



Construction Industry Council

SUBMISSION TO THE GOVERNMENT BY CONSTRUCTION INDUSTRY COUNCIL

Jobs and Infrastructure – A Plan for National Recovery



CIC Vision

'To save 70,000 jobs over the next three years, maintain highly skilled productive resources in Ireland and deliver necessary infrastructure at excellent value for money for the public benefit, with minimal additional State borrowings'

The Construction Industry Council wishes to gratefully acknowledge the assistance of **Annette Hughes** from **DKM Economic Consultants** and **Cormac O'Rourke** from **Goodbody Corporate Finance** in the preparation of this report.



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Executive summary and conclusions

Construction confidence at an all time low

This submission reflects the grave concerns of the Construction Industry Council about the future prospects for construction. It proposes a plan for national economic recovery which will save 70,000 jobs. Involving minimal state borrowing, it will deliver necessary infrastructure for the public benefit and maintain a highly skilled productive workforce.

The current economic situation is severely impacting on an already very weak construction sector. Confidence is at an all time low and job losses continue to accelerate. Despite the rescue package announced for banks, a CIC survey suggests that a lack of finance is the primary reason for the delay/postponement of projects by the private sector, which is forecast to decline dramatically. Without public sector investment therefore the industry will fall to 43% of its sustainable level by 2011 and 385,000 jobs will be lost.

A sharp adjustment is underway

The construction industry was a key driver of economic growth over the decade to 2007. By the end of 2007 the industry had reached a value of €38.5bn, 24% of GNP, and employed around 400,000¹. This was equivalent to 19% of total employment. The CIC recognises that an industry of this size had become unsustainable but a very sharp adjustment is now well underway.

Optimum size suggests output at €18bn

The CIC strongly believes that in the medium term Ireland should have a construction industry which is larger than the EU 15 (c 12% of GDP) because of its infrastructure deficit. Construction output should be at least €18bn for a number of years, equivalent to 12% of 2008 GNP. Otherwise Ireland will continue to fall behind the rest of the EU.

Infrastructure deficit remains to be addressed

The National Competitiveness Council has stated that our infrastructure deficit still places Ireland at a material disadvantage to other EU countries. NDP 2007-2013 was designed to address this deficit. However, the serious deterioration in the Exchequer finances is now making it difficult to deliver on the NDP.

In a recent survey of 14 EU economies, *The 2009 European Growth and Jobs Indicator*, Ireland has moved down from 4th to 13th place in one year. The removal of infrastructure deficits in an economy is essential in our efforts to raise competitiveness and boost economic growth. Doing nothing will damage our competitiveness further.

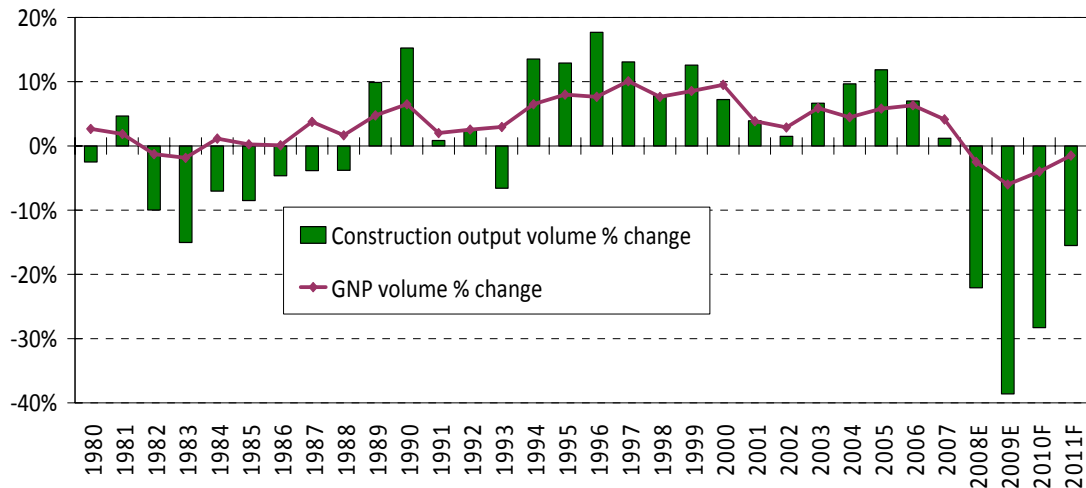
Ample anecdotal evidence exists for the infrastructure deficit, in particular the poor quality of our schools and hospital buildings. Our third level institutions need investment if they are to build a knowledge based economy. There are water quality issues throughout the country. The CIC believes that it is essential to plug this infrastructure gap.

¹ Direct employment plus 40% indirect employment.

Industry to shrink to 43% below its optimum size by end 2011

Without a Government stimulus, output in the construction industry looks set to record the biggest contraction in thirty years. Projections suggest the industry will already be below its optimum size of €18bn by the end of 2009. The industry could shrink to €12.3bn by the end of 2010, 33% below its long-term optimum size, and to €10bn in 2011, 43% below its optimum size.

Figure 1: The most severe contraction in thirty-years



The CIC believes that a decline in the industry below €18bn will result in unnecessary job losses and an erosion of essential long-term productive capacity and further undermine our national competitiveness. Action is required immediately to stem this unprecedented loss of output.

Economy could lose 20% of its workforce by end 2011

Total employment in construction was down 33% by February 2009 from a year earlier. Total employment (direct plus indirect) in construction could decline to 126,000 by the end of 2011, back to 1994 levels. In the absence of a Government stimulus, job losses could reach 385,000 by the end of 2011, equivalent to 19% of total employment in the economy - taking the 'induced' impacts of construction expenditure across the wider economy into account.

A narrow window of opportunity exists

Tender prices are down 20% from the peak in 2007. There is now a window of opportunity to roll out infrastructure projects given the excellent value for money which is available combined with high productivity and an abundance of skilled resources. This would secure construction jobs and retain skills across the country.

Improving infrastructure generates additional benefits to competitiveness and economic growth as well as providing an important public benefit. The ESRI has calculated the positive long-run effects on GNP are that for every €1bn spent on infrastructure GNP increases by €0.4bn per annum in the long-run. The quality of infrastructure is improved for the population as a whole, while the positive effects persist in the economy long after the money is spent.

Employment intensity of construction projects

A CIC survey shows that one job is created for every €93,220 of turnover in construction. The net cost to the Exchequer of investing €93,220 in infrastructure is €56,508 or 61% of the original investment, based on an analysis of earnings and tax paid plus the social welfare costs of unemployment.

Information collected from CIC members on a range of projects suggest that the employment intensity of projects ranges from 8 jobs per €1m invested for civil engineering projects to 10 jobs per €1m invested in a hospital, 12 jobs per €1m invested in a school, and 13 jobs per €1m invested in an office block. For the purposes of considering the impact of a Government stimulus, an average of 10 jobs per €1m is used in this report.

A Government stimulus package of €5bn per annum for next three years for infrastructure

The CIC believes that a stimulus package of €5bn per annum over three years will save 70,000 jobs and maintain an important skills base. This €5bn is additional to the Public Capital Programme in each of the next three years and should not be seen as an opportunity to reduce existing capital allocations.

The options available to Government are either to 'do nothing' and lose 70,000 jobs, which is equivalent to half the number employed in the foreign direct investment (FDI) sector; or to 'provide a stimulus' equivalent to €5bn per annum for three years.

The CIC believes that it is essential to provide a stimulus now so that design, planning permission and tenders can be advanced in 2009 in order to ensure projects reach construction in 2010. Moreover a Government stimulus will help to restore confidence to the private sector and the indirect and induced impacts will generate substantial benefits for the economy over the medium-term, well in excess of the €5bn.

**Table 1: Stimulating construction activity with a €5bn
per annum stimulus**

Option 1	'Do nothing'	Option 2	'Do something'
Stimulus package	€0.0 bn		€5.0 bn
Direct and indirect jobs lost #	50,000	Direct and indirect jobs #	50,000
Induced effects (*1.4)	20,000	Induced effects (*1.4)	20,000
Total job losses	70,000	Total jobs created	70,000
Social Welfare cost (based on €18,254/ person)	1.3 bn	Social Welfare saved (based on €18,254/ person)	1.3 bn
Total tax lost (based on €18,458/ person)	1.3 bn	Total tax take (based on €18,458/ person)	1.3 bn
		Total avoided cost	2.6 bn
Total cost to Government of 'do nothing'	2.6 bn	Net additional cost	€2.4 bn
As a % of stimulus package	51%	As a % of stimulus package	49%
Thus cutting PCP by €1bn still cost €510m.		Net cost of funding €5bn is only €2.4bn.	
funded by			
Government borrowing	2.6 bn		
Private Pension Funds		Currently 80% invested outside Ireland	1.3 bn
Other financial institutions (e.g. EIB)			1.1 bn

Based on our estimate of 10 jobs per €1m. (see Section 3.5).

Tax and Social Welfare calculations set out in Table 3.4.

In summary the figures above show that

- In a 'do nothing' scenario, for every €1bn cut from the Public Capital Programme, the Government has to spend €510m but no infrastructure will be built.
- For every €1bn invested in infrastructure, it only costs the Government €490m plus the infrastructure is put in place, jobs are protected and the competitiveness of the economy is improved. In addition, the positive effects persist in the economy long after the money is spent.
- The net cost to the Exchequer of the stimulus package is €2.4bn or 49% of the €5bn.

Structures exist to provide funding which are "off balance sheet"

The source of part of the funding suggested is a combination of private pension funds and other "off balance sheet" structures. We believe the Pension Funds of Ireland will fund up to €1.3bn, which in the absence of the scheme proposed would likely follow their current allocation of 80% to assets outside of Ireland. Thus of the €2.4bn net cost to the Exchequer, an estimated €1.3bn could be

provided by Irish pension funds with the remaining €1.1bn "off balance sheet" funding coming from financial institutions like the European Investment Bank.

Further advantages which are worth highlighting:

1. The Government would not have to raise any upfront additional funding.
2. The €2.6bn of funding required in the "Do Nothing" scenario has to be funded directly by the Government in any event.
3. On the other hand, the net cost of €2.4bn associated with the stimulus package could be funded externally, off balance sheet.

Fund infrastructure as long as the cost is less than the returns

The CIC believes that an additional stimulus package can be achieved at a fraction of the cost of the total investment and a modest additional cost to the "do nothing" scenario.

From an economic point of view, investing in infrastructure makes sense as long as the return on that investment is greater than the cost of funding it.

The CIC proposed funding solution presents a unique opportunity to increase the productive potential of the economy and add to our long-term economic growth while maintaining the PCP at a high level in absolute terms.

Priority infrastructure projects

In terms of this €5bn stimulus package the CIC has provided an indicative list of capital projects, based on our consultations with the main infrastructure spending departments, which should now be considered for funding. However, given the rapid economic downturn, the CIC is keen to ensure that the best projects are selected/prioritised on the basis that they:

- o Are employment intensive.
- o Generate an economic rate of return above their costs.
- o Add to the productive potential of the economy, and
- o Minimise the external leakage of funds.

Recommendations

The CIC recommends as a matter of urgency that the following actions be put in place immediately to progress the stimulus package:

- 1) **Agree the Stimulus package in principle by end March 2009.**
- 2) **Urgent prioritisation of public infrastructure projects by end April 2009, on basis that:**
 - i. Projects with planning and already tendered to proceed immediately i.e. emphasis on construction ready projects.
 - ii. They are employment intensive.
 - iii. They generate an economic rate of return above their costs.
 - iv. They add to the productive potential of the economy.

- v. They minimise the external leakage of funds.
- 3) **Consultation with Pension Funds to conclude by May 2009.**
- 4) **High level Implementation Group to standardise procurement and contractual arrangements, to conclude by May 2009.**
- 5) **Fast track planning and procurement in line with recommendations in Section 5 and Appendix 3.**

Construction Industry Council

The Construction Industry Council was established in February 1991 with the objective of dealing with issues of common interest for the construction industry in relation to overall policy issues. The Council acts only on the basis of consensus and all decisions and policy statements published are agreed by the member organisations.

Membership of the Council consists of:

- The Society of Chartered Surveyors (SCS)
- The Royal Institute of Architects in Ireland (RIAI)
- Engineers Ireland
- The Association of Consulting Engineers of Ireland (ACEI)
- The Construction Industry Federation (CIF)
- The Building Materials Federation (BMF)

The CIC represents approximately 43,000 members.

SCS Membership Figures:

- 2,200 fully chartered members
- 1,000 probationers (those undergoing the process to become chartered)

RIAI Membership Figures:

- 600 architectural practices with 60 branches
- The practices represent 3,172 members of whom 3,172 are architects and 400 are architectural technicians

Engineers Ireland Membership Figures:

- 18,000 fully qualified members
- 5,000 students

ACEI Membership Figures:

- No. of company members: 106
- Number of employees represented through these companies: 4,905

CIF Membership Figures:

- No of company members: 3,000 members across all sectors of the construction industry, including civil engineers, commercial and residential developers, and specialist contractors and sub-contractors.

BMF Membership Figures:

- No. of company members: 40
- Number of employees represented through these companies: 5,000 (approx)
- Member companies are in Cement, Concrete Products, Paint, Insulation, pipes, roofing products, Adhesives; chimney Systems; Cladding Products; Plasterboard, etc.

Section 1 Introduction

The changed economic realities which have unfolded at a rapid pace over the past eighteen months have placed the Irish economy in an extremely weak position. Although a rescue package has been announced for the main banks which may reduce the difficulties securing credit, there is no doubt that there is less scope for consumers and businesses to borrow.

The serious deterioration in the Exchequer finances is generating significant budgetary pressures for Government. As a result, the Government announced a series of measures in the Budget last October and again in February, each of which was expected to raise €2bn. Following the significant reduction in tax revenues in the first two months of 2009, the Government is to announce a further package of tax increases and spending cuts in a new Budget on 7th April. Already just two months into the year the projected tax shortfall looks set to reach €4bn compared with Budget 2009 projections. Part of the February savings were to be achieved through a €300m across the board reduction in the 2009 Budget Exchequer capital allocations, but the likelihood now is that there will be much greater pressure to reduce the capital programme when more up to date figures are announced with the revised spending estimates.

The unprecedented economic challenges, which are showing no signs of abating, are further impacting on an already severely dented construction sector. The current economic situation combined with the difficulties securing finance do not augur well for building projects over the next two years. Confidence in the sector is at an all time low as new business continues to weaken, the pace of employment losses accelerates and companies remain pessimistic about the future outlook.

The construction industry was a key driver of economic growth over the decade to 2007. By the end of 2007 the industry had reached a value of €38.5 billion, 24% of GNP and employed around 400,000 persons², 19% of total persons employed. Output in the industry accounted for 21.4% of GNP on average over the last decade, of which 9% (on average) originated in new housebuilding.

The concern now in the industry is that, as the economic recession gathers momentum in 2009 and 2010, the prospects for public and private non-residential building will be extremely weak over the next two years leading to a severe contraction in construction output. This will have serious consequences for construction employment and wider economic activity as well as for the Exchequer finances. It will ultimately result in a deeper and longer economic recession. Moreover, the skills and experience of the construction industry, built up over the last decade, will be lost and will take considerable time to build up again.

This submission, from the Construction Industry Council (CIC), reflects the grave concerns amongst all its stakeholders about the short and medium-term prospects for construction. Specifically, in respect of public sector infrastructure projects, the CIC is keen to see public sector projects proceed to construction as soon as possible, in particular those projects which are very labour intensive.

² This figure of 400,000 includes 287,000 persons directly employed plus an estimated 115,000 persons employed indirectly in construction (see Section 2.2).

The Council also believes that there are solutions to the current funding difficulties. Firstly, any additional funding over and above the cost of social welfare can be found from the private sector and not the Exchequer. Secondly, by opting for an "off balance sheet" structure, more of the funding can be raised from the private sector. The lack of liquidity in the project finance banking market can be addressed using a combination of the EIB and pension funds. Thirdly, a stimulus package will have its maximum effect if procurement and planning difficulties are addressed immediately.

The CIC believes there is now a real opportunity to deliver badly needed high quality infrastructure projects over the next three years, while saving 70,000 jobs and achieving excellent value for money. The solutions proposed will ensure that those highly skilled productive resources, which were built up over the past decade at a considerable cost by investment in education and training, will be maintained in Ireland, thus helping to keep economic activity at a more sustainable level. Moreover investment in infrastructure benefits the population as a whole while at the same time protecting jobs in the wider economy.

Objectives of submission

The objectives of the submission are to:

- 1) **Demonstrate the need to invest in public infrastructure which generates a return and improves the competitiveness of the economy, while at the same time laying the foundations for the next economic upturn.**
- 2) **Accurately predict where the industry is heading and the implications for employment in the absence of a Government stimulus.**
- 3) **Ascertain the employment intensity of investment in infrastructure projects.**
- 4) **Highlight the need to protect jobs and retain skilled resources in the economy.**
- 5) **Demonstrate the value for money that now exists in construction.**
- 6) **Define the optimum level for construction output over the long-term.**
- 7) **Propose funding solutions for the urgent delivery of much needed public infrastructure.**
- 8) **To work with Government and financial institutions to ensure the recommendations of this report are immediately acted upon.**

Structure of submission

The submission is set out as follows:

Section 2 reviews the cyclical nature of the Irish construction industry, outlines where we are now in the construction cycle and examines the current and future employment situation in the absence of a Government stimulus.

Section 3 addresses Ireland's infrastructural deficit and considers the main benefits of investing in construction projects in terms of Value for Money, Economic Rate of Return and Employment impacts. The employment intensity of construction projects is also examined.

Section 4 considers the prospects for activity levels in the construction industry over the period to 2011. It presents an analysis of the Public Capital Programme as well as an indicative list of projects which might not proceed in each department due to funding difficulties. The results of a CIC private sector survey are also presented. It also considers what the long-term sustainable level of construction output should be.

Section 5 shows that there are solutions to the current funding problems in the construction industry and proposes a series of innovative “off balance sheet” solutions whereby the Government could raise money to fund infrastructure in the medium-term which does not require additional upfront funding from the Exchequer.

Section 6 combines the earlier sections in regard to the prioritisation of public infrastructure projects and the key funding solutions and presents an analysis of the options available to Government in terms of ‘doing nothing’ or ‘doing something’ to stimulate construction activity. It demonstrates that a positive stimulus of €5bn which focuses on labour intensive construction projects will also generate many economic benefits for the economy and return the industry to a more sustainable growth path.

The Executive Summary contains our conclusions and recommendations.

We wish to acknowledge the assistance of the CIC Members, the Department of Finance, other Government Departments and State Agencies in the compilation of this report. The Appendices contain further information and statistics which support, and are referred to throughout, the main report.

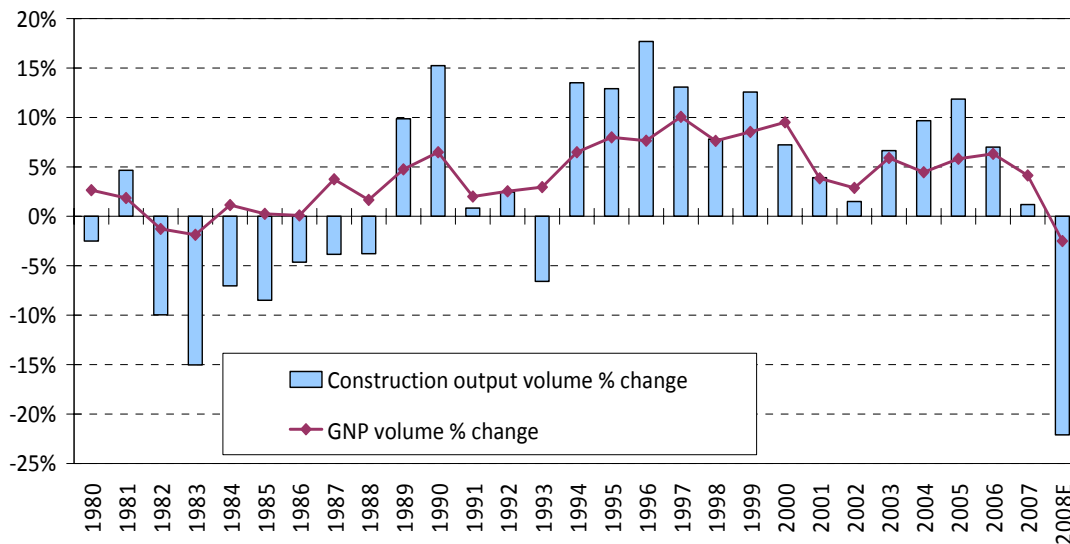
Section 2 The construction industry – where have we come from?

2.1: The construction industry cycle – a review

Construction industries, just like the economy, generally tend to be subject to fluctuations in activity levels. Such fluctuations give rise to cycles which can involve shifts over time between periods of relatively rapid growth in output and periods of relative stagnation or contraction. These fluctuations tend generally to be measured using GNP but they can also be measured using output in the construction sector. The fluctuations do not follow any predictable periodic pattern but will be influenced at any point in time by a number of factors, including Government policy, the state of the public finances, trends in interest rates, income and employment, demographics, the level of public and private sector investment and the level of confidence in an economy.

The Irish construction sector is no exception. The cyclical nature of the Irish construction industry is evident from the next chart which shows construction output and real economic growth (GNP) over almost a thirty-year period.

Figure 2.1: The Construction and GNP Cycle 1980 to 2008e



Source: CSO National Accounts, DEHLG Annual Construction Review and Outlook

The construction sector is made up of three main sub-sectors: residential, general contracting and civil engineering. The cyclical nature of the industry over time reflects the contributions from each sub-sector, which are determined by the scale of investment by the public and private sectors. During the period 1994 to 2006 activity levels across all sub-sectors of the industry increased at exceptional rates, making it the longest boom phase over the last thirty years and probably the longest on record.

Looking briefly at other periods in the construction cycles:

1) 1980 - 1981: construction industry peaked in value terms in 1981 with output up by 5%

The industry benefited from an expansion in the Public Capital Programme in 1981.

2) 1982 - 1988: average decline of 7.5% per annum in construction output

A sharp decline in construction investment materialised over this six-year period (average of -7.5% per annum) due to low levels of economic growth. Average GNP grew by less than 1% per annum. Interest rates were high in both nominal and real terms over this period, thereby adversely impacting on private sector investment in particular. Housing demand also declined sharply due to high emigration and relatively static population levels.

3) 1989 - 1990: output growth of 12.5% per annum

In contrast to the previous period, the much improved economic growth performance in 1989 (+5%) and 1990 (+7%) led to a short recovery in construction industry output in each year, equivalent to volume growth of 10% and 15% respectively in each year.

4) 1991 - 1993: average output decline of just over 2% per annum

Despite the growth in the Public Capital Programme in real terms over this three-year period, partly due to the provision of generous EU funding over the period 1989 to 1993, there was a decline in total construction output due to a fall off in private sector investment.

5) 1994 - 1999: industry volume expanded by 13% per annum on average culminating in the most vigorous growth period in the history of the State

This period of spectacular growth in construction output in Ireland was unique in that all of the broad categories of work consistently contributed to the industry's strong performance since 1994, with residential investment leading the upturn in 1994.

The period 1994 - 1999 was associated with a cumulative growth in real GNP of almost 50% or 8.4% per annum. This vigorous economic growth path facilitated a positive climate for construction investment over the period. The construction sector benefited considerably from the low and stable interest rate environment, which generated a high level of consumer and business confidence, and the very strong increase in employment of around 5% on average per annum since 1994. All of these factors contributed to the recovery in private sector construction investment, particularly in the housing and non-housing sectors. The strong growth in foreign investment also boosted private non-residential construction, while the continued availability of EU financial support for public sector investments continued to sustain public investment activity.

6) 2000 to 2002: period of moderation in construction activity

The three-year period 2000-2002 was characterised by a deceleration in output growth, due to the slowdown in economic growth as the Irish economy began to lose competitiveness and our exports weakened. The construction industry problems of the excesses of the late 1990s, in

terms of the sharp increase in building cost inflation and lack of competitive tendering, led to a weakness in demand from the private sector in the early years of the decade.

7) 2003 to 2007: phenomenal acceleration in construction output growth again

However, private sector building activity expanded again at an unprecedented rate over the period 2004-2006 as interest rates fell to historically low levels and the easy availability of credit became a worldwide phenomenon. The economy and construction sector went out of control as lax lending policies exacerbated an already unsustainable situation. Meanwhile the public sector benefitted from the substantial funds allocated each year to infrastructure projects in Public Capital Programmes (PCPs). The total PCP had doubled in value terms, which was equivalent to an average annual increase of 10% in nominal terms. As employment and disposable incomes continued to increase across the economy, the demand for housing and credit seemed to be unrelenting at least until 2006. Although the volume of construction output continued to rise modestly in 2007, a substantial correction in the housing market began around the end of 2006, and the volume of residential investment subsequently declined in 2007.

However, by the end of this period, it was clear that the Irish economy had become too dependant on construction as the value of output reached a record level of €38.5bn in 2007 or 24% of GNP. Meanwhile the sector was responsible for employing one in every 5 persons working in the economy, either directly or indirectly in construction.

8) 2008 to date: the most severe contraction in thirty years

Construction peaked at 24.5% of GNP in 2006 and total investment in the economy, including building and construction, peaked at around 31%³. Both had become unsustainable and an adjustment was inevitable.

Thus after an extraordinary period of output growth, demand for construction was expected to contract in some years. The severity of the economic recession suggests that, without a Government stimulus, the industry looks set to contract sharply for a number of years, undershooting its long-term optimum size from the end of 2009⁴. A further decline beyond 2009 is essentially eroding the economy's long-term productive capacity.

2.2: Where we are now in the construction cycle

Construction output has contracted sharply

The current phase of the construction industry will require a rebalancing across the individual sectors. The substantial share accounted for by residential construction – close to 65% at the peak - will need to be taken up by other sectors, at least in part, as housing falls back well below its long-term sustainable level before it eventually recovers.

The latest estimate for construction output in 2008 suggests that the volume of output is likely to have declined by around 22%. Current indications are that the industry this year could contract by around 40%, which would imply an output level of €17.6bn. In the absence of a major stimulus package to reinvigorate construction activity, the size of the construction industry will shrink to

³ Total investment in the economy captures all capital investment in building and construction plus investment in machinery and equipment.

⁴ We look at the construction industry's prospects over the medium-term in Section 4.

around €12.3bn by 2010 - 33% below its long-term optimum and 68% below the peak only three years earlier⁵.

This will have serious consequences for tax receipts, direct and indirect construction employment and wider economic activity. The result will be a deeper and longer economic depression, which will delay any recovery. Moreover it is difficult to come to terms with such a serious scaling back of the industry at a time when Ireland continues to have a low infrastructure stock compared to its trading partners. The importance of continued investment in infrastructure for building a competitive economy is well acknowledged by many, including the Taoiseach⁶. There will undoubtedly be significant negative repercussions for the country's competitiveness if capital investment plans are curtailed at this point in time.

Construction confidence at an all time low

The most recent Ulster Bank Purchasing Managers' Index (PMI) for the construction industry recorded an unprecedented decline in activity in February 2009, continuing the consistent decline in the PMI index which commenced in June 2007. The decline is evident across all sectors of construction, with activity in the commercial sector displaying the sharpest contraction. The overall message from the PMI survey is that new orders are contracting, clients are postponing spending decisions and the accelerating pace of job losses is a major cause for concern.

Acceleration in pace of job losses

Construction is one of the most labour-intensive forms of economic activity in the Irish economy. As a result of the economic recession and the contraction in construction activity the industry is now shedding labour at a rapid pace. This loss of labour has serious repercussions for the wider economy as the total impact of the construction industry on the economy works on a number of different levels, three in total:

- 1) In the first place, there is the **direct** addition to economic output generated by the output of the industry, which can be measured by the earnings of those employed in construction, i.e. payroll plus profits earned. This comprises the employment generated by all jobs created by construction firms that work directly on projects. The typical professional, trade and craft occupations which are included in the measure of 'direct' employment in construction are included in Appendix 1.
- 2) Secondly there is the **indirect** employment generated by the firms that provide the inputs to the project in question plus the employment generated by those firms who supply the firms providing the inputs and so on. These are sometimes called 'second generation' suppliers and include, for example, persons employed in concrete manufacturing, joinery workshops and steel fabrication.

Estimates of indirect employment in construction are typically estimated at 40% of direct employment⁷, implying that for every ten persons directly employed on a construction project there are a further four 'indirectly' employed in supporting industries.

⁵ A detailed medium-term projection for construction output is included in Section 4.

⁶ In the foreword to the most recent National Competitiveness Report from the National Competitiveness Council (January 2009) the Taoiseach states that "it has never been more important to identify clearly those issues which are key to underpinning national competitiveness" and "we must continue to prioritise investment in our productive capacity and to secure greater value for money across all areas of public spending..."

⁷ This is broadly in line with the methodology used by the EU Commission, The Competitiveness of the Construction Industry [Com (97) 539 Final], 4th November 1997, Page 2.

- 3) There are further **induced** employment impacts which include all of the jobs created by those directly and indirectly employed in construction spending their wages and profits throughout the wider economy. These would include the additional jobs (and income) in retail and other sectors that are created as a result of the various consumer purchases made by those households employed at the direct and indirect stages.

Payroll and profits are often referred to as the *direct effect* of economic activity, and demand for domestically produced inputs as the *indirect effect*. In addition, these generate further benefits, as the recipients spend their money elsewhere in the economy⁸. This third benefit is generally referred to as the *multiplier effect*. There are no up to date measures of such multipliers in the Irish context but US evidence suggests that the induced multiplier in regard to road construction projects varies between 1.5 and 2.0.⁹ These values refer to a closed economy where there would be little or no import content in construction projects, unlike in the case of a small open economy like Ireland. We estimate that multipliers in the Irish case are somewhat less and we use an estimate of 1.4 throughout this report.

Direct employment in February 2009 is already down 33% from the peak

According to the QNHS, the numbers directly employed in construction had already fallen by 52,400 in Q4 2008¹⁰ (Sep-Nov quarter) to 233,800 persons from the peak recorded in Q2 2007 (March-May 2007) or by almost 20%. Over the last three months, there have been further significant increases in the numbers becoming unemployed in construction as indicated by the Live Register performance. The total on the Live Register reached 352,800 (seasonally adjusted) in February 2009, up 87% from a year earlier. Construction related job losses continued to dominate the Live Register increase with males accounting for over 18,000 of the February increase of 26,700 (68%). If an estimated 65% of the 66,600 males who joined the Live Register since October 2008 had previously worked in construction, this would imply a further 43,300 became unemployed since October 2008, bringing the total jobs lost in construction to around 96,000 since the peak in Q2 2007. This would imply that the total number of persons directly employed in construction at the end of February was 190,500.

Total employment in construction looks set to fall back to 1994 levels

The wider repercussions on the economy, in terms of the indirect employment impacts, suggest that the total (direct plus indirect) number of persons employed in construction has already fallen to around 267,000 in February 2009, compared with 400,000 at the peak. Employment estimates for 2010 and 2011 (based on output projections presented in Section 4) suggest that total employment in construction will decline back towards 147,000 by the end of 2010 and will fall further to only 126,000 by the end of 2011. **This level would bring employment in construction back to 1994 levels.**

These figures imply a serious shedding of labour in construction and in other areas dependent on construction, with almost 254,000 jobs lost by the end of 2010 or 275,000 by end of 2011, in the absence of any immediate Government stimulus for infrastructure projects.

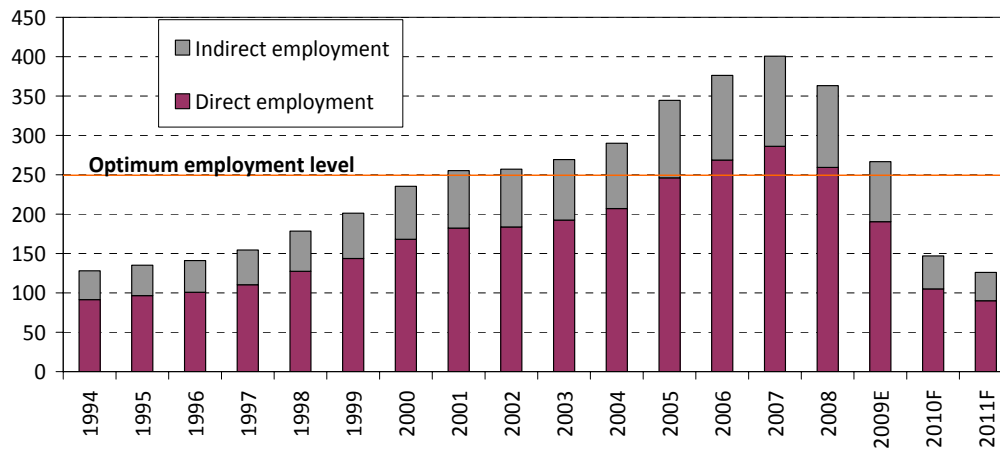
The next Chart puts the current situation into context, showing the phenomenal growth in total construction employment over the period since 1994 and the rapid acceleration in the pace of job losses since the peak in 2007.

⁸ Albeit profits of foreign-owned firms are repatriated and there would be some leakage due to the purchase of imports.

⁹ US Department of Transportation Federal Highway Administration (FHWA).

¹⁰ The latest data (seasonally adjusted) available published in February 2009. At that time 84% of all construction workers were Irish citizens, and 16% were from the EU Accession States.

Figure 2.2: Total employment in construction 1994 to 2011F
(Q2 each year)¹¹



Note: The chart displays total employment in construction using the estimate of 40% for indirect employment.

The chart illustrates the exceptional growth in construction employment over the period 2000-2007. Aligned with the growth in output are higher standards and new methods of construction, a more rigorous regulatory environment and new areas of activity, which have all generated a demand for more construction skills and new occupations.

No jobs for graduates

As well as the impacts of serious job losses which are now in train, there are further repercussions for the industry. The first is the lack of jobs for current and future graduates over the next two/three years across the wide range of disciplines associated with construction. The second is the reduced potential to attract leaving cert students into the construction professions, which will damage the industry and reduce the ability to replace workers as they retire over the long-term. The final development is the reduced opportunity to preserve the base of construction trades/craft workers in the industry. We understand that on 14th February 2009 there were a total of 25,641 apprentices of which 4,000 were redundant.

Including 'induced' employment impacts, the economy looks set to lose almost 20% of its employed workforce by end 2011 based on the current and projected decline in construction volumes alone

Table 2.1 sets out the projected employment numbers out to end 2011 which are consistent with the medium-term projection for construction output presented in Section 4. The latter predicts that the volume of construction output will have declined by 72% between 2007 and 2011 to around €10bn. The employment projections presented in Table 2.1 suggest that 2011, implying almost 275,000 jobs will be lost in construction and in areas dependent on it.

¹¹ **Data Sources:** The data for the period 1994-1997 relates to the old Annual Labour Force Survey carried out in April each year. The data for the period 1998-2008 represents Q2 seasonally adjusted data from the Quarterly National Household Survey produced by the CSO. The 2009 estimate is derived based on recent trends in the Live Register. Estimates for 2010 and 2011 are based on the medium-term projections for construction output presented in Section 4.

Table 2.1: Estimated Job losses in construction

		Direct	Indirect	Total
		<i>Numbers employed</i>		
Peak Q2 2007	Mar-May'07	286,200	114,480	400,680
Q4 2008	Sep-Nov'08	233,800	93,520	327,320
Current estimate	Feb-09	190,500	76,200	266,700
Forecasts y/e Dec:				
2009		150,000	60,000	210,000
2010		105,000	42,000	147,000
2011		90,000	36,000	126,000
Relative to peak:				
Total jobs lost to date		-95,700	-38,280	-133,980
Total jobs lost by end 2010		-181,200	-72,480	-253,680
Total jobs lost by end 2011		-196,200	-78,480	-274,680

* In the absence of a Government stimulus.

The above analysis has not considered the *induced* employment losses which will arise in the economy as a result of the direct and indirect job losses in construction. **Based on an estimated multiplier of 1.4 to capture the induced employment impacts, this would imply a total of 384,552 jobs lost throughout the economy as a result of construction alone, which is equivalent to 19% of the latest estimate for total employment across the economy** (2.06m at Q4 2008, seasonally adjusted).

Table 2.2: Estimated Job losses in construction after counting 'induced' impacts

	Total jobs lost relative to peak	Including multiplier of 1.4	As % of total employment at Q4 2008
By end 2009	190,680	266,952	13.0%
By end 2010	253,680	355,152	17.3%
By end 2011	274,680	384,552	18.7%

While these figures may be difficult to comprehend in the context of where the industry got to at the peak in 2007 there is ample evidence on the ground of unprecedented job losses right across the sector. Estimates of the numbers employed in design offices suggest that employment will be down to 60% of peak levels by the summer this year and 40% by the end of the year.

The main implication of the above is that the industry will already be below its optimum level by the end of 2009, and 43% below it by the end of 2011, in both output and employment terms.

Essential to retain the skills base of the industry

Having built up these substantial skills in the sector over the past ten to fifteen years, it is imperative that the skills are retained in construction to add to the productive potential of the economy. They are required to address the infrastructure deficit which still exists in the Irish economy but are also necessary to ensure that the economy is well placed to meet the needs of the FDI sector and the sophisticated technical and building requirements of the next generation of new enterprises which Ireland Inc. is keen to attract for its next development phase. Thus action is required to stimulate both private and public sector construction activity if the shedding of skilled jobs is to be minimised.

In this regard recent statements by the Taoiseach¹² about plans to ‘prioritise projects that generate more jobs’ and ‘commit considerable expenditure on roads, school infrastructure, home insulation and energy efficiency measures’ are encouraging. The CIC welcome these initiatives but stress that it is essential that these projects proceed to construction as quickly as possible.

¹² See speeches by the Taoiseach Mr. Brian Cowen T.D. to Dublin Chambers of Commerce AGM and his announcement of measures taken as part of the Government’s Implementation of the Framework on Stabilisation, Social Solidarity and Economic Renewal, 5/2/2009.

Section 3: The benefits of investing in infrastructure

Construction is a labour-intensive form of economic activity, with labour costs accounting for in excess of 50% of turnover. Because of its labour intensity, there is a high level of immediate economic return through personal tax receipts. This section reviews the impact of construction on the wider economy. It begins with evidence of Ireland's infrastructural deficit.

3.1: Does Ireland still have an infrastructural deficit?

The National Development Plan (NDP) 2007-2013 represented the plan to address Ireland's infrastructure deficit and plug the gap compared with our trading partners. The current NDP, prepared in 2006, is associated with a record level of investment in infrastructure over a seven year period. Now just three years into the plan, the economy is facing major challenges which are making it difficult to deliver the NDP. Indeed the CIC would strongly recommend that infrastructure projects are reprioritised based on the benefits they generate in terms of employment, rates of return and their capacity to add to the productive potential of the economy.¹³

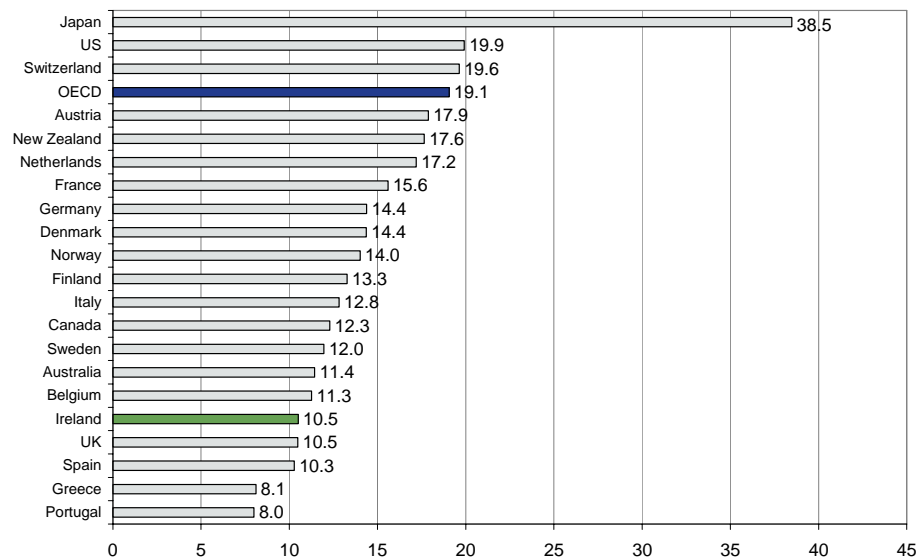
Despite the considerable investment in the public capital stock over the boom years, as reflected in the escalation in the Public Capital Programme from €6bn in 2000 to an estimated €13bn in 2008, Ireland still lags other countries in regard to its level of public capital stock.

In a recent survey of 14 EU economies, *The 2009 European Growth and Jobs Indicator*, Ireland has moved down from 4th to 13th place in one year. The removal of infrastructure deficits in an economy is essential in our efforts to raise competitiveness and boost economic growth. Doing nothing will damage our competitiveness further.

Evidence of Ireland's infrastructure deficit is available from the Annual Benchmarking Report from the National Competitiveness Council. The following Chart summarises the position in relation to the capital stock per person in 2004 based on an IMF methodology.

¹³ See Section 6.2.

Figure 3.1: Public Capital Stock per Person (€000s), 2004



Levels of public capital stock per person in Ireland compare poorly with other countries, with the estimated amount just over half the OECD average. Ireland's poor ranking reflects underinvestment in the past and strong population growth in recent years.

OECD-28 Ranking: 17

Source: Kamps, C., 2006, "New estimates of government net capital stocks for 22 OECD countries: 1960-2001," in *IMF Staff Papers* (53)1, pp120-150.

Based on the above chart, it is clear that an infrastructure deficit existed in 2004. While Ireland may have moved up a few places in the rankings since 2004, we suspect that Ireland would still be at a material disadvantage in relation to other countries today. Thus from a competitiveness perspective it is essential that spending on plugging this gap continues and that alternative funding mechanisms are explored.

There is ample anecdotal evidence of the infrastructure deficit in Ireland in 2009 which remains to be addressed:

- In primary and post-primary **schools** there remains a significant deficit in regard to the quality and quantity of mainstream accommodation with many schools in need of refurbishment and operating out of portacabins - a temporary arrangement that still persists.
- While some investment has been made under various funding initiatives, the quality of some **third level educational institutions** is considerably below what is required if Ireland is to be successful at building a research and innovation based economy and educational facilities for areas of national strategic importance, such as biomedical, health and environmental research.
- Many **hospitals** require an upgrade of their facilities, due to the poor standard of their existing building stock. Some were 1800s workhouses, refitted as hospital wards, but not fit for purpose. A number have wards and consulting rooms in prefabricated accommodation - again a temporary arrangement which still persists. Facilities and capacity in Accident and Emergency departments are still a cause for concern.
- Notwithstanding the major investment in the national **road network**, which has substantially improved journey times, commuting times in the main urban areas still need to be improved

with investment in good public transport. Moreover, the significant improvements in the major inter-urban routes highlight the inadequacies of investment in other roads.

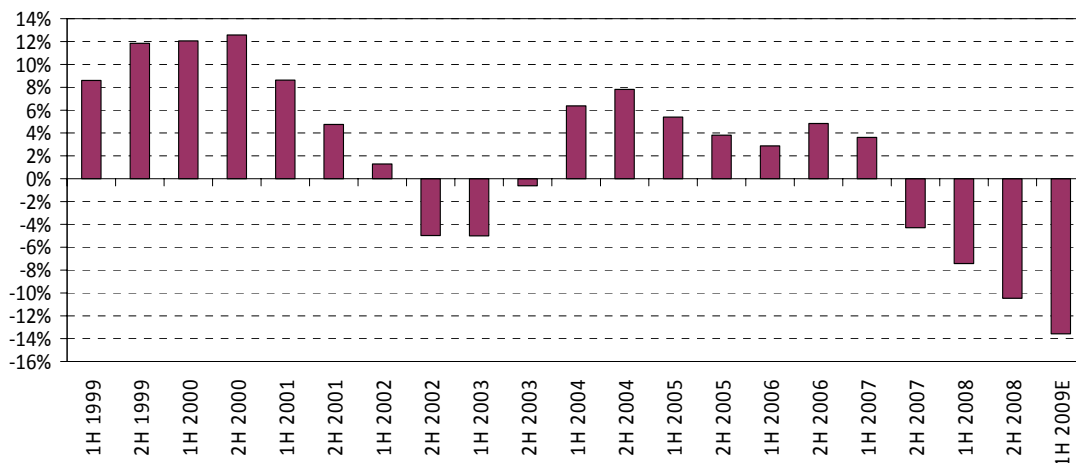
- Investment in **water** quality in the major urban areas in particular, notably Galway, needs to be considerably increased. In regard to water networks, there are also issues around leaks and mains replacement.

3.2: Value for money

The concept of ‘value for money’ is one which received considerable attention after the capacity constrained period in the construction industry in the late 1990s when construction inflation was running at 12% per annum on average. As a result subsequent National Development Plans included it among their key programme objectives. The NDP 2007-2013 specifically included Value for Money Management and Assessment Frameworks which provided for the appropriate appraisal and management of capital projects including cost benefit analysis for all projects over €30m. Just this month, the requirement was introduced that all capital projects worth more than €5m must be sanctioned by the Department of Finance.

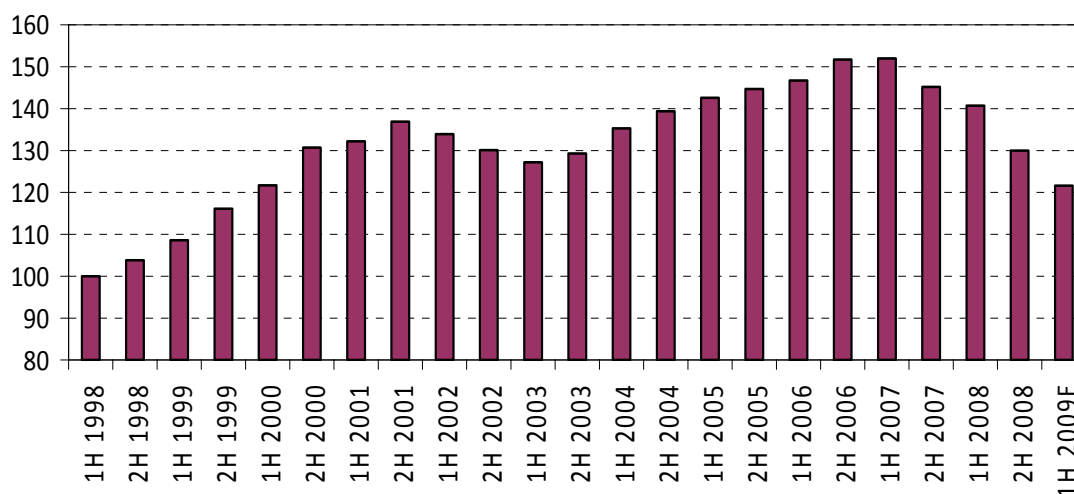
Figure 3.2 displays the change in average tender prices according to SCS data. The value for money during the capacity constrained years of the late 1990s is evident from the chart. That period was followed by reductions in tender prices in 2002-2003. Over the four year period 2003-2007 average tender prices increased by 19%. However that trend was quickly reversed in the second half of 2007 as the construction sector began to slow down. As a result, by the end of 2008, tender prices had fallen by 15% since they peaked in the second half of 2007. **The view in the industry is that they will be down by 20% by the summer of 2009. Thus tender prices are back to where they were in 1999, ten years earlier (Figure 3.3).**

Figure 3.2: Trends in Tender Price Inflation
Year-on-year % changes



Source: Society of Chartered Surveyors

Figure 3.2: Trends in Tender Price Index
Index 1H 1998 = 1000



Thus the current contraction in construction output has probably generated the best value for money that has been available for a decade. The contraction in new orders and the acceleration in job losses have generated considerable competition for the work that is put out to tender. This is evident from the recent trend in tender prices from other sources as well as the SCS. The next Table shows the dramatic decline in tender prices during 2008, which is expected to continue at a more moderate rate in 2009.

Table 3.1: Recent trends in tender prices for general contracting work*

	2007	2008	2009E	Cumulative 2007-2009
Society of Chartered Surveyors (SCS)	-4.3%	-10.5%	-5.0%	-18.6%
Bruce Shaw	0.0%	-12.0%	-5.0%	-16.4%
Davis Langdon PKS	-1.0%	-13.5%	-4.0%	-17.8%
Average	-1.8%	-12.0%	-4.7%	-17.6%

* % change year to December.

The latest Tender Price Index from the SCS shows that tender prices fell by 7.6% between June and December 2008, and by 10.5% over the full year to December 2008. The most recent Annual Reviews from Bruce Shaw and Davis Langdon PKS estimate that tender prices fell by between 12% and 13.5% in 2008, although in some cases declines of over 20% were recorded. **Without any doubt, tender prices from 2007 will be down 20% by the end of 2009.**

A 'window of opportunity'

The fall in tender prices comes despite increases in the cost of labour and material inputs and reflects the situation where contractors are bidding at or below cost in order to secure a share of the ever diminishing market. It is likely that there will be a further reduction in tender prices during 2009 but perhaps at a slower rate, as below cost tendering can only be a short term solution.

Thus the very competitive environment which currently exists presents an ideal window of opportunity to roll out infrastructure projects:

- The industry has capacity and unemployed resources.
- There is a need to secure construction jobs which will ultimately generate other jobs across the economy through indirect and induced impacts.
- There is excellent value for money with tender prices back to where they were at the beginning of this decade.
- There is a significant infrastructure deficit.

Combined with the innovative funding solutions proposed in Section 5, these should allow much needed public infrastructure projects to proceed to construction as quickly as possible.

We understand, that prices for recently tendered hospital projects (e.g. Mater Hospital, National Rehabilitation Hospital) are 20% down on Budgets prepared in 2008. Similar reductions are reported for school buildings, a number of which were retendered this year to get the best value for money. We also understand from the National Roads Authority that tender prices for roads fell by 3% in 2008. Road construction is now 20% cheaper than it was 10 years ago. Taking land costs into account, we can now construct 5km of motorway at the same cost as 3km were in 2006.

3.3: Economic returns

There is an economic return on investment in construction through improved physical infrastructure stock. In 1999 the World Bank calculated that the average economic rate of return for World Bank infrastructure projects between 1983 and 1992 was 11% for electricity projects and 29% for road building projects.¹⁴

Ireland has traditionally suffered from a deficit in the quality of its physical infrastructure in comparison to competitor EU economies. Despite high levels of investment from both the Irish Exchequer and the EU, deficits in the Irish road network, water infrastructure and rail network are still evident. As a result investment in infrastructure should yield higher returns where a significant deficit exists.

According to the ESRI, the long run effect of investment in infrastructure is a permanent increase in GNP. For every €1bn spent GNP goes up by €0.4bn per annum in the long run.

National primary roads – GNP around 3% higher than it would otherwise be

The ESRI calculated that investment in road infrastructure in the first two years of the NDP raised the level of GNP by over 7% above what it would have been in 2002 without any investment. More significantly, the ESRI concluded that, in the long run, the level of GNP would be around 3% higher than it would otherwise be. This represented a real rate of return on NDP/CSF investment of around 14% for road investments (real i.e. after adjusting for inflation) at that time¹⁵.

¹⁴ World Bank (1994) *World Development Report 1994; Infrastructure for Development* (New York: OUP).

¹⁵ Mid-Term Evaluation of the National Development Plan (NDP) and the Community Support Framework (CSF) for Ireland for the period 2000-2006, ESRI October 2003; and NDP/CSF 2000-2006 Review (Page 30).

Health infrastructure - internal rates of return of over 13%

Health projects potentially confer some of the most significant socioeconomic benefits of all public projects, over and above the pure financial benefits of revenue generation. DKM has performed a number of CBAs for major capital investment in hospitals over the last two years. Of the benefits that it was possible to value, its findings suggested internal rates of return of over 13% for all projects, with three estimated at 25% or over (for an evaluation period of 30 years). A number of qualitative benefits were also noted in each of the CBAs.

The most significant non-financial benefit comes from the improved health of future patients. While this is difficult to value, due to the non-commercial nature of public health service delivery, health economists have developed the measure, 'Quality Adjusted Life Years', or QALYs. In essence, these represent the additional years of healthy living gained from treatment (compared with the situation without treatment). To the extent that the patient's remaining life is not lived in full health, QALYs are discounted. They are then valued at €45,000 per QALY (based on the National Centre for Pharmacoeconomics estimate¹⁶ and international norms). DKM's CBAs estimated considerable benefits based on the QALYs gained by future patients of the health services in Ireland.

In many of the facilities examined a range of health and safety guidelines (including fire safety) have not been complied with because of the limitations of existing buildings. More recently, infection control (SARI) guidelines have required greater space in wards and isolation rooms, but existing buildings are not large enough to accommodate these without severely constricting capacity. **It is clear that, as medical and health care best practice guidelines emerge, older hospital buildings become increasingly unfit for purpose and are in need of replacement.**

The CBAs were carried out under the assumption that the economy was fully employed. Thus, any resources that are used by the project carry an opportunity cost, as they might have been used in a different area of the economy. In the context of a less than fully employed economy, the rates of return would be higher still, as it is assumed that any job or enterprise creation is directly attributable to the project. The economic impact of increased purchasing power is also multiplied across the rest of the economy.

This point is particularly relevant to health projects, both during and post-construction:

- Health project construction can be more resource-intensive than other construction. For example, buildings generally require a range of fittings to ensure accessibility, safety and hygiene.
- Post-construction, health service delivery is very labour-intensive. Payroll typically makes up more than 50% of operating expenditure in a hospital project.

Primary and post-primary school building - internal rates of return are more difficult to measure

Returns to investment in education are less clearcut as they tend to be amalgamated with the returns to investment in human capital (i.e. education), which in turn is a key driver of economic growth. Mankiw, Romer and Weil¹⁷ conducted research which stated that there is "clear evidence of the importance of human as well as physical capital accumulation in explaining the cross-country variation in standards of living and rates of growth". Achieving high participation rates in first and

¹⁶ See NCPE evaluations – e.g. http://www.ncpe.ie/u_docs/doc_165.pdf.

¹⁷ Reference to Mankiw, N, Gregory, David Romer and David N. Weil, 1992 "A Contribution to the Empirics of Economic Growth", Quarterly Journal of Economics, 107 (2) 407-437.

second level education is a prerequisite for the attainment of higher living standards. It is for this reason that the investment in primary and post-primary infrastructure needs to be accelerated in order to provide an attractive environment to allow the maximum level of participation at this level of education.

The most recent documents on Building Ireland's Smart Economy¹⁸ recognises the gains to be made from investment in third level education and in research and development. This investment cannot take place in isolation and requires an adequate level of infrastructure to implement it.

Without investment in educational buildings, there is a real danger of damaging our future economic growth.

3.4: Employment impact of construction projects

Investment in construction has a significant payback in terms of job creation. Each category of infrastructural investment gives a different return, depending on the employment intensity of construction projects.

Demand side impacts

While the number of jobs created through investment in any particular job varies, in excess of 50% of the total cost is accounted for by employment (direct plus indirect). In addition, a further four jobs are created in the wider economy. In 2006, it was estimated by Government that one quarter of all small and medium sized enterprises (SMEs) in Ireland were in the construction industry.

We previously considered the contribution of the construction industry to the economy in terms of the demand side - direct, indirect and induced - employment impacts in Section 2.2.

3.4.1: Employment intensity of construction projects

Based on information received from the CIC members we have ascertained the amount of turnover required in each of the five years to 2007, based on actual hours worked on and off-site including design hours, to generate one job. The overall employment generated reflects the direct and indirect jobs on the project. The information provided is set out in Table 3.2 for the period 2004-2007.

¹⁸ Building Ireland's Smart Economy, A Framework for Sustainable Economic Renewal, Department of the Taoiseach, January 2009.

Table 3.2: Investment required to create one job

Year	Total man hours worked on site	Number of projects	Number of man hours worked off site	Number of design hours worked	Total man hours worked on and off site incl. design	Total man years worked *	Value of projects (excl VAT)	Client investment generated per working year	Number of jobs per €10m of investment
2007	13,683,082	197	2,528,183	824,820	17,036,085	8,573	€998,948,213	€116,523.83	86
2006	13,117,070	166	2,572,721	839,350	16,529,141	8,318	€1,016,546,535	€122,213.32	82
2005	11,803,898	155	2,204,375	719,177	14,727,450	7,411	€871,003,740	€117,526.02	85
2004	9,936,977	128	1,656,188	540,331	12,133,496	6,106	€654,401,393	€107,176.57	93
						2009 – 2010 Projection =		€93,219.06 #	107
	Based on direct staff and sub-contractors. (No off site persons included)		Based on value of Irish work off site [Rate based on gross average earnings]			* Based on Q2 2008 CSO figures: 46 weeks per year and 43.2 hours per week [1,987.2 hrs per year]		# Value for money adjustment = 2007 price less 20%	

Source: CIC Members

Based on the information provided in Table 3.2:

- The turnover required to create one job in 2007 was €116,524, which implies 9 jobs per €10m investment.
- **The 2007 figure adjusted to 2009 levels, based on the 20% reduction in tender prices from 2007, is €93,220. This is equivalent to 11 jobs (direct and indirect) per €1m investment.**

While the above reflects the 'average' for a basket of projects, the labour intensity of projects will vary depending on the type of investment. We have therefore obtained further information from CIC members in regard to individual projects. Table 3.3 provides comprehensive information on actual hours worked on and off-site including design hours, to generate one job for a range of projects¹⁹.

It is important to note that four of the projects were carried out in 2007 and tender costs for civil engineering projects have declined by around 5% since 2007. If we adjust the last three projects by 5%, the 2007 office block by 20%, and the 2008 school and hospital projects by 5%, we derive an up to date estimate for the cost per job in 2009.

The table illustrates the variation in the labour intensity of the different projects, ranging from

- **8 jobs per €1m invested in civil engineering projects (waste water treatment, sewerage schemes, inter-urban road) to**
- **10 jobs per €1m invested in a hospital,**
- **12 jobs per €1m invested in a school, and**
- **13 jobs per €1m invested in an office block.**

Hence we use an average of 10 jobs per €1m when considering the impact of a Government stimulus (Section 6).

¹⁹ Further information is available if required from the CIC.

Table 3.3: Employment intensity for a range of infrastructure projects

Project	Hours worked on site	Hours worked off site by the primary supply chain in Ireland	Hours worked off site by design staff	Hours worked off site by Head Office staff	Total hours worked	Equivalent working years #	Client investment generated per working year	Year which investment relates to	Reduction in tender prices to reflect 2009 investment level	2009 investment levels	Number of jobs per €10m of investment
Secondary School	277,135	46,619	26,100	7,200	357,054	180	€89,407	2008	-5%	€84,937	118
Hospital	1,460,433	487,042	181,998	46,390	2,175,863	1,095	€105,936	2008	-5%	€100,639	99
Office Block	532,033	154,862	39,587	15,897	742,379	374	€98,010	2007	-20%	€78,408	128
Waste Water Treatment	300,000	86,781	21,894	18,900	427,575	215	€125,485	2007	-5%	€119,211	84
Sewerage Scheme	103,050	55,931	5,766	9,965	174,712	88	€132,231	2007	-5%	€125,619	80
Inter Urban Road	2,300,103	588,760	77,000	121,212	3,087,075	1,553	€128,743	2007	-5%	€122,306	82

Source: CIC Members

Based on Q2 2008 average weekly hours worked from CSO of 46 weeks.

The 'average' figure of €93,220 from Table 3.2 is used in the next Table to derive the net costs to the Exchequer from investing in public infrastructure.

Table 3.4: Net Cost to Exchequer from Investing in Infrastructure

	Project A		Project B	Weighted Average #
Project Cost (2007 excl VAT)	116,524			
Turnover required to create one man year of labour (direct and indirect) 2009	93,220		93,220	
<u>Made up of:</u>				
Labour cost/worker *	59,890	64%	59,890	
Materials plus plant (excl VAT)	28,669	31%	28,669	
Profit	<u>4,661</u>	5%	<u>4,661</u>	
	93,220		93,220	
Tax take on labour after employee pension of 3%				
Gross salary	53,000		53,000	
Income tax	9% 4,792	18%	9,774	
Employee PRSI	4% 2,056	4%	2,056	
Employer PRSI	10% 5,300	10%	5,300	
Health levy	2% 1,028	2%	1,028	
Income levy	1% <u>514</u>	1%	<u>514</u>	
	13,691		18,673	17,876
Other Taxes:				
Corporation Tax on profits	12.5% <u>583</u>		<u>583</u>	
Total all taxes	14,273		19,255	18,458
Estimate of Social Welfare savings	33,428		15,385	18,254
Net cost to Exchequer	45,519		58,580	56,508
Net cost as % of Turnover	49%		63%	61%

Average cost to Exchequer **€56,508 or 61% of original investment -
Ignoring the "induced effects" in the wider economy**

Note: Project A employs a married construction worker and Project B employs a single construction worker.

* The labour includes the direct and indirect employment generated by the projects.

The last column shows the weighted average based on the methodology used to derive the cost of social welfare.

The example assumes gross average earnings of €53,000 and takes a weighted average (last column), based on the methodology used to derive the cost of social welfare²⁰. The gross salary of €53,000 is based on a consensus across CIC members for the average across all persons employed on a project. This is 23% higher than the average CSO figure for earnings of construction workers in 2008 of €43,000 (based on clerical and operatives only).

Thus based on the original investment of €93,220, the average tax (weighted) generated by the project is €18,458. Assuming the person employed was previously unemployed or was just finishing

up on another project and facing the prospect of unemployment, the average (weighted) social welfare and other savings as a result are estimated at €18,254 per worker²⁰.

Thus the net cost to the Exchequer of investing €93,220 in a construction project is €56,508 or 61% of the original investment.

Thus based on the above an investment of €1m generates 11 direct and indirect jobs and would cost the Exchequer €610,000.

Section 6 examines the impact of a €5bn stimulus by Government which would generate 50,000 direct and indirect jobs in construction plus a further 20,000 or 40% through the induced employment effects across the wider economy.

Supply side impacts

Over the longer-term, there are additional benefits to competitiveness and economic growth from significant levels of investment in physical and social infrastructure. Moreover the quality of infrastructure is improved for the population as a whole, generating an important public benefit, while the investment generates other jobs across the economy for the wider workforce, not just in construction.

Specific benefits also arise depending on whether the investment is in a civil engineering project, such as a road, airport, power station or water treatment plant, or in a public building, such as a hospital, school building, third-level research building, garda station or cultural building.

While the previous discussion dealt solely with estimating the demand side employment effects of expenditure on major infrastructure projects, there are also supply side impacts. The supply side impacts of investment under the Operational Programme for Transport for the period 1994-1999 were considered in a study by DKM and the ESRI over ten years ago²¹. That study reviewed the main quantifiable savings from investment in the national road network, which related mainly to time savings by private cars and commercial vehicles but also included reduced maintenance and capital costs for commercial fleet owners and reduced accident costs.

3.5: Conclusions

There are many benefits from investing in public infrastructure and these benefits will be higher in an economy like Ireland, which has an infrastructural deficit. ESRI research shows that over the long-term the effect on GNP is that it stays higher by almost one-half of the investment.

There are also significant demand and supply side impacts in terms of the employment generated, which in turn generate induced employment impacts and further economic activity through multiplier effects.

²⁰ These figures are derived based on actual payments made in 2007 from the publication *Social Welfare Statistics 2007*. The weighted average figure of €18,254 reflects the fact that 84% of those in receipt of social welfare payments were single and 16% of those in receipt had dependent children. The calculations also take account of the proportion in receipt of rental support/mortgage interest supplement and other welfare entitlements (e.g. medical cards).

²¹ The Macro-Economic Effects of the Transport Investment under OPTRANS, DKM Economic Consultants and the ESRI, April 1998.

We estimate, based on information from CIC members, that **an investment of €1m generates 11 direct and indirect jobs and costs the Exchequer €610,000.**

Based on further information received from CIC members on specific projects we estimate the employment intensity of projects ranges from

- **8 jobs per €1m invested in civil engineering projects (waste water treatment, sewerage schemes, inter-urban road) to**
- **10 jobs per €1m invested in a hospital,**
- **12 jobs per €1m invested in a school, and**
- **13 jobs per €1m invested in an office block.**

Thus we use an average of 10 jobs per €1m in considering the impact of a stimulus package in Section 6.

It has also been established that the current contraction in construction output has generated the best value for money that has been available for a number of years, with tender prices expected to be down by 20% by the end of 2009 from 2007 levels.

Section 4 The prospects for construction

This section presents a review of the Public Capital Programme. It begins with a discussion on the current review of capital spending and makes the case that any reductions in the capital programme will erode confidence in the construction sector.

The focus in what follows is on the PCP estimated provision for 2009 as announced at the time of the 2009 Budget. The purpose is to identify the priority areas for capital investment in infrastructure. An indicative list of projects is presented, following consultations with the main infrastructure spending departments, which includes projects which might not proceed in each department due to funding difficulties. The CIC considers that it should now be possible to progress these projects, given the proposed funding solutions outlined in Section 5.

The second part of this section considers the prospects for activity levels in the construction industry over the period to 2011 using the results of a private sector CIC survey. It goes on to demonstrate the critical role that Government plays in driving construction activity in these challenging economic times, when private sector activity levels are weakening at an accelerating pace. It ends with a discussion on what the optimum size of the construction industry should be over the medium-term. The analysis clearly demonstrates the urgent need for a stimulus package from the Government.

4.1: Capital spending – under review

The analysis of the Public Capital Programme (PCP) which follows is based on the PCP estimated provisions and the multi-annual capital investment framework published with the 2009 Budget. We understand, from our consultations with the main spending departments, that these allocations are likely to be significantly lower when the 2009 Revised Spending Estimates are published²².

On this basis the allocations in the multi-annual capital investment framework can, at best, be only indicative, as they will be reduced further. Indeed we understand from our consultations with the Department of Finance that the existing multi-annual capital framework is subject to review and will not be published with the Revised Estimates in March. In the current climate, the expectation has to be one of substantial downward revisions to the capital provisions over the medium-term, which does not augur well for construction. However, it should be pointed out that there have also been reallocations within the PCP for 2009, following the Taoiseach announcements that a sum of €150m is being reallocated, half each, to labour intensive spending on school building projects and energy saving measures. These measures are welcomed by the CIC.

Any reductions imply that there will be projects which will not proceed to construction this year and will be delayed due to funding difficulties. Appendix 2 contains the Budget 2009 capital provisions for the main infrastructure spending departments. Following our consultations with the individual

²² The Taoiseach stated that €300m would be cut from the 2009 Budget Exchequer capital allocations but the general expectation is that the next set of figures published will show a greater reduction.

departments, we were in a position to ascertain what projects are included in the capital allocations and what projects are now unlikely to proceed but would be ready to proceed if an alternative source of funds was available. Our analysis excludes any carry-overs from 2008 as this information is not available.

That said, the Government has indicated that despite expenditure pressures which have arisen this year, capital expenditure will remain a top priority. In response to falling revenue pressures, and as part of the current Budget/Estimates process, the Government has decided to review all capital expenditure proposals for 2009 to 2011, in order to ensure that constrained resources can be targeted at priority investments in core economic infrastructure which add to the productive capacity of the economy and generate jobs. This should enable Ireland to recover quickly, when the present economic downturn abates.

In this regard the Department of Finance has issued an instruction to all other departments which prevents them from signing any contracts for capital projects worth more than €5m without its direct sanction. The CIC would be keen to maintain the PCP at a high level in the current environment, with spending devoted to projects which earn an economic return and address the infrastructure deficit, but would be concerned that this requirement could delay projects and much needed jobs.

Commitment to 5% of GNP can be exceeded

In the Budget 2009 statement, gross capital spending was projected at 5% of GNP for this year, equivalent to €8.2bn in absolute terms (8.4% below the 2008 provision). Moreover Government is committed to maintaining this rate of investment in 2010 and 2011 on core capital investment priorities which add to the productive potential of the economy. However, there is no economic rule which suggests a cap on expenditure of 5% of GNP, particularly so in the context of a construction environment where tender prices are falling, job losses are accelerating and there are positive returns to investment in infrastructure. Moreover, in a situation in which GNP in the economy is expected to contract by around 6% in 2009 and a further 4% in 2010, the commitment to capital investment will fall in absolute terms when the fixed percentage formula is used. Thus the overall planned capital commitment to the construction sector would be lower than it should be in an economy which is losing competitiveness and which continues to have an infrastructure deficit.

Government needs to make a serious commitment to spending on infrastructure which is dictated, not by an arbitrary percentage of GNP, but by the capacity to add to the productive potential of the economy and generate jobs.

Planning for further reductions will erode confidence in the construction sector

Notwithstanding the likelihood of further reductions, the total reduction in the multi-annual capital investment framework over the period 2009-2012 is already at €3.84bn in respect of the Exchequer provision or €960m on average per year²³. This is substantially above the €300m mentioned by the Taoiseach earlier in the year.

Based on the expectation of further reductions in the PCP, to be announced this month, this will only serve to damage confidence in the construction sector, generate more job losses and reduce our competitiveness even more.

²³ This €3.84bn represents the difference in the multi-annual programme amounts for the period 2009-2012 between the 2008 Budget and the 2009 Budget.

Our analysis demonstrates²⁴ that for every €1bn cut from the capital programme, the Government has to spend 51% or €510m without any infrastructure being delivered.

4.2: Public Capital Programme – status of projects

The focus in what follows is on the PCP estimated provision for 2009 as announced at the time of the 2009 Budget, the purpose of which is to identify the priority areas for capital investment in infrastructure. Projects were selected, following consultations with the main infrastructure spending departments regarding their capital provisions for 2009. This section contains a summary of those projects which we understand might not proceed in each department due to funding difficulties. It should now be possible to progress these projects, given the proposed funding solutions outlined in Section 5.

In total seven Government departments were consulted:

- Transport
- Environment, Heritage and Local Government
- Education
- Health and Children (including the HSE)
- Office of Public Works
- Justice, Equality and Law Reform
- Communication, Energy and Natural Resources

Before proceeding with the individual departments, the CIC wishes to acknowledge that it supports current Government policy in regard to the evaluation of capital projects. The CIC is firmly of the view that investment in major public capital projects should be based on robust cost-benefit analysis, implying that infrastructure projects should only proceed if they 1) generate an economic return, 2) add to the productive potential of the economy and 3) generate jobs.

4.2.1: Transport

We understand the annual allocations for transport reflect commitments in *Transport 21*, a ten year programme (2006-2015) for Exchequer and PPP capital investment in national roads, public transport and regional airports.

Transport 21 allocated over €34bn to transport projects comprising €26bn from the Exchequer and €8bn via PPP. However, it was launched in November 2005, at a time when the economic climate was more favourable than it is at present. The full transport allocation under *Transport 21* is expected to be reduced by €500m this year and by around €345m each year over the period to 2013, before any further cuts expected in the next round of reviews.

The CIC is supportive of the public transport elements of *Transport 21* subject to cost benefit analysis and labour intensity prioritisations mentioned above.

In respect of road projects, the Transport Minister announced in January 2009 that €1.44m (three-quarters of the total of €1.9m allocated to roads) would be allocated to the national roads programme this year to finance 315 projects across the country. This figure is €240m less than the allocation in 2008.

²⁴ Section 6.

The Minister for Transport has stated that:

- All road projects completed by the NRA in recent years were delivered below budget and completed, on average, approximately 4 months ahead of schedule, and
- The rate of return on road projects has been outstanding, and is typically over twice the investment cost²⁵.

The NRA suggests that every €1m invested in roads generates 10 construction jobs, which is consistent with our estimate in Section 3. Moreover, road construction is also a skill intensive activity. There are approximately 1,000 people working on the planning and design of national roads at any point in time. In addition some 800 archaeologists are employed on road projects.

Based on the above the following road schemes, which the NRA initially had hoped to progress to construction this year but are now being rescheduled due to funding difficulties, should proceed:

- N5 Longford bypass
- N25 Carrigtwohill to Midleton Road in Co. Cork
- N18 Gort to Oranmore in Co. Galway
- The reconstruction of Newlands Cross on the N7, South Dublin
- Upgrade of the N11 south of Ashford, co. Wicklow.

We understand that a number of these projects are ready to go to construction as soon as funding becomes available.

There are in addition another 7 projects, totalling some 154kms proceeding to CPO/EIS during 2009. These could go into construction during 2010.

4.2.2: Environment, Heritage and Local Government (DEHLG)

The DEHLG is allocated the second largest capital allocation after Transport. It has responsibility for Housing (65% of 2009 allocation), Water Services (26%), Local Government services (2%), Heritage (2%), Waste Management and Planning. The 2009 Budget capital allocation is €2.16bn, 4% below the estimated outturn for 2008.

The main areas which the DEHLG is responsible for are as follows:

Housing - The total capital provision is €1.4bn, €1.3bn of which is for the provision and renewal of social housing. In the current recession with the increase in unemployment and the rising numbers on social housing lists, the backlog of social housing needs should be met through a combination of new build, refurbishment or the purchase of private units.

Water services – includes investment under the Water Services Investment Programme the largest component of the Water Services Programme and relates to the provision of major water and sewerage schemes to meet the strategic objectives for investment in water services infrastructure. The programme is delivered via a rolling 3 year programme, the most recent of which was published

²⁵ NRA Press Release 28th January 2009.

in 2007 and relates to the period 2007-2009. The Programme is made up of 955 projects that have an overall capital value of €5.8 billion.

There are a number of areas which need to be addressed in respect of our water services infrastructure:

- Water Supply Quantity & Quality Deficit (e.g. Galway, Stillorgan)
- Lack of Urban Drainage Collection & Treatment Capacity
- Flood Risk Areas – Relief Schemes
- Asset Renewal – Maintaining quality of older infrastructure.

The CIC also considers the introduction of water charges would provide an additional source of revenue to fund investment in water services infrastructure. In this regard the opportunity to retrofit water meters to the housing stock would provide significant employment.

Heritage - including responsibility for National Parks and Monuments, the promotion of conservation of architectural heritage, the administration of Exchequer funding for built heritage, mainly through the provision of grants processed by Local Authorities and the Heritage Council, and funding for works on State owned properties carried out by the OPW plus support for the work of other bodies involved in built heritage, such as the OPW, the Irish Heritage Trust and the Heritage Council.

4.2.3: Education

The total capital provision for Education and Science is €931 million, up 7% on the estimated outturn for 2008. Approximately 80% of the total provision is construction related for primary and post-primary building projects but this proportion could fall to 60 to 70% for more complex third-level building projects.

The key building projects in the education sector relate to the national schools, post-primary and third level institutions. Planned capital expenditure this year for building projects across all levels is forecast to be up by 10% on 2008, although the provision for national schools is down by 5%.

Primary and post-primary

The combined allocation for primary and post-primary schools is €581 million, which is marginally below (-1%) the 2008 estimated outturn. The DES published a list of primary schools in 2004 which prioritised schools in particular bands: Band 1 related to new schools needed to accommodate areas experiencing a strong growth in the population; Band 2 prioritised schools that had a deficit of mainstream accommodation and or required refurbishment; other bands further down were deemed to be less of a priority. However that list has been overtaken by events, new schools have been added to the first grouping with the result that other schools on the list have been pushed down further.

In February, the Minister for Education and Science announced 43 school building projects which are to go to tender and construction this year. Five of the total are being retendered to get the best value for money in the construction sector. However we understand that 1,250 schools applied for major building works while only 43 were included in the February announcement.

The Minister also announced 25 school building projects that are to begin architectural planning.

It is clear that there are a substantial number of schools that require both major and minor building works. We understand, for example, that there are in excess of 1,000 primary schools which would

benefit from a new more efficient Summer Works Scheme. It is proposed by the CIC that the Department of Education and Science should abolish the 10% local contribution which delays school buildings unnecessarily and increases the cost of administration.

At a minimum, it is essential that all primary and post-primary schools are built to a modern high quality standard and are fit for purpose in line with national policy objectives regarding the importance of investment in education.

Third level institutions

Similarly it is essential that third level institutions have state of the art research and other shared facilities if Government is to be successful in building a knowledge based economy over the medium-term.

4.2.4: Health and Children – capital provision

The total capital provision for the Department of Health and Children is €550m, over three-quarters of which are allocated to hospital building and equipment. This is down significantly (-23%) on the estimated outturn for 2008. Investment in health infrastructure has changed over the period 2002-2006, when it averaged €513m per year, just 7% behind the 2009 estimated provision.

We understand from our consultations with the HSE that €230m of the €425m allocated to the HSE for hospitals was already contractually committed at the beginning of 2009. Thus the vast majority of the capital projects within the HSE are already in train and no new projects are anticipated to come on stream during 2009. Of concern would be the suggestion that if the capital provision was to be cut again, it is likely that projects with momentum would have to stop.

The more sophisticated the project the more which tends to be spent on equipment. Approximately 65% to 70% on average of the total spend goes into construction; the balance represents equipment and design team fees.

Hospital projects

Economic rates of return for health infrastructure projects tend to be over 13%²⁶. The poor standard of the existing hospital building stock plus the lack of compliance with medical and health care best practice guidelines, imply that older hospital buildings are increasingly unfit for purpose and are urgently in need of replacement.

Following our consultation with the Department of Health and Children and the HSE a number of projects were referred to such as, for example, the **Mater Adult Hospital**. Enabling works are underway at the site and approval to appoint contractors is expected June/July 2009. Building is to commence in June/July 2009 and a construction period of two years is anticipated. Procurement of the **National Paediatric Hospital** needs to be accelerated. The procurement to deliver the **national oncology programme** also should be resolved. In regard to the mental health programme, the relocation or redevelopment of the **Central Mental Hospital** should be advanced. The HSE also needs to proceed immediately with the **National Rehabilitation Hospital**.

The provision of **Primary Care Centres** is a major labour intensive programme nationwide and should be prioritised. We understand that there is a need for 200/250 Primary Care Centres throughout the

²⁶ See Section 3.

country. In 2009, agreement in principle was reached with bidders in 48 locations. Some 20 are already built, including 5 in Dublin. A further 47 locations have been agreed with the HSE Board.

In regard to **long stay residential units (Care of the Elderly Programme)** we understand the requirement is for 8 by 20 bed units, with 4 or 5 units on the same site and the HSE is keen to place them within the community. The procurement of these units needs to be accelerated and the funding put in place for the HSE.

4.2.5: Office of Public Works (OPW) – capital provision

The planned Exchequer capital allocation for the OPW was cut back significantly in the 2009 Budget provision from €387m in 2008 to €226m in 2009 (excluding PPP). The vast bulk of the reduction reflects the deferral of decisions on the decentralisation programme until 2011 which was announced in the 2009 Budget.

Garda stations

There are currently 10 major new garda stations between €10m and €25m which could be ready to start construction within three to six months.

Given the accelerated planning process available for garda stations, they have a real potential to save jobs in 2009.

There are some 20-30 garda station projects around the country in towns, at an average cost of c. €200k to €300k. These small projects can be an important source of work for small and medium sized contractors and can have a significant impact on the local economy. They represent a prime example of the type of projects suited to the small scale funding proposals covered in Section 5.

Major building projects

OPW also manages major projects for Government department and State Agencies, a number of which were mentioned and are noted below

- **National Concert Hall** - in a competitive dialogue, expect preferred bidder to be selected by December 2009. Construction expected to start second half of 2010.
- **Relocation of the Abbey Theatre** - OPW have yet to undertake an international architectural design competition for this and we understand that it is unlikely to reach construction for another four years.
- **National Sports Campus** at Abbotstown - considerable investment made to date on this project which the OPW expects to see submitted for planning in December 2009.

The OPW is keen to progress the National Sports Campus project and put it out to tender so that the project can achieve good value for money and be in place after the current difficult period ceases.

4.2.6: Justice, Equality and Law Reform – Capital Provision

The estimated capital budget for the Department of Justice, Equality and Law Reform (JELR) in 2009 is €155m or €374m including the estimate for PPP. Approximately 40% of the €155m goes into construction. In terms of building projects the main areas for which the department has responsibility are prisons and courthouses.

Capital projects

The following information regarding selected capital projects was obtained from the Department:

- The PPP estimate of €219m in the department's capital allocation is not expected to be spent in 2009. We understand this relates to **Thornton Hall** which includes the relocation of Mountjoy Prison plus plans for a new **State Forensic Science Laboratory** on the site some three years down the line. Immediate attention is to focus on the development of a DNA database, legislation for which is expected to be passed early this year. The new Thornton Hall will also contain an evidence repository plus a garda station as part of the prison complex.
- The **Munster Prison** at Kilworth Camp, located between Fermoy and Mitchelstown, is to be procured by PPP. The site was allocated by the Department of Defence to develop a new prison which will replace Cork prison and serve the Munster region. A detailed business case is being prepared for this project but it is unlikely to move to construction for a few years.
- Preliminary work has been done for a **new national detention facility** for juveniles in Lusk and is expected to start construction in 2010.

4.2.7: Communications, Energy and Natural Resources – Capital Provision

The capital provision for the DCE&NR is €134m which is mostly allocated to communications and sustainable energy projects. The largest allocation (€54m) is for sustainable energy programmes covering a number of small but important schemes in the context of increasing energy efficiency (the Home Energy Saving scheme (€20m), the Greener Homes schemes (€12m) for installing heat technologies, and the Warmer Homes low income support scheme (€5m)).

In this regard the CIF has recommended²⁷, as part of an incentivisation package, that Government should subsidise energy audits of houses (BER assessments) and consequent retrofit work, based on verified savings as a result of the homeowner carrying out works to specification. A modest investment of say €10,000 per house could give rise to a potential market of €9bn. If this was spread out over a period of 6 years it would amount to a €1.5bn investment per annum which could be incentivised to a level of 10% giving rise to a Government investment of €150m per annum. Significant employment would also be created as a result.

There is a provision of €45m for the provision of communications infrastructure including broadband via the Metropolitan Area Networks programme and the National Broadband scheme. It is estimated that some 10% of the country has no broadband coverage.

Investment by semi-State energy companies – non-voted expenditure

The vast bulk of the public capital provision for CE&NR relates to investment by the semi-state companies in the energy sector. Significant investment (€1.6bn) is planned, the vast bulk of it by the ESB and BGE. In the current climate, projects covered by these capital provisions would appear to be less vulnerable to any cutbacks than projects directly funded by the Exchequer.

Much of the capital investment by ESB, BGE and Eirgrid is sanctioned by the Energy Regulator and is funded mostly from their own resources plus borrowing. The aggregate investment level by all three is substantial and the individual companies should be encouraged to make investments in the Irish economy as far as possible as opposed to elsewhere.

²⁷ Construction Industry Submission to Department of the Taoiseach, January 2009.

4.3: Non-Exchequer funded capital projects

In addition to the allocations from the Exchequer there is a further substantial non-Exchequer capital allocation of around €6.1 billion which is funded out of the resources of the semi-state agencies and local authorities and from external borrowings (EU receipts)²⁸. A proportion of this would make its way into the construction sector.

The largest provisions relate to investment by the:

- Semi-State energy companies;
- Dublin Airport Authority at the State airports, notably at Dublin;
- Local authorities in non-national roads;
- Local authorities in local authority and social housing;
- DEHLG in Environmental Services and water and sewerage services;
- CIE and the RPA in public transport.

This investment depends on the performances of the individual semi-state companies plus the income of local authorities, which is suffering from the weak economic performance and the decline in development contributions.

4.4: Indicative project list

The analysis of the PCP above together with our consultations confirm that there are a number of infrastructure projects which could proceed if alternative sources of funding were available. An indicative list of projects follows based on our consultations which we understand might not proceed in each department due to funding constraints. The CIC considers these projects to be among those suitable for the innovative funding solutions proposed in Section 5.

Thus the CIC recommends the following:

Transport

- ✓ The major inter-urban and key secondary routes are completed.
- ✓ Proceed with the Atlantic Corridor.
- ✓ A significant amount of funds should be made available for a programme of minor works on the national secondary roads, which would benefit employment in every county.
- ✓ The Dublin Outer Orbital route should be progressed.
- ✓ Public transport projects which pass a cost benefit analysis should be undertaken.

Water

- ✓ Major watermains rehabilitation projects in all the major urban areas to reduce leakage to target levels.

²⁸ See Appendix 1.

- ✓ Complete the upgrading of water and wastewater treatment works within the programme.
- ✓ Implement the Greater Dublin Drainage Strategic Study recommendations including expansion of the Ringsend Works, upgrading of the networks and advancing of a new strategic treatment works in North Dublin.
- ✓ Complete Water Services Strategic Plans in each water supply area (Local Authority) in accordance with the Water Supply Act, identify priorities and proceed to planning stage.

Waste Management:

- ✓ Recycling & Recovery Infrastructure.
- ✓ Speed up implementation of the Regional Waste Management Plans in all regions to meet recycling and recovery targets.

Flooding:

- ✓ Complete the Catchment Flood Risk Management Plans for all priority catchments and develop a co-ordinated programme of works (OPW and Local Authorities) to protect urban areas at risk to flooding.

Housing

- ✓ The backlog of social housing needs is met through a combination of new build, refurbishment or acquisition of private units.

Education

- ✓ All primary and post-primary schools are built to a modern high quality standard and are fit for purpose in line with national policy objectives regarding the importance of investment in education.
- ✓ The Government should adopt a similar approach to the Building Schools for the Future initiative in the UK which was an approach introduced in 2006 for capital investment in school buildings that would see the entire secondary school building stock upgraded and refurbished to 21st century standards.
- ✓ The Minister for Education and Science should immediately publish a five-year school building plan for the list of schools to be constructed, waiting to go to tender and at the early or advanced stage of architectural planning.
- ✓ The Minister for Education and Science needs to urgently reintroduce a more efficient Summer Works Scheme.
- ✓ Third level projects supporting the knowledge based economy should be progressed.

Health

- ✓ The provision of Primary Care Centres is a major labour intensive programme nationwide and should be prioritised.

- ✓ In line with current health policy to place all services within the community in order to free up beds in Acute Hospitals, that Government should prioritise the provision of long stay residential units throughout the country over the period 2010-2013.
- ✓ It should be a key priority to improve the quality of the existing hospital building stock to ensure it is fit for purpose and meets medical and health care best practice guidelines.
- ✓ Procurement of the **National Paediatric Hospital** needs to be accelerated.
- ✓ The procurement to deliver the **national oncology programme** also needs to be resolved.
- ✓ The relocation or redevelopment of the **Central Mental Hospital** needs to be advanced.
- ✓ The HSE proceeds immediately with the **National Rehabilitation Hospital**.

Garda Stations

- ✓ The Garda Station Building Programme should be progressed.

OPW major capital projects

- ✓ The National Concert Hall, the relocation of the Abbey Theatre and the National Sports Campus at Abbotstown should be progressed immediately.

Prisons

- ✓ The Thornton Hall complex should either be progressed immediately to accommodate the relocation of Mountjoy Prison or the prison should be redeveloped / refurbished on its existing site.
- ✓ The Munster Prison should be fast-tracked to provide construction employment in the Munster region.
- ✓ The new national detention facility for juveniles should be brought forward to 2009.

Courthouses

- ✓ A programme to build/refurbish courthouses across the country should be accelerated.

Broadband

- ✓ The roll out of broadband. In this context broadband penetration across firms and households in Ireland is among the lowest in the EU-15 and our ranking across the EU15 has not improved since 2003²⁹. Broadband is an important requirement for businesses from a competitiveness perspective and it would appear, that with Ireland significantly below the EU average, considerable investment is needed to allow Ireland to at least catch up.

Energy saving measures

- ✓ Energy saving measures which generate employment for medium and small construction companies.

Non-voted expenditure review

²⁹ Annual Competitiveness Report 2008. Benchmarking Ireland's Performance: Volume 1, National Competitiveness Council. Page 102.

- ✓ A review should be undertaken of non-voted expenditure to ascertain 1) what funds, if any, could be reallocated to construction projects; which 2) earn an economic return, and 3) which generate the most employment.

4.5: Private construction prospects – the CIC survey

The CIC carried out a survey to establish the volume of private sector construction work over the next three years. Over 200 organisations, including developers, contractors and private clients, were contacted to ascertain their views regarding the state of the construction industry over the period 2009-2011.

Following an analysis of the CIC survey below, this section presents an overall projection for the construction industry, looking at the prospects for investment by the private and public sector, including new, and repair, maintenance and improvement (RM&I) works.

The private sector construction industry is acutely aware of the serious risks associated with the current downturn. They are concerned about the rapid acceleration of job losses, the increase in unemployment and the loss of skills in design and construction which are essential to the long-term success of the economy. Moreover, this is happening at a time when the State can benefit from the exceptional value for money that is now available from the Industry.

The survey questions related principally to private sector work and covered industrial, offices, retail, mixed-use schemes, hotels, sports and cultural facilities. **Based on the aggregate volume of work from the survey (c. €2bn. in 2007) and the current estimate of new private non-residential construction in 2007, as per the Annual Construction Industry Review and Outlook (€5.82bn), the survey accounted for 34% of the total value of new private sector work in 2007.**

Substantial fall off in private sector work over next two years

The question to ascertain the prospects for private non-residential work over the period 2009-2011 suggests that the volume of work looks set to fall sharply over the next three years. Companies are extremely pessimistic about the outlook as employment losses continue to accelerate. It is evident from the survey that confidence in the sector is at an all time low.

Table 4.1 sets out the extent of the decline in activity envisaged by the respondents to the survey for the period 2009-2011. The gross figures for 2009-2011 are derived based on the 2007 CIC survey figure (c. €2bn) which corresponded to 34% of the total value of new work in 2007 (€5.8bn).

Table 4.1: Projected volume of private sector work from CIC survey

	2009E	2010F	2011F
Value private non-residential construction (€m) from CIC survey	1,079	641	340
Annual % change	-44.1%	-40.6%	-46.9%
CIC Survey estimate as % of total in 2007 = 34%	34%	34%	34%
Projected volume of work 2009-2011 based on 2007 CIC survey representing 34% of the total value of NEW work in 2007	3,210	1,907	1,012

* CIRO Construction Industry Review and Outlook September 2008, Department of the Environment, Heritage and Local Government.

With serious consequences for job – direct, indirect and induced

This prognosis is extremely negative and will have disastrous implications for employment levels in the sector, resulting in the loss of the significant skills base which has been built up over the past decade and which was achieved at a considerable cost by investment in education and training. With the volume of private sector work expected to contract to less than €2bn within two years, the scale of the industry by 2010 could be such that total employment levels could fall back to around 147,000 (direct plus indirect) compared with 400,000 at the peak³⁰. A contraction in jobs at this rate would imply serious job losses elsewhere in the economy as the *induced* employment impacts, in terms of the jobs created to sustain the consumer expenditure by those in employment in construction, would be severely reduced also.

4.6: Prospects for overall construction activity

The projections for construction output reflect current sentiment in the industry as new orders fall sharply, clients postpone investment decisions, job losses accelerate and the economy struggles with recession.

Table 4.3 presents our forecast for construction output, assuming there is no stimulus package from Government.

Public sector construction activity

At the present time it would appear that the only impetus to construction is coming from the public sector, although recent concerns about the rapidly deteriorating public finances suggest that the capital programme may not be immune for the current economic difficulties. Already the Taoiseach indicated early in February that there would be a €300 million across-the-board reduction in the 2009 Budget Exchequer capital allocations³¹. As previously acknowledged at the beginning of this section, the reduction in the Exchequer capital provision will be higher. The CIC estimates are set out in the next Table together with the figures published with the 2009 Budget.

According to Table 4.2:

- The CIC has revised downward the total Exchequer capital investment provision to an estimated €7bn in 2009, down 15% on the 2009 Exchequer provision at the time of the Budget (€8.2bn) and down by almost 18% on the estimated outturn for 2008 according to the CIC.
- The estimated Exchequer provisions for 2010 and 2011 are also revised substantially downwards, from €8.3bn to €6bn in 2010 and from €8.1bn to €5.5bn in 2011.
- Thus overall the total Exchequer amount over the three years 2009-2011 is reduced by around €6bn from €24.7bn to €18.5bn.

³⁰ See forecast of job losses in Table 2.1.

³¹ 3 February 2009 - Taoiseach Announces Government Decision on the Implementation of the Framework for Stabilisation, Social Solidarity and Economic Renewal following negotiations with the Social Partners.

- The non-Exchequer amount is assumed at €4bn each year while the PPP/NDFA element remains unchanged.
- The vast bulk of the public construction spend is assumed to move in line with the percentage change in the Exchequer amount over the period 2009 to 2011. Thus the 2008 estimate for public sector construction is projected to decline by 17.6% in 2009, 14.3% in 2010 and 8.3% in 2011.
- The total PCP declines from €11.7bn in 2007 to €9.5bn in 2011, when the PPP/NDFA amounts are excluded. The last time the PCP was around €9.5bn was in 2006.

Table 4.2: Projected public capital provisions 2009-2011

	2007	2008E	2009E	2010F	2011F
PCP					
Exchequer	8,017	9,249	8,231	8,297	8,193
PPP/NDFA	67	334	507	1,438	2,139
Non-Exchequer	<u>3,721</u>	<u>5,020</u>	<u>6,072</u>	<u>N/A</u>	<u>N/A</u>
Total PCP (Budget 2009)	11,805	14,603	14,810	9,735	10,332
CIC Revisions (estimates)					
Exchequer	8,017	8,500	7,000	6,000	5,500
PPP/NDFA	67	334	507	1,438	2,139
Non-Exchequer	<u>3,721</u>	<u>4,000</u>	<u>4,000</u>	<u>4,000</u>	<u>4,000</u>
Total PCP	11,805	12,834	11,507	11,438	11,639
Total PCP (excl PPP/NDFA)	11,738	12,500	11,000	10,000	9,500
Annual % change in Exchequer amount			-17.6%	-14.3%	-8.3%
Public Sector construction (est)	6,527	5,874			
- as % of Exchequer	81%	69%			
- as % of Total PCP	55%	46%			
Exchequer provision as % of GNP	5.0%	5.2%	4.8%	4.3%	4.0%

Source: Multi-annual Capital Investment Framework from Budget 2009 and CIC estimated revisions.

We should point out that, in the context of the 5% of GNP figure used by the Department of Finance, the percentage comes in at less than 5% when the lower projected Exchequer figures are used. However, the Exchequer capital provision is falling significantly in absolute terms - by €2.5bn between 2008 and 2010 - implying a substantially lower than planned public capital commitment to the construction sector. This again illustrates the totally arbitrary nature of the 5% figure for which there is no basis, especially in an economy where GNP is contracting.

Housebuilding

We have included a projection for housebuilding activity in order to gauge the prospects for the industry as a whole. The forecast assumes the level of new housebuilding falls to 23,000 units this year, followed by around 12,000 units in 2010. This represents an enormous reduction on levels at the peak (88,000) but is supported by recent trends in housing commencements and registrations. The projection also assumes that investment in private household RM&I also declines over the forecast period, reflecting a lack of confidence, difficulty securing credit, concerns about job prospects and reductions in disposable income in an increasing number of households.

Private non-residential construction

In respect of the private non-residential sector we have used the grossed up figures from our survey for the projected period 2009-2011 (Table 4.1). Our 2008 figure is derived by assuming a 20% reduction in the volume of construction output in 2007, our base year. This reflects the very weak performance in the second half of the year.

We apply the same percentage reductions to our 2007 base figure for the volume of private non-residential repair, maintenance and improvement work (RM&I), which was also covered in the survey.

The volume of agricultural building is shown separately as this sector has seen unprecedented levels of investment in building over the past three years – almost €2bn – in response to the introduction of the Nitrates Directive and increased participation in the Rural Environment Protection Scheme. Farmers received grants towards this investment provided the buildings were completed by December 2008. Accordingly there is likely to be little, if any, investment in agricultural buildings over the next three years. Our projection assumes there is none.

Thus our overall projection is presented in Table 4.3 and in Figure 4.1.

Table 4.3: Construction output projections to 2011*

€ million	2007 (07 prices)	2008E (08 prices)	2009E	2010F	2011F constant 2009 prices
New completions forecast (units)	78,027	51,724	23,000	12,000	10,000
New housing	17,770	10,602	4,713	2,458	2,047
RM&I housing	4,946	4,323	3,458	2,767	2,490
All housing	22,716	14,924	8,171	5,225	4,537
Private non-residential NEW #	5,822	4,657	3,210	1,907	1,012
Private non-residential RM&I **	902	721	403	240	127
Total private non-residential (excl agri.)	6,723	5,379	3,613	2,147	1,139
Total agricultural building	864	816	0	0	0
Total private non-residential	7,587	6,195	3,613	2,147	1,139
Public civil engineering NEW	4,581	3,793			
Public social Infrastructure NEW	1,945	1,611			
Total public sector NEW	6,527	5,404	4,451	3,815	3,497
Public civil engineering R&M	1,184	1,089			
Public social infrastructure RM&I	447	411			
Total public sector RM&I	1,631	1,631	1,343	1,151	1,055
Total public sector	8,158	7,035	5,793	4,966	4,552
Total Construction Output	38,461	28,155	17,578	12,337	10,228
Construction as % of GNP	23.9%	17.1%	11.8%	8.8%	7.4%
GNP volume % (DKM est)	4.1%	-2.0%	-6.0%	-4.0%	-1.5%
			Annual % change in VOLUME		
		2008E	2009E	2010F	2011F
All housing		-28.1%	-45.2%	-36.1%	-13.2%
Private non-residential (excl agric)		-20.0%	-44.1%	-40.6%	-46.9%
Total agricultural building		5.0%	-100.0%	0.0%	0.0%
Total private non-residential		-17.2%	-52.2%	-40.6%	-46.9%
Total public sector NEW		-10.0%	-17.6%	-14.3%	-8.3%
Total public sector RM&I		-10.0%	-17.6%	-14.3%	-8.3%
Total public sector		-10.0%	-17.6%	-14.3%	-8.3%
Total construction output		-22.1%	-38.6%	-28.3%	-15.5%

Using CIC survey numbers in Table 4.1. * In the absence of any Government stimulus.

** Applying the same percentage reduction as in the CIC survey for new work.

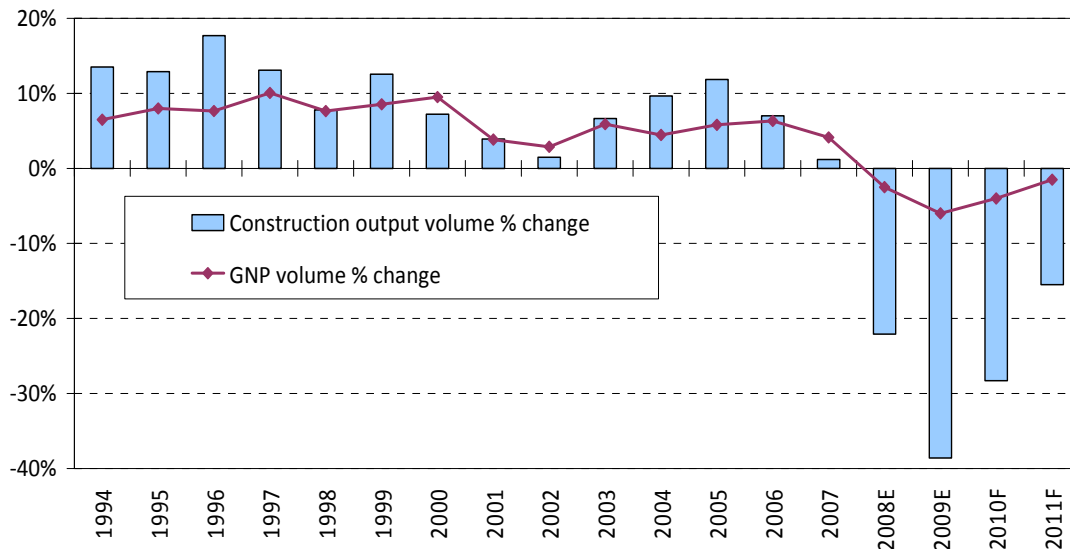
Based on the estimate for 2009 (€17.6bn), it is clear that by the end of this year the industry will already be below its optimum size (€18bn.)

The 2010 figure is only one-third of the value of output in the industry at the peak but is also one-third below what is considered to be the optimum level of construction output for the medium-term.

The detailed projections suggest that the total volume of construction output could fall to around €12bn by the end of 2010, in the absence of any Government stimulus, which corresponds to just under 9% of GNP compared with 24% of GNP at the peak in 2007.

These projections are consistent with cement sales which were down 25% in 2008 and are trending down a further 45% in 2009.

Figure 4.1: Construction - the most severe contraction in thirty years



Industry will lose €26bn in output in three years which is the value built up over a 15-year period since 1992

Based on the projection above the industry looks set to lose €26bn in output between the peak year 2007 and 2010. Looking back over the volumes generated in the past, the industry spent 15 years building up those volumes, as output in the industry was €26bn below the 2007 peak back in the early 1990s³². The projection is for a further reduction to around €10bn in 2011, which is 43% below the optimum level.

This is a substantial decline in what was a major sector of the economy in terms of the substantial direct and indirect jobs and Exchequer revenues which it generated plus the *induced* employment impacts created by those spending their wages throughout the wider economy. The much lower amount of infrastructure put in place as a result also reduces the productive potential of the economy and weakens our competitiveness. And this is at a time when there is a real requirement to improve our competitiveness to allow us to compete again in international markets.

Action is required immediately to stem this unprecedented decline in construction volumes

It is, therefore, essential now that the Government acts immediately to stem this massive loss of output. The CIC believes that there is a real opportunity now to harness the legacy of the construction boom while at the same time delivering high quality infrastructure and saving 50,000 highly skilled and experienced jobs. The innovative funding solutions proposed (at Section 5) combined with the

³² Looking at construction output in constant prices, i.e. excluding inflation.

exceptional value for money available in the market provide a unique opportunity to manage the adjustment to a more sustainable level of construction output over the medium-term. We consider what this might be below under Section 4.7.

4.7: The optimum construction industry over the medium-term

The value of output in the construction industry peaked at €38.5 billion in 2007, or 24% of GNP (20% of GDP). This compares with a value of €17.6 billion in 2000 or almost 20% of GNP (17% of GDP). These proportions were unsustainable, even in 2000, and compare with an average of around 12.5% of GDP across the Euroconstruct region³³ (since 1993). Thus it would appear that the optimum size of the Irish construction industry over the medium-term will be substantially below where it was in 2007, with the obvious consequences for construction employment.

Already with estimates for construction output suggesting that the value of output could decline to around €12 billion by the end of 2010, making it the most serious contraction in thirty years, this would see the industry falling back to below 9% of GNP.

An industry equivalent to around 12 to 15% of GNP is more sustainable

However, if the Irish construction industry is to align itself over the medium-term, not just with the rest of Europe, but with its own historical averages in terms of GNP³⁴, the value of Irish construction output should settle at around 12% of GNP over the medium-term. This would imply an industry of at least €18bn (12% of 2008 GNP). We have already indicated that the industry by the end of 2009 will already be below this optimum level.

The further decline of the industry beyond 2009 will result in the unnecessary loss of jobs and the undesirable erosion of the economy's essential long-term productive capacity.

Ireland in the short to medium-term should have a construction industry which is larger than the EU 15, because of its infrastructure deficit.

While the optimum level (€18bn) is below the unsustainable levels recorded at the peak, it is substantially above the perilous levels to which the industry will descend to over the next three years, without a Government stimulus, estimated here at €10bn or 43% below its optimum level.

Moreover this level would allow the considerable investment which has yet to be made in bringing Ireland's overall infrastructure stock and quality up to OECD levels to take place³⁵.

³³ The Euroconstruct region comprises 15 countries in Western Europe and 4 Central and Eastern European countries - 19 countries in total. The GDP is the measure used in Europe. Ireland is unique in that it has significant net income flows with the rest of the world which need to be taken into account in deriving the output of the economy. Thus in Ireland GNP = GDP less net income flows from the rest of the world.

³⁴ Over the 25 years 1984 to 2008(E) the construction industry accounted for almost 17% of GNP on average. Excluding the exceptional boom period 1994-2008(E), construction output accounted for around 13% of GNP over the period 1984 to 1993.

³⁵ Ireland's score in regard to overall infrastructure quality remains significantly below the OECD average according to a survey of executives' perceptions regarding the overall quality of infrastructure in an economy. Annual Competitiveness Report Volume 1: Benchmarking Ireland's Performance, page 97, National Competitiveness Council January 2009.

4.8: Opinions from the CIC survey

The CIC survey also sought separate information from the respondents to the following three questions:

- 1) For projects which you had planned and are now delayed or postponed for the period 2009-2011, what are the main reasons for this delay/postponement?
- 2) If the Government decides to come forward with a stimulus package for the construction industry, in what areas would you suggest they should invest?
- 3) What should the Government do to encourage development by the private sector?

4.8.1: Reasons for delaying/postponement of projects

When asked what the main reasons were for delaying/postponing projects that had been planned for the 2009-2011 period, close to 100% of respondents stated that the inability to secure finance from lending institutions was the primary reason. Many referred to the lack of project finance, the lack of finance for purchasers and tenants, the lack of finance for residential mortgages, the unavailability of development finance, the fact that banks have reduced the amount of finance, making projects unviable. The lack of funding was seen as a consequence of the banking crisis that has prevailed during the months gone by.

Respondents also noted the significant reduction in demand as having a major influence on their reduced/delayed projects, second only to the lack of finance available. Reduced demand for office accommodation and the general lack of tenants and purchasers were mentioned as being the main source of concern in this regard.

Of the main reasons for such reduced activity levels, quite a large proportion of responses mentioned unacceptable delays on the behalf of An Bord Pleanála as being responsible. Having provided examples of such delays, some respondents reported them as being largely spurious and totally unacceptable.

Other reasons stated included the very weak market conditions as reflected in the collapse of the residential/ commercial property market and the resulting uncertainty associated with this as well as the economic recession.

In summary, the following were cited as being responsible for delaying/postponement of construction projects:

- Lack of finance;
- Reduced demand levels;
- Delays with An Bord Pleanála;
- Market collapse (both residential and commercial);
- General uncertainty.

4.8.2: Recommended areas for investment as part of stimulus package

In response to this question, an overwhelming majority of respondents mentioned investment in capital projects on infrastructure as the top priority. The areas in which such investment should be targeted were as follows:

1. Education - schools and R&D centres of excellence plus address the space deficits at 3rd/4th level.
2. Renewable energy and wind farms.
3. Insulating the existing building (housing/commercial) stock to improve its energy rating.
4. Transport – National roads and local roads for smaller villages were mentioned and rail was also mentioned in the context of Transport 21.
5. Health, healthcare and medical infrastructure.
6. Water/Waste -such as treatment plants and schemes for smaller villages and towns.
7. Ports and airports – in the context of connectivity infrastructure.
8. Social Housing.
9. Public Buildings.

Education infrastructure, notably schools, third level and research buildings were the most mentioned areas for investment.

In addition to the above, there were a small number of requests for tax incentives to encourage house purchase and the development of industrial/technology parks in particular areas. Other such suggestions mentioned included the abolition of stamp duty and Government interventions to promote lending.

One specific suggestion related to the development of multi-purpose community based sports facilities which would be operated in partnership with local authorities, educational establishments and community clubs. The provision of State funding for the construction of such facilities would generate a good return on investment for the State during construction and operation as well as significant returns in the form of social capital within the communities in which they would be based.

4.8.3: Role of Government in encouraging development in the private sector

The third and final question that was asked sought views on what the Government should do to encourage development in the private sector. This question was asked on two levels – firstly, in relation to new projects and secondly, in relation to Repair, Maintenance, Improvement/Minor Works.

The majority of respondents felt that the most important role that the Government could play in encouraging private sector development was assisting the banks to ensure access to funding for private clients.

Infrastructure investment in the form of further PPP projects was mentioned as was investment in the energy sector, particularly in enhancing the energy efficiency of the current building stock. In addition, increasing the speed of and response from An Bord Pleanála was further emphasised within this category.

More generally, stabilising the economy, increasing competitiveness and restoring confidence were referred to by some respondents as been important tasks for the Government for encouraging private sector development.

Respondents feel that the Government should carry out the following functions if development by the private sector is to be encouraged:

- Assist the banks to ensure access to funding.
- Consider targeted tax incentives.
- Infrastructure development, including Public Private Partnership.
- Focus on energy projects.
- Restore confidence and competitiveness.

In terms of promoting development in the category of Repair, Maintenance, Improvement and Minor Works, the area cited most was that of grants for those who undertake such work, with a particular emphasis on energy efficiency work and the provision of incentives for energy upgrading.

In conclusion, the overriding concern amongst the respondents was the banking crisis and the difficulty securing finance which many felt needed to be resolved if private sector development was to recover. There was an overwhelming emphasis on infrastructure investment, especially in schools and in the energy efficiency of buildings. Finally, there were several references to the inefficiency of the planning system and to the time it takes An Bord Pleanála to carry out its role.

While the earlier emphasis in this Section has been on the public sector, it is important to acknowledge that the private sector also has an important role to play in stimulating construction activity. Any stimulus from Government will boost confidence in the private sector and encourage private sector development, thus adding further to the volumes of construction output.

Section 5 Innovative funding solutions for public infrastructure

5.1: Introduction

This report has already made the case for investment in productive infrastructure. The benefits which arise are increased Exchequer revenues and jobs, but more importantly, addressing Ireland's infrastructure gap will lead to improvements in our competitiveness. This effect will last long past the period of any stimulus.

It is clear from the earlier sections that the construction industry has ample productive capacity available for work right now. With tender prices falling rapidly, the industry is more competitive than it has been for a long time. It is in a position to deliver excellent value for money. The Government cannot control job losses such as those which occurred in Dell. It can however, embark on a programme of public works. As Roosevelt discovered during the depression in 1930's America, public works not only deliver immediate jobs locally, but their economic effects accrue for many years afterwards.

The key priority projects should be those that can add to Ireland's productive capacity and that earn an economic return.

This section of the report deals with the critical issue of financing for those infrastructure projects³⁶ which we have identified in Section 4. We explore innovative funding solutions to assist with the urgent delivery of much needed public infrastructure which will improve the competitiveness of the Irish economy and lay the foundations for the next economic upturn. The source of the funding proposed is the Pension Funds of Ireland, which in the absence of the scheme proposed will likely follow their current allocation of 80% to assets outside of Ireland.

Fund infrastructure as long as the cost is less than the returns

The CIC is not arguing for indiscriminate investment in infrastructure. From an economic point of view, investing in infrastructure makes sense as long as the return on that investment is greater than the cost of funding it. Moreover our analysis suggests that there are direct and indirect benefits which are generated by the investment. There are further induced impacts as economic activity is generated elsewhere in the Irish economy. Although up to date estimates of construction multipliers are not available for the Irish economy, international research suggests that multipliers range between 1.5 and 2.0. Allowing for the fact that Ireland is a small open economy, the CIC has assumed that the induced effects may be as low as 1.4 times and therefore has used this conservative figure in its analysis. In effect this means that every €1 spent on construction generates a further 40c of induced impacts

³⁶ This funding section was prepared by Goodbody Corporate Finance and builds on two discussion papers which were circulated to the Department of Finance in December 2008 and January 2009. These papers are available from Goodbody Corporate Finance or the CIC.

5.2: Raising finance for infrastructure in a funding crisis

The bank market is closed for infrastructure

Over the last 15 years, throughout Europe, a new form of financing has emerged - generally referred to as Public Private Partnership (PPP). In the traditional PPP model, bank funding (funded over a period of 20 to 25 years) provided an alternative to Government financing through the Gilt market. While this funding is more expensive, the overall cost of the infrastructure can be justified by risk transfer, design innovation and a proven ability to achieve construction on time and on budget.

The recent credit crisis in the banking sector now means that even the strongest banks struggle to source funds beyond 5-7 year period. This has resulted in a large number of PPP transactions being cancelled or delayed by a lack of funding, not only in Ireland but elsewhere in Europe.

There is a partial solution

Because of a mismatch in funding³⁷, the concept of a "mini-perm" structure has emerged. In the "mini-perm" structure, the bank provides the first 5 to 7 years of a 20 year debt profile. However, the terms and conditions of such structures are becoming ever more onerous. If the client cannot refinance at the end of 5 to 7 years, the banks now require complete control through an event of default at the end of the 5 to 7 year period. In the UK and in France, the governments have had to stand behind the refinancing or more recently the UK Government has promised to provide funding directly into the structures. In the current market, the Irish Government will have to provide similar support or will have to find an alternative form of financing.

5.3: A new method of funding

The CIC has had discussions with a large number of institutions and pension fund managers over the last few months. There is a desire amongst the fund managers to be seen to be working in the national interest. The CIC has proposed a transaction to the funds which would work as follows:

- A committed fund for infrastructure would be established.
- The fund would be used for a number of projects, giving a "portfolio" effect.
- The debt in the fund would be committed in advance by the pension fund, and would fund approximately 90% of the infrastructure cost.
- The remaining 10% of the infrastructure cost would come from the construction industry in the form of equity or from specialist infrastructure funds.
- The institutions are willing to take Availability³⁸ risk in these projects. This is similar to the views of those banks still active in the project finance market. Demand Risk³⁹ would not be attractive, given the uncertainty of the current market conditions.

³⁷ Banks normally borrow short-term and lend long-term. Because of increasing uncertainty about long-term funding, they are no longer willing to live with this mismatch and will only lend money for the same length of time they can raise committed money for.

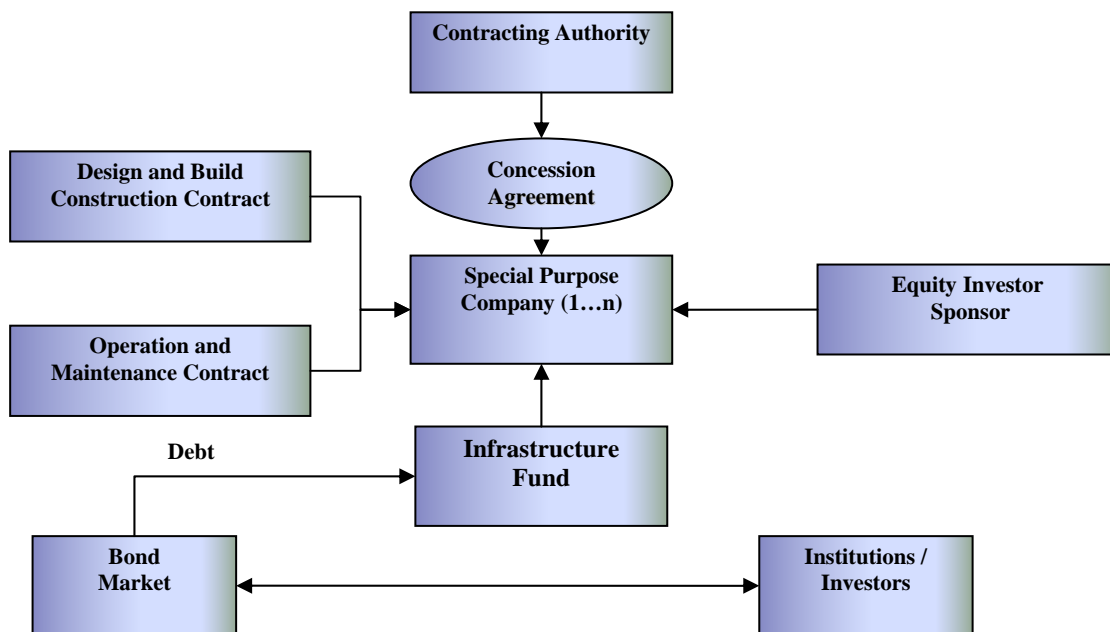
³⁸ Availability Risk is best understood by way of example. In the case of a road, it is "available" when it is open for traffic. Payments are made proportional to availability. A road can be partially available,

- The institutions are willing to take similar maintenance and operation to that taken in traditional PPP / DBFO transactions.
- The institutions would expect to see traditional levels of Compensation on Termination.

5.4: How does it work?

The CIC envisages a traditional Design, Build, Finance and Operate (DBFO) structure, where a Government entity contracts for new infrastructure with the private sector. The private sector competes for the construction on a "design and build" basis. It also includes the maintenance and operation of the infrastructure over the remaining 20 or 25 year basis. The competitive element in the design, build and operate phases ensures best value for money. The finance is proposed to come from the Pension Funds, with the NTMA ensuring fair value for money - see below.

The following is a diagrammatic representation of the structure:



The structure proposed is "Off Balance Sheet" for Eurostat

e.g. when one of two lanes is open with the other closed for maintenance. In the case of a school or another building, it is deemed to be available when it is "fit for purpose" i.e. light, heat and other conditions are met. Roads, rail, water and sewerage, waste collection, hospitals, schools and prisons have all been contracted internationally on the basis of availability payments.

³⁹ Demand risk normally arises when payments are proportional to use, e.g. according to the number of cars using the road, the number of pupils in the school etc. User charges may or may not be levied, but in general, charges have been levied internationally in the case of roads and in water and sewerage projects.

Using an infrastructure fund, such as that proposed, moves the associated borrowings “off balance sheet” for the Government. It is therefore compatible with the Government's stated desire to reduce the headline deficit in the General Government Balance (GGB). The current limit under the Stability and Growth Pact is for a deficit of 3% in the GGB. A fund like this is not counted for the GGB.

In effect the cost of paying for the infrastructure is put through the Government's accounts over 20 or 25 years, as the bonds are repaid. In the case of the Public Capital Programme, which is traditionally procured the cost of the infrastructure is charged to the General Government Balance over the 2 or 3 year construction period.

5.5: What needs to be done?

The Government will need to be pro-active...

A degree of consensus is emerging amongst the larger market participants that such an asset allocation is appropriate and desirable. In order to avoid a situation where any fund is seen to either “steal a march” on its peers or run the risk of having its fund performance suffer by comparison with others by participating, there is a requirement to build on this consensus and move to a situation where all pension funds “jump together”.

... or the money will go abroad

If the Government and the industry are not proactive in developing a product such as this, it is likely that 80% of the funds which are invested in Irish pension funds over the next 5 to 10 years, to replenish their recent poor performance, will be invested outside of Ireland. **This is because Irish pension funds now typically allocate 80% of their money to assets outside of Ireland.**

*The likely Cost of the Bonds*⁴⁰

From the late 1980's, when DBFO / PFI / PPP was invented until recent times (approximately 12 months ago) concession based transactions, such as those proposed rarely moved outside a pricing range of 75bp to 110bp. While we have seen transactions with pricing as low as 55bp these were very much the exception.

Discussions with banks that remain active in the project finance sector in recent weeks indicate that pricing on similar transactions has moved to a minimum of 200bp at tenors of 5 years with 10 year tenors attracting pricing of 250 to 350bp over the relevant swap (fixed price) tenor. As the pricing is moving rapidly, the Government should use the considerable expertise of the NTMA in debt markets to negotiate price with the institutions.

5.6: Advantages

What might such a fund be used for?

A fund such as this is suitable for many long-life assets such as:

⁴⁰ Pricing is normally expressed in basis points (bp) where 100 bp = 1%. This pricing convention is the margin in excess of Euribor – the Euro Interbank Offer Rate. Euribor is the rate at which banks used to lend to each other in the wholesale credit markets before the credit crisis

- Roads
- Rail
- Water and Sewerage
- Hospitals
- University Buildings
- Government Offices
- Schools

A full list of suggested projects is contained in Section 4.

The structure is sufficiently flexible to attract other financing

The above structure can also be used to attract other “off balance sheet” funding for infrastructure. This would further reduce the headline Irish Government borrowing volumes. For example the European Investment Bank would be willing to provide funding for banks to invest in such projects or to provide “liquidity” after the initial 5 to 7 year period has run out. The option of funding “off balance sheet” is only available for this type of structure and not for the funding of Social Welfare payments.

This might also be used for existing assets

The concept might also be used for existing assets, should the Government have a requirement for short-term fund-raising. It is likely that such fund-raising would be cheaper than new build as the construction risk would be gone.

A demonstration of commitment and it has been done before

A bond fund would be a tangible demonstration of commitment to the Irish economy by the pension fund industry. It would help reduce Ireland’s infrastructure deficit and contribute to its future growth. It could be raised from institutions and / or by the sale of bonds to individuals through institutions. In concept, the Infrastructure Fund is similar to the Irish Pension Fund Property Unit Trust (IPFPUT).

Appeal of the bonds can be improved

In recent years infrastructure bonds have had a relatively limited appeal to Irish institutions due to their complex structure, relatively low yield and low liquidity. To take the issue of liquidity first, this can be addressed by seeking a quotation for the bonds on the Irish Stock Exchange and by asking stockbrokers, such as Goodbody, to make a market in the Bond. This is something which Goodbody is willing to do. It is confident that other stockbrokers would also play their part. While it would provide some degree of liquidity, it is recognised that for a product such as this liquidity is likely to be lower than in the gilt and stock markets. Pricing has now moved to a point where infrastructure bonds have a combination of risk profile and pricing which is attractive to the market – see above.

5.7: Local Initiatives and some further ideas

There are other possibilities outside the fund concept...

The above financial structures are most suitable for large infrastructure or portfolios of large infrastructure. However many of the lessons drawn can also be used on a smaller scale.

Small local initiatives could work

For small local infrastructure such as schools, leisure facilities, swimming pools, libraries, local health centres or other small buildings the funds could be raised locally. This could be done as follows:

1. Schools, leisure facilities, swimming pools, libraries or local health centres that currently have planning permission should be identified by the relevant Agency or Government Department.
2. These buildings should have received sanction to have got to the planning permission stage.
3. Funds would be raised locally from individuals that have savings or retirement lump sums.
4. The local bank or Credit Union would act as collector of the funds.
5. This local bank would also act as trustee / administrator for the project in exchange for a small fee or at cost.
6. The OPW / Local Authority/ Department of Education/ Department of the Environment, Heritage and Local Government would procure the infrastructure concerned.
7. The annual payments would be paid from the Government to the trustee for onward payment to the local investors.
8. If there was a requirement to change maintenance provider of the school, the Bank would work with the OPW / Local Authority/ Department of Education/ Department of the Environment to choose the successor maintenance provider.

Small scale transactions only work with standardised documents

In order to make small scale projects such as those proposed work, the NDFA (who have the mandate from Government to advise on all projects in excess of €30m) or the OPW (who have a long history of delivering large numbers of projects) would have to develop standardised documents. These documents would have to be fair to all concerned. This is not a major task as templates exist both for roads and other OPW small scale transactions.

The evaluation criteria also need to be standardised

The evaluation criteria for small projects need to be standardised by the Department of Finance and the relevant home departments. With schools already identified for replacement, this should prove relatively simple. Other priority projects already approved / designed should receive priority. In the case of water and sewerage, some of the projects if not completed, are likely to give rise to fines from the EU, on the basis of the Water Quality Directive and therefore should produce a positive return immediately.

Index Linked Bonds could prove very attractive and good value ...

Conventional infrastructure bonds tend to pay a combination of interest and capital back over the period of the loan. A number of institutions have stated that they would have an appetite for “index linked” bonds as these would help match liabilities to Irish inflation. As Irish inflation has exceeded that in the Euro zone in recent times, there is a strong argument that in the medium-term Irish inflation will have to lag that in the rest of the Euro zone for a period. This is the only way in which Ireland can “catch up” absent a serious growth in productivity. Should this come to pass, Index-linked bonds would generate particularly good value for money for the Irish Government over the medium-term.

Tax free bonds would appeal to individuals

There is little interest in tax spared bonds from institutions as they do not suffer tax on income at present. However from an individual perspective, there might be considerable attraction in tax-free bonds, similar in many ways to the municipal bonds which are tax-free in the US. A retail offering such as this could be issued at a discount to the yields demanded by institutions. Indeed this concept is currently being canvassed as a national recovery bond.

5.8: Planning and procurement are still bottlenecks

The slow speed of procurement has been an issue for some time for the construction industry and the professions associated with it. In the current situation, with a dearth of work and workers being laid off daily, there is a clear need to speed up procurement. In the current National Emergency, there is a need to shorten the procurement process and the time to obtain planning. Without this shortening there is a real danger that the stimulus will come too late to maintain the key skills necessary within the industry. There is a detailed discussion of the issue of planning and how it might be improved and streamlined in Appendix 3.

Procurement can be speeded up by standardising:

- Construction Documents
- Financing Documents

Construction Risk Transfer – New Government Contracts Suite can be the template

It is clear that the old model of procurement is no longer appropriate. Modern standards require that risk be appropriately shared between the parties. The Government Contracts Committee (GCC) has developed a suite of design and build contracts which could be used as a template for future procurement.

Implementation through the OPW has the potential to streamline execution

The Irish Government has at its disposal one of the most respected and experienced procurement outfits in the Office for Public Works (OPW). This is an organisation that has successfully procured buildings and other infrastructure for a very long time. It also has at its disposal, considerable design expertise which allows it to consider issues other than price.

The OPW was very successful in the difficult years of the late 1980s and early 1990s in procuring local authority headquarter buildings. This was done on a timely basis and had the following features:

- Competition based on Design and Price
- Fixed price contract
- Penalties if late
- Simple Design and Build

A repeat of this structure, with a maintenance contract, has the potential to speed up the overall procurement and deliver an off balance sheet structure, provided the payments are on the basis of availability.

Standard finance documents already exist

Standard finance document templates have already been produced by the NRA and by the NDFA. All that remains is to make whatever minor adjustments are necessary to ensure compliance of these documents to current market practice. The principal issue to be addressed is the issue of compensation on termination. In recent international transactions this has been standardised at about 95% of the amount of the senior debt. In essence, this means that if the project is terminated by the state, it receives the project delivered at 80% to 85% of its build cost (cost less 10-15% equity plus the write-off of 5% of the senior debt).

5.9: Conclusions

The CIC believes that:

- 1) Projects should be built where the return exceeds the cost, particularly when tender prices continue to weaken.
- 2) It is possible to fund additional infrastructure spend in a way which does not materially affect Ireland's adherence to the Stability and Growth Pact. This new form of finance can be raised from pension funds, banks and other financial institutions.
- 3) The proposed infrastructure fund will help to replenish pension funds.
- 4) A failure to use an Infrastructure Fund will see 80% of future pension fund monies being allocated to assets outside Ireland.
- 5) There is a willingness in the industry to engage on the idea of an Infrastructure Fund.
- 6) A national emergency exists in the construction industry. In order to have the greatest economic effect, there is a need for a system of faster public procurement while remaining within the EU procurement guidelines. A failure to speed up procurement and planning may delay any stimulus past the point when it can have an effect.
- 7) The key to faster procurement is greater standardisation of documents. Moreover further procurement resources are required in addition to the NDFA, which the CIC believes already exist in the OPW.

Section 6 **Proposals for delivering high quality infrastructure**

6.1: Sustaining the construction industry

Sustaining the construction industry at around 12 to 15% of GNP will require a stimulus package from Government. A positive set of measures to stimulate construction activity which focuses on labour intensive construction projects will also generate many economic benefits for the economy and return the industry to a more sustainable long-term future.

Moreover investment in construction has a limited import content and hence a limited impact on the balance of payments.

There is also the additional impact on private sector investment as a stimulus package from Government would boost confidence amongst private investors and encourage private sector development.

'Do nothing' is not an option

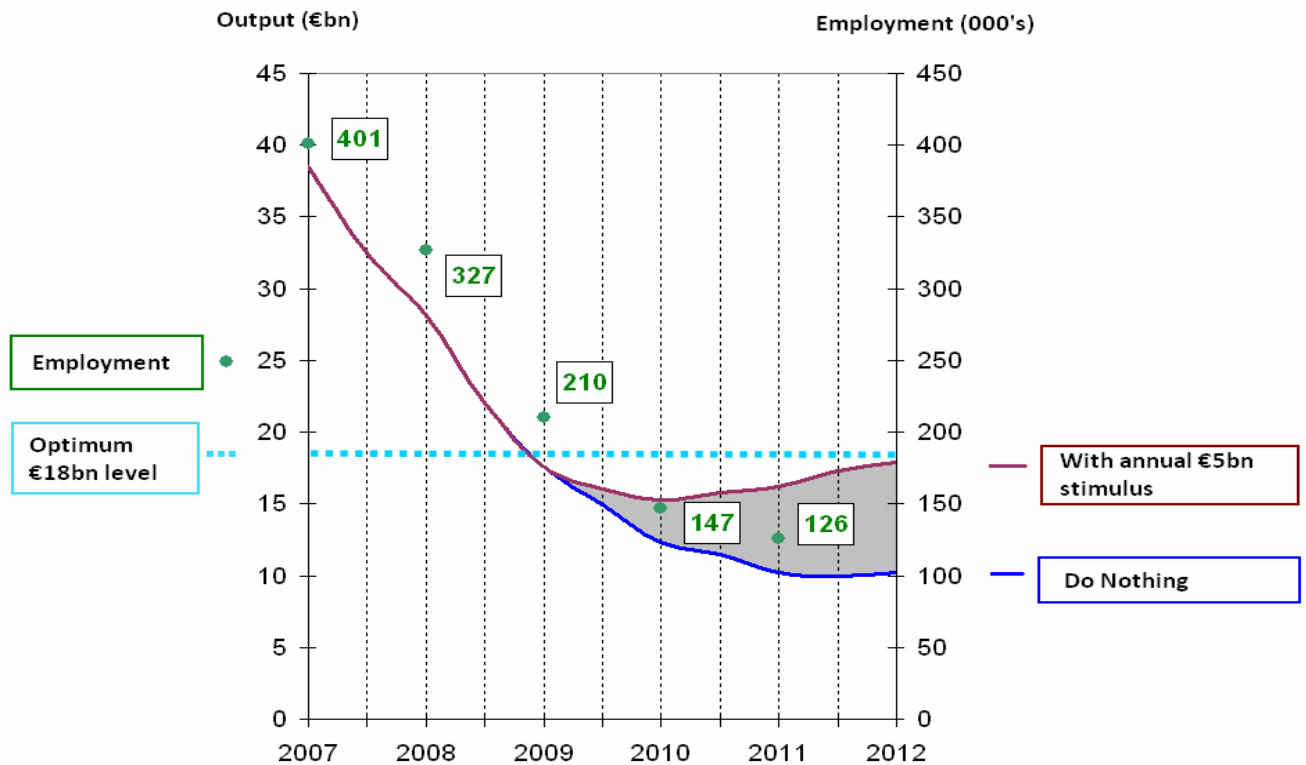
Without a Government stimulus, i.e. the 'do nothing' option, the construction industry could shrink to 7.4% of GNP in 2011. Thus there is a real danger that the industry would fall below its critical mass, returning the industry to its size during the early-1990s. Our assessment of the prospects for the industry (Section 4) suggests that the industry, in a 'do nothing' situation, would decline dramatically to around €10bn by the end of 2011, which would leave it 43% below what is considered to be the optimum level of construction output for the medium-term (€18bn).

The competitiveness of the economy would be further eroded if capital investment in infrastructure was curtailed. There would also be a missed opportunity to improve the quality of the built environment and at a time when excellent value for money is available in the industry. The greatest tragedy would be the lost productive capacity in the long run and the reduction in the skills base which was built up as a result of considerable investment in education and training.

We demonstrate further in this section that for every €1bn cut from the capital construction programme, i.e. 'do nothing' option, the Government has to spend 51% or €510m without any infrastructure being delivered. Thus making a decision not to invest in public infrastructure is a false economy.

Our earlier estimate in Section 2 indicated that without a stimulus from Government, there would be a serious shedding of labour in the construction sector and in other areas of the economy dependent on construction - with over 250,000 direct and indirect jobs lost by the end of 2010 compared with the peak in Q1 2007 or over 355,000 jobs in total when induced effects are taken into account. The human cost of such mass unemployment would also be considerable.

Figure 6.1: The medium-term implications for construction output with and without a Government stimulus



It is clear from the chart that by the end of 2009 the industry will already be below its optimum size.

A narrow window of opportunity

The CIC believes there is a real opportunity to harness the legacy of the construction boom by seizing the opportunity which now presents itself in terms of the:

- Capacity to build a competitive economy by investing in much needed infrastructure.
- Opportunity to add to the productive capacity of the economy.
- Chance to stem the decline not just in construction employment but in employment in the wider economy.
- Opportunity to maintain those highly skilled productive resources in Ireland.
- The excellent value for money which now exists as a result of the dramatic reduction in construction tender prices over the past two years which has returned construction prices back to the levels which prevailed in 2000.

An important benefit from investing in infrastructure is the benefit for the population as a whole in terms not just of the much improved and better quality infrastructure which results, but also in terms of the capacity to protect jobs in the wider economy.

Thus it is essential to provide a stimulus now so that design, planning permission and tenders can be advanced in 2009 in order to ensure projects reach construction in 2010.

The choice is between investing in infrastructure or losing a further 70,000 jobs

The CIC believes that a stimulus package of €5bn per annum over three years would deliver high quality best value infrastructure projects while at the same time saving 70,000 jobs and maintaining the skills base. Section 5 elaborates on how this funding would be raised.

Saving 70,000 jobs with a stimulus is equivalent to half of the numbers of jobs in the foreign direct investment (FDI) sector.

With 80% of the money invested in Irish pension funds going abroad, the innovative solutions proposed represents a real opportunity to keep the funds at home and earn a return of about 6-7% per annum.

The main funding solution is set out in Table 6.1 which shows the cost to Government of two options:

- 1) A 'do nothing' option with no stimulus, and
- 2) A 'do something' option with a stimulus of €5bn per annum.

'Do nothing' option – the cost is greater than it might appear

The cost of 'doing nothing' is very significant not just in human terms but also in cash terms for the Exchequer.

In a 'do nothing' scenario, taking the option not to spend €5bn would give rise to 50,000 lost jobs, based on our average of 10 (direct and indirect) jobs for every €1m spent. We estimate the induced job losses at 20,000, based on our multiplier of 1.4, giving a cumulative total of 70,000.

The social welfare cost for 70,000 people based on an estimate of €18,254 (Section 3) is €1.3bn. Based on the lost tax revenue, estimated at €18,458 per person (see Table 3.4), the total lost revenue is €1.3bn. This suggests that the total cost to the Government of doing nothing is considerable at €2.6bn. This is equivalent to 51% of the stimulus of €5bn in the 'do something' option.

Thus, in a 'do nothing' scenario, for every €1bn cut from the Public Capital Programme, only €490m will be saved but no infrastructure will be built.

**Table 6.1: Stimulating construction activity with a €5bn
per annum stimulus**

Option 1	'Do nothing'	Option 2	'Do something'
Stimulus package	€0.0 bn		€5.0 bn
Direct and indirect jobs lost #	50,000	Direct and indirect jobs #	50,000
Induced effects (*1.4)	20,000	Induced effects (*1.4)	20,000
Total job losses	70,000	Total jobs created	70,000
Social Welfare cost (based on €18,254/ person)	1.3 bn	Social Welfare saved (based on €18,254/ person)	1.3 bn
Total tax lost (based on €18,458/ person)	1.3 bn	Total tax take (based on €18,458/ person)	1.3 bn
		Total avoided cost	2.6 bn
Total cost to Government of 'do nothing'	2.6 bn	Net additional cost	€2.4 bn
As a % of stimulus package	51%	As a % of stimulus package	49%
Thus cutting PCP by €1bn still cost €510m.		Net cost of funding €5bn is only €2.4bn.	
funded by			
Government borrowing	2.6 bn		
Private Pension Funds		Currently 80% invested outside Ireland	1.3 bn
Other financial institutions (e.g. EIB)			1.1 bn

Based on our estimate of 10 jobs per €1m. (see Section 3.5).

Tax and Social Welfare calculations set out in Table 3.4.

'Do something' option: €5bn per annum 2010-2012

In the 'do something' option, the CIC makes the case for an additional⁴¹ stimulus of €5bn per annum over three years. Table 6.1 shows the real cost of a €5bn stimulus package which is derived as follows:

- Based on the average cost per job, a stimulus of €5bn would create 50,000 direct and indirect jobs in construction.
- Through the multiplier effect a further 20,000 are created in the wider economy.
- The tax generated by the 70,000 persons in employment is €1.3bn, based on our estimates in Table 3.4.
- The social welfare saving is equivalent to €1.3bn as derived in the 'do nothing' option.
- Thus the net cost to the Exchequer of the stimulus package is €2.4bn or 49% of the €5bn.

⁴¹ This €5bn is additional to the public capital provision in each of the next three years and should not be seen as an opportunity to reduce the existing capital allocations. While better value for money is now available, the capital provision should not be reduced just because every €1m invested today delivers more output than it did in the peak years.

Thus, for every €1bn invested in infrastructure, it only costs the Government a net amount of €490m plus the infrastructure is put in place, jobs are protected and the competitiveness of the economy is improved. Moreover the positive effects persist in the economy long after the money is spent.

The source of part of the funding is a combination of private pension funds and various other structures. We believe the Pension Funds of Ireland will fund €1.3bn, which in the absence of the scheme proposed would likely follow their current allocation of 80% to assets outside of Ireland. Thus of the €2.4bn net cost to the Exchequer, an estimated €1.3bn is provided by Irish pension funds and the remaining €1.1bn is made available by other “off balance sheet” funding from financial institutions like the European Investment Bank.

The CIC is making the case for an additional stimulus of €5bn per annum over three years as it is seriously concerned that the industry is rapidly heading towards a turnover of €10bn in 2011, which is well below the long-run optimum of €18bn. This optimum level of activity would put us on a par with other European countries, many of whom have superior infrastructure to our own.

However, we believe that there are further advantages which are worth highlighting:

4. The Government would not have to raise any upfront additional funding.
5. The €2.6bn of funding required in the “Do Nothing” scenario has to be funded directly by the Government, in any event.
6. On the other hand, the net cost of €2.4bn associated with the stimulus package could be funded externally, off balance sheet, albeit at a higher cost – see Section 5.4.

Fund infrastructure as long as the cost is less than the returns

The key message is that an additional stimulus package can be achieved at modest additional cost, which is only a fraction of the total investment.

Thus from an economic point of view, investing in infrastructure makes sense as long as the return on that investment is greater than the cost of funding it. We have demonstrated in Section 3 that the returns on productive infrastructure are considerable and that the effects persist long after the money has been spent on the infrastructure. Moreover, a stimulus package preserves jobs for the population as a whole, retains our highly skilled productive resources, and the public benefit from the much higher quality infrastructure which is put in place.

This funding solution presents a unique opportunity to increase the productive potential of the economy and add to our long-term economic growth while maintaining the PCP at a high level in absolute terms.

6.2: Priority infrastructure projects

In terms of this €5bn stimulus package we have provided an indicative list of projects in Section 4, based on our consultations with the main infrastructure spending departments, which should now be considered for funding. However, given the rapid economic downturn, the CIC is keen to ensure that the best projects are selected/prioritised based on the following impacts:

- They are employment intensive.
- They generate an economic rate of return above their costs.
- They add to the productive potential of the economy, and
- They minimise the external leakage of funds.

The CIC is not arguing for indiscriminate investment in construction. Rather it is arguing for targeted investment in productive infrastructure. We demonstrate in Section 3 that the returns can be significant, but in an era of limited funds, investment must be targeted on those areas which deliver the greatest long-term return.

However the CIC believes that it is absolutely critical that the design, planning and procurement of projects begins immediately in order to enable the commencement of construction in 2010.

6.3: Immediate Actions

The CIC recommends as a matter of urgency that the following actions be put in place immediately to progress the stimulus package:

- 3) **Agree the Stimulus package by end March 2009.**
- 4) **Urgent prioritisation of public infrastructure projects by end April 2009, on basis that:**
 - vi. Projects with planning and tendered to proceed i.e. emphasis on construction ready projects.
 - vii. They are employment intensive.
 - viii. They generate an economic rate of return above their costs.
 - ix. They add to the productive potential of the economy.
 - x. They minimise the external leakage of funds.
- 6) **Consultation with Pension Funds to conclude by May 2009.**
- 7) **High level Implementation Group to standardise procurement and contractual arrangements, to conclude by May 2009.**
- 8) **Fast track planning and procurement in line with recommendations in Section 5 and Appendix 3.**

Appendix 1: Direct employment in construction showing trades and professions

The following Table shows the occupations which are covered in the 'direct' employment measure published by the CSO in the Quarterly National Household Survey.

Sector - Construction	2004q1	2005q1	2006q1	2007q1	2008q1
	Thou	Thou	Thou	Thou	Thou
Occupation					
111 Building managers	5.9	6.1	5.6	7.6	6.5
170 Property & estate managers & proprietors	1.6	1	1.3	1.3	1
210 Civil/mining engineers	8.4	8.4	10.7	12.6	12.2
211 Mechanical engineers	3.4	3.4	5.4	4.8	5.8
212 Electrical engineers	3.7	3.5	4	4	2.8
260 Architects	4.4	4.5	7.3	7	6.9
261 Town planners	*	*	*	*	*
262 Building, mining and other surveyors	1.3	2.1	2	2.2	1.6
301 Engineering technicians	1.8	1.2	1.2	1.1	1.7
303 Architectural, town planning technicians	*	*	1.6	*	*
304 Building & civil engineering technicians	*	*	*	*	*
310 Draughtspersons	1.8	1.8	2.3	1.7	2.5
311 Building inspectors	*	*	*	*	*
312 Quantity surveyors	3	2.7	3	4	3.9
360 Estimators & valuers	*	*	*	*	*
500 Bricklayers, masons	13.1	17.1	15.7	16.4	12.3
501 Roofers, slaters, tilers, sheeters, cladders	3.8	6.4	6.8	7.5	7.5
502 Plasterers	10.5	11.8	14.4	14	15.3
503 Glaziers	*	*	1.3	*	1.3
504 Builders, building contractors	14.6	19.5	20.1	22.3	25.2
505 Scaffolders, riggers, steeplejacks	1.7	1.7	2.6	3	2.9
506 Floorers, floor coverers, carpet fitters, tilers	2.7	2.5	3.4	2.5	3
507 Painters & decorators	9.7	11.6	11.6	12.6	11.6
509 Other construction trades n.e.c.	5.3	4.6	5.1	7	7
521 Electricians, electrical maintenance fitters	24.1	25.8	29	30.4	28.2
522 Electrical engineers (not professional)	*	*	*	*	*
532 Plumbers, heating & related trades	12.7	13.7	15	16.8	16.3
535 Steel erectors	1.9	2.3	2.2	1.8	2.1
886 Crane drivers	1	1	1.1	1.9	1.2
892 Water & sewerage plant attendants	*	*	*	*	*
896 Construction and related workers	5.4	5.9	6.3	8.1	8.1
921 Mates in Building Trade	1.9	1.9	1.4	1.7	1.5
923 Road construction & maintenance workers	2.2	2.1	2.8	3.4	3.3
929 Other building & civil engineering labourers	19	25.2	30.1	37.4	31.5
Total in construction	202.1	233.1	252.1	284.2	274.4
Total in employment	1,833	1,910.8	2,004.8	2,081.3	2,135.1

Appendix 2: The Public Capital Programme provisions for 2009

This Appendix presents detailed tables for the PCP provisions at the time of the 2009 Budget for the main Government departments, which are responsible for the majority of capital expenditure which impacts on construction:

- ✓ Transport
- ✓ Environment, Heritage and Local Government
- ✓ Education
- ✓ Health and Children
- ✓ Office of Public Works
- ✓ Justice, Equality and Law Reform
- ✓ Communications, Energy and Natural Resources

As noted in Section 4 these provisions are expected to be significantly reduced when the capital spending estimates are published later this month.

A2.1: Transport - capital provision

Transport receives the largest allocation in the PCP, accounting for around 30% of the total PCP. The total capital provision for transport projects is €2.9 billion, down 7% on the estimated outturn for 2008.

Table A2.1: Transport PCP

Transport	2008 Est €000s	2009 Est €000s	% change
Construction of national/non-national roads	2,078,814	1,921,500	-8%
Road safety agencies and expenses	654	654	0%
Vehicle and driver licencing expenses	1,455	1,455	0%
Public transport capital projects	986,000	916,500	-7%
Regional airports	24,000	11,000	-54%
Irish Coast guard	4,907	4,907	0%
Seaports and shipping	3,785	3,699	-2%
Cross border initiatives	6,150	17,650	+187%
Carbon reduction measures	-	10,000	
Total Capital provision for Transport	3,105,765	2,887,365	-7%

A2.2: Environment, Heritage and Local Government (EHLG)

The DEHLG is allocated the second largest capital allocation after Transport. It has responsibility for Housing (65% of 2009 allocation), Water Services (26%), Local Government services (2%), Heritage (2%), Waste Management and Planning.

Table A2.2: DEHLG PCP

	2008	2009	%
Environment, Heritage and Local Government	Est	Est	change
	€000s	€000s	
<u>Housing:</u>	1,535,501	1,415,500	-8%
Social housing provision and renewal	1,388,015	1,313,000	-5%
Affordable housing and private housing supports	147,486	102,500	-31%
<u>Water Services Investment Programme</u>	471,374	560,000	19%
<u>Waste Management recycling/landfill</u>	23,849	15,000	-37%
<u>Local Government:</u>	54,363	45,500	-16%
Fire and Emergency services	23,953	23,000	-4%
LA library and archive services	16,910	10,000	-41%
Community and social inclusion	3,000	2,000	-33%
Disability services	10,000	10,000	0%
Economic and social disadvantage	500	500	0%
<u>Heritage:</u>	61,871	45,000	-27%
Grants for Heritage Council	7,874	6,000	-24%
Built Heritage and Irish Heritage Trust	29,997	21,000	-30%
National Parks and Wildlife Service	24,000	18,000	-25%
Irish Heritage Trust	5,000	2,000	-60%
<u>Planning:</u>	60,153	1,000	-98%
Urban Regeneration	20,153	1,000	-95%
Gateway Innovation Fund	40,000	-	-100%
Miscellaneous services	7,313	6,629	-9%
EH&LG - PPP estimate	30,000	75,000	150%
Total capital provision for EH&LG	2,244,424	2,163,629	-4%

Source: Budget 2009. Figures exclude any carryover from 2008

A2.3: Education – capital provision

The total capital provision for Education and Science is €931 million, up 7% on the estimated outturn for 2008. Approximately 80% of the total provision is construction related for primary and post-primary building projects but this proportion could fall to 60 to 70% for more complex third-level building projects.

Table A2.3: Education and Science PCP

	2008	2009	%
Education and Science	Est	Est	change
	€000s	€000s	
National Schools - building, equipment & furnishings	390,200	369,300	-5%
Second level - building grants and capital costs	196,000	212,000	+8%
Third level	184,150	265,325	+44%
Sub-total building	770,350	846,625	+10%
<u>Other:</u>			
Office machinery and supplies	5,000	5,000	0%
ICT in Schools	18,000	10,000	-44%
National Qualifications Framework	3,000	-	-100%
Educational disadvantage	21,000	9,000	-57%
Grangegorman Development Agency	6,000	6,000	0%
PPP costs	4,000	12,100	+203%
PPP estimate	40,000	42,000	+5%
Total capital provision for E&S	867,350	930,725	+7%

Source: Budget 2009. Figures exclude any carryover from 2008

A2.4: Health and Children – capital provision

The total capital provision of the Department of Health and Children is €550m, over three-quarters of which is allocated to hospital building and equipment.

Table A2.4: Health and Children PCP

Health and Children	2008 Est €000s	2009 Est €000s	% change
Grants for building/equipping of Agencies	20,000	15,000	-25%
Health Services Executive			
Building, equipping, furnishing health facilities and third-level education facilities for nursing	544,181	425,447	-22%
National Lottery funding	2,539	2,539	0%
Economic/Social disadvantaged and disability	7,000	7,000	0%
IT systems /related services for Health Agencies	40,000	30,000	-25%
Office of Minister for Children			
National childcare investment programme	101,564	60,000	-41%
H&C - PPP estimate	-	10,000	
Total Capital provision for health facilities	715,284	549,986	-23%

A2.5: Office of Public Works (OPW) – capital provision

The planned Exchequer capital allocation for the OPW was cut back significantly in the 2009 Budget provision from €387m in 2008 to €226m in 2009 (excluding PPP). The vast bulk of the reduction reflects the impact of the deferment of decisions on the decentralisation programme until 2011 which was announced in the 2009 Budget.

Table A2.5: OPW PCP

Office of Public Works	2008 Est €000s	2009 Est €000s	% change
New works, alterations and additions	245,030	158,330	-35%
Flood relief projects	50,000	50,000	0%
Purchase of sites and buildings	82,512	10,000	-88%
Grant for certain refurbishment projects	3,500	2,500	-29%
Other misc	5,970	4,970	-17%
Total Capital provision	387,012	225,800	-42%
OPW - PPP estimate		86,000	
Total OPW capital provision	387,012	311,800	-19%

A2.6: Justice, Equality and Law Reform – capital provision

The estimated capital budget for the Department of Justice, Equality and Law Reform (JELR) in 2009 is €155m or €374m including the estimate for PPP. Approximately 40% of the €155m goes into construction. In terms of building projects the main areas for which the department has responsibility are prisons and courthouses.

Table A2.6: JE&LR PCP

Justice, Equality and Law Reform	2008 Est €000s	2009 Est €000s	% change
State Pathology	8,000	8,000	0%
Probation service - services to offenders	5,000	4,500	-10%
Irish Youth Justice Service	9,000	12,272	36%
Garda computerisation	43,222	36,325	-16%
Garda - communications and other equipment	26,243	12,600	-52%
Prison buildings and equipment	39,636	40,340	2%
Courthouses - capital works	29,632	23,500	-21%
Other (e.g. PRA, office machinery/supplies)	<u>18,591</u>	<u>17,787</u>	<u>-4%</u>
	179,324	155,324	-13%
JE&LR - PPP estimate	178,000	219,000	<u>23%</u>
Total Capital provision for Justice facilities	357,324	374,324	5%
Maintenance of Garda premises (current)	9,521	7,521	-21%

A2.7: Communications, Energy and Natural Resources – capital provision

The capital provision for the DCE&NR is €134m which is mostly allocated to communications and sustainable energy projects. The vast bulk of the public capital provision for CE&NR relates to investment by the semi-state companies in the energy sector. Significant investment, amounting to €1.6 billion is planned, the vast bulk of it by the ESB and BGE.

Table A2.7: CE&NR PCP

Communications, Energy & Natural Resources	2008 Est €000s	2009 Est €000s	% change
Communications - ICT and other programmes	58,884	45,436	-23%
Broadcasting - grants	2,917	900	-69%
Natural Resources -	10,700	10,653	0%
Inland Fisheries	3,300	3,487	+6%
Energy:			
Sustainable Energy Programmes	49,000	53,672	+10%
Energy Research Programmes	26,500	17,350	-35%
Miscellaneous	3,839	2,500	-35%
Total capital provision for CE&NR	155,140	133,998	-14%
Non-voted expenditure:			
ESB	960,000	960,000	0.0%
Bord Gáis	342,000	438,000	+28.1%
Eirgrid	29,000	148,000	+410.3%
Bord Na Mona	37,141	36,016	-3.0%
Total	1,368,141	1,582,016	+15.6%
Multi-annual capital investment provision:			
	2010	2011	2012
Total CM&NR	133	133	138
Annual % change	-0.7%	+0.0%	+3.8%
			2013
			150
			+8.7%

Source: Budget 2009. Figures exclude any carryover from 2008.

A2.8: Non-Exchequer funded capital projects

In addition to the allocations from the Exchequer there is a further substantial non-Exchequer capital allocation of around €6.1 billion which is funded out of the resources of the semi-state agencies and local authorities and from external borrowings (EU receipts). A proportion of this would make its way into the construction sector. The following Table does not cover all expenditure.

Table A2.8: 2009 Non-Exchequer capital provision

Non-voted expenditure	Dept.	2008	2009	% change
		Est outturn €000s	Est €000s	
ESB	CE&NR	960,000	960,000	0.0%
State Airports	Transport	454,000	629,000	+38.5%
House Purchase/ improvement Loans	EH&LG	627,375	625,000	-0.4%
Road improvement/maintenance	Transport	409,000	548,500	+34.1%
Bord Gais	CE&NR	342,000	438,000	+28.1%
Local authority and social housing	EH&LG	309,375	380,000	+22.8%
Environmental Services	EH&LG	146,393	200,000	+36.6%
Water and Sewerage Services	EH&LG	120,000	170,000	+41.7%
Eirgrid	CE&NR	29,000	148,000	+410.3%
IDA Ireland Buildings	ET&E	115,671	115,670	0.0%
Irish Aviation Authority	Transport	39,954	81,135	+103.1%
CIE	Transport	93,300	71,700	-23.2%
Railway Procurement Agency	Transport	-	43,500	
Coillte Teoranta	Agric.	55,000	41,000	-25.5%
RTE	CE&NR	58,400	40,343	-30.9%
An Post	CE&NR	44,000	40,000	-9.1%
Horse Racing Ireland	AS&T	31,000	37,000	+19.4%
Bord Na Mona	CE&NR	37,141	36,016	-3.0%
Enterprise Ireland	ET&E	55,130	27,550	-50.0%
Sfadco	ET&E	20,938	22,000	5.1%
Teagasc	Agric.	17,000	12,000	-29.4%
Bord Na gCon	AS&T	16,500	10,080	-38.9%
IDA Ireland Grants	ET&E	8,000	8,000	0.0%
Udaras na Gaeltachta	CR&GA	6,500	6,000	-7.7%
Ordnance Survey of Ireland	CE&NR	3,000	3,075	2.5%
SFADCO (Tourism)	AS&T	1,530	1,500	-2.0%
National Stud	Agric.	1,280	1,400	9.4%
Urban Regeneration	EH&LG	1,765	1,000	-43.3%
Peace Programme	Finance	1,854	435	-76.5%
Irish Film Board	AS&T	500	300	-40.0%
Broadcasting Commission of Ireland	CE&NR	320	200	-37.5%
Bord Iscaigh Mhaire	Agric.	69	100	44.9%
Failte Ireland - tourism dev. works	AS&T	10,000	-	-100.0%
Port companies	Transport	2,400	-	-100.0%
Total non-voted expenditure		4,021,395	4,698,504	+16.8%

Appendix 3: Delivering a more effective planning system

Introduction

This section of the submission deals with the general regulatory system including Planning, Building Control and An Bord Pleanála. Section 5 on Funding focuses on projects which have been through the planning system but also deals with planning and procurement bottlenecks which have been a serious issue for some time and were also raised in the separate CIC survey. These important issues are indicative of the uncertainty and inconsistency of our regulatory systems at present. A range of relatively minor changes are identified, which could be achieved rapidly, and without any cost to the Government, which would have a cumulative effect of making the planning system more efficient, reducing costs for the applicant and also reducing costs for local authority planning systems.

Issues which would have a longer term and a more significant impact are also considered but these would, in some cases, require legislative change.

A more effective planning system would facilitate new projects coming to construction stage more rapidly, with reduced costs and increased employment.

Planning

In 2007 there were 87,000 planning applications, 65,000 in 2008 and 40,000 are expected for 2009, which some regard as being optimistic. The reduction in the number of applications has not led to any change in the efficiency of the system. The majority of citizens come into contact with the planning system possibly only once. Clients, architects, engineers and surveyors etc are constant users of the system and are in a more informed position to evaluate the effects of the regulatory framework.

Many users of the planning system would describe the process as being dysfunctional with some notable exceptions. These systemic problems were concealed during the recent high levels of construction activity, but with the downturn, these failures represent a significant obstacle to recovery.

Planning problems with potential for immediate improvement

As noted above there are a number of planning problems which could be dealt with immediately.

Planning application forms

The 2000 Planning Act included a Model Application Form. The expectation was this would be used by all local authorities. However, each local authority uses a different form, and frequently there are changes to such forms. The Revenue manages to capture the complex tax return system in one form. It is difficult to see how this cannot be accomplished in planning also.

The DOEHLG should require all planning authorities to use a standard form. In the event of there being particular and special local requirements this should be listed in an appendix to the standard form.

Invalidation

The 2000 Planning Act required all planning applications to be validated i.e. checked for completeness before the application is considered. The objective was to improve the quality of planning applications coming to local authorities. However, the result is that it is often more difficult for an application to be validated than to have the planning application itself decided. There is a substantial waste of resources, with the local authority returning applications, and for applicants, in dealing with what are in most cases minor administrative matters. Quite frequently applications are invalidated incorrectly but there is no redress of recourse when this occurs.

The solution is simple and immediate. A small number of local authorities have adopted the practice of validating applications at the planning counter, where minor issues can be identified, and where the applicant can return within a matter of days with the application ready for validation. The DOEHLG should direct that this should be standard practice.

Planning Notices

The objective of a Planning Notice is to alert persons, who might be affected by a particular application, so that details can be checked in the local authority planning Office. The practice has grown in many planning authorities of treating the newspaper notice almost as a form of planning application, where every aspect of the scheme has to be described in detail. If any minor element is omitted it is likely that the application will be invalidated and returned to the applicant; this often occurs late in the planning application process, with consequent delays.

Again, the solution is simple. Regulations should be made to clarify the purpose of a Planning Notice, which should be to give a general description of the project, and not an exhaustive description of the entirety of the development.

Pre-planning consultation and records

The 2000 Planning Act gave the right to an applicant for a pre-planning consultation with a planning authority about the general approach to an application. The reality is these are extremely difficult to arrange, and even with the reduction of the number of planning applications from 2007, the problem remains. More importantly these consultations are often not recorded at all or recorded in any systematic manner, except in a small number of Local authorities.

The lack of any record means that when there is a change of a planning official, which happens regularly, then the whole process must start again. Even where a record has been taken, this is frequently ignored. It is accepted that a planning consultation does not mean that permission will be granted; circumstances as may well arise during the course of consideration, but there is a need for a degree of certainty and consistency in consultation with the planning authorities.

The issues raised above are dealt with in the 2007 Development Management Planning Guidelines many useful and sensible systems are proposed. However, these Guidelines are simply "guidelines" and are routinely ignored by the majority of planning authorities with consequent losses and delays. The Development & Management Guidelines should be enforced by means of Regulation or Statutory Instrument and not simply as guidelines.

Planning Performance

Performance of local authorities varies widely from local authority to local authority.

Planning statistics are completed every quarter by the DEHLG, but there appears to be no action taken by the Department when substantial variances are shown. These variances cannot be explained by the complexity of applications, because many of the major urban centres generally seem to have a better performance, or by shortage of staff at administrative and planning level because numbers have been considerably increased in recent years.

A survey carried out by the RIAI in 2007/2008, again shows the considerable variation in performance of planning authorities and the many problems being encountered by applicants.

There is an urgent need for the DEHLG to take a much more proactive role in evaluating and responding to variances in performance of various local authorities so as to ensure an even standard of performance throughout the sector which would result in cost savings for applicants and the public sector, leading to projects moving quickly to site with the consequent increases in employment.

Management

In a small number of local authorities there is effective management of the planning system from the Manager to the Director of Planning Services and through Senior Planners to Junior Planners with clear objectives being set. In many other local authorities there are no clear set objectives despite the existence of a Development Plan and the policy is set entirely on the personal view of a particular planner at the time. This may be a professional problem in that the current Code of the Irish Planning Institute, at Principle 3, states:

“a member must not undertake any duties or carry out any instructions of an employer or supervisor which involves making statements purported to be his or her own which are contrary to his or her bona fide professional opinions and must not instruct any other member to do so”.

The provision of the Irish Planning Institute (IPA) Code of Conduct appears to give precedence to individual professional views, as distinct from informed professional and corporate views at a senior level.

Managers and Directors of services should ensure that planning applications are based on the Planning Acts, Planning Regulations on the Development Plan and not on the individual views of a particular planner at a particular time.

The Irish Planning Institute should be asked to reconsider Principle 3 of their Code of Conduct.

Team Based Approach

Current structures often require the applicant going round the departments seeking meetings and approvals with individuals in each department, who often end up being the wrong individual (i.e. not the decision maker). What could be dealt in one meeting takes six, with consequential inefficiencies for all.

Current consultation is very much hampered and guarded because the planner does not often have the input of the support departments to hand. As a consequence these consultations can be pointless.

There is a tendency for planners to defer decisions or comment because all parties have not provided their input. Advice is qualified because of the roads or sanitary services views are not known. On this basis decisions are delayed until the last minute.

The planner working in what some times appears to be total isolation from the other departments, is left with the unenviable position of interpretation or making a call on last minute file reports from the various departments. The current system causes delay with last minute reports from departments causing requests for extension of time further submissions and or unnecessary conditions.

The planning role can be pressurised with individuals working in isolation, to some extent, and every decision being scrutinised and contradicted, both internally and externally. It is little wonder that consultations and decisions are defensive, planning a reactive rather than proactive and the whole process has stagnated.

One solution would be to form area based multidisciplinary teams which would be better placed to take a comprehensive view of the planning issues, resulting in better planning and greater efficiencies for the local authority. This will translate directly towards quicker responses, more balanced views and ultimately more open dialogue between applicants and the local authorities.

An Bord Pleanála

This section of the submission should not be taken as wishing to limit or restrict the right of responsible and appropriate planning appeals, but the present circumstances should allow for the consideration of some fundamental issues. There is scope for considerable reform of the planning appeals system which would have the potential to improve certainty, speed of delivery, employment prospects and reduce costs.

Time Limits

While An Bord Pleanála has stated time objectives there is a no statutory time limit on decisions unlike local authority planning departments. Urgent and immediate consideration should be given to the introduction of time limits, although it is accepted that certain major projects may require further extensions of time. However, many projects of this kind should be dealt with through the procedures set out in the Strategic Infrastructure Act 2005. For example a domestic attic conversion with no particular issues, has taken in excess of eight months for an appeal to be determined.

Legislative change is urgently required to set real time limits and not time objectives. At a minimum a separate section of An Bord Pleanála should be established to process, within strict time limits less complex projects.

The “Ab Initio” Rule

The Bord when considering an application does not just consider the appeal received but the entirety of the project. For example, a local authority could have given permission for a secondary school; there is one objection on traffic grounds, but the Bord considers the entirety of the project, could reject the local authority decision and refuse permission.

If the Bord were to be limited to considering only on the grounds stated in appeals received this would give greater certainty and would also make the achievement of time limits a more straightforward matter.

Vexatious Appeals

The existing Bord Pleanála legislation allows for the rejection of vexatious appeals, although this option is rarely, if ever, exercised.

The usual type of vexatious appeal is where a third party lodges an appeal in the expectation of being paid by the applicant to withdraw such an appeal: this is not an unusual activity. The present difficult economic climate could lead to an increase in this type of activity. An Bord Pleanála should adopt a clear policy that where such practices are evident an Appeal should be rejected before consideration.

Building Regulations

Fire Safety Certificates

Many public and private sector clients, given the present economic circumstances, having secured Planning Permission are reluctant to incur the additional costs for the preparation of a Fire Safety Certificate Application. The preparation of such an application can be complex and demanding depending on the scale of the project. This will be further complicated by the proposed Access Certificate process.

If approval or funding becomes available clients are anxious to move forward as quickly as possible. Some local authorities will accept a project proceeding if the Fire Safety Application has been lodged, others will not. This inconsistency needs to be resolved and can be dealt with by way of a direction for the DEHLG.

There is also provision in the Building Control Act 2007 for retrospective granting of Fire Safety Certificates, with certain conditions and the Sections of the Act dealing with this should be commenced as soon as possible in order to ensure that when projects can proceed as quickly as possible. The same consideration should be given to the proposed Access Certificate system.

Social Infrastructure

The focus of the Government Capital Programme is stated to be social housing, schools and healthcare together with infrastructure works. These projects have a social purpose, will deliver long-term benefits for society and will generate employment and taxation revenues. The integrated use of the Strategic Infrastructure Act 2005 and Local Area Plans, such as are used in the Dublin Docklands area, could provide for substantial and meaningful consultation. When this process is completed Appeals would be precluded and such projects could proceed on a defined timescale.

Extension of the Planning Exemption System

In addition to the Strategic Infrastructure Act 2005 and local Area Plans consideration should be given to the extension of planning exemptions for schools, social housing and related facilities and healthcare projects.

Urgent consideration should be given extending the Act to include schools, community buildings and healthcare.

