HIGHWAYS AGENCY

Safe roads, reliable journeys, informed travellers

The project control framework
Handbook

v2 April 2013

An executive agency of the Department for Transport

Acronyms and abbreviations

ASC	Asset support contractor
BICC	Board investment and commercial sub-committee
DfT	Department for Transport
ECI	Early contractor involvement
HA	Highways Agency
HIB	Highways investment board
HPB	Highways programme board
IA	Investment authorisation
IAF	The Department for Transport's investment appraisal framework
ICF	The Highways Agency's investment control framework
MAC	Managing agent contractor
MM	Managed motorways
MM-ALR	Managed motorways - all lanes running
MP	Major Projects (directorate)
NDD	Network Delivery and Development (directorate)
NetServ	Network Services (directorate)
NSIP	Nationally significant infrastructure project
PCF	Project control framework
PICG	Project investment control group
RCC	Regional control centre
RPA	Risk potential assessment
RTMC	Regional technology maintenance contractor
SGAR	Stage gate assessment review
SHARE	The Highways Agency's document management system
SofS	Secretary of State (for transport)
SRO	Senior responsible owner
TechMAC	Technology managing agent contractor
TM	Traffic Management (directorate)

Contents

About this handbook

On 1st April 2008 we launched the project control framework in our Major Projects directorate. The framework sets out how we, together with the Department for Transport, manage and deliver major improvement projects.

It is designed to ensure that we deliver road projects which meet our customers' aspirations in a cost efficient and timely manner.

This handbook provides an overview of the project control framework. It explains the key things you need to know in order to use the framework to manage major projects – those projects costing more than £10 million.

This handbook is one element of the materials that you will need to use the framework. It should be read in conjunction with:

- The electronic project control framework community that defines the detail of what must be produced and done. This is available on the Highways Agency's:
    - Way we Work intranet site; and
    - Supply chain portal extranet

The Way we Work and Highways Agency supply chain portal will be your primary tools for using the framework and managing projects through it. These electronic sites are updated frequently to ensure that the project control framework remains accurate and up to date and it is important for users to refer back to them regularly. Paper copies of the product matrix, individual product description pages or templates should not be printed or stored electronically for future use as this creates version control issues and risks obsolete templates being used.

- The Highways Agency's investment control framework together with the Department for Transport's investment appraisal framework which defines the financial governance arrangements applying to all Highways Agency investments.

- Tips for writing, reviewing and signing off a project control framework product.

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

About the project control framework

The project control framework is a joint Department for Transport and Highways Agency approach to managing major projects. It is designed to help us work together to develop and deliver major projects. It comprises:

- A standard project lifecycle
- Standard project deliverables
- Project control processes
- Governance arrangements

The framework is not just for project managers within the Highways Agency's major projects directorate. It is for everyone involved in developing and delivering a major road project. This includes DfT, other Highways Agency directorates and their suppliers.

Roles and responsibilities

There are five key roles within the framework. These are detailed on but in summary they are:

Project manager
Manages the development and delivery of a major project on behalf of the Agency. **This is a Highways Agency role throughout the framework**.

Senior responsible owner
Has overall accountability for the delivery of the project ensuring the project remains focused on achieving its objectives. The SRO has the authority to make decisions concerning the delivery of the project within a certain delegation. **During the options phase this is either a DfT or Highways Agency role depending on the type of project and is a Highways Agency role during the development and construction phases**.

The project sponsor
(This role is under review as at April 2013).

Has overall ownership of the transport problem that is being addressed by the project. They are accountable for ensuring that the project provides the right solution to that problem. **This is a DfT role throughout the framework**.

Senior users
Represent the interests of other Highways Agency's directorates (for example the Network Delivery and Development and Traffic Management directorates who will operate and maintain the road once the project has been completed and handed over) and act as focal points for liaison with their directorate.

The project board
Oversees the delivery of the project and supports the SRO as appropriate.

| Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes |

About the project control framework

The core principles of the framework

The lifecycle

- All major projects follow a **standard lifecycle divided into stages**

- A project can only be in one stage of the lifecycle at any point in time

- The **stages align with key decision points** in the project's development and delivery

- There is a **clear process for moving between stages**

The project deliverables

- **The framework focuses on what needs to be delivered** by a project within each stage of the lifecycle

- **The project's deliverables are called products**, for example a business case, an economic assessment report and a project plan are all products

- **Each product has a standard product definition** describing its purpose, the content and quality criteria

- There are clearly **defined roles and responsibilities** for product production, sign off and consultation

- The **product matrix defines which products are needed and at what stage(s) of the lifecycle they need to be produced**

- **All products are mandatory**, although some may not be appropriate depending on the specific requirements of individual projects. Where a product is identified as being not appropriate, it is important to record that this has been determined after due consideration and with the agreement of the SRO and project sponsor. This is outlined in more detail on .

Processes

- Are only specified where:
  - They are statutory
  - They are needed to operate the project control framework
  - There is clear consensus that there is a single, 'best' process that should be followed

- Where there is already established best practice process and guidance this sits with the project control framework. For example, the *Design Manual for Roads and Bridges* is linked throughout the framework where appropriate.

Governance

- The project control framework exists within the context of governance arrangements defined by the investment control framework and investment appraisal framework.

Flexibility

- The project control framework is intended to be used flexibly within the context of these principles.

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

Major road projects

Major road projects

All major road projects are progressed through the project control framework which is split into three phases as shown below.
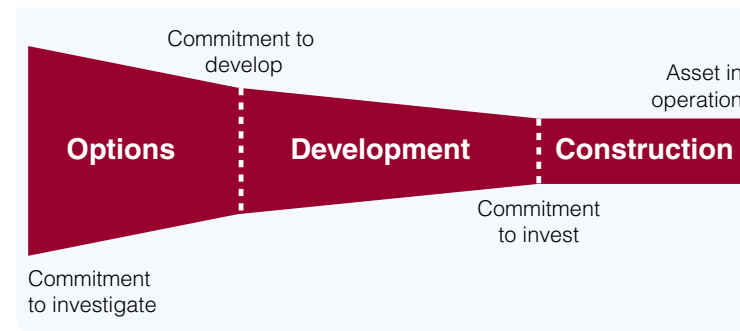
Figure 2: The three phases of the PCF

Options phase – identifies the preferred road solution to the transport problem. By the end of the phase there is certainty that, for example, the project will involve widening along a specific route.

Development phase – focuses on the design of the preferred solution taking it through the necessary statutory processes up to the point where a decision to commit to invest in building the road solution can be made.

Construction phase – is where the road solution is built, handed over for operation and the project is closed down.

Core principles

- Entry into each phase is subject to the approval of the DfT and ministers

- Funding for the project will be provided by DfT and ministers on a phase by phase basis.

- Projects may drop out of the lifecycle at any point up to the commitment to invest if they fail value for money, affordability or other criteria

Roles and responsibilities for major projects

- During the options phase the senior responsible owner is DfT for those projects with more than one route option. For single option projects this role may be assigned to the Highways Agency.

- If a project progresses into the development phase the Highways Agency becomes the senior responsible owner (if they are not already) and continues this role in the construction phase.

- The project sponsor and project manager roles are constant throughout the three phases. The project sponsor is always DfT, the project manager is always a Highways Agency role.

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

The Major Projects lifecycle

Strategy, shaping and prioritisation

It is assumed that before a project enters the project control framework it will have completed a feasibility study during a strategy, shaping and prioritisation stage. Key activities in this pre-project phase (PCF stage 0) include:
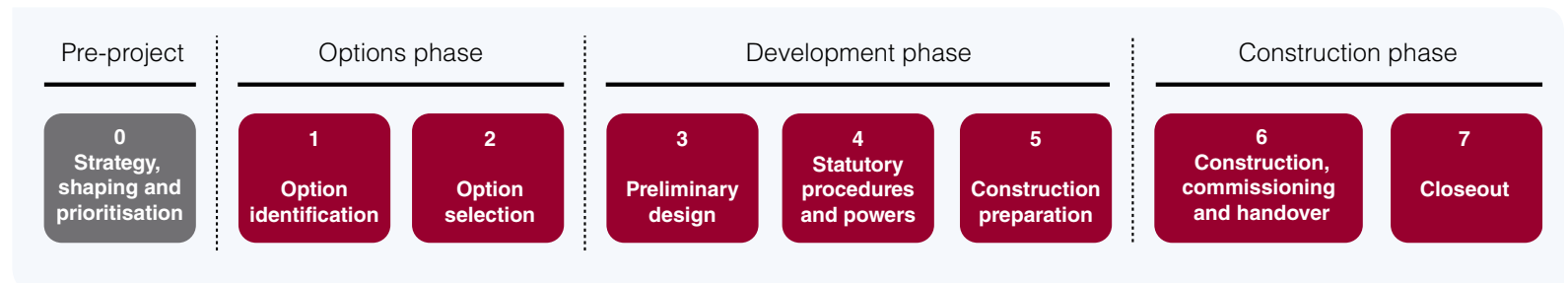
- Identification and prioritisation of potential transport issues

- Shaping, investigation and assessment of the viability of transport scheme solutions to the problem, including road network solutions

- The initiation of a major road project (if deemed the most viable solution to the transport issue)

Major Projects lifecycle

Once initiated a project enters the Major Projects lifecycle which breaks down the three phases of the PCF into seven stages shown below in Figure 3.

Projects can only ever be in one stage at any one point in time. In most cases projects move through all seven stages in turn. However some stages may not be required depending on individual project circumstances and the requirements for single option projects are outlined in more detail on page 12. Where stages are combined or omitted:

- This must be agreed with the project sponsor and senior responsible owner in advance.

- The project manager must agree with the project sponsor and senior responsible owner what to do with the deliverables required at that stage – in general, their delivery should be moved into another stage if they are still appropriate to the project.

Pre-project	Options phase		Development phase			Construction phase	
0 Strategy, shaping and prioritisation	**1** Option identification	**2** Option selection	**3** Preliminary design	**4** Statutory procedures and powers	**5** Construction preparation	**6** Construction, commissioning and handover	**7** Closeout

Figure 3: Major Projects lifecycle

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

The Major Projects lifecycle

The stages are:

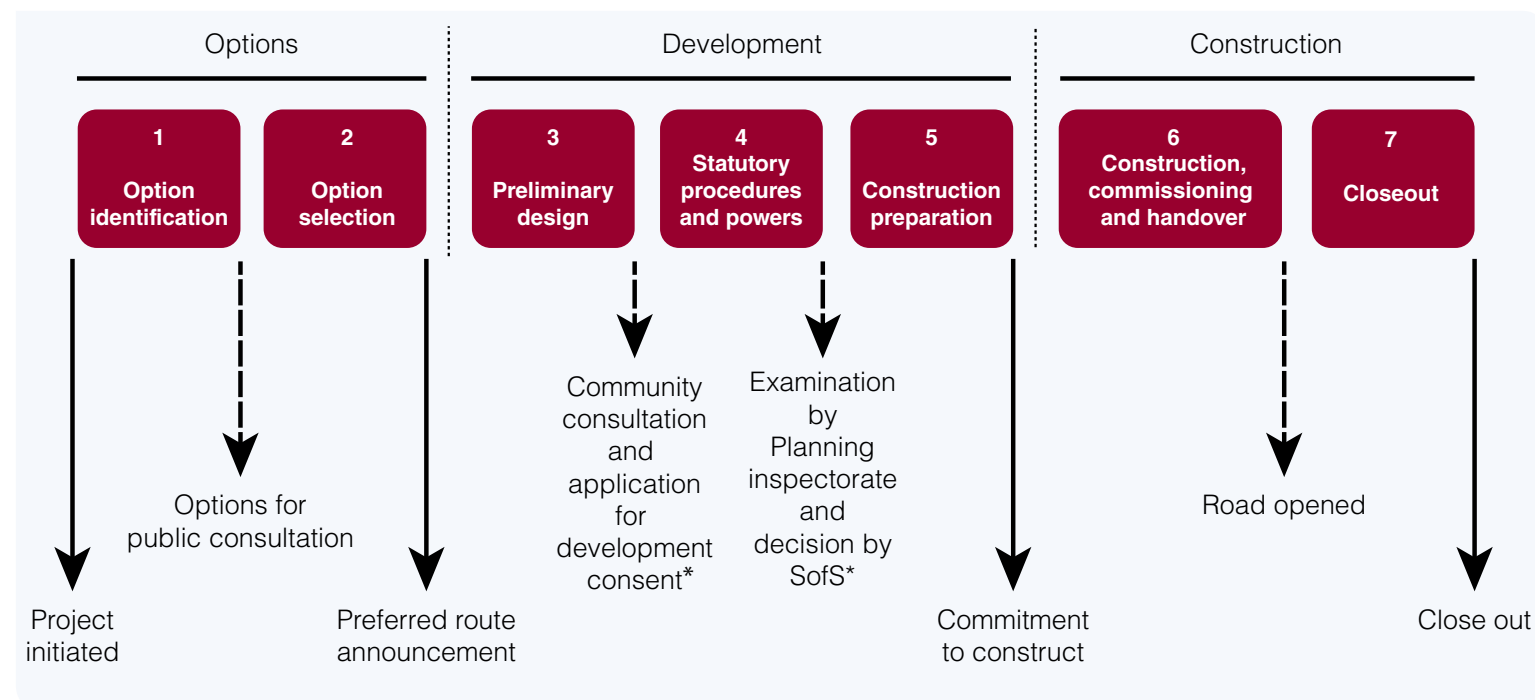|	
1 **Option identification**	Identify options to be taken to public consultation
	Assess options in terms of environmental impact, traffic forecasts and economic benefits
	Refine the cost estimate of options (including an allowance for risk)
2 **Option selection**	Carry out public consultation including exhibitions
	Analyse comments received and select a preferred option
	Refine the cost estimate for preferred option (including allowance for risk)
	Refine the environmental impact assessment, traffic forecasts, and economic benefits following public consultation if required
	Produce an outline business case
	Announce the preferred route
3 **Preliminary design**	If early contractor involvement procurement method selected, appoint contractor
	Carry out surveys (such as topographical, geotechnical, environmental)
	For Planning Act 2008 schemes hold community consultation including exhibitions, complete consultation report and resolve or rebut outstanding issues
	Complete and freeze the preliminary design of the preferred route
	Prepare draft Planning Act 2008 development consent order (or Highways Act 1980 orders if the scheme is below the threshold for a nationally significant infrastructure project (NSIP)), as appropriate
	Complete the environmental assessment and prepare the environmental statement
	Agree initial target cost with ECI contractor (if applicable)

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A – project control processes

The Major Projects lifecycle

4 **Statutory procedures and powers**	Publish notice of acceptance of Planning Act 2008 draft development consent order and application (or notice of draft Highways Act 1980 orders if the scheme is below the threshold for a NSIP) and environmental statement as appropriate (exhibitions may be considered for Highways Act 1980 orders)
	Arrange public inquiry for Highways Act 1980 orders (if required)
	Under the Planning Act 2008 the Planning Inspectorate will decide on the preliminary meeting and examination of the application for development consent. We will need to register and comment as an interested party (the developer)
	Present evidence and rebuttals to objections for Highways Act 1980 orders at inquiry
	The Planning Inspectorate panel or inspector will make recommendations to the Secretary of State
	Issue secretary of state's decision letter confirming whether orders/development consent are to be confirmed as published in draft, rejected or amended
5 **Construction preparation**	Confirm orders/development consent and respond to any high court challenges (if any)
	Obtain approval to any advance works or advance statutory undertakers diversions
	Agree costs of construction with the contractor. If ECI is procurement method, agree final target cost
	Produce the final business case
	For Planning Act 2008 schemes place details of land to be acquired on deposit and publish a notice to say where these can be inspected
	Obtain notice to proceed
6 **Construction, commissioning and handover**	Issue notices to treat and enter take possession of land
	Complete detailed design
	Construct and commission scheme
	Hand over asset for operation with as-built drawings and health and safety file
	Open scheme to traffic
7 **Closeout**	Agree final account with contractor
	Contractor completes outstanding works (or re-work)
	Complete a review of project delivery
	Complete POPE process

| Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes |

The Major Projects lifecycle

Key decision points in the Major Projects lifecycle

The stages reflect the significant decision points in the project's development and delivery.

Options		Development			Construction	
1 Option identification	**2** Option selection	**3** Preliminary design	**4** Statutory procedures and powers	**5** Construction preparation	**6** Construction, commissioning and handover	**7** Closeout
Project initiated	Options for public consultation / Preferred route announcement	Community consultation and application for development consent*	Examination by Planning inspectorate and decision by SofS*	Commitment to construct	Road opened	Close out

Figure 4: Key decision points within the Major Projects lifecycle

* Nationally significant infrastructure projects only. For projects under the threshold, Highways Act 1980 and Public Inquiry processes will apply.

The Major Projects lifecycle

Variations to the Major Projects lifecycle

The PCF is designed to be used flexibly and a revised lifecycle commencing in PCF stage 3 preliminary design has been developed for use on single option projects. A revised product matrix (available on the electronic PCF sites) is also in operation.

Single option projects

Single option projects are defined as follows:

a) Within the highway boundary and therefore with no requirement for land take or associated statutory processes

b) No requirement for an environmental statement

c) The route is already fixed

NB Single option projects must meet the above criteria and should not be confused with projects that require land take or an environmental statement but only have one viable option.

The projects that are therefore most likely to fall within this category are:

• Online widening

• Controlled or managed motorways (including MM-ALR)

There is a common misperception that all managed motorway projects can adopt the revised lifecycle but this is only the case if they meet the criteria for a single option project ie no land take etc.

Taking the example of a managed motorway all lanes running project, it may have 'options' with regard to the operating regime at specific locations

Pre-project	Options		Development			Construction	
0 Strategy, shaping and prioritisation	**1** Option identification	**2** Option selection	**3** Preliminary design	**4** Statutory procedures and powers	**5** Construction preparation	**6** Construction, commissioning and handover	**7** Closeout
	No requirement for an options phase		No requirement for PCF stage 4			PCF stage 6 and 7 as is	
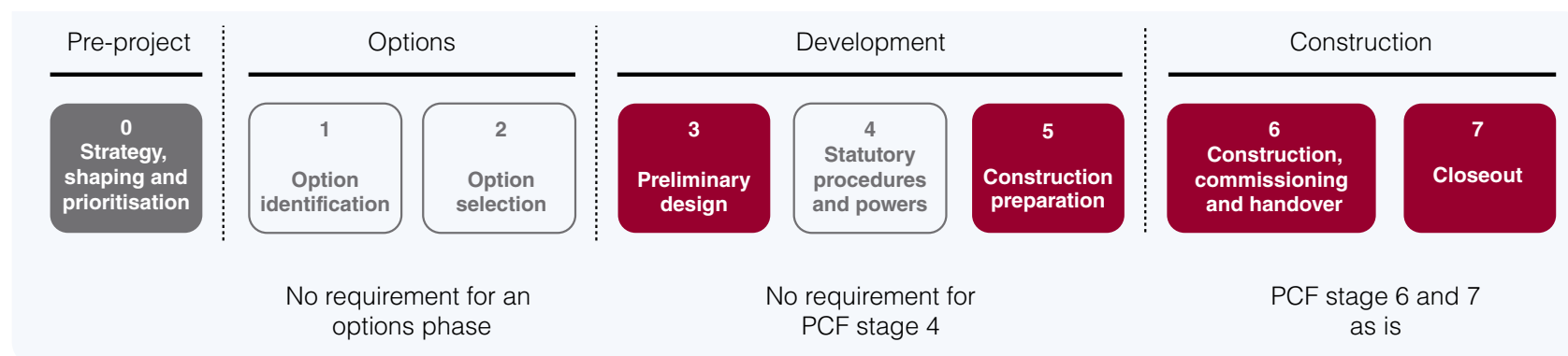
Figure 5: The revised lifecycle for single option projects (assuming no land take or need an environmental statement)

The Major Projects lifecycle

(for example although through junction running is the design option there may be some locations whereby it is not appropriate) but this is not the same as assessing different routes or whether to widen or bypass as per the option identification and option selection stages of the traditional Major Projects lifecycle. It can therefore commence in PCF stage 3 preliminary design without the need for an options phase. The need for PCF stage 4 statutory procedures and powers stage is also negated as long as the project does not involve any land take or the requirement for an environmental statement.

Assumptions for adoption of the single option project lifecycle

It is assumed that before a project enters PCF stage 3 it will have previously obtained a commitment to investigate a single option such as MM-ALR or online widening. This will have been achieved either by the completion of a feasibility study during the strategy, shaping and prioritisation stage or by assessing options under the traditional PCF lifecycle before adopting the revised lifecycle.

It is also assumed that the project team will have agreed with their SRO and DfT project sponsor that it is appropriate to adopt a revised PCF lifecycle on their specific project.

Governance arrangements for single option projects

Approval of the development phase budget should be sought from the project investment control group, investment control framework group and the highways investment board in the usual way prior to entering stage 3 preliminary design, including producing the client scheme requirements product and the five DfT summary business case templates as part of the investment submission product. Schemes with a cost of £200 million or more will also need to seek approval from the board investment and commercial sub-committee and HM Treasury.

Any projects with specific risks or issues which may affect the decision to give a full development phase budget (eg uncertainty of scope; a low benefit to cost ratio; political drivers; high value etc) should be assessed to determine whether it would be more appropriate to apply for a stage 3 budget only, subject to prior approval of this approach by the SRO and DfT project sponsor.

Gateway reviews for single option projects

As with any project, teams are advised to hold a gateway assessment meeting to identify their own project specific requirements. It is envisaged that for most projects, an abridged Gateway 1 / 2 would be appropriate early in PCF stage 3 to provide assurance of a robust business case and to review the delivery strategy.

Products and product matrices

Products

The project control framework focuses on what needs to be delivered at each stage of the project.

The deliverables which are produced are called 'products'. For example, a consultation leaflet, a business case or an economic assessment report are all products. They are the things we need to produce in order to plan, manage and progress a project.

Each product has a standard definition that specifies the product's:

- Purpose

- Content

- Quality criteria

- Roles and responsibilities relating to the product

For some products we may also include a mandatory process; templates; supporting topic information or guidance and links to other resources on the intranet and internet.

Many product definitions have been developed in line with current DfT and Highways Agency best practice process, guidance and standards. Where this is the case we will also link to these documents, for example, the *Design Manual for Roads and Bridges* is linked where appropriate.

Products and product matrices

Product production, consultation and sign-off

All products in the project control framework have a defined set of roles and responsibilities associated with them. These roles and responsibilities define who:

Produces the product	Generally, the person producing the product is free to choose who and how the product is produced provided it meets the criteria set out in the product definition
	However, **if a product has a mandatory process then that process must be followed**. Evidence that the process was followed must be gathered and retained
	In most cases the project manager is responsible for ensuring products are produced
Is accountable for the product and signs it off	Every product has **one** single point of accountability and therefore **one** single **sign-off**
	The person signing off the product is accountable for the product being fit for purpose. This means that the product has: – Been produced in line with the product definition content and quality criteria – Identified consultees have been properly consulted
Must be consulted in the production of the product	Consultation must take place as part of product development and **evidence of consultation must be retained**
	There are two types of consultation: **For technical / operational approval** – The consultee is asked to quality assure certain technical or operational aspects of the product and give approval. This includes for example, approving appraisal of the road solution by colleagues in the Highways Agency network services directorate. However it also includes approval of other aspects such as traffic management plans – The product cannot be signed off as complete unless it has been approved by the identified consultees page 21. **For comment** – The consultee is asked to review the product and provide any comments – These comments do not have to necessarily be acted upon. Whether they are taken into account is the decision of the person accountable for the product but reasons why should be documented
The product must be distributed to	The product is distributed when sign off is complete.
	Evidence of distribution must be retained
	Anyone who is consulted in the production of a product must be given a final copy of the product. Those named under the distribution column within a product definition are identified because they have not been involved in the production or consultation of the product but will have an interest in the final version of it

Products and product matrices

Product matrices

The product matrix defines which products are needed and when. If a product is required at a stage then it specifies if the product is:

Produced	The product is produced for the first time in the project lifecycle
Updated	The product is updated with up to date information but no new analysis, for example, the risk management plan is continually updated throughout the project lifecycle
Refined	As a project is developed and designed further analysis takes place reflecting the impacts of that design. Refining a product means adding detail as a result of further improved analysis to a product. For example, a cost estimate is progressively refined across the project lifecycle.
Reviewed	A review is carried out to confirm whether the product might need to be updated or possibly refined – although it is generally expected that no action is required and **review does not mean re-write**. For example, client scheme requirements generally remain stable throughout a project but it may be necessary to amend them in the event of any scope changes.

Figure 6 shows an extract of the project control framework matrix.

Products and product matrices

Product matrix

	Pre-project	Options		Development			Construction	
	0 **Strategy, shaping and prioritisation**	**1** **Option identification**	**2** **Option selection**	**3** **Preliminary design**	**4** **Statutory procedures and powers**	**5** **Construction preparation**	**6** **Construction, commissioning and handover**	**7** **Closeout**
Scope Client scheme requirements	Produced	Reviewed	Reviewed	Reviewed	Reviewed	Reviewed	Reviewed	
Client phase remit	Produced	Reviewed	Produced	Reviewed	Reviewed	Produced	Reviewed	
Appraisal specification report	Produced	Refined	Refined	Refined				
Cost estimating Order of magnitude estimate	Produced							
Options estimate		Produced	Refined					
Preliminary estimate				Produced				
Initial estimate				Produced				
Developing estimate					Produced			
Final estimate						Produced		
Cost to complete estimate							Produced	Refined
Risk Risk management plan		Produced	Updated	Updated	Updated	Updated	Updated	Updated
Risk register		Produced	Refined	Refined	Refined	Refined	Refined	Refined
Qualitative risk assessment		Produced	Updated	Updated	Updated	Update		

Figure 6: Product matrix extract

The columns across the top of the product matrix show all of the stages of the PCF. Users should read down the page to establish which specific products are required at each individual stage and whether they are to be produced, reviewed, refined or updated .

The rows down the left hand side of the product matrix show all of the products within the PCF. Users should read across the page to establish the requirement of each specific product at each individual stage.

Some products may be a requirement of one stage only and others may be a requirement of multiple stages depending on their purpose. The product requirements of each PCF stage are summarised into product checklists, which are used as part of the planning process and stage gate assessment reviews .

Products and product matrices

Product flexibility

All products in the project control framework are mandatory and must be produced. The project control framework does not have 'optional' products but they may vary in their size and content depending on the type of project and its level of complexity.

The only exception to this is where it is obvious that products are not required to be produced because they are not appropriate to a particular project.

For example, production of a regeneration report is only required if the road scheme affects travel to, from or within a regeneration area. Other products (identified on the PCF product matrix as MM only) are unique to the operation of managed motorways and so would not be applicable to a traditional bypass or widening project.

Whether or not a product is produced is determined as part of the management of the stage. Project teams should review each product and establish for their own specific project whether it is:

a) required

b) fit for purpose and

c) whether the level of detail outlined in any supplied templates is appropriate for the size and complexity of their project

The decision to omit products is on an exceptional basis, has to be agreed with the SRO and project sponsor at the start of the stage and be recorded in the comments section of the product checklist.

In some instances it may be acceptable to submit substitute products with the approval of the SRO and project sponsor. For example, a section 278 agreement or NDD commissioning form would be acceptable substitutes for a client scheme requirements for those specific project types.

| Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A – project control processes |

Tips for the consistent and effective application of the PCF

Successful delivery of a large road project is a complicated and demanding challenge which needs to be expertly managed and it will not be achieved by simply producing documents and asking for comments on them.

The PCF is there to help project managers manage projects and the products are live documents designed to help projects to progress and for the range of issues identified in the documents to be managed. Those people that embrace the PCF and get the most out of it take a deep interest in what's in the products, whether they are an acceptable standard and what issues are being identified which need to be managed. They do this with a forward looking sense of what are the pitfalls and issues ahead which we need to address now?

If the PCF is approached as a paper based exercise where products are simply ticked off and put on the shelf, it will not be used in the way that is intended and no value will be added.

If users see themselves as mere post boxes sending products to consultees for comments and back again to their consultants, they will miss the point that the aim of the PCF is to empower project teams and aid delivery, not to unnecessarily hinder.

Please do

- See the PCF as a useful tool to facilitate delivery – not a barrier to it

- Think carefully about what outcomes products are designed to deliver, not just when they need to be produced

- Produce and sign off products during the stage wherever possible to avoid a last minute rush in the run up to the stage gate assessment review

- Remember that the PCF did not introduce anything new – it merely formalised all of the existing documentation (much of it relating to statutory processes) that was being produced anyway

Please don't

- View the PCF as a hindrance or a box ticking exercise

- Apply it too rigorously or get bogged down in the detail – you will not fail a SGAR for producing a product in the wrong sized font

- Focus solely on achieving a successful outcome at SGAR as although this is important, it should not be driving the project. Projects plans should set out how project objectives will be delivered within the scope in the most cost effective and appropriate manner using the PCF products to assist in the process, not simply when products will be produced. Successful SGAR outcomes will then follow as a result

Tips for the consistent and effective application of the PCF

Three key principles of the PCF to reinforce

1. Plan the coming stage properly focussing on what outcomes need to be delivered.

Proper planning is essential and fundamental to good project management. SGARs need to be balanced with equal focus on the stage that has just passed and the coming stage.

The PCF should be used to help deliver outcomes, not just products. The focus should be on the objective of the stage and what needs to be achieved, not just when products will be completed.

The word **framework** should be emphasised as templates can sometimes be followed too stringently. Project teams should review each product and establish for their own specific project whether it is required, fit for purpose and whether the level of detail outlined in any supplied templates is appropriate for the size and complexity of the project.

Any variations should be agreed with the SRO at the start of the stage (not in the final run up to the SGAR) and be recorded in the comments section of the product checklist.

The most appropriate order of sequence between the PCF stage gate assessment review, the investment authorisation process and gateway review should be determined as part of the stage planning process. This could be done as part of a SGAR (eg establish stage 2 requirements at SGAR 1) or as part of a gateway assessment review meeting.

Project plans should include products but not be the sole focus, the emphasis should be on what each product is designed to deliver and not just be a box ticking exercise.

The implementation report for new standards is a good example of where the emphasis should be on what each product is designed to deliver. The template supplied is extremely basic but is designed to:

- Ensure integrated project teams are aware of any new standards that may have been introduced since their project started

- Ensure that the potential impact of any new standards are fully considered and understood

- Ensure that new standards are either adopted or departures from standards are sought as appropriate

- Ensure that NetServ are kept fully consulted and informed on the impact of new standards on individual projects

The product is therefore not just about producing a piece of paper but should give confidence that any change of standards have been considered and incorporated into the design where practical and/or where cost savings may be achieved.

Tips for the consistent and effective application of the PCF

2. Consultation is a vital component – not an afterthought

Early product consultation is the key to PCF success. Consultees should be identified at an early stage and told when and why their input will be required.

An integrated project team should be established and include all key consultees from Network Delivery and Development directorate, NetServ etc. Full advantage should be made of named contacts such as the NDD senior users, who are familiar with the PCF and can advise who in their directorate need to be consulted on individual products.

Plenty of time for product review should be incorporated into projects plans – it is not reasonable to expect consultees to comment on products that are sent to them shortly before a SGAR.

Product progress should be monitored at regular progress meetings and a last minute rush to get everything signed off should be avoided.

Project teams should review the content and quality of each product before it is circulated for comment. It is unfair to rely on consultees to pick up any errors.

There is no need to get all consultees to physically sign products off, just the person named under accountable and signed off by but evidence of conformity is also required from any consultees with 'for technical/operational approval' after their

name. This may take the form of an electronic minute or email as long as it clearly and unambiguously confirms the extent to which the product is fit for purpose and/or adheres to relevant guidance, procedures or legislation .

3. Eliminate waste and focus efforts where most needed

The PCF is designed to be flexible and users are actively encouraged to identify products which may genuinely not be required on their individual projects to ensure value for money and possible cost savings. Sometimes products may genuinely not be required but this will vary between projects and with careful consideration it may be possible to omit some. An alternative may be to combine products or move them between the stages if it is appropriate and there is good reason to do so.

Where products can be omitted or combined, this should be agreed with the SRO and DfT project sponsor at the start of the stage and the justification noted in the comments column of the product checklist.

Project teams are encouraged to consider whether they really need to outsource individual products or whether they could do all or some of it themselves.

Whether the level of detail outlined in any supplied templates is appropriate for the size and complexity of the project should be agreed with consultants before they produce anything. Review does not mean re-write. If after review a

Tips for the consistent and effective application of the PCF

product is still fit for purpose and does not require any further updating, time, money and effort should not be wasted re-writing it.

The PCF sets out the quality standard for what needs to be produced but there should be no issue if products are produced to an even higher standard if the project warrants it and it is providing value for money, for example more time spent on producing the risk register may ultimately result in greater cost savings. The key is to ensure that both the SRO and DfT project sponsor are content with whatever has been or will be produced.

It is important not to make SGAR packs too over complex. SGARs are not the place to present products as they should all have been signed off in advance of the meeting and there is no need for them to be expensively bound and laminated. The key SGAR document is the PCF product checklist and this usually consists of a handful of pages only.

Paper copies of the product matrix, individual product description pages or templates should not be printed or stored electronically for future use as this creates version control issues and risks obsolete templates being used. The PCF is a live electronic site that is updated frequently and users should check back regularly to ensure that their products match the latest descriptions and templates. To help users keep track of any

changes, they are publicised in both regular PCF newsletters and on the version control log.

Major Projects' instruction MPI-02-09-2012

PCF users are reminded of the contents of MPI-02-092012 review of the project control framework which actively encourages PCF users to:

- Trim away the fat from their products and avoid waffle and duplication

- Use the client scheme requirements as a central summary document to significantly reduce the size of some products and avoid having to repeat the same background over and over again

- Version control their documents and tell each individual reviewer why their comments are important and what benefit their views will add to the product

- Use the origins of PCF products to clarify why each product is required and where it originates from, often legislation or guidance

How stages are managed

Stages are managed on a plan; do; review; basis.

Plan: before the stage	Identify which products need to be produced during the stage by completing a product checklist
	Ensure that the IT system PowerSteering is updated so that the product requirements match the most recent version of the product matrix
	Identify any products that are not appropriate to the project and record justification for not producing
	Produce a plan (in the widest sense) for the production of the products
	Agree the plan with the senior responsible owner and the DfT project sponsor
Do: during the stage	Manage the stage against plan
	Produce products
	Consult on the products
	Get product sign-offs
	Record actions taken and store documents properly in SHARE
Review: at the end of the stage	Review delivery of products against plan and account for any variance
	Review time and cost against plan
	Undertake stage gate assessment review (page 25)
	Obtain necessary investment authorisation
	Undertake gateway review (if necessary)

Project assurance and governance

Governance of projects is provided through:

Project assurance

Investment authorisation/re-authorisation

Roles and responsibilities

Project assurance

Project assurance provides the basic framework of controls that assure:

- the project is being managed and controlled as directed by the SRO

- basic standards are being followed

- the project is well-managed

The project assurance controls within the project control framework are:

- regular reporting (right)

- exception reporting and re-authorisation (right)

- sign-off of products as they are produced (page 15)

- stage gate assessment reviews (page 25)

- gateway reviews (page 30)

Regular reporting

The Major Projects portfolio office defines and maintains a schedule of regular reports that must be completed according to the schedule. The project manager is responsible for completing the reports on time.

Exception reporting

Project managers must produce an exception report if:

- The expected cost of the current phase is forecast to be higher than the approved budget for that phase (excluding contingency)
  - For projects in the options and development phases the expected cost of the project as a whole is forecast to be higher than the most likely/central estimate endorsed by the Secretary of State

- Stage end is projected to be more than three months beyond the baselined end date of the stage

- Where, in the opinion of the DfT project sponsor, the scope of the scheme has changed sufficiently to warrant re-authorisation

The exception report must be submitted to the Major Projects portfolio office and DfT project sponsor.

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

Project assurance and governance

Stage gate assessment reviews

Stage gate assessment reviews provide basic assurance that:

- The stage is complete and is within tolerance

- The project control framework has been followed

- The project is ready to proceed to the next stage, subject to investment authorisation

It is an evidence-based review that is intended to draw on documentation and activities that the project team have already produced.

All projects must complete a stage gate assessment review:

- At the end of every project stage as part of the managing stage boundaries process (page 54)

- Every 12 months if a project stage is planned to last more than 18 months (see tips for a successful interim SGAR on page 30)

- Prior to seeking investment authorisation to move into the next phase (page 35)

All stage gate assessment reviews must be planned at the project outset and must be included in the project schedule and project management plan.

This section provides a summary of stage gate assessment reviews. The Way we Work site provides detailed information regarding process, outcomes and how they are undertaken.

Who attends the stage gate assessment review?

Attendance at the stage gate assessment review should be as follows:

Senior responsible owner

Highways Agency project manager

DfT project sponsor

Highways Agency major projects portfolio office representative

Senior users (as appropriate)

Highways Agency project team representatives (as appropriate)

Stage gate assessment review attendance may only be delegated in exceptional circumstances with the agreement of the senior responsible owner and cannot be undertaken by correspondence.

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A – project control processes

Project assurance and governance

What is assessed in a stage gate assessment review?

For the stage being completed, the stage gate assessment review confirms that:

- The risk potential assessment has been reviewed and updated

- The products are approved and signed-off

- Any variance from the planned products are understood

- Cost and time performance are within acceptable tolerances

- There is evidence that project board meetings have been held and plans, risks and issues have been regularly reviewed

- Lessons learned have been captured for the stage

- Documents have been properly stored in SHARE

For the next stage the stage gate assessment review confirms that:

- The project manager has identified which products will be delivered

- Risks associated with any proposed stage derogations* are identified and assessed

A deviation or exemption from a rule or law.

- There is a plan and cost estimate for delivering those products

- The resources needed to deliver the plan have been identified and a plan is in place for securing the resources

The review does not:

- Seek to review every single product produced for the stage. This is done as part of the quality assurance when products are signed off during the stage (page 15)

- Make any assessment of the overall management of the project; this is done by the gateway review (page 30)

- Make any assessment of the continued need for the project; this is done by the investment authorisation process (page 35)

Preparing for a stage gate assessment review

Stage gate assessment reviews are intended to be low cost and minimally disruptive as all products will have been produced, consulted on, approved and signed off in advance – keep this in mind when participating in a review.

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

Project assurance and governance

Prior to the stage gate assessment review the project manager must compile a review submission pack. The pack comprises:

- Agenda

- Current monthly management report

- End of stage report

- Completed product checklist for the current stage

- Product checklist for the next stage identifying the products to be produced with baseline dates for completion

- Project schedule

- Change control log

- The risk register

- Cost estimate for the next stage (via the scheme cost estimate)

This pack assists reviewers in making an overall assessment as to whether the project is ready to move to the next stage. Reviewers can ask for additional products to be brought to the review. For example they may wish to look at those products on the checklist which have not been completed.

Project managers should also consider what other key documentation might need to be brought to the review. For example, project managers need to be prepared to evidence that all products have been signed off and that plans, risks and issues are regularly reviewed and updated. This might include sign off sheets for products and minutes from team/progress meetings.

Holding the stage gate assessment review

All stage gate assessment reviews must have a chair (usually the senior responsible owner) who is accountable for determining the overall outcome of the review.

It is up to the chair to determine the structure of the review, the role of the reviewers and what specific questions might be asked to determine the outcome of the review.

However as an example of how the review might be held, the initial focus will be to review the product checklist for the stage. Where it shows all products are complete reviewers might ask questions to test this. Where the product checklist is incomplete reviewers will want to know the cause, what impact it has on the project progressing and what actions must be undertaken to ensure its completion.

In reviewing the current stage reviewers will also seek to understand how well change, risk cost and time are being managed on the project. This may for example, involve reviewing evidence of current risk register and change log.

| Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes |

Project assurance and governance

The final part of the review then looks forward to see how prepared the project is to move to the next stage. This includes reviewing and agreeing the product checklist for the next stage.

In terms of behaviours, when holding the review:

- The focus of the review should not be about criticism, put-downs or point scoring

- The review needs to create a positive environment where open and transparent discussions can take place

- Reviewers should not seek to delve into the detail within individual products. This will already have been done as part of the sign off of that product

- Reviewers are not there to determine if the project is still the right project to invest in. The focus must be on whether a project manager is complying with the framework

- The review should not be seen as something which will always stop a project moving to the next stage. In most cases, if products have been complete and plans are in place for the next stage, the review simply provides the project manager and SRO with confidence that they can continue to progress the project (subject to investment authorisation) and that it is supported by their peers

Outcome of the stage gate assessment review

There are four potential outcomes:

Outcome		Basis for decision
Green	Proceed to next stage.	All products complete and quality/progress validated
Amber	Proceed to next stage, but complete certain products or actions Report back on completion within a set timescale Chair to decide if follow up meeting is required or evidence of completion can be done via correspondence	Outstanding products and actions can be completed within a reasonably short period and identifiable timescales which will not be programme critical or impact statutory or safety processes
Red/ Amber	Do not proceed to next stage until required products and actions have been completed Then repeat the stage gate assessment review	Products critical to the successful delivery of the project are incomplete The outcome of further work cannot be predicted or delivery is in doubt
Red	Do not proceed – stop	Factors critical to success cannot be resolved or outside actions require the project to stop at that point

Project assurance and governance

The outcome of the review is recorded on the stage gate assessment certificate, including any agreed actions. By signing this certificate the review also provides sign off that the product checklist and schedule for the next stage has been completed and agreed.

Where the project is awarded an amber outcome it is at the discretion of the chair to determine how assurance is provided that outstanding products and actions are complete. This can be done by a follow up meeting or correspondence. The outcome of the review and the agreed actions must be recorded in the stage gate assessment certificate.

Where a project is awarded a red/amber outcome a full stage gate assessment review must be repeated and another stage gate assessment certificate produced.

Tips for monitoring, booking and running a successful interim stage gate assessment review

- Whenever a stage is expected to span 18 months or more, interim SGARs should take place a year after the last full stage end SGAR. If the current stage is likely to take, say, 15 months, there is not a requirement to hold an interim after one year as the full stage end SGAR will occur three months later, unless of course the SRO specifically wants to hold one.

- The purpose behind an interim SGAR is to hold a stock take of progress to date and to ensure that all products have either been produced or are on track to be produced by the end of the stage. The outcome that is awarded is a prediction of how the project is likely to fare at its full stage end SGAR based on evidence to date, and so even if no products have been fully completed or signed off, a green outcome could still be awarded if the SRO was confident and reassured that everything was on track to be completed by the full stage end.

- The Planning Act 2008 introduced the requirement to carry out pre-application consultation and it is strongly advised that an interim SGAR should be held during PCF stage three prior to entering into the pre-application consultation process, to establish if the required products have been completed and to assess readiness to proceed.

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

Project assurance and governance

Gateway reviews

A Gateway review is a 'peer review' in which independent project managers from outside the project use their experience and expertise to examine the progress and likelihood of successful delivery of the project.

A Gateway review provides assurance and support to the senior responsible owner that:

- Suitable skills and experience are deployed on the project

- All stakeholders understand the project status and issues

- There is assurance that the project can progress to the next phase

- Time and cost targets have a realistic basis

- Lessons are learned

- The project team are gaining input from appropriate stakeholders.

Gateway reviews are a mandated assurance process for all publicly funded major projects, although not all reviews will apply to all projects. SROs and project managers should engage early with the Centre of Excellence to agree which gateways are required and when.

All major projects should usually undertake Gateway reviews as shown in the table below.

Gateway reviews are undertaken as part of the managing stage boundaries process .

Gateway	Major project phase/stage
1 **Business justification**	Entry to the options phase (undertaken on behalf of DfT) (option identification stage)
2 **Delivery strategy**	Entry to the development phase (preliminary design stage)
3a **Investment decision**	Entry to the statutory procedures and powers stage
3b **Investment decision**	End of the construction preparation stage
4 **Readiness for service**	Prior to open for traffic or consent to operate
5a **Operational review and benefits realisation**	Following handover into operations and before the end of the defects period
5b **Operational review and benefits realisation**	A further operational benefits review may need to be undertaken. The timing is at the discretion of the SRO

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A – project control processes

Project assurance and governance

Differences between a Gateway review and a PCF SGAR

The Gateway review is an independent peer review, usually over three to four days to examine the progress and likelihood/confidence of successful delivery of the project.

The reviews are intended to support government projects to achieve their intended outcomes.

The Gateway review provides assurance and delivery confidence rating to the senior responsible owner that:

- Suitable skills and experience are deployed on the project

- All stakeholders understand the project status and issues and are providing appropriate input

- There is assurance that the project can progress to the next phase

- There is a delivery confidence rating

- Lessons are learned

- Suitable governance procedures are in place and are being followed

Further detailed guidance on the Gateway review process is available for Highways Agency staff on the portal.

How does a Gateway review differ from a stage gate assessment review?

It is simplest form a stage gate assessment review focuses on the **quality** assurance of a project. Whilst it does not review individual products, it assesses whether the PCF is being followed.

By definition this means the assessment of whether products have not only been completed, but also signed off as being fit for purpose, having followed the correct procedures in the producing the products. This includes ensuring the correct consultation has taken place on those products.

Detailed quality assurance is carried out as products are signed off but this review acts as the overarching quality assurance, assessing the completion of the product set for the stage as a whole.

The assessment of whether a project is ready to move to the next stage is largely based on assurance that the current stage is completed and sufficient plans, such as a next stage product checklist and schedule are in place to move to the next stage.

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

Project assurance and governance

The stage gate assessment review is very much an inward facing review, chaired by the SRO. The SRO has the overall responsibility for determining the outcome.

The Gateway review provides a **strategic** overview at **key decision points** in the project lifecycle tailored to the project's current situation, issues and needs. It is carried out by independent peer reviewers to provide assurance to the SRO.

The review focuses on overall confidence that the project will deliver its intended outcomes in line with its business case and places emphasis on lessons learned from other similar projects and from its own earlier stages. To be effective, the review team can request to see any member of the integrated project team and specialists/stakeholders external to the team. Stage gate assessment reviews do not make any such assessment. Whilst Gateway reviews also assess readiness to move to the next stage, this assurance is based on different assessment criteria to the SGAR, in particular whether the right skills and experience are deployed on the project and whether stakeholders are actively engaged.

The table on the following page demonstrates these differences in more detail.

Project assurance and governance

	PCF SGAR	Gateway review
Timing	Two to three hour review	Three to four day review
Composition	Reviewers are member of project team/organisation. The review is chaired by the SRO	Reviewers are independent of the project team/organisation and appointed on the basis of their skills and experience
Assessment criteria	For the stage being completed, the SGAR confirms that: The risk potential assessment has been reviewed and updated; the products are signed-off; any variance from the planned products are understood; cost and time performance are within acceptable tolerances; there is evidence that project board meetings have been held and plans, risks and issues have been regularly reviewed; lessons learned have been captured for the stage. For the next stage the SGAR confirms that: The project manager has identified which products will be delivered; risks associated with any proposed stage derogations are identified and assessed; there is a plan and cost estimate for delivering those products; the resources needed to deliver the plan have been identified and a plan is in place for securing the resources	The review team's delivery confidence of the project is based on its ability to meet its objectives and is assessed by drawing on the evidence, interviews and experience of project delivery
Type of preparation material	Prior to the SGAR the project manager must compile a review submission pack comprising of a current monthly management report; end of stage report; completed project checklist for the current stage; product checklist for the next stage identifying the products to be produced with baseline dates for completion; project schedule; change control log; the risk register; funding for the next stage (via the scheme cost estimate)	The project team must make available all relevant key documentation to the review team plus any other documents that they request to enable them to make their delivery confidence assessment
Personnel	Varies depending on the RPA score but typically the senior responsible owner, the DfT project sponsor, the project manager, Major Projects portfolio office representative, NDD / TM senior user and any other interested parties. Contractors / consultants do not attend	The external review team, the integrated project team and other key stakeholders as requested by the review team to be interviewed
Outcomes	**Green**: Proceed to next stage **Amber**: Proceed to next stage, but complete certain products or actions **Red**/**amber**: Do not proceed to next stage until required products and actions have been completed – then repeat the stage gate assessment review **Red**: Do not proceed – stop	The report, giving findings and recommendations with categories of critical, essential or recommended as necessary and the delivery confidence assessment giving a colour status and a statement from the review team outlining what they believe to be the likelihood of success

Project assurance and governance

Summary of stage gate assessment reviews and Gateway reviews

The diagram below shows the relationship between the lifecycle and the stage gate assessment reviews and Gateway reviews.

The diagram is indicative and the timing of the Gateway reviews may vary depending on the project specific circumstances. The most appropriate order of sequence between the project control framework stage gate assessment review,

investment authorisation process and Gateway review should be determined as part of the stage planning process. This could be done as part of a SGAR (eg establish stage 2 requirements at SGAR 1) or as part of a gateway assessment review meeting.

NB: Gateway review 4 should take place prior to open for traffic or consent to operate. SGAR 6 should take place approximately three months after road opening to coincide with the production of the as-built documentation.
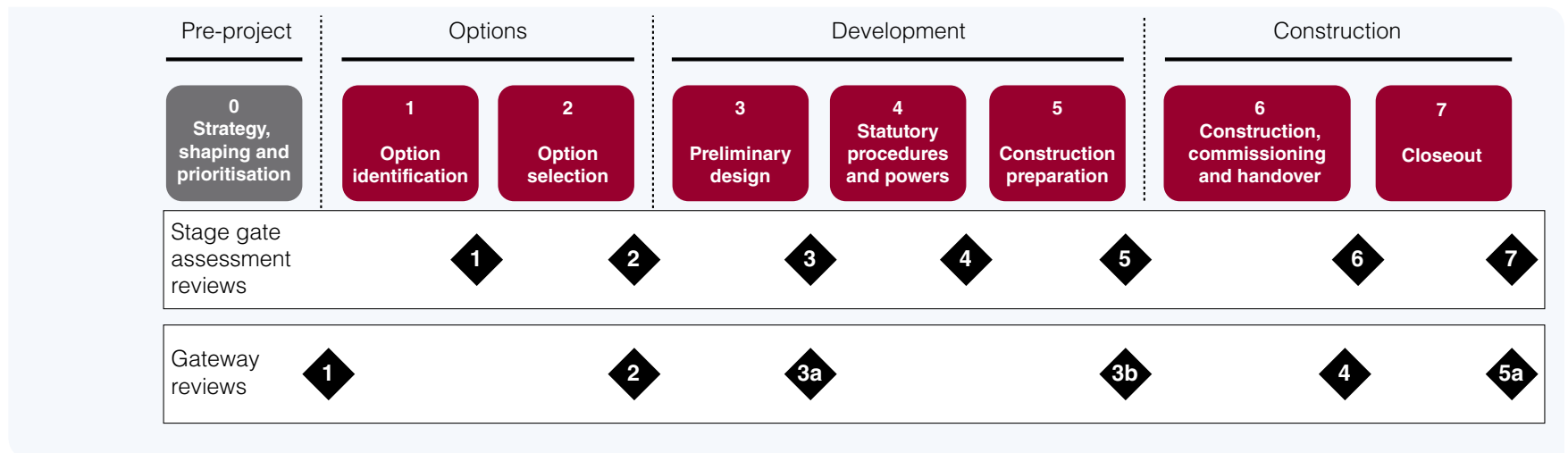
Figure 7: Summary of stage gate assessment reviews and Gateway review points

Project assurance and governance

Investment authorisation

All investment decisions are ultimately taken by the Department for Transport ministers. The specific requirement for investment authorisation and re-authorisation are determined by the:

- Department for Transport's investment appraisal framework and

- Highways Agency's internal investment control framework

Ministerial investment authorisation is required at the beginning of each phase approving:

- Budget and duration for the project phase (options, development and construction)

- Planned duration for the project as a whole, including planned start and end dates for the construction phase

- The outturn range estimate for the project as a whole (minimum (P10), most likely (P50), maximum (P90))

As long as the project remains within the approved cost and timescale, there is no requirement to seek ministerial investment authorisation between stages other than those which correlate with the phase boundaries.

Depending upon the phase budget authorised, DfT may also hold a level of contingency against the budget. Subject to authorisation by the project investment control group and the highways programme board, this will allow the project team to draw down limited additional funding for the options or development phase budget, without seeking further ministerial investment authorisation.

Levels of clearance and authorisation

Phase by phase ministerial investment authorisation

All projects must obtain clearance at the appropriate level before being submitted to the minister for investment authorisation. The appropriate level will depend on the overall cost of the project. Normally a stage gate assessment review must take place before step 1. Confirmation of the outcome of this review must be included in any submission seeking Highways Agency or DfT clearances. If the outcome was not green, a brief explanation of the reason(s) why should be included.

All projects must progress through the following steps to attain ministerial investment authorisation:

Step 1

Gain clearance from the Highways Agency's major projects investment and control group.

Step 2

Gain clearance in accordance with the Highways Agency's investment control framework group.

Project assurance and governance

Step 3

For projects expected to cost under £50 million (IAF tier three) clearance is provided internally by the Highways Agency. For projects expected to cost over £50 million and under £200 million (IAF tier two) clearance is provided by the highways investment board.

Step 3a

For projects £200 million or over (IAF tier one) clearance is provided by DfT's board investment and commercial sub-committee and clearance must also be sought from HM Treasury at entry to the development phase and construction phase.

Step 4

Seek investment authorisation from the minister.

Responsibilities

The Highways Agency project manager is responsible for obtaining all Highways Agency internal clearances. The DfT project sponsor is responsible for obtaining all DfT clearances and coordinating all ministerial investment submissions.

Project assurance and governance

Summary of investment authorisation and ministerial decisions

The diagram below summarises the stages at which Highways Agency, DfT, ministerial and HM Treasury decisions are required.

Please refer to Annex D of the Highways Agency's investment control framework for full details of the approval process.
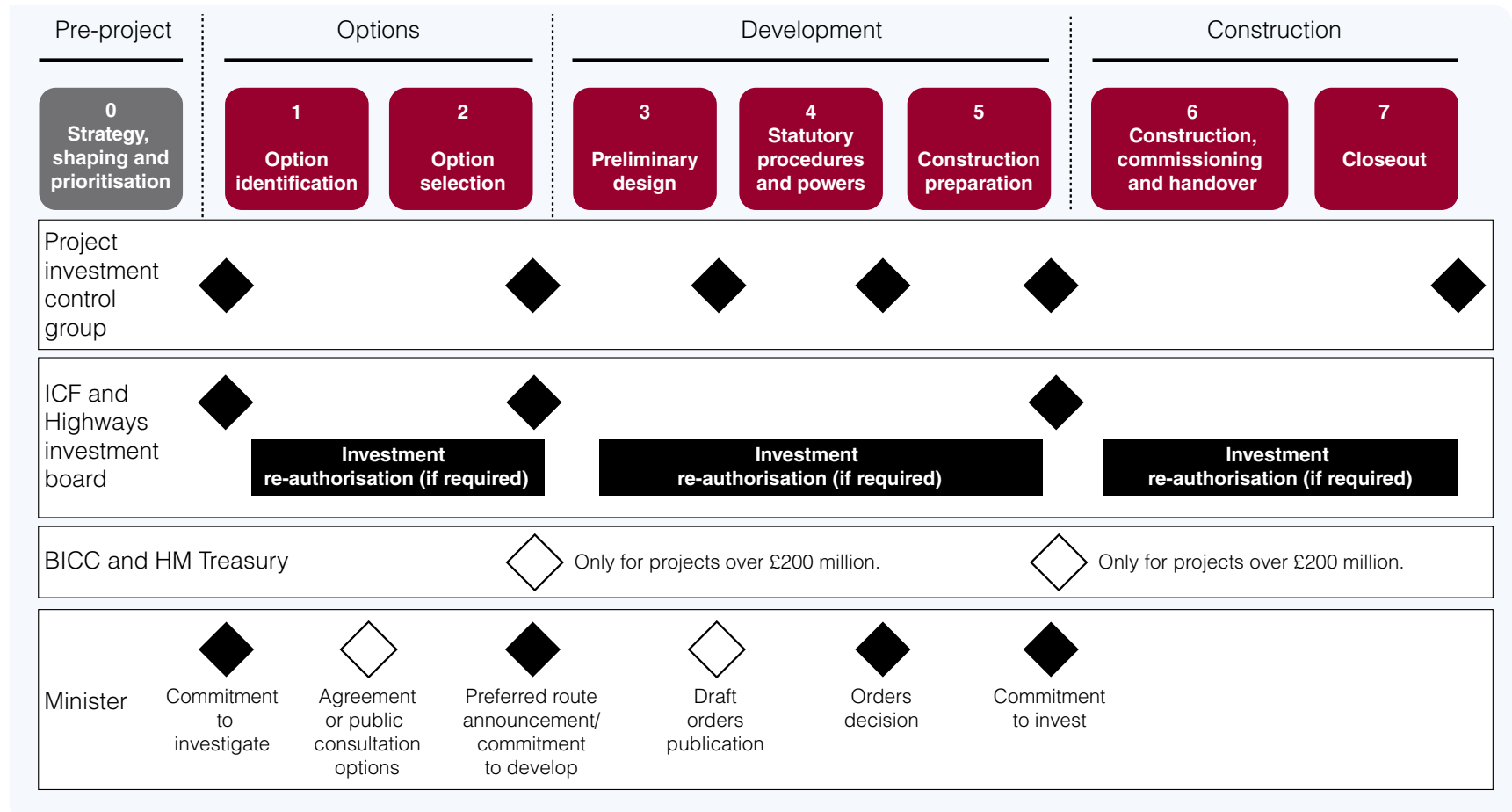

Figure 8: Summary of investment decision points

Project assurance and governance

Investment authorisation of 'suspended' schemes

From time to time it may become necessary to 'suspend' schemes due to funding, capacity or other constraints. Decisions to 'suspend' schemes are made at the sole discretion of the Department for Transport and are subject to ministerial approval.

At the point of suspension, a budget to meet any costs associated with the scheme during its suspension and a time frame for re-appraisal of the scheme will be set.

Suspended projects will continue to be subject to regular reporting requirements and stage gate assessment reviews.

For suspended schemes which are subsequently re-instated, investment reauthorisation will be required.

Investment re-authorisation

Investment re-authorisation is triggered whenever an exception report is produced .

When to seek investment reauthorisation

In the event of a project forecasting to exceed its approved budget or deviating from the agreed programme or scope, an investment submission paper should be raised to the project investment control group. The project manager

shall seek budget authority based on a fully evidenced change request as follows:

- If the change request for additional budget is less than the available phase contingency (options or development), the SRO shall sponsor a submission to the highways programme board

- If the change request for additional budget is greater than the available phase contingency (all phases), the SRO shall sponsor a submission to highways investment board seeking investment re-authorisation by the Secretary of State for an increase in the phase budget. The DfT project sponsor shall brief the SofS and secure final investment re-authorisation as necessary

All project investment re-authorisations must follow the guidelines laid down by the Highways Agency's investment control framework and DfT's investment appraisal framework.

The project sponsor and senior responsible owner will decide whether investment re-authorisation should be sought immediately or deferred until a project is ready for a decision on whether it should be allowed to proceed to the next stage.

As a general rule if the scheme is within three months of the planned completion of a project stage, investment re-authorisation may be deferred.

Project assurance and governance

Reporting requirements

The project sponsor must be informed of all changes/increases to phase budgets.

The highways investment board, as part of regular monthly reporting on project progress must be informed of:

- The potential need for increases to the construction phase budget, as soon as that need is identified

- Actual changes to the construction phase budget within the Highways Agency delegated limit

- Any changes to the project delivery timetables to accommodate cost increase during the construction phase

Roles and responsibilities

There are five key project roles within the project control framework:

- Project manager
- DfT project sponsor
- Senior responsible owner
- Project board
- Senior users

The following sections set out the general responsibilities and accountabilities for each of these roles. In addition, specific roles associated with products are set out in the product definitions .

Project manager

The project manager is the individual responsible for managing the development and the delivery of a project on behalf of the Highways Agency, under remit from the DfT project sponsor and on behalf of the senior responsible owner.

The project manager leads and manages the project team with the authority and responsibility to run the project on a day-to-day basis.

The project manager is responsible for:

- Managing the project on a day-to-day basis within the remit provided by the DfT project sponsor and delegations provided by the senior responsible owner

- Being aware of the business objectives of the project and ensuring that these are satisfied

- Ensuring that the project produces the required products, to the required standard of quality and within the specified constraints of time and cost

- Establishing the project organisation, defining roles and responsibilities and deliverables for each team member

- Performing project planning, monitoring and control on the project

- Establishing the safety ethic within the project team and ensuring that the project complies with safety regulations

- Providing a safe working environment for the execution of work directly under their responsibility

- Ensuring that statutory processes are followed and appropriate consents are obtained

- Ensuring compliance with the Highways Agency's standards and processes – including the project control framework and investment control framework

- Managing and administrating any consultant or supplier contracts

- Managing project risks, including the development of contingency plans

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

Roles and responsibilities

- Initiating corrective action when necessary

- Reporting through agreed reporting lines on project progress

- Managing project resources, including project works contractors

- Ensuring that the DfT project sponsor has relevant up to date information on the project and is involved in major decision making, including stage gate reviews

- Leading and directing a multi-discipline project team which may consist of development, design and construction, commercial, planning, testing and commissioning and support personnel

DfT project sponsor

(This role is under review as at April 2013).

The DfT project sponsor is responsible for representing DfT interests throughout the project life cycle. The project sponsor owns the transport problem that is being addressed and ensures that the project provides an appropriate solution to that problem. There is only one DfT project sponsor for any project.

The DfT project sponsor is responsible for:

- At the initiation of a project defining the project's objectives, scope and requirements, as set out in the scheme requirements document, consulting as necessary with other potential stakeholders

- Agreeing the phase remit at the start of a phase

- Agreeing any changes to the client scheme requirements document during the course of the project

- Commissioning the Gateway one review and liaising with the Highways Agency on the implementation of the recommendations

- Managing, and leading on, DfT's assessment of the outline and final business cases for the scheme

- Managing, and leading on, provision of DfT comments on products for which DfT is a consultee

- Receiving progress reports and exception reports from the project manager and following up as necessary

- Attending stage gate assessment reviews and being entitled to attend progress meetings and meetings of the project board. They are responsible for the outcome of the stage gate assessment review for low risk projects during the options phase

- Co-ordinating submissions to ministers seeking investment authorisation and re-authorisation throughout the project life cycle

- Assisting the project manager in the resolution of problems, issues and change control

- Managing DfT's relationship with external stakeholders with an interest in particular schemes

Roles and responsibilities

Senior responsible owner

The senior responsible owner has overall accountability for the delivery of the project ensuring the project remains focused on achieving its objectives. They have the authority to make decisions concerning the delivery of the project within a certain delegation.

The senior responsible owner is responsible for:

- Providing clear leadership and direction through the life of the project

- Ensuring the project governance arrangements comply with the project control framework through:
  - review and sign off of key products
  - deciding the outcome of stage gate assessment reviews
  - ensuring change is effectively managed and escalated appropriately

- Ensuring that the project is technically and financially viable and compliant with the Highways Agency's corporate standards and strategic business plans

- Ensuring the project is ready to seek investment authorisation

- Managing the interface with key senior stakeholders

- Commissioning appropriate assurance to determine that the project is fit to proceed to the next stage/phase, for example Gateway reviews

Senior users

The senior user role is undertaken by the NDD regional divisional director (or their delegated representative), representing the interests of Network Delivery and Development directorate (NDD) and Traffic Management directorate (TM).

The primary purpose of the role is to act as the client for major project schemes under development and delivery in their region. Senior users are responsible for:

- Representing NDD / TM on the scheme project board and stage gate assessment reviews

- Ensuring scheme requirements have been clearly and completely defined

- Challenging design, maintenance and operational assumptions made by the project teams

- Being a single point of sign off for the design from an NDD / TM perspective

- Ensuring that the scheme developed and delivered is fit for purpose and can be successfully operated.

- Acceptance of the scheme being delivered and the handover into maintenance and operations

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

Roles and responsibilities

Project board

The project board supports the SRO and takes an overview of the project. The time that the project board can allocate to an individual project is normally limited and so the project board's role is very much management by exception.

Until further guidance has been developed the composition of the project board and the timing of meetings shall be determined by the SRO.

Other roles

This handbook focuses on the five key roles within the framework. We recognise that there are many other individuals who have an important role in developing and delivering a major project. This includes, for example:

- The integrated project team which includes consultants and contractors and Highways Agency project support staff

- Highways Agency colleagues consulted in the production of products

Project handover and closeout

Maintenance and operational handover of a scheme from the Major Projects project team to the Network Delivery and Development service delivery team should take place on the date of scheme completion/road opening. However, the Major Projects project team will retain responsibility for issues arising from the construction during the one year defect period. Other outstanding work which may be completed by Major Projects and the contractor post handover includes work to side roads which can only be carried out once traffic has been removed, and the completion of the planting contract.

Queries received by the service delivery team on major project scheme issues prior to handover will be referred to the Major Projects project team. After handover the service delivery team will decide who should respond after discussion with the project team. The project team must always be prepared to assist service delivery team colleagues on these issues.

Handover notes for the service delivery team are to be prepared by the project team identifying any long term outstanding issues. Every effort should be made to resolve issues prior to handover. Close liaison with the Network Delivery and Development senior user is advised.

A schedule is to be prepared for the service delivery team of any paper files to be sent to registry. The ownership of files held in SHARE should be transferred to the appropriate person to facilitate file management in the future.

Any scheme finance issues should be dealt with and settled by the project team.

The project team will be responsible for arranging a joint inspection of the scheme between the managing agent, the employers agent and the contractor before the end of the defect period ie nine months after completion in the case of a scheme with a one year defect period. Both Procurement and the MAC/ASC, TechMAC / RTMC and other specialist suppliers should flag this up to the service delivery manager at the appropriate time. A further inspection should occur prior to the civils and technology handover of the asset.

Land to be disposed of and landscape maintenance areas and their contract requirements including the extent of any outstanding maintenance and defect periods must be specifically identified to property management; and disposal and service delivery teams by the project team prior to handover.

Projects often include new local access roads, altered side roads and junctions, and mitigation land, which will become the responsibility of the local highway authority to maintain. It is essential for early and continual liaison to take place with the local highway authority prior to and during construction to enable timely local highway authority handover to take place, preferably

Project handover and closeout

in advance of the civils maintenance (MAC / ASC) handover certificate being signed. To aid this process, a memorandum of understanding with the local authority including a handover process flowchart has proved effective in the past. The timing of the local authority handover should be discussed and agreed with the Network Delivery and Development senior user.

Handover and closeout process chart

The chart has a time line along which are listed the relevant documents and processes required to be completed at various times leading up to and following scheme completion (for example when the road is open to traffic and all traffic management has been removed). The chart is shown graphically to simplify the process and to highlight the need to ensure handover and closeout documents are developed and updated in good time, as and when appropriate throughout the lifecycle of a project.

The chart essentially follows the guidance already provided through the project control framework with the exception that project closeout follows maintenance and operational handover, rather than coinciding with it. Time needs to be allowed between handover and closeout to enable as many outstanding issues as possible to be resolved prior to project closeout.

Documents required for handover

Documents required for handover (these will normally be available in SHARE in which case links should be provided. Some documents may be stored in other relevant Highways Agency systems such as HAPMS, SMIS or IAMIS).

- As built drawings/documentation
- Updated health and safety file from PCF stage 2
- Template for handover schedule
- Civils maintenance (MAC / ASC) handover certificate – including outstanding matters checklist
- Technology commissioning plan
- Technology maintenance (TechMAC / RTMC) documentation and certificate
- Operational (TM/RCC) handover documentation and certificate
- Updated permit to connect from PCF stage 5

Maintenance and operational handover

To take place upon scheme completion, with the issuing of the certificate of completion timed to coincide with the signing of the civils maintenance (MAC / ASC) handover certificate. If this cannot be achieved, then by agreement

Project handover and closeout

with the Highways Agency, a health and safety file sufficiently complete to enable effective operation must be available at the time of handover, together with an agreed outstanding matters checklist (which forms part of the civils maintenance (MAC / ASC) handover certificate).

SGAR 6 should take place approximately three months after scheme completion, to coincide with the completion of the as built documentation and the health and safety file.

Early and continual liaison with Network Delivery and Development, maintenance service providers, and Traffic Management (regional control centres and traffic officer service) should take place to ensure that what is delivered meets the previously agreed requirements for handover. There should be one handover to both Network Delivery and Development and Traffic Management, including technology. Caveats/exclusions to handover should be the exception and if found necessary, kept to a minimum.

On schemes where a phased/staged handover into operation and/or maintenance is proposed early agreement and approval should be sought from the Network Delivery and Development senior user, project board and regional operations board (ROB).

Road safety audits (RSAs)

A mandatory audit report produced during the development and construction phases of a project to help identify potential safety issues and mitigate these where possible. Four audit reports are produced throughout the project lifecycle with RSA stage 3 and RSA stage 4 of particular relevance to the handover and closeout process. RSA stage 3 should be undertaken at the end of construction and preferably before the scheme is open to traffic to minimise any potential risks to road users. RSA stage 4 is undertaken at 12 months and 36 months after the scheme has opened to traffic and includes the analysis and reporting of accident data. Issues arising from the 12 month RSA should be resolved before project closeout.

Project closeout

Project closeout is achieved when any outstanding works are completed and the final account is agreed with the contractor. This should be achieved as soon as reasonably practicable after handover and in any event no later than two years after scheme completion. SGAR 7 should take place at this point. At this time the closure checklist should be produced and agreed with Network Delivery and Development, following which Network Delivery and Development takes full responsibility for the

Project handover and closeout

new asset. This checklist, developed at a closeout review workshop, details all outstanding claims and issues (including any remaining issues from the outstanding matters checklist), and identifies who is to be responsible for these.

It is important to avoid a situation arising where all outstanding issues automatically revert to Network Delivery and Development – it is anticipated Major Projects will still continue to be responsible for a number of issues if they are best placed to deal with them (eg property/lands issues).

New issues may arise following project closeout which are not identified on the closure checklist. In the first instance these should be directed to Network Delivery and Development as network owner who will coordinate responses with support, as appropriate, from Major Projects and other delivery partners.

Good practice guide to handover

1 Set up early handover meetings to discuss and agree handover documentation with adopting bodies (internal and external).

2 Set up trackers to populate and monitor progress – link all documents to the tracker to make them easy to find.

3 Send sample handover packages at an early stage to establish an acceptable standard by the receiving authority.

4 Present the overall tracker at each monthly progress meeting with the client so that all parties are kept informed.

5 All information which will form the basis of the handover package should be stored electronically in the relevant scheme area on SHARE. Exceptions are where documents are A2 or larger (or over 20mb) and cannot be stored on SHARE.

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

Project handover and closeout

| PCF stage 2 Option selection | PCF stage 3 Preliminary design | PCF stage 5 Construction preparation | Minus 3 months minimum | Scheme completion (road open and traffic management removed) | Plus 3 months maximum | Plus 1 year | Plus 2 years maximum | Plus 3 years |

MP

MP/contractor 1 year Defects period ends

MP/contractor landscaping contract ongoing 3 to 5 years

Construction and commissioning

Maintenance and operational handout NDD and certificate of completion issued

NDD*

Project closeout

Following project closeout NDD has full responsibility for the new asset

*NDD responsible for maintenance and operation of the new asset

Health and safety file and maintenance and repair strategy statement first produced

Technology commissioning plan first produced

Handover schedule and permit to connect first produced. Maintenance and repair strategy statement refined

*Liaison on:
• As built documentation
• Health and safety file

• Gateway review 4 prior to opening)
• Stage 3 RSA (prior to opening)

• Part 1 claims

SGAR 6 and as built documentation and health and safety file

• Part 1 claims - 2nd notice
• Stage 4 RSA (+12 months)
• 1 year after POPE

• Final account agreed
• Project closeout report
• Closure checklist
• SGAR 7
• PICG stage 5a Gateway review 5a

Stage 4 RSA (+36 months)

Documents required for handover are listed on page 44. (These documents should normally be in SHARE in which case links should be provided).

* Early liaison with suppliers and other Highways Agency directorates must take place throughout the lifecycle of the project to ensure key handover activities are developed and completed **prior** to scheme completion/road opening
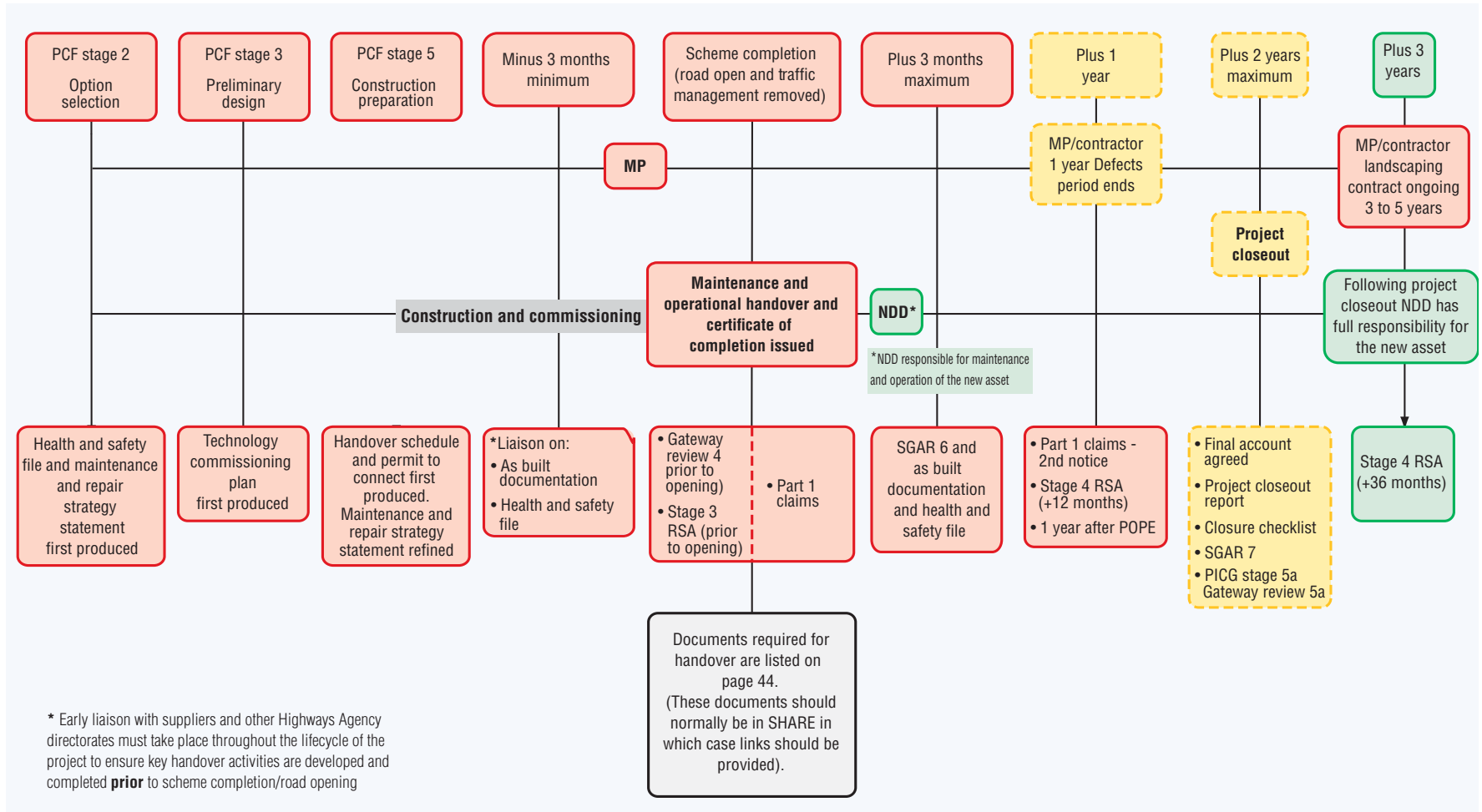
Figure 9: Based on the Major Projects lifecycle

KEY:
Major Projects (MP) responsibility
Major Projects/Network Delivery and Development joint responsibility
Network Delivery and Development (NDD) responsibility
SGAR Stage gate assesssment review
RSA Road safety audit

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A – project control processes

Annex A project control processes

Project control processes

The plan-do-review basis is implemented through five processes:

Initiating a project

Ensure that the project is adequately scoped and established prior to starting the first stage and that a 'plan' for the first stage is in place.

Controlling a stage

'Do' the stage – manage the project on a day to day basis – delivering products, monitoring progress, managing risk, etc.

Managing stage boundaries

As each project stage nears completion, 'review' the current stage and confirm that it is complete and 'plan' for the next stage.

Managing change

Is the process of managing ongoing change to the project in a controlled manner.

Closing a project

Ensure that the project is properly closed and that any residual issues are handed over into 'business as usual' as appropriate.
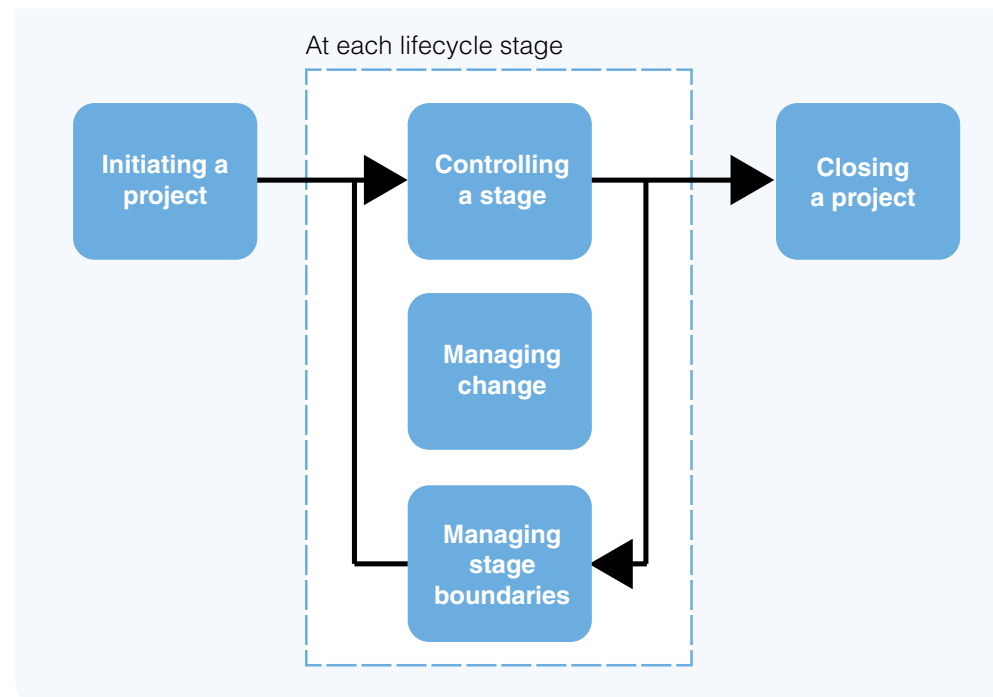
Figure 10: Project control processes

Annex A project control processes

Initiating a project

Initiating a project is a critical stage in the strategy shaping and prioritisation process and comprises three key activities:
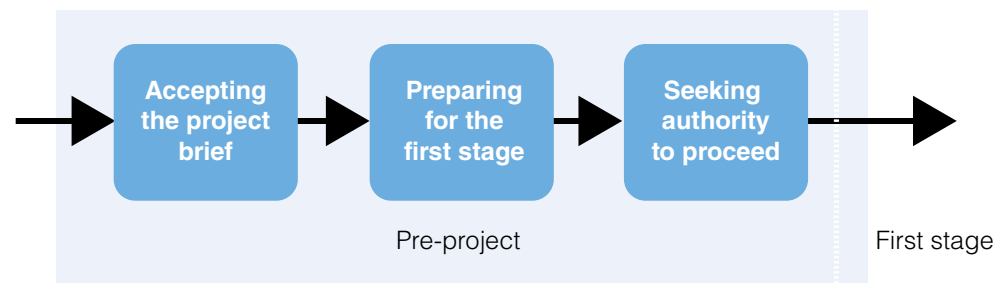
Accepting the project brief

Ensure that the documentation used to initiate the project is complete, consistent and of acceptable quality. A checklist for this is provided on .

Preparing for the first stage

Ensure that the project is properly established and all of the project management documentation needed to run the project is in place. A checklist for this is provided on .

Seeking authority to proceed

Obtain the authorities needed to proceed into the first stage of the lifecycle. The required authorities are set out in the investment authorisation on .

Figure 11: Initiating a project

Annex A project control processes

Accepting the project brief checklist

Review and confirm the acceptability of the following products which make up the project brief provided by the strategy, shaping and prioritisation process.

Accepting the project brief	✓
Client scheme requirements	
Value for money assessment	
Client phase remit	
Options phase budget	
Scheme estimate (order of magnitude estimate)	

Preparing for the first stage checklist

| Preparing for the first stage	✓
Register the project with the Major Projects portfolio office	
Complete a risk potential assessment for the project and send the resulting score to the Centre of Excellence	
Identify which products must be delivered during the options identification stage and complete the baseline dates in the product checklist for that stage and obtain sign off from the SRO	
Create and baseline the project management plan and project schedule for delivering those products	
Create and populate the risk register etc	
Provide copies of the baselined product checklist, project management plan and project schedule to the Major Projects portfolio office	

Annex A project control processes

Controlling a stage

Controlling a stage consists of seven activities, some of these have specific products on the product matrix which are produced as part of the Major Projects lifecycle.

Controlling a stage adds some additional requirements around the regular project management activities that must be undertaken as part of the stage. For example, holding project progress review meetings.

The project manager must retain evidence that they have undertaken these activities and this will be reviewed at the stage gate assessment review at the end of the stage .
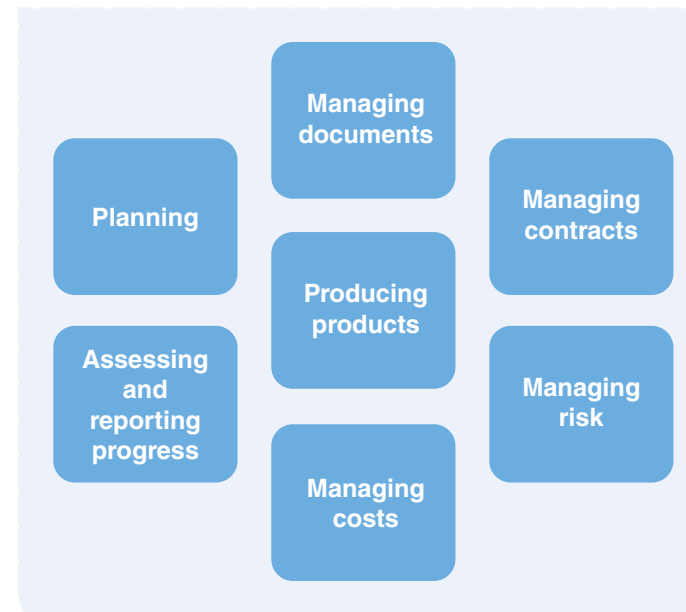
Figure 12: Controlling a stage

Controlling a stage checklist

Requirements for controlling a stage	✓
Hold progress meetings and update the schedule at least once a month.	
Comply, in a timely manner, with the requirements of the regular reporting schedule.	
Monitor costs and manage against the cost plan at least once a month.	
Actively review risks at least once a month.	
Ensure that risk mitigations are reflected within the project management plan (in the widest sense).	
Ensure that the document management process has been followed (below).	

Managing documents

The approach to managing documentation needs to support the basic principles of project control framework. For example, that all evidence of product production and sign off is retained.

Project managers have overall responsibility for the management of documentation. They must ensure that:

- Once a product is signed off and therefore completed that the product is 'frozen'. This means that no further changes can be made to that product. Signed off products must be frozen before a stage gate assessment review.

Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes

Annex A project control processes

- It is up to the project manager to decide how to freeze a product, but this might include converting the document into a PDF document

- If a product is updated during a stage or stages each update must be retained. For example a risk management plan will be continually updated throughout the stage

- If a product is refined through the lifecycle each version must be retained and frozen for the stage gate assessment review. For example, by the end of a project there will be seven versions of the scheme cost estimate

- All products, documents, scheme information and supporting data produced by ourselves and our consultants, must be filed in SHARE, or as a paper record. Documentation not compatible with SHARE may be stored using other suitable electronic storage mediums

Annex A project control processes

Managing stage boundaries

Managing stage boundaries overlaps with controlling a stage. It starts close to the end of a stage, carrying the project through the stage gate assessment review, investment authorisation and gateway review processes and into the next stage of the lifecycle. the following diagram is indicative and the timing of the gateway review may change depending on the stage and project specific requirements.

Preparing for stage end

Undertake a 'review' of progress against plan and confirm that the stage is, indeed, complete. A checklist for this is provided on .

Preparing for the next stage

Ensure that the 'plan' is in place for the next stage. A checklist for this is provided on .

Stage gate assessment review

Undertake a stage gate assessment review .

Seeking investment authority

Obtain the authorities needed to proceed to the next stage. The required authorities are set out in the investment authorisation on .

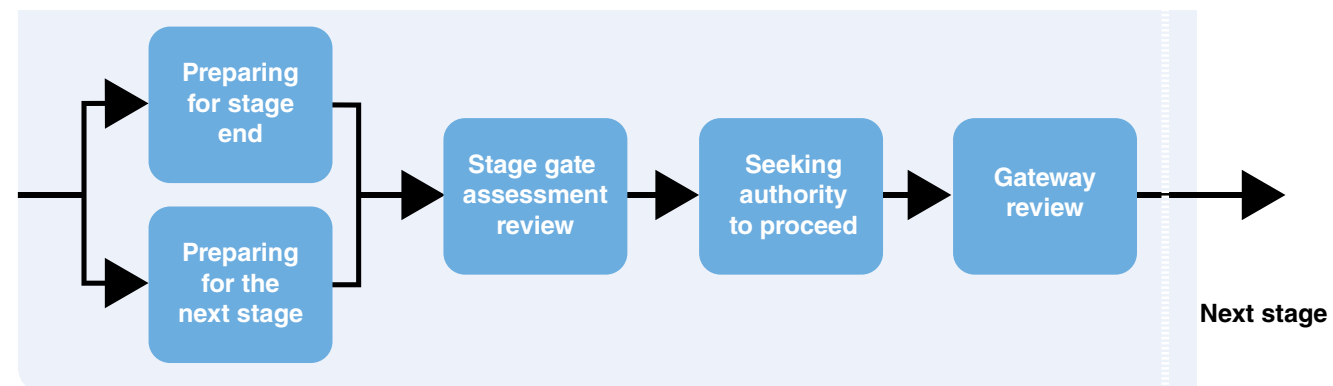### Gateway review

Undertake any necessary gateway review .

Figure 13: Managing stage boundaries

Annex A project control processes

Preparing for stage end checklist

Preparing for stage end	✓
Update a risk potential assessment for the project and send the resulting score to the Centre of Excellence	
Review the products produced against the baselined product checklist for the beginning of the Stage	
Confirm that products are signed-off and supported by proof of consultation	
Confirm that any variance in the products produced is understood and can be justified	
Confirm that there is evidence that mandatory processes have been followed	
Confirm that documents are properly stored in SHARE	
Complete the product checklist for the current stage indicating dates of completion and providing comment on any products not yet complete	
Ensure there is evidence that the requirements of Controlling a stage have been met	
Review cost and time against the versions baselined at the start of the stage	
Arrange the stage gate assessment review	

Preparing for the next stage checklist

Preparing for the next stage	✓
Complete the risk potential assessment for the next stage and send the resulting score to the Centre of Excellence	
Update the risk register, issues register, etc	
Identify which products must be delivered during the next stage and complete the baseline dates of the product checklist for that stage	
Update and baseline the project management plan and project schedule for delivering those products	
Provide copies of the baselined product checklist, project management plan and project schedule to the Major Projects portfolio office	
Prepare and send out the stage gate assessment review submission pack	
Hold the stage gate assessment review	
Produce any necessary investment submissions (if needed)	
Complete a gateway review (if needed)	

Annex A project control processes

Managing change

Within PCF change is defined as any issue which will have an effect on the development and delivery of the project whether negative or positive. Change can come from a number of sources and includes, for example, the materialisation of risks or changes in legislative or technical standards.

Any change, no matter how big or small must be:

- **Captured and assessed**

  The starting point for any change is to complete a change request form. This form records the nature of the change and assesses its impact on the project specifically in terms of time, cost and scope. Changes must not be accepted unless a full impact assessment (appropriate to the size of the change) has been completed.

  Assessing the impact must always also include whether the change affects products. This includes whether products will require to be updated and the cost and time implications of doing this.

  All changes are also captured on a change log and every project must have and regularly update the change log. The log not only records potential change but summarises its impact (taken from the change request form) and monitors and tracks the change through to implementation (if accepted).

- **Accepted or rejected**

  Who approves the change depends on the time, cost and scope tolerance set for the project. If the change is within tolerance then the change request is submitted for approval to the project manager or, in more significant cases, the senior responsible owner and DfT project sponsor.

  Before the change can be approved relevant key stakeholders must be consulted on the change. For example, if the change requires an increase in cost then those involved in the production and sign off for the scheme cost estimate will need to be consulted.

Any stakeholder with an interest in the project can raise a change request. It is the project manager's responsibility to ensure that all changes are captured, assessed and escalated appropriately.

Tolerances

Tolerances for managing change will be set by the SRO at each stage as part of the management of the stage. These will be reported to the DfT project sponsor and the Highways Agency major projects portfolio office to ensure a consistent approach across projects.

Anything above the project tolerances will trigger an exception report . Where this involves a departure from the original approval the project will also need to seek investment re-authorisation.

Annex A project control processes

Closing a project

Closing a project ensures that the project has a distinct end point rather than drifts into operational management.

Closing a project	✓
Finalise all project documentation	
Confirm that all documents are properly stored in SHARE	
Archive	
Hand over financial documentation	
Hand over contract documentation	
Hand over any remaining as built drawings to the operator	
Hand over health and safety file to the operator	
Complete a project close out report and send to the Major Projects portfolio office	
Hold post project review	
Obtain final stage gate assessment certificate	

Breaking projects into sub-projects

There are theoretically a number of circumstances where it may be appropriate to break a project into a number of sub-projects. For example where:

- Development and/or construction of elements of the project need to be progressed on significantly differing timescales – for example, a project that has significant traffic management issues associated with it or is subject to funding constraints

- The procurement strategy for the project seeks to reduce risk by letting significant elements of the work to different suppliers and, potentially, under differing procurement regimes

- It would lower the overall risk profile of the project to manage it as separate and distinct sub-projects

In such cases, a project may be divided into sub-projects at any stage or phase boundary with the agreement of the project investment control group / the highways investment board as appropriate; although it would usually be sensible to aim to split the project into sub-projects at phase boundaries.

Each sub project is then taken forward independently. This means that each sub project has its own project schedule, risk register, product checklist etc.

| Contents | Acronyms & abbreviations | About this handbook | About the project control framework | Major road projects | The Major Projects lifecycle | Products and product matrices | Tips for the consistent & effective application of the PCF | How stages are managed | Project assurance & governance | Roles & responsibilities | Project handover and closeout | Annex A - project control processes |

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