Séanadh

Is í an Oifig Buiséid Pharlaininteach (OBP) a d’ullmhaigh an doiciméad seo mar áis do Chomhaltaí Thithe an Oireachtais ina gcuid dualgas parlaiminteach. Ní bheartaítear é a bheith uileghabhálach nó críochnúil. Féadfaidh an OBP aon fhaisnéis atá ann a bhaint as nó a leasú aon tráth gan fógra roimh ré. Níl an OBP freagrach as aon tagairtí d’aon fhaisnéis atá á cothabháil ag tríú páirtithe nó naísc chuig aon fhaisnéis den sórt sin nó as ábhar aon fhaisnéise den sórt sin. Tá baill foirne an OBP ar fáil chun ábhar na bpáipéar seo a phlé le Comhaltaí agus lena gcuid foirne ach ní féidir leo dul i mbun plé leis an mórophobal nó le heagralochtai seachtracha.

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The Parliamentary Budget Office (PBO) has prepared this Briefing Paper on Public Private Partnerships (PPPs) in recognition of a number of factors:

- The National Development Plan 2018-2027 (part of Project 2040) highlights the budgetary priority the Government attaches to public infrastructure investment. The programme of investment set out in the Plan should be considered in the context of the multi-annual Exchequer Capital allocations (Budget 2018) in respect of the four year period 2018-2021 which “provides an additional €4.3 billion in capital funding, increasing total capital investment for the period by 17.3% to €29.2 billion.”\(^1\)\(^2\)
- PPPs represent a growing State liability;\(^3\) albeit from a low base and subject to a ceiling;
- The Review of the Inter-Departmental Group on the use of PPPs and its recommendations on their future role is due to be published shortly. It had been intended that the outcome of that review process would be published alongside the National Development Plan – a number of recommendations from the Review are however included in the Plan;\(^4\)
- The use of PPPs is likely to continue to be considered in the case of large-scale projects;\(^5\)
- The risk of overheating and/or inflation in the construction sector may have to be considered in the context of the planned increase in capital investment – Government policy in respect of PPPs is therefore one component in monitoring that risk;
- The complexity of determining the off-balance sheet status of PPP projects can, in certain circumstances, introduce “a level of uncertainty into capital planning.”\(^6\)
- Both the Comptroller and Auditor General and the International Monetary Fund (IMF) have commented on PPPs in Ireland recently;
- A focus has been placed on the widespread use of PPPs in the UK by the compulsory liquidation of Carillion. The use of PPPs in the UK far exceeds that of Ireland; however, this incident offers an opportunity to review the current approach to PPPs in Ireland; and
- The PBO also undertook to provide this Briefing Paper in response to a request from the Committee on Budgetary Oversight.

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1 National Development Plan 2018-2027, section 1.11
2 The multi-annual Exchequer capital allocations agreed in Budget 2018 are being extended under the National Development Plan for a further year and so will now underpin each Department’s capital planning process for a five-year period from 2018 to 2022. These five-year allocations will be reviewed and extended annually on a rolling basis to include a fifth year, as part of the annual Estimates process.
3 The projected total expenditure on PPPs over the life of the contracts agreed has increased from ~6.1 Billion at the end of 2012 to ~9.6 Billion at the end of 2016. Source: Comptroller and Auditor General Annual Report 2016, section 4.5.
4 While the PPP Review has not been published, some references to its findings are included in the National Development Plan and are included in this paper where appropriate.
6 Minister for Public Expenditure and Reform, Response to Parliamentary Question [3599/17] 26 January 2017
Box 1 – Addressing future infrastructure requirements

Project 2040 comprises both the National Development Plan and the National Planning Framework which set out the Government’s plans for the provision of infrastructure in Ireland in the periods 2018-2027 and 2018-2040 respectively. The need for Ireland to address “emerging infrastructure bottlenecks” has also recently been noted by the European Commission’s Country Report Ireland 2018. The demand for infrastructure in the coming decades underpins the recommendation of the forthcoming Public Private Partnership (PPP) Review that:

“All large-scale projects included in the new National Development Plan should [...] continue to be assessed in terms of suitability for procurement by PPP and/or alternative financing, in particular projects which involve user charges or which offer the potential to generate significant third party income.”

The National Planning Framework sets the high-level strategic plan for future development while the National Development Plan sets out the investment priorities in the short-medium term.

This PBO Briefing Paper outlines:

- What PPPs are and various aspects of these partnerships;
- Their legislative basis and institutional framework; and
- The number of PPPs in Ireland, the liabilities involved and the expenditure ceiling in place.

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7 The Parliamentary Budget Office intends to publish a Note in respect of the Country Report before the end of March 2018

8 National Development Plan 2018-2027, section 2.6
Overview

In the context of investing in public infrastructure, Public Private Partnerships (PPPs) are notable by virtue of the fact that they are the only off-balance sheet mechanism open to the Government that can comply with EU fiscal rules. They therefore provide an option that allows the delivery of additional infrastructure and services than might otherwise be possible.

Some of the advantages associated with PPPs are that they allow the public sector to avail of private sector expertise and innovation and that their deployment allows the State to share risk between the public and private sectors.

The history of PPPs in Ireland is relatively brief, commencing with a pilot programme under the Department of Education and Science in 1999; PPPs have since been used across a number of areas including transport, education, and health.

Since their inception in Ireland a legislative and institutional framework has been developed to support and safeguard their use. Important aspects include Value for Money tests, checks on affordability and the use of a Public Sector Benchmark (i.e. comparing the cost of the PPP with achieving the same objective by traditional procurement).

A Review of the use of PPPs is due to be published shortly and some recommendations from that Review were published in the National Development Plan 2018-2027. Both the Comptroller and Auditor General and the International Monetary Fund (IMF) have commented on the use of PPPs relatively recently. This paper therefore provides an overview of the use of PPPs and summarises the advantages of their use while noting some challenges.

The PBO suggests that, in the interests of greater transparency, consideration could be given to including the following on the dedicated Government PPP website:

- Estimates of PPP expenditure in the context of the multi-annual capital allocations in respect of the period 2018-2021; and
- A breakdown of major PPP projects in the water sector and their cost.
Definition and Purpose of PPPs

Public Private Partnerships (PPPs) are partnerships between the public and private sectors for the purpose of delivering a project or service traditionally provided by the public sector. These partnerships tend to be long-term agreements (25 years+) which can take many contractual forms. In Ireland, as can be seen in Appendix 1, the forms of PPP used are primarily:

- Design-Build-Finance-Maintain (DBFM);
- Design-Build-Finance-Operate-Maintain (DBFOM); and
- Concessions.

In the case of the water sector, the PPP model has also been integrated into the water services sector. In the case of works involving the provision of treatment plants the DBO model is the preferred procurement route.9

In theory, PPPs offer a range of potential benefits to the State:

- PPPs may potentially exhibit greater value for money (VfM) than traditionally procured projects;
- The public sector can benefit from private sector efficiencies and innovations, and the State reduces its exposure to risk by assigning the appropriate project risk to the private sector; and
- PPPs may also result in the provision of higher quality infrastructure. Where the private sector has responsibility for the asset for the long term it may be incentivised to design and construct infrastructure to a high standard in order to reduce its maintenance costs.

In addition to the above, PPPs have a smaller upfront impact on capital expenditure, i.e. PPPs spread payments for capital infrastructure over a longer timeframe than traditional procurement options. As PPPs distribute the cost of projects over a longer time frame, they may create greater flexibility within budgets to provide a greater volume or quality of infrastructure in the short term.

Crucially, they offer the potential for the State to move capital expenditure off-balance sheet in line with EU fiscal rules. PPPs appear to be unique in this regard, as:10

“[A] Clearing House group chaired by the Department of Housing was unable to identify any new off balance sheet model that would be capable of being classified as off-balance sheet under Eurostat rules.”

However, the benefits of PPPs are not universally accepted; criticisms of PPPs include:

- The Value for Money (VfM) of PPPs is difficult to assess until the PPP itself has been in place for several years or indeed has concluded, i.e. the full lifecycle costs of PPPs are difficult to assess prior to, or early, in their existence;
- PPPs can potentially create private sector monopolies as their duration (frequently several decades) can, in certain circumstances, provide the private sector actor with a monopolistic position which may place potential competitors at a disadvantage; and
- Where PPPs relate to the provision of a service it may be difficult to define the quality of the service to be delivered within a contractual agreement; this may lead to the service provided being of poorer quality than had it been provided directly by the public sector.

10 Minister for Public Reform and Expenditure, Response to Parliamentary Question [26209/17] 01 June 2017
**Legislative Basis and Institutional Framework**

The *State Authorities (Public Private Partnership Arrangements) Act 2002* provides the legislative basis for PPPs in Ireland ensuring that the State acts *intra vires* when entering into PPPs, i.e. the legislation aims to ensure that public authorities are legally empowered to enter into PPPs; however, the Comptroller and Auditor General (C&AG) has stated that PPPs are vulnerable to legal challenges which can significantly delay delivery.\(^\text{11}\)

The use of PPPs as a means of providing public services or infrastructure is subject to an institutional framework and various guidelines, both national and at EU level. The National Development Finance Agency (NDFA) and the Department of Public Expenditure and Reform’s Central Unit both play key roles in the PPP process in Ireland. The Central Unit provides guidance and the policy and legislative frameworks underpinning PPPs – it also maintains a dedicated website. The NDFA acts as financial advisor to the state and procures and delivers PPPs in most sectors (excluding transport and local authorities).

**PPPs in Ireland: number, liabilities and ceiling**

Ireland does not utilise major PPP projects (i.e. capital cost exceeding €20 million) frequently – there were a total of 27 such projects listed on the PPP.gov.ie website, with total nominal value of the Exchequer’s financial commitments amounting to €9.6 billion at end 2016.\(^\text{12}\) The €9.6 billion liability is an increase from €6.1 billion at end 2012 and reflects a number of new contracts signed in that period.\(^\text{13}\) The total PPP expenditure to end 2016 reported on the PPP website was just over €3 billion. A tabular summary of the 27 major PPP projects is provided at Appendix 1. PPPs in the water sector are not included in the list of Exchequer funded financial commitments under Public Private Partnerships and Concession Projects provided on the PPP.gov.ie website. A list of major projects in the water sector was provided in a reply to a Parliamentary Question in 2013.\(^\text{14}\)

Estimates provided in respect of PPP liabilities cannot be definitive as:\(^\text{15}\)

- PPP projects are vulnerable to legal challenges which can cause significant delays;
- Requested variations to a project after the contract has been agreed can lead to additional public sector partner costs; and
- Benchmarking in respect of contract services provided over the life of the contract can result in an increase or decrease in the annual payment made by the public sector. Benchmarking involves the PPP company comparing its own (or its subcontractors’) charges for providing services to the current market price of equivalent services.

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\(^{11}\) Comptroller and Auditor General, *Report on the Accounts of the Public Services 2016* (2017, p.56)

\(^{12}\) International Monetary Fund, *Technical Assistance Report—Public Investment Management Assessment* (November 2017, p.30)

\(^{13}\) Comptroller and Auditor General, *Report on the Accounts of the Public Services 2016* (2017, p.53)

\(^{14}\) Response to Parliamentary Question 841

An aggregate ceiling of 10% for PPP liabilities (annual payments and any other costs such as land acquisition) was introduced by Government by way of an Investment Policy Framework for PPPs in 2015. This policy applies to both existing PPPs and new PPPs then in procurement or planning. The purpose of the framework is to set a limit on the extent to which the annual costs of PPPs would pre-commit capital funding available to future Governments for investment purposes, in terms of the overall aggregate Exchequer capital allocation projected to be available in any individual year. The forthcoming PPPs Review is understood to recommend that the previous policy of associating this limit with individual Departments’ capital allocation be reinstated.

The ceiling for PPP liabilities assists in:
- ensuring that overreliance on PPPs is avoided; and
- preventing off-balance sheet PPPs being used as a default to address infrastructural needs. This is important in the long-term as it prevents future budgets being overly constrained by commitments made in the present.
Public Private Partnerships (PPPs) are partnerships between the public and private sectors for the purpose of delivering an asset or a service traditionally provided by the public sector. PPPs are characterised by a more complex contractual relationship between the parties than in the case of a conventional infrastructure project.\textsuperscript{16} The Framework for Public Private Partnerships (2001) describes PPPs as:\textsuperscript{17}

“An arrangement between the public and private sectors (consistent with a broad range of possible partnership structures) with clear agreement on shared objectives for the delivery of public infrastructure and/or public services by the private sector that would otherwise have been provided through traditional public sector procurement.”

It is intended that PPPs should structure the relationship between the parties and aim to allocate risks to the party best able to control them. Their overall aim is to exploit private sector skills and competencies in order to achieve increased value.\textsuperscript{18} The transfer of risk to the private sector actor should encourage them to act efficiently as they will only be able to recoup their investment by identifying and managing the risks inherent in the project.

PPPs may present three key characteristics:\textsuperscript{19}

1. Responsibility for provision of the project or service are shared between the public and private sector with the private sector responsible for a significant level of the risk, i.e. provision (design or construction) should be linked to other elements of the project such as financing, operating or maintaining the project;
2. A long-term commitment by the public sector for the provision of the public service through contractual arrangements with private sector actors; and
3. The exploitation of private sector competencies (managerial, technical, financial and innovation) over the project’s lifetime and the cross-transfer of skills between the public and private partners.

\textsuperscript{16} Van den Hurk, M., ‘Learning to Contract in Public Private Partnerships for Road Infrastructure: Recent Experiences in Belgium’ [2016] Policy Sciences 49(3) 309,310
\textsuperscript{17} Public Private Partnership, Framework for Public Private Partnerships (2001) p.1
\textsuperscript{18} European Commission, Guidelines for Successful Public Private Partnerships (2003) pp.16-7
\textsuperscript{19} Public Private Partnership, Framework for Public Private Partnerships (2001, p.1)
The Structure of PPPs

There are many types of PPP which are differentiated on the basis of the specific roles allocated to each of the PPP partners. In Ireland, as can be seen in Appendix 1, there are primarily three types of PPP currently in use:

I. Design-Build-Finance-Maintain (DBFM): DBFM PPPs require the private sector provider to provide and maintain the asset/infrastructure but not to operate it. This is likely to be used to provide schools and similar infrastructure; in such cases the public sector will want use of the asset but will not require that the private partner provide the attendant service, i.e. in the case of a school, the public sector or the relevant patron would employ the teaching staff.

II. Design-Build-Finance-Operate-Maintain (DBFOM): DBFOM PPPs effectively require the private sector to replace the public sector for the duration of the contract. These PPPs require the private sector to both provide and operate the asset/infrastructure. In the case of a water treatment plant, for example, this would require the private sector to staff the plant to ensure service delivery on behalf of the public sector contractor.

III. Concessions: Concessions differ from other PPPs in how they provide a financial return to the private sector. Unlike other PPPs the private sector achieves its financial return by levying a charge on users of the service. Concessions are best suited to cases where the service or infrastructure has the characteristics of a private good. The specific nature of concessions limits their use; however, concessions are likely to be largely similar to DBFOM PPPs in terms of what is required of the private sector provider. In Ireland, concessions have been used to a large extent in the transport sector.

In addition, PPPs which are Design-Build-Operate (DBO) have been used in the water sector in Ireland.

These types of PPP may be further distinguished on the basis of how the private sector achieves a return for financing a project. The private sector achieves a financial return by either of the following means:

- **Unitary payments:** The public sector provides annual payments to the private sector for a contractually agreed period of time. These unitary payments typically comprise one or more of the following elements – usage payments, availability payments and service performance payments; 21 or

- **Concessions:** Allow the private sector to levy user fees from the asset for a defined period of time. Concessions are effectively an allowance for the private sector to charge the public for the use of infrastructure or service. Tolls roads are a common example of concessions. 22

While the contract is in force, PPP infrastructure may be owned by the public partner but operated by the private partner. Assets may also be transferred to the private partner, operated by them for the duration of the project life cycle, and revert to the public sector party thereafter. The selected legal framework must allow the chosen solution to be operated whilst also protecting the interests of both the public and private sector partners. The movement of assets between the partners should not generate unnecessary additional costs. The public partner, prior to entering the PPP, must determine the legal status of the assets under the PPP.

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22 International Monetary Fund, Technical Assistance Report—Public Investment Management Assessment (November 2017, p.29)
The Advantages of PPPs

PPPs may provide a more efficient route to the provision of a project or service traditionally provided by the public sector; however, PPPs also allow the public sector to raise finance for the provision of infrastructure off-balance sheet and in compliance with fiscal rules. This may be particularly useful in an environment of budgetary restrictions.23

Box 2 – PPPs and National Accounts

PPPs can provide an off government balance sheet (i.e. without a direct impact on government debt) mechanism to supplement exchequer capital funding with private finance which means they are capable of delivering more infrastructure while complying with EU fiscal rules. PPPs offer greater flexibility in providing public sector services and infrastructure in the short-term, at the cost of reduced flexibility in the long-term as capital budgets are pre-committed to long-term annualized payments.

The ability to move PPPs off-balance sheet created a concern that they might be used by EU Member States to conceal expenditure and liabilities in contradiction of the Stability and Growth Pact rules. Eurostat therefore developed rules relating to the statistical accounting of PPPs which determine whether a PPP’s assets should be recorded on the government’s balance sheet. These rules are based on how the main risks of a project are allocated between the government and the PPP operator. In cases where the financial risk of the project is primarily allocated to the government, the asset is recorded on the government balance sheet.24

In the event that the asset is recorded off-balance sheet, only the service fees paid to the partner over the long-term impact the government deficit, and no debt will be recorded. The potential to place PPPs off-balance sheet makes their use compliant with the deficit threshold established in the Maastricht Treaty (now Article 126 Treaty on the Functioning of the European Union).

To qualify as a PPP under Eurostat rules, the majority of the cost of the asset must be met directly by the Exchequer over the life of the contract through availability based unitary payments.25 In order for a PPP to be considered off-balance sheet the majority of risks and rewards have to be borne by the private partner.26 Three main risks are analysed to determine if a PPP may be placed off-balance sheet; these are construction, demand, and availability.27

Decisions are taken by the national statistical authorities (in Ireland, the Central Statistics Office (CSO)) and, ultimately, Eurostat. The CSO’s analysis will also consider factors which may distort the allocation of risks and rewards in a PPP, i.e. government financing, government guarantees, termination clauses and the allocation of the assets at the end of the contract. It is also significant to determine whether or not the partner is, for statistical purposes, classified outside the general government sector.28
The European Commission has identified a range of benefits typically associated with PPPs which are set out in Table 1 – the Commission’s descriptions are supplemented with other commentary as appropriate.

**Table 1 – The advantages of employing PPPs**

<table>
<thead>
<tr>
<th>Advantage</th>
<th>Explanatory Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accelerated infrastructure provision</td>
<td>PPPs can allow the public sector to finance a project through on-going service payments. This allows projects to be commenced even when there is limited access to funds either through a constrained budget or through spending caps.</td>
</tr>
<tr>
<td>Faster implementation</td>
<td>The assignment of responsibility to the private sector, with payment linked to provision of a service, incentivises the private sector to deliver projects in a timely manner.</td>
</tr>
<tr>
<td>Reduced whole life costs</td>
<td>Where PPP projects provide for the on-going operation and maintenance of an asset to be provided by the private sector operator there is a strong incentive for the private contractor to minimise costs throughout the entire life of a project thereby increasing long-term efficiency. This can prove difficult in traditional public sector budgeting.</td>
</tr>
<tr>
<td>Better risk allocation</td>
<td>A core principle of PPPs is the optimal allocation of risk rather than the maximisation of risk transfer, i.e. the risks should be allocated to the party best able to manage the risk at least cost. Reeves (2011) notes that appropriate risk allocation aligns the incentives of public and private contractors which encourages greater efficiency.</td>
</tr>
<tr>
<td>Better incentives to perform</td>
<td>The allocation of risk to the private sector actor should incentivise it to improve the management and performance of a given project. PPPs usually provide that full payment only be made where the required service is provided to an agreed standard and on an on-going basis.</td>
</tr>
<tr>
<td>Improved quality of service</td>
<td>Experience suggests that service quality under PPPs is often better than that achieved by traditional procurement. This could reflect one or more of the following: enhanced integration of services with supporting assets, enhanced economies of scale, innovation in service delivery, and the performance incentives and/or penalties typically forming part of the PPP contract. Reeves (2011) notes that PPPs facilitate tendering on the basis of long-term efficiencies rather than just input specifications which characterised traditional procurement.</td>
</tr>
<tr>
<td>Generation of additional revenues</td>
<td>The private sector may be able to access revenues from third parties leading to a reduction in the cost of any public sector subvention which may be required. There is a potential to generate additional revenue through the disposal of surplus assets or the use of spare capacity.</td>
</tr>
<tr>
<td>Enhanced public management</td>
<td>By freeing government officials of the responsibility for providing the project or service they can instead focus on regulating, planning, and evaluating the performance of the project rather than engaging in the day-to-day delivery of the project or service. PPPs also allow projects to be benchmarked. This facilitates comparison of public and private sector costs for service provision thereby ensuring that the best possible value for money is being achieved.</td>
</tr>
<tr>
<td>Increased Innovation</td>
<td>The competitive process for PPPs may encourage private sector innovation.</td>
</tr>
</tbody>
</table>


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31 Ibid  
The Challenges posed by PPPs

This section will describe the risks and challenges which may be posed by the use of PPPs and identify how PPPs are not a suitable approach to the provision of infrastructure or services in all cases. Box 3 describes typical management problems identified in the context of PPPs generally.

Box 3 – Classic Management Problems in PPPs

- **Goal conflict:** The objectives of public and private sector actors are likely to be different; this can lead to reduced efficiency and distortion of goals with the private sector pursuing maximum profits and failing to deliver on public objectives.

- **Principal-agent problems:** The principal agent theory suggests that private sector actors (agents) control the information regarding their costs and operations which makes it difficult for the public sector (principals) to challenge poor performance or excessive costs.

- **Limited competition:** Information asymmetry (as present in the principal-agent problem) can be offset by competition as the principal can gain greater understanding of costs and processes from the private sector actors competing for the role of agent. PPPs tend to involve large costly projects which reduce the pool of potential competitors.

- **Rent seeking:** Public sector contracts may attract opportunistic private sector actors who seek to gain excessive profits and incomes from the project, thereby undermining the efficiency objective of utilising PPPs.

- **Moral hazard:** The public sector, regardless of formal allocation of risk, will ultimately bear responsibility for projects embodying a public good and therefore will be unable to let it fail. In cases where the project becomes financially unviable for the private sector actor the public sector will likely intervene with a bailout.

- **Inter-dependency:** PPPs can lead to the public and private sector actors becoming reliant upon each other to achieve their goals. This may be productive in some cases; however, it may also make the public sector unwilling to impose sanctions or other forms of discipline in relation to the private sector actor’s performance if they fear it may negatively impact on delivery of the service to clients.

The IMF has recently expressed some concern regarding the approval of PPPs in Ireland, specifically that the VfM process screens out relatively few projects and that arguably “too much emphasis” had been placed on the additionality case for PPPs in recent years. The case of Carillion plc in the United Kingdom illustrates the risk of over-reliance on one PPP service provider.

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34 International Monetary Fund, Technical Assistance Report—Public Investment Management Assessment (November 2017, p. 31)
Box 4 – When the private partner in a PPP fails – Carillion plc

In the United Kingdom, Carillion plc entered into compulsory liquidation on 15 January 2018.\textsuperscript{35} Carillion went into liquidation following an announcement that its profits were to be reduced by £845 million (£375 million of which related to the UK, primarily linked to three PPP projects). The House of Commons Library describes this as representing Carillion having “been £845m too optimistic about its contracts.”\textsuperscript{36} It observed that Carillion’s borrowings increased more than fivefold in the period 2009-2018, and had nearly doubled (89%) from December 2016 to January 2018.\textsuperscript{37} It also identified serious issues in Carillion’s finances observing that in the period 2009-2018, debts rose by 297% while the value of its long-term assets only increased by 14%; Carillion also withheld payments to creditors as a form of \textit{quasi} short-term borrowing.\textsuperscript{38}

The UK Government had contracts with Carillion for provision of services for hospitals, schools, prisons, transport, and others. The government had a total of around 450 contracts with Carillion.\textsuperscript{39} Following Carillion entering compulsory liquidation a number of its joint venture partners “have committed to stepping into the respective public sector contracts to ensure continuity of these vital services.”\textsuperscript{40} In the case of public sector construction sites, these have been secured and construction will begin following the appointment of a new contractor.\textsuperscript{41}

In Ireland, the Minister for Public Expenditure and Reform has stated that international best practice provides that PPP contracts include provisions which specifically address the liquidation of a consortium member of the PPP company, or an entity under the contract, in order to protect the public interest and to provide that the project proceeds to completion. In such cases, the consortium’s funders and remaining shareholders are required to implement measures to ensure the project is completed to the satisfaction of the State/public sector. The Minister also stated that:\textsuperscript{42}

“Liquidation of a company involved in delivering a public infrastructure project, such as Carillion plc, is an unfortunate development but would impact on any project where a supplier became insolvent during the delivery process, regardless of whether the project was being procured by PPP or by traditional means. The issue, therefore, is not PPP-specific, but where it arises in a PPP project, the provisions of the PPP contract ensure that the public interest is protected.

The contractual mechanisms within a PPP project agreement are designed to limit the State’s financial exposure in such a scenario. An important feature of PPPs... is that no payments are made until the facilities are handed over to the State and are operational. Once facilities are operational, payments to the PPP company are linked to service performance and availability of the facilities over the lifetime of the contract, with deductions applying when the facilities are not performing or are unavailable.”

\textsuperscript{35} House of Commons Library, \textit{The Collapse of Carillion} (January 2018, p.3)
\textsuperscript{36} Ibid p.15
\textsuperscript{37} Ibid p.12
\textsuperscript{38} Ibid p.13
\textsuperscript{39} Gov.uk, \textit{Carillion: information for employees, sub-contractors, creditors and suppliers} (2018)
\textsuperscript{40} House of Commons Debates 15 January 2018, vol 634, col 624
\textsuperscript{41} Ibid
\textsuperscript{42} Minister for Public Expenditure and Reform, Response to Parliamentary Question [493158] 31 January 2018
The Comptroller and Auditor General has noted that post implementation evaluation of PPPs offers the potential to learn from the experience in order to conduct future PPPs more effectively – of the 17 projects operational for more than five years (at the time of the report), ten have been reviewed. However, no post project reviews completed had been published at that time and that seems to remain the case.\textsuperscript{43} The PBO would also suggest that the publication of such reviews would increase the potential for parliamentary oversight and scrutiny of PPPs. It notes however that some reviews may not be published on the basis that they contain commercially sensitive material.

The Comptroller and Auditor General has also stated that PPPs are vulnerable to legal challenges which can significantly delay delivery\textsuperscript{44} and that transaction costs can increase significantly where variations to the contract are required after it has been signed.\textsuperscript{45} These factors are ones that could, naturally, also impact on traditional procurement projects.

Some international studies have shown that \textit{ex ante} transaction costs of PPPs (legal, for example) may represent a significant proportion of the overall cost of a PPP project, frequently exceeding 10\% of the cost of the capital value of the project.\textsuperscript{46}

In addition, the Nevin Economic Research Institute (NERI) states that:\textsuperscript{47}

\begin{quote}
\textquote{\textit{It} is evident that the achievement of VFM depends on factors such as competition for contracts (which may be undermined by high bidding costs) and risk transfer.\textsuperscript{48}}
\end{quote}

The claim that PPPs provide greater VFM than traditional provision of public projects is not always easy to prove and one report states that "important factors that diminish the \textit{prime facie} case in favour of PPP...include potentially higher finance costs of PPP and the magnitude of transaction costs."\textsuperscript{48}

\textsuperscript{43} Comptroller and Auditor General, Report on the Accounts of the Public Services 2016 (2017, p.65)
\textsuperscript{44} Ibid, p.56
\textsuperscript{45} Ibid, p.58
\textsuperscript{46} Dudkin, G. and Välilä, T., \textit{Transaction Costs In Public Private Partnerships: A First Look At The Evidence} (2005, p.2)
\textsuperscript{47} Reeves, E., \textit{Public Private Partnerships in Ireland: A Review of the Experience} (2013, p.11), Privatisation and PPP Research Group, Department of Economics University of Limerick
\textsuperscript{48} Ibid, p.10
Box 5 – Value for Money (VfM) and Affordability

The achievement of a value for money outcome in the use of public funds should be an overarching consideration in the procurement and delivery of each PPP. In the procurement of a PPP, there are key stages at which value for money is formally tested. The formal tests assess the potential for a project to secure value for money at a particular point in time and in light of the available information. The overall VfM of a project can only be fully determined at the end of the PPP contract term. In general, responsibility for carrying out the formal PPP Value for Money tests rests with the Sponsoring Agency. The National Development Finance Agency (NDFA) will advise any State authority as to the optimal means of financing the cost of public investment projects in order to achieve VfM.

The assessment of whether a PPP project represents VfM is a separate consideration from whether or not the project is affordable. Affordability is considered from the point of view of the budget and other financial criteria relating to the Sponsoring Agency. VfM, in the context of a PPP project, involves consideration of the overall impact that the project could have on the Exchequer or other source of public funds. PPP projects that provide value for money solutions may not be affordable and vice versa. All PPP projects fulfil both of these criteria.

Source: Value for Money and the Public Private Partnership Procurement Process, sections 1.3-1.6

It is not possible to establish the savings that may be generated by the use of a PPP project in the absence of a benchmark of public expenditure. In addition to this, achieving savings requires that the private sector make efficiency gains greater than the higher cost of private financing of the project. The compilation of a public sector benchmark is therefore essential before committing to the PPP process. Box 6 describes the use of the public sector benchmark (PSB) in Ireland.

50 The discount rates and inflation rates for project appraisal and financial evaluation purposes in respect of PPPs is available here.
51 Public Private Partnership, Technical Note on the compilation of a Public Sector Benchmark for a Public Private Partnership Project (2007)
Box 6 – Purpose of the Public Sector Benchmark (PSB)

The PSB is a key tool in the PPP procurement process. It is presented as a single monetary value that represents the full estimated cost, taking income and risks into account, to the Sponsoring Agency of delivering the project using ‘traditional’ public sector procurement. This single monetary value is underpinned by a financial model and other relevant supporting documentation. The PSB must comprehensively address all costs, income and risks that the private sector will be invited to tender for in the PPP contract. The compilation of the PSB will build on the Detailed Appraisal carried out under the Capital Appraisal Guidelines.

The use of assessment processes and the Public Sector Benchmark is necessary to evaluate the comparative merits of PPP versus traditional public sector provision. The Public Service uses discount rates to help formulate the total cost of a project. Discount rates provide a present value for future expenditure. Also included in the calculation of the cost of public sector benchmarks are inflation rates. Estimating the cost of a project in the long-term requires consideration of both interest rates and discount rates in order to provide a robust costing of a project over its life-cycle. The appropriate rates for project appraisal and financial evaluation are set by the Department of Public Expenditure and Reform.

The PSB is not a prediction of the actual outturn cost of the project. For this reason, Sensitivity and Scenario Analyses are important aspects of the compilation of the PSB. The valuations used in the PSB should represent the best estimate available, at the time of compilation, of all of the costs, income and risks associated with a given PPP project.

The ultimate purpose of the PSB is to act as a reference throughout the PPP procurement process. It will also play an important role in the assessment of whether the highest ranking bid received has the potential to offer value for money.

Subsequent to the procurement process, benchmarking and market testing are used to ensure that the PPP contract continues to provide Value for Money in respect of contract services. Such benchmarking can result in either an increase or a decrease in the unitary charge payable by the State.

Sources: Technical Note on the compilation of a Public Sector Benchmark for a Public Private Partnership Project (January 2007, p.4); Comptroller and Auditor General, Report on the Accounts of the Public Services 2016 (2017, sections 4.15 – 4.18).

PPP frameworks, guidelines, and technical notes have been used in the analysis of proposed projects such as Thornton Hall Prison. In that case it was found that the cost of unitary payments increased by over 30% from the tender submitted by the preferred bidder which lead to the decision not to proceed with this as a PPP project.

The Comptroller and Auditor General noted in that Office’s Annual Report that a number of other PPPs had been cancelled in 2011 including:

- Three planned bundles of third level education projects; and
- Dublin’s three large-scale mass-transport projects (Metro North, Dart Underground and Metro West).

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52 Comptroller and Auditor General, Report on the Accounts of the Public Services 2014 (2015, p.106)
53 Comptroller and Auditor General, Report on the Accounts of the Public Services 2011, pp.86-88
The State Authorities (Public Private Partnership Arrangements) Act 2002 forms the legislative basis for the participation of Irish State Authorities in the PPP process. The Act “facilitates the fullest possible participation by Irish State Authorities in the PPP process.”

A key provision of the State Authorities (Public Private Partnership Arrangements) Act 2002 is:

Section 3(1) of the Act which provides for the State acting alone or in conjunction with a State authority to enter into arrangements known as “public private partnership arrangements” with partners for the performance of function of the State authority specified within the arrangement. These functions may include:

(i) the design and construction of an asset, together with the operation of services relating to it and the provision of finance, if required, for such design, construction and operation, or

(ii) the construction of an asset, together with the operation of services relating to it and the provision of finance, if required, for such construction and operation, or

(iii) the design and construction of an asset, together with the provision of finance for such design and construction, or

(iv) the provision of services relating to an asset for not less than 5 years and the provision of finance, if required, for such services

A number of other acts are relevant to, or have developed, the legislative context of PPPs. These include the:

- Transport (Railway Infrastructure) Act 2001;
- National Development Finance Agency Act 2002;
- National Development Finance Agency (Amendment) Act 2007; and the
- National Treasury Management Agency (Amendment) Act 2014.
Central Unit

While the financial responsibility for PPP projects rests with the relevant sponsoring Department or agency, the Central PPP Unit in the Department of Public Expenditure and Reform facilitates the PPP process centrally. The Central Unit is responsible for the overall PPP process including developing the general policy framework and legal framework which govern operation of PPPs. The Central Unit liaises with Departments and other State authorities and provides central guidance on the PPP process. The Central Unit is responsible for the publication of guidance documents for use by Departments and authorities considering the utilization of PPPs. The guidance produced by the Central Unit should be viewed in conjunction with the Public Spending Code (discussed below).

The Central Unit has produced a number of guidance documents including, inter alia, the Framework for Public Private Partnerships, Guidelines to State authorities regarding the National Development Finance Agency, Main PPP Guidelines and a Technical Guidance Note: Assessment of Projects for Procurement as PPPs.

Public Spending Code

Section B.05 of the Public Spending Code deals with expenditure related to PPPs. This section also refers to B.03. This section of the Code discusses “Approvals Required and Scale of Appraisal” and summarises the checkpoint and approvals which are required prior to proceeding with a proposal to full implementation. This document sets out the process of how a PPP may proceed to implementation. In the case of projects of a value in excess of €20 million the respective Cost-Benefit Analysis (CBA) or Cost-Effectiveness Analysis (CEA) should be referred to the Central Expenditure Evaluation Unit of the Department of Public Expenditure and Reform (DPER) for review prior to the Sanctioning Authority granting approval in principle.

In the particular case of PPPs the Sponsoring Agency must seek the advice of the National Development Finance Agency (NDFA) on all projects of €20 million or more. The Public Spending Code recommends the consideration of procuring a project by PPP in cases where projects are anticipated to cost in excess of €20 million as part of the standard project appraisal.
National Development Finance Agency (NDFA)

The NDFA, as part of the National Treasury Management Agency (NTMA), is the statutory financial advisor to State authorities in respect of all public investment projects with a capital value in excess of €20 million. The NDFA is also wholly responsible for the procurement and delivery of PPPs in sectors other than transport and the local authorities. The NDFA therefore has the joint remit of advising on, and entering into, PPPs. The NDFA’s objective is to maximize the value for money achieved for the Exchequer.58
The Comptroller and Auditor General has noted that Ireland’s PPP liability has grown from €6.1 billion at end 2012 to €9.6 billion at end 2016. Total expenditure on PPPs to end 2016 just exceeded €3 billion. Annual unitary payments were forecast to increase from €225 million at end 2016 to €345 million at end 2021.

Appendix 1 provides a table adapted from the project tracker available on the PPP.gov.ie website and represents a concise version thereof – this sets out the Exchequer funded financial commitments of 27 major PPP projects (projects with a value in excess of €20 million) as of year-end 2016. This does not include major PPP projects relating to the water sector. While more up to date data would be welcome, there are a number of issues that merit discussion arising from the table in its present form.

The scope for Government to finance provision of public services and infrastructure was restricted in 2015 by the introduction of an Investment Policy Framework for PPPs. The Framework applies to the future cost of unitary payment charges in respect of both existing PPPs already in place and new PPPs currently in procurement or planning. The restriction provides that no more than 10% of aggregate capital expenditure, in any given year, can be used to service annualized payments for PPP contracts. This 10% limit takes into account “the aggregate cost of all unitary payments as well as any other costs (such as land acquisition or enabling works).” The introduction of this ceiling seems to have been prompted by

> “the increasing level of unitary payments which arise on PPP projects...an issue of concern for the Education budget, given the large unitary charge in the budget for 25 schools built using the PPP model capital. In 2016, for example, of the total Education capital expenditure of €704 million, €85 million (12 per cent) was allocated to PPP projects. The total annual cost of unitary payments projected to fall due on all existing and planned PPP projects over the period 2016-2021, according to the Capital Plan, is almost €2 billion. This is close to 6 per cent of the gross voted capital expenditure provided over the same period.”

This ceiling ensures the ratio of capital expenditure for provision of public services by the public sector to that provided by the private sector never falls below 9:1. The ceiling for PPP liabilities assists in:

- ensuring that some of the potential pitfalls of overreliance on PPPs do not come to pass. Overreliance on PPPs can serve to diminish the ability of the public sector to provide services or infrastructure as expertise becomes embedded in the private sector supplier; and
- preventing off-balance sheet PPPs being used as a default to address infrastructural needs. This is important in the long-term as it prevents future budgets being overly constrained by commitments made in the present.

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59 Comptroller and Auditor General, Report on the Accounts of the Public Services 2015 (2017, p.53)
60 This would appear to be available for 2017 in respect of at least one Vote, Response to Parliamentary Question [44323/18] 30 January 2018. However, it is not available on the PPP.gov.ie website.
61 Minister for Public Expenditure and Reform, Response to Parliamentary Question [17354/17] 06 April 2017
62 Comptroller and Auditor General, Report on the Accounts of the Public Services 2015 (2017, section 4.7)
63 Construction Industry Federation, Enhancing Ireland’s Infrastructure (August 2017, p.8)
64 Minister for Public Reform and Expenditure, Response to Parliamentary Question [26209/17] 01 June 2017
The IMF has recommended that consideration be given to both replacing the “current fiscal cap on unitary/availability payments with a rule that scores the total capital cost of a PPP against departments’ capital envelopes” and imposing restrictions on PPPs in the social sector.\(^\text{65}\)

The *Expenditure Report 2018* sets out the total gross capital expenditure ceilings for the period 2018-2021. Based on the Total Gross Capital Expenditure Ceilings (see Appendix 2 of this paper) the corresponding PPP ceilings for the years 2018-2021 are €533 million, €657 million, €717.5 million, and €778.5 million.\(^\text{66,67}\)

The PBO notes that Government could consider providing a more disaggregated estimate of forthcoming unitary payments. This would serve to increase transparency. These disaggregated estimates for unitary payments could be linked to the Multi-annual Capital Investment Allocations as set out in the *2018 Expenditure Report* in order to clarify the proportion of overall capital expenditure comprised of PPPs.\(^\text{68}\) Publication of all estimated expenditure on PPPs (regardless of source) in the context of multi-annual capital investment allocation budgets would add transparency to capital budgeting. Based on the data available (see tables 2 and 3 below), the PBO expects total expenditure in respect of PPPs in 2018 to be approximately €386 million.

**Table 2 – Estimated PPP Expenditure 2018 (Non-voted)**

<table>
<thead>
<tr>
<th>Vote</th>
<th>Description</th>
<th>External (borrowing/EU receipts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vote 22 Courts Service</td>
<td>PPP Estimate (Funded by Unitary Payments)</td>
<td>€18,600,000</td>
</tr>
<tr>
<td>Vote 26 Education</td>
<td>PPP Estimate (Funded by Unitary Payments)</td>
<td>€63,000,000</td>
</tr>
<tr>
<td>Vote 31 Transport</td>
<td>PPP Estimate (Funded by Unitary Payments)</td>
<td>€109,000,000</td>
</tr>
<tr>
<td>Vote 38 Health</td>
<td>PPP Estimate (Funded by Unitary Payments)</td>
<td>€8,826,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>PPP Estimate (Funded by Unitary Payments)</strong></td>
<td><strong>€199,426,000</strong></td>
</tr>
</tbody>
</table>


\(^{65}\) *International Monetary Fund, Technical Assistance Report-Public Investment Management Assessment (November 2017, p.32)*

\(^{66}\) *Department of Public Expenditure and Reform, Expenditure Report 2018, p.217*

\(^{67}\) *Excluding any capital carried forward between years*

\(^{68}\) *Department of Public Expenditure and Reform, Expenditure Report 2018, p.217*
Table 3 – Estimated PPP Expenditure 2018 (Voted)

<table>
<thead>
<tr>
<th>Vote</th>
<th>Subhead/Source</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vote 13 Office of Public Works</td>
<td>Subhead B.10 ‘Unitary Payments’</td>
<td>€25,000,000</td>
</tr>
<tr>
<td>Vote 22 Courts Service</td>
<td>Subhead A.4 ‘PPP Costs’ &amp; Deferred Surrender (€3,736,000)</td>
<td>€39,699,000</td>
</tr>
<tr>
<td>Vote 31 Transport, Tourism and Sport</td>
<td>Subhead B.3.4 ‘PPP Operations’</td>
<td>€122,098,000</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>€186,797,000</strong></td>
</tr>
</tbody>
</table>

Source: PBO based on the Revised Estimates for Public Services 2018 (2017)

In the past, unitary payments were considered to form part of a vote’s current expenditure; however, in more recent years they are classified as capital expenditure. The PBO notes that this change has resulted in increased transparency in the reporting of current and capital voted expenditure.

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Appendix 1 – Exchequer funded financial commitments under PPP Projects (to end 2016)

The following should be noted in the context of the following table.

- Estimates of future nominal committed payments are calculated on an assumed future annual inflation of 2 per cent per annum.
- PPP Unitary expenditure by TII relates to construction, operation and availability payments.
- Other PPP expenditure relates to VAT, rates, enabling works, authority variations etc.
- A review of “Other PPP Payments” is currently being undertaken by the Department of Education and Skills, and figures will be provided following completion of the review. Total PPP cost figures are also subject to change in that context.
- Rounding effects totals.
<table>
<thead>
<tr>
<th>Department/Agency</th>
<th>Project Classification</th>
<th>Operational From</th>
<th>Contractual Value (€,m)</th>
<th>Projected Total Cost of all PPP Payments (€,m)</th>
<th>Year of Final Payment</th>
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<tr>
<td><strong>Health</strong></td>
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<tr>
<td>Primary Care Bundle</td>
<td>DBFM</td>
<td>Phased from Q3 2017</td>
<td>140.0</td>
<td>457.8</td>
<td>2042</td>
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<td><strong>OPW</strong></td>
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<td>National Conference Centre</td>
<td>DBFOM</td>
<td>Aug-10</td>
<td>189.8</td>
<td>779.4</td>
<td>2035</td>
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<tr>
<td><strong>Justice</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Criminal Courts Complex</td>
<td>DBFOM</td>
<td>Nov-09</td>
<td>132.4</td>
<td>623.5</td>
<td>2035</td>
</tr>
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<td>Courts Bundle</td>
<td>DBFOM</td>
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<td>383.7</td>
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<td><strong>Total Justice</strong></td>
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<td>282.3</td>
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<td><strong>Education</strong>*</td>
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<td>5 Pilot Schools</td>
<td>DBFM</td>
<td>2002</td>
<td>63.7</td>
<td>290.4</td>
<td>2027</td>
</tr>
<tr>
<td>National Maritime College</td>
<td>DBFM</td>
<td>2004</td>
<td>51.4</td>
<td>187.8</td>
<td>2029</td>
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<td>Cork School of Music</td>
<td>DBFM</td>
<td>2007</td>
<td>49.3</td>
<td>230.2</td>
<td>2032</td>
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<td>Schools Bundle 1</td>
<td>DBFM</td>
<td>2010</td>
<td>59.9</td>
<td>245.6</td>
<td>2035</td>
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<tr>
<td>Schools Bundle 2</td>
<td>DBFM</td>
<td>2011</td>
<td>81.7</td>
<td>342.4</td>
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<tr>
<td>Schools Bundle 3</td>
<td>DBFM</td>
<td>2013</td>
<td>100.0</td>
<td>410.4</td>
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<td>Schools Bundle 4</td>
<td>DBFM</td>
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<td>61.3</td>
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<td>School Bundle 5</td>
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<td>90.9</td>
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<td></td>
<td></td>
<td>558.2</td>
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<td><strong>Transport Infrastructure Ireland</strong></td>
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<td>M3 Clonee Kells[2]</td>
<td>DBFOM</td>
<td>Jun-10</td>
<td>521.2</td>
<td>706.4</td>
<td>2052</td>
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<td>Limerick Tunnel[1]</td>
<td>DBFOM</td>
<td>Jul-10</td>
<td>382.5</td>
<td>281.6</td>
<td>2041</td>
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<tr>
<td>M50 Upgrade</td>
<td>DBFOM</td>
<td>Sep-10</td>
<td>219.1</td>
<td>944.6</td>
<td>2042</td>
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<td>N11 Arklow/Rathnew</td>
<td>DBFOM</td>
<td>Phased with final completion Q2/Q3 2015</td>
<td>131.2</td>
<td>465.3</td>
<td>2040</td>
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<tr>
<td>M17/18 Gort/ Tuam**</td>
<td>DBFOM</td>
<td>Dec-17</td>
<td>271.4</td>
<td>932.2</td>
<td>2042</td>
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<td>M11 Gorey/ Enniscorthy**</td>
<td>DBFOM</td>
<td>Jul-19</td>
<td>234.5</td>
<td>507.7</td>
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<td>Department/Agency</td>
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<td>Contractual Value (€, m)</td>
<td>Projected Total Cost of all PPP Payments (€, m)</td>
<td>Year of Final Payment</td>
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<td>------------------------</td>
<td>------------------</td>
<td>--------------------------</td>
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<tr>
<td>N25 New Ross**</td>
<td>DBFOM</td>
<td>2019</td>
<td>150.6</td>
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<td>M4 Kilcock Kinnegad</td>
<td>Concession</td>
<td>Dec-05</td>
<td>301.8</td>
<td>179.3</td>
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<tr>
<td>M1 Dundalk</td>
<td>Concession</td>
<td>Sep-05</td>
<td>112.6</td>
<td>6.9</td>
<td>2034</td>
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<tr>
<td>M8 Fermoy</td>
<td>Concession</td>
<td>Oct-06</td>
<td>182.7</td>
<td>151.7</td>
<td>2024</td>
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<tr>
<td>N25 Waterford</td>
<td>Concession</td>
<td>Oct-09</td>
<td>262.3</td>
<td>196.8</td>
<td>2027</td>
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<tr>
<td>N6 Galway Ballinasloe</td>
<td>Concession</td>
<td>Dec-09</td>
<td>297.8</td>
<td>371.5</td>
<td>2035</td>
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<tr>
<td>M7/8 Portlaoise</td>
<td>Concession</td>
<td>May-10</td>
<td>300.1</td>
<td>85.7</td>
<td>2023</td>
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<td>MSA</td>
<td>Concession</td>
<td>Sep/Oct-10</td>
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<td>47.1</td>
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<td>1,039.0</td>
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<td>Dublin City Council</td>
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<td>Dublin Waste to Energy</td>
<td>Concession</td>
<td>2017</td>
<td>346.0</td>
<td>–</td>
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<td>Total</td>
<td></td>
<td></td>
<td>4,946.6</td>
<td>9,635.6</td>
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</tbody>
</table>

* Education figures to be validated

**Figures include a provision for a VAT bullet payment when due.

[1] The Payments for Limerick Tunnel include payments required to be made under the traffic guarantee contract mechanism. The nominal value of remaining payments as at 31 December 2015 does not include any amounts for future payments under this mechanism.

[2] The Payments for M3 Clonee Kells include payments required to be made under the traffic guarantee contract mechanism. The nominal value of remaining payments as at 31 December 2015 does not include any amounts for future payments under this mechanism.

Source: Adapted from PPP Projects (accessed 9 March 2018)

* This table is a summary table which removes four columns from the table linked above: PPP payments to end 2016 (€, m); Projected Future PPP Unitary Payments in NOMINAL Terms (€,m); Other PPP Payments, where available (€,m); and PPP Company.
## Appendix 2 – Multi-Annual Capital Investment Allocations 2018-2021

<table>
<thead>
<tr>
<th>Category</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>€ million</td>
<td>€ million</td>
<td>€ million</td>
<td>€ million</td>
</tr>
<tr>
<td>Agriculture, Food and the Marine</td>
<td>248</td>
<td>255</td>
<td>258</td>
<td>265</td>
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<tr>
<td>Business, Enterprise and Innovation</td>
<td>560</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Children and Youth Affairs</td>
<td>28</td>
<td>32</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td>Communications, Climate Action and Environment</td>
<td>209</td>
<td>256</td>
<td>297</td>
<td>317</td>
</tr>
<tr>
<td>Culture, Heritage and the Gaeltacht*</td>
<td>54</td>
<td>75</td>
<td>76</td>
<td>80</td>
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<tr>
<td>Defence</td>
<td>77</td>
<td>106</td>
<td>113</td>
<td>120</td>
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<tr>
<td>Education and Skills*</td>
<td>745</td>
<td>941</td>
<td>942</td>
<td>1,006</td>
</tr>
<tr>
<td>Employment Affairs and Social Protection</td>
<td>10</td>
<td>14</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>Finance Group*</td>
<td>26</td>
<td>25</td>
<td>22</td>
<td>18</td>
</tr>
<tr>
<td>Foreign Affairs and Trade Group</td>
<td>13</td>
<td>17</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Health*</td>
<td>493</td>
<td>667</td>
<td>724</td>
<td>780</td>
</tr>
<tr>
<td>Housing, Planning, Community and Local Government</td>
<td>1,130</td>
<td>1,310</td>
<td>1,376</td>
<td>1,403</td>
</tr>
<tr>
<td>Justice and Equality Group*</td>
<td>146</td>
<td>242</td>
<td>231</td>
<td>219</td>
</tr>
<tr>
<td>Public Expenditure and Reform Group*</td>
<td>175</td>
<td>203</td>
<td>214</td>
<td>223</td>
</tr>
<tr>
<td>Rural and Community Development*</td>
<td>88</td>
<td>86</td>
<td>70</td>
<td>72</td>
</tr>
<tr>
<td>Transport, Tourism and Sport*</td>
<td>1,327</td>
<td>1,643</td>
<td>2,058</td>
<td>2,526</td>
</tr>
<tr>
<td>PCP Reserve</td>
<td>98</td>
<td>136</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>Total Gross Capital Expenditure Ceilings*</td>
<td>5,330</td>
<td>6,570</td>
<td>7,175</td>
<td>7,785</td>
</tr>
</tbody>
</table>

Source: PBO based on 2018 Expenditure Report, p.217

*Rounding affects totals*
Publications

*PBO Initial Objectives & Services* 4 October 2017

**Commentaries**

*Quarterly Economic and Fiscal Commentary (Q4 2017)* 23 January 2018

*Post-Budget 2018 Commentary for the Committee on Budgetary Oversight* 24 October 2017

**Briefing Papers**

*Briefing Paper 4 of 2018* *The Gender and Equality Budgeting pilot in the Revised Estimates for Public Services 2018* 27 February 2018

*Briefing Paper 3 of 2018* *Revised Estimates for Public Services 2018* 20 February 2018

*Briefing Paper 2 of 2018* *Local Property Tax: Issues to be considered with the revaluation of the base* 15 January 2018

*Briefing Paper 1 of 2018* *European Semester 2018 and how it interacts with Ireland’s Budget 2019* 15 January 2018

**PBO Notes**

*Note 3 of 2018* *The Multiannual Financial Framework of the EU* 9 February 2018

*Note 2 of 2018* *Note on Revaluation of the Local Property Tax base* 15 January 2018

*Note 1 of 2018* *Note on Ireland’s budgetary process and the European Semester 2018* 15 January 2018

**Infographics**

*Budgetary Cycle 2018* 10 January 2018

*Exchequer revenue – Significant months* 6 March 2018