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Transport Infrastructure Ireland

TII Publications



Project Appraisal Guidelines Unit 2.0 - Project Appraisal Deliverables

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1. Context

1.1 Introduction

This unit provides guidance on the Project Appraisal Deliverables that are required throughout the project lifecycle of TII Capital Expenditure Projects and outlines the deliverables required at each TII Project Phase.

TII Projects¹ are generally broken down into four categories in the TII Project Appraisal Guidelines (PAG) based on the size of estimated project budget. Each budget threshold requires a different scale of appraisal, which is proportionate to the size of the project. The four budget categories are as follows:

- Greater than or equal to €200m
- Greater than €30m but less than €200m
- Greater than €5m but less than €30m
- Greater than €0.5m but less than €5m

This unit provides an overview of the appraisal deliverables required for each of the above categories of project. This PAG Unit explains the deliverables required for each appraisal pathway depending on the type, complexity and scale of the project. Yet, it should be noted that each appraisal pathway is flexible and can be adapted to different project uses if required.

For instance, the €5-30m appraisal pathway deliverables have generally been adapted to appraise greenway projects regardless of budget size. Furthermore, the methods and deliverables used in each appraisal pathway are negotiable if there is a strong project justification for changing them. For example, a small realignment of a National Road, which involves a budget greater than €30m, may not require detailed modelling if a strong Business Case can be created without this analysis.

1.2 Study Area Definition

There are two types of study area that are used in the project appraisal and design process. These are defined in PAG Unit 2.0, to ensure there is clarity regarding the use of the term 'study area' for each deliverable. The two types of study area are:

- **Appraisal Study Area:** The Appraisal Study Area is used in the Phase 1 process to analyse travel demand, transport conditions, develop the Strategic Options and assess them to identify the Preliminary Options for detailed appraisal. This study area will be based on the project objectives, the start and end points of the transport route for which a solution/intervention is being sought, and the area of influence that could reasonably be expected to be influenced by proposed interventions.
- **Constraints Study Area:** The Constraints Study Area is initially defined in Phase 1 for the purposes of identifying all the physical / artificial / engineering / natural constraints within an area within which it is expected that options will be developed and examined.

¹ For the categorisation of projects capital expenditure costs are inclusive of VAT.

The development of the study area is cyclical in nature and its extent is influenced by the findings of the constraints, risks and opportunities study and design development. The Constraints Study Area can evolve as necessary throughout all stages of the project lifecycle².

² During the constraints study the environmental constraints study area will vary by environmental discipline (or factor).

2. Projects Over €30m Appraisal Deliverables

2.1 Project Deliverables Overview

The set of deliverables required from the appraisal process is dictated by the requirements of the Department of Transport (DoT) Transport Appraisal Framework (TAF).

The appraisal process involves deliverables that are required at various project stages, with varying levels of detail, as the scheme progresses. For Projects over €30m, these deliverables are:

- Project/Programme Outline Document (PAG Unit 2.1)
- Feasibility Report (PAG Unit 3.0)
- Options Report (PAG Unit 4.0)
- Preliminary Business Case (PBC - PAG Unit 8.0)
- Detailed Business Case (DBC – PAG Unit 8.0)
- Final Business Case (FBC – PAG Unit 8.0)
- Ex-Post Evaluation (EPER – PAG Unit 9.0)

Figure 2.0.1 illustrates the alignment of the PAG deliverables against the TII Project Management Guidelines (PMG) project phases and Department of Public Expenditure, NDP Delivery and Reform (DPENDR) Infrastructure Guidelines approval gates and deliverables.

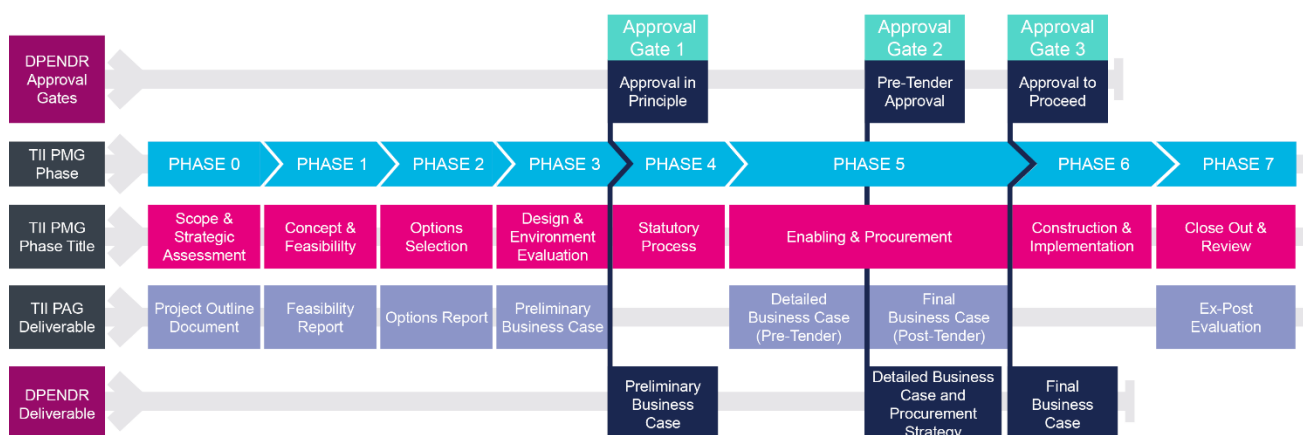


Figure 2.0.1 TII PMG Project Phases & Main DPENDR Decision Gates/Deliverables

2.2 Phase 0-7 Project Deliverables

2.2.1 Main Project Appraisal Deliverables

A Phase 0 **Project / Programme Outline Document (POD)** is required on all projects with a capital cost in excess of €20m (incl. VAT) in order to comply with the requirements of the TAF. Based on the limited available information at the outset of a project, the POD sets out the rationale for the project, its alignment with government policy, its objectives, explores potential solutions that meet the requirements of NIFTI, a high-level estimate of costs/affordability, key risks, an appraisal plan and governance plan. Full details of the requirements/structure of the POD are provided in PAG Unit 2.1.

The Phase 1 **Feasibility Report (FR)** involves a baseline review of the Appraisal Study Area to identify the key transport issues and opportunities. A study of key constraints is also undertaken to strengthen the investment rationale.

The objectives from the Phase 0 POD are refined and strengthened in the FR to remove bias and ensure they meet the SMART requirement. Strategic Options are identified and assessed against the project objectives, key constraints, risks and opportunities. A refined list of feasible Strategic Options is the output of the Phase 1 FR, which are taken forward to Phase 2 for refinement and further consideration. The FR is a combined PAG/PMG deliverable.

The Phase 2 **Options Report (OR)** commences with the development of the Preliminary Options (route corridors / alignments) that emerge from the Strategic Options defined in Phase 1. An initial sifting of the Preliminary Options (i.e. Stage 1 - Preliminary Options Assessment) is undertaken to take a manageable number of options forward for detailed appraisal (i.e. Stage 2 - Project Appraisal Matrix). The detailed appraisal of the Preliminary Options uses transport modelling, analysis tools, environmental impacts and assessment tables to identify the Preferred Option.

The impact of each Preliminary Option is assessed using Multi-Criteria Analysis techniques such as TAA (Transport and Accessibility Appraisal) and other quantitative methods such as CBA (Cost Benefit Analysis) and CEA (Cost Effectiveness Analysis). This appraisal will result in identification of the Preferred Option to take forward for design in Phase 3 (i.e. Stage 3 - Selection of Preferred Option). The OR is a combined PAG/PMG deliverable.

The **Preliminary Business Case (PBC)** will form an update to the Options Report following detailed consideration of scheme planning and design and costs required for Phase 3 of the Preferred Option. The PBC brings together the Phase 3 information to form a complete statement documenting the rationale behind, and justification for the project. The PBC enables the Sponsoring Agency to bring together all the evidence to support their contention that the scheme should be implemented. It will be the Preliminary Business Case that the Approving Authority will base its decision upon, and it must therefore provide a complete picture of all the arguments in favour of, and the impacts of, the proposed scheme.

The **Detailed Business Case (DBC)** will form an update to the PBC following detailed consideration of scheme planning and design and costs required for Phase 5 on the Preferred Option (taking into consideration any changes that may impact the proposal following the Phase 4 Statutory Processes). Again, the DBC brings together the Phase 5 information to form a complete statement documenting the rationale behind, and justification for the project at Phase 5. It will be the Detailed Business Case that the Approving Authority will base its decision upon to proceed to tender, and it must therefore provide a complete picture of all the arguments in favour of and impacts of the proposed scheme.

The **Final Business Case (FBC)** will form an update to the DBC following the completion of the tendering process at Phase 5. The FBC will include the Main Construction Contract cost following the tendering process. It will be the Final Business Case that the Approving Authority will base its decision upon to proceed to the construction of the project.

The **Ex-Post Evaluation Report (EPER)** is carried out within five years of the completion date of the project and its purpose is to determine whether:

- The basis on which the project was undertaken was justified
- The expected benefits and outcomes materialised
- The planned outcomes were the appropriate responses to actual public needs
- The appraisal and management procedures adopted were satisfactory
- If conclusions can be drawn applicable to other projects, to the ongoing use of the asset, or to associated policies

2.2.2 Supporting Technical Reports

In addition to the main appraisal deliverables, supporting technical reports may be produced, which are created as appendices in the Options Report initially, and then updated in the PBC and FBC as the project progresses. Two key technical reports are:

- The **Transport Modelling Report (TMR)**, which describes the data, modelling techniques and assumptions that have been used to model and assess the various options/scenarios for the project. It presents the existing situation and the future scenarios, with and without, the proposed transport intervention. Further details can be found in PAG Unit 5.0 (Transport Modelling Overview), which introduces the detailed PAG transport modelling guidance.
- The **Cost Benefit Analysis (CBA)** Report provides an assessment of the costs and benefits of the scheme in order to determine if the scheme is economically worthwhile. All impacts of the scheme which can be given a monetary value are included in this assessment. In addition to the economic assessment, the report also needs to include a financial appraisal of the proposed transport intervention. Further details can be found in PAG Unit 6.0 (Cost Benefit Analysis Overview), which introduces the detailed PAG CBA guidance.

2.3 PAG Deliverables in the Appraisal Process

Table 2.0.1 sets out the appraisal deliverables for Projects as the scheme progresses through the project planning phases. The PAG deliverables are required to be reviewed as the project moves through the project phases and revised or updated as more data and information becomes available.

Table 2.0.1 Appraisal Deliverables for Projects over €30m by TII PMG Project Phase

TII Project Management Guidelines - Project Phase	PMG/PAG Deliverables						
	POD	FR	OR	PBC	DBC	FBC	EPER
Phase 0: Scope and Strategic Assessment	Y						
Phase 1: Concept & Feasibility		Y					
Phase 2: Option Selection			Y				
Phase 3: Design and Environmental Evaluation				Y			
Phase 4: Statutory Processes							
Phase 5: Enabling and Procurement					Y ³	Y ⁴	
Phase 6: Construction and Implementation							
Phase 7: Closeout and Review							Y

For clarity, the TII Project Management Guidelines (PMG) project phases and associated PAG deliverables are set out and aligned with the TAF and deliverables in Figure 2.0.1. TII PAG deliverables align with the TAF Decision Gates.

³ Detailed Business Case = Phase 5 Pre-Tender Business Case

⁴ Final Business Case = Phase 5 Post-Tender Business Case

3. Projects €5m to €30m - Appraisal Deliverables

Projects (€5m to €30m) are appraised in line with the requirements in PAG Unit 12.0. The following deliverables are required for this type of project, based on the listed PAG Units:

- Project / Programme Outline Document (PAG Unit 2.1)⁵
- Feasibility Report (PAG Unit 3.0)
- Options Report (PAG Unit 4.0)
- Project Appraisal Report (PAG Unit 12): This is a condensed Business Case which summarises the appraisal deliverables (Feasibility Report, Options Report, Traffic Modelling Report and CBA) for the proposed scheme. The PAR is initially developed at Phase 3, and subsequently updated at Phase 5 pre-tender and Phase 5 post-tender.
- Ex-Post Evaluation Report⁶ (PAG Unit 9.0)

Table 2.0.2 outlines the PAG deliverables for Projects (€5m to €30m) at each TII PMG project phase. The deliverables used in this appraisal pathway are generally also used for greenway and active travel projects.

Table 2.0.2 Appraisal Deliverables for Projects (€5m to €30m) by Project Phase

Project Management Guidelines – Project Phase	PAG Deliverable				
	POD	FR	OR	PAR	EPER
Phase 0: Scope and Strategic Assessment	Y				
Phase 1: Concept & Feasibility		Y ⁷			
Phase 2: Option Selection			Y		
Phase 3: Design and Environmental Evaluation				Y	
Phase 4: Statutory Processes					
Phase 5: Enabling and Procurement				Y ⁸	
Phase 6: Construction and Implementation					
Phase 7: Closeout and Review					Y

TII may at their own discretion, apply the guidance in Unit 12 (or sections of the guidance) to specific projects with a capital cost less than €5m. At the commencement of the project, the relevant TII Senior Engineering Inspector will determine if the guidance in Unit 12 (or part thereof) applies to a project with a capital cost less than €5m.

⁵ Only required for Projects over €20m. For projects with capital costs less than €20m, it is recommended that the requirement for a POD or a note outlining the approach to the appraisal of the project (i.e. an appraisal plan), be discussed and agreed with the relevant TII Senior Engineering Inspector. PAG Unit 2.2 outlines specific guidance for PODs concerned with active travel or greenway schemes.

⁶ Ex-Post Evaluation Report is required for all projects with costs of €20m or more as per the requirements of TAF

⁷ A simplified version of the Feasibility Report is produced for projects under €30m

⁸ A Pre-Tender PAR and Post-Tender PAR is required to meet the DoT TAF Business Case requirements

4. Projects €0.5m to €5m - Appraisal Deliverables

Projects (€0.5m to €5m) are appraised in line with the requirements in PAG Unit 14.0. The only PAG deliverable is an Appraisal Summary Table (AST) in Phase 3 as shown in Table 2.0.3.

Table 2.0.3 Appraisal Deliverables for €0.5 to €5m Projects by Project Phase

Project Phase	PAG Deliverable
	AST
Phase 3: Design and Environmental Evaluation	Y



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