

# PROJECT MANAGEMENT PROCEDURES

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## A Summary Guide



NRA

*National Rivers Authority*

# *National Rivers Authority*

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**NRA**

*National Rivers Authority*

**SUMMARY GUIDANCE  
ON THE APPLICATION OF THE  
PROJECT MANAGEMENT PROCEDURES**

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## **LIST OF ABBREVIATIONS**

CE	Chief Executive
CS	Chief Scientist
DF	Director of Finance
DO	Director of Operations
DoE	Department of the Environment
DWM	Director of Water Management
EG	The Executive Group of the NRA
FD	Flood Defence
MAFF	Ministry of Agriculture, Fisheries and Food
NRA	National Rivers Authority
PAB	Project Assessment Board
PER	Project Evaluation Report
PID	Project Initiation Document
PIN	Policy Implementation Note
PPA	Post-Project Appraisal
RGM	Regional General Manager
RM	Regional Manager
RMT	Regional Management Team
SoD	Scheme of Delegation
WO	The Welsh Office

## INTRODUCTION

The National Rivers Authority ("NRA") is a Non-Departmental Public Body. This status, and its support by public money, places particular responsibilities upon all its employees to ensure value-for-money at all times.

The NRA undertakes a large number of projects of varying types and size in fulfilling its statutory duties. These projects need to be managed to ensure that their need and justification is properly established and that they are controlled to achieve successful completion within planned constraints of quality, cost and time. The procedures represent the minimum standards for project management within the NRA, ensuring a consistent approach to the planning and management of all projects, regardless of business function. It is recognised that individual functions within the NRA may wish to extend them in order to suit their own requirements.

This document is intended to summarise and explain, but not replace, the **Project Management Procedures Policy Implementation Note ("PIN")**. The purpose of this guide is to promote general staff awareness of the way in which all NRA projects are to be managed. In addition, the PIN on Procedures for Managing Small Projects summarises the procedures applying specifically to small projects.

This guide contains flowcharts illustrating the common stages that each project must pass through, referring to relevant sections of the Project Management Procedures PIN (and other related PINs as appropriate). Projects are categorised as small, medium and large depending upon expected expenditure and level of risk (see below). Separate flowcharts are attached for small projects and for medium/large projects. The procedures are not mandatory for projects with a planned expenditure below £10,000.

### The Definition of a Project

A project is defined in the Financial Memorandum as "a commitment to a discrete item of expenditure, or to a set of expenditures related in such a way that the benefits of any one of them cannot be fully realised independently of the others".

Projects are unique (ie. non-repetitive) items of work and expenditure which exist for a limited period, having defined start and finish points. A project involves the organisation of human, material and financial resources to undertake a unique scope of work, of given specification, within constraints of cost and time, to achieve beneficial change defined by quantitative and qualitative objectives.

Projects may consist of capital or revenue expenditure, but all capital expenditure is considered to be project-related.

### Project Categories

Projects are categorised as small, medium and large in the table below, depending upon the type of project and its total estimated cost. Small and medium projects will be “uprated” to medium and large projects respectively if they are assessed as “high risk”.

<i>Type</i>	<i>Category</i>		
	Small	Medium	Large
Engineering - Flood Defence	Up to £500,000	Up to £1,000,000	Over £1,000,000
Engineering - Non-Flood Defence	Up to £100,000	Up to £500,000	Over £500,000
IS, R & D and Others	Up to £100,000	Up to £250,000	Over £250,000

### Project Stages

For project management purposes, a project lifecycle is divided into 4 stages:

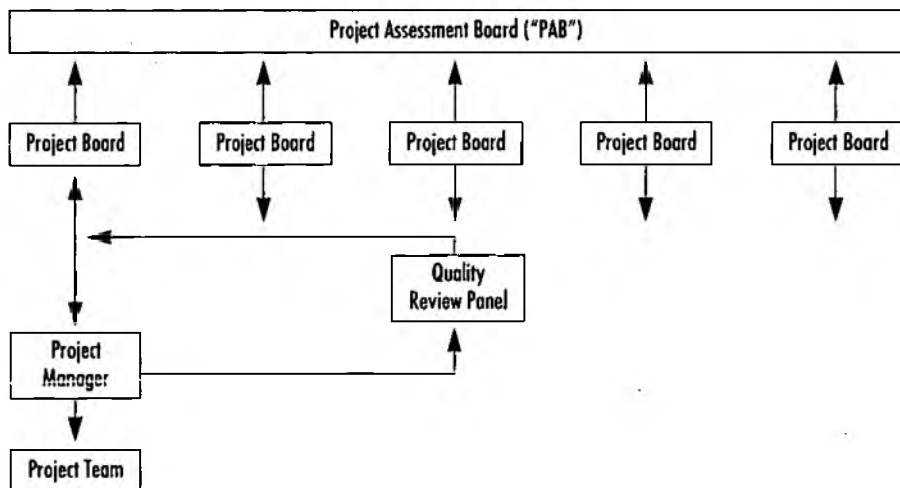
- Stage 1** - inclusion of the project on an approved programme;
- Stage 2** - detailed planning and project authorisation under the Scheme of Delegation (“SoD”);
- Stage 3** - the project is undertaken; and
- Stage 4** - the project is completed and closed.

## PROJECT ORGANISATION AND RESPONSIBILITIES

The management and control structure for all projects is centred around three management bodies:

- the Project Assessment Board ("PAB");
- the Project Board; and
- the Project Manager.

The relationship between these management bodies is illustrated below.



The PAB is responsible for a group of projects, whereas the Project Board and the Project Manager have direct responsibility for only a single project. However, in the case of small projects, the roles of the PAB and Project Board may be delegated to individual managers - see below. The role of the Quality Review Panel is discussed in Stage 3.

### The Project Assessment Board ("PAB")

The PAB is responsible for controlling and monitoring all projects undertaken within a Region and at Head Office, and therefore provides key management support to the Regional Management Team and National Directors respectively. The membership of the PAB should be taken from various functions and therefore represent a strategic overview of projects to ensure the objectives of the Corporate Plan are achieved.

There must be a separate PAB for each Region and one at Head Office, although a Region may decide that more than one PAB is required in order to oversee projects within an area or function.

PAB must consist of between three and six managers, including a chairman who must be a senior manager. Members will be appointed by the Regional Management Team or National Directors.

In order to effectively monitor and control a diverse set of current projects, the PAB is required to authorise key planning and completion documents for each project and review high-level financial reports in order to track the progress of approved programmes. These roles are introduced in the appropriate section of this guide.

In addition, one of the main roles of the PAB is to set up the management structure for each new project undertaken by the Region or Head Office. This will involve:

- for medium and large projects, deciding on the chairmanship and remaining membership of the Project Board for each project; and
- for small projects, assessing whether the roles of the Project Board and the PAB itself should be delegated to individual managers - see below for details.

### **The Project Board**

A Project Board will be set up by the PAB to control, monitor and assist the work of the Project Manager. As such, the Project Board is ultimately responsible for the successful completion of the project and delivery of products. The Project Board therefore monitors and assists the work of the Project Manager at “control points”, leaving the Project Manager free to plan and organise between these points.

There should be a Project Board for each project, and will normally include a chairman and at least two other members chosen by the PAB and/or the chairman.

### **The Project Manager**

Every project must have a Project Manager who has day-to-day responsibility for the management of the project from beginning to end, and as such must be an appropriately experienced individual. The Project Manager is accountable to the Project Board for the successful completion and implementation of the product or products.

The Project Manager has primary responsibility for delivery of products to the users, for selecting and managing the project team, and for controlling the various



activities which must be completed in order to deliver each product. The Project Manager is therefore the key individual in undertaking the project and has substantial authority to run the project activities day-to-day.

### **Management Procedures for Medium and Large Projects**

Every large project must be monitored and controlled by the PAB and must have a Project Board as outlined above. The management structure for medium projects will normally be identical to that for large projects, although the extent of monitoring and control will not be as great. Specifically for medium projects only, the Project Board may decide to take on the role of the Quality Review Panel itself (see stage 3), and a Project Evaluation Report (see Stage 4) is not mandatory.

### **Small Projects - Delegating the Roles of the PAB and the Project Board**

For small projects, the roles of the PAB (other than the selection of projects for Post-Project Appraisal) may be delegated by the PAB to the relevant **Budget Manager**. The Budget Manager is defined as that function manager who holds, and is accountable for, the budget for the project. For the flood defence function, the roles may also be delegated to the Capital Programme Manager.

For most small projects, particularly those where the PAB has delegated its role to a Budget Manager, a Project Board is unlikely to be appropriate. If so, the PAB (or Budget Manager, where appropriate) has two options:

- (1) delegate the role of the Project Board to the Budget Manager - if this is the case, the Budget Manager will be responsible for directly controlling, monitoring and assisting the work of the Project Manager, and the project management structure will consist of only these two individuals; or
- (2) delegate the role of the Project Board to an individual Line Manager.

Conversely, a situation could arise where the PAB considers that a project represents such a high degree of risk that they decide to perform the role of the Project Board themselves in order to maintain close control.

References in the remainder of this guide to the PAB and the Project Board should also be taken to refer to the Budget Manager and Line Manager respectively, where appropriate to small projects.

## STAGE 1 - INITIAL APPROVAL

The identification of the need for expenditure on a project, and the co-ordination of the process of obtaining initial approval, is that of the appropriate Regional Manager (or Head of Function for Head Office or National initiatives). The project must also be prioritised: National projects will be ranked during preparation of the Corporate Plan, whereas for Regional projects further prioritisation should take place as a part of Regional planning.

3.2

3.3

Once the need for a project has been established and it has been identified and categorised, authorisation has to be obtained before inclusion in an approved programme. The process of authorisation is controlled by a two-stage process:

3.4

- obtaining initial authorisation from the PAB to include the project in an approved programme and to incur expenditure on detailed planning; and
- obtaining full authorisation under the SoD.

For **medium and large projects**, initial authorisation to include the project in an approved programme is obtained at Stage 1, whereas full authorisation under the SoD is obtained at Stage 2.

For **small projects**, only a single submission (via a Summary Appraisal Form) is required to obtain authorisation to include in an approved programme and to obtain SoD authorisation. A completed Form A must accompany the Summary Appraisal Form to obtain authorisation under the SoD.

3.5.2

### The Summary Appraisal Form

All proposed projects have to be submitted to the PAB on a Summary Appraisal Form (form PM1) which must include the following information:

3.5.1

- a description of the problem, need or opportunity and a justification of the proposed project, including the consequences of "doing nothing";
- the estimated costs and benefits of each option, a recommendation of the preferred option, its timing and risks; and

- a proposed outline of the **Project Plan** (see Stage 2).

The PAB will recommend whether the project should be included on an approved programme and will give approval for expenditure on the detailed planning of the project. Incurring expenditure beyond the planning stage is dependent upon obtaining authorisation under the SoD. Note that SoD authorisation may be required during Stage 1 if expenditure on planning is expected to exceed certain limits ( see the FM/SoD PIN for details).

Once approval has been given for inclusion in an approved programme, the PAB appoints the Project Board and Project Manager.

## STAGE 2 - DETAILED PLANNING AND SCHEME OF DELEGATION AUTHORISATION

Once a medium or large project has obtained initial approval to commit expenditure on appraisal work, the project can then be formally planned and authorised under the SoD.

4.1

### The Project Initiation Document ("PID")

Full project authorisation under the SoD is obtained with the submission of the Project Initiation Document ("PID") to the PAB. The PAB will make a recommendation for SoD authorisation and forward the PID to the relevant authority. The Project Manager is responsible for the preparation of the PID.

4.2.1

A PID is not required for small projects - these obtain full authorisation with the submission of a Summary Appraisal Form and Form A (see Stage 1).

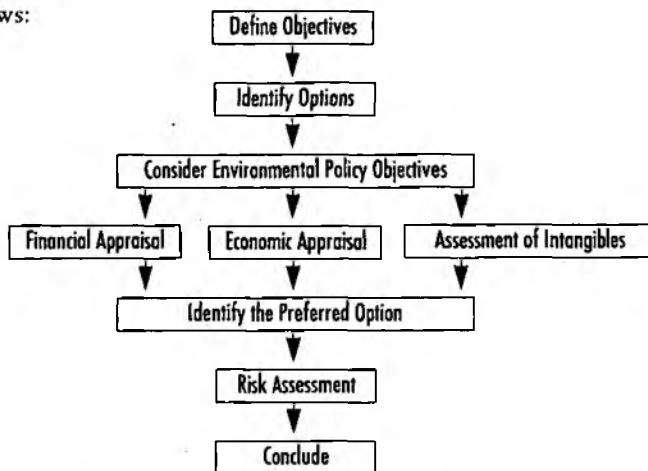
The PID is the primary planning document to be prepared under the project management procedures. It is a living document which should be updated throughout the project lifecycle. It is comprised of four sections:

- **Project Brief:** this sets out the title and overall and detailed objectives of the project, its scope and terms of reference. 4.2.2
- **Product Descriptions (form PM2):** these set out the required specifications of each product which is to be developed during the project. 4.3
- **Business Case:** this document sets out the various options for executing the project, identifying and justifying the preferred option. The Business Case forms the basis of the submission of the Form A and must include the following: 4.4
  - the detailed objectives of the project; 4.4.4
  - each option identified, with an assessment of the environmental effect of each; 4.4.5  
4.4.6
  - the costs, benefits and timing of each option in both financial and economic terms; 4.4.7  
4.4.8

- identification of the preferred option; and
- identification and assessment of the risks and uncertainties affecting the project.

4.4.11

The stages in the preparation of the Business Case can be represented as follows:



**Project Plan:** this sets out the detailed method for executing the preferred option and comprises three interlinked elements:

4.5

- the **Technical Plan**, which sets out the general approach to product delivery, including the activities and stages to be undertaken, their dependencies and any tools required. It will also set out the proposed timetable for the delivery and implementation of the products.
- the **Resource Plan**, which identifies the type, quantity and cost of manpower, materials and financial resources used, and sets out the proposed project team organisation and responsibilities.
- the **Quality Plan**, which sets out the quality acceptance criteria and the method and timetable of the Quality Review of the products.

4.5.3

4.5.4

6.2

Large projects, which are broken down into discrete stages, will have **Stage Plans** prepared by the Project Manager and submitted for approval.

4.5.5

## STAGE 3 - MONITORING AND CONTROLLING THE PROJECT

Once the required approvals have been given to the project, the project may be undertaken. It is recognised that the project may fail to achieve the objectives set out in the PID; therefore, project monitoring and control is essential in order to identify deviations from the detailed plan and will enable approved changes to be incorporated into the revised plan.

The monitoring and controlling procedure comprises the following elements, discussed in turn below:

- the maintenance of project files to provide a record of progress; 5
- quality assurance procedures to ensure products achieve prescribed specifications; 6
- the monitoring of physical progress and the control of contract performance; 7.2
- change control procedures to ensure the terms of reference are fulfilled and changes are properly authorised; and 7.3
- the monitoring of financial progress. 8

### Project Files

A Project File will be set up when the project is initiated. It will enable a record of the progress of the project through its lifecycle and provide an audit trail. The file must contain all relevant information and data relating to the planning, management, quality, control and authorisations of the project. 5.3

Separate Stage Files will be required for large projects which are subdivided into discrete stages. Each Stage File will consist of general, technical and quality sections. 5.4

### Quality Assurance

Quality assurance seeks to ensure that the completed product meets the required specifications set out in the Product Description. The procedures involve the preparation of a Quality Plan which is then compared to actual product development by way of periodic Quality Reviews conducted by a Quality Review Panel. The object of the 6.2

Quality Review is to identify and formally agree changes to correct any omissions, deviations or errors as early as possible in the development of the product.

The Quality Review Panel should be set up by the Project Board; the Panel must be chaired by a member of the Project Board and should also include members who represent the product users and persons with appropriate technical expertise.

6.4

The Quality Plan is prepared as an element of the Project Plan; it identifies the criteria against which the products are to be measured; it details the timing and method of Quality Review which is to be carried out. The two types of review are:

6.2

- a formal Quality Review: a full Quality Review Panel meeting to review high-value or technically complex products;
- a postal Quality Review: a review of lower-value, technically simple products conducted by post between the Project Manager and the members of the Panel.

6.5

6.6

The terms of reference of the Quality Review are set out in a **Quality Review Invitation (form PM3)**. At the conclusion of the Quality Review, the Project Manager must ensure that all agreed changes are recorded on the **Quality Review Action List (form PM4)**. Once the action points have been completed this list is to be signed off by the chairman of the Quality Review Panel.

6.5.1

## Physical Progress

The Project Manager should prepare a **Progress Report** for each meeting of the Project Board. The format of the Report should be agreed by the Project Board during the detailed planning stage, but must contain the following:

7.2

- a list of highlights for the period detailing key milestones achieved and financial performance;
- a summary of each Change Report (see below) which has yet to be approved; and
- a forecast of what is expected to occur in the next period.

## Contract Control Procedures

Projects normally include a set of individual contracts between the NRA and its contractors, consultants or suppliers. It is the responsibility of the Project Manager to ensure that each contract is performed in accordance with the terms and conditions, and must report by exception on contract progress to the Project Board.

7.3.1

Although the Project Manager will monitor the contract day-to-day and will receive periodic progress reports from the contractor, the Project Manager must also periodically review each contract to ensure it is being properly carried out. Reviews must be carried out at each of the following events:

- immediately prior to the payment of any major invoice;
- prior to the final contract payment and the payment of any retention;
- before the expiry of any maintenance period; and
- at any other point when costs, timings or quality criteria appear to be departing from those specified in the contract.

7.3.2

Each Region should develop appropriate procedures, such as checklists, which the Project Manager will be required to complete when such events occur. The procedures should seek to ensure that any payment is fully justified in technical, financial and legal terms.

7.3.3

## Change Control Procedures

Significant adjustments to the Project Plan require approval through the change control procedure. Two types of event may result in a change: those that require no adjustment to the original product specification, termed "Exceptions"; and those which require revision of the specification, termed "Changes".

7.4.1

When an Exception or Change is identified, the Project Manager must prepare a **Change Report** (form PM5). The Change Report sets out the nature of the Exception or Change, why it has arisen, and its effect on the project.

7.4.2



Where necessary, the proposed course of action for recovery must be set out in a Change Plan, prepared by the Project Manager. The Change Plan should include separate Technical, Resource and Quality Plans which will supplement the original plans as included in the PID.

7.4.3

Once the Project Manager has obtained the agreement of the Project Board, the Change Report (including the Change Plan) should be forwarded to the PAB for approval. PAB approval is not required for every Change Report - they will not need approval where:

7.4.4

- technical adjustments do not result in changes in timings, costs, or quality criteria; or
- tolerances of time or cost (as set out in the original Project Plan) have not been exceeded.

However, a Change Report must be prepared for every Exception or Change, and must be filed on the appropriate Project File.

### Financial Monitoring

All projects, and the programme in which they are included, must have costs, forecasts and budgets monitored and reported to management bodies.

Financial monitoring will be co-ordinated by the appropriate finance department, which will be responsible for submitting the **Monitoring Reports** to the PAB, RMT (or National Directors in the case of Head Office projects) and, ultimately, the NRA Board (via Head Office Finance Directorate). The reports required by each management body are:

8.4

8.5

- the PAB will receive a monthly report listing all medium and large projects, and total figures for the current year's approved programmes;
- the RMT/National Directors will receive the same information as the PAB, but submitted quarterly; and
- the NRA Board will receive a quarterly report listing all large projects, and total figures for the current year's approved programmes.

In addition to the above reports, a **Summary Completion Statement** must be prepared for review by the PAB monthly, and the RMT/National Directors and NRA Board quarterly. This report will set out the financial performance of each project completed in the period, regardless of its category.

8.6

For all the above reports, detailed explanations must be provided for every variance between actual and budgeted expenditure, where that variance exceeds 10% of the total budgeted expenditure or £50,000, whichever is the lower figure.

## STAGE 4 - CLOSURE

All projects must be formally signed off on completion. The closure procedures aim to ensure that the project has been completed in accordance with approved plans, and that all products have been delivered to the satisfaction of users and, where necessary, have been effectively implemented. Closure is a three-stage process:

9.1.1

- (1) the completed product is **delivered** to the user and is **implemented** into the existing organisational structure;
- (2) the user **accepts** the implemented product; and
- (3) the Project Board and Project Manager hold a **closure meeting** and make a recommendation on formal approval of closure by the PAB.

Stage 1 involves the execution of an agreed **Implementation Plan**, developed as part of the **Technical Plan**, which may include staff training requirements and reorganisation of activities and systems. The **Implementation Plan** will therefore be approved by the PAB during project planning, but will require re-appraisal by the Quality Review Panel prior to execution.

9.2

Once the product has been implemented to the satisfaction of the user, the Project Manager should obtain an **Acceptance Letter (form PM6)** from the user to confirm this. More than one Acceptance Letter may be required for each product - the requirements for user acceptance will be set out in the **Implementation Plan**.

9.3

At stage 3, the closure meeting will review all closure documentation, including Acceptance Letters and relevant project files. The meeting may require preparation of a **Project Evaluation Report ("PER")** which assesses the achievement of the project's objectives and seeks to document experiences gained from carrying out the project so that future projects may benefit. A PER is required for large projects, but for other projects the Project Board may determine whether it is appropriate. The closure meeting should arrive at a recommendation for formal signing-off by PAB.

9.5

9.4

## **Post-Project Appraisal (“PPA”)**

Once a project has been formally closed, the project may be selected by the PAB for Post-Project Appraisal (“PPA”). Any project may be selected from those projects which are considered to offer the greatest opportunity to improve performance, or those which experienced significant difficulties. However, because of the resource implications of PPA, only a handful of projects will be selected each year by a PAB.

9.6.3

PPA aims to obtain the maximum benefit from the lessons learned and experience gained while undertaking the project. PPA comprises an independent review of the following aspects of a project:

9.6.2

- its overall objectives and the quality of project planning;
- achievement of those objectives, including comparison of actual costs, benefits and timings against budget; and
- the extent of compliance with relevant procedures.

Two separate PPAs may be required for a project: the first, to be carried out soon after project closure, should review the effectiveness of project planning and management; the second, which may be performed several years later, should seek to establish the impact of the project and its products on the working practices of the NRA. It must also assess whether the benefits that were perceived to accrue from the project during planning were in fact realised following completion.

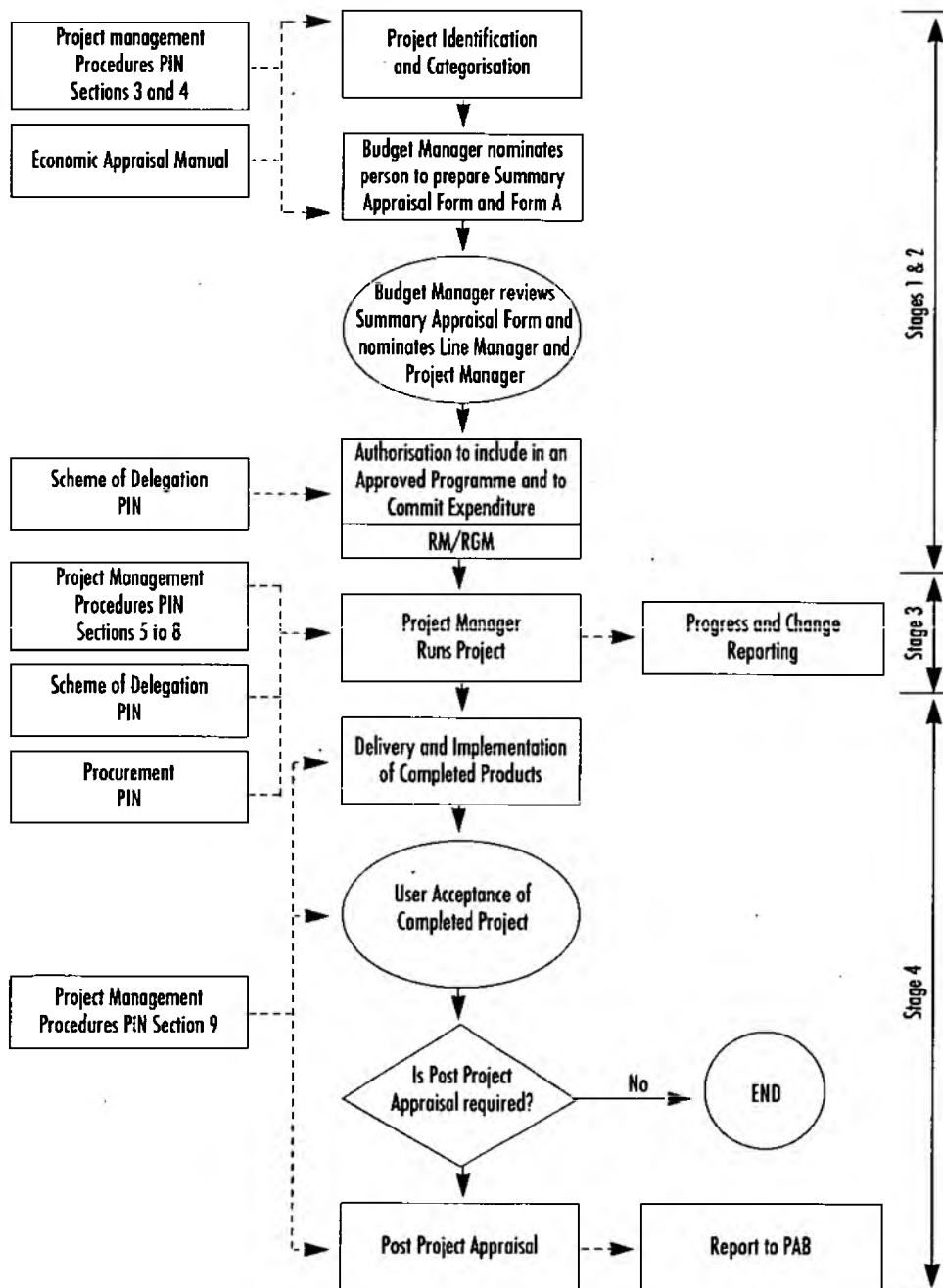
9.6.4

The report of the independent PPA team will be submitted, together with recommendations and conclusions, to the PAB for its approval and will subsequently be submitted to the NRA Board.

9.6.6

## FLOWCHARTS

## ACTIVITY FLOW DIAGRAM FOR SMALL PROJECTS



## ACTIVITY FLOW CHART FOR MEDIUM AND LARGE PROJECTS

