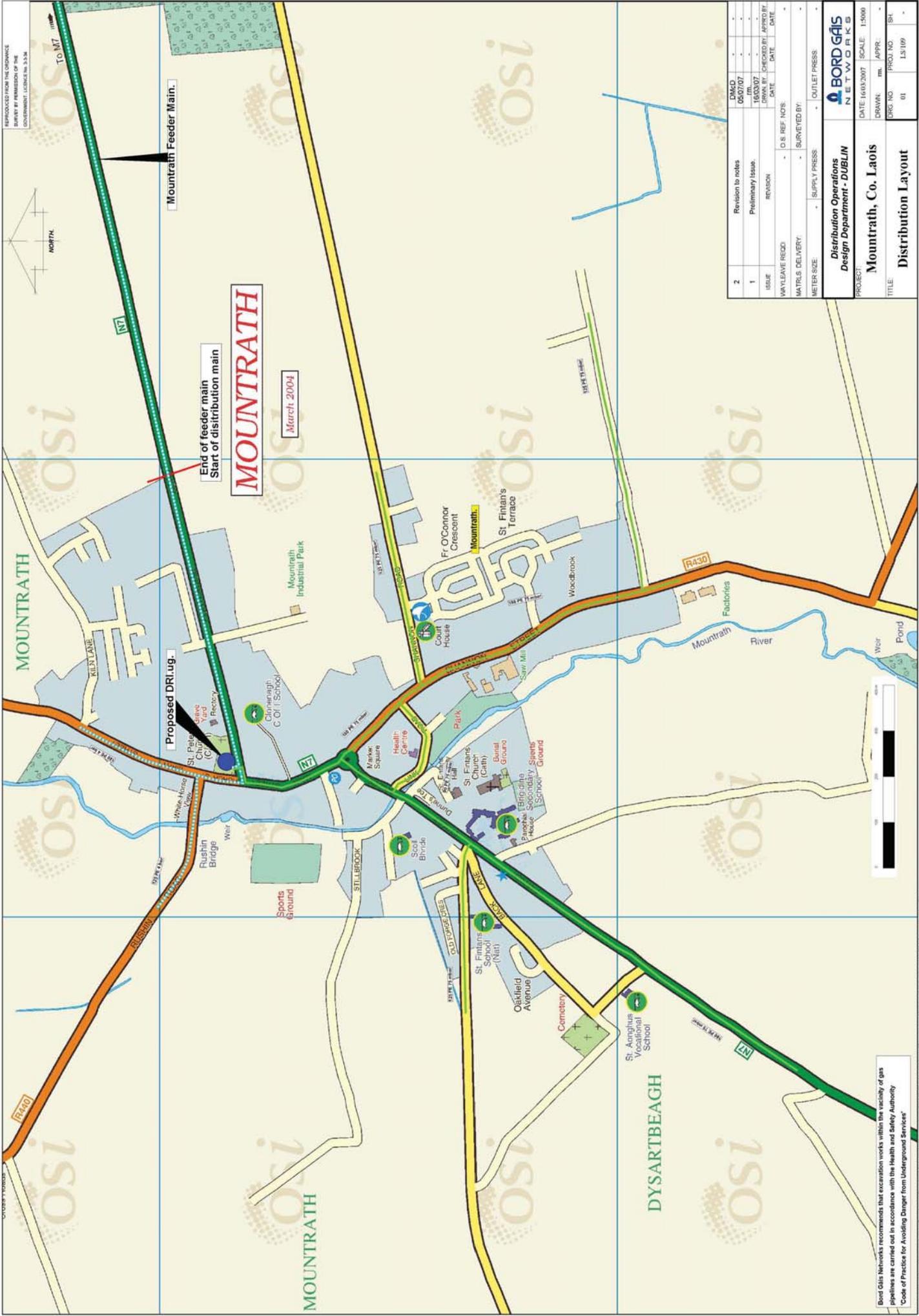
Connection of Mountrath to the network results in a negative net present value (NPV) of €3.03m and therefore connection of this town is uneconomic on a stand-alone basis.



Plot Date:	21/06/07	Drawn:	mm.
Scale:	1:50000		
Proj. No.	Mountrath Feeder Main.		
LS:	1:5081		

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Not Archived - Alternative : [Designs|Dublin|Network Extension|2007 Projects|Adj. Towns to Network|Mountrath FM



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NORTH

Proposed DRI ug.

End of feeder main
Start of distribution main

MOUNTRATH

March 2004

2	Revision to notes	DATE	05/07/07	SCALE	1:5000
1	Preliminary Issue	DATE	16/03/07	DRAWN BY	mm
	ISSUE	DATE		CHECKED BY	APPR
	WV/LEAVE REQD	DATE		DATE	
	MATERIALS DELIVERY	DATE		DATE	
	METER SIZE	DATE		DATE	
	OUTLET PRESS	DATE		DATE	

BORD GÁS
NETWORKS

PROJECT: **Distribution Operations Design Department - DUBLIN**

DATE: 16/03/2007 | SCALE: 1:5000

DRAWN: mm | APPR: -

PROJECT NO: 01 | PROJ NO: 13.109

SHEET NO: 1/1

TITLE: **Distribution Layout**

Bord Gás Networks recommends that excavation works within the vicinity of gas pipelines are carried out in accordance with the Health and Safety Authority 'Code of Practice for Avoiding Danger from Underground Services'

3.3. Abbeyleix, Co. Laois

3.3.1. Summary Details:

Abbeyleix is located 14km from Portlaoise on the main Dublin-Cork (N8) route and is considered to have high potential growth as a commuter town serving the Dublin region and as a service centre for the surrounding agricultural hinterland. The population of Abbeyleix is currently 1,568 as per the results of the 2006 Census. This is projected to increase to 3,236 by 2018 (see Appendix B). It is forecast that up to 500 houses will be connected in Abbeyleix over the next ten years.

There are three large IC loads in Abbeyleix, including the Abbeyleix District Hospital, Abbeyleix Manor Hotel and First Ireland Spirits. It is expected that with population growth at least a proportional increase in I/C customers will develop.

Abbeyleix is 14km from the existing Portlaoise network.

3.3.2. Summary Load Analysis:

Abbeyleix, Co. Laois

Source: Networks cost estimates report June 2007

Industrial/Commercial Load Summary Forecast:

Total EAC 2015	4,984 MWh	170,112 Therms
Peak Day 2015	29,902 kWh	1,021 Therms

New Housing Summary Forecast:

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

3.3.3. Solutions:

The most economic option for supplying Abbeyleix is by installing a 250mm PE100 SDR17 feeder main from Portlaoise (13.7 km approx). A reinforcement of the Portlaoise network is also required as a result of the connection of Abbeyleix to this network, the costs of which have been included in the analysis.

3.3.4. Cost Estimates:

Abbeyleix, Co. Laois

Source: Networks cost estimates report July 2007.

Estimated Capital expenditure Costs for feeder and Distribution Mains:

	Costs €
<i>Transmission AGI Upgrade</i>	€0
<i>Feeder / Distribution Main Construction</i>	€5,093,775
Total Estimated Costs	€5,093,775

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 and construction contracts.

The estimates do not include for:

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

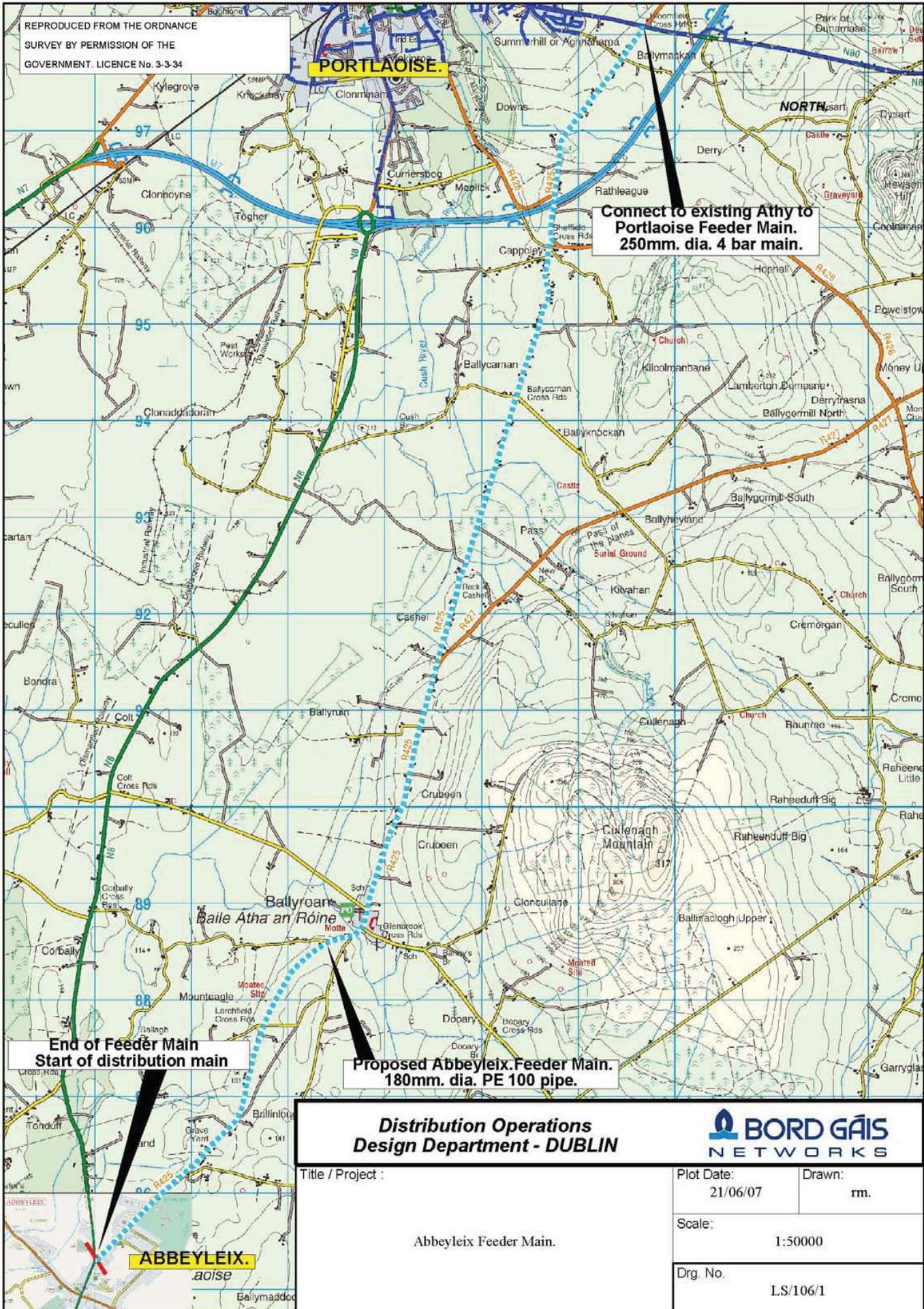
3.3.5. Business Modelling:

€m	NPV @ 5.2%
DISTRIBUTION	
Distribution Revenue	1.60
Capex	-5.45
Contributions	0.10
Opex	-0.26
Distribution Total	-4.01
TRANSMISSION	
Onshore Revenue	0.41
Entry Revenue	0.29
Capex - AGI	0.00
Opex	0.00
Transmission Total	0.70
NPV TOTAL	-3.31

3.3.6. Results:

Connection of Abbeyleix to the network results in a negative net present value (NPV) of €3.31m and therefore connection of this town is uneconomic on a standalone basis.

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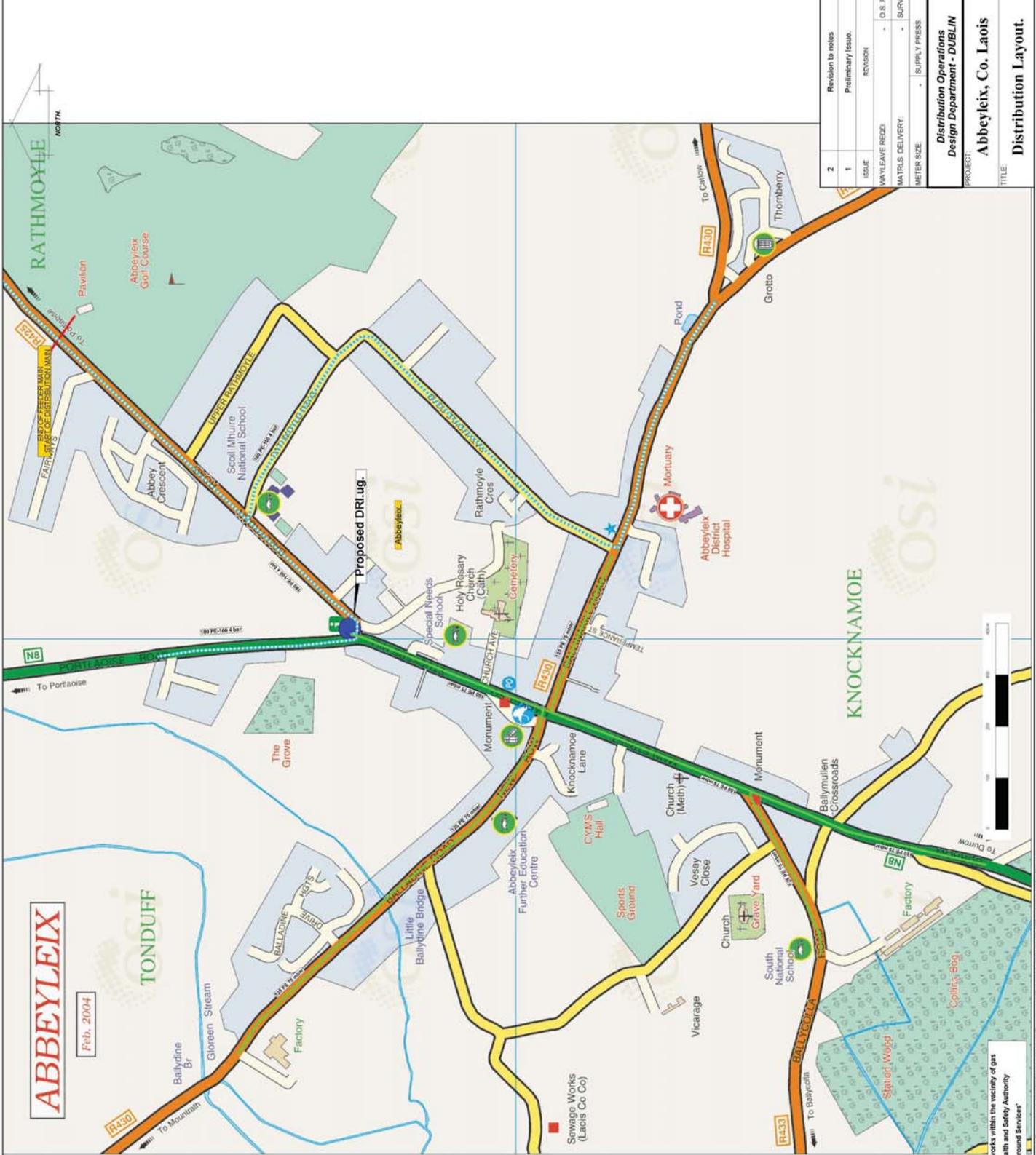


Connect to existing Athy to
 Portlaoise Feeder Main.
 250mm. dia. 4 bar main.

End of Feeder Main
 Start of distribution main

Proposed Abbeyleix Feeder Main.
 180mm. dia. PE 100 pipe.

Distribution Operations Design Department - DUBLIN		BORD GÁIS NETWORKS	
Title / Project :		Plot Date: 21/06/07	Drawn: rm.
Abbeyleix Feeder Main.		Scale: 1:50000	
		Drg. No. LS/106/1	



2	Revision to notes	DM&D			
1	Preliminary Issue	09/07/07			
	REVISION	31/05/07			
	ISSUE	DRAWN BY:	CHECKED BY:	APPROVED BY:	
		DATE	DATE	DATE	
	WAYLEAVE REQD:	D.S. REF. NOS:		SURVEYED BY:	
	MATERIALS DELIVERY:	SUPPLY PRESS:		OUTLET PRESS:	
	METER SIZE:				
<p>BORD GÁS NETWORKS</p> <p>DATE: 08/03/2007 SCALE: 1:5000</p> <p>DRAWN: APPR: </p> <p>DRG. NO: 01 PROJ. NO: 1.3.1/07 SH:</p>					
<p>PROJECT: Distribution Operations Design Department - DUBLIN</p> <p>CLIENT: Abbeyleix, Co. Laois</p> <p>TITLE: Distribution Layout.</p>					

Bord Gás Networks recommends that excavation works within the vicinity of gas pipelines are carried out in accordance with the Health and Safety Authority 'Code of Practice for Avoiding Danger from Underground Services'

Not Archived - Alternative: [D:\gpa\Dublin\Network Extension\2007 Projects\A6] - Towns to Network\Abbeyleix File\Abbeyleix.DWG

3.4. Monasterevin, Co. Kildare

3.4.1. Summary Details:

Monasterevin is located 62km from Dublin City and is considered to have high population growth potential as a commuter town. The town is designated as a secondary dynamic cluster in the regional planning guidelines for the Greater Dublin Area (2004). The population of Monasterevin is currently 3,649 as per the results of the 2006 Census. This is projected to increase to 8,653 by 2018 (see Appendix B).

It is forecast that up to 1500 houses will be connected in Monasterevin over the next ten years. The projected figure is based on the recently opened M7 motorway and reopened rail link to Dublin. 150 acres of land in the area has been zoned residential. Bord Gáis Networks at present have 929 connections enquires for Monasterevin. In terms of I/C load, Moore Abbey is the main commercial entity, with Glanbia Foods also producing in the area.

Monasterevin is located 18km from the existing Athy network.

3.4.2. Summary Load Analysis:

Monasterevin, Co. Kildare

Source: Networks cost estimates report June 2007

Industrial/Commercial Load Summary Forecast:

Total EAC 2015	8,408 MWh	286,950 Therms
Peak Day 2015	44,523 kWh	1,520 Therms

New Housing Summary Forecast:

New Housing Load (Therm)	780,000 (year 10)
New Housing Load (MWh)	22,860 (year 10)

3.4.3. Solutions:

The most economic option for supplying Monasterevin town is by installing a 315mm SDR 17 PE100 feeder main from Athy along the R417 (18.5 Km approx).

3.4.4. Cost Estimates:

Monasterevin, Co. Kildare

Source: Networks cost estimates report July 2007.

Estimated Capital expenditure Costs for feeder and Distribution Mains:

	Costs €
<i>Transmission AGI Upgrade</i>	€0
<i>Feeder / Distribution Main Construction</i>	€6,187,520*
Total Estimated Costs	€6,187,520*

*without reinforcement

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 and construction contracts.

The estimates do not include for:

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

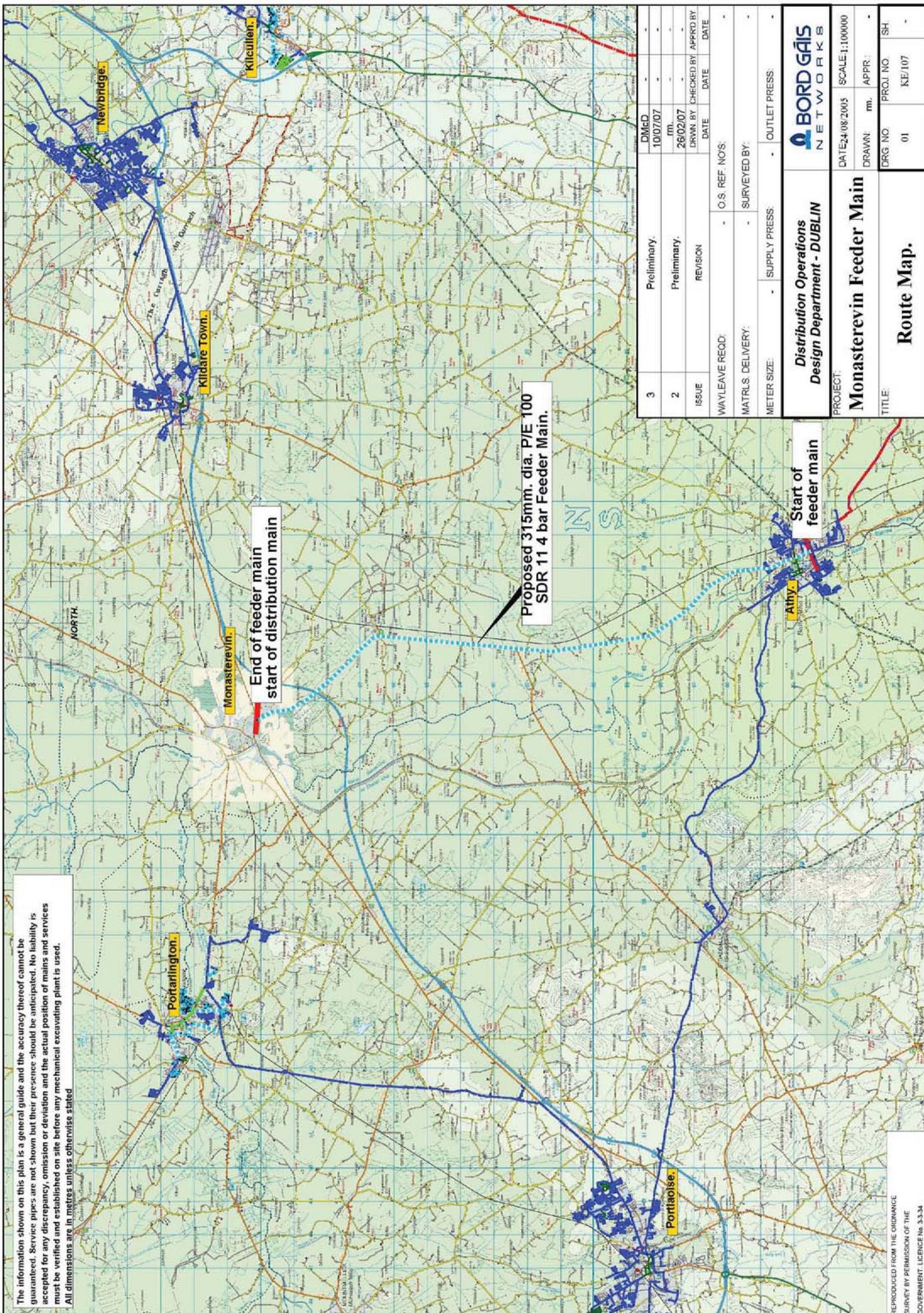
3.4.5. Business Modelling:

€m	NPV @ 5.2%
DISTRIBUTION	
Distribution Revenue	3.92
Capex	-7.24
Contributions	0.27
Opex	-0.29
Distribution Total	-3.33
TRANSMISSION	
Onshore Revenue	1.00
Entry Revenue	0.69
Capex - AGI	0.00
Opex	0.00
Transmission Total	1.69
NPV TOTAL	-1.65

3.4.6. Results:

Connection of Monasterevin to the network results in a negative net present value (NPV) of €1.65m and therefore connection of this town is uneconomic on a stand-alone basis.

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.



Proposed 315mm. dia. P/E 100 SDR 11 4 bar Feeder Main.

End of feeder main start of distribution main

Start of feeder main

3	Preliminary	DM&D	10/07/07	-	-
2	Preliminary	fm	26/02/07	-	-
ISSUE	REVISION	DATE	DATE	DATE	DATE
WAYLEAVE REQD:		O.S. REF. NO'S:			
MATRLS. DELIVERY:		SURVEYED BY:			
METER SIZE:		SUPPLY PRESS:		OUTLET PRESS:	

BORD GÁIS NETWORKS

Distribution Operations
Design Department - DUBLIN

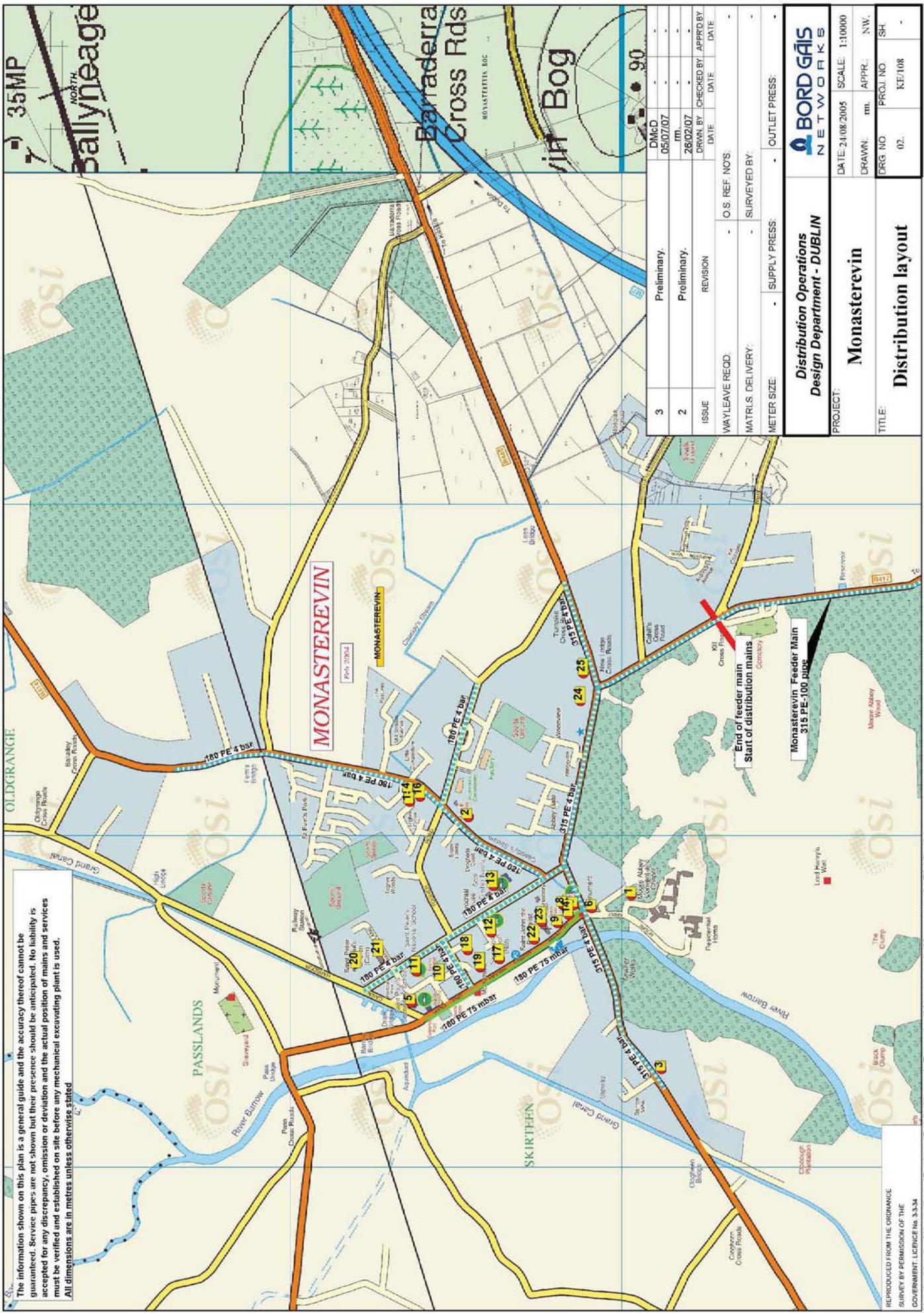
PROJECT: **Monasterevin Feeder Main**

TITLE: **Route Map.**

DATE: 24/08/2005 SCALE: 1:100000

DRAWN: mm. APPR: -

DRG NO: 01 PROJ NO: SH KE/107



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.

3	Preliminary	DMICD	05/07/07
2	Preliminary	mm	26/02/07
ISSUE	REVISION	DRWN. BY	CHECKED BY
DATE	DATE	DATE	DATE
WAYLEAVE RECD.	O.S. REF. NOS.	SURVEYED BY:	
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BORD GÁIS NETWORKS	
Distribution Operations Design Department - DUBLIN	
PROJECT:	Monasterevin
DATE:	21/08/2005
SCALE:	1:10000
DRAWN:	mm
APPR.:	N.W.
DRG. NO.:	02.
PROJ. NO.:	KE/108
SHEET:	-
Distribution layout	

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3.5. Kildare / Laois Reinforcement

Bord Gáis Networks produces a Network Capacity statement every year in accordance with the terms of its licence. This report identifies the ability of the network to deliver gas in accordance with customer demand to the standard pressure required in its Code of Operations. It is based on the most up to date current demand and forecast growth in the next seven years on an area by area basis. It uses sophisticated computer simulation software to identify pressure weaknesses in the network over that period.

The output from this is used to identify design solutions that will maintain the network to the agreed standard of gas pressure delivery. This results in additional pipe being added to the network, subject to financial evaluation, to deliver more gas and is termed the Reinforcement of a local network.

Bord Gáis Networks recognises that this is an ongoing requirement and the CER has agreed to such proposals included in its published Bord Gáis Networks Revenue Review 2007/8–2011/12 document (CER/07/111 Distribution). This approval allows Bord Gáis Networks to undertake such reinforcement work in the period October 2007 to September 2012.

The Kildare / Laois area and in particular the towns of Portlaoise, Portarlinton and Kildare, have been identified as requiring reinforcement over this period. Alternative engineering designs have been simulated and costed and the preferred design, from both an engineering and financial viewpoint, is a 315mm Distribution polyethylene pipe joining Athy to Monasterevin and ongoing to Portarlinton and Kildare in the short term with a potential further Transmission steel pipe injection after c. 9 years midway between Athy and Monasterevin. The cost of the Distribution Athy to Monasterevin feeder main is c. € 5.1m and the cost for the Transmission pipe c. €8.0m at current price levels.

The impact on the town of Monasterevin is that the Distribution feeder main of 19km at a cost of €5.1m will be undertaken as part of the reinforcement project resulting in a reduced capital cost to the town project. As can be seen from Section 3.4.5 above, the results for a stand-alone solution to Monasterevin include a capital cost of €6.2m and an NPV of -€1.65m. This NPV changes to -€2.1 million when additional transmission opex costs associated with the reinforcement option are taken into account. The summary of the high level capital costs and financials for the reinforcement option is thus as follows:

Monasterevin Reinforcement Option	Capital Cost	Net Present Value
Original Financials	+€6.2m	-€2.1m
Adjustment for feeder main allocated to reinforcement	-€5.1m	+€4.9m
Revised Town Project Financials	+€1.1m	+€2.8m
Revenues* allocated to Reinforcement Project		-€1.0m
Net Financial Town Out Turn		+€1.8m

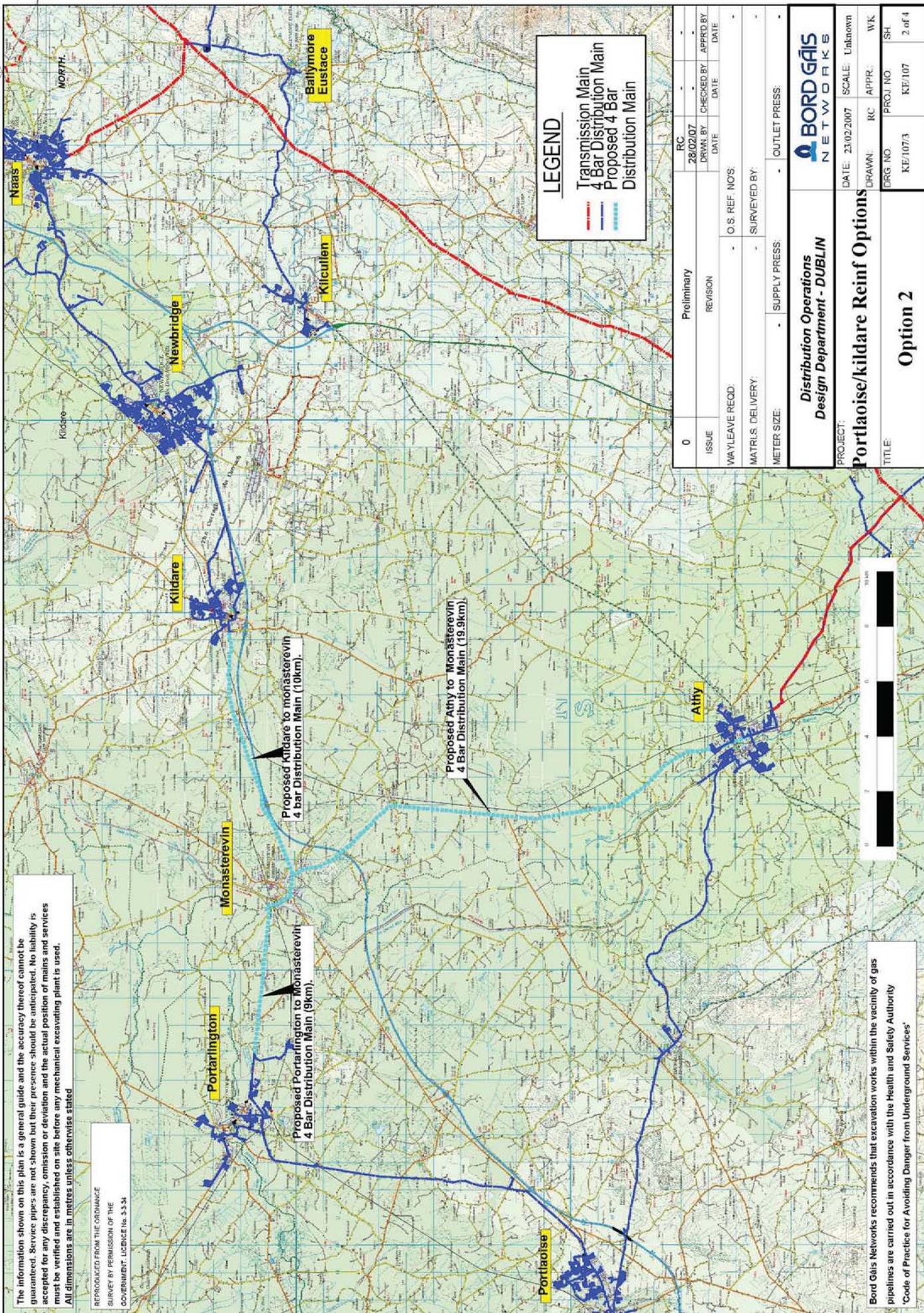
*A financial evaluation was undertaken on this large reinforcement project such that the capital expenditures were justified on the basis of projected future revenues

3.5.1. Results:

The connection of Monasterevin, when taken in conjunction with the planned reinforcement, results in a positive net present value of €1.8m and is therefore viable for connection to the gas network.

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.

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LEGEND

- Transmission Main
- 4 Bar Distribution Main
- Proposed 4 Bar Distribution Main

0	Preliminary	RC	28/02/07	CHECKED BY	APPROD BY
ISSUE	REVISION	DRWN. BY	DATE	DATE	DATE
WAYLEAVE RECD:	O.S. REF. NO'S	SURVEYED BY:			
MATRLS. DELIVERY:	SUPPLY PRESS:	OUTLET PRESS:			
METER SIZE:					

BORD GÁIS NETWORKS

Distribution Operations Design Department - DUBLIN

Portlaoise/kildare Reinf Options

DATE: 23/02/2007 SCALE: Unknown

DRAWN: RC APPR: WK

DWG. NO: KE/107/3 PROJ. NO: KE/107 SH: 2 of 4

TITLE: **Option 2**

Bord Gais Networks recommends that excavation works within the vicinity of gas pipelines are carried out in accordance with the Health and Safety Authority 'Code of Practice for Avoiding Danger from Underground Services'